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Smart Education System

Catalogue V.24

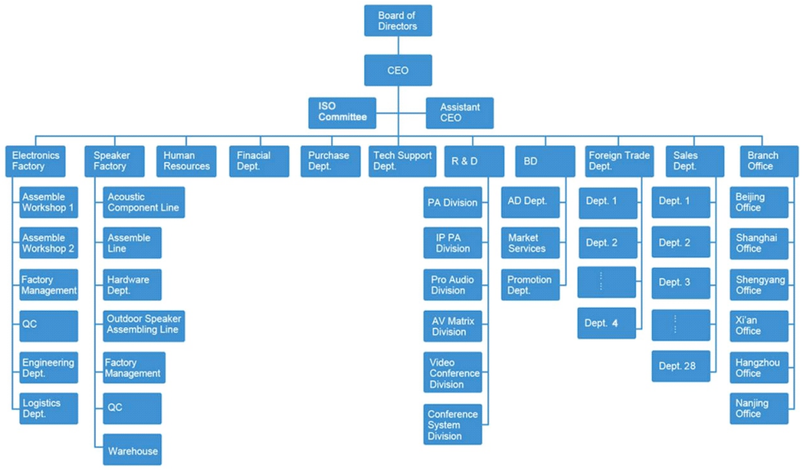
Company Introduction

ITC is the No. 1 manufacturer of audiovisual & lighting system in China for more than 28 years. ITC owns five headquarter buildings, two R&D center building and four factories. We have 800 R&D engineers, 1200 pre-sales and after sales engineers, 126 sales department all total 7000 employees.

ITC can provide integrated solution from PA system, IP intercom system, Alarm system, Professional sound system, HD video conference system, LED screen, UV light, Interpretation, central control system, ITC stage light & architecture light etc. We are the official supplier for important events like 2008 Beijing Olympic Games, 2010 Shanghai World Expo, 2010 Guangzhou Asian Games, 2016 Hangzhou G20 Summit, Turkey expo, Guyana national conference, India subway, USA 500 chain shop, Uzbekistan national defense conference, Five Nigeria national airport and many other key project. Our worldwide successful projects are about one million cases.

All of our products are developed and manufactured by ourselves. We have 600 high educated R&D engineers who study the market demand and develop suitable products. Our products are compliant with CE, RoHS, EN54, UL, CCC, NOM certificate.

Company Organization



Our Production Lines
A group of highest technology equipments are used to strengthen the reliability and output capacity: SMT machine, reflow oven & numerical control cutting machine. 95% PCB of the equipment s are made by SMT machine to ensure quality consistency and higher reliability. The numerical cutting machines enhance the equipments in elaborate & elegant level. A comprehensive process of tests are be involved: drop test, vibration test, aging, Hipot & RoHS test.

Certificates:
CCC, ISO9001, CE & RoHS, IEC60914. Parts of our product are complied with certificates: CB, SASO, ETL, UL, FCC, EN54-16 and EN54-24. Parts of loudspeakers are certified by waterproof, dustproof, fire-proof & explosion-proof.

CATALOG

ABOUT US

PRODUCTION STRENGTH

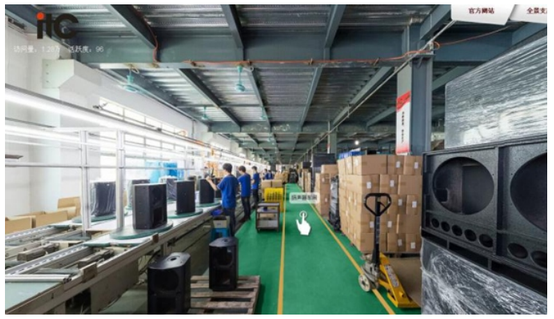
PRODUCTION PROCESS

Marketing building

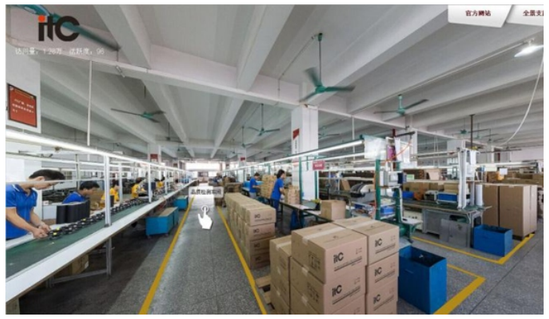
6,000+ staffs

ITC industrial park

52000 sqm Main production base for full-line products



Loudspeaker workshop



Speaper workshop

Professional speaker factory

Annual output of 6 million speakers

Lighting factory

Production area 20,000sqm

SMT workshop

QC workshop

Electronics factory

Annual output of 1.5 million

LED factory

Annual output of 100,000㎡ LED screen

Testing workshop

Packing workshop

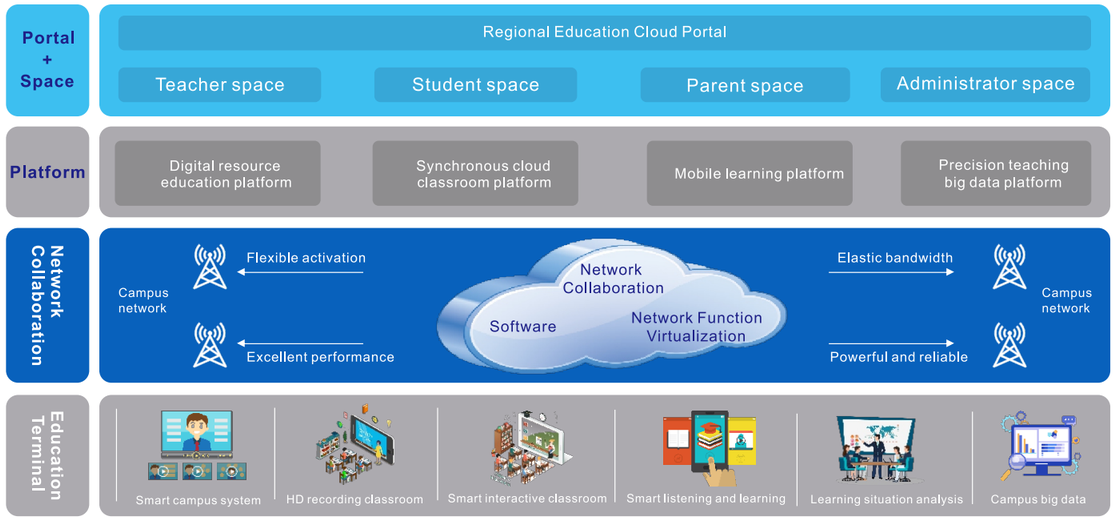
ABOUT US

R&D Equipment and Workshop

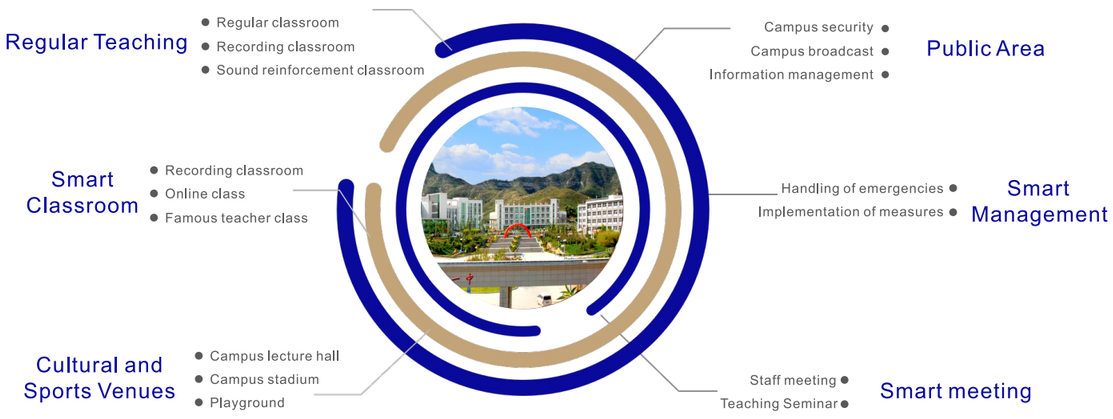
Equipment

Production Workshop

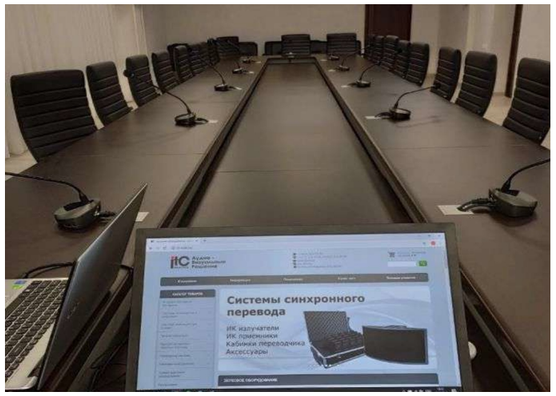
Solution Architecture

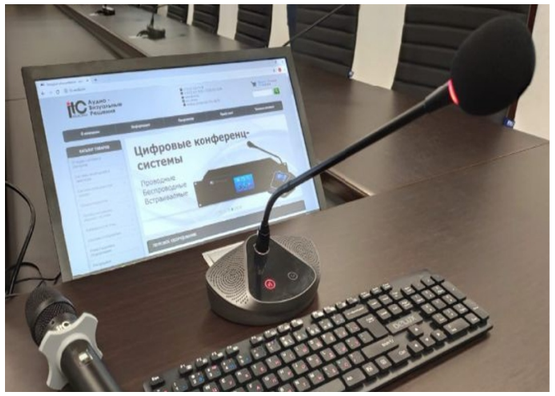


Scene Construction



▲ Tran Hung Dao School, Vietnam
♦ conference system





▲ Almaty University of Energy and Communication, Kazakhstan
♦ paperless conference system + digital conference system

▲ Tan Mai Primary School, Hanoi, VN
♦ IP PA system

▲ Lawrence S.Ting School,HCMC， Vietnam
♦ AV system

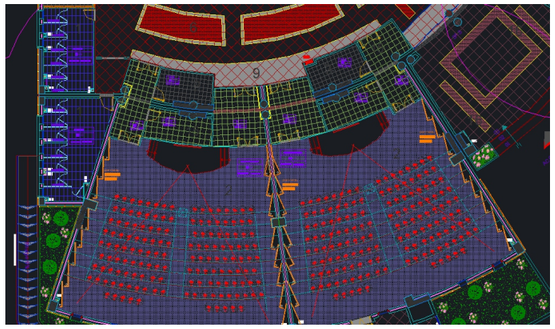
▲ Ajial School, Maldives
♦ PA system

▲ Kazakh National Pedagogical University
♦ paperless conference system + digital conference system

▲ Asfandiyarov University,Kazakhstan
♦ paperless conference system +digital conference system

▲ National Defense University,Turkey
♦ digitalconference system+simultanouce interpretation system

▲ SKH Yan Laap Primary School, Hong Kong
♦ IP PA system



▲ Military School , Algeria

♦ conference system + video conference sytem+interpretation system + professional sound sytem+ recording and broadcasting system

▲ BRAC University,Bengal

♦ Professional sound system+ Stage Lighting

▲ Ha Dong Medical College, Vietnam

♦ PA system

▲ Nanyang Technological University,Singapore

♦ ITC PA System

▲ Singapore Polytechnic School

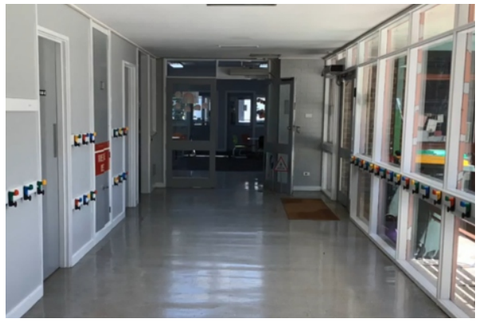
♦ ITC IP PA System

▲ Dunearn Secondary School, Singapore

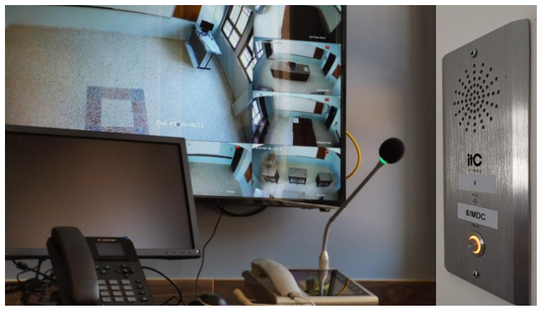
♦ ITC PA System+Pro sound System

▲ Lake Joondalup Baptist College , Australia
♦ IP Network Public Address System

▲ Exford School, Melbourne, Austrilia
♦ ITC IP PA System



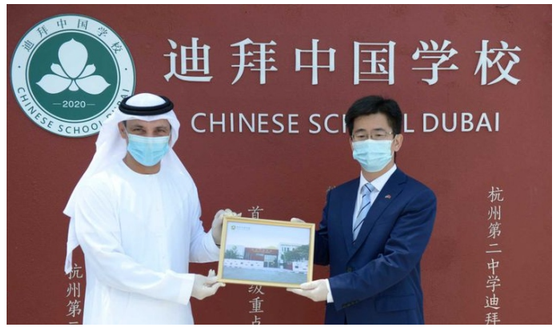
▲ Gisborne Primary School, Melbourne, Australia
♦ ITC IP PA System



▲ Chinese Male High School in Ramallah, Palestine
♦ ITC 78 IP/PA System

▲ Gems Millenium School Dubai
♦ ITC 77 IP/PA System

▲ Gems Indian School Dubai
♦ ITC 77 IP/PA System



▲ Chinese School Dubai
♦ ITC 77 IP/PA System

▲ Dorat AL-Khaleej Private School, Oman
♦ ITC IP/PA System

▲ British-International school of Tbilisi
♦ ITC Indoor LED Video Wall

▲ Indian School Ghubrah, Oman
♦ ITC IP/PA System

▲ Modern College of Business and Science New School, Oman
♦ ITC IP/PA System

▲ Bahloul International Schools, Iraq
♦ ITC PA System

▲ Presidential School, Uzbekistan
♦ ITC IP PA System

▲ Luso-Chinese Vocational Technical School, Macau
♦ ITC IP PA System

▲ Global International School, Mongolia
♦ ITC IP PA System

▲ Khonkaen University, Thailand
♦ ITC IP PA System+Conference System

▲ OMIKRON,Greece
♦ ITC IP PA System

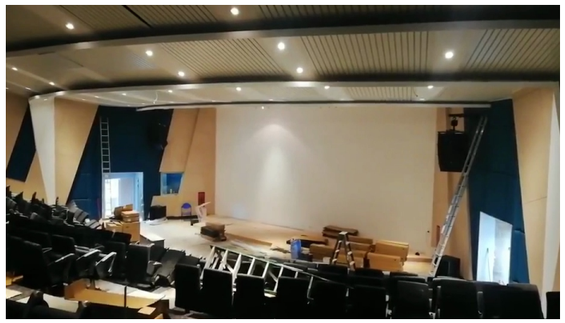
▲ Koridalos Kindergarten, Greece
♦ ITC IP PA System

▲ Qudus University - Rafah branch, Palestine ♦ ITC P25 LED Video Wall

▲ Children Camp , Hungary
♦ TCP/IP Network Audio System

▲ Vietnam Marine Time University
♦ ITC IP PA System

▲ Siberian Federal University Public Center， Krasnoyarsk
♦ ITC IP PA System



▲ Swinburne University in Sarawak, Malaysia
♦ ITC Pro Sound System

Interactive Smart Flat Panel for teaching

Interactive Smart Flat Panel
TV-98830E

Description

This interactive smart flat panel integrates application function modules such as presentation, writing, human-computer interaction, and content sharing. With a practical paperless information-based comprehensive application platform, it helps transform and upgrade the teaching methods of tens of millions of Chinese traditional classrooms.

Feature

* Using narrow frame design, UHD LED LCD screen, display resolution 3840*2160, display ratio 16:9, with anti-glare effect; under high illumination (110K Lux) environment, it can still work normally.
* The screen display has rich color details and a high degree of color reproduction (color gamut ≥ NTSC 72%), and the classroom demonstration screen can be presented delicately.
* The grayscale of the screen reaches more than 128, which endows the display screen with sharp effect and strong layering.
* Adopting zero lamination technology, there is almost no sense of suspension when you lift the pen to write, giving you a paper-like writing experience. The surface tempered glass (7H hardness) can effectively protect the screen, reduce the polarization and scattering between the panel and the glass, and the screen display is clearer and more transparent, and the viewing angle is wider.
* It has the function of reducing and filtering blue light, which can be activated by touching the menu button.
* Support sensing and automatically adjusting the screen brightness to achieve different brightness display effects in different lighting environments. This function can be turned on or off by itself.
* Support the camera function, click the camera button to call the camera (external connection) to take pictures; click the settings button to adjust the countdown to take pictures, the position of the toolbar button, and the position of the camera.
* Using IR touch technology, it supports dual-system multi-person and multi-touch writing. It supports up to 20 points of touch under Android system, and up to 40 points of touch under Win system.
* The 2.0-channel high-power independent cavity speaker + front sound structure design makes the output sound quality more clear and textured, making the transmission of knowledge more dynamic and lively.
* Built-in wireless network module, without any external or transfer antenna, network card can realize Wi-Fi wireless Internet connection and AP wireless hotspot transmission at the same time. Support 2.4G & 5G frequency bands, and the version complies with IEEE 802.11 a/b/g/n/ac /ax standards.
* The front TypeC interface supports full-featured audio and video input functions. External devices can be connected through a standard TypeC cable to project the screen on the large screen. At the same time, the touch computer operation can be realized without connecting any other cables.
* Equipped with dual RJ45 network interfaces, it realizes the function of two-way branch router, and the automatic identification and use of the input and output terminals do not need to be distinguished, so that the external devices can share the connection, and only one wired network cable is needed to realize simple deployment.
* Adopt the design of virtual buttons on the left and right side navigation bars, which can quickly call back, home, whiteboard, annotation, multi-task management, signal source, tools, etc., and supports custom replacement of applications and shortcut tools.
* In the Android system environment, shortcut tools can be called through the left and right sidebars to realize the task collaboration of the two-screen display on the screen; the notification supports writing and presentation pictures and documents, supports entering the comment mode, and can be shared by scanning the code.
* In any channel, you can quickly call up the convenient menu of the central control at any position through gestures, with common functions such as return operation, one-key home page, task preview, menu setting, one-key whiteboard, and full-channel screen annotation; six shortcut applications can be customized and added; the central control menu can be automatically hidden without occupying the display area.
* Adopt the design of three keys in one, that is, the power switch, OPS computer switch and energy-saving standby key are the same physical key, so as to ensure the convenience of user operation.
* The Android whiteboard supports writing and gesture erasing, and supports more than ten graphics tools. The written content of the whiteboard can be exported to PDF, picture and other formats. It supports local/USB storage of the whiteboard content, and supports QR code scanning and sharing.

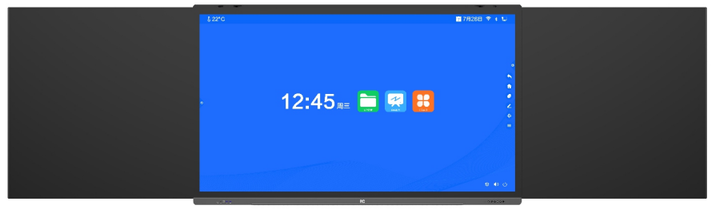
Interactive Smart Flat Panel for teaching

* The whiteboard supports intelligent recognition of hand-drawn graphics, and supports the insertion of smart tables. The size of the table can be automatically extended according to the writing content, and rows and columns can be added separately by drawing straight lines.
* Support voting function. Topic and option content can be edited, up to 10 options can be set, single-choice and multiple-choice are supported. After the setting is completed, the voting will be issued through mobile phone scanning, and the voting results can be generated into pie charts or bar charts, and can be inserted into the whiteboard in picture format.
* Support wireless screen projection function, transfer the external computer screen to the large screen through the screen projection software, and connect up to four devices at the same time for screen projection.
* Support customizing the length of no-signal standby time. When the device is in the state of no signal reception within the set time, it will automatically standby to save energy consumption.
* Support standby wake-up function. In standby mode, the LAN and HDMI ports support the wake-up of the whole machine when receiving signals. It is energy-saving and environmentally friendly, and can increase the service lifespan of large-screen devices.
* Support customizing the power-up default channel, specify the power-up default channel when shutting down in any channel, and also remember the power-off signal source as the power-up signal source.
* With the screen password lock function, you can customize the unlock password. After the function is turned on, the screen can be locked and the unlock password can be entered.
* Support the all-network function; only one wired network cable is required to meet the Internet access requirements of OPS and Android dual systems, and there is no need to switch to the network cable connection separately.

Specification

Model	TV-98830E
Screen size	98 inches
Screen type	IPS
System version	Android 11.0
CPU	Quad-core A55
RAM	4GB
ROM	32GB
Response time	8ms
Aspect ratio	16:9
Display size	2158.85(H)×1214.35 (V)mm
Resolution	3840(H)×2160(V)
Refresh rate	60Hz
Chroma	1.07B (10bit)
Color Gamut NTSC(Typ.)	72%
Contrast ratio	1200:1
Viewing angle	178°(H/V)
Backlight type	DLED
Screen brightness (Typ.)	400-450cd/m2 ±10% (typical value of nine-point center)
Average lifespan	≥50000H
Touch recognition technology	Infrared touch
Supported touch system	XP/Win7/ Win10/ LINUX/ Android
Touch points	Windows: 40-point touch, 20-point writing; Android: 20-point touch, 10-point writing
Minimum identifier	2mm
Touch method	Opaque objects such as fingers and stylus
Touch response time	＜8ms
Touch accuracy	±1mm
Writing height	≤2.5mm
Writing surface hardness	7H
Wi-Fi version	IEEE802.11a/b/g/n/ac/ax+Bluetooth5.0
Wi-Fi working frequency	2.4G, 5G
Wi-Fi working distance	<10M
Sound track	CH2.0 stereo dual channel
Power	2×15W@8Ω
PC type	Plug-in Intel Core series modular computer
PC port	OPS-C Standard 80 Pin
Front port	HDMI*1, USB3.0*2, Type - C*1, TOUCH 2.0*1
Onboard input port	RJ45*1, AUDIO IN*1, RS232*1, USB2.0*1, HDMI*2, USB3.0*2
Onboard output port	RJ45*1, EARPHONE(LINE OUT)*1, OPTICAL OUT*1, TOUCH OUT(USB2.0)*1
Power supply	110~240V/50~60Hz
Total power consumption (without OPS)	About 400W
Standby power consumption	≤0.5W
Overall size (L*H*D)	2217.84mm*1326.29mm*94.8mm
Package size (L*H*D)	2401mm*1490mm*320mm
Screen + wall mount thickness	129mm (error ±2mm)
Weight	98±1kg/127.9±2kg
Working temperature	-10℃~55℃
Working humidity	10%~90%RH (no condensation)

Smart Blackboard
TV-86830EB



Description

This smart blackboard integrates application functional modules such as presentation, writing, human-computer interaction, content sharing, and so on. With practical paperless system and efficient information transmission, the comprehensive application platform helps the transformation and upgrading of teaching methods, provides intelligent interactive experience and application display, and realizes diversified and information-based knowledge dissemination and sharing. In the future, we will adhere to the concept of "helping narrow the gap in educational equipment and allow more students to equally experience the fun of knowledge", continue to provide customers with higher-quality and efficient educational products and services, and work hard to continue the legacy of teachers and pass on the legacy of the past. .

Feature

* Adopt the integrated design of three splicing planes. The main and secondary screens transition smoothly and are on the same plane, without a separate frame in the middle. The edges of the screen are are covered with metal rounded corners for protection. Support a variety of writing methods such as marker, ordinary chalk, and dustless chalk. It can realize unified screen writing on the entire blackboard, and adopt wall-mounted installation, which is easy to disassemble.
* The display screen in the middle area adopts UHD LED LCD screen, with a display resolution of 3840*2160, a display ratio of 16:9, and anti-glare effect. It can still work normally under the illumination of 110KLUX.
* The left and right sub-boards are made of high anti-reflective material to achieve non-reflective effect, the handwriting can be clearly seen at any angle, and the original handwriting can be maintained.
* With rich color details of display and high color reproduction (color gamut ≥ NTSC 85%), the demonstration picture can be presented delicately.
* More than 128 grayscale resolution level of the display ensures the sharpness and layering of the screen display effect.
* Use fit technology without zero distance for paper-like writing experience. The surface tempered glass (7H hardness) can effectively protect the screen, and reduce the polarization and scattering between the panel and the glass, so that the screen display is clearer and more transparent, and the viewing angle is wider.
* With blue light reducing function, which can be activated by touching the menu button with one key.
* The whole machine can sense and automatically adjust the screen brightness to achieve different display effects in different lighting environments. This function can be turned on or off by yourself.
* Adopt capacitive touch technology, support dual-system multi-touch writing, support up to 20 touch writing in Android, and support up to 20 touch control in Win system.
* 2.0 sound channel high-power independent cavity speaker and front-end sound structure design makes the output sound quality clearer and more textured.
* Built-in wireless network module, without any external antenna, transfer antenna, or network card, can realize Wi-Fi wireless Internet connection and AP wireless hotspot transmission at the same time. Support 2.4/5.0GHz frequency band (support 6GHz), and the version complies with IEEE 802.11 b/g/n standards.
* The front TypeC interface supports full-featured audiovisual input. The external device can project display to the large screen by connecting the standard TypeC cable. At the same time, the operation of touch computer can be realized on the machine without connecting any other cables.
* Equipped with dual RJ45 network interfaces to realize the function of two branch routers, and the input and output terminals are automatically identified and used without distinction, so that external devices can share the connection. Simple deployment can be achieves with only one wired network cable.
* With virtual buttons of the navigation bar on the left and right sides to quickly return and call home page, whiteboard, annotation, multitasking management, signal source, tools, and so on. Support custom replacement of applications and shortcut tools.
* In Android system, shortcut tools can be called through the left and right sidebars to achieve two-screen display and task collaboration. Notification supports for writing and presenting pictures and documents, supports for entering annotation mode, and sharing by scanning code.
* Under any channel, the convenient central control menu can be quickly called up at any position through gestures, with common functions such as return, one-key home page, task preview, menu setting, one-key whiteboard, and all-channel screen annotation, and six shortcut applications can be added by custom; the central control menu can be automatically hidden without occupying the display area.
* The whole machine has 7 front buttons, that is, the power switch button, the OPS computer switch button and the energy-saving standby button are the same physical button to ensure the convenient operation.
* Android whiteboard supports writing and gesture erasing, supports more than ten graphic tools, supports export of whiteboard content to PDF, picture and other formats, supports local/U disk saving of whiteboard content, and supports QR code scanning and sharing.
* Whiteboard supports intelligent recognition of hand-drawn graphics, and supports insertion of intelligent tables. The table can be automatically expanded according to the writing content, and rows and columns can be added separately by drawing straight lines.
* Support voting function. You can edit the content of the issues and options, and can set up to 10 options of single-choice and multiple-choice. After the setting is completed, you can scan code to issue the voting, and the voting results can be generated as pie chart or bar chart, which can be inserted into the whiteboard in image format.

Interactive Smart Flat Panel for teaching

* Support wireless screen projection, support the transmission of external computer images to the large screen with wireless software, and can connect up to four devices to screen at the same time.
* No-signal standby time can be customized. When the device is in a no-signal receiving state within the set time, it will automatically stand by to save energy.
* Support standby wake-up function. In standby state, LAN and HDMI ports support wake-up and power-on when the signal is connected, which is energy-saving and environmentally friendly, and can improve the service life of large screen.
* The default channel for startup can be customizes. When any channel is turned off, you can specify the default channel to start up, and you can also set the shutdown signal source to memorize as the startup signal source.
* With screen password lock function, you can customize the unlock password. After enabling, you can lock the screen and enter the password to unlock.
* Support one-stop function, only one wired network cable is required to meet the Internet access requirements of the OPS and Android dual systems without switching the network cable connection separately.
* With touch lock to prevent the operation interface from being accidentally operated.
* Support NFC function, only for screen sharing.
* Support the camera function. Click the camera button to call the camera (external) to take pictures.

Specification

Model	TV-86830EB
Size	86 inches
System version	Android 11.0
CPU	Quad core A55
RAM	4GB
Storage	32GB
Response time	≤6ms
Aspect ratio	16:9
Display size	1895.04mm(L)*1065.96mm(H)
Resolution	3840 (H) ×2160 (V)
Refresh rate	60Hz
Chromaticity	1.07B (10bit)
Color gamut NTSC (Typ.)	72%
Contrast	4000:1
Viewing angle	178°(H/V)
Backlight type	DLED
Brightness (Typ.)	350cd/m2 ±10% (Typical value at nine-point center)
Lifespan	≥50000 hours
Touch recognition	Capacitive touch
Touch system	Windows10/Windows8/Windows7/Android
Touch point	Windows supports 20-point touch, Android supports 20-point touch and 10-point writing
Smallest identifier	1mm
Touch method	Finger or capacitive stylus
Touch response time (Typ.)	＜6ms
Touch accuracy	±2mm (more than 90% touch area)
Screen surface hardness	7H
Wi-Fi version	802.11 b/g/n
Wi-Fi working frequency	2.4/5.0GHz(support 6GHz)
Wi-Fi working distance	0~12m
Bluetooth version	5.0
Bluetooth working frequency	2.4GHz/5GHz
Bluetooth working distance	0~12m
Soundtrack	CH2.0 stereo dual channel
Power	2*2*10W (treble 2*10W, midrange 2*10W)
PC type	Plug-in Intel Core series modular computer
PC interface	OPS-C standard 80 Pin
Front interface	HDMI*1,USB3.0*2,Type-C*1,TOUCH 2.0*1
Onboard input port	RJ45*1,AUDIO IN*1,RS232*1, USB2.0*1, HDMI*2,USB3.0*2
Onboard output port	RJ45*1,EARPHONE(LINE OUT)*1,OPTICAL OUT*1,TOUCH OUT(USB2.0)*1
Power input	100-240V~50/60Hz
Overall power consumption (excluding OPS)	450W
Standby power consumption	≤0.5W
Overall dimension (L×W×T)	4214x94x1221mm
Weight (net weight)	61±1Kg
	21±1kg (excluding booth)
Weight (gross weight)	78±2kg
	25±1kg (excluding booth)
Working temperature	0˚C~40˚C
Working humidity	10%~80%RH
Storage temperature	-20˚C~60˚C
Storage humidity	10%~90%RH

Smart pen box
TE-BH03

Description

With the help of many cutting-edge technologies such as artificial intelligence, handwriting recognition, machine learning, and big data, it maintain students' existing writing habits and achieve real-time collection of handwriting. The smart pen box set consists of a dot matrix pen, a smart pen box and supporting consumables. The dot matrix pen does not change existing writing habits, but provides a professional digital "paper-screen interaction" solution, supporting the electronicization of original handwriting and automatic recognition of handwritten text.

Feature

1. Hardware parameters
*Support 4G full network wireless transmission mode and support real-time/offline transmission modes.
*The smart pen box and dot matrix pen adopt a fully automatic pairing mode, eliminating the need for manual pairing.
*The smart pen box uses a lithium-ion polymer battery, which supports continuous use for ≥15 hours when fully charged.
*The smart pen box is in line with students' usage habits. The size of the pen dimension is 180mm*52mm*22mm and the weight is 130g.
*The dot matrix pen uses a polymer lithium battery, which supports continuous use for ≥4 hours when fully charged.
*The dot matrix pen is in line with the student's pen habits, pen dimensions of 142 mm long, 9 mm wide (excluding the pen cap) within the weight of 13g (excluding the pen cap).
*The dot matrix pen supports lens recognition speed of 200FPS and pressure sensitivity of 4096 levels.
*The refill of the dot matrix pen adopts a 108mm long refill magnetic levitation structure.
*The dot matrix pen can be used for full-angle writing, and supports 360-degree rotating lens orientation, which can accurately collect writing data.
2. Platform parameters
(1) Assign homework
*Support synchronized teaching aids, test papers and homework assignments by subject and class, and support real-time and timed assignments and test papers by class or by group or by individual, so as to realize graded teaching.
*When teachers assign homework, it supports picking questions to assign or assigning the whole page, and it also supports the preview of homework assignment. Teachers can set up homework content at once and release it to students at the end of class or at regular intervals every day.
*If the starting time of the assignment is not yet started after the assignment is set up successfully, the teacher can adjust the content of the assignment, the starting time and the deadline of the assignment at any time. For the assignments that have already been started, it supports adding assignment topics, modifying the deadline, and turning on/off the objective questions, as well as auto-correcting and deleting the assignments.
*Teachers can set the deadline for each assignment according to requirements, and at the same time, they can modify the deadline according to the actual situation, and the system will also send a message to notify the students when the deadline arrives.
*Teachers can set the expected completion time for the assignment submission according to their own expectations. The system will calculate the actual completion time of each student according to the assignment start time and the assignment submission time, and finally present the report to show whether the completion time of the students' assignments meets the teachers' expectations.
(2) Correcting homework
*Supports automatic correction of objective questions with set answers after homework submission; supports online correction of subjective questions by teachers, and provides functions such as homework return, re-scoring, annotation, and marking and correction of assigned papers.
*Support teachers to use dot-matrix pens to correct students' assignments offline, the system automatically collects the teacher's correction data and forms a statistical report, and can also annotate students' assignments with pen strokes. No need to connect to the cell phone applet to complete the homework correction.
*Supports real-time recording and transmission of students' writing process, so that teachers can grasp the students' learning situation through problem playback during the correction process.
*Teachers can adjust the problematic correction results by re-correcting the corrected assignments, and the system will re-generate the corresponding assignment reports according to the re-criticism results.
*Teachers can download the results of homework correction with one click after correcting the homework. The system will generate a report of homework questions + answering handwriting + correction results according to each student for teachers to download and print.
(3) Wrong question book
*Support the automatic collection of students' wrong questions in the class, the wrong questions can be sorted according to the number of wrong answers or question numbers, and the wrong questions can be categorized according to the date, knowledge points or chapters, display the number of wrong answers, the number of revisions statistics, and support the display of students' handwriting content.
*Support the system to recommend the corresponding practice questions and knowledge point explanation for each question according to students' mistakes.
*Teachers can choose the time according to the class to generate students' wrong books in the system, and after generating, they can download the wrong question books of the whole class with one click, and support to view the revised records submitted by the students.
(4) Personalized situation report
*Support the system to automatically generate a single learning report and support report update. Support the analysis of the class students' homework time, homework process and students' performance.
*Support the statistics of the answer situation of each question, the accuracy rate of a single question, the distribution of the time spent on homework, as well as the analysis of knowledge points, skills and ability indicators, and give corresponding teaching suggestions.
*Support the generation of a single report by default when assigning homework, and the system will push a single homework report after each homework correction is completed.
*Supporting the system to release unit reports regularly after the end of a unit of study, with statistics of the whole unit's homework data and learning situation data.
(5) Smart pen classroom
*Without changing students' study habits, without using tablets, and retaining the original writing method, students' learning data can be collected online in real time.
*Supports four modes of classroom initiation: homework explanation, teaching assistant lecture and test, test paper explanation and test, and quick creation. Students in these four modes use smart pen boxes to participate in answering questions on smart study books, smart homework books or dot matrix answer sheets, realizing real-time collection of handwriting when writing and answering. Teachers can also call up questions at any time to explain.
*Support teachers to view the answer results of multiple students at the same time for comparison. They can view the replay of each student's question-taking process. The system can automatically identify the objective question accuracy and generate answer statistics.
*Supports providing real-time classroom data statistics for teachers and students. The system will calculate the proportion of students' choices for each option in real time. Teachers can set the correct answer after students answer, and the system will automatically calculate the accuracy of answering questions.
*Support teachers to watch the live broadcast of students' answers. After the answer is completed, the teacher can compare the answer results of at least 4 students on the same screen, and the teacher's correction results will be displayed in real time. When explaining the details of students' answers to questions, it supports retrieving answers and displaying them on the same screen, making it easier for teachers to explain wrong questions.
*Support the system to dynamically display students' answering progress in real time, automatically identify the accuracy of objective questions and generate answering statistics.
*Support teachers to initiate interactive methods such as voting, answering questions, random roll calls, and timers in class, update student participation rankings in real time based on class performance, and participate in interactions through "teaching aids, test papers, matrix books, and answer sheets."
*Support teachers to use the brush tool in class to annotate and highlight key points. The annotated content can be saved with one click. Teachers can download the blackboard writing after class and share it with students to enhance their impressions. The eraser function can erase the blackboard content that the teacher does not

want at any time or clear the screen with one click. The mobile terminal can be used to operate the brush on the same screen to achieve walking teaching.
*Supports the generation of classroom learning reports. After the class is over, the system will generate a learning report for the current class, allowing teachers to understand the statistics and interaction of students in this class, and also download student response data.
(6) Class files
*Support teachers to check the learning files of the classes they teach, which can compare the data of multiple classes and check the knowledge, abilities and skill learning status of each class and students.
*Support the display of data comparisons between knowledge points, skills and abilities learned by classes of the same grade.
(7) Paper Formation Center
*Supports teachers to select diversified questions according to chapters, knowledge points, degree of difficulty, etc., generates test papers quickly and conveniently, and realises the automatic dot-matrixing of test papers, which implements multi-scenarios of teaching and meets the needs of teachers for assigning homework and classroom tests.
*Support topic selection and test preparation, and provide an online question bank. Teachers can select questions based on chapters or knowledge points to compose papers, and can support dot matrix paper answers, answer book answers, and assigned answer sheet answers.
*Support teachers to independently upload test papers, automatically switch questions, lay out dot matrix codes and correction areas, and support dot matrix paper answers, answer book answers, and scored answer sheet answers.
*Support teachers to choose matching answer sheets to create questions independently. The system provides editing functions for commonly used question types in daily tests.
*Support the combination of examination and practice, teachers can set up their own papers and upload them or select questions from the question bank to create scoring papers, which can be used together with the matching dot matrix answer cards to assign corresponding scores to the correct answers, and teachers can carry out offline marking and corrections in the correcting and marking areas of the answer cards.
*Support teachers to share test papers to the school-based paper library and copy the resources of the school-based paper library for use.
*Supports automatic collection of questions that students got wrong in the center of the examination and included them in the class's wrong questions.
(8) AI composition
*Supports essay critique for Chinese and English classes. While getting personalised essay critique, and quick statistics to help teaching and learning analysis. Provide students and teachers with automatic essay review and correction services.
*Support selecting essay topics in the synchronous question bank for assigning homework, or teachers can customize topics for assigning homework.
*Supports automatic uploading by students through dot-matrix pen writing; supports teachers to release assignments through photo uploading.
*Support students to submit multiple English and language compositions at the same time, the system can automatically score and comment on the composition, intelligent identification of speech defects, typos, and annotated tips, and according to the teacher's commenting habits, to give AI simulation comment, automatic identification of good words and phrases in the composition.
*The system supports retaining students' original handwriting, and supports viewing electronic notes at any time, which is convenient for the teacher's review. Support teachers to adjust students' composition scores, support teachers' comments.
*Support to view the overall class situation (average score, submission, whole class composition scores, time spent and other information), support to view the details of individual assignments by clicking on the individual.
*Support adding excellent compositions to model essays by uploading model essay pictures. Support teachers to download and print students' individual composition reports by one click.
(9) Cloud Notes
*Supports viewing students' cloud notes of each teaching aid, dot matrix blank book, answer book, and test paper by page number and date.
(10) Academic quality monitoring platform
*Provide multi-dimensional data statistics and horizontal comparative data analyses on homework assignment, homework time, homework accuracy, classroom usage, composition usage, reading usage, and mastery of knowledge points, skills, and abilities of provinces, cities, districts, counties, schools, and classes to provide data support for teaching management and educational decision-making in schools.

Specification

Model	TE-BH03
Dot matrix pen	
RAM	16MB
Bluetooth version	BLE4.2
Transmission mode	Real-time transmission/offline transmission
Charging method	Magnetic
Handwriting collection	CMOS Sensor
Lens recognition speed	200FPS
Pressure sensing	Level 4096
Battery	100mAh polymer lithium cobalt oxide battery
Charging time	≤1.5 hours
Working hours	≥4 hours
Power input	DC 5.0V 0.30A
Standby time	≥300 days (with SIM card)
Usage environment	Temperature 0-50℃/humidity ≤95%RH (no condensation)
Refill	108mm long pen core magnetic levitation structure
Freely for hand-writing	When holding the pen to write, you can write at all angles,
	support 360-degree rotating lens orientation and accurately collect writing data.
Writing angle	Based on the vertical line on the paper, positive writing is ≥40 degrees and negative writing is ≤30 degrees.
Power on	The pen tip has a pressure sensor and automatically turns on (it automatically turns on when the stationery box is pulled out)
Dimension	L: 142mm, W: 9mm (excluding pen cap)
Product material	Engineering plastics + aluminum alloy
Weight	About 0.013kg (excluding pen cap)
smart pen box	
Bluetooth version	BLE4.2
Wireless transmission	4G full network communication
Transmission mode	Real-time transmission/offline transmission
Card slot	Cannot boot without card, security protection
Pairing mode	Fully automatic (no manual pairing required)
Input interface	Type-C
Output Interface	2pins standard magnetic suction head
Battery capacity	1500mAh, lithium-ion polymer
Charging time	≤2.5 hours
Continuous working hours	≥15 hours
Power input	DC 5.0V 2.0A
Power Output	DC 5.0V 0.30A
Standby time	300 days
Usage environment	0-50℃/humidity ≤95%RH (no condensation)
Dimension (L*W*H)	180mm*52mm*22mm
Product material	Engineering plastics, UL94-V0 fire protection grade material
Weight	0.13kg

Smart pen box
TE-BH01

Description
With the help of many cutting-edge technologies such as artificial intelligence, handwriting recognition, machine learning, and big data, it maintain students' existing writing habits and achieve real-time collection of handwriting. The smart pen box set consists of a dot matrix pen, a smart pen box and supporting consumables. The dot matrix pen does not change existing writing habits, but provides a professional digital "paper-screen interaction" solution, supporting the electronicization of original handwriting and automatic recognition of handwritten text.

Feature
* Support 4G full network wireless transmission mode and support real-time/offline transmission modes.
*The smart pen box and dot matrix pen adopt a fully automatic pairing mode, eliminating the need for manual pairing.
*The smart pen box uses a lithium-ion polymer battery, which supports continuous use for ≥15 hours when fully charged.
*The smart pen box is in line with students' usage habits. The size of the pen dimension is 180mm*52mm*22mm and the weight is 130g.
*The dot matrix pen uses a polymer lithium battery, which supports continuous use for ≥4 hours when fully charged.
*The dot matrix pen is in line with the student's pen habits, pen dimensions of 142 mm long, 9 mm wide (excluding the pen cap) within the weight of 13g (excluding the pen cap).
*The dot matrix pen supports lens recognition speed of 200FPS and pressure sensitivity of 4096 levels.
*The refill of the dot matrix pen adopts a 108mm long refill magnetic levitation structure.
*The dot matrix pen can be used for full-angle writing, and supports 360-degree rotating lens orientation, which can accurately collect writing data.

Specification

Model	TE-BH01
Dot matrix pen	
RAM	16MB
Bluetooth version	BLE4.2
Transmission mode	Real-time transmission/offline transmission
Charging method	Magnetic charging
Handwriting collection	CMOS Sensor
Lens recognition speed	200FPS
Pressure sensing	Level 4096
Battery	100mAh polymer lithium cobalt oxide battery
Charging time	≤1.5 hours
Working hours	≥4 hours
Power input	DC 5.0V 0.30A
Standby time	≥300 days (with SIM card)
Usage environment	Temperature 0-50℃/humidity ≤95%RH (no condensation)
Refill	108mm long pen core magnetic levitation structure
Freely for hand-writing	When holding the pen to write, you can write at all angles,
	support 360-degree rotating lens orientation and accurately collect writing data.
Writing angle	Based on the vertical line on the paper, positive writing is ≥40 degrees and negative writing is ≤30 degrees.
Power on	The pen tip has a pressure sensor and automatically turns on (it automatically turns on when the stationery box is pulled out)
Dimension	L: 142mm, W: 9mm (excluding pen cap)
Product material	Engineering plastics + aluminum alloy
Weight	About 0.013kg (excluding pen cap)
smart pen box	
Bluetooth version	BLE4.2
Wireless transmission	4G full network communication
Transmission mode	Real-time transmission/offline transmission
Card slot	Cannot boot without card, security protection
Pairing mode	Fully automatic (no manual pairing required)
Input interface	Type-C
Output Interface	2pins standard magnetic suction head
Battery capacity	1500mAh, lithium-ion polymer
Charging time	≤2.5 hours
Continuous working hours	≥15 hours
Power input	DC 5.0V 2.0A
Power Output	DC 5.0V 0.30A
Standby time	300 days
Usage environment	0-50℃/humidity ≤95%RH (no condensation)
Dimension (L*W*H)	180mm*52mm*22mm
Product material	Engineering plastics, UL94-V0 fire protection grade material
Weight	0.13kg

Interconnect Blackboard

Interconnect Blackboard
TE-86HB-EG

(Smart interactive Intelligent Panel needs to be purchased separately, the above is a schematic diagram of the effect)

Description

The interconnected blackboard adopts an integrated design of microelectronic infrared technology to achieve functions such as synchronous display of blackboard writing and recording. It has the characteristics of high handwriting restoration , impact resistance , long lifespan , no light radiation, no heat source reflection, and low energy consumption . It is widely used in general education, vocational education, higher education and other teaching scenarios.

Feature

*The interconnected blackboard adopts a flat structural design , and the frame is equipped with an intelligent blackboard digitization system, which can synchronously display the blackboard content on the connected display device . There are blackboard function keys on one side of the blackboard to realize multiple functions such as deletion, color change, and saving .
*The interconnected blackboard is connected via a USB cable to achieve synchronization of blackboard writing functions .
*The interconnected blackboard can be written with ordinary chalk, with a smooth feel, full and even handwriting, clear lines and legible writing; there is no obvious residual writing when wiping with an eraser, and no dust is flying; it automatically recognizes ordinary chalk, whiteboard pens, erasers and fingers when writing .
*Built-in annotation function (not third-party software), with 8 annotation colors to choose from, supports saving annotation screenshots as image format files; has 3 annotation handwriting selection functions, including thin, medium and thick handwriting; has an eraser function, partial annotation erasure and modification, and the eraser area size is automatically associated with the thickness of the annotation handwriting; has the most recent eraser erase function, or handwriting annotation, quick undo function; has the function of clearing (clearing the screen) all annotation handwriting with one click; has the function of opening saved blackboard pictures through the annotation function for secondary editing.
*The interconnected blackboard is made of special environmentally friendly two- component polyurethane glue , which has high bonding strength and is not easy to debond . At the same time, the formaldehyde emission of the writing board meets the national provincial and above authoritative departments' testing standards for the release of harmful substances to ensure human health .
*The overall writing on the interconnected blackboard is smooth and continuous, and the drawing lines are smooth without breakage, jump or offset.
*The interconnected blackboard can run for a long time , and the signal amplitude is normal, neither too high nor too low.
*The software is compatible with Win7 or above systems. When it is started, it automatically detects whether the number of blackboards, network, and microphone are normal, and provides abnormal solutions.
*Based on any writing surface such as ordinary blackboards and ordinary whiteboards, ordinary chalk or whiteboard pens can be digitized in real time, and electronic blackboard writing with original handwriting is automatically generated to restore the teacher's important blackboard content, and synchronized to the teaching display screen in real time to realize digital teaching.
*It has a local mode, in which the blackboard and display device are displayed synchronously. It has the function of locally recording the blackboard, electronic courseware and teacher's voice, and archiving and storing them in a designated local location. When reviewing locally, one side has the blackboard and the other side has the courseware. You can use the index page function to quickly locate the content you want to watch without dragging the progress bar, which improves the efficiency of key review and learning review.
*It has an Internet-connected mode and is compatible with all functions of the local mode. During breaks, the system can identify users, and the blackboard notes, key knowledge points, and courseware content will be automatically synchronized with the teacher's network space and the school platform to form a school-based resource library, effectively preventing unauthorized personnel from using illegal and harmful information, and occupying the school's network space and traffic consumption.
*It has intelligent recognition function, no need to manually select settings, it can automatically identify changes in the thickness of the writing pen tip, and maximize the writing experience ; the software can set the critical range of the writing pen and the eraser. When the size of the operating object is larger than the critical range, it will be automatically identified as an eraser. There is no need to manually select settings, and it does not change the teacher's usage habits at all.
*It has an intelligent shielding function, which can automatically shield the interference of the teacher's sleeves and palms when writing. The writing effect will not be affected even if the fingers are close together or the left palm is under the blackboard, and the teacher's writing habits will not be changed at all.
*It has the function of multiple people writing at the same time. Multiple students can write smoothly on a single blackboard or multiple blackboards without affecting each other, meeting the teacher's interactive teaching requirements.
*The software has the function of setting the thickness of the digital blackboard notes. The blackboard notes can be made bolder according to the size of the classroom, making it easier for students at a distance, such as those in the back row of a large lecture hall, to watch.
*There are physical shortcut keys on both sides of the blackboard. According to usage habits, they can be set as single-side buttons or double-side buttons. The specific functions are as follows:
(1) Same-screen display: To meet the needs of multi-dimensional classroom teaching scenarios, the blackboard and the electronic large screen can be displayed synchronously or asynchronously .
(2) One-click screen clearing: The blackboard displayed on the monitor can be cleared with one click of a function button, allowing teachers to quickly remove screen noise. It also has an anti-accidental touch function, so that teachers will not accidentally touch the clear button during teaching, causing the valuable blackboard content to disappear. In other words, double-clicking within 2 seconds is considered a screen clearing operation .
(3) Real-time saving: You can use the function button to save the current blackboard writing on the local computer, and quickly save important blackboard writing content in a classroom without network or in local mode .
(4) Content switching: The Interactive Intelligent Panel can be switched to display blackboard content or computer courseware content through the function button .
(5) Page turning function: support through the function buttons up page and next page to realize the page turning of courseware or page turning to view the content of the saved board book.
6) Color selection: The color of the digitized blackboard writing can be selected through the function button. It is divided into red, blue and black, which makes it convenient for teachers to mark key points or difficult points according to the class content .
(7) Key points: Click the button to enter the key points recording mode, divide the area to capture the screen you want to record and enter the recording mode. It also supports the simultaneous display of blackboard notes. After the recording is completed, click the Done button to form a complete key points recording video. Students and teachers can watch the key points explanation video anytime and anywhere in their local or personal network space.
*Internet Blackboard has the following WeChat sharing functions:
*(1) It has two ways to enter the class: scanning the QR code on WeChat and entering the class number. After entering the classroom, the number of students who have signed in will be displayed. Through the WeChat public account, the content on the display screen can be captured in real time to form personalized class notes for students to save. It also supports sharing courses on WeChat and taking courses away. It also supports courses automatically following the class. Students do not need to scan the code. They can view the course content belonging to them after class or when they return home. They can view and review courses anytime and anywhere.
*(2) With picture uploading function, it supports the teacher to upload real-time pictures (students' homework, teaching materials, etc.) to the screen for the whole class to learn and communicate quickly, and with the teacher's consent, it supports all students to upload the contents of their respective pictures to the screen through their smartphones and other devices to be used as an interactive seminar for teaching and learning, and at the same time, it supports the teacher's function of not displaying and closing the offending and unhealthy pictures in a timely manner.
*It has the function of changing the writing background color. The page background color can be set to white, green, blue, and black. After changing to a dark background color, the system automatically recognizes it and switches the default handwriting color to white, avoiding teachers from repeatedly setting the handwriting color.
*It has the function of recording lessons. The client function can be used to record blackboard writing, electronic courseware and teacher's voice to achieve micro-recording and broadcasting. The software will not record the portraits of teachers and students, and the storage size of each lesson is within 50MB on average, which takes up less storage space.
*With key content review function, local mode or network mode, support for a class of key review, video, including lecture board, courseware, teaching voice, without dragging the progress bar through the whole class video to find the key content, fully and efficiently improve the efficiency of teachers and students to review the course.
*It has the function of recording and replaying lessons, supports content storage and playback. The recorded videos of the key points, difficult points and test points of the entire lesson can be viewed in local mode, mobile phone and WEB web page. It also has the function of taking notes with picture content.
*It can meet the needs of courseware display and recording, and supports files in common formats such as word, excel, jpg, pen, web, pdf, ppt, etc.

Specification

Model	TE-86HB-EG
Structure	Planar structure
Back Plate	Made of high quality rust-proof blue color-coated steel plate, thickness 0.4mm
Writing panel material	Enamel plate
Color	Dark green
Thickness of board substrate	0.35mm, no splicing on the whole board
Writing surface gloss	8%
Writing surface roughness	Ra1.6-3.2 μm
Writing surface coating hardness	9H
Power loss	2.0W
Power supply	USB
Location Accuracy	1.5mm
Touch Depth	3.0mm
Touch points	10
Minimum touch recognition object (infrared)	3mm
Minimum touch recognition object (capacitance)	8mm
Linearity	3mm
Response time	3-12ms
Light resistance	98000Lux
Service lifespan	15 years
Wrap Angle	Made of anti-aging, anti-fatigue, high-strength ABS engineering plastics, molded in one step,
	rounded corners without burrs and splicing
Liner	The lining board of the Internet blackboard is made of extruded board with excellent waterproof, flame
	retardant, sound insulation, shock absorption, corrosion resistance and high strength. The thickness is 14mm
	and the hardness is high. The board surface does not vibrate when writing, feels good and does not deform.
Frame	The material is high-grade matte aluminum alloy, silver-white or black, with oxidation and frosted coating
	treatment on the surface. The aluminum alloy profile has no scratches on the surface, is corrosion-resistant,
	and is molded in one step. Its color is soft, without glare or reflection, which can better ensure the teaching
	effect. The frame specification is 21.6×30mm, the maximum wall thickness is 1.4mm, and the internal
	reinforcement increases the effective writing area and enhances the stiffness of the writing board. It has a
	good sealing effect and will not loosen or deform.
Protection class	IP34
Operating temperature	0℃～40℃
Storage temperature	-20℃～ 60℃
Working humidity	20% to 80%, no condensation
Storage humidity	10% to 90%, no condensation
Outer diameter	Length 2038mm × height 1172mm
Machine dimension (length x width x height)	4000mm*120mm*1172mm (with 86-inch Interactive Intelligent Flat Panel)
Thickness of whole machine + wall mount	120mm (error ±2mm)

Interconnect Blackboard
TE-G110HB-AG / TE-G110HB-TG

(The 110-inch display needs to be purchased separately, the above is a schematic diagram)

Description

The interconnected blackboard adopts an integrated design of microelectronic infrared technology to achieve functions such as synchronous display of blackboard writing and recording. It has the characteristics of high handwriting restoration , impact resistance , long lifespan , no light radiation, no heat source reflection, and low energy consumption . It is widely used in general education, vocational education, higher education and other teaching scenarios.

Feature

*The interconnected blackboard adopts a flat structural design , and the frame is equipped with an intelligent blackboard digitization system, which can synchronously display the blackboard content on the connected display device . There are blackboard function keys on one side of the blackboard to realize multiple functions such as deletion, color change, and saving .
*The interconnected blackboard is connected via a USB cable to achieve synchronization of blackboard writing functions .
*The interconnected blackboard can be written with ordinary chalk, with a smooth feel, full and even handwriting, clear lines and legible writing; there is no obvious residual writing when wiping with an eraser, and no dust is flying; it automatically recognizes ordinary chalk, whiteboard pens, erasers and fingers when writing .
*Built-in annotation function (not third-party software), with 8 annotation colors to choose from, supports saving annotation screenshots as image format files; has 3 annotation handwriting selection functions, including thin, medium and thick handwriting; has an eraser function, partial annotation erasure and modification, and the eraser area size is automatically associated with the thickness of the annotation handwriting; has the most recent eraser erase function, or handwriting annotation, quick undo function; has the function of clearing (clearing the screen) all annotation handwriting with one click; has the function of opening saved blackboard pictures through the annotation function for secondary editing.
*The interconnected blackboard is made of special environmentally friendly two- component polyurethane glue , which has high bonding strength and is not easy to debond . At the same time, the formaldehyde emission of the writing board meets the national provincial and above authoritative departments' testing standards for the release of harmful substances to ensure human health .
*The overall writing on the interconnected blackboard is smooth and continuous, and the drawing lines are smooth without breakage, jump or offset.
*The interconnected blackboard can run for a long time , and the signal amplitude is normal, neither too high nor too low.
*The software is compatible with Win7 or above systems. When it is started, it automatically detects whether the number of blackboards, network, and microphone are normal, and provides abnormal solutions.
*Based on any writing surface such as ordinary blackboards and ordinary whiteboards, ordinary chalk or whiteboard pens can be digitized in real time, and electronic blackboard writing with original handwriting is automatically generated to restore the teacher's important blackboard content, and synchronized to the teaching display screen in real time to realize digital teaching.
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*It has intelligent recognition function, no need to manually select settings, it can automatically identify changes in the thickness of the writing pen tip, and maximize the writing experience ; the software can set the critical range of the writing pen and the eraser. When the size of the operating object is larger than the critical range, it will be automatically identified as an eraser. There is no need to manually select settings, and it does not change the teacher's usage habits at all.
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(4) Content switching: The Interactive Intelligent Panel can be switched to display blackboard content or computer courseware content through the function button .
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(7) Key points: Click the button to enter the key points recording mode, divide the area to capture the screen you want to record and enter the recording mode. It also supports the simultaneous display of blackboard notes. After the recording is completed, click the Done button to form a complete key points recording video. Students and teachers can watch the key points explanation video anytime and anywhere in their local or personal network space.
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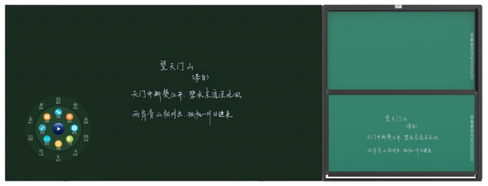
*(2) With picture uploading function, it supports the teacher to upload real-time pictures (students' homework, teaching materials, etc.) to the screen for the whole class to learn and communicate quickly, and with the teacher's consent, it supports all students to upload the contents of their respective pictures to the screen through their smartphones and other devices to be used as an interactive seminar for teaching and learning, and at the same time, it supports the teacher's function of not displaying and closing the offending and unhealthy pictures in a timely manner.
*It has the function of changing the writing background color. The page background color can be set to white, green, blue, and black. After changing to a dark background color, the system automatically recognizes it and switches the default handwriting color to white, avoiding teachers from repeatedly setting the handwriting color.
*It has the function of recording lessons. The client function can be used to record blackboard writing, electronic courseware and teacher's voice to achieve micro-recording and broadcasting. The software will not record the portraits of teachers and students, and the storage size of each lesson is within 50MB on average, which takes up less storage space.
*With key content review function, local mode or network mode, support for a class of key review, video, including lecture board, courseware, teaching voice, without dragging the progress bar through the whole class video to find the key content, fully and efficiently improve the efficiency of teachers and students to review the course.
*It has the function of recording and replaying lessons, supports content storage and playback. The recorded videos of the key points, difficult points and test points of the entire lesson can be viewed in local mode, mobile phone and WEB web page. It also has the function of taking notes with picture content.
*It can meet the needs of courseware display and recording, and supports files in common formats such as word, excel, jpg, pen, web, pdf, ppt, etc.

Specification

Model	TE-G110HB-AG	TE-G110HB-TG
Structure	Planar structure	
Back Plate	Made of high quality rust-proof blue color-coated steel plate, thickness 0.4mm	
Writing panel material	Enamel plate	
Color	Dark green	
Thickness of board substrate	0.35mm, no splicing on the whole board	
Writing surface gloss	8%	
Writing surface roughness	Ra1.6-3.2μm	
Writing surface coating hardness	9H	
Power loss	2.0W	
Power supply	USB	
Location Accuracy	1.5mm	
Touch Depth	3.0mm	
Touch points	10	
Minimum touch recognition object (infrared)	3mm	
Minimum touch recognition object (capacitance)	8mm	
Linearity	3mm	
Response time	3-12ms	
Light resistance	98000Lux	
Service lifespan	15 years	
Wrap Angle	Made of anti-aging, anti-fatigue, high-strength ABS engineering plastics, molded in one step,	
	rounded corners without burrs and splicing	
Liner	The lining board of the Internet blackboard is made of extruded board with excellent waterproof,	
	flame retardant, sound insulation, shock absorption, corrosion resistance and high strength.	
	The thickness is 14mm and the hardness is high. The board surface does not vibrate when writing,	
	feels good and does not deform.	
Frame	The material is high-grade matte aluminum alloy, silver-white or black, with oxidation and frosted coating	
	treatment on the surface. The aluminum alloy profile has no scratches on the surface, is corrosion-resistant,	
	and is molded in one step. Its color is soft, without glare or reflection, which can better ensure the teaching	
	effect. The frame specification is 21.6×30mm, the maximum wall thickness is 1.4mm, and the internal	
	reinforcement increases the effective writing area and enhances the stiffness of the writing board.	
	It has a good sealing effect and will not loosen or deform.	
Protection class	IP34	
Operating temperature	0˚C～40˚C	
Storage temperature	-20˚C～ 60˚C	
Working humidity	20% to 80%, no condensation	
Storage humidity	10% to 90%, no condensation	
Outer diameter	Length 2247mm × height 1379mm	Length 2476mm × height 1408mm
Machine dimension (length x width x height)	4894mm*59mm*1379mm (with 110-inch display)	4952mm*65mm*1408mm (with 110- inch display)
Thickness of whole machine + wall mount	120mm (error ±2mm)	65mm (error ±2mm)

Interconnect Blackboard
TE-G138HB-AG / TE-G138HB-TG



(The 138-inch display needs to be purchased separately, the above is a schematic diagram)

Description

The interconnected blackboard is assembled from two writing boards of the same size that can be rotated up and down and supporting products. It uses microelectronic infrared technology to realize functions such as synchronous display of blackboard writing and light recording and playback. It has the characteristics of high handwriting restoration , impact resistance , long lifespan, no light radiation, no heat source reflection, and low energy consumption . It is widely used in general education, vocational education, higher education and other teaching scenarios.

Feature

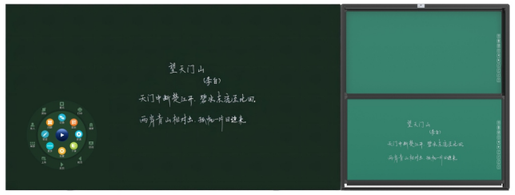
*The interconnected blackboard adopts high-quality slides , closed dust-proof bearings , wire rope lifting , and up and down push-pull structure design . The entire lifting structure is installed on the inner surface of the vertical frame of the blackboard. The lifting blackboard frame is equipped with an intelligent blackboard digitization system, which can synchronously display the blackboard content on the connected display device . There are blackboard function keys on one side of the blackboard to realize multiple functions such as deletion, color change, and saving .
*The interconnected blackboard is connected via a USB cable to achieve synchronization of blackboard writing functions . A chalk slot is provided under the interconnected blackboard, and the chalk slot is inlaid with the lower frame of the blackboard .
*The interconnected blackboard can be written with ordinary chalk, with a smooth feel, full and even handwriting, clear lines and legible writing; there is no obvious residual writing when wiping with an eraser, and no dust is flying; it automatically recognizes ordinary chalk, whiteboard pens, erasers and fingers when writing .
*Built-in annotation function (not third-party software), with 8 annotation colors to choose from, supports saving annotation screenshots as image format files; has 3 annotation handwriting selection functions, including thin, medium and thick handwriting; with the most recent eraser erase function, or handwritten annotations, fast undo function; with a key to clear (clear screen) all the annotations handwritten content of the function; with the annotations through the function to open the saved blackboard picture for secondary editing function.
*The interconnected blackboard is made of special environmentally friendly two- component polyurethane glue , which has high bonding strength and is not easy to debond . At the same time, the formaldehyde emission of the writing board meets the national provincial and above authoritative departments' testing standards for the release of harmful substances to ensure human health.
*The overall writing on the interconnected blackboard is smooth and continuous, and the drawing lines are smooth without breakage, jump or offset.
*The interconnected blackboard can run for a long time , and the signal amplitude is normal, neither too high nor too low.
*The software is compatible with Win7 or above systems. When it is started, it automatically detects whether the number of blackboards, network, and microphone are normal, and provides abnormal solutions.
*Based on any writing surface such as ordinary blackboards and ordinary whiteboards, ordinary chalk or whiteboard pens can be digitized in real time, and electronic blackboard writing with original handwriting is automatically generated to restore the teacher's important blackboard content, and synchronized to the teaching display screen in real time to realize digital teaching.
*With local mode, the blackboard is synchronized with the display device. With local recording of the blackboard, electronic courseware and teacher's voice, and archived and stored locally in a designated location. When reviewing locally, there is the blackboard on one side and the courseware on the other. Using the index page function, you can quickly find what you want to see without dragging the progress bar, which improves the efficiency of key review and study review.
*With networking mode, compatible with all the functions of the local mode, the system can identify the user's identity during the classroom, the explanation of the board and knowledge focus and the content of the courseware will be automatically synchronized with the teacher's cyberspace and the school platform to form a school-based resource library, effectively eliminating the use of non-authorized personnel to produce illegal and harmful information, and occupy the school's cyberspace and the problem of traffic consumption.
*With intelligent recognition function, no need to manually select settings, it can automatically identify changes in the thickness of the writing pen tip, and maximize the writing experience ; the software can set the critical range of the writing pen and the eraser. When the size of the operating object is larger than the critical range, it will be automatically identified as an eraser. There is no need to manually select settings, and it does not change the teacher's usage habits at all.
*With intelligent shielding function, which can automatically shield the interference of the teacher's sleeves and palms when writing. The writing effect will not be affected even if the fingers are close together or the left palm is under the blackboard, and the teacher's writing habits will not be changed at all.
*With multiple simultaneous writing function, multiple students in a single blackboard or multi-blackboard scenarios of their own smooth writing, do not affect each other, to meet the teacher's interactive teaching requirements.
*The software has the function of setting the thickness of the digital blackboard notes. The blackboard notes can be made bolder according to the size of the classroom, making it easier for students at a distance, such as those in the back row of a large lecture hall, to watch.
*There are physical shortcut keys on both sides of the blackboard. According to usage habits, they can be set as single-side buttons or double-side buttons. The specific functions are as follows:
(1) Same-screen display: To meet the needs of multi-dimensional classroom teaching scenarios, the blackboard and the electronic large screen can be displayed synchronously or asynchronously .
(2) One-click screen clearing: The blackboard displayed on the monitor can be cleared with one click of a function button, allowing teachers to quickly remove screen noise. It also has an anti-accidental touch function, so that teachers will not accidentally touch the clear button during teaching, causing the valuable blackboard content to disappear . In other words, double-clicking within 2 seconds is considered a screen clearing operation .
(3) Real-time saving: You can use the function button to save the current blackboard writing on the local computer, and quickly save important blackboard writing content in a classroom without network or in local mode .
(4) Content switching: The Interactive Intelligent Panel can be switched to display blackboard content or computer courseware content through the function button . and next page function buttons to turn the courseware pages or turn the pages of the saved blackboard content .
(6) Color selection: The color of the digitized blackboard writing can be selected through the function button. It is divided into red, blue and black, which makes it convenient for teachers to mark key points or difficult points according to the class content .
(7) Key points: Click the button to enter the key points recording mode, divide the area to capture the screen you want to record and enter the recording mode. It also supports the simultaneous display of blackboard notes. After the recording is completed, click the Done button to form a complete key points recording video. Students and teachers can watch the key points explanation video anytime and anywhere in their local or personal network space.
*Internet Blackboard has the following WeChat sharing functions:

(1) It has two ways to enter the class: scanning the QR code on WeChat and entering the class number. After entering the classroom, the number of students who have signed in will be displayed. Through the WeChat public account, the content on the display screen can be captured in real time to form personalized class notes for students to save. It also supports sharing courses on WeChat and taking courses away. It also supports courses automatically following the class. Students do not need to scan the code. They can view the course content belonging to them after class or when they return home. They can view and review courses anytime and anywhere.
*(2)With picture uploading function, it supports the teacher to upload real-time pictures (students' homework, teaching materials, etc.) to the screen for the whole class to learn and communicate quickly, and with the teacher's consent, it supports all students to upload the contents of their respective pictures to the screen through their smartphones and other devices to be used as an interactive seminar for teaching and learning, and at the same time, it supports the teacher's function of not displaying and closing the offending and unhealthy pictures in a timely manner.
*It has the function of changing the writing background color. The page background color can be set to white, green, blue, and black. After changing to a dark background color, the system automatically recognizes it and switches the default handwriting color to white, avoiding teachers from repeatedly setting the handwriting color.
*It has the function of recording lessons. The client function can be used to record blackboard writing, electronic courseware and teacher's voice to achieve micro-recording and broadcasting. The software will not record the portraits of teachers and students, and the storage size of each lesson is within 50MB on average, which takes up less storage space.
*It has the function of reviewing key points. In local mode or network mode, it supports reviewing the key points of a class. The video includes the lecture blackboard, courseware, and teaching voice. There is no need to drag the progress bar through the entire class video to find the key content, which fully and efficiently improves the review efficiency of teachers and students.
*It has the function of recording and replaying lessons, supports content storage and playback. The recorded videos of the key points, difficult points and test points of the entire lesson can be viewed in local mode, mobile phone and WEB web page. It also has the function of taking notes with picture content.
*It can meet the needs of courseware display and recording, and supports files in common formats such as word, excel, jpg, pen, web, pdf, ppt, etc.
*There are two parallel convex rails designed on the inner side of the blackboard frame. The rails and the frame are integrated into one design and the mold is formed in one step. Four sets (8) of concave pulleys are evenly and invisiblely installed on both sides of each sliding writing blackboard. The two concave pulleys are respectively slidably connected to the front and rear single convex rails of the convex rails, so the writing board can be raised and lowered without tilting or shaking back and forth. The pulley can push and pull for 90,000 times and can be used normally.
*Four buffer pads are installed on both sides of the inner surface of the outer frame of each set of lifting blackboards to prevent direct collision between the writing board frame and the outer frame, effectively reducing noise and protecting the writing board and motion system.

Specification

Model	TE-G138HB-AG	TE-G138HB-TG
Structure	Up and down push and pull structure	
Back Plate	Made of high quality rust-proof blue color-coated steel plate, thickness ≥ 0.4mm	
Writing panel material	Enamel plate	
Color	Dark green	
Thickness of board substrate	0.35mm, no splicing on the whole board	
Writing surface gloss	8%	
Writing surface roughness	Ra1.6-3.2μm	
Writing surface coating hardness	9H	
Power loss	4.0W	
Power supply	USB	
Location Accuracy	1.5mm	
Touch Depth	3.0mm	
Touch points	10	
Minimum touch recognition object (infrared)	3mm	
Minimum touch recognition object (capacitance)	8mm	
Linearity	3mm	
Response time	3-12ms	
Light resistance	98000Lux	
Service lifespan	15 years	
Wrap Angle	Made of anti-aging, anti-fatigue, high-strength ABS engineering plastics,	
	molded in one step, rounded corners without burrs and splicing	
Liner	The sliding board lining of the interconnected blackboard is made of extruded board with excellent waterproof,	
	flame retardant, sound insulation, shock absorption, corrosion resistance and high strength. The thickness is	
	15mm, the hardness is high, the board surface does not vibrate when writing, the hand feel is good, and it	
	does not deform. The other lifting board linings are made of moisture-proof and good stiffness polystyrene	
	foam board with a thickness of 15mm; when writing, the board surface does not vibrate	
Frame	The material is high-grade matte aluminum alloy, silver-white or black, the surface is treated with oxidation and	
	frosted coating, the surface of the aluminum alloy profile is scratch-free, corrosion-resistant, and the mold is	
	formed in one step. Its color is soft, glare-free, and non-reflective, which better guarantees the teaching effect.	
	The frame specifications are 21.6×30mm, 42.6×30mm, and the maximum wall thickness is 1.4mm. The	
	internal reinforcement increases the effective writing area and enhances the stiffness of the writing board. The	
	sealing effect is good, it will not loosen or deform. The lower frame of the movable board has a handle, which	
	is convenient for pushing up and down. The overall appearance is beautiful. The outer frame specifications are	
	left and right vertical frames 110mm×55mm, the middle vertical frame 110mm×80mm, and the horizontal frame	
	110mm×30mm. There is a guard plate outside the vertical frame. The outer frame and the track are integrated,	
	which effectively improves the safety of product use and can effectively protect the built-in track so that the	
	track will not be deformed by external impact.	
Groove wheel	Fixed on the inner surface of the vertical frame, invisible installation;	
	the pulley adopts precision bearings and wear-resistant polyester material	
Transmission connection	The 3mm diameter steel wire rope has high mechanical strength;	
	the writing board moves up and down easily and without noise.	
Chalk Trough	Effectively prevent chalk dust from falling vertically, width 70mm, wall thickness 1.0mm; connected to the frame	
	by a twisted buckle inlay, aluminum alloy color consistent, end with ABS plastic plugging to prevent scratches	
Protection class	IP34	
Operating temperature	0˚C～40˚C.	
Storage temperature	-20˚C～ 60˚C.	
Working humidity	20% to 80%, no condensation	
Storage humidity	10% to 90%, no condensation	
Single board outer diameter	Length 2000mm×Height 861mm	Length 2000mm×Height 876mm
Machine dimension (length x width x height)	5062mm*110mm*1722mm (with 138-inch display)	5091mm*110mm*1751mm (with 138-inch display)
Thickness of whole machine + wall mount	110mm (error ±2mm)	

Interconnected Blackboard
TE-G165HB-AG / TE-G165HB-TG



(The 165-inch display needs to be purchased separately, the above is a schematic diagram)

Description

The interconnected blackboard is assembled from two writing boards of the same size that can be rotated up and down and supporting products. It uses microelectronic infrared technology to realize functions such as synchronous display of blackboard writing and light recording and playback. It has the characteristics of high handwriting restoration , impact resistance , long lifespan, no light radiation, no heat source reflection, and low energy consumption . It is widely used in general education, vocational education, higher education and other teaching scenarios.

Feature

*The interconnected blackboard adopts high-quality slides , closed dust-proof bearings , wire rope lifting , and up and down push-pull structure design . The entire lifting structure is installed on the inner surface of the vertical frame of the blackboard. The lifting blackboard frame is equipped with an intelligent blackboard digitization system, which can synchronously display the blackboard content on the connected display device . There are blackboard function keys on one side of the blackboard to realize multiple functions such as deletion, color change, and saving .
*The interconnected blackboard is connected via a USB cable to achieve synchronization of blackboard writing functions . A chalk slot is provided under the interconnected blackboard, and the chalk slot is inlaid with the lower frame of the blackboard .
*The interconnected blackboard can be written with ordinary chalk, with a smooth feel, full and even handwriting, clear lines and legible writing; there is no obvious residual writing when wiping with an eraser, and no dust is flying; it automatically recognizes ordinary chalk, whiteboard pens, erasers and fingers when writing .
*Built-in annotation function (not third-party software), with 8 annotation colors to choose from, supports saving annotation screenshots as image format files; has 3 annotation handwriting selection functions, including thin, medium and thick handwriting; with the most recent eraser erase function, or handwritten annotations, fast undo function; with a key to clear (clear screen) all the annotations handwritten content of the function; with the annotations through the function to open the saved blackboard picture for secondary editing function.
*The interconnected blackboard is made of special environmentally friendly two- component polyurethane glue , which has high bonding strength and is not easy to debond . At the same time, the formaldehyde emission of the writing board meets the national provincial and above authoritative departments' testing standards for the release of harmful substances to ensure human health.
*The overall writing on the interconnected blackboard is smooth and continuous, and the drawing lines are smooth without breakage, jump or offset.
*The interconnected blackboard can run for a long time , and the signal amplitude is normal, neither too high nor too low.
*The software is compatible with Win7 or above systems. When it is started, it automatically detects whether the number of blackboards, network, and microphone are normal, and provides abnormal solutions.
*Based on any writing surface such as ordinary blackboards and ordinary whiteboards, ordinary chalk or whiteboard pens can be digitized in real time, and electronic blackboard writing with original handwriting is automatically generated to restore the teacher's important blackboard content, and synchronized to the teaching display screen in real time to realize digital teaching.
*With local mode, the blackboard is synchronized with the display device. With local recording of the blackboard, electronic courseware and teacher's voice, and archived and stored locally in a designated location. When reviewing locally, there is the blackboard on one side and the courseware on the other. Using the index page function, you can quickly find what you want to see without dragging the progress bar, which improves the efficiency of key review and study review.
*With networking mode, compatible with all the functions of the local mode, the system can identify the user's identity during the classroom, the explanation of the board and knowledge focus and the content of the courseware will be automatically synchronized with the teacher's cyberspace and the school platform to form a school-based resource library, effectively eliminating the use of non-authorized personnel to produce illegal and harmful information, and occupy the school's cyberspace and the problem of traffic consumption.
*With intelligent recognition function, no need to manually select settings, it can automatically identify changes in the thickness of the writing pen tip, and maximize the writing experience ; the software can set the critical range of the writing pen and the eraser. When the size of the operating object is larger than the critical range, it will be automatically identified as an eraser. There is no need to manually select settings, and it does not change the teacher's usage habits at all.
*With intelligent shielding function, which can automatically shield the interference of the teacher's sleeves and palms when writing. The writing effect will not be affected even if the fingers are close together or the left palm is under the blackboard, and the teacher's writing habits will not be changed at all.
*With multiple simultaneous writing function, multiple students in a single blackboard or multi-blackboard scenarios of their own smooth writing, do not affect each other, to meet the teacher's interactive teaching requirements.
*The software has the function of setting the thickness of the digital blackboard notes. The blackboard notes can be made bolder according to the size of the classroom, making it easier for students at a distance, such as those in the back row of a large lecture hall, to watch.
*There are physical shortcut keys on both sides of the blackboard. According to usage habits, they can be set as single-side buttons or double-side buttons. The specific functions are as follows:
(1) Same-screen display: To meet the needs of multi-dimensional classroom teaching scenarios, the blackboard and the electronic large screen can be displayed synchronously or asynchronously .
(2) One-click screen clearing: The blackboard displayed on the monitor can be cleared with one click of a function button, allowing teachers to quickly remove screen noise. It also has an anti-accidental touch function, so that teachers will not accidentally touch the clear button during teaching, causing the valuable blackboard content to disappear . In other words, double-clicking within 2 seconds is considered a screen clearing operation .
(3) Real-time saving: You can use the function button to save the current blackboard writing on the local computer, and quickly save important blackboard writing content in a classroom without network or in local mode .
(4) Content switching: The Interactive Intelligent Panel can be switched to display blackboard content or computer courseware content through the function button . and next page function buttons to turn the courseware pages or turn the pages of the saved blackboard content .
(6) Color selection: The color of the digitized blackboard writing can be selected through the function button. It is divided into red, blue and black, which makes it convenient for teachers to mark key points or difficult points according to the class content .
(7) Key points: Click the button to enter the key points recording mode, divide the area to capture the screen you want to record and enter the recording mode. It also supports the simultaneous display of blackboard notes. After the recording is completed, click the Done button to form a complete key points recording video. Students and teachers can watch the key points explanation video anytime and anywhere in their local or personal network space.
*Internet Blackboard has the following WeChat sharing functions:

Interconnect Blackboard

(1) It has two ways to enter the class: scanning the QR code on WeChat and entering the class number. After entering the classroom, the number of students who have signed in will be displayed. Through the WeChat public account, the content on the display screen can be captured in real time to form personalized class notes for students to save. It also supports sharing courses on WeChat and taking courses away. It also supports courses automatically following the class. Students do not need to scan the code. They can view the course content belonging to them after class or when they return home. They can view and review courses anytime and anywhere.
*(2)With picture uploading function, it supports the teacher to upload real-time pictures (students' homework, teaching materials, etc.) to the screen for the whole class to learn and communicate quickly, and with the teacher's consent, it supports all students to upload the contents of their respective pictures to the screen through their smartphones and other devices to be used as an interactive seminar for teaching and learning, and at the same time, it supports the teacher's function of not displaying and closing the offending and unhealthy pictures in a timely manner.
*It has the function of changing the writing background color. The page background color can be set to white, green, blue, and black. After changing to a dark background color, the system automatically recognizes it and switches the default handwriting color to white, avoiding teachers from repeatedly setting the handwriting color.
*It has the function of recording lessons. The client function can be used to record blackboard writing, electronic courseware and teacher's voice to achieve micro-recording and broadcasting. The software will not record the portraits of teachers and students, and the storage size of each lesson is within 50MB on average, which takes up less storage space.
*It has the function of reviewing key points. In local mode or network mode, it supports reviewing the key points of a class. The video includes the lecture blackboard, courseware, and teaching voice. There is no need to drag the progress bar through the entire class video to find the key content, which fully and efficiently improves the review efficiency of teachers and students.
*It has the function of recording and replaying lessons, supports content storage and playback. The recorded videos of the key points, difficult points and test points of the entire lesson can be viewed in local mode, mobile phone and WEB web page. It also has the function of taking notes with picture content.
*It can meet the needs of courseware display and recording, and supports files in common formats such as word, excel, jpg, pen, web, pdf, ppt, etc.
*There are two parallel convex rails designed on the inner side of the blackboard frame. The rails and the frame are integrated into one design and the mold is formed in one step. Four sets (8) of concave pulleys are evenly and invisiblely installed on both sides of each sliding writing blackboard. The two concave pulleys are respectively slidably connected to the front and rear single convex rails of the convex rails, so the writing board can be raised and lowered without tilting or shaking back and forth. The pulley can push and pull for 90,000 times and can be used normally.
*Four buffer pads are installed on both sides of the inner surface of the outer frame of each set of lifting blackboards to prevent direct collision between the writing board frame and the outer frame, effectively reducing noise and protecting the writing board and motion system.

Specification

Model	TE-G165HB-AG	TE-G165HB-TG
Structure	Up and down push and pull structure	
Back Plate	Made of high quality rust-proof blue color-coated steel plate, thickness ≥ 0.4mm	
Writing panel material	Enamel plate	
Color	Dark green	
Thickness of board substrate	0.35mm, no splicing on the whole board	
Writing surface gloss	8%	
Writing surface roughness	Ra1.6-3.2μm	
Writing surface coating hardness	9H	
Power loss	4.0W	
Power supply	USB	
Location Accuracy	1.5mm	
Touch Depth	3.0mm	
Touch points	10	
Minimum touch recognition object (infrared)	3mm	
Minimum touch recognition object (capacitance)	8mm	
Linearity	3mm	
Response time	3-12ms	
Light resistance	98000Lux	
Service lifespan	15 years	
Wrap Angle	Made of anti-aging, anti-fatigue, high-strength ABS engineering plastics,	
	molded in one step, rounded corners without burrs and splicing	
Liner	The sliding board lining of the interconnected blackboard is made of extruded board with excellent waterproof,	
	flame retardant, sound insulation, shock absorption, corrosion resistance and high strength. The thickness is	
	15mm, the hardness is high, the board surface does not vibrate when writing, the hand feel is good, and it	
	does not deform. The other lifting board linings are made of moisture-proof and good stiffness polystyrene	
	foam board with a thickness of 15mm; when writing, the board surface does not vibrate	
Frame	The material is high-grade matte aluminum alloy, silver-white or black, the surface is treated with oxidation and	
	frosted coating, the surface of the aluminum alloy profile is scratch-free, corrosion-resistant, and the mold is	
	formed in one step. Its color is soft, glare-free, and non-reflective, which better guarantees the teaching effect.	
	The frame specifications are 21.6×30mm, 42.6×30mm, and the maximum wall thickness is 1.4mm. The	
	internal reinforcement increases the effective writing area and enhances the stiffness of the writing board.	
	The sealing effect is good, it will not loosen or deform. The lower frame of the movable board has a handle,	
	which is convenient for pushing up and down. The overall appearance is beautiful. The outer frame	
	specifications are left and right vertical frames 110mm×55mm, the middle vertical frame 110mm×80mm,	
	and the horizontal frame 110mm×30mm. There is a guard plate outside the vertical frame. The outer frame	
	and the track are integrated, which effectively improves the safety of product use and can effectively protect	
	the built-in track so that the track will not be deformed by external impact.	
Groove wheel	Fixed on the inner surface of the vertical frame, invisible installation;	
	the pulley adopts precision bearings and wear-resistant polyester material	
Transmission connection	The 3mm diameter steel wire rope has high mechanical strength;	
	the writing board moves up and down easily and without noise.	
Chalk Trough	Effectively prevent chalk dust from falling vertically, width 70mm, wall thickness 1.0mm; connected to the frame	
	by a twisted buckle inlay, aluminum alloy color consistent, end with ABS plastic plugging to prevent scratches	
Protection class	IP34	
Operating temperature	0˚C～40˚C.	
Storage temperature	-20˚C～ 60˚C.	
Working humidity	20% to 80%, no condensation	
Storage humidity	10% to 90%, no condensation	
Single board outer diameter	Length 2000mm×Height 1032mm	Length 2000mm×Height 1047mm
Machine dimension (length x width x height)	5672mm*110mm*2065mm (with 165-inch display)	5701mm*110mm*2094mm (with 165-inch display)
Thickness of whole machine + wall mount	110mm (error ±2mm)	

HD Recording and broadcasting system

Recording Controller

Automatic recording control embedded software V3.11

TS-0650

Description

The new fully automatic eight-position audiovisual recording equipment adopts integrated hardware design, embedded Linux operating system, highly integrated image acquisition, recognition and tracking, recording, automatic broadcast, live broadcast, on-demand and other system modules, meeting the needs of producing high-quality teaching videos, online learning, interactive teaching, etc.

Feature

* Integrated hardware device, embedded Linux OS, highly integrated system module such as image recognition tracking, automatic navigation, live, VOD, acquisition, and recording, easy to use and maintain, with high security.
* Based on the B/S architecture, you can log in to the web to realize functions such as live broadcast management, signal management, group management, user management, file management, scheduled recording, central control management, and system management.
* Audio adopts AAC high-definition encoding method, and the audio and video are accurately and synchronously recorded.
* Video adopts H.264 encoding method with adjustable bit rate; support video encoding from 256kbps to 12Mbps, and support resolutions such as 1920x1080.
* The most advanced tracking algorithm is used to detect the vertical movement tracking of face, and ignore other activities of the students; the accuracy rate reaches more than 90% to intelligently present classroom focus.
* Accurately track students of low age and large height differences without installation of auxiliary tracking and analysis cameras, and support self adapt of the height of students in different classes.
* The recording controller has an encryption algorithm to ensure that the copyrighted machine needs to be activated to have the right to use, and support the authorized using date.
* With 2.2-inch LCD screen, to display system hard disk space, version number and recording status, IP address and other device information.
* The controller comes with 2TB storage space, and the recording content can be stored for up to 2000 class hours; support frequent use of the device for more than one year; support automatic deletion of old files and loop recording.
* Equipped with 3-channel HDMI signal input interfaces, which can be used to connect to computer or camera.
* Equipped with 4-channel SDI signal input interfaces, which can be used to connect to camera.
* Equipped with 1 YCBR composite signal input interface for connecting external signal sources.
* Equipped with 8-channel network signal inputs, adopt standard RTSP stream access to collect network camera signals.
* Equipped with up to 8-channel simultaneous inputs of video signals, and the signal type supports HDMI/3G-SDI/IP.
* Equipped with 2-channel HDMI video output interfaces for connecting external display devices.
* Equipped with 3-channel 3.5mm audio input interfaces for collecting external audio signals.
* Equipped with 2-channel 3.5mm audio output interfaces for monitoring or connecting to external sound reinforcement equipment.
* Equipped with 4 RS-232 control interfaces, which can be used for seamless signaling docking with other control systems.
* Equipped with 3 USB ports for connecting U disk or keyboard and mouse.
* Equipped with 2-channel 802.3ab 1000Base-T gigabit network interfaces, support IPv4 address and IPv6 address.
* Equipped with 2.4G remote control, with laser pointer function, which can realize remote one-key recording function, support the control of computer to perform PPT operations, such as PPT page turning, playback, and exit.
* Support manual navigation through navigation software, and can also cooperate with the built-in automatic navigation module for fully automatic navigation.
* Support remote control of the control panel. Click the panel button to realize the input source screen monitoring or navigation switching, recording mode switching, start and stop recording, special effects switching and camera control functions.
* Support simultaneous rotation and zooming of up to 8 PTZ cameras, and support image tracking function with one key.
* Support single-stream single-screen / single-stream multi-screen / multi-stream multi-screen recording, which can realize that each input signal can be saved as a separate file, and can record up to 5-channel video images at the same time; support custom categories for classified recording and classified storage, support multiple formats such as MP4, AVI, MOV, FLV and MKV.
* Support 7 screen layouts including three screens, four screens and dialogue screens, and support 2 custom screen layouts to meet individual needs.
* Support custom segmented recording, with a duration of 30-480 minutes optional, and can seamlessly connect with other manufacturers' non-line editing tools.
* Support PVW and PGM dual screens, support output switching special effects when switching output display, including 12 kinds of screen switching special effects such as gradual change, erase, push, expand, and fly-in.
* Support subtitle settings, built-in subtitle templates, users can customize the size, color, and position of the letters.
* Support online voice transcribing function to realize speech-to-text and automatically generate subtitles.
* Support custom add film title function, support to upload customized title and display time.
* Support tagging each video screen to distinguish the screen and display different content.
* Support appointment recording function. After the appointment recording class schedule is edited, it will automatically record according to the scheduled time, and automatically produce the file name with information such as venue, speaker and subject.
* Built-in VOD module, which can perform online playback, pause, jump and other operations of video files through network.
* Support live broadcast function, support simultaneous live broadcast of 50 users in the LAN; support standard RTMP streaming protocol, which can be connected to third-party live broadcast platform for online live broadcast, which is convenient for expanding live broadcast number.
* It can cooperate with third-party FTP file server to automatically upload backup files. The courseware is automatically sent to the file server. File uploads and downloads automatically adjust bandwidth to prevent network congestion.
* Support video file repair function. During the recording, video files damaged by power failure can be repaired.
* Support one-button reset function to avoid file corruption, loss of IP address, loss of administrator password and system failure.
* Support one-key upgrade function. When the system has new function iterations, the function upgrade can be realized by importing firmware.
* Support software central control, fill in the central control command in the recording management interface to use the interface for central control operation, docking other devices to support one-key central control instructions.
* Support docking with private cloud platform server. After successful docking, cloud platform can uniformly control equipment, facilitating the management of multiple recording equipment.
* Support user group management function, which can assign account permissions to each user. Users can only watch live and on-demand files after authorization, and the corresponding users can only access the corresponding files.

Specification

Model	TS-0650
Video protocol	H.264
Code stream	256Kbps~12Mbps
Video output format	MP4/MOV/MKV/FLV/AVI/TS
Audio protocol	AAC
Live broadcast protocol	Support TS, RTSP,
	RTP and RTMP real-time protocol streams
Network protocol	Support TCP, UDP, RTMP, RTSP, FTP, DHCP,
	HTTP protocol
Video input interface	4-channel SDI high-definition video interfaces,
	3-channel HDMI high-definition video interfaces,
	1-channel composite video interface
Video output interface	3-channel HDMI high-definition video interfaces
Input resolution	1920x1080P60/P50/I60/I50/P30/P25fps
Output resolution	1920x1080P60/P50/P30/P25fps,
	1280x720P60/P50/P30/P25fps,
	720X576P60/P50/P30/P25fps
Audio input interface	3-channel 3.5mm audio interfaces
Audio output interface	2-channel 3.5mm audio interfaces (synchronous output)
Network port	2-channel Gigabit Ethernet ports
USB interface	3-channel USB 2.0 interfaces
Control port	4-channel RS-232 interfaces
Panel button	1×switch button
Storage	2TB
Power supply	DC 24V/5A
Power consumption	45W
Weight	4.2kg
Size	484×310×60mm (L×D×H)
Operating temperature	-10°C~55°C (Well-ventilated ambient temperature)
Operating humidity	20%~80% relative humidity, no condensation

Education Cloud Platform Server
TS-0620E

Description

Education cloud platform is a comprehensive education platform with the functions of on-demand, live, teaching and research activities and campus management in response to the national policy of "Three Supplies Two Platforms". Based on the deep understanding of the guiding ideology of "Three Supplies Two Platforms", in-depth consideration of the actual demands of the education industry users on the course recording and the use of recording content to carry out follow-up applications. It combines the recognition of the application of cloud computing, big data in education industry, drived from business needs, and match with the efficient, stable and reliable system structure, to meet the demands of teacher teaching, student learning, parental tracking and education management institutions administration based on the platform and etc.
It adopts embedded Linux operating system, efficient, stable and reliable system architecture. And IT integrates video on demand, live broadcast, teaching and research activities, and campus management function modules.
Support for browser access and management, including IE, Google Chrome, Firefox and other browsers that use the IE kernel, such as 360, Sogou, etc. IE supports IE8 and above.
Adapt to IOS, Android mobile. Support on-demand, live broadcast, homework, personal space management and other operations.

Feature

Video on demand
*No plug-in on demand: support users directly on-demanding video resources through the browser, no need to install a dedicated plug-in.
*QR code sharing: support sharing the on-demand video through weibo and WeChat QR code, support watching the video by phone through scanning the QR code.
*Video recommendation: providing recommended video to users on home page according to on-demand times, liked video or administrator setting.
*Video classification: administrator can flexiblely classify the videos based on the circumstances; user can search and browse the videos by video classification.
*Popular videos: the newly upload video in system can be set to be displayed on home page, so that users can view the latest video.
*Video search: video in the system can be searched by title, keyword, and video knowledge point , the searched video can be sorted by the latest release, the highest popularity, most playback sort, so that easy for the users to find the video in need.
*Video playback: users can like the video, make comment, and take note when watching; users can switch between full-screen and window; users can collect their interested videos and managed in their personal space.
*Video learning anti-hanging machine: The teacher can automatically pause the video course, pause the video playing at the custom time. And the student must manually click to play to prevent the student from hanging up.
*Practice when watching: teacher can add some subjects in the video, when the viewers watching the point-in-time, it will pop up a subject, after video finished it will pop up the subject result.
*Knowledge point index: on the premise that no video spliting,user can establish index according to the video point-in-time,it will associated to the relevant location based on index.
*Video Credits: Teachers can customize the video course credits. Students can complete the video as required, and pass the test to get the corresponding credits.
*Upload video: users can upload local video to the platform, to edit and manage the video.
*Associated documents: users can can download video attachments to learn when watching the video.
*Video editing: teachers can mark, add test, set leader and tail, video slices, integrating multiple video in their videos, and manage the video attachment.
*Support comment, taking notes, asking questions while watching the video, and the content of notes and questions can be managed in the Personal Center.

Live video
*No plug-in live viewing, user can directly watch the live video through the browser, no need to install a dedicated plug-in
*Live interactive: users can take notes when watching live video, online users can participate in the discussion between each other, and also can share the good live video.
*The video can be automatically released after recording, and can be managed in the personal space.
*The video can be published after recording, the relevant users are invited to conduct the evaluation and the evaluation criteria can be established.
*With Appointment and reservation-free live broadcast function, you can choose whether to record during live broadcast, and record video directly to the cloud platform;
*The list of live broadcasts is categorized according to started and un-started, and un-started live broadcasts are arranged according to the calendar time, so that users are able to clearly understand the daily live broadcast appointment time.
*Live ban: Administrators can ban certain users to prevent the classroom from disorder;
*Sensitive word processing: Administrators can configure, filter, replace, delete or review sensitive words.
*Mobile phone live video: teacher can start live video on the mobile, students can watch the live video directly through the mobile.
*Live password: support for the live set password, the user to enter the correct password to watch live.
*S-T analysis: according to the live classroom live, platform will automatically analyze the proportion of classroom behavior, teachers, students, and interactive behavior, and then automatically draw the behavior distribution map. It will automatically analyze the class type according to the data, and provide to teacher for reference.

Excellent course album
*Album classification: Educational resource album classification can be sorted according to school stage, grade, subject, release time, and download volume.
*Associated resources:The excellent class album can be associated with videos, test papers, and documents. Users can download documents during the course of participating in the course.
*Album keywords: Support for setting keyword attributes for albums
*Teacher following: Support follow teachers who post albums and support private message interactions

Network teaching and research
* Excellent class selection: Support teachers to independently initiate excellent class selection; teachers can choose to participate directly from their own course materials when setting up activities, and set evaluation criteria. The background administrator can also initiate a selection and invite teachers to participate.
* Evaluation criteria: Teachers can customize the evaluation criteria and use them according to the actual situation of the assessment activities.
* Activity participation: Teachers can participate in the evaluation activities initiated by other teachers, watch the video of the event, and evaluate the content according to the evaluation criteria.

Resource management
* Resource Search: User-uploaded public materials such as courses, videos, and documents are directly collected on the platform. And they can be searched by grade, subject, and keyword for useful resources.
* Resource ranking: Support the display of the latest, popular, and download ranking. And support the administrator to manually recommend resources.
* Resource application: You can read the uploaded related word, PDF, Excel, PPT data online. And you can download, collect and share resources as needed. And it supports users to comment online on resources.

Famous Teacher center
*Famous Teacher Center: Supports customizing the list of outstanding teachers. Users can view classroom information through the list of famous teachers, watch wonderful teaching videos of famous teachers, and view teaching materials of famous teachers.
*Users can add attention to teachers, support users to follow each other, and communicate online and via private messages.
*Support the administrator to customize the background to add, delete, modify and check the list of famous teachers.

News Bulletin
*News release: school administrator can release campus news and information at background.
*Campus bulletin: user can send a temporary campus bulletin.
*Announcement classification: support custom announcement classification
*Announcement sorting: supports manual sorting of announcements

Discipline group
*Group permissions: Teachers who join the group can download and upload the resources in the group. Supports invitations to join groups or applications to join groups.
*Associated resources: The discipline group can associate videos, test papers, and documents. Users can view and learn resources in the group.
*Public release: Group members can publish announcements in the group, and group members can also upload lesson plans to create a good group atmosphere.
*Group discussion: Support group discussion in the form of posts. Group members can view the list and details of posts, and support online posting. Posts can contain text, pictures, videos, attachments and other information.

Smart test
*Question type association: The question type is associated with the subject and academic period. Selecting the corresponding academic period and subject when composing the test can automatically associate the relevant question type.
*Online question bank: including public question bank and personal question bank. The question bank can filter test questions by grade, subject, version, question type, and difficulty. It supports quick search of test questions, supports display of my favorite test questions, supports filtering of used test questions, and views analysis. And collect questions.
*Test composition: After users can select the test application scope, examination scope, difficulty, knowledge points, and question types, the system automatically selects the test question resources to form a complete test question, which is convenient and fast.
Smart practice
*Question-taking practice: It supports two question-taking modes, timed and untimed, to highly restore the exam scene, quickly switch between questions and question types, and increase the convenience of question-taking.
*System correction: supports systematic correction of objective questions and provides corresponding analysis to facilitate students to consolidate knowledge points.
*My homework: Support students to quickly check the homework they need to complete and practice
*Wrong question book: Supports the collection of wrong questions in the test, and repeats the wrong questions to consolidate knowledge points.

Collaborative lesson preparation
*Personal lesson preparation: supports teachers' pre-class preparation, supports association of online test papers, videos, resources, supports local upload of documents, supports lesson preparation editing, uploading lesson plans, and deletion.
*Collaborative lesson preparation: Support teacher collective lesson preparation, jointly complete large-scale course preparation, support associated online test papers, videos, resources, support local uploading of documents, support lesson preparation editing, uploading and deleting lesson plans.

Campus inspection
Campus inspection: Connect to the recording host or campus monitoring system. Support real-time viewing of campus surveillance images, configure surveillance equipment on campus, and monitor current images in every corner of the campus. Once images that endanger the personal safety of teachers and students are captured or danger is sensed, contingency measures can be taken immediately.

Personal space
*Teacher personal space: Upload document and videos, manage your own uploaded videos, view your favorite videos, quickly enter the teaching and research activities you have participated in.
*Online lesson preparation: Teacher can prepare lessons in personal center, upload lesson information, video and other files, and online edit teaching plans.
*Teachers release teaching tasks online: Compose on-line test paper, publish teaching tasks, review task, view task completion status, and view task analysis reports.
*The class space supports teachers to view class circles, assign class homework, add class members, record student results, etc.
*Student personal space: Upload document and videos, manage your own uploaded videos, view your favorite videos.
*Class space: Students can enter the class through their personal space to obtain class information (class schedules, tasks, notices, members, etc.); students view tasks posted by teachers, complete tasks online, view learning records; users can view the class group (dynamics sent by users in the same class); consult the address book.
*Parent personal space: View student online learning records, collected videos, completed tasks and personal notes, Q&A, messages, class notifications, school notifications, etc.
*APP video taking and uploading: teacher can also take micro-class video, and real-time upload through the mobile APP .
*My diary: Users can write diaries in the personal center, and the diary can be set to be public or secret.
*Ask for leave: Teachers and students can leave, parents can take time off for their children; teachers will approve the leave of parents or students, and the administrator will approve the leave of the teacher.

My message
* Notification: Display all notifications received by the user;
* Comment: The user views comments of the resources uploaded by himself, and the comments posted by himself when learning;
* Notification: Display the private message received by the user, as well as the private message record with other users.

My settings
* Set personal basic information and modify the avatar through personal space;
* Parent users can associate their children's accounts here.

Background management
*Organization structure: user can set the organization structure according to the demands and classify the users for easy management.
*User management: administrator can add, delete, disable users easy, import in bulk, export in bulk and set the user's organization at background.
*Role permission: administrator can set the user role and assign permission according to the role.
*Class management: all the classes in current campus can be unified manage. User can search class, add or delete a single class, import or add class members, add or modify class schedule, and set the class post.
*Post management: support add, delete or modify the post. With perfect and customized post management.
*Private message management: Manage private messages between platform users.
*Video management: user can do search, save, add, delete, review, disable, recommend to home page, cancel recommendation, watch, mark, manage attachment, highlight and cancel highlight, set video basic information, make access right public or private.
*Video storage settings: Flexibly set the duration of video storage and automatically clean the video upon expiration.
*Assessment management: manage all of the assessment, user can add, delete, enable, disable, modify the assessment criteria which activities need, user also can modify the scoring detailed regulations in assessment criteria.
*Album management: teachers can audit, view, recommend to home page, front-end sort, and delete the created albums.
*Platform management: LOGO set ,home page picture set ,home page head set, page footing set,system settings, one-button gray display, etc..
*Information management: manage, view, and delete public resources and comments on the platform.Set up and manage the platform materials.
*Test questions management: Manage test questions, test papers, and test question type that are open to the platform
*Live broadcast management: Review the live appointment of the teacher, add settings to the live classroom, manage the live broadcast device. And the platform can be directly enabled, suspended, and stopped.
*Online patrol: School administrators can view all classrooms directly on the website and conduct batch management.
*Monitoring patrol: Security personnel and other personnel can monitor the every corners of various scenes on the campus through the platform.
*Resource Push: The lower-level user can push the resource to the upper-level user. After the higher-level audit is passed, the resource will be presented in the upper-level page.
*Device Management: Add the recording and broadcasting devices and manage all the recording devices on the platform.
*Announcement Management: Publish announcements and manage announcements and the types.
*Watermark setting: Set whether to add watermark when uploading video, and manage the style setting of watermark.
*Sensitive words: Sensitive word and other banned content management for the content of the platform users.
*System: View of system information, system time setting, system IP configuration, recycle station management, registration management.

Hardware architecture

Model	TS-0620E
Cabinet	1U rack-mounted chassis; adopt high-quality 1.0mm galvanized steel, solid structure, with the excellent ability of anti electromagnetic
	interference and anti radiation. Meet EMC design standard.
Hard disk	Support 4 hot plug hard disk; standard enterprise-class hard disk HDD-4TB × 1 and 32G capacity SSD hard disk; 4 hard disk hard disks
	extraction box with locking device, slide design to make hard disk extraction more convenient, support hot-swappable hard drive.
CPU	Single Intel Xeon E3-v5 processor (quad core)
Memory	Standard 8G DDR4; maximum support 64GB DDR4
LAN	2 10/100/1000M bps ports
I / O interfaces	Front 2 USB 2.0, rear 2 USB2.0; 1 fast UART16550 serial port; 1 VGA video port.
Hardware monitor	Fault / error / overload and alarm (including disk / RAID / power / fan / temperature / IO performance.
MTBF	50000 / H（MTBF）
Power	300W server power.
Voltage input	100-240V, 50 / 60Hz.
Operating temperature	-10 ℃ ~ 60 ℃.
Relative humidity	5% - 90%, non-condensing.
Dimensions	Length 660mm × Width 430mm × Height 43.5mm.

Conference recording management platform server

Embedded software: recording file transfer algorithm software V2.4

TS-0620M

Description

Conference recording management platform adopts embedded Linux operating system, which is efficient, stable and reliable. Working with conference recording controller, it is carefully designed according to the needs of corporate conferences to solve the problem that enterprise users cannot watch the meeting live broadcast in real time and obtain the latest information of the meeting. The main functions of the platform include: meeting reservation, meeting live broadcast, meeting review, video on demand, news announcement, information release, user management, etc.

Feature

Video on demand
*No plug-in on-demand: support customers to demand video resources directly through the browser without installing special playback plug-ins.
*Video recommendation: provide users with recommended videos on the home page according to the on-demand times, liked videos, and administrator setting.
*Video classification: administrator can classify and manage videos with flexible rules, and users can search and browse videos according to the classification.
*Popular videos: for newly uploaded videos in the system, you can set whether to display on the homepage in the background, so that users can view the latest videos.
*Video search: all videos in the system can be searched by title, keywords, and video knowledge points. The searched videos can be sorted according to the latest release, highest popularity, and downloads, so that users can find the videos they need.
*Video playback: watch videos online, support uploading video attachments in the background for users to download.
*Upload videos: users can upload local videos in multiple formats to the platform, and edit and manage the videos. Non-mp4 format video supports online automatic cloud transcoding, and video resolution can be switched. The video introduction supports graphic description. Support video storage time setting to automatically delete videos regularly.
*Visitor record: automatically record video watching users.
*Video editing: administrator can edit the video online and manage attachments in the background.
*Video viewing permissions: support to set video viewing permissions in batches according to organizational structure, position, and user name.
*Video attachments: support to add video attachments when uploading videos.
*Highlight marking: support for marking highlights of the video.
*Test while watching: support setting test questions. When users watch the video to the certain time, the question will automatically pop up. The result of the question will be displayed at the end of the video.
*Screenshots and comments: support ratings and comments while watching videos, and support screenshots and comments on videos.
*Watching statistics: count the user's watch time for videos.
*Video introduction: support graphic description, upload poster introduction.
*Sharing restriction: set whether the video supports sharing.
*Download limit: set whether the assessment video supports download
*Video watermark: add watermark to the video for anti-counterfeiting.

Live broadcast
*No plug-in live broadcast: support to directly watch live broadcast through browser without installing special playback plug-in.
*Live broadcast interaction: during the live broadcast, users can discuss through barrage.
*Video recording: support live video recording, the recording file can become on-demand video after approval.
*Appointment and immediate live broadcast function. Choose whether to record during the live broadcast, support live broadcast password setting, and the user can watch the live broadcast after entering the correct password.
*Live introduction can be added in the background for users to view.
*Live broadcast list is categorized according to the started and unstarted live broadcasts, and the unstarted live broadcasts are arranged according to the time, so that users can clearly understand the daily live broadcast appointment time.
*Live broadcast muting: administrator can mute some users to prevent some students from disrupting the class;
*Sensitive word processing: administrator can configure sensitive words, and filter, replace, or delete sensitive words.
*Support multi-bit rate: support SD, HD, and full HD three definition settings during live broadcast, and can be switched in the player window during playback.

Course album
*Course album supports to associate platform materials, videos, and local files. Users can integrate relevant materials and courses into an album for release.
*Album classification: customizable album classification and flexible management.
*Album sharing: share the content of the course album.
*Viewing permission: album viewing permission can be set to restrict users of course viewing.
*Album ranking: support albums sorting according to release time and popularity.

Resource management
*Resource search: materials uploaded by users, such as documents, videos, audios, and pictures, are directly collected on the platform. You can search by keywords to obtain useful resources.
*Resource ranking: support display of resources according to latest and download volume, and support direct upload of resource in the background. Resource uploaded by front-end user needs to be reviewed by the background and can be displayed after passing.
*Resource application: you can read the uploaded relevant word, PDF, Excel, PPT materials online, and can also download or collect and share resources as needed. Support users to rate resources.

*Resource classification: support custom resource classification and flexible resource management.
*Viewing permission: support customizable resource viewing permission, and support restrictions on organization, positions, and user accounts.
*Download/sharing restriction: set whether to support downloading and sharing.
*Private resources: support administrator to set private resources, which cannot be viewed by others.

News announcement
*Publish news: administrator can set news announcement classification and publish announcement content in the background. Support important announcements on top.
*Announcement list: support to display sticky announcements, and support to like and interact with the content when viewing announcements.
*Announcement attachments: support for adding announcement attachments, which users can view and download.
*News classification: support custom classification for news announcements.

Account setting
*User can set personal account information, modify the avatar, add mobile phone, email and other information.
*Support users to modify the login password.

Background management
*Webpage setting: customize webpage title and logo.
*Logo setting: support user-defined upload logo to platform.
*Platform setting: support to add, edit, and disable to the navigation bar. Support users to customize the footer version information.
*One-click graying: support platform one-click graying
*Carousel picture management: support users to customize the carousel picture page of homepage, information, album, and video on demand. Support to set link to jump directly to the relevant page after clicking on the carousel.
*Announcement management: support administrators to add, edit, disable, and delete announcements. Announcements can be classified and topped. Announcement attachments can be added.
*About us: support administrator to modify the company information introduction.
*Sensitive word setting: support administrator to set sensitive words, disable and replace sensitive words, and support classification operations on sensitive words.
*Organization structure: support custom organization structure, up to 9 levels can be added.
*Position information: user positions can be set, and position information can be associated with viewing permission.
*Role management: default role of the platform is administrator and staff. Administrator has all the permissions of foreground and background, and staff only has the permission of foreground: users can add roles with corresponding permissions according to needs.
*User management: support manual addition, registration application, and batch import of user data. Support to associate position information with users. Support disabling, enabling, and deleting user accounts.
*Registration management: support approval of new registered users, support batch approval and batch rejection, and support to view user registration details.
*Operation log: record the background operation log.
*Video list: display VOD list, and support to add, edit, preview, download, push to homepage, watch statistics, and delete videos.
*Push to homepage: popular videos on the homepage are sorted in order of release time by default. Administrator can customize recommended homepage setting in the background, and the required videos can be pushed to the corresponding position of the popular on-demand videos on the homepage.
*Transcoding information: all uploaded videos will be automatically transcoded in the cloud. Transcoding can switch the video to playable mp4 format and achieve resolution switching.
*Upload setting: can limit the size of the uploaded video.
*Transcoding setting: can limit video transcoding, support setting of immediate transcoding or idle transcoding to improve platform performance.
*Video storage setting: support to set default video retention period, and the videos that exceed the period will be automatically deleted. Support setting to save video separately.
*Insufficient storage space prompt: when the platform storage space is less than 20%, it will automatically prompt users to expand or clean up useless video files.
*Live broadcast list: display all live broadcasts that have not unstarted, are in progress, and have ended. The live broadcast can be previewed, and be shut down immediately.
*Scheduled live broadcast: support immediate live broadcast and scheduled live broadcast, support setting of live broadcast passwords, and choose whether to record. The recorded live file can become on-demand video after approval. Support uploading live broadcast cover, and live broadcast introduction can display graphic description, which is recommended to display in poster format.
*Live recording files: display live recording files, which can become on-demand video after approval. Support platform recording and receiving recording and broadcasting controller recording files.
*Equipment management: display the connected recording and broadcasting controller equipment, and edit the equipment information.
*Resource management: support the management of platform resource, support to preview, edit, download resource and set private resource, and support to upload data in the background.
*Document review: can review the document submitted by front user in the background. After the review is passed, the document can be displayed at the front ground.
*Album management: can manage platform album information. When adding albums, it supports associated platform information, platform videos, and local files. Users can integrate materials with related attributes into an album, or into a video collection.
*System setting: administrator can view the system operation status in the background, including display of running time/memory/CPU/disk usage.
*Time setting: support for synchronizing local time, support for modifying server time.
*IP configuration: support administrator to set the platform IP, this operation is only valid for the super administrator.
*Recycle Bin: support clearing, restoring, and deleting the content of the Recycle Bin.
*Platform storage: support setting up local storage or cloud storage according to customer needs.

Specification

Model	TS-0620M
Cabinet	1U rack-mounted cabinet; adopt high-quality 1.0mm galvanized steel plate, stable structure,
	excellent anti-electromagnetic interference and anti-radiation capabilities, meet EMC design standards
Hard disk	Support 4 hot-swappable hard disks; standard enterprise-level hard disk HDD-4TB×1 and 32G capacity SSD hard disk; 4 hard disk
	extraction boxes with locking devices, slide rail design to make hard disk extraction more convenient, support hard disk hot swap
CPU	Single Intel Xeon E3-V3 processor
RAM	Standard 8G memory; maximum support 32GB DDR
LAN	2 10/100/1000M bps network ports
I/O port	2 front USB 2.0, 2 rear USB2.0; 1 fast UART16550 serial port; 1 VGA video port
Hardware monitoring	Fault/error/overload and alarm (including disk/RAID/power/fan/temperature/IO performance)
MTBF	50000/H (MTBF)
Power supply	300W server power supply
Input voltage	100-240V, 50/60Hz
Working temperature	-10°C~60°C
Relative humidity	5%–90%, no condensation
Dimension	660×430×43.5mm (L×W×H)

Conference recording management platform server

Embedded software: recording file transfer algorithm software V2.4

TS-0620MA

Description

Conference recording management platform adopts embedded Linux operating system, which is efficient, stable and reliable. Working with conference recording controller, it is carefully designed according to the needs of corporate conferences to solve the problem that enterprise users cannot watch the meeting live broadcast in real time and obtain the latest information of the meeting. The main functions of the platform include: meeting reservation, meeting live broadcast, meeting review, video on demand, news announcement, information release, user management, etc.

Feature

Video on demand
*No plug-in on-demand: support customers to demand video resources directly through the browser without installing special playback plug-ins.
*Video recommendation: provide users with recommended videos on the home page according to the on-demand times, liked videos, and administrator setting.
*Video classification: administrator can classify and manage videos with flexible rules, and users can search and browse videos according to the classification.
*Popular videos: for newly uploaded videos in the system, you can set whether to display on the homepage in the background, so that users can view the latest videos.
*Video search: all videos in the system can be searched by title, keywords, and video knowledge points. The searched videos can be sorted according to the latest release, highest popularity, and downloads, so that users can find the videos they need.
*Video playback: watch videos online, support uploading video attachments in the background for users to download.
*Upload videos: users can upload local videos in multiple formats to the platform, and edit and manage the videos. Non-mp4 format video supports online automatic cloud transcoding, and video resolution can be switched. The video introduction supports graphic description. Support video storage time setting to automatically delete videos regularly.
*Visitor record: automatically record video watching users.
*Video editing: administrator can edit the video online and manage attachments in the background.
*Video viewing permissions: support to set video viewing permissions in batches according to organizational structure, position, and user name.
*Video attachments: support to add video attachments when uploading videos.
*Highlight marking: support for marking highlights of the video.
*Test while watching: support setting test questions. When users watch the video to the certain time, the question will automatically pop up. The result of the question will be displayed at the end of the video.
*Screenshots and comments: support ratings and comments while watching videos, and support screenshots and comments on videos.
*Watching statistics: count the user's watch time for videos.
*Video introduction: support graphic description, upload poster introduction.
*Sharing restriction: set whether the video supports sharing.
*Download limit: set whether the assessment video supports download
*Video watermark: add watermark to the video for anti-counterfeiting.

Live broadcast
*No plug-in live broadcast: support to directly watch live broadcast through browser without installing special playback plug-in.
*Live broadcast interaction: during the live broadcast, users can discuss through barrage.
*Video recording: support live video recording, the recording file can become on-demand video after approval.
*Appointment and immediate live broadcast function. Choose whether to record during the live broadcast, support live broadcast password setting, and the user can watch the live broadcast after entering the correct password.
*Live introduction can be added in the background for users to view.
*Live broadcast list is categorized according to the started and unstarted live broadcasts, and the unstarted live broadcasts are arranged according to the time, so that users can clearly understand the daily live broadcast appointment time.
*Live broadcast muting: administrator can mute some users to prevent some students from disrupting the class;
*Sensitive word processing: administrator can configure sensitive words, and filter, replace, or delete sensitive words.
*Support multi-bit rate: support SD, HD, and full HD three definition settings during live broadcast, and can be switched in the player window during playback.

Course album
*Course album supports to associate platform materials, videos, and local files. Users can integrate relevant materials and courses into an album for release.
*Album classification: customizable album classification and flexible management.
*Album sharing: share the content of the course album.
*Viewing permission: album viewing permission can be set to restrict users of course viewing.
*Album ranking: support albums sorting according to release time and popularity.

Resource management
*Resource search: materials uploaded by users, such as documents, videos, audios, and pictures, are directly collected on the platform. You can search by keywords to obtain useful resources.
*Resource ranking: support display of resources according to latest and download volume, and support direct upload of resource in the background. Resource uploaded by front-end user needs to be reviewed by the background and can be displayed after passing.
*Resource application: you can read the uploaded relevant word, PDF, Excel, PPT materials online, and can also download or collect and share resources as needed. Support users to rate resources.

*Resource classification: support custom resource classification and flexible resource management.
*Viewing permission: support customizable resource viewing permission, and support restrictions on organization, positions, and user accounts.
*Download/sharing restriction: set whether to support downloading and sharing.
*Private resources: support administrator to set private resources, which cannot be viewed by others.

News announcement
*Publish news: administrator can set news announcement classification and publish announcement content in the background. Support important announcements on top.
*Announcement list: support to display sticky announcements, and support to like and interact with the content when viewing announcements.
*Announcement attachments: support for adding announcement attachments, which users can view and download.
*News classification: support custom classification for news announcements.

Account setting
*User can set personal account information, modify the avatar, add mobile phone, email and other information.
*Support users to modify the login password.

Background management
*Webpage setting: customize webpage title and logo.
*Logo setting: support user-defined upload logo to platform.
*Platform setting: support to add, edit, and disable to the navigation bar. Support users to customize the footer version information.
*One-click graying: support platform one-click graying
*Carousel picture management: support users to customize the carousel picture page of homepage, information, album, and video on demand. Support to set link to jump directly to the relevant page after clicking on the carousel.
*Announcement management: support administrators to add, edit, disable, and delete announcements. Announcements can be classified and topped. Announcement attachments can be added.
*About us: support administrator to modify the company information introduction.
*Sensitive word setting: support administrator to set sensitive words, disable and replace sensitive words, and support classification operations on sensitive words.
*Organization structure: support custom organization structure, up to 9 levels can be added.
*Position information: user positions can be set, and position information can be associated with viewing permission.
*Role management: default role of the platform is administrator and staff. Administrator has all the permissions of foreground and background, and staff only has the permission of foreground: users can add roles with corresponding permissions according to needs.
*User management: support manual addition, registration application, and batch import of user data. Support to associate position information with users. Support disabling, enabling, and deleting user accounts.
*Registration management: support approval of new registered users, support batch approval and batch rejection, and support to view user registration details.
*Operation log: record the background operation log.
*Video list: display VOD list, and support to add, edit, preview, download, push to homepage, watch statistics, and delete videos.
*Push to homepage: popular videos on the homepage are sorted in order of release time by default. Administrator can customize recommended homepage setting in the background, and the required videos can be pushed to the corresponding position of the popular on-demand videos on the homepage.
*Transcoding information: all uploaded videos will be automatically transcoded in the cloud. Transcoding can switch the video to playable mp4 format and achieve resolution switching.
*Upload setting: can limit the size of the uploaded video.
*Transcoding setting: can limit video transcoding, support setting of immediate transcoding or idle transcoding to improve platform performance.
*Video storage setting: support to set default video retention period, and the videos that exceed the period will be automatically deleted. Support setting to save video separately.
*Insufficient storage space prompt: when the platform storage space is less than 20%, it will automatically prompt users to expand or clean up useless video files.
*Live broadcast list: display all live broadcasts that have not unstarted, are in progress, and have ended. The live broadcast can be previewed, and be shut down immediately.
*Scheduled live broadcast: support immediate live broadcast and scheduled live broadcast, support setting of live broadcast passwords, and choose whether to record. The recorded live file can become on-demand video after approval. Support uploading live broadcast cover, and live broadcast introduction can display graphic description, which is recommended to display in poster format.
*Live recording files: display live recording files, which can become on-demand video after approval. Support platform recording and receiving recording and broadcasting controller recording files.
*Equipment management: display the connected recording and broadcasting controller equipment, and edit the equipment information.
*Resource management: support the management of platform resource, support to preview, edit, download resource and set private resource, and support to upload data in the background.
*Document review: can review the document submitted by front user in the background. After the review is passed, the document can be displayed at the front ground.
*Album management: can manage platform album information. When adding albums, it supports associated platform information, platform videos, and local files. Users can integrate materials with related attributes into an album, or into a video collection.
*System setting: administrator can view the system operation status in the background, including display of running time/memory/CPU/disk usage.
*Time setting: support for synchronizing local time, support for modifying server time.
*IP configuration: support administrator to set the platform IP, this operation is only valid for the super administrator.
*Recycle Bin: support clearing, restoring, and deleting the content of the Recycle Bin.
*Platform storage: support setting up local storage or cloud storage according to customer needs.

Specification

Model	TS-0620MA
Cabinet	2U rack-mounted cabinet; high-quality 1.0mm galvanized steel sheet, stable structure,
	excellent anti-electromagnetic interference and anti-radiation capabilities, in line with EMC design standards
Hard disk	Support 8 hot-swappable hard drives, support RAID 0, 1, 5, 6, 10; standard enterprise-class hard drives HDD-4TB×1 and 32G SSD hard
	drives; hard disk extraction is more convenient, support hard disk hot swap
CPU	Single Intel Xeon E5-V3 processor
RAM	Standard 8G DDR4 memory; Supports up to 256GB
LAN	2 10/100/1000M bps network ports
I/O port	Front 2 USB 2.0, rear 2 USB2.0; 1 fast UART16550 serial port; 1 VGA video port
Hardware monitoring	Fault/error/overload and alarm (including disk/RAID/power/fan/temperature/IO performance
MTBF	100000/H (MTBF)
Power supply	500W server power supply
Input voltage	100-240V, 50/60Hz
Working temperature	-10°C~60°C
Relative humidity	5%–90%, no condensation
Dimension	650×440×88mm (L×W×H)

Zhizhi Conference Recording Management Platform Software V4.04
TS-0620MR

Feature

Video on demand
*No plug-in on-demand: support customers to demand video resources directly through the browser without installing special playback plug-ins.
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*System setting: administrator can view the system operation status in the background, including display of running time/memory/CPU/disk usage.
*Time setting: support for synchronizing local time, support for modifying server time.
*IP configuration: support administrator to set the platform IP, this operation is only valid for the super administrator.
*Recycle Bin: support clearing, restoring, and deleting the content of the Recycle Bin.
*Platform storage: support setting up local storage or cloud storage according to customer needs.

Pendant Microphone
TS-0620DM

Specification

Model	TS-0620DM
Monomer	back pole electret
Directivity	single
Frequency response:	50Hz ~ 16KHz
Frequency response curve	Frequency response curve
Sensitivity	-35dB ± 3dB (0db = 1V / Pa at 1KHz)
Output impedance	250Ω± 30% (at 1KHz)
Cable	Φ2mm x 72cm Shielded wire
Plug	three-pin XLR
Weight	128g

Mobile Broadcast Directing Software V1.012
TS-0650AR

Description
It is a recording controller software that integrates multiple functions such as directing control, interactive management, on-demand playback, and central control settings. It is suitable for various scenarios such as classrooms, conferences, and court trials.

Feature
*Support screen preview, you can view 6-channel camera screen and 1-channel PGM screen.
* Support screen layout setting, support single-screen, double-screen, three-screen, four-screen and other layout styles, which can be freely switched.
* Support manual, automatic and other directing methods; support "one-click" to start fully automatic image tracking shooting and recording function.
* Support address book function. Users can enter the device name or IP address in the search box at the top to search for the corresponding contacts that have been added, or they can create new contacts on the right side of the search box to add contacts. The added contacts can be dialed, edited, and deleted through the buttons on the right.
* Support class convene function. In the interactive mode, the lecture classroom can directly initiate the interactive function to the classroom terminals that have participated in the classroom interaction through the historical records, without additional configuration.
* Support permission control function. In the interactive mode, the lecture classroom can be set to turn on and off the terminal screen and sound of the listening classroom, and set the layout of the interactive screen.
* Support video on demand function, users can play, pause, and drag the progress bar of recorded video files without downloading.
* Support software central control, fill in the central control instructions in the recording management interface, and then perform central control operations through the interface, and connect to other devices for one-key control.

Desktop Guide Station
TS-0650B

Description
TS-0650B 8-inch touch guide station installed in the podium of recording and broadcasting classroom, connecting to the recording and broadcasting controller by CAT5/CAT6 cable, to fulfill the management of the teaching/training process.

Feature
* 8-inch glass waterproof and dustproof panel, embedded installation in podium of
* classroom , with waterproof function,control, connectivity, operation and other status indication.
* By connecting to the teacher's computer, to remote control the recording and broadcasting controller.
* Support one key to start , pause , stop recording function.
* Support one key to switch the movie mode screens.
* Support one key to switch guide mode, open the automatic guide, semi-automatic guide and manual guide.
* Support interactive remote screen switching.

Specification

Model	TS-0650B
Electrical characteristics	12V DC
Display	8-inch glass waterproof and dustproof panel,
Screen switch	Support
Recording control	Support
Guidance control	Support
Control state	Connection status indicator
Interactive switching	Support
Control method	Support RS-232 protocol control, support network control
Dimension	203 x 127 x 29mm
Weight	0.68Kg

Recording Controller

Automatic recording control embedded software V3.11

TS-0650C

Description

The new fully automatic eight-position audio and video recording equipment adopts integrated hardware design, embedded Linux operating system, highly integrated image acquisition, recognition and tracking, recording, automatic broadcast, live broadcast, on-demand and other system modules, meeting the needs of conference recording, training and learning, interactive teaching, etc.

Feature

* Integrated hardware device, embedded Linux OS, highly integrated system module such as image recognition tracking, automatic navigation, live, VOD, acquisition, and recording, easy to use and maintain, with high security.
* Based on the B/S architecture, you can log in to the web to realize functions such as live broadcast management, signal management, group management, user management, file management, scheduled recording, central control management, and system management.
* Audio adopts AAC high-definition encoding method, and the audio and video are accurately and synchronously recorded.
* Video adopts H.264 encoding method with adjustable bit rate; support video encoding from 256kbps to 12Mbps, and support resolutions such as 1920x1080(HDMI can support 3840x2160 resolution).
* Using self-developed tracking algorithms to detect the vertical movement tracking of face, and ignore other activities of the students; the accuracy rate reaches more than 90% to intelligently present classroom focus.
* Accurately track students of low age and large height differences without installation of auxiliary tracking and analysis cameras, and support self adapt of the height of students in different classes.
* The recording and broadcasting controller has an encryption algorithm to ensure that the copyrighted machine needs to be activated to have the right to use, and to support the authorized using date.
* The controller has built-in shortcut keys, and support one-key recording, stopping, live broadcast and copying of recorded files.
* With 2.2-inch LCD screen, to display system hard disk space, version number and recording status, IP address and other device information.
* The controller comes with 2TB storage space, and the recording content can be stored for up to 2000 class hours; support frequent use of the device for more than one year; support automatic deletion of old files and loop recording.
* Equipped with 3-channel HDMI signal input interfaces, which can be used to connect to computer or camera.
* Equipped with 4-channel SDI signal input interfaces, and the SDI interface has POC function, which supports self-adaptive recognition of POC equipment, and realizes one line to complete video transmission, pan-tilt control and power supply functions.
* Equipped with 8-channel network signal inputs, adopt standard RTSP stream access to collect network camera signals.
* Equipped with up to 8-channel simultaneous inputs of video signals, and the signal type supports HDMI/3G-SDI/IP.
* Equipped with 3-channel HDMI video output interfaces for connecting external display devices.
* Equipped with 3-channel audio input interface for collecting external audio source signals.
* Equipped with 3-channel audio output interface for monitoring or connecting external sound reinforcement equipment.
* Equipped with 5 RS-232 phoenix terminal interfaces and 1 RS-485 phoenix terminal interface, which can be used for seamless signaling docking with other control systems.

* Equipped with 5 USB ports for connecting U disk or keyboard and mouse.
* Equipped with 2-channel 802.3ab 1000Base-T gigabit network interfaces, support IPv4 address and IPv6 address.
* Support manual navigation through navigation software, and can also cooperate with the built-in automatic navigation module for fully automatic navigation.
* Support remote control of the control panel. Click the panel button to realize the input source screen monitoring or navigation switching, recording mode switching, start and stop recording, special effects switching and camera control functions.
* Support simultaneous rotation and zooming of up to 8 PTZ cameras, and support image tracking function with one key.
* Support single-stream single-screen / single-stream multi-screen / multi-stream multi-screen recording, which can realize that each input signal can be saved as a separate file, and can record up to 5-channel video images at the same time; support custom categories for classified recording and classified storage, support multiple formats such as MP4, AVI, MOV, FLV and MKV.
* Support 7 screen layouts including three screens, four screens and dialogue screens, and support 2 custom screen layouts to meet individual needs.
* Support custom segmented recording, with a duration of 30-480 minutes optional, and can seamlessly connect with other manufacturers' non-line editing tools.
* Support PVW and PGM dual screens, support output switching special effects when switching output display, including 12 kinds of screen switching special effects such as gradual change, erase, push, expand, and fly-in.
* Support subtitle settings, built-in subtitle templates, users can customize the size, color, and position of the letters.
* Support online voice transcribing function to realize speech-to-text and automatically generate subtitles.
* Support custom add film title function, support to upload customized title and display time.
* Support tagging each video screen to distinguish the screen and display different content.
* Support two-dimensional keying function. Cut out the characters from green screen or blue screen background and merge them with two-dimensional virtual background to synthesize a picture.
* Support appointment recording function. After the appointment recording class schedule is edited, it will automatically record according to the scheduled time, and automatically produce the file name with information such as venue, speaker and subject.
* Built-in VOD module, which can perform online playback, pause, jump and other operations of video files through network.
* Support live broadcast function, support simultaneous live broadcast of 50 users in the LAN; support standard RTMP streaming protocol, which can be connected to third-party live broadcast platform for online live broadcast, which is convenient for expanding live broadcast number.
* It can cooperate with third-party FTP file server to automatically upload backup files. The courseware is automatically sent to the file server. File uploads and downloads automatically adjust bandwidth to prevent network congestion.
* Support video file repair function. During the recording, video files damaged by power failure can be repaired.
* Support one-button reset function to avoid file corruption, loss of IP address, loss of administrator password and system failure.
* Support one-key upgrade function. When the system has new function iterations, the function upgrade can be realized by importing firmware.
* Support software central control, fill in the central control command in the recording management interface to use the interface for central control operation, docking other devices to support one-key central control instructions.
* Support docking with private cloud platform server. After successful docking, cloud platform can uniformly control equipment, facilitating the management of multiple recording and broadcasting equipment.
* Support user group management function, which can assign account permissions to each user. Users can only watch live and on-demand files after authorization, and the corresponding users can only access the corresponding files.
* Support confidential audio and video encrypted recording, and provides two encryption methods: user password encryption and U-shield encryption. Support encryption of unencrypted recorded videos. Provides RecPlayer dedicated decryption player to decrypt and play encrypted videos.
* Support the SM4 national secret algorithm function and realizes the SM4 encrypted recording algorithm function.

Specification

Model	TS-0650C
Video protocol	H.264
Code stream	256Kbps~12Mbps
Video output format	MP4/MOV/MKV/FLV/AVI/TS
Audio protocol	AAC
Live broadcast protocol	Support TS, RTSP, RTP and RTMP real-time protocol streams
Network protocol	Support TCP, UDP, RTMP, RTSP, FTP, DHCP, HTTP protocol
Video input interface	4-channel SDI high-definition video interfaceS, 3-channel HDMI high-definition video interfaces
Video output interface	3-channel HDMI high-definition video interfaces
Input resolution	3840x2160P30fps、1920x1080P60/P50/I60/I50/P30/P25fp
Output resolution	3840x2160P30fps、1920x1080P60/P50/P30/P25fps、1280x720P60/P50/P30/P25fps、720X576P60/P50/P30/P25fps
Audio input interface	2-channel Phoenix terminal interfaces, 1-channel HDMI audio interface
Audio output interface	1-channel Phoenix terminal interface, 1-channel 3.5mm audio interface, 1-channel HDMI audio interface
Network port	2-channel Gigabit Ethernet ports
USB interface	5-channel USB 2.0 interfaces
Control port	5-channel RS-232 interfaces, 1-channel RS-485 interface
Panel button	1×switch button, 4×function buttons
Indicator light	3×LED indicators
Storage	2TB
Power supply	DC 24V/5A
Power consumption	45W
Weight	2.25kg
Size	440×295×53.8mm (L×D×H)
Operating temperature	-10°C~55°C (Well-ventilated ambient temperature)
Operating humidity	20%~80% relative humidity, no condensation

Recording Controller

Automatic recording control embedded software V3.11

TS-0658

Description

It adopts an integrated hardware design, embedded Linux operating system, and highly integrated system modules such as image recognition and tracking, automatic directing, live broadcasting, VOD, acquisition, and recording. It is a new generation of fully automatic eight-camera recording controller that meets the needs of producing high-quality teaching videos, online learning, and interactive teaching.

Feature

*Adopt integrated hardware design, embedded Linux operating system, highly integrated system modules such as image recognition and tracking, automatic guidance, live broadcast,VOD, acquisition, recording, etc. It is easy to use, easy to maintain, and has high security.
* Based on the B/S architecture, you can log in to the web terminal to realize functions such as live broadcast management, signal management, group management, user management, file management, reservation recording, central control management, and system management.
* Adopt AAC HD audio encoding method, to realize accurate and synchronous audiovisual recording.
* Adopt H.264 video encoding method, adjustable bit rate, support video encoding 256kbps ~ 12Mbps, support resolution such as 3840x2160 and 1920x1080.
* The most advanced tracking algorithm is used to detect the vertical movement tracking of the face contour, ignoring other activities of the students, with an accuracy rate of more than 90%, intelligently presenting the focus of the classroom.
* Without installing auxiliary tracking analysis cameras, it can accurately track students with large height differences and adapt to the heights of students in different classes.
* The built-in encryption algorithm of the recording controller ensures that the genuine machine needs to be activated before it can be used, and supports the use authorization date.
* The built-in audio processing module supports functions such as environmental noise suppression, automatic equalization, intelligent sound mixing and echo cancellation, which can solve the problems of echo and noise in interactive recording classrooms.
* The built-in shortcut keys support one-key record, stop, live and one-key copy of recorded files.
* The built-in 2.2-inch LCD screen displays system hard disk space, version number, recording status, IP address and other device information.
* With 2TB of storage space, the recording content can be stored for up to 2000 class hours. Support frequent use of the device for more than one year; support automatic deletion of old files and loop recording.
* With 3 HDMI signal input interfaces, connected to a computer or a camera.
* With 4 SDI signal input interfaces, the SDI interface has the POC function, supports the self-adaptive identification of POC devices, and realizes the video transmission, PTZ control and power supply functions in one line.
* With 8-channel network signal inputs, using standard RTSP stream access to collect network camera signals.
* Support synchronous input of up to 8 video signals, and the signal type includes HDMI/3G-SDI/IP.
* With 3 HDMI video output interfaces, connected to external display devices.
* With 1 HDMI audio input interface, 2 unbalanced input phoenix interfaces for collecting external audio source signals; 8 balanced input phoenix interfaces, support 48V phantom power supply and 16-band EQ processing, connected to omnidirectional microphones or classrooms hanging microphone; 5 unbalanced input phoenix interfaces, used to connect other audio equipment.

* With a 3.5mm audio output interface, used for monitoring or connecting to external sound equipment.
* With 5 RS-232 control interfaces, used for seamless signaling connection with other control systems.
* With 5 USB ports, connected to U disk or keyboard and mouse.
* With 3 802.3ab 1000Base-T Gigabit network interfaces, support IPv4 address and IPv6 address.
* With a 2.4G remote control with laser pointer function, realize the remote one-key recording function, support the control of the teacher's computer to realize PPT operation, and perform PPT page turning, playback, exit and other operations.
* Support manual directing through the directing software, and work with the built-in automatic directing module for automatic directing.
* Support remote control of the control panel, and functions such as input source screen monitoring or switching, recording mode switching, recording and stopping, special effect switching and camera control can be realized by clicking the button on the panel.
* Support the rotation and zooming of up to 8 PTZ cameras at the same time, support the image tracking function with one click.
* Support single-stream single-screen/single-stream multi-screen/multi-stream multi-screen recording methods, each input signal can be saved as a separate file, up to 5 channels of video images can be recorded at the same time, and categories can be customized for classified recording and classified storage, and supports MP4, AVI, MOV, FLV and MKV and other formats.
* Support 7 screen layouts such as three-screen, four-screen and dialogue screen, and support two custom screen layouts to meet individual needs.
* Support custom segmented recording, with an optional duration of 30-480 minutes, and can seamlessly connect with non-linear editing tools from other manufacturers.
* Support PVW and PGM dual screen, support output switching effects when switching output display, including 12 transition effects such as fade, erase, push, expand, fly in, etc.
* Support subtitle setting, built-in subtitle template, users can customize the size, color and position of letters.
* Support online speech transcription function, realize transcribing speech into text and automatically generate subtitles.
* Support the function of adding a custom title, support uploading a custom title and customizes its display time.
* Support tagging of each video screen, distinguishing the screen to display different content.
* Support 2D keying function; cut out the characters from the green screen or blue screen background, merge with the two-dimensional virtual background picture, and synthesize one picture.
* Support the function of recording reservation. After the recording timetable is completed, the recording will be automatically performed at the scheduled time, and the file name will be automatically generated with information such as venue, speaker and theme.
* Built-in VOD module, support play, pause, jump and other operations of video files online through the network.
* Support live broadcast function, and support live broadcast to 50 users in the local area network at the same time; support standard RTMP streaming protocol, and can be connected to third-party live broadcast platforms for online live broadcast, convenient to expand the number of live broadcasts.
* Support the function of automatically uploading backup files, and work with a third-party FTP file server to automatically push the courseware to the file server; automatically adjust the bandwidth during file uploading and downloading to prevent network congestion.
* Support video file repair function. During recording, damaged video files caused by power outages can be repaired.
* Support one-key reset function to avoid file damage, loss of IP address and loss of administrator password, which will cause the system to become unusable.
* Support one-key upgrade function, when the system has new function iterations, the function can be upgraded by importing the firmware.
* Support software central control, fill in the central control instructions in the recording and broadcasting management interface, you can perform central control operations through the interface, and connect to other devices for one-key control.
* Support connecting with private cloud platform servers. After the connection, the cloud platform can manage and control the devices in a unified manner, convenient for the management of multiple recording and broadcasting devices.
* Support user group management function, assign account permissions to each user, users can watch live and VOD files after authentication, and corresponding users can only access corresponding files.

Specification

Model	TS-0658
Video protocol	H.264
Code stream	256Kbps~12Mbps
Video output format	MP4/MOV/MKV/FLV/AVI/TS
Audio protocol	AAC
Live protocol	Support TS, RTSP, RTP and RTMP real-time protocol streams
Network protocol	Support TCP, UDP, RTMP, RTSP, FTP, DHCP, HTTP protocols
Video input port	4 SDI HD video ports, 3 HDMI HD video ports
Video output port	3 HDMI HD video ports
Input resolution	3840x2160P30, 1920x1080P60/P50/I60/I50/P30/P25fps
output resolution	3840x2160P30, 1920x1080P60/P50/P30/P25fps, 1280x720P60/P50/P30/P25fps, 720X576P60/P50/P30/P25fps
Audio input port	1 HDMI with audio input, 15 phoenix terminal ports
Audio output port	1 3.5mm audio port, 5 Phoenix terminal ports
Network port	3 Gigabit Ethernet ports
USB port	5 USB 2.0 ports
Control port	5 RS-232 ports, 1 RS-485 port
Panel button	2 x switch buttons
Storage	2TB
Power supply	DC 24V/5A, DC 12V/2A
Power consumption	50W
Weight	5.6kg
Dimension	484×340×88mm (L×D×H)
Working temperature	-10℃~55℃ (ambient temperature under well-ventilated conditions)
Relative humidity	20%~80% relative humidity, no condensation

Recording Controller

Automatic recording control embedded software V3.11

TS-0660C

Description

It adopts integrated hardware design, embedded Linux operating system, and integrates functions such as CD recording, backup recording, voice tracking, and live broadcast. It is an audiovisual recording device specially designed for "Sunshine Court" and "Technology Court".

Feature

*Adopt integrated hardware design, embedded Linux operating system, highly integrated system modules such as image recognition and tracking, automatic guidance, live broadcast, VOD, acquisition, recording, etc. Easy to use, easy to maintain, and has high security.
* Based on the B/S architecture, you can log in to the web terminal to realize functions such as live broadcast management, signal management, group management, user management, file management, reservation recording, central control management, and system management.
* Adopt AAC HD audio encoding method, support accurate and synchronous audiovisual recording.
* Adopt H.264 video encoding method, adjustable bit rate, support video encoding 256kbps ~ 12Mbps, and support resolutions such as 1920x1080.
* The built-in encryption algorithm of the recording controller ensures that the genuine machine needs to be activated before it can be used, and supports the use of authorization date.
* Built-in 2.2-inch LCD screen, support the display of system hard disk space, version number, recording status, IP address and other device information.
* Come with 2TB of storage space; the recording content can be stored for up to 2000 class hours; support frequent use of the device for more than one year; support automatic deletion of old files and loop recording.
* With 2 HDMI signal input interfaces, connected to a computer or a camera.
* With 4 SDI signal input interfaces, connected to the camera.
* With 1 YCBR composite signal input port, connected to external signal sources.
* With 8 network signal inputs, adopt standard RTSP stream access to collect network camera signals.
* Support synchronous input of up to 8 video signals; support signal types such as HDMI/3G-SDI/IP.
* With 2 HDMI video output interfaces, connected to external display devices.
* With 3 3.5mm audio input interfaces, used to collect external audio signals.
* With 2 3.5mm audio output interfaces, used for monitoring or connecting to external sound reinforcement equipment.
* With 2 RS-232 control interfaces, used for seamless signaling connection with other control systems.
* With 2 USB ports, used to connect U disk or keyboard and mouse.
* With 1 802.3ab 1000Base-T Gigabit network interface, support IPv4 address and IPv6 address.
* Built–in dual DVD burner, support dual-disc double-layer 8.5GB DVD recording, support up to 16 hours of seamless continuous recording of dual-disc HD video recording.
* Support manual directing through the directing software, and automatic directing through the built-in automatic directing module.
* Support remote control of the control panel; functions such as input source screen monitoring or broadcast switching, recording mode switching, recording and stopping, special effect switching and camera control can be realized by clicking the button on the panel.

* Support simultaneous rotation and zooming of up to 8 PTZ cameras; support one-click image tracking function.
* Support single-stream single-screen/single-stream multi-screen/multi-stream multi-screen recording methods, each input signal can be saved as a separate file; up to 5 channels of video images can be recorded at the same time, and categories can be customized for classified recording and storage; support MP4, AVI, MOV, FLV and MKV and other formats.
* Support 7 screen layouts such as three-screen, four-screen and dialogue screen; support two custom screen layouts to meet individual needs.
* Support PVW and PGM dual screen, support output switching effects when switching output display, including 12 screen switching effects such as fade, erase, push, expand, fly in, etc.
* Support subtitle setting, built-in subtitle template, users can customize the size, color and position of letters.
* Support online speech transcription function, realize transcribing speech into text and automatically generate subtitles.
* Support the function of adding a custom title, support uploading a custom title and customize its display time.
* Support tagging of each video screen to distinguish the video screens of the trial seat, prosecutor, defendant, defense seat, and auditorium.
* Support simultaneous dual backup recording of CD and HDD; support functions such as no-disk/insufficient space warning, dual-disc seamless recording, etc.
* Support manual recording and automatic recording. After the recording is completed, it can automatically finish the processing operations such as disc sealing and disc output.
* Support recording reservation function, you can select recording reservation function according to the case list, and it will automatically record at the predetermined time after completion.
* Built-in VOD module, support operations such as play, pause, and jump of online video files through the network.
* Support live broadcast function, and support live broadcast to 50 users in the local area network at the same time; support standard RTMP streaming protocol, and support connecting to third-party live broadcast platforms for online live broadcast, convenient to expand the number of live broadcasts.
* Support the automatic uploading of backup files; working with a third-party FTP file server to automatically push the courseware to the file server; file uploading and downloading can automatically adjust the bandwidth to prevent network congestion.
* Support video file repair function. During recording, damaged video files caused by power outages can be repaired.
* Support one-key reset function to avoid file damage, loss of IP address and loss of administrator password.
* Support one-key upgrade function, when the system has new function iterations, the function can be upgraded by importing the firmware.
* Support software central control, fill in the central control instructions in the recording management interface, you can perform central control operations through the interface, and connect to other devices for one-key control.
* Support connecting with the court system platform. Through RTSP/RTMP/HLS and other network live broadcast protocols, support real-time live broadcast and recording of case trial on the court trial live broadcast platform.
* Support user group management function, assign account permissions to each user, users can watch live and VOD files after authentication, and corresponding users can only access corresponding files.
* Support video file management. The files can be sorted chronologically, the file name can be edited, and MD5 encryption is used to prevent file tampering. According to the video file case number, cause of action, appellant and other relevant information, you can accurately search and find files.
* Support the function of online court opening/closing on the web page. You can create a case first, fill in the relevant case information, and then choose to start a court.
* Support online editing of transcript templates; the transcript clerk can import it with one click during court sessions.
* Support online editing of transcripts on web pages; you can directly export case transcript files and download playback videos on the web page.
* Support online revision of case details; you can continue to revise the transcript or case details after the court session.

Specification

Model	TS-0660C
Video protocol	H.264
Code stream	256Kbps~12Mbps
Video output format	MP4/MOV/MKV/FLV/AVI/TS
Audio protocol	AAC
Live protocol	Support TS, RTSP, RTP and RTMP real-time protocol streams
Network protocol	Support TCP, UDP, RTMP, RTSP, FTP, DHCP, HTTP protocols
Video input interface	4 SDI HD video interfaces, 2 HDMI HD video interfaces, 1 composite video interface
Video output interface	2 HDMI HD video interfaces
Input resolution	1920x1080P60/P50/I60/I50/P30/P25fps
Output resolution	1920x1080P60/P50/P30/P25fps, 1280x720P60/P50/P30/P25fps, 720X576P60/P50/P30/P25fps
Audio input interface	3 3.5mm audio interfaces
Audio output interface	2 3.5mm audio interfaces
Network port	1 Gigabit Ethernet port
USB port	2 USB 2.0 ports
Control port	2 RS-232 ports
Panel button	1× switch button, 4× function button
Storage	2TB
DVD drive	2xDVD drive
Disc format	DVD±R, DVD±RW, DVD±RDL, etc.
Power supply	DC 24V/5A
Power consumption	50w
Weight	2.5kg
Dimension	440×295×66mm (L×D×H)
Working temperature	-10℃~55℃ (under well-ventilated conditions)
Relative humidity	20%~80%, no condensation

Special delivery classroom teaching host
TS-0663

Description

It adopts integrated hardware design, embedded Linux operating system, and highly integrated system modules such as image collection, recognition and tracking, recording, automatic guidance, live, and on-demand, which is a new generation of recording host to meet the needs of producing high-quality teaching videos, online learning, interactive teaching and so on.

Feature

*It adopts integrated hardware ARM+DSP design and embedded Linux operating system. It is highly integrated with system modules such as image recognition and tracking, automatic guidance, live, on-demand, collection, and recording. It is easy to use, easy to maintain, and has ultra-high security.
* Based on the B/S architecture, you can log in to the web terminal to realize functions such as live management, signal management, user management, file management, scheduled recording, central control management, and system management.
* Supports AAC audio encoding, accurate and simultaneous recording of audiovisual.
* Adopting H.264/H.265 video encoding and decoding technology, the bit rate is adjustable, supports video encoding from 256kbps to 12Mbps, and the maximum resolution can reach 3840*2160.
* Using advanced tracking algorithms, by detecting the vertical movement of face contours and ignoring other activities of students, the accuracy rate reaches more than 90%, intelligently presenting the "focus" of the classroom.
* There is no need to install tracking auxiliary analysis cameras, and it can support younger students and classes with large height differences, and adapt to the height of students in different classes.
* The recording host has a built-in encryption algorithm, which ensures that genuine machines need to be activated before they can be used, and supports the use authorization date.
* It has three major application function modules: recording module, TV module, and interactive module.
* The built-in audio processing module supports multi-channel mixing, AGC function, noise reduction adjustment, audio adjustment and other functions, which can solve the echo, noise and other problems in interactive recording classrooms.
* The host has 1TB of storage space, can store up to 1,000 lessons, and supports frequent use of the device for more than a year; it supports automatic deletion of old files and loop recording.
* The host has 2 HDMI input interfaces, which can be used to connect to teaching computers.
* The host has 2 HDMI output interfaces, which can be used to connect to TV sets.
* The host has 5 network signal inputs and uses standard RTSP stream access to collect network camera signals.
* The host has 1 network audio input interface for connecting to an omnidirectional microphone to collect the voices of teachers and students; 2 3.5mm audio inputs for collecting external microphone and computer audio. 3 channels of audio support mixing input, 3.5mm audio input has the highest priority, and omnidirectional microphone input has the lowest priority.
* The host has 1 3.5mm audio output interface for monitoring or external sound equipment; 1 HDMI audio output for TV sound reinforcement.
* The host has an RS-232 Phoenix terminal interface, which can be used for seamless signaling connection with other control systems.
* The host has 1 RS-485 control interface for connecting and controlling the touch screen.
* The host machine comes standard with a control touch screen. The touch screen supports functions such as guide recording, classroom interaction, device shutdown, and recording duration display, and is suitable for various teaching scenarios.
* The host has 2 USB 2.0 interfaces, which can be used to connect U disks or 2.4GHz remote control consoles. The recorded video files can be automatically copied by connecting to a USB storage device, enabling copying as you record.
* The host has one 802.3ab 1000Base-T Gigabit network interface and supports IPv4.
* The host has dual power supply function and supports standard POE power supply and DC 12V power supply. When an external power outage occurs or the power module is damaged, the host can be used normally.
* The host comes with a 2.4G remote control, which can realize remote control of the recording and broadcasting host and supports air mouse control mode.
* It supports manual broadcasting through the broadcasting software, and can also be used with the built-in automatic broadcasting module for fully automatic broadcasting.
* Supports remote control of the control screen. By clicking the control screen button, you can realize input source screen monitoring or director switching, recording mode switching, and start and stop recording.
* It supports the simultaneous operation of the rotation and zoom of up to 3 PTZ cameras, and supports the setting of preset position tracking functions, and the screen can be called up with one click.
* Supports recording multiple video formats such as MP4, AVI, MOV, FLV and MKV.
* It supports 7 screen layouts, including three screens, four screens, and conversation screens, and supports 2 custom screen layouts to meet personalized needs.
* Supports custom segmented recording, with optional duration of 30-480 minutes, and can be seamlessly connected with non-linear editing tools from other manufacturers.
* Supports switching special effects, including 12 kinds of screen switching special effects such as gradient, wipe, push, expand, and fly-in.
* Supports subtitle settings and built-in subtitle templates. Users can customize the size, color, and position of letters.
* Supports online speech transcription function to transcribe speech into text and automatically generate subtitles (to achieve this function, you need to connect to a third-party service) .
* Supports the function of customizing the title title, uploading a custom title title and customizing its display time.
* Supports labeling each video screen to distinguish between screens and display different content.
* Built-in video interaction function can realize the interaction of 4 recording hosts. In discussion mode, the main lecture room can have audiovisual interaction with any lecture room; in mute mode, the lecture room can watch the live broadcast of the lecture.
* Support address book function. In discussion mode, users can enter the device name or IP address in the search box at the top to find the corresponding contact that has been added, or they can create a new contact on the right side of the search box to add a contact. The added contacts can be dialed, edited, deleted and other operations through the buttons on the right.
* Supports class convening function. In interactive mode, the main lecture room can directly initiate interactive functions on classroom terminals that have participated in classroom interactions by viewing historical records. No additional configuration is required, which is convenient and fast.
* Support permission control function. In interactive mode, the main lecture room can be set to turn on and off the terminal screen and sound in the lecture room, and the screen layout of the interactive screen can be set.
* Supports dual-screen dual display function. In recording and broadcasting mode, the HDMI OUT2 interface outputs the guide preview interface, and the HDMI OUT1 interface outputs computer courseware content. In interactive mode, the HDMI OUT2 interface outputs the interactive images of the lecturer and the listener. When the lecturer turns on the auxiliary stream sharing, the HDMI OUT1 interface of the lecturer and the listener outputs the lecturer's computer courseware content; when the lecturer does not turn on the auxiliary stream sharing, the HDMI OUT1 interface of the lecturer Output the computer courseware content of the lecturer, and the HDMI OUT1 interface of the lecturer outputs the computer courseware content of the lecturer .
* Combined with the special delivery classroom interaction platform, interaction between 50 recording hosts can be achieved. Supports a variety of screen layouts, can display up to 16 screens at the same time, and can automatically perform screen polling.
* Supports docking with educational resource public service platforms to realize resource on-demand and sharing application functions; supports selection of viewing content by platform, school period, subject, version and teaching materials, automatic caching and high-definition video playback; supports on-demand, drag and drop, review, and jump Wait for the video content playback operation.
* It supports the scheduled recording function. After the scheduled recording schedule is edited, it will automatically record at the scheduled time, and automatically generate file names with information such as venue, speaker, and theme.
* Built-in VOD on-demand module, you can perform online playback, pause, jump and other operations of video files through the network.
* Supports live broadcast function, supports live broadcast for 50 users at the same time within the local area network ; supports standard RTMP streaming protocol, can be connected to third-party live broadcast platforms for online live broadcast, conveniently expanding the number of live broadcasts.
* It supports automatic uploading of backup files and can cooperate with third-party FTP file servers to automatically push courseware to the file server. Bandwidth can be automatically adjusted for file upload and download to prevent network congestion.
* Supports video file repair function. During the recording process, video files damaged due to power outage can be repaired.
* Supports one-click reset function to avoid file damage, IP address loss, and administrator password loss that may cause the system to become unusable.
* Supports one-click upgrade function. When the system has new function iterations, function upgrades can be achieved by importing firmware.
* It supports software central control. After filling in the central control instructions in the recording and broadcasting management interface, you can perform central control operations through the interface and connect to other devices for one-click control.
* Supports docking with private cloud platform servers. After successful docking, the cloud platform can provide unified management and control of the equipment, making it easier to manage multiple recording equipment.

Specification

Model	TS-0663
Video protocol	H.264/H.265
Code stream	256Kbps~12Mbps
Video output format	MP4/MOV/MKV/FLV/AVI/TS
Audio protocol	AAC
Live protocol	Supports TS, RTSP, RTP and RTMP real-time protocol streams
Network protocol	Support TCP, UDP, RTMP, RTSP, FTP, DHCP, HTTP protocols
Video input interface	2 -channel HDMI high-definition video interface
Video output interface	2 -channel HDMI high-definition video interface
Input resolution	3840x2160P30/P25fps, 1920x1080P60/P50/I60/I50/P30/P25fps, 1280x720P60/P50fps
Output resolution	3840x2160P30fps, 1920x1080P60/P50/P30/P25fps, 1280x720P60/P50/P30/P25fps, 720X576P60/P50/P30/P25fps
Audio input interface	2-channel 3.5mm audio interface, 1-channel RJ45 audio interface
Audio output interface	1 channel 3.5mm audio interface
Network port	1 Gigabit network port
USB interface	2-channel USB 2.0 interface
Control port	1 RS-232 interface, 1 RS-485 interface
Panel buttons	1×switch button
Storage	1TB
power supply	DC 12V/5A
Power consumption	30W
Weight	1.8kg
Dimension （L×D×H）	300×158×45mm
Operating temperature	-10℃~55℃ (ambient temperature under well-ventilated conditions)
Relative humidity of working environment	20%~80% relative humidity, no condensation

Recording Controller

Automatic recording control built-in software V3.11

TS-0663C

Description

It adopts integrated hardware design, embedded Linux operating system, and highly integrated with built-in ultra-high-definition video collection, recording, live broadcast, director switching, image segmentation and splicing, and local echo output, realizing multiple functions such as video live broadcast, intelligent guidance, ultra-high-definition recording, remote control, image recognition tracking, and multi-party interaction. It is the latest generation of multimedia information recording and dissemination equipment independently developed to meet the needs of the education industry for comprehensive live teaching, interactive learning, and practical training.

Feature

*Adopt integrated hardware design, embedded Linux operating system, highly integrated audio and video collection, encoding, decoding, professional directing, live broadcast, on-demand, recording and other system modules, Easy to use, easy to maintain, and support high security.
* Based on the B/S architecture, you can log in to the web terminal to realize functions such as live broadcast management, signal management, group management, user management, file management, recording reservation, central control management, and system management.
* Support AAC audio encoding, accurate synchronous recording of audio and video.
* Adopt H.264/H.265 video encoding and decoding technology, and the pure hardware DSP method collects, encodes and transmits high-definition video signals. It supports up to 7 channels of encoding and recording.
* Adopt a self-developed tracking algorithm to detect vertical movement tracking of face contours and ignore other activities of students. The accuracy rate reaches more than 90%, intelligently presenting the focus of the class.
* Without installing auxiliary tracking analysis cameras, it can accurately track students with large height differences and adapt to the heights of students in different classes.
* With built-in encryption algorithm, the genuine machine needs to be activated before it can be used; support the use of authorization date.
* Built-in 1.8-inch LCD screen displays real-time preview of common device status such as device operating status, parameter information, hard disk capacity, audio status, etc.
* The built-in shortcut keys support one-key record, stop, live and one-key copy of recorded files.
* With 2TB storage space, the recording content can be stored for up to 2000 hours; support frequent use of the device for more than one year; support automatic deletion of old files and loop recording.
* With 1 HDMI signal input interfaces, connected to a computer or a camera.
* With 2 HDMI output interfaces, 1 supports 3840x2160@30fps resolution output, and can be used to connect to external display systems.
* With 2 3G-SDI signal input interfaces, the SDI interface has the POC function, supports the self-adaptive identification of POC devices, and realizes the video transmission, PTZ control and power supply functions in one line.
* With 3 3.5mm audio input, used to collect external audio.
* With 3 3.5mm audio output interface, used for monitoring or connecting to sound reinforcement equipment;
* With one RS-232 Phoenix terminal interface and one RS-485 Phoenix terminal interface, used for seamless signaling connection with other control systems.
* With 3 USB interfaces and 2 Type-C interfaces, which can be used to connect U disk or keyboard and mouse, video capture, file copy, upgrade and other functions.
* With 4 channels of 802.3ab 1000Base-T Gigabit network interfaces, 3 of which support POE function, realizing power supply and network supply with one network cable; supports IPv4 addresses and IPv6 addresses.
* Support up to 7 channels of video stream recording, 1 channel of PGM screen recording and 6 channels of resource channel screen recording. The recorded file format supports standard MP4, AVI, MOV, FLV, TS and MKV and other formats, with a maximum bit rate of 20M and a maximum resolution of 3840x2160@30fps.
* Support simultaneous decoding of 6-channel 3840x2160@30fps network cameras, support up to 6-channel image synthesis output, realizing simultaneous online preview of 6 images.
* With 2.4G remote control, it can realize remote control of the recording controller.
* Support local video preview and playback function, which can preview and view the currently recorded video, providing multiple playback switching, and support 0.5x, 1x, 1.5x, and 2x video playback speed adjustment playback.
* Support software/hardware reset function. Users can restore the device to factory settings through physical buttons of the device or remote commands to avoid file damage, loss of IP address, and loss of administrator password, resulting in the system being unusable.
* Support a variety of guidance methods for flexible control, support manual guidance through the web page, and can also be used with the built-in automatic guidance module for fully automatic guidance.
* Support remote control of the control screen. Click the control screen button to realize input source screen monitoring or director switching, recording and broadcasting mode switching, and starting and stopping recording.
* Support 7 screen layouts such as three-screen, four-screen and dialogue screen; support two custom screen layouts to meet individual needs.
* Support custom segmented recording, with an optional duration of 30-480 minutes; support up to 8 hours of uninterrupted recording, and support seamlessly connecting with non-linear editing tools from other manufacturers.
* Support switching effects, including 12 screen switching effects such as fade, erase, push, expand, and fly in.
* Support subtitle setting, built-in subtitle template, users can customize the size, color and position of letters.
* Support the function of customizing the title title, uploading a custom title title and customizing its display time.
* Built-in video interaction function can realize the interaction of 4 recording controllers. In discussion mode, the main lecture room can have audio and video interaction with any lecture room; in mute mode, the lecture room can watch the live broadcast of the lecture.
* Support address book function. In discussion mode, users can enter the device name or IP address in the search box at the top to find the corresponding contact that has been added, or they can create a new contact on the right side of the search box to add a contact. The added contacts can be dialed, edited, deleted and other operations through the buttons on the right.
* Support class convening function. In interactive mode, the main lecture room can directly initiate interactive functions on classroom terminals that have participated in classroom interactions by viewing historical records. No additional configuration is required, which is convenient and fast.
* Support permission control function. In interactive mode, the main lecture room can be set to turn on and off the terminal screen and sound in the lecture room, and the screen layout of the interactive screen can be set.
* Support dual-screen dual display function. In recording and broadcasting mode, 1 HDMI interface outputs the guide preview interface, and 1 HDMI interface outputs computer courseware content. In interactive mode, 1-channel HDMI interface outputs the interactive images of the lecturer and the lecturer. When the lecturer turns on the auxiliary stream sharing, the HDMI interfaces of the lecturer and the lecturer output the computer courseware content of the lecturer; When the lecturer does not enable auxiliary stream sharing, the lecturer's HDMI interface outputs the lecturer's computer courseware content, and the lecturer's HDMI interface outputs the lecturer's computer courseware content.
* Combined with the special delivery classroom interaction platform, interaction between 50 recording and broadcasting hosts can be achieved. Support a variety of screen layouts, can display up to 16 screens at the same time, and can automatically perform screen polling.
* Support docking with educational resource public service platforms to realize resource on-demand and sharing application functions;Support the selection of viewing content by platform, school period, subject, version and teaching materials, automatic caching and high-definition video playback; supports on-demand, drag and drop, playback, jump and other video content playback operations.
* Support the function of recording reservation. After editing the recording schedule, it can be automatically recorded according to the scheduled time, and the file name will be automatically generated with information such as venue, speaker and theme.
* Built-in VOD module, support the operations such as play, pause, and jump of online video files through the network.
* Support live broadcast function, and support live broadcast to 50 users in the local area network at the same time; support standard RTMP streaming protocol, and support connecting to third-party live broadcast platforms for online live broadcast, convenient to expand the number of live broadcasts.
* Support the automatic uploading of backup files; working with a third-party FTP file server to automatically push the courseware to the file server; file uploading and downloading can automatically adjust the bandwidth to prevent network congestion.
* Support the video file repair function, support repair of recording files in multiple formats such as MP4, AVI, MOV, FLV, TS and MKV.
* Support one-key reset function to avoid file damage, loss of IP address and loss of administrator password.
* Support one-key upgrade function, when the system has new function iterations, the function can be upgraded by importing the firmware.
* Support software central control, fill in the central control instructions in the recording management interface, you can perform central control operations through the interface, and connect to other devices for one-key control.
* Support docking with private cloud platform servers. After successful docking, the cloud platform can provide unified management and control of the equipment, making it easier to manage multiple recording and broadcasting equipment.
* Supports people counting, built-in AI people detection algorithm, and counts the number of people in the view in real time.
* Supports character behavior analysis and uses posture detection algorithms to conduct big data analysis and statistics on the skeletal postures of students in the classroom. It can identify students' basic postures such as lowering their heads, raising their heads, turning their heads, and raising their hands.
* Supports quick response attendance. The host computer has a built-in AI facial feature recognition algorithm. Through real-time facial recognition and matching of the speaker, it can perform high-precision matching with the pre-entered facial feature library.

Specification

Model	TS-0663C
Video protocol	H.264、H.265
Code stream	256Kbps~20Mbps
Video output format	SupportMP4/MOV/MKV/FLV/AVI/TS
Audio protocol	AAC
Live protocol	Support TS, RTSP, and RTMP real-time protocol streams
Network protocol	Support TCP, UDP, RTMP, RTSP, FTP, DHCP, HTTP protocols
Video input interface	1 HDMI video interface, 2 3G-SDI video interfaces (support POC power supply)
Video output interface	HDMI OUT1: Adjustable resolution, up to 4K30 with audio output, fixed PGM screen
	HDMI OUT2: 1080P60 (fixed) with or without audio output, fixed director interface output
Interactive mode	Bluetooth remote control/mouse/USB touch
Input resolution	3840x2160@30fps、2560*1600@60fps、2560*1440@60fps、2048*1152@60fps、1920*1200@60fps、
	1920x1080@60/50/30/25fps、1680*1050@60fps、1280*720@60fps
Output resolution	3840x2160@30fps、1920x1080@60/50/30/25fps
Audio input interface	3 3.5mm audio input interface, 1-way HDMI with audio input
Audio output interface	3 3.5mm audio output interface, 1-way HDMI with audio output
Network port	4 802.3ab 1000Base-T Gigabit network interfaces, 3 of which support POE power supply
USB port	2 USB2.0 interfaces, 1 USB3.0 interface, supports mouse/U disk/director switcher
Control port	1 RS-232 interface, 1 RS-485 interface
Storage	2TB
Display	1.8-inch LCD display supports real-time preview display of common device statuses such as device operating
	status/parameter information/hard disk capacity/audio status etc.
Button	1×switch button, 4×function button
Software reset function	Support restoring factory settings
Software upgrade	Support USB upgrade, web-side network upgrade
Indicator light	3*LED, system operation, hard disk failure and recording prompt lights
Power supply	DC 24V/5A
Power consumption	120W
Working temperature	-10℃~55℃ (under well-ventilated conditions)
Relative humidity	20%~80%, no condensation
Weight	3.15 kg
Dimension （L×D×H）	484×258×44mm

HD Recording Controller

Embedded DSP codec system V3.1

TS-0663M

Description

It adopts integrated hardware design, embedded Linux operating system, and highly integrated system modules such as image acquisition, identification and tracking, recording, automatic broadcasting, live broadcasting, and VOD. It is a new generation of recording controller that meets the needs of conference recording, online learning, and interactive teaching.

Feature

*Adopt integrated hardware ARM+DSP design, embedded Linux operating system, highly integrated system modules such as image recognition and tracking, automatic guidance, live broadcast, VOD, acquisition, recording, etc. Easy to use, easy to maintain, and support high security.
* Based on the B/S architecture, you can log in to the web terminal to realize functions such as live broadcast management, signal management, group management, user management, file management, recording reservation, central control management, and system management.
* Support AAC audio encoding, accurate synchronous recording of audio and video.
* Adopt H.264/H.265 video encoding and decoding technology, adjustable bit rate, support video encoding 256kbps ~ 12Mbps, and support the max resolution of 3840*2160.
* With built-in encryption algorithm, the genuine machine needs to be activated before it can be used; support the use of authorization date.
* With 2TB storage space, the recording content can be stored for up to 2000 hours; support frequent use of the device for more than one year; support automatic deletion of old files and loop recording.
* With 1 HDMI input interface, connected to teaching computer.
* With 1 HDMI output interface, connected to TV.
* With 1 VGA output interface, connected to a monitor.
* With 5 network signal inputs, adopt standard RTSP stream access, used to collect network camera signals.
* With one 3.5mm audio input, used to collect external audio.
* With one 3.5mm audio output interface, used for monitoring or connecting to sound reinforcement equipment; with 1 HDMI audio output, used for TV sound reinforcement.
* With one RS-232 Phoenix terminal interface, used for seamless signaling connection with other control systems.
* With 1 RJ45 to RS-485 control interface, used for connecting and controlling the touch screen.
* With 1 control touch screen as standard, and the power supply and control functions can be realized through a network cable between the controller and the touch screen. The touch screen supports functions such as broadcasting and recording, device shutdown, and recording duration display.
* With 2 USB 2.0 ports, used to connect U disk. The recorded video files can be automatically copied by connecting to the USB storage device.
* With 1 802.3ab 1000Base-T Gigabit network interface, support IPv4.
* With dual power supply function, support standard POE power supply and DC 12V power supply. When an external power failure occurs or the power module is damaged, the controller can be used normally.
* Support manual directing through the directing software, and automatic directing through the built-in automatic directing module.
* With 1 control screen as standard, support remote control of the control screen; realize input source screen monitoring or broadcast switching, recording mode switching, recording and stopping by clicking the control screen button.
* Support the rotation and zooming of up to 3 PTZ cameras at the same time, support the setting of the preset tracking function, and support one-key screen invocation.
* Support recording MP4, AVI, MOV, FLV and MKV and other video formats.
* Support 7 screen layouts such as three-screen, four-screen and dialogue screen; support two custom screen layouts to meet individual needs.
* Support custom segmented recording, with an optional duration of 30-480 minutes; support seamlessly connecting with non-linear editing tools from other manufacturers.
* Support switching effects, including 12 screen switching effects such as fade, erase, push, expand, and fly in.
* Support subtitle setting, built-in subtitle template, users can customize the size, color and position of letters.
* Support online speech transcription function, realize transcribing speech into text and automatically generate subtitles.
* Support the function of adding a custom title, support uploading a custom title and customizing its display time.
* Support tagging of each video screen, distinguishing the screen to display different content.
* Support the function of recording reservation. After editing the recording schedule, it can be automatically recorded according to the scheduled time, and the file name will be automatically generated with information such as venue, speaker and theme.
* Built-in VOD module, support the operations such as play, pause, and jump of online video files through the network.
* Support live broadcast function, and support live broadcast to 50 users in the local area network at the same time; support standard RTMP streaming protocol, and support connecting to third-party live broadcast platforms for online live broadcast, convenient to expand the number of live broadcasts.
* Support the automatic uploading of backup files; working with a third-party FTP file server to automatically push the courseware to the file server; file uploading and downloading can automatically adjust the bandwidth to prevent network congestion.
* Support the video file repair function. During the recording process, the damaged video files caused by power failure can be repaired.
* Support one-key reset function to avoid file damage, loss of IP address and loss of administrator password.
* Support one-key upgrade function, when the system has new function iterations, the function can be upgraded by importing the firmware.
* Support connecting with private cloud platform servers. The cloud platform can manage and control the devices in a unified manner, convenient for the management of multiple recording devices.
* Support software central control, fill in the central control instructions in the recording management interface, you can perform central control operations through the interface, and connect to other devices for one-key control.
* Support connecting with remote video conference system to realize the recording of conference content. Up to 5 groups of conference contents can be recorded at the same time.
* Support connecting with digital conference system to realize tracking linkage function. When the speaker turns on the digital microphone, the camera can link the designated position to shoot the speaker; up to 3 PTZ cameras can be controlled at the same time.
* Support image recognition tracking function; in the individual performance mode, the stage character tracking function is realized.

Specification

Model	TS-0663M
Video protocol	H.264/H.265
Code stream	256Kbps~12Mbps
Video output format	MP4/MOV/MKV/FLV/AVI
Audio protocol	AAC
Live protocol	Support TS, RTSP, RTP and RTMP real-time protocol streams
Network protocol	Support TCP, UDP, RTMP, RTSP, FTP, DHCP, HTTP protocols
Video input interface	1 HDMI video interface
Video output interface	1 HDMI video interface, 1 VGA HD video interface
Input resolution	3840x2160P30/P25fps,
	1920x1080P60/P50/I60/I50/P30/P25fps, 1280x720P60/P50fps
Output resolution	3840x2160P30fps, 1920x1080P60/P50/P30/P25fps,
	1280x720P60/P50/P30/P25fps, 720X576P60/P50/P30/P25fps
Audio input interface	1 3.5mm audio interface, 1 RJ45 audio interface
Audio output interface	1 3.5mm audio interface
Network port	1 Gigabit Ethernet port
USB port	2 USB 2.0 ports
Control port	1 RS-232 port, 1 RJ45 to RS-485 port
Panel button	1 × switch button
Storage	2TB
Power supply	DC 12V/5A
Power consumption	30W
Weight	1.8kg
Dimension	300×158×45mm (L×D×H)
Working temperature	-10˚C~55˚C (under well-ventilated conditions)
Relative humidity	20%~80%, no condensation

Camera

TS-0663JS

Description

*Equipped with 4K Sensor and 4K lens to achieve high-definition electronic PTZ effect.
*Built-in leading image recognition and tracking algorithms, it can achieve smooth and natural tracking effects without any auxiliary positioning camera or tracking host. Different cameras are assembled before production to achieve teacher tracking.
*Fully automatic focus distortion-free lens, wide-angle field of view up to 42°. Supports EPTZ, allowing you to see more clearly.
*Network or USB director output, no need for recording or terminal and other director equipment, can realize the director stream output of teacher's computer and student computer.
*The new CMOS image sensor with ultra-high signal-to-noise ratio can effectively reduce image noise in low-light conditions. It also applies 2D and 3D noise reduction algorithms to significantly reduce image noise. Even in ultra-low-light conditions, the picture remains clean and clear, with an image signal-to-noise ratio of over 55dB.
*Supports PoE one-line function, integrating power, video, audio and control into one.
*Supports interlaced mode, a single camera can output panoramic and close-up signals simultaneously, achieving a dual-lens effect.
*It supports up to 3840x2160@30fps resolution encoded network stream output and is backward compatible.

Specification

Model	TS-0663JS
Sensor type	1/2.7 inches, CMOS, effective 8.31 MP
Scanning method	Line by Line
Lens mount type	M12
Lenses	Focal length: f=7.2mm, horizontal field of view: 44°
Auto focus	Teacher computer supports
Minimum illumination	0.5 Lux @ (F1.8, AGC ON)
Electronic shutter	1/30s ~ 1/10000s
White Balance	Auto, Indoor, Outdoor, One-touch, Manual, Specified color temperature
Digital noise reduction	2D, 3D digital noise reduction
BLC	support
EPTZ	support
Digital zoom	8x
PoE power supply	support
Lenses	Teacher tracking mode
Operating system	Windows 718110MacOSXLinux Android
Color space/compression	H.264/MJPEG
USB Audio	support
USB Video Protocol	UVC 1.1~UVC 1.5
Encoding Protocol	H.264/H.265/MJPEG
Video stream	First stream, second stream, third stream, fourth stream
First stream resolution	1920x1080, 1280x720, 1024x576, 960x540, 640x480, 640x360
Second stream resolution	3840x2160, 1920x1080, 1280x720, 1024x576, 720x576 (50Hz), 720x480 (OSD), 720x408, 640x360, 480x272, 320x240, 320x180
Third stream resolution	1920x1080, 1280x720, 1024x576, 960x540, 720x576, 720x408, 640x480, 640x360, 480x272, 320x240, 320x180
Fourth stream resolution	1920x1080, 1280x720, 1024x576, 960x540, 720x576, 720x408, 640x480, 640x360, 480x272, 320x240, 320x180
Video bitrate	32Kbps~16384Kbps
Bit rate control	Variable bit rate, fixed bit rate
Frame rate	25fps, 30fps
Audio compression standards	AAC/G711A
Audio Bitrate	64K, 96K, 128K, 256K
Supporting agreement	TCP/IP, HTTP, RTSP, RTMP(S), ONVIF, DHCP, 28181, multicast, etc.
Network interface	1 LAN: 10M/100M adaptive Ethernet port, support PoE
Audio input interface	1-channel LINE IN: 3.5mm audio input interface
Audio output interface	1-channel LINE OUT: 3.5mm audio output interface
USB interface	1-channel USB2.0: Type-C interface
Power interface	DC005 type (DC 12V)
Input voltage	DC 12V/PoE (802.3af)
Input current	0.5A (max)
Power consumption	6W (max)
Operating temperature	0˚C~40˚C
Stored temperature	-40˚C~60˚C
Dimensions (L*W*H)	110mm x 96mm x 44mm
Net weight	About 0.4Kg

Camera
TS-0663SK

Description
The camera features complete functions, excellent performance, and rich interfaces and supports H.265/H.264 encoding and 4K resolution. It is suitable for remote education, teaching recording and broadcasting, conference system, remote training, telemedicine, court hearing system, emergency command system system, etc.

Feature
*Equipped with 4K Sensor and 4K lens to achieve high-definition EPTZ effect.
*With built-in leading image recognition and tracking algorithm, it can realize student tracking with smooth and natural tracking effect without any auxiliary positioning camera or tracking host. It supports 8 shielded zones.
*The fully automatic focus distortion-free lens has a wide-angle field of view up to 95°. Small lens, broad horizon. EPTZ is also supported, to get bigger picture, better view.
*The brand new CMOS image sensor with ultra-high signal-to-noise ratio can effectively reduce image noise in low illumination situations. Simultaneous application of 2D and 3D noise reduction algorithms significantly reduces image noise. Even in ultra-low illumination situations, the image is still clean and clear, and the image signal-to-noise ratio is as high as 55dB or more.
*Support 3G-SDI interface, with effective transmission distance up to 150 meters (1080p30). SDI and network can be output simultaneously.
*Support POE (Power Over Ethernet) N-ISDN function, integrating power, video, audio and control lines into one.
*Support Interleave mode, which enables a single camera to output panoramic and close-up signals at the same time, achieving the effect of one camera with two lenses
*Support encoded web stream output with resolutions up to 3840x2160@30fps. And it is downward compatible.
*Support local storage function, enabling direct local recording of USB flash disk without NVR.

Specification

Model	TS-0663SK
Sensor type	1/2.8 inches, CMOS, effective pixels of 8.46 million
Scanning method	Progressive
Lens mount type	M12
Lens	Focal length: f=2.8mm, horizontal field of view: 95°
Auto focus	Supported
Minimum illumination	0.5 Lux @ (F1.8, AGC ON)
Electronic shutter	1/30s ~ 1/10000s
White balance	Automatic, indoor, outdoor, one-touch, manual, specified color temperature
Digital noise reduction	2D, 3D digital noise reduction
BLC	Supported
EPTZ	Supported
Digital zoom	8x
PoE	Supported
Track	Student tracking mode supported
Video coding standards	H.265/H.264/MJPEG
Video stream	First code stream, second code stream, third code stream, fourth code stream
First code stream resolution	1920x1080, 1280x720, 1024x576, 960x540, 640x480,640x360
Second code stream resolution	3840x2160, 1920x1080, 1920x1080, 1280x720, 1024x576, 720x576(50Hz), 720x480(60Hz),
	720x408, 640x360, 480x270, 320x240, 320x180
Third code stream resolution	1024x576, 960x540, 720x576(50Hz), 720x480(60Hz), 720x408, 640x360, 480x270, 320x240, 320x180
Fourth code stream resolution	1024x576, 960x540, 720x576(50Hz), 720x480(60Hz), 720x408, 640x360, 480x270, 320x240, 320x180
Video bit rate	32Kbps ~ 102400Kbps
Code rate control	Variable code rate, fixed code rate
Frame rate	50Hz: 1fps ~ 25fps, 60Hz: 1fps ~ 30fps
Audio compression standard	AAC
Audio bit rate	48Kbps, 64Kbps, 96Kbps, 128Kbps
Supported protocols	TCP/IP, HTTP, RTSP, RTMP, Onvif, DHCP, multicast, etc.
HD output	1-way, 3G-SDI: BNC type, 800mVp-p, 75Ω, following SMPTE 424M standard; PoC supported
USB interface	1 way, USB 2.0, Type A socket
Network interface	1 RJ45: 10M/100M adaptive Ethernet; PoE supported
Audio interface	1-way Line In, 3-core Phoenix interface
Control interface	1-way RS485, 2-core Phoenix interface, maximum distance of 1,200 meters, VISCA/Pelco-D/Pelco-P protocol
Power interface	DC005 type (DC 12V)
Input voltage	DC 12V/PoE (802.3af)
Input current	0.5A (maximum)
Operating temperature	-10℃ ~ 40℃
Storage temperature	-40℃ ~ 60℃
Power consumption	6W (maximum)
Size	72mm×60mm×130mm
MTBF	>30,000 hours
Net weight	0.45kg

HD Recording and broadcasting system

Camera
TS-0663TK

Description
The camera features complete functions, excellent performance, and rich interfaces and supports H.265/H.264 encoding and 4K resolution. It is suitable for remote education, teaching recording and broadcasting, conference system, remote training, telemedicine, court hearing system, emergency command system system, etc.

Feature
*Equipped with 4K Sensor and 4K lens to achieve high-definition EPTZ effect.
*With built-in leading image recognition and tracking algorithm, it can realize teacher tracking with smooth and natural tracking effect without any auxiliary positioning camera or tracking host.
*The fully automatic focus distortion-free lens has a wide-angle field of view up to 42°. Small lens, broad horizon. EPTZ is also supported, to get bigger picture, better view.
*The brand new CMOS image sensor with ultra-high signal-to-noise ratio can effectively reduce image noise in low illumination situations. Simultaneous application of 2D and 3D noise reduction algorithms significantly reduces image noise. Even in ultra-low illumination situations, the image is still clean and clear, and the image signal-to-noise ratio is as high as 55dB or more.
*Support 3G-SDI interface, with effective transmission distance up to 150 meters (1080p30). SDI and network can be output simultaneously.
*Support POE (Power Over Ethernet) N-ISDN function, integrating power, video, audio and control lines into one.
*Support Interleave mode, which enables a single camera to output panoramic and close-up signals at the same time, achieving the effect of one camera with two lenses
*Support encoded web stream output with resolutions up to 3840x2160@30fps. And it is downward compatible.
*Support local storage function, enabling direct local recording of USB flash disk without NVR.

Specification

Model	TS-0663TK
Sensor type	1/2.8 inches, CMOS, effective pixels of 8.46 million
Scanning method	Progressive
Lens mount type	M12
Lens	Focal length: 7.2mm, horizontal field of view: 42°
Auto focus	Supported
Minimum illumination	0.5 Lux @ (F1.8, AGC ON)
Electronic shutter	1/30s ~ 1/10000s
White balance	Automatic, indoor, outdoor, one-touch, manual, specified color temperature
Digital noise reduction	2D, 3D digital noise reduction
BLC	Supported
EPTZ	Supported
Digital zoom	8x
PoE	Supported
Track	Teacher tracking mode supported
Video coding standards	H.265/H.264/MJPEG
Video stream	First code stream, second code stream, third code stream, fourth code stream
First code stream resolution	1920x1080, 1280x720, 1024x576, 960x540, 640x480,640x360
Second code stream resolution	3840x2160, 1920x1080, 1920x1080, 1280x720, 1024x576, 720x576(50Hz), 720x480(60Hz),
	720x408, 640x360, 480x270, 320x240, 320x180
Third code stream resolution	1024x576, 960x540, 720x576(50Hz), 720x480(60Hz), 720x408, 640x360, 480x270, 320x240, 320x180
Fourth code stream resolution	1024x576, 960x540, 720x576(50Hz), 720x480(60Hz), 720x408, 640x360, 480x270, 320x240, 320x180
Video bit rate	32Kbps ~ 102400Kbps
Code rate control	Variable code rate, fixed code rate
Frame rate	50Hz: 1fps ~ 25fps, 60Hz: 1fps ~ 30fps
Audio compression standard	AAC
Audio bit rate	48Kbps, 64Kbps, 96Kbps, 128Kbps
Supported protocols	TCP/IP, HTTP, RTSP, RTMP, Onvif, DHCP, multicast, etc.
HD output	1-way, 3G-SDI: BNC type, 800mVp-p, 75Ω, following SMPTE 424M standard; PoC supported
USB interface	1 way, USB 2.0, Type A socket
Network interface	1 RJ45: 10M/100M adaptive Ethernet; PoE supported
Audio interface	1-way Line In, 3-core Phoenix interface
Control interface	1-way RS485, 2-core Phoenix interface, maximum distance of 1,200 meters, VISCA/Pelco-D/Pelco-P protocol
Power interface	DC005 type (DC 12V)
Input voltage	DC 12V/PoE (802.3af)
Input current	0.5A (maximum)
Operating temperature	-10℃ ~ 40℃
Storage temperature	-40℃ ~ 60℃
Power consumption	6W (maximum)
Size	72mm×60mm×130mm
MTBF	>30,000 hours
Net weight	0.45kg

Interactive management platform terminal

Special delivery classroom interactive platform software V 6.50

TS-0663U

Description

Adopting integrated hardware design and embedded Linux operating system, it is a management interactive terminal that controls and manages multiple educational recording host.

Feature

*It adopts integrated hardware design, embedded Linux operating system, highly integrated control, interaction, management and other system modules, making it easy to use, easy to maintain and support high security.
*Based on the B/S architecture, you can log in to the web terminal to realize functions such as room creation, screen layout, class convening, batch upgrades, system management, network configuration, and user management.
*Adopting H.264/H.265 video encoding and decoding technology, the bit rate is adjustable, supports video encoding from 256kbps to 8192Kbps, and the maximum resolution can reach 1920*1080P.
*The audio adopts AAC HD coding mode, accurate synchronized recording of audio visual.
*The host has 1 HDMI video output interface for connecting external display devices.
*The host has 2 USB interfaces for connecting U disks.
*The host has one 802.3ab 1000Base-T Gigabit network interface and supports IPv4.
*The host has dual power supply function and supports standard POE power supply and DC 12V power supply. When an external power outage occurs or the power module is damaged, the host can be used normally.
*Supports class convening function. With one click, all online recording terminals can be summoned into the interactive classroom.
*Supports 50 classrooms to participate in interactions at the same time, can display 16 channels of images at the same time , and supports one-click switching and automatic polling.
*Supports 8 screen layout switching. There are 2-channel, 4-channel, 6-channel, 8-channel and 16-channel picture combinations to choose from.
*Supports remote management of online delivery classroom hosts. You can designate any special classroom host as the main lecturer, and realize functions such as remote camera control, screen switching, and automatic tracking.
*Support system management functions. You can view the device information of the special classroom host and support batch upgrades.
*Support rights management function. Only users with device permissions can operate the device and implement functions such as device management, device polling, classroom management, and system management.
*Supports organizational structure construction, can establish multi-level user relationships, and can bind and manage corresponding devices.

Specification

Model	TS-0663U
Video protocol	H.264/H.265
Code stream	256Kbps~8192Kbps
Audio protocol	AAC
Live protocol	Supports TS, RT SP, RTP and RTMP real-time protocol streams
Network protocol	Support TCP, UDP, RTMP, RTSP, FTP, DHCP, HTTP protocols
Video output interface	1-way HDMI high-definition video interface
Input resolution	1920x1080P60/P50/I60/I50/P30/P25fps, 1280x720P60/P50fps
Output resolution	1920x1080P60/P50/P30/P25fps, 1280x720P60/P50/P30/P25fps, 720X576P60/P50/P30/P25fps
Network port	1 Gigabit network port
USB interface	2-way USB 2.0 interface
Panel buttons	1×switch button
Power supply	DC 12V/5A
Power consumption	30W
Weight	1.8kg
Dimension （L×D×H）	300×158×45mm (L×D×H)
Operating temperature	-10℃~55℃ (ambient temperature under well-ventilated conditions)
Relative humidity of working environment	20%~80% relative humidity, no condensation

Camera

TS-0663XS

Description

*Equipped with 4K Sensor and 4K lens to achieve high-definition electronic PTZ effect.
*Built-in leading image recognition and tracking algorithms, it can achieve smooth and natural tracking effects without any auxiliary positioning camera or tracking host. Different cameras can be assembled before production to achieve student tracking.
*Fully automatic focus distortion-free lens, wide-angle field of view up to 42°. Supports EPTZ, allowing you to see more clearly.
*Network or USB director output, no need for recording or terminal and other director equipment, can realize the director stream output of teacher's computer and student computer.
*The new CMOS image sensor with ultra-high signal-to-noise ratio can effectively reduce image noise in low-light conditions. It also applies 2D and 3D noise reduction algorithms to significantly reduce image noise. Even in ultra-low-light conditions, the picture remains clean and clear, with an image signal-to-noise ratio of over 55dB.
*Supports PoE one-line function, integrating power, video, audio and control into one.
*Supporting interlaced mode, a single camera can output panoramic and close-up signals simultaneously, achieving a dual-lens effect.
*It supports up to 3840x2160@30fps resolution encoded network stream output and is backward compatible.

Specification

Model	TS-0663XS
Sensor type	1/2.7 inches, CMOS, effective 8.31 MP
Scanning method	Line by Line
Lens mount type	M12
Lenses	Focal length: f=2.8mm, horizontal field of view: 95°
Auto focus	Teacher computer support
Minimum illumination	0.5 Lux @ (F1.8, AGC ON)
Electronic shutter	1/30s ~ 1/10000s
White balance	Auto, Indoor, Outdoor, One-touch, Manual, Specified color temperature
Digital noise reduction	2D, 3D digital noise reduction
BLC	support
EPTZ	support
Digital zoom	8x
PoE power supply	support
Lenses	Student Tracking Mode
Operating system	Windows 718110MacOSXLinux Android
Color space/compression	H.264/MJPEG
USB Audio	support
USB Video protocol	UVC 1.1~UVC 1.5
Encoding protocol	H.264/H.265/MJPEG
Video stream	First stream, second stream, third stream, fourth stream
First stream resolution	1920x1080, 1280x720, 1024x576, 960x540, 640x480, 640x360
Second stream resolution	3840x2160, 1920x1080, 1280x720, 1024x576, 720x576 (50Hz), 720x480 (OSD), 720x408, 640x360, 480x272, 320x240, 320x180
Third stream resolution	1920x1080, 1280x720, 1024x576, 960x540, 720x576, 720x408, 640x480, 640x360, 480x272, 320x240, 320x180
Fourth stream resolution	1920x1080, 1280x720, 1024x576, 960x540, 720x576, 720x408, 640x480, 640x360, 480x272, 320x240, 320x180
Video bitrate	32Kbps~16384Kbps
Bit rate control	Variable bit rate, fixed bit rate
Frame rate	25fps, 30fps
Audio compression standards	AAC/G711A
Audio Bitrate	64K, 96K, 128K, 256K
Supporting agreement	TCP/IP, HTTP, RTSP, RTMP(S), ONVIF, DHCP, 28181, multicast, etc.
Network interface	1-channel LAN: 10M/100M adaptive Ethernet port, support PoE
Audio input interface	1-channel LINE IN: 3.5mm audio input interface
Audio output interface	1-channel LINE OUT: 3.5mm audio output interface
USB interface	1-channel USB2.0: Type-C interface
Power interface	DC005 type (DC 12V)
Input voltage	DC 12V/PoE (802.3af)
Input Current	0.5A (max)
Power consumption	6W (max)
Operating temperature	0℃~40℃
Stored temperature	-40℃~60℃
Dimensions (L*W*H)	110mm x 96mm x 44mm
Net weight	About 0.4Kg

Recording Controller
TS-0664

Description

A recording and broadcasting system integrating human-computer interaction interface. It adopts integrated hardware design, embedded Linux operating system, and highly integrated with built-in ultra-high-definition video collection, recording, live broadcast, director switching, image segmentation and splicing, local echo output, and interactive module, realizing multiple functions such as video live broadcast, intelligent guidance, ultra-high-definition recording, image recognition tracking. It is the latest generation of video and recording integrated controller independently developed for the needs of live broadcast teaching in the education industry.

Feature

*Adopt integrated hardware design, embedded Linux operating system, highly integrated system modules such as image recognition and tracking, automatic directing, live broadcast, on-demand, collection, recording, video statistics, and remote teaching.
* Based on the B/S architecture, you can log in to the web terminal to realize functions such as live broadcast management, signal management, group management, user management, file management, recording reservation, central control management, and system management.
* Support AAC audio encoding, accurate synchronous recording of audio and video.
* Adopt H.264 encoding method, the bit rate is adjustable, support video encoding from 256kbps to 8Mbps, and supports resolutions such as 1920x1080.
* Adopt a self-developed tracking algorithm to detect vertical movement tracking of face contours and ignore other activities of students. The accuracy rate reaches more than 90%, intelligently presenting the focus of the class
* With 1-channel adjustable camera, it can be customized as network signal input, and can achieve ±15° direction adjustment, up to 1920x1080@30fps resolution image capture.
* The controller comes with 64G memory storage, supports uploading and scheduled uploading to designated FTP file servers, and supports automatic deletion of old files to meet loop recording.
* With 1 HDMI signal input interfaces, connected to a computer or a camera.
* With 5 channels of network signal input, standard RTSP stream access is used to collect network camera signals.
* The controller supports up to 6 simultaneous inputs of video signals, and the signal type supports HDMI/IP.
* With 2 channels of HDMI video output interface, used to connect external display devices, 1 channel of teacher directing screen output. 1 channel is used for composite picture output.
* With 2-channel audio input interface, used to collect external audio source signals.
* With 2-channel audio output interface, used for monitoring or connecting external sound reinforcement equipment.
* With2 channel USB interface, used to connect mouse, keyboard, etc.
* With1 channel Micro USB interface, supports OTA upgrade/debugging, etc.
* With1 channel 100M network interface, supports IPv4 address and IPv6 address.
* The directing station has a built-in automatic directing module, which can conduct fully automatic directing and also provides manual broadcasting function.
* Support single-stream single-picture/single-stream multi-picture/multi-stream multi-picture recording methods, and supports multiple video formats such as MP4, AVI, MOV, FLV and MKV.

HD Recording and broadcasting system

* Support 7 screen layouts such as three-screen, four-screen and dialogue screen to meet individual needs.
* Support custom segmented recording, with optional duration of 30-120 minutes, and can be seamlessly connected with non-linear editing tools from other manufacturers.
* When PGM screen switching output is displayed, it supports setting output switching special effects, including 12 kinds of screen switching special effects such as gradient, shrink, fly-in, and expansion.
* Support the function of customizing the title title, uploading a custom title title and customizing its display time.
* Support the slogan setting function, customizes the slogan theme, font color, and font size for the recording and broadcasting screen, and provides real-time time display switch.
* Support watermark function to ensure video copyright ownership, prevent theft and protect document authenticity.
* Support the scheduled recording function. After the scheduled recording schedule is edited, it will automatically record at the scheduled time, and automatically generate a file name with information such as venue, speaker, and theme.
* Built-in PTZ control function,support controlling the zooming, zooming out, up, down, left and right movement of PTZ cameras and electronic PTZ cameras on the directing interface.
* Built-in VOD module, support play, pause, jump and other operations of video files online through the network, support video playback speed adjustment of 0.75x, 1.25x, 1.50x, and 2.0x.
* Support live broadcast function, and support live broadcast to 50 users in the local area network at the same time; support standard RTMP streaming protocol, and can be connected to third-party live broadcast platforms for online live broadcast, convenient to expand the number of live broadcasts.
* Support full-screen zoom function, and after zooming in, there are still common functions such as volume adjustment and multiple playback.
* Support the automatic uploading of backup files; working with a third-party FTP file server to automatically push the courseware to the file server; file uploading and downloading can automatically adjust the bandwidth to prevent network congestion.
* Support one-key upgrade function, when the system has new function iterations, the function can be upgraded by importing the firmware.
* Support factory reset function, which can clear personal information and reconfigure the device.
* Support docking with private cloud platform servers. After successful docking, the cloud platform can provide unified management and control of the equipment, making it easier to manage multiple recording and broadcasting equipment.
* Support one-to-one audio and video interaction function and support access to MCU server. The directing interface supports up to 16 composite screen displays.

Specification

Model	TS-0664
Video protocol	H.264
Code stream	256kbps～8Mbps
Video output format	MP4/MOV/MKV/FLV/AVI/TS
Audio protocol	AAC
Live protocol	Support RTMP, RTSP real-time protocol streaming
Network protocol	Support TCP, UDP, RTMP, RTSP, FTP, DHCP, HTTP protocols
Video input port	1 HDMI high-definition video interface, 1 built-in panoramic camera
Built-in camera viewing angle	91°□ D□ /83°(H)/54°(V)
Video output port	2-way HDMI high-definition video interface
Input resolution	1920x1080P60/P59/P30/P25fps
output resolution	1920x1080P60/P50/P30/P25fps
Video display	Single picture, picture-in-picture, 2/3/4 picture split screen
Audio input port	1 channel 3.5mm audio interface, 1 channel HDMI with audio input
Audio output port	1 channel 3.5mm audio interface, 1 channel HDMI with audio output
Network port	1 100M network interface
USB port	2-channel USB interface for connecting mouse, keyboard, etc.
Control port	1 channel Micro USB interface, supports OTA upgrade/debugging, etc.
Control buttons	1 channel camera adjustment knob
Storage	With EMMC storage, capacity 64G
Indicator light	1 ring indicator light
Recording method	Simultaneous recording of sound and video
Directing function	Support video preview/live screen monitoring/video switching/multi-screen live screen display/audio adjustment, etc.
Live recording function	Support real-time live broadcast/synchronous recording/movie mode recording/one-click push streaming and
	recording/local channel playback/built-in player
Remote teaching function	Built-in interactive module
Software reset function	Support restoring factory settings
Internet function	Support local connection/automatically obtain IP address
Power supply	DC 12V/1.5A (power adapter)
Power consumption	10W
Storage temperature	-10°C～+60°C
Storage humidity	20%～95%
Operating temperature	-10°C～+50°C (ambient temperature under well-ventilated conditions)
Working humidity	20%～80% (relative humidity, no condensation)
Weight	1.085kg
Dimensions (L×D×H)	408mm*75mm*89mm

Recording Controller

Automatic recording control embedded software V3.11

TS-06504K

Description

The new fully automatic eight-position audio and video recording equipment adopts integrated hardware design, embedded Linux operating system, highly integrated UHD video acquisition module, recording module, live broadcast module, guide switching module, image segmentation and splicing module, and local echo output module to realize multiple functions such as live video broadcast, intelligent guide, ultra-high-definition recording, image recognition tracking, and multi-party interaction, meeting the needs of conference recording, training and learning, interactive teaching, etc.

Feature

*Integrated hardware device, embedded Linux OS, highly integrated system module such as image recognition tracking, automatic navigation, live, VOD, acquisition, and recording, easy to use and maintain, with high security.
* Based on the B/S architecture, you can log in to the web to realize functions such as live broadcast management, signal management, group management, user management, file management, scheduled recording, central control management, and system management.
* The system comes standard with an eight-core 64-bit processor with a main frequency of up to 2.4GHz and 8GB of running memory. The ultra-high performance system has high stability and reliability, ensuring the normal operation of the system;
* Audio adopts AAC high-definition encoding method, and the audio and video are accurately and synchronously recorded.
* The video adopts H.264 and H.265 encoding and decoding methods, and the pure hardware DSP method collects, encodes and transmits high-definition video signals. Support up to 8 channels of encoding and recording.
* Using self-developed tracking algorithms to detect the vertical movement tracking of face, and ignore other activities of the students; the accuracy rate reaches more than 90% to intelligently present classroom focus.
* Accurately track students of low age and large height differences without installation of auxiliary tracking and analysis cameras, and support self adapt of the height of students in different classes.
* The controller has built-in shortcut keys, and support one-key recording, stopping, live broadcast and copying of recorded files.
* The controller has a 1.8-inch LCD display that supports real-time preview display of common device statuses such as device operating status, parameter information, hard disk capacity, etc.
* The controller comes with 2TB storage space, and the recording content can be stored for up to 2000 class hours; support frequent use of the device for more than one year; support automatic deletion of old files and loop recording.
* The controller supports 8 channels of 3840x2160@30fps IPC network cameras for simultaneous access and decoding, and supports a maximum of 6 channels of image synthesis output, enabling 6 channels of images to be previewed online at the same time.
* The controller has 6 HDMI signal input interfaces, supports full HDMI interface 4K video capture, and has 2 HDMI interfaces to achieve simultaneous audio and video capture.
* The controller has 4 channels of HMDI signal output interfaces, supporting 2 channels of 3840x2160@30fps resolution output; 2 channels of which can achieve simultaneous audio and video output.
* Audio transmission adopts AAC high-definition encoding method, audio and video are accurately and synchronously recorded, and supports 5-channel audio collection and output.
* The controller supports audio management functions, supports mixing of 5 audio inputs, and sets the input volume respectively.
* The controller has three RS-232 Phoenix terminal interfaces and one RS-485 Phoenix terminal interface, which can be used for seamless signaling connection with other control systems.
* The controller has 4 USB2.0 interfaces and 1 USB3.0 interface for connecting U disk or keyboard and mouse.
* The controller has 1 802.3ab 1000Base-T Gigabit network interface, 1 optical fiber network port, and supports IPv4 addresses and IPv6 addresses.
* The controller supports 9 channels of video stream recording, 1 channel of PGM screen recording and 8 channels of resource channel screen recording. The maximum resolution supports 3840x2160@30fps, and the recorded file format supports standard MP4, AVI, MOV, FLV, TS and MKV and other formats.
* The controller has a built-in guidance function, which outputs the guidance interface to a third-party display device through the HDMI output interface, which can realize guidance control of the recording interface.
* Equipped with a control panel for remote control, it supports input source screen monitoring or input source screen directing switching by clicking on the panel button.

It can switch the recording and playback mode, start and stop recording, switch special effects, and control the camera on the controller.
* Support single-stream single-picture/single-stream multi-picture/multi-stream multi-picture recording methods, allowing each input signal to be saved as a separate file. Support custom categories for classified recording and classified storage, and support multiple formats such as MP4, AVI, MOV, FLV and MKV.
* Support custom segmented recording, with five optional segment lengths of 30, 60, 120, 240 and 480, support up to 8 hours of uninterrupted recording. Support seamless connection with non-wire knitting tools from other manufacturers. Support manual control of recording, providing functions such as start, pause, resume, and end recording.
* Movie mode supports PVW and PGM dual screens, supports output of 12 switching special effects when switching output display, and supports six screens, four screens, three screens, picture-in-picture and dialogue screens, and supports custom screen combinations to meet personalization need.
* Movie mode supports subtitle settings and built-in subtitle templates. Users can customize the subtitle display content.
* Movie mode supports watermarks, and users can customize the display position of the logo image.
* The movie mode switching method supports manual remote directing through software and hardware, and can also be used with the host's built-in automatic directing module for fully automatic directing switching.
* The controller supports the voice transliteration function, which can transcribe speech into text and automatically generate subtitles.
* Support the function of customizing the title title, uploading a custom title title and customizing its display time.
* Support appointment recording function. After the appointment recording class schedule is edited, it will automatically record according to the scheduled time, and automatically produce the file name with information such as venue, speaker and subject. Web page signal management supports the function of recording small resources individually.
* Support local video preview and playback function, which can preview and view the currently recorded video, provide multiple playback switching, and support 0.5x, 1.5x, 2x, and 3x video playback speed adjustment playback.
* Support image settings such as logo and subtitles; support live broadcast screen background, image signal display background and other settings; support one-click start of live broadcast, drag and drop videos to the designated window according to the window screen.
* Built-in VOD module, which can perform online playback, pause, jump and other operations of video files through network.
* Support live broadcast function, support live broadcast for 200 users at the same time within the local area network; support standard RTMP streaming protocol, and can be connected to third-party live broadcast platforms for online live broadcast, making it easy to expand the number of live broadcasts.
* The controller supports cooperating with a third-party FTP file server to automatically upload backup files. Supports the rapid establishment of a file server through FTP server tools. Courseware is automatically pushed to the file server. Bandwidth can be automatically adjusted for file upload and download to prevent network congestion.
* The controller supports software/hardware reset function. Users can easily restore the device to factory settings through the device's physical buttons or remote commands to avoid file damage, loss of IP address, and loss of administrator password, resulting in system inoperability.
* Support one-key upgrade function. When the system has new function iterations, the function upgrade can be realized by importing firmware.
* The controller supports recording power outage video repair function.Support manual selection of repair files to prevent sudden power outage during the recording process, resulting in the loss of previously recorded courseware.
* The controller supports the group management function of B/S users, and can assign its account and password to each user. Users can only watch live broadcasts and on-demand files after being authenticated and authorized, and with the roommate group management function, corresponding users can only access corresponding courseware.
* The controller supports local video preview and playback function, which can preview and view the currently recorded video, provide multiple playback switching multiples, and support 0.5x, 1.5x, 2x, and 3x video playback speed adjustment playback.
* The controller supports internal and external network interaction, has 1+3 calling function, point-to-point calling, and can be expanded to 1+15 calling after being connected with the multimedia control unit (MCU).
* The controller supports RTSP, RTMP, RTP, TS and other streaming media protocols, has a customized RTMP streaming function, and supports 3-way streaming at the same time to meet a variety of application scenarios.
* The controller has a standard API protocol, supports third-party platform docking, and controls recording/live broadcast/file upload, etc.
* The controller has teaching resources and supports docking with different resource platforms to achieve diversified sharing and display of teaching content. Supports seamless connection with various online education platforms, cloud resource libraries, etc., making it easy for teachers to introduce teaching materials at any time.

Specification

Model	TS-06504K
Video protocol	H.264、H.265
Code stream	256Kbps~20Mbps
Video output format	Support MP4/MOV/MKV/FLV/AVI/TS
Audio protocol	AAC
Live broadcast protocol	Support TS, RTSP and RTMP real-time protocol streams
Network protocol	Support TCP, UDP, RTMP, RTSP, FTP, DHCP, HTTP protocols
Video input interface	6-channel HDMI high-definition video interface
Video output interface	4-channel HDMI high-definition video interface
Split screen capability	Single picture, picture-in-picture, 2/3/4/5/6 pictures
Input resolution	3840x2160@30fps、2560*1600@60fps、2560*1440@60fps、2048*1152@60fps、1920*1200@60fps、
	1920x1080@60/50/30/25fps、1680*1050@60fps、1280*720@60fps
Output resolution	3840x2160@30fps、1920x1080@60/50/30/25fps
Audio input interface	1-channel 3.5mm audio input interface, 2-channel Phoenix terminal input interface, 2-channel HDMI audio input interface
Audio output interface	1-channel 3.5mm audio output interface, 2-channel Phoenix terminal output interface, 2-channel HDMI audio output interface
Network port	1 Gigabit network interface, 1 optical fiber network port
USB interface	4 USB 2.0 interfaces, 1 USB 3.0 interface, support mouse/U disk/director switcher/keyboard
Control port	3 RS-232 interfaces, 1 RS-485 interface
Panel button	1×switch button, 4×function button
Software reset function	Support restoring factory settings
Indicator light	3×LED indicators, system operation, hard disk failure and recording prompt lights
Storage	2TB
Power supply	DC 24V/3A
Power consumption	45W
Weight	3.5kg
Size (L×D×H)	482.6×258.2×45mm
Operating temperature	-10℃-55℃ (ambient temperature under well-ventilated conditions)
Operating humidity	20%~80% relative humidity, no condensation

Recording Controller

Embedded DSP codec system V3.1

TS-06515

Description

The HD recording system with integrated human-computer interactive interface tablet adopts integrated hardware equipment and embedded Linux operating system design, and is highly integrated with built-in ultra-high-definition video capture module, recording module, live broadcast module, guide switching module, image segmentation and splicing module, and local echo output module to realize functions such as live video broadcast, intelligent guide, ultra-high-definition recording, and touch screen control.It is the latest generation of multimedia information recording and dissemination equipment independently developed for the practical training education industry, comprehensive live teaching, practical training and other needs.

Feature

*Adopt integrated hardware design, embedded Linux operating system, highly integrated system modules such as image recognition and tracking, automatic guidance, live broadcast,VOD, acquisition, recording, etc. It is easy to use, easy to maintain, and has high security.
* The controller comes with 2TB of storage space, 8GB of running memory, and 16GB of memory storage. The ultra-high performance and large storage space enable the recording content to be stored for up to 2,000 class hours, supporting frequent use of the device for more than a year; it supports automatic deletion of old files and loop recording.
* The controller has a built-in 2W4Ω speaker that can monitor local audio.
* Equipped with a 17.3-inch capacitive touch screen with a resolution of 1920*1080 and using tempered glass ≥7H. The surface hardness provides the most user-friendly interaction method. It can respond quickly through gestures such as dragging, clicking, double-clicking, and long pressing.
* The video adopts H.264 and H.265 encoding and decoding methods, and the pure hardware DSP method collects, encodes and transmits high-definition video signals. It supports up to 9 channels of encoding and recording.
* Support simultaneous access to 19 channels of 1080P network cameras for decoding, support up to 16 channels of image synthesis output, and enable simultaneous online preview of 16 images.
* With 1 HDMI 4K video capture interface, which can realize simultaneous audio and video capture.
* With 2 channels of 3G-SDI video interface and support POC power supply.
* Equipped with 2-way HDMI video output interface, supporting maximum resolution input and output of 3840x2160@30fps.
* Support 1-channel Type-C device access, and Type-C capture supports up to 4K resolution.
* Audio transmission adopts AAC high-definition encoding method, 1 HDMI IN with audio input, 3 3.5mm audio input interfaces; 3 3.5mm audio output interfaces; 1 local audio speaker amplification, supporting audio mixing output.
* Support audio management function and support setting the volume of three-way 3.5mm audio input and HDMI audio input respectively.
* Built-in Gigabit network ports ≥ 4, 3 of which support POE power supply, meeting dual network isolation and physical isolation of wired networks and wireless networks.
* Support up to 9 channels of video stream recording, 1 channel of PGM screen recording and 8 channels of resource channel screen recording.The recorded file format supports standard MP4, AVI, MOV, FLV and MKV and other formats. The maximum bit rate supports 12M and the maximum resolution supports 3840x2160@30fps.
* Support custom segmented recording, with an optional duration of 30-480 minutes. It can be seamlessly connected to non-linear editing tools from other manufacturers. During the recording process, users can check the recorded duration through the recording controller. Users can manually control start/pause/resume and end recording, and the recording will automatically end after 8 hours without manually ending the recording.
* Support the automatic appointment recording function. After the appointment recording schedule is edited, the recording will be automatically performed at the scheduled time, and the file name will be automatically generated with information such as the venue, speaker, and theme. During the recording process, important knowledge points can be marked at the current time point, and colors can be used to distinguish correct points from incorrect points. The video time can be marked with text after the recording is completed.
* With 1 RS-232 and 1 RS485 interface PTZ control function, support 3 USB interfaces, and 2 Type-C interfaces.It supports gesture control of the pan/tilt, zooming in and out, up, down, left, and right, and with stepless speed adjustment to achieve smooth and low-latency control of camera rotation to cope with various training scenarios.
* The controller supports a one-click reset function to avoid file damage, loss of IP address, and loss of administrator password, resulting in system inoperability.
* Built-in wireless sending module, paired with a receiver, support real-time transmission of live broadcast images over a 100-meter ultra-long distance. It uses a self-developed private protocol to achieve ultra-low latency and ultra-high-definition image quality.
* Support the knowledge point saving function. For key training scenarios, the current training results can be taken and saved as screenshots. After taking a screenshot, it supports functions such as frame, brush, and text annotation to annotate the picture.
* Support video preview and playback function, which can preview and view the currently recorded video, and provide the slowest video playback speed adjustment of 0.5x, 0.75x, 1.5x, 2x, and 4x times. Support annotation on currently playing video screenshots and annotation functions for replaying.
* Support cooperation with third-party FTP file servers to automatically upload backup files. Support the rapid establishment of a file server through FTP server tools. Courseware is automatically pushed to the file server. Bandwidth can be automatically adjusted for file upload and download to prevent network congestion.
* Support RTSP, RTMP, RTP, TS and other streaming media protocols, with customized RTMP streaming function, and support three-way streaming at the same time to meet a variety of application scenarios.
* Support image settings such as logo and subtitles, support live broadcast screen background, image signal display background and other settings; support one-click start of live broadcast; drag and drop the video to the designated window according to the window screen.

Specification

Model	TS-06515
Video protocol	H.264、H.265
Code stream	256Kbps~12Mbps
Video output format	MP4/MOV/MKV/FLV/AVI
Audio protocol	AAC
Live protocol	Support TS, RTSP,
	RTP and RTMP real-time protocol streams
Network protocol	Support TCP, UDP, RTMP, RTSP, FTP,
	DHCP, HTTP protocols
Video input port	1 HDMI video interface, 2 3G-SDI video
	interfaces (supports POC power supply),
	1 Type-C device capture
Video output port	2 HDMI HD video ports
Split screen capability	Single screen, picture in picture,
	2/3/4/5/6/8/16 screen split screen
Input resolution	Support 3840x2160@60fps,
	1920x1080@60/50/30/25fps
output resolution	3840x2160@30fps、1920x1080@60/50/30/25fps
Audio input port	3 3.5mm audio input interface,
	HDMI IN1 input with 1-way audio input
Audio output port	3 3.5mm audio output interface,
	1 local sound reinforcement (synchronous output)
Network port	4 802.3ab 1000Base-T Gigabit network
	interfaces, 3 of which support POE power supply
USB port	2 USB 2.0 interfaces, 1 USB 3.0 interface,
	support mouse/U disk/director switcher
Control port	2 control interface, support RS-232, RS-485
Recording method	Simultaneous recording of sound and video
Storage	2TB SATA
Navigation function	Support video preview/live screen
	monitoring/video switching/multi-screen live
	screen display/audio adjustment, etc.
Live recording function	Support real-time live broadcast/synchronous
	recording/movie mode recording/one-click push
	streaming and recording/local channel
	playback/built-in player
Software reset function	Support restoring factory settings
Software upgrade	Support USB upgrade
Internet function	Support local connection/automatically obtain
	IP address
Power supply	DC 24V/5A
Power consumption	45W
Reset button	Restore factory settings
Operating temperature	-10℃-55℃ (ambient temperature under
	well-ventilated conditions)
Relative humidity of	20%~80% relative humidity, no condensation
working environment	
Weight	3.89kg
Dimensions (L×D×H)	401.8×257.3×38.8mm

Practical training and teaching mobile controller

TS-06515CAR

Description

It is supported by a medical-grade white high-strength metal structure base frame, new aviation aluminum alloy composite material column design, with hollow interior, U-shaped universal arm mobile cart with hidden wiring. It can be used with recording controller, pickup microphone and other equipment to realize comprehensive live teaching and practical training.

Feature

*The entire device adopts an integrated and modular design, providing convenient functional component expansion and installation experience, which greatly simplifies the use and maintenance process.
* The column is made of high-strength aluminum alloy structure, with T-shaped slots on the front and rear sides, allowing users to easily install other equipment. The surface coating of the column has been professionally treated, which greatly enhances its scratch resistance and makes it more durable.
* The top of the column is equipped with a tripod head support plate, which provides a convenient and fast installation platform that can accommodate various panoramic cameras. Whether it is a fixed or angle-adjustable camera, it can be easily installed to ensure all-round surveillance coverage.
* The monitor mount adopts a standard Vesa interface, which can flexibly adjust the pitch angle up to 30 degrees and the left and right swing angle up to 90 degrees, meeting the user's needs for different viewing angles and angles.
* Equipped with an ergonomically designed ABS handle, which feels comfortable and makes moving the stroller easier and more convenient. Whether it is used for a long time or pushed frequently, the comfortable feel can provide a better control experience and make the movement of the stroller easier.
* The body is equipped with a 1.2-meter universal arm, which has excellent flexibility. The arm can rotate 360 degrees horizontally, and can also be adjusted in two sections in multiple directions, and can be adjusted 60 degrees in the vertical direction. It can move and operate flexibly to meet the needs of different angles and directions.
* The movable joint has a damping device, double sections for multi-directional adjustment, support pulling at any angle, and can hover at the required position, making it easy to operate with one hand.
* Equipped with a 445mm*303mm thickened ABS tray. The length and width of the tray can be customized according to needs to adapt to different item placement needs. Items can be placed for operation drills.
* With excellent stability performance, support 15-degree tilt test, and can walk without tilting with a load of 50kg, ensuring safety and reliability in various situations, making it suitable for various working environments.
* Four medical silent wheels are installed at the bottom of the car body to reduce noise and vibration when moving. It is also equipped with a foot brake device to easily lock the car body to ensure safety.
* The base can be pre-installed with a hidden backup power supply to ensure continuity of power supply in an emergency. The power interface and network interface are reserved at the bottom.
* Hidden wiring design, support internal threading of multiple wire harnesses, making the layout of wires and wire harnesses more orderly, reducing the intersection of messy lines, and enhancing the overall aesthetics.
* The chassis size is 500*500mm and is supported by a high-strength aluminum alloy structural base frame, which has high load-bearing capacity and strong stability.
* With 500Wh mobile power supply, which can run the vehicle for 6 hours.
* Safe to use, support overcharge, overcurrent, overdischarge, and short circuit protection, with high stability and strong anti-interference ability. It provides stable voltage and current output, high temperature tolerance, and can work normally at high temperatures.Support device charging and use at the same time.

Specification

Model	TS-06515CAR
Vehicle height	1.889 m
Cross arm expansion size	1.2 m
Total lifting height of cross arm	0.5 m
Cross arm foldable and shrinkable size	0.65/0.55 m
Wishbone load-bearing	0.5-2 kg
Battery capacity	500 Wh
Charging power	DC 20V/5A, charging time is about 4-5 hours
Power display	LCD display, real-time display of battery capacity
Size (W*D*H)	500*500*1889 mm
Weight	37kg (including mobile power supply, excluding camera, display screen and speaker equipment)

Receiver
TS-06515WR

Description
Adopting integrated hardware equipment and embedded Linux operating system design, integrating 4K video decoder and wireless transmission module to realize wireless networking, video decoding and playback functions, etc, it is a device for wireless transmission and playback of tablet recording and mobile video recording.

Feature
*Adopt integrated design hardware equipment, embedded Linux operating system, equipped with quad-core ARM Cortex-A53, with a main frequency of up to 1.5GHz.
* Support 4K H.264/H.265 video decoding and 4K VP9 video decoding output, providing an unparalleled high-definition visual experience.
* 3. With 1 HDMI 2.0 output interface, support up to 32-bit true color (RGB/YCbCr), support up to 60Hz refresh rate, and support multiple audio formats, including stereo, multi-channel, DTS, Dolby and other audio encoding formats.
* Withs a 3.5mm audio output interface, support the transmission of audio signals through the HDMI interface, providing a more flexible and diverse audio connection method.
* Built-in 5G channel wireless module, support one-click networking, with strong anti-interference ability, and can transmit signal sources through the wireless network to achieve ultra-low delay transmission and ultra-high-definition live broadcast images. Support a maximum distance of up to 100 meters and is compatible with various usage scenarios.
* Dedicated remote port, support remote management and can easily manage and control the device remotely. Whether it is device settings, firmware upgrades or troubleshooting, it can all be completed through remote management, saving time and energy.
* 6.With 1 100M network port, in addition to wireless networks, it also supports the use of wired network connections, and can also connect other devices through this interface to share the convenience of wireless networks.
* With 1 power indicator light, 1 system status light and 1 network connection status light, providing a clear device status display function. The power indicator light shows whether the power is on to ensure that the device is working properly. The system status light can display the operating status of the device. The network connection status light can display the connection status of the device and the network.

Specification

Model	TS-06515WR
Video output	1 HDMI 2.0 interface
Audio output	1 channel 3.5mm audio output interface, HDMI output with audio
Video standard protocol	H.264, H.265
Output resolution	3840x2160@30fps、1920x1080@60fps
Live broadcast agreement	Support TS, HTTP, RTSP and RTMP real-time protocol streams
Software upgrade	Support upgrade through OTG interface, support upgrade through WEB
Network port	1 RJ45 network interface
Power supply	DC12V/1.5A
Power consumption	10W
Operating temperature	-10℃~45℃
Relative humidity	20%～80%, no condensation
Weight	0.46kg
Dimensions (L×D×H)	138x68x28.2mm

Camera
Embedded software: HD video conference dedicated camera software V2.0
TV-620XM

Description
This camera adopts a new generation of ISP image processing algorithm to provide a more perfect white balance and auto exposure function, so that the image output performance has been significantly improved, and the imaging effect is also better. It supports H.265/H.264 encoding, which makes the picture smoother and clearer even under low bandwidth. Characterized by complete functions, excellent performance, and diversified interfaces, it is widely used in educational recording, distance teaching, video conference, live streaming and broadcasting, etc.

Feature
*Full HD image: Using 1/2.8-inch high-quality image sensor, the maximum resolution reaches 1920x1080, and the output frame rate reaches 60 frames per second.
* Using 60.7° high-quality optical lens, it supports 20× optical zoom, and 16× digital zoom.
* Using AI technology and pedestrian re-identification technology, it can accurately detect the location of each person based on information such as the dress, body shape, hairstyle, and facial features of the participants, and realize automatic identification and tracking of speakers, automatic selection, and intelligent privacy blurring of the meeting.
* Support the extension of 1080P60 NDI®|HB technology to achieve ultra-high-resolution image quality and closer to lossless visual effects through network transmission.
* All video output interfaces have achieved low latency indicators. Support 4-channel video simultaneous output of HDMI, 3G-SDI, USB 3.0, and network, and support 1080P60.
* The advanced focusing algorithm is used to make the lens focus quickly, accurately and stably.
* Use exclusive audio processing algorithm to eliminate reverberation; adopt advanced 2D and 3D noise reduction technology to further reduce noise; support EQ adjustment to optimize sound effects; support built-in dual mic pickup, and also support external microphones, wireless speakers, etc. With a 3.5mm audio input interface to meet the sound pickup needs of most scenes.
* Equipped with 1 channel of 3.5mm audio output interface.
* Support HDMI, USB 3.0 and network audio output, AAC audio encoding, realizing better sound quality, less bandwidth occupation.
* The camera can be controlled via RS232 and RS485 serial ports.

Specification

Model	TV-620XM
Video signal system	1080P60, 1080P59.94, 1080P50, 1080I60, 1080I59.94, 1080I50, 1080P30, 1080P29.97, 1080P25, 720P60, 720P59.94, 720P50
Sensor type	1/2.8 inches, CMOS, effective pixels: 2.07 million, progressive
Scanning method	Progressive scanning
Lens	20x, f4.42mm~88.5mm, F1.8~F2.8 [35mm equivalent focal length: 34mm-674mm]
Digital zoom	16x
Minimum illumination	0.5Lux @ (F1.8, AGC ON)
Electronic shutter	1/30s~1/10000s
White balance	Auto, manual, one-touch, specified color temperature, indoor, outdoor
Digital noise reduction	2D, 3D digital noise reduction
BLC	Support
SNR	≥55dB
Horizontal field of view	60.7°~3.36°
Vertical field of view	34.1°~1.89°
Horizontal rotation range	±170°
Vertical rotation range	-30°~+90°
Horizontal rotation speed	1.7°~100°/s
Vertical rotation speed	1.7°~69.9°/s
Horizontal and vertical flipping	Support
Image freeze	Support
Presets quantity	255
Presets accuracy	0.1°
Audio parameters	
Digital audio pickup	Built-in dual microphone array, 100Hz to 16KHz frequency response
Analog audio input	Support 3.5mm Line-In
Digital audio output	Support HDMI, USB, LAN and other audio output
Analog audio output	Support 3.5mm Line-Out
USB parameters	
Color space/Compression	YUY2/MJPEG/H.264
Video format	Support various video formats with different frame rates and resolutions, up to 1080P60 YUY2 output
	USB video communication protocol UVC 1.1 or UVC1.5
	USB audio 32K sampling rate, support UAC2.0
	UVC PTZ control, support IPC features (IP Camera)
Video coding standard	H.264/H.265
Video stream	First code stream, Second code stream
First stream resolution	1920x1080, 1280x720, 1024x576, 960x540, 640x480, 640x360
Second stream resolution	1280x720, 1024x576, 720x576, 720x480, 720x408, 640x360, 480x270, 320x240, 320x180
Video bit rate	32Kbps~102400Kbps
Bit rate control	Variable bit rate, fixed bit rate
Frame rate	1fps~60fps
Audio compression standard	AAC
Audio bit rate	96Kbps, 128Kbps, 256Kbps
Network protocol	NDI｜HB｜NDI｜HX, TCP/IP, HTTP, RTSP, RTMP, Onvif, DHCP, Multicast, SRT, etc.
Input and output interface	USB interface, 1 USB 3.0: Type A socket
HD output	1CH, HDMI: Version 1.3
	1CH, 3G-SDI: BNC type, 800mVp-p, 75Ω, in line with SMPTE 424M standard
Network interface	1CH, RJ45: 10M/100M/1000M adaptive Ethernet port, support PoE
Audio interface	1CH, Line In, 3.5mm audio jack; 1CH, Line Out, 3.5mm audio jack
Communication interface	1CH, RS232 In: 8-pin mini DIN, maximum distance: 30 meters, VISCA/Pelco-D/Pelco-P protocol
	1CH, RS232 Out: 8-pin small DIN, maximum distance: 30 meters, for VISCA protocol networking
	1CH, RS485: 2-pin Phoenix port, maximum distance: 1200 meters, VISCA/Pelco-D/Pelco-P protocol
Power interface	JEITA type (DC IN 12V)
Input voltage	DC 12V, PoE (802.3af)
Input current	1000mA
Working temperature	0°C~40°C
Storage temperature	-40°C~60°C
Power consumption	12W
Dimension (L×W×H)	146×169×168mm
Net weight	About 1.5kg
MTBF	30000H

Omnidirectional Microphone
TV-650DM

Description
Suitable for recording and broadcasting teaching, conference recording and other places.

Feature
*Omnidirectional condenser microphone with high sensitivity.
*Designed for applications requiring wide frequency response, high sound pressure and fast transient response.
*Get the best live results with a digital audio processor.

Specification

Model	TV-650DM
Frequency response	100Hz ~ 16KHz
Sensitivity	-32dB
Pointing feature	Omnidirectional
Output impedance	250Ω±30%
Output amplitude	Max 300mV
Maximum sound pressure	139dB sound pressure, 1KHz at 1% T.H.D
Dynamic Range	Typical value is 115dB, 1KHz is at the highest sound pressure
Signal to noise ratio	≥65dB
Pickup distance	6 meters
Phantom power supply	DC 48V
Output connector	External 3-pin card male XLR-3-12C
Installation method	Embedded installation
Net weight	About 160g

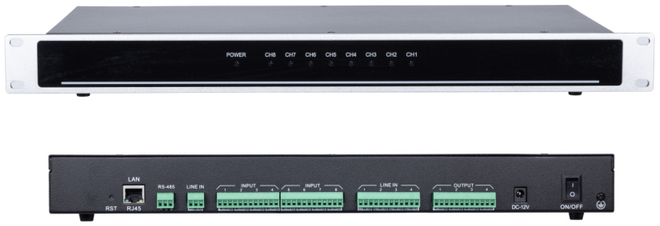
Microphone
TV-650QM

Feature
*Adopt high-sensitivity omnidirectional microphone for omnidirectional pickup, with clear and natural sound.
* Built-in dedicated audio signal processing function effectively prevents voice signal distortion and attenuation.
* Support 48V phantom power supply, balanced output.
* Can cooperate with audio processor to get the best live sound effect.
* Built-in lightning protection, power reverse polarity protection and electrostatic protection.

Specification

Model	TV-650QM
Pickup range	5-50㎡
Sensitivity level	-34dB±3dB
Frequency response	100Hz~16kHz
Directivity	Omnidirectional
SNR	68dB
Dynamic range	84dB(1kHz at Max dB SPL)
MAX SPL	110dB SPL (1kHz, THD 1%)
Output signal amplitude	2.5Vpp
Microphone	Diaphragm condenser microphone
Signal processing circuit	Dedicated audio signal processing circuit
Circuit protection	8kV Air contact ESD, lightning protection, power reverse polarity protection
Connection method	3 leads + (red) - (white) G (black)
Installation method	Ceiling installation
Power supply voltage	48V phantom power
Power supply current	20mA
Operating temperature	0℃~50℃
Colour	Silver
Housing material	Aluminum alloy
Dimension	Φ86mm×22.8mm
Weight	140g

Audio Processor
TV-650YZ



Description
The digital audio processor uses environmental noise suppression technology, automatic equalization technology, intelligent mixing technology and echo cancellation technology, etc., to solve the echo and noise problems of interactive recording and broadcasting classrooms.

Feature
*It adopts industrial embedded architecture, adopts dedicated chip and embedded operating system, which is stable and reliable.
*Integrated automatic noise suppression technology (removal of noise interference including air conditioners, exhaust fans, etc.) to ensure sound quality.
*With echo cancellation function, the mix of wireless microphone and hanging microphone needs to be processed by AEC, and the reference signal is remote audio signal.
*With 8 balanced input interface, support differential input, support 48V phantom power supply, support 16-segment EQ processing function.
*With 4 channels of mono LINE IN input interface, interface definition: 1-remote audio input, 2 & 4 courseware, 3-wireless microphone.
*With 4 balanced output interfaces, interface definition: 1-output to remote (including wireless microphone, hanging microphone, courseware), 2-recording (including wireless microphone, hanging microphone, courseware, remote audio input), 3 & 4 output to Speakers (including wireless microphone, courseware, remote audio input).
*Support intelligent mixing function (8-channel balanced inputs can be combined arbitrarily).
*Support voice anti-reverberation function, to avoid multi-channel voice interference and highlight important voice signals.
*Can be monitored via the network, software upgrading and parameter configuration (support LAN and public network).
*Flexible configuration mode, support software upgrade through network port, RS485 interface and parameter configuration input/output gain, EQ, AGC, noise reduction level and other parameters.
*Support NOMA function, automatically adjust the output level of the system according to the number of MICs that are turned on, and not increase the output gain of the system due to the superposition of input levels, effectively suppressing the formation of acoustic feedback.

Specification

Model	TV-650YZ
8-channel balanced input	Phoenix terminal, audio input impedance 100KΩ, support 48V phantom power supply
4-channel LINE IN input	Phoenix terminal, audio input impedance 100KΩ, maximum input level 6dBV
4-channel balanced output	Phoenix terminal, mixing output
Total harmonic distortion (THD+N)	≤0.002%@+4dBu, 1KHz
Remote echo cancellation	Handling echo delay capability: 128ms, 256ms, 512ms
Echo suppression ratio	>60dB
Sampling Rate	32KHz
Number of samples	16
Dynamic range	90dB
Environmental noise elimination	Steady-state noise cancellation ratio: 30dB
Maximum intelligent mixing number	8 channels
Anti-reverberation channel	4 channels
Frequency response	20Hz-16KHz
Maximum gain	59dB
Power supply	DC 12V/2A
Size	Length 482.6 × depth 255 × height 44 (mm)

Cloud-controlled classroom system

Controller
TS-9200WB

Description
The Cloud Controlled Classroom System Server is matched with platform software, which is the background management platform of the cloud controlled classroom system.

Specification

Model	TS-9200WB
CPU	Xeon 20 cores
Memory	DDR4 128GB
Hard disk	SSD 256G+enterprise hard drive 4T
Network card	2* Gigabit network card
Video output interface	1*VGA
Other	4*2.0USB, 2*3.0USB, 1*serial port
Working power consumption	AC 100-240V/500W
Chassis	2U rackmount chassis
Dimensions (L×W×H)	430*660*88mm
Working environment	Ambient temperature -10℃～50℃; Relative humidity≤75%
Weight	13.0Kg

Cloud Controlled Classroom System Server
TS-9200S

Description
It is an integrated management system applied to classroom audiovisual and lighting services, which fundamentally changes the traditional control mode of classroom equipment and builds an intelligent and collaborative teaching environment.

Feature
*Industrial-grade rack-mounted cabinet design, steel structure, with high anti-magnetic, dust-proof and impact-proof capabilities.
* 17.3-inch LED LCD display, built-in five-wire industrial reinforced touch screen, easy-to-use touch control.
* Built-in industrial-grade push-pull keyboard, built-in industrial-grade touch mouse panel + left and right button design, connect external mouse and keyboard through USB interface, convenient for users to operate.
* Industrial-grade dedicated motherboard design, Intel Core i7 quad-core processor, faster processing speed, stronger operating performance, long-term stable and uninterrupted operation.
* Built-in large-capacity 256GB mSATA solid-state hard disk, characterized by anti-vibration, anti-drop, fast read and write speed, and low power consumption.
* With 8 USB interfaces, 6 general serial ports, the highest transmission rate is 480M. It is convenient for external extension of peripheral devices to access.
* With 2 Gigabit network cards, compatible with 100M network. Support adaptive switch connection system.
* Support dual graphics cards; support connecting to the FullHD display device.
* With 1 short-circuit triggering start-up interface, it is used for timed drive of start-up and operation of external equipment, and realizes unattended function.
* After carrying the server software, the system management control center is formed. The server software uses the background system service, and it is an enterprise-level standard server working mode. The system can run automatically when the system is turned on. Compared with the software running on the front desk of the interface, it features higher stability and reliability.

Specification

Model	TS-9200S
Screen size	17.3 inches
Screen color	24bit full color
Display screen	17.3″ high resolution LED LCD screen (1920*1080)
Touch screen	10-point capacitive touch screen
Aspect ratio	16:9
Working temperature	-10℃~50℃
Storage temperature	-20℃~60℃
Relative humidity	10%~95%, no condensation
Standard interface	1×PS/2 port; 6×serial port; 1×VGA; 1×HDMI, 8×USB interface; 2×Gigabit Ethernet port; 1×Audio
Hard disk	Support 3.5", 2.5", mSATA hard drives; standard mSATA 256GB
Memory	DDR supports up to 16GB; standard 8G/DDR
Network card	Intel Dual Gigabit Network Interface Card
Network protocol	Support IPV6, IPV4 network protocols
CPU	Intel Core i7 Quad Core
Audio signal SNR	LINE: 70dB; MIC: 60dB
Audio signal distortion	1KHz<0.5%
Audio signal standard input level	LINE: 300mV; MIC: 5mV
Audio signal standard output level	0dBV
Input voltage	AC100V-240V
Software operating platform	Windows server 2008
Dimension (W×H×D)	484×353.5×339.5mm
Weight	18.4kg

Cloud Controlled Classroom Terminal TS-9210

Description

It is a multimedia IoT teaching terminal integrating functional modules such as audiovisual matrix, IoT central control, amplifier and network decoding. Characterized by high equipment integration, strong extendability, and powerful functions, it is suitable for conventional classrooms, multimedia classrooms, lecture halls, etc.

Feature

*Standard 1U rack-mount design, black aluminum oxide brushed panel, professional mechanical assembly process.
* High equipment integration, diversified functions, built-in audio control, video matrix, IoT central control, amplifier and network decoding and other modules.
* With a built-in matrix switching module, it supports 4 HMDI inputs and 2 HDMI outputs, and realizes synchronous audio and video output.
* With a built-in volume control module, it supports 1 set of line input, 1 channel of MIC input, and 1 set of line output, and can independently manage the volume of the device.
* With a built-in 2.4G wireless audio module, it supports 2.4G wireless microphone access to realize wireless local sound amplification, which is convenient for users to make mobile speeches.
* With built-in 2*45W (MAX) digital amplifier modules and 2 amplifier output interfaces, it can be directly connected to constant-impedance speakers to meet local sound reinforcement needs.
* The built-in network broadcast decoding module can be used as a digital broadcast decoding terminal, and the extension management controller or broadcast controller can realize functions such as audio broadcast, BGM playback, and scheduled task playback.
* With 1 channel of 100V constant voltage signal backup input, when the network or equipment is disconnected, the broadcast signal will automatically switch from digital network signal to analog constant voltage signal, and digital-to-analog seamless switching can be realized in 0.3 seconds to ensure the smoothness of the listening test of the college entrance examination.
* With 1 programmable power control interface, it supports delayed power-off function, and the length of the delay time can be customized to ensure that the device is automatically shut down and then powered off, which can effectively protect the device.
* With 1 motorized curtain control interface, it supports control of motorized curtain up/down/stop function. Using the European standard design, it prevents users from connecting other electrical devices to this interface, thereby avoiding damage to the device.
* With 1 IR learning port and 2 independent programmable IR sending ports, it can control IR remote control devices such as cameras, TVs, projectors and air conditioners.
* With 2 weak relay control interfaces, it can trigger and control power supply sequencer, electric control lock and other devices.
* With 2 RS-232 two-way communication interfaces, it can control projectors, signal switchers, power controllers, dimmers, cameras and other third-party devices.
* With 2 RS-485 control interfaces, it supports independent programming and access to temperature and humidity, current detection, PM2.5 detection and other sensors. The extension management controller realizes real-time monitoring of the classroom environment, and performs linkage control based on the monitoring data to automatically adjust the classroom to a comfortable learning environment.
* With 2 I/O interfaces, it can realize remote computer on/off control; it can be connected to switch sensor equipment such as biological perception/disconnection alarm, and can realize functions such as door magnetic status feedback.
* With 1 Wiegand protocol interface, it can be connected with an external card reader. The extension management controller implements the IC card attendance management function, supports the definition of card swiping mode, and automatically links the class mode/self-study mode when swiping the card.
* Support the control and management of 8 terminals: teacher web terminal, admin web terminal, Android APP, IOS APP, control panel, H5, WeChat applet, and DingTalk applet, characterized by multi-channel access to users, unified and convenient operation, and real-time synchronization of status. The extension management controller is required.
* Support multiple setting strategies of the classroom control panel, and control the terminal by swiping the card and the control panel keys to avoid unrelated personnel operations. The extension management controller is required.
* Support one-key reset function, support one-key reset to factory state.
* The whole system is characterized by flexible scalability and powerful network control functions. Through the network, it can be extended to access serial port IR control modules, I/O modules, relay modules, lighting control modules, etc., so as to realize classroom IoT control, environmental perception and "Internet +" deep fusion. The extension management controller is required.

Specification

Model	TS-9210
Network interface	Standard RJ45
Internet speed	100Mbps
Video input interface	4*HDMI, HDMI1.4 standard
Video output interface	2*HDMI, HDMI1.4 standard
HDCP protocol	Support
Resolution	3840×2160P30, 1920×1080P60
EDID	2
Audio input	1 set of RCA, 1*MIC, 1*100V constant voltage signal, 1*2.4G wireless receiver, network broadcast decoding module, 4*HDMI
Audio output	1 set of RCA, 2*HDMI
Amplifier output	2*45W (MAX), constant resistance 8Ω
LINE IN frequency response	80Hz-16kHz (±0.5db)
MIC IN frequency response	200Hz-10kHz (±0.5db)
LINE IN sensitivity	775±40mV
MIC IN sensitivity	10±1mV
LINE OUT harmonic distortion	<0.1%
SPK OUT harmonic distortion	<1%
SNR	>80dB(A)
RS-232 port	2
RS-485 port	2
I/O port	2
IR sending port	2
Weak relay port	2
Power output	1, ~220V 50Hz (400W MAX)
Motorized curtain control interface	1, ~220V 50Hz (100W)
Wiegand protocol interface	1
Total power consumption	60W (MAX)
Working temperature	-10℃~+45℃
Relative humidity	20%~80%, no condensation
Dimension (L×D×H)	484×315×44mm
Weight	3.5kg

Cloud Controlled Classroom Terminal TS-9210P

Description

It is a multimedia IoT teaching terminal integrating functional modules such as audiovisual matrix, IoT central control, amplifier and network decoding. Characterized by high equipment integration, strong extendability, and powerful functions, it is suitable for conventional classrooms, multimedia classrooms, lecture halls, etc.

Feature

*Standard 2U rack-mount design, black aluminum oxide brushed panel, professional mechanical assembly process.
* High equipment integration, diversified functions, built-in audio control, video matrix, IoT central control, amplifier and network decoding and other modules.
* With a built-in matrix switching module, it supports 3 HMDI inputs and 2 HDMI outputs, and realizes synchronous audio and video output.
* With a built-in volume control module, it supports 1 set of line input, 1 channel of MIC input, and 1 set of line output, and can independently manage the volume of the device.
* With a built-in 2.4G wireless audio module, it supports 2.4G wireless microphone access to realize wireless local sound amplification, which is convenient for users to make mobile speeches.
* With built-in 2*45W (MAX) digital amplifier modules and 2 amplifier output interfaces, it can be directly connected to constant-impedance speakers to meet local sound reinforcement needs.
* The built-in network broadcast decoding module can be used as a digital broadcast decoding terminal, and the extension management controller or broadcast controller can realize functions such as audio broadcast, BGM playback, and scheduled task playback.
* With 1 programmable power control interface, it supports delayed power-off function, and the length of the delay time can be customized to ensure that the device is automatically shut down and then powered off, which can effectively protect the device.
* With 1 motorized curtain control interface, it supports control of motorized curtain up/down/stop function. Using the European standard design, it prevents users from connecting other electrical devices to this interface, thereby avoiding damage to the device.
* With 1 IR learning port and 2 independent programmable IR sending ports, it can control IR remote control devices such as cameras, TVs, projectors and air conditioners.
* With 2 weak relay control interfaces, it can trigger and control power supply sequencer, electric control lock and other devices.
* With 2 RS-232 two-way communication interfaces, it can control projectors, signal switchers, power controllers, dimmers, cameras and other third-party devices.
* With 2 RS-485 control interfaces, it supports independent programming and access to temperature and humidity, current detection, PM2.5 detection and other sensors. The extension management controller realizes real-time monitoring of the classroom environment, and performs linkage control based on the monitoring data to automatically adjust the classroom to a comfortable learning environment.
* With 2 I/O interfaces, it can realize remote computer on/off control; it can be connected to switch sensor equipment such as biological perception/disconnection alarm, and can realize functions such as door magnetic status feedback.
* With 1 Wiegand protocol interface, it can be connected with an external card reader. The extension management controller implements the IC card attendance management function, supports the definition of card swiping mode, and automatically links the class mode/self-study mode when swiping the card.
* Support the control and management of 8 terminals: teacher web terminal, admin web terminal, Android APP, IOS APP, control panel, H5, WeChat applet, and DingTalk applet, characterized by multi-channel access to users, unified and convenient operation, and real-time synchronization of status. The extension management controller is required.
* Support multiple setting strategies of the classroom control panel, and control the terminal by swiping the card and the control panel keys to avoid unrelated personnel operations. The extension management controller is required.
* Support one-key reset function, support one-key reset to factory state.
* It adopts modular design and supports combined plug-in modular computer (OPS computer). It can also meet the needs of teaching without additional teaching computers in the classroom.
* The entire system is characterized by flexible scalability and powerful network control functions. Through the network, it can be extended to access serial IR control modules, I/O modules, relay modules, lighting control modules, etc., so as to realize the deep integration of classroom IoT, environmental perception and "Internet +". The extension management controller is required.

Specification

Model	TS-9210P
Network interface	Standard RJ45
Internet speed	100Mbps
Video input interface	3*HDMI, HDMI1.4 standard
Video output interface	2*HDMI, HDMI1.4 standard
HDCP protocol	Support
Resolution	3840×2160P30, 1920×1080P60
EDID	2
Audio input	1 set of RCA, 1*MIC,
	1*2.4G wireless receiver,
	network broadcast decoding module,
	3*HDMI
Audio output	1 set of RCA, 2*HDMI
Amplifier output	2*45W (MAX), constant resistance 8Ω
LINE IN frequency response	80Hz-16kHz (±0.5db)
MIC IN frequency response	200Hz-10kHz (±0.5db)
LINE IN sensitivity	775±40mV
MIC IN sensitivity	10±1mV
LINE OUT harmonic distortion	<0.1%
SPK OUT harmonic distortion	<1%
SNR	>80dB(A)
RS-232 port	2
RS-485 port	2
I/O port	2
IR sending port	2
Weak relay port	2
Power output	1, ~220V 50Hz (400W MAX)
Motorized curtain control interface	1, ~220V 50Hz (100W)
Wiegand protocol interface	1
PC type	Plug-in Intel Core series modular computer
PC configuration	I5/I7 (optional)
Total power consumption	600W (MAX)
Working temperature	-10℃~+45℃
Relative humidity	20%~80%, no condensation
Dimension (L×D×H)	484×303×88mm
Weight	5.2kg

Touch screen
TS-9221

Description
The device integrates one-click entry and exit functions, teaching scene switching, video source switching, multimedia classroom sound amplification, remote management and control, card swiping linkage and attendance, etc. It further integrates the podium and central control, making the podium a new digital entrance. Teachers can achieve goals such as explaining and annotating courseware and controlling the teaching environment in front of the podium, bringing a more integrated experience and suitable for various places such as regular classrooms and multimedia classrooms.

Feature
*The device adopts an integrated design, with the screen, base, and card swiping module integrated into one body. The appearance shows a sense of fashion and meets the user's needs for a screen and a card swiping module at the same time.
* Support dual-screen display and control on the front. The 21.5-inch screen can display video images on the screen. The 10.1-inch screen integrates IoT functions, which can switch between different scenes and control classroom equipment.
* Support large and small screen interactive functions, which can simultaneously display the images of interactive intelligent flat panel, smart blackboards or LED displays, and support operations such as annotating courseware. Teachers can operate directly in front of students, making communication more convenient and efficient.
* Support environmental monitoring function, and can be used with classroom terminals and sensors to view temperature, humidity, PM2.5 and other data collected by sensors connected to the classroom terminal in real time.
* Support video control function, and can be used with one-click switching of multiple signal sources in the classroom terminal to realize switching control of the built-in matrix of the classroom terminal.
* Support volume control function. When used with a classroom terminal, it can control the volume of microphones, IP broadcasts, and HDMI audio sources connected to the classroom terminal.
* Support equipment control function, and can be used with classroom terminals to control projectors, projection screens, interactive intelligent flat panel, smart blackboards, recording and broadcasting controller, computers, air conditioners and other equipment connected to classroom terminals on and off, mode switching and other controls.
* Support the scene calling function, and can be used with classroom terminals to add various scene modes such as class and after class. The control terminal can start or switch all devices in the scene with just one click, avoiding cumbersome operation steps.
* Support the controller information viewing function, which can view the IP and version related information of the access host.
* With the platform, support optional multiple panel combination control strategies and IC card permission management. Classrooms can be controlled by role, time period or course.
* Equipped with classroom terminals, support online flexible configuration of custom programming instructions, enabling rich scenario modes.
* The access device interface, business management and operation and maintenance are highly integrated, making it easier for teachers to teach.

Specification

Model	TS-9221
Touchscreen	21.5-inch IPS screen + 10.1-inch TFT screen
21.5-inch IPS screen resolution	1920*1080
10.1-inch TFT screen resolution	1024*600
Control interface	RS-485
Power consumption	20W
Power supply	Support DC12V power supply
Slope	30°
Right port	HDMI*1,USB*3
Bottom port	HDMI*2,USB*3,TOUCH *1,RFID*1,PANEL*1
Dimensions (L×W×H)mm	652.84mm x287.96mm x164.73mm
Material	Flowerless galvanized
Operating temperature	-10℃~45℃
Relative humidity of working environment	20%~80% relative humidity, no condensation
Weight	9.5kg

Touch screen
TS-9221G

Description
The device integrates one-click entry and exit functions, teaching scene switching, video source switching, multimedia classroom sound amplification, remote management and control, card swiping linkage and attendance, etc. It further integrates the podium and central control, making the podium a new digital entrance. Teachers can achieve goals such as explaining and annotating courseware and controlling the teaching environment in front of the podium, bringing a more integrated experience and suitable for various places such as regular classrooms and multimedia classrooms.

Feature
*The device adopts an integrated design, with the screen, base, and card swiping module integrated into one body. The appearance shows a sense of fashion and meets the user's needs for a screen and a card swiping module at the same time.
* Support dual-screen display and control on the front. The 21.5-inch screen can display video images on the screen. The 10.1-inch screen integrates IoT functions, which can switch between different scenes and control classroom equipment.
* Support large and small screen interactive functions, which can simultaneously display the images of interactive intelligent flat panel, smart blackboards or LED displays, and support operations such as annotating courseware. Teachers can operate directly in front of students, making communication more convenient and efficient.
* Support environmental monitoring function, and can be used with classroom terminals and sensors to view temperature, humidity, PM2.5 and other data collected by sensors connected to the classroom terminal in real time.
* Support video control function, and can be used with one-click switching of multiple signal sources in the classroom terminal to realize switching control of the built-in matrix of the classroom terminal.
* Support volume control function. When used with a classroom terminal, it can control the volume of microphones, IP broadcasts, and HDMI audio sources connected to the classroom terminal.
* Support equipment control function, and can be used with classroom terminals to control projectors, projection screens, interactive intelligent flat panel, smart blackboards, recording and broadcasting controller, computers, air conditioners and other equipment connected to classroom terminals on and off, mode switching and other controls.
* Support the scene calling function, and can be used with classroom terminals to add various scene modes such as class and after class. The control terminal can start or switch all devices in the scene with just one click, avoiding cumbersome operation steps.
* Support the controller information viewing function, which can view the IP and version related information of the access host.
* With the platform, support optional multiple panel combination control strategies and IC card permission management. Classrooms can be controlled by role, time period or course.
* Equipped with classroom terminals, support online flexible configuration of custom programming instructions, enabling rich scenario modes.
* The access device interface, business management and operation and maintenance are highly integrated, making it easier for teachers to teach.

Specification

Model	TS-9221G
Touchscreen	21.5-inch IPS screen + 10.1-inch TFT screen
21.5-inch IPS screen resolution	1920*1080
10.1-inch TFT screen resolution	1024*600
Slope	30°
Power consumption	20W
Material	Flowerless galvanized
Power supply	Support DC12V power supply
Bottom port	HDMI*2,USB*3,TOUCH *1,RFID*1,PANEL*1
Right port	HDMI*1,USB*3
Operating temperature	-10℃~45℃
Relative humidity of working environment	20%~80% relative humidity, no condensation
Weight	9.5kg
Dimensions (L×W×H)mm	652.84mm x287.96mm x164.73mm

Touch screen

Cloud control interactive control screen embedded software V1.013

TS-9215

Description

The device integrates functions such as one-key class start/end, teaching scene switching, video source switching, multimedia classroom sound reinforcement, remote control and management, card linkage and attendance. It further integrates the podium and control system, making the podium a new digital entrance. Teachers can achieve goals such as annotating courseware and controlling the teaching environment in front of the podium, bringing a more integrated experience. It is suitable for various places such as regular classrooms and multimedia classrooms.

Feature

*Integrated design, the screen is integrated with the base and card swiping module, and the appearance shows a sense of fashion, which meets the user's needs for both the screen and the card swiping module.
* Support dual-screen display and control on the front. The 15.6-inch screen can display video images on the screen, and the 7-inch screen integrates the Internet of Things function, which can switch between different scenes and control classroom device.
* Support main screen and vice screen interactive functions, which can simultaneously display the screens of equipment such as Interactive Intelligent Flat Panel, Smart Blackboards or LED displays, and support operations such as annotating courseware. Teachers can directly face students to operate, making communication more convenient and efficient.
* Support environmental monitoring function, with classroom terminals and sensors, support viewing the temperature, humidity, PM2.5 and other data collected by sensors connected to classroom terminals in real time.
* Support the video control function, with the one-key switching of multiple signal sources of the classroom terminal, it can realize the switching control of the built-in matrix of the classroom terminal.
* Support the volume control function, with the classroom terminal, it can realize the volume control of the microphone, IP PA system and HDMI audio source connected to the classroom terminal.
* Support device control function, with the classroom terminal, it can control the projector, projection screen, interactive intelligent flat panel, smart blackboard, HD recording controller, computer, air conditioner and other equipment connected to the classroom terminal to switch on and off, and switch modes.
* Support the scene call function, with the classroom terminal, support adding various scene modes such as class start/end, and the control terminal only needs one-key operation to start or switch all the devices in the scene, avoiding cumbersome operation steps.
* Support the controller information viewing function, which can realize the viewing of the access controller IP and version related information.
* With the platform, a variety of panel combination control strategies and IC card authority management can be selected, and the classroom can be controlled by role, time period or course.
* Equipped with classroom terminals, support online flexible configuration of custom programming instructions, and can realize rich scene modes.
* The access device interface is highly integrated with business management and operation and maintenance, making it easier for teachers to attend classes.

Specification

Model	TS-9215
Touchscreen	15.6-inch IPS screen + 7-inch TFT screen
15.6 inches IPS screen resolution	1920*1080
7 inch TFT screen resolution	800*480
Control interface	RS-485
Video protocol	EDP protocol
Slope	30°
Bottom port	HDMI*2,USB3.0*3,TOUCH 2.0*1,RFID*1,PANEL*1
Right port	HDMI*1,USB3.0*3
Power supply	DC +12V
Power consumption	9.8W
Material	Galvanized without pattern
Operating temperature	-10℃~+45℃
Working environment relative humidity	20%~80% relative humidity (no condensation)
Dimensions	465.5x208x121.4mm (W×H×D)
Weight	3.7Kg

Touch Screen

TS-9215G

Description

The cloud control multimedia interactive control screen provides teachers with richer audio matrix, video matrix switching and control functions in classroom scenarios. The device integrates functions such as one-key class start/end, teaching scene switching, video source switching, multimedia classroom sound reinforcement, remote control and management, card linkage and attendance. It further integrates the podium and control system, making the podium a new digital entrance. Teachers can achieve goals such as annotating courseware and controlling the teaching environment in front of the podium, bringing a more integrated experience.

Feature

*Integrated design, the screen is integrated with the base and card swiping module, and the appearance shows a sense of fashion, which meets the user's needs for both the screen and the card swiping module.
* Support dual-screen display and control on the front. The 15.6-inch screen can display video images on the screen, and the 7-inch screen integrates the Internet of Things function, which can switch between different scenes and control classroom device.
* Support main screen and vice screen interactive functions, which can simultaneously display the screens of equipment such as Interactive Intelligent Flat Panel, Smart Blackboards or LED displays, and support operations such as annotating courseware. Teachers can directly face students to operate, making communication more convenient and efficient.
* Support environmental monitoring function, with classroom terminals and sensors, support viewing the temperature, humidity, PM2.5 and other data collected by sensors connected to classroom terminals in real time.
* Support the video control function, with the one-key switching of multiple signal sources of the classroom terminal, it can realize the switching control of the built-in matrix of the classroom terminal.
* Support the volume control function, with the classroom terminal, it can realize the volume control of the microphone, IP PA system and HDMI audio source connected to the classroom terminal.
* Support device control function, with the classroom terminal, it can control the projector, projection screen, interactive intelligent flat panel, smart blackboard, HD recording controller, computer, air conditioner and other equipment connected to the classroom terminal to switch on and off, and switch modes.
* Support the scene call function, with the classroom terminal, support adding various scene modes such as class start/end, and the control terminal only needs one-key operation to start or switch all the devices in the scene, avoiding cumbersome operation steps.
* Support the controller information viewing function and modification, which can realize the viewing of the access controller IP and version related information.
* With the platform, a variety of panel combination control strategies and IC card authority management can be selected, and the classroom can be controlled by role, time period or course.
* Equipped with classroom terminals, support online flexible configuration of custom programming instructions, and can realize rich scene modes.
* The access device interface is highly integrated with business management and operation and maintenance, making it easier for teachers to attend classes.

Specification

Model	TS-9215G
Touchscreen	15.6-inch IPS screen + 7-inch TFT screen
15.6 inches IPS screen resolution	1920*1080
7 inch TFT screen resolution	800*480
Slope	30°
Control interface	RS-485
Video protocol	EDP protocol
Slope	HDMI*2,USB3.0*3,TOUCH2.0*1,RFID*1,PANEL*1
Bottom port	HDMI*1,USB3.0*3
Right port	DC +12V
Power supply	9.8W
Power consumption	Galvanized without pattern
Material	-10℃~+45℃
Operating temperature	20%~80% relative humidity (no condensation)
Working environment relative humidity	465.5mm x208.1mmx121.4mm
Dimensions	3.7kg

Multimedia Terminal
TS-9230P1

Description

It is a multimedia IoT teaching terminal integrating functional modules such as audiovisual matrix, IoT central control, DSP audio processing， amplifier and network decoding. Characterized by high equipment integration and strong extendability, it is suitable for conventional classrooms, multimedia classrooms, lecture halls, etc.

Feature

*Standard 1U rack design, black anodized aluminum brushed panel, and professional mechanical assembly process.
2.The device is highly integrated, with built-in audio control, video matrix, IoT central control, power amplifier, network audio decoding and other modules, rich in functions.
3.Built-in matrix switching module, supports 4 channel HMDI high-definition input, 2 channel HDMI high-definition output, and can achieve audio and video synchronous output.
4.With 1 RJ45 microphone interface, 1 channel seat microphone can be connected to provide clearer and more stable audio input for teaching or conference.
5.Built-in digital wireless teaching receiving module, can connect two teaching wireless handheld microphones. Digital wireless audio transmission adopts digital modulation, with automatic frequency scanning and automatic frequency matching functions.
6.With 1 channel wireless handheld microphone infrared frequency linking expansion interface,which is used to connect an external infrared frequency linking transmitter to expand the frequency linking range.
7.With 2 channel digital wireless antenna expansion interface for external receiving antennas to expand the reception range.
8.Built-in 120W intelligent digital amplifier module, with 4 channel amplifier output interface, can be directly connected to fixed-resistance speakers to meet local sound reinforcement needs.
9.Integrated network broadcast function, built-in network IP decoding module, can be used as a digital broadcast decoding terminal, and can be used with the network broadcast system to realize scheduled broadcast, network audio playback, remote program on-demand, scheduled task playback and other functions.
10.The system features built-in professional DSP audio processing capabilities, enabling remote gain adjustment, 15-band EQ balance adjustment, noise gate, compressor, feedback suppression, audio matrix, and other essential functions. Additionally, it offers four types of quick-save sound effects for swift activation, effectively catering to diverse and dynamic classroom environments. This facilitates convenient adjustment and optimization of the classroom's sound reinforcement environment.
11.Integrated howling suppression function can effectively increase the transmission gain and improve the class experience of teachers and students.
12.With audio switching matrix function, it supports custom audio input and output configuration achieving precise control of teaching audio scenes.
13.With 1 channel 100V constant voltage signal backup input, when the network is abnormal or the device is powered off, the broadcast signal automatically switches from digital network signal to analog constant voltage signal to ensure the smooth listening test of the college entrance examination.
14.With 1 programmable power control interface that supports a delayed power-off function, the delay time can be customized to ensure the device shuts down automatically in an orderly manner, effectively protecting the device.
15.With 1 electric curtain control interface that supports the control of electric curtain up/down/pause function. The interface adopts European standard design to prevent users from connecting other electrical devices to this interface, thereby avoiding damage to the equipment.
16.With 1 channel infrared learning port and 2-channel independent programmable infrared IR sending interfaces, it can control various infrared remote control equipment such as cameras, TVs, projectors, and air conditioners.
17.With 2 weak relay control interfaces, it can trigger and control power sequencers, electric locks and other devices.
18.With 2 RS-232 two channel communication interfaces, it can control third-party devices such as projectors, signal switchers, power controllers, dimmers, cameras, etc.
19.With 2 independently programmable RS-485 control interfaces, it can be connected to sensors such as temperature and humidity, current detection, PM2.5 detection, and microphone processors. This allows the management and control host to expand its capabilities, enabling real-time monitoring of the classroom environment. Furthermore, based on the linkage control of the monitoring data, the classroom can be automatically adjusted to create a comfortable learning environment.
20.With 2 I/O interfaces, it can facilitate computer switch control and connect to switch quantity sensor devices such as human perception/disconnection alarms. Additionally, it can enable functions like door magnetic state feedback.
21.With 1 channel Wiegand protocol interface, it can be connected to an external card reader, and the management and control host can be expanded to realize the card swiping attendance management function, support the definition of card swiping mode, and automatically link the class mode/get out of class mode when swiping the card.
22.The terminal supports multi-terminal control and management of the teacher web terminal, administrator web terminal, Android APP, Apple APP, control panel, H5, WeChat applet, and DingTalk applet, reaching users through multiple channels, and the operation is unified and convenient, and the status is synchronized in real time. It needs to expand the management and control host to achieve.
23.The system supports various classroom control panel setting strategies and controls the terminal through methods such as card swiping and the combination of control panel buttons, thereby preventing unauthorized personnel from operating it. Expanding the management control host is necessary to achieve this.
24.With a one-button reset function, it can be restored to the factory state with one button.
25.The whole system has flexible scalability and powerful network control function. It can be expanded through the network to access serial infrared control modules, I/O modules, relay modules, lighting control modules and so on, to achieve the deep integration of classroom Internet of Things, environmental perception and "Internet +".

Specification

Model	TS-9230P1
Network interface	Standard RJ45
Network rate	100Mbps
Video input interface	4 channel HDMI，HDMI1.4 standard
Video output interface	2 channel HDMI，HDMI1.4 standard
HDCP protocol	Support
Resolution ratio	3840x2160@30、1920x1080@60
EDID	2
Audio input	1 RCA, 1 channel RJ45, 1 channel 100V analog backup signal, 2 channel U-segment wireless receivers,
	network broadcast audio source, 4 channel HDMI
Audio output	1 set of RCA, 2 channel HDMI
Rated total power output	120W
Front speaker output	60W MAX/8Ω
Center and rear speaker output	60W MAX/8Ω
Audio input sensitivity	Unbalanced 775mV
Audio output sensitivity	Unbalanced 1V output
Signal-to-Noise Ratio	>73dB(A)
RS-232 port	2 channel
RS-485 port	2 channel
I/O□	2 channel
Remote control panel interface	Independent RS485 interface
Infrared sending port	2 channel
Weak relay port	2 channel
Wiegand protocol interface	1 channel
Power Output	1 channel，AC 220V 50Hz（400W MAX）
Electric curtain control interface	1 channel，AC 220V 50Hz（100W）
Wiegand protocol interface	1 channel
Operating Voltage	AC 220V 50Hz
Power consumption	400W (Power consumption and electric curtain power consumption are calculated separately)
Working temperature	-10℃~+45℃
Relative humidity of working environment	20%~80% relative humidity, no condensation
Overall size（L×D×H）mm	484×315×44
Weight	4.5kg

Cloud-controlled classroom system

Multimedia terminal
TS-9230P2

Description

It is a multimedia IoT teaching terminal integrating functional modules such as audiovisual matrix, IoT central control, amplifier and network decoding. Characterized by high equipment integration and strong extendability, it is suitable for conventional classrooms, multimedia classrooms, lecture halls, etc.

Feature

* The equipment is highly integrated, with built-in audio switching module, video switching module, infrared learning and transmitting module, equipment power management module, electric curtain control module, power amplifier module, network broadcast module, control interface module, video decoding module, wireless screen projection module, etc.
* HD video switching function, support 3-in and 4-out audio and video switching, and support 4K signal transmission when the transmission distance is 3 meters. Support audio and video synchronous input and output multi-IoT interfaces, and support device linkage through infrared, RS232, RS485, relays, etc.
* The device integrates 1 infrared learning port and 2 independent programmable infrared IR transmission interfaces, which can remotely control multiple infrared remote control devices, such as cameras, TVs, projectors, air conditioners, educational whiteboards, etc.
* With 1-way electric curtain control interface, support the control of electric curtain lift/lower/pause functions.
* Integrate 1-channel network broadcast module to realize network remote broadcast, music playback and scheduled bell ringing.
* With 2-way weak relay control interface, it can trigger and control power sequencers, desktop computers, electronic door locks and other equipment.
* With 3-way RS-232 two-way communication interface, which is independently programmable and can be connected to projectors or third-party communication equipment, such as signal switchers, power controllers, dimmers, cameras, etc.
* With 4-channel RS-485 control interface, which is independently programmable and can be connected to projectors or third-party communication equipment, such as signal switchers, power controllers, dimmers, cameras, etc.; one of the channels is connected to an expansion panel, providing DC 12V/0.5A power supply, and can be used with other high-power panels that require independent power supply.
* With 2-way I/O interface, which can be connected to switch sensing equipment such as human body sensing/disconnection alarm, etc., and can realize door lock control linkage and other functions.
* With 1 Wiegand protocol interface, which can be connected to the card reader to control the card swiping attendance management function.Support customized card swiping mode, swiping card to link to class and get out of class mode; support IC card permission management, and can control classrooms by role, time period or course.
* Integrated wireless screen projection module, combined with 2.4G antenna, support multiple screen projection methods, support mainstream video APP screen projection through DLNA; support Mircast protocol and AirPlay protocol screen projection.
* Integrated ≥ 6 audio inputs: 1 stand-mounted microphone sound control input, suitable for desktop stand-mounted microphone sound amplification; 1 channel computer/teaching tablet audio input interface; 1 channel audio input interface for recording and broadcasting system;1 channel analog desktop microphone input interface; 2 channels non-inductive teaching microphone input interface.
* Integrate ≥ 4 audio outputs: 1 audio output; 1 recording and broadcasting system audio output, which can be used with the recording and broadcasting system to meet interactive teaching needs; 1 front-end sound reinforcement audio output; 1 mid- and back-end sound reinforcement audio output.
* Integrated ≥8-port switch: 4 channels with AT standard POE power supply, 4 channels of standard RJ45 network interface, 10/100/1000Mbps network adaptation.
* Built-in infrared frequency binding transmitter, used for wireless teaching microphone frequency binding.
* With 1-channel 3.5mm infrared frequency linking expansion interface, which is used to connect an external infrared frequency linking transmitter to expand the frequency linking range.
* With 2-channel digital wireless antenna expansion interface for external receiving antennas to expand the reception range.
* With 2 programmable power control interfaces and 1 programmable projection power control interface. Support delayed power-off function and current monitoring, which can effectively protect the equipment.
* Support extended touch panel, touch screen, mobile phone tablet (APP), web and other methods for management and control, and support customized one-click class entry and exit functions.
* Integrated network broadcast function, built-in network IP decoding module, can be used as a digital broadcast decoding terminal, and can be used with the network broadcast system to realize scheduled broadcast, network audio playback, remote program on-demand, scheduled task playback and other functions.
* Integrated device power management function, with 3-way programmable power control interface, support delayed power-off function and current monitoring, which can effectively protect the device.
* Integrated sound quality adjustment function to realize practical functions such as remote gain adjustment, 15-band EQ balance adjustment, noise gate, compressor, feedback suppression, audio matrix, etc. It can cope with various complex and changeable classroom environments, making it easy to adjust and optimize the classroom sound reinforcement environment.
* Integrated howling suppression function can effectively increase the transmission gain, ensure the stability of teaching sound amplification, and improve the class experience of teachers and students.
* Built-in non-sensory teaching microphone audio processing function, providing AFC (Auto feedback control), AGC (Auto gain control), AEQ(Auto equalization), ENC（Environmental noise cancellation) and other audio processing algorithms, which ensures clear sound amplification during lectures so that students can hear clearly and teachers can speak easily.
* Providing multiple sets of audio interfaces to facilitate the access of interactive intelligent flat panel, computers, recording and broadcasting sources, and audio matrix output. Equipped with an audio switching matrix, it supports customized audio input and output configurations to achieve precise management and control of teaching audio scenes.
* The built-in digital wireless teaching receiving module supports the access of two teaching wireless handheld wireless microphones, expanding the teacher's teaching range and enriching teaching methods, and at the same time facilitating classroom interaction between teachers and classmates.
* Digital wireless audio transmission adopts digital modulation method, which ensures stable transmission and ensures smooth sound amplification without lag during the teaching process. At the same time, automatic frequency scanning and automatic frequency binding functions can realize non-inductive access of wireless microphones, making it convenient for teachers and students to use.

Specification

Model	TS-9230P2
Projector power output interface	AC 220V
Computer power output interface	AC 220V
Curtain control	Up and down control
Remote control tablet interface	Independent RS485 interface
Desktop microphone	RJ45 interface
Line audio output	Unbalanced 1V output/470Ω impedance
Recording and broadcasting system audio output	Unbalanced 1V output/470Ω impedance
Front-end audio output	Unbalanced 1V output/470Ω impedance
Mid- and rear-end sound reinforcement audio output	Unbalanced 1V output/470Ω impedance
Computer/teaching tablet audio input	Unbalanced 350mV
Recording and broadcasting system audio input	Unbalanced 350mV
Analog desktop microphone audio input	Balanced 100mV
Non-sensory teaching microphone audio input	Balanced 40mV
Front-end amplifier output	2*200W MAX/8Ω
Mid/rear amplifier output	2*200W MAX/8Ω
SNR	≥73dB
Network Interface	4-way 1000Mbps RJ45 interface, 4-way AT standard POE network port
Operating Voltage	～220V 50Hz
Machine power consumption	900W
Operating temperature	-10℃～45℃
Working humidity	20%~80% relative humidity, no condensation
Size (L*W*H)	484*290*44mm
Weight	4kg

Multimedia terminal
TS-9230S2

Description
It is a multimedia IoT teaching terminal integrating functional modules such as audiovisual matrix, IoT central control, amplifier and network decoding. Characterized by high equipment integration and strong extendability, it is suitable for conventional classrooms, multimedia classrooms, lecture halls, etc.

Feature
* The equipment is highly integrated, with built-in audio switching module, video switching module, infrared learning and transmitting module, equipment power management module, electric curtain control module, power amplifier module, network broadcast module, control interface module, video decoding module, wireless screen projection module, etc.
* HD video switching function, support 3-in and 4-out audio and video switching, and support 4K signal transmission when the transmission distance is 3 meters. Support audio and video synchronous input and output multi-IoT interfaces, and support device linkage through infrared, RS232, RS485, relays, etc.
* With the combined plug-in modular computer interface, the interface has built-in power supply module and line connection module, no need to configure additional video cables and power cables, the wiring is beautiful, and it is easy to use and maintain. Support access to standardized OPS computer modules, and the classroom can meet the needs of teachers without additional teaching computers.
* The device integrates 1 infrared learning port and 2 independent programmable infrared IR transmission interfaces, which can remotely control multiple infrared remote control devices, such as cameras, TVs, projectors, air conditioners, educational whiteboards, etc.
* With 1-way electric curtain control interface, support the control of electric curtain lift/lower/pause functions.
* Integrate 1-channel network broadcast module to realize network remote broadcast, music playback and scheduled bell ringing.
* With 2-way weak relay control interface, it can trigger and control power sequencers, desktop computers, electronic door locks and other equipment.
* With 3-way RS-232 two-way communication interface, which is independently programmable and can be connected to projectors or third-party communication equipment, such as signal switchers, power controllers, dimmers, cameras, etc.
* With 4-channel RS-485 control interface, which is independently programmable and can be connected to projectors or third-party communication equipment, such as signal switchers, power controllers, dimmers, cameras, etc.; one of the channels is connected to an expansion panel, providing DC 12V/0.5A power supply, and can be used with other high-power panels that require independent power supply.
* With 2-way I/O interface, which can be connected to switch sensing equipment such as human body sensing/disconnection alarm, etc., and can realize door lock control linkage and other functions.
* With 1 Wiegand protocol interface, which can be connected to the card reader to control the card swiping attendance management function.Support customized card swiping mode, swiping card to link to class and get out of class mode; support IC card permission management, and can control classrooms by role, time period or course.
* Integrated wireless screen projection module, combined with 2.4G antenna, support multiple screen projection methods, support mainstream video APP screen projection through DLNA; support Mircast protocol and AirPlay protocol screen projection.
* Integrated ≥ 6 audio inputs: 1 stand-mounted microphone sound control input, suitable for desktop stand-mounted microphone sound amplification; 1 channel computer/teaching tablet audio input interface; 1 channel audio input interface for recording and broadcasting system;1 channel analog desktop microphone input interface; 2 channels non-inductive teaching microphone input interface.
* Integrate ≥ 4 audio outputs: 1 audio output; 1 recording and broadcasting system audio output, which can be used with the recording and broadcasting system to meet interactive teaching needs; 1 front-end sound reinforcement audio output; 1 mid- and back-end sound reinforcement audio output.
* Integrated ≥8-port switch: 4 channels with AT standard POE power supply, 4 channels of standard RJ45 network interface, 10/100/1000Mbps network adaptation.
* Built-in infrared frequency binding transmitter, used for wireless teaching microphone frequency binding.
* With 1-channel 3.5mm infrared frequency linking expansion interface, which is used to connect an external infrared frequency linking transmitter to expand the frequency linking range.
* With 2-channel digital wireless antenna expansion interface for external receiving antennas to expand the reception range.
* With 2 programmable power control interfaces and 1 programmable projection power control interface. Support delayed power-off function and current monitoring, which can effectively protect the equipment.
* Support extended touch panel, touch screen, mobile phone tablet (APP), web and other methods for management and control, and support customized one-click class entry and exit functions.
* Integrated network broadcast function, built-in network IP decoding module, can be used as a digital broadcast decoding terminal, and can be used with the network broadcast system to realize scheduled broadcast, network audio playback, remote program on-demand, scheduled task playback and other functions.
* Integrated device power management function, with 3-way programmable power control interface, support delayed power-off function and current monitoring, which can effectively protect the device.
* Integrated sound quality adjustment function to realize practical functions such as remote gain adjustment, 15-band EQ balance adjustment, noise gate, compressor, feedback suppression, audio matrix, etc. It can cope with various complex and changeable classroom environments, making it easy to adjust and optimize the classroom sound reinforcement environment.
* Integrated howling suppression function can effectively increase the transmission gain, ensure the stability of teaching sound amplification, and improve the class experience of teachers and students.
* Built-in non-sensory teaching microphone audio processing function, providing AFC (Auto feedback control), AGC (Auto gain control), AEQ(Auto equalization), ENC□ Environmental noise cancellation) and other audio processing algorithms, which ensures clear sound amplification during lectures so that students can hear clearly and teachers can speak easily.
* Providing multiple sets of audio interfaces to facilitate the access of interactive intelligent flat panel, computers, recording and broadcasting sources, and audio matrix output. Equipped with an audio switching matrix, it supports customized audio input and output configurations to achieve precise management and control of teaching audio scenes.
* The built-in digital wireless teaching receiving module supports the access of two teaching wireless handheld wireless microphones, expanding the teacher's teaching range and enriching teaching methods, and at the same time facilitating classroom interaction between teachers and classmates.
* Digital wireless audio transmission adopts digital modulation method, which ensures stable transmission and ensures smooth sound amplification without lag during the teaching process. At the same time, automatic frequency scanning and automatic frequency binding functions can realize non-inductive access of wireless microphones, making it convenient for teachers and students to use.

Specification

Model	TS-9230S2
Projector power output interface	AC 220V
Computer power output interface	AC 220V
Curtain control	Up and down control
Remote control tablet interface	Independent RS485 interface
Desktop microphone	RJ45 interface
Line audio output	Unbalanced 1V output/470Ω impedance
Recording and broadcasting system audio output	Unbalanced 1V output/470Ω impedance
Front-end audio output	Unbalanced 1V output/470Ω impedance
Mid- and rear-end sound reinforcement audio output	Unbalanced 1V output/470Ω impedance
Computer/teaching tablet audio input	Unbalanced 350mV
Recording and broadcasting system audio input	Unbalanced 350mV
Analog desktop microphone audio input	Balanced 100mV
Non-sensory teaching microphone audio input	Balanced 40mV
Front-end amplifier output	2*200W MAX/8Ω
Mid/rear amplifier output	2*200W MAX/8Ω
SNR	≥73dB
Network Interface	4-way 1000Mbps RJ45 interface,
	4-way AT standard POE network port
Operating Voltage	～220V 50Hz
Machine power consumption	900W
Operating temperature	-10℃～45℃
Working humidity	20%~80% relative humidity, no condensation
Size (L*W*H)	484*290*44mm
Weight	4kg

Cloud Controlled Classroom Terminal
TS-9205

Description
The terminal is integrated with multimedia central control, power amplifier, broadcasting and other modules. In this way, intelligent control and adjustment, and scene linkage operations can be performed on the equipment through the server. Characterized by high integration, simple operation, high stability and reliability, it is suitable for multimedia classrooms, laboratories and other places.

Feature
*Wall-mounted design, real-time clock display on the panel, small size, exquisite appearance.
* High device integration: built-in audio control, IoT central control, power amplifier, network decoding and other modules, rich in functions.
* The built-in volume control module supports 1 set of line input and 1 set of line output, so that the volume of the device can be independently managed.
* Built-in 2*20W (MAX) digital amplifier module, with 2 amplifier output interfaces, it can be directly connected to constant-resistance speakers to meet local sound reinforcement needs.
* The built-in network radio decoding module can be used as a digital radio decoding terminal. Working with the server, it can realize functions such as audio broadcast, BGM playback, and scheduled task playback.
* With 2 independent programmable IR sending interfaces, it can control IR remote control equipment such as cameras, TVs, projectors and air conditioners.
* With 2 weak relay control interfaces, it can trigger and control power supply sequencer, electric control lock and other equipment.
* With 2 RS-232 two-way communication interfaces, it can control projectors, signal switchers, power controllers, dimmers, cameras and other third-party equipment.
* With 2 RS-485 control interfaces, it can be independently programmed, and can be connected to sensors such as temperature and humidity, current detection, and PM2.5 detection. With the server, the real-time monitoring of the classroom environment can be realized, and according to the monitoring data linkage control, the classroom can be automatically adjusted to a comfortable learning environment.
* With 2 I/O interfaces, it can realize remote PC on/off control, can be connected to switching sensor equipment such as biological perception/disconnection alarm, and can realize door magnetic status feedback and other functions.
* Support one-key reset function; it can be restored to the factory state with one key.
* The entire system features flexible scalability and powerful network control functions. It can be extended to access serial IR control modules, I/O modules, relay modules, lighting control modules, etc. through the network to realize the deep integration of classroom IoT, environmental perception and "Internet +".

Specification

Model	TS-9205
Network interface	Standard RJ45
Network speed	100Mbps
Cross network segment	Support cross-segment network centralized control and management
Audio input	1*AUX, 1*network radio decoding module
Audio output	1*LINEOUT, 2*amplifier output
Amplifier output	2*20 W (MAX), constant resistance 8Ω
LINE IN frequency response	80Hz-16kHz (±0.5db)
LINE IN sensitivity	350±40mV
LINE OUT harmonic distortion	<0. 1 %
SPK OUT harmonic distortion	<1%
SNR	>75dB(A)
RS-232 port	2
RS-485 port	2 (one of which is the extended touch panel interface)
I/O port	2
IR sending port	2
Weak relay port	2
Power output	1CH, 24V (MAX 20W)
Total power consumption	48W (MAX)
Working temperature	-10℃~+45℃
Relative humidity	20%~80%, no condensation
Dimension	180*145*40mm
Weight	0.95kg

Control Panel
TS-9210BD

Feature
*Installed on the classroom podium, used with the multimedia IoT teaching terminal, equipped with shortcut control buttons and indicator lights for teachers to use conveniently.
* Support one-key class start/end, projector on/off, projection screen up/down, video switching display, volume control and other operations, which greatly facilitates the daily use of classes for teachers.

Specification

Model	TS-9210BD
Communication protocol	485 Protocol NET Bus Communication
Power supply	24V
Dimension	196*104*25
Weight	0.45kg

Microphone
TS-9230MU

Description
A wireless microphone based on a digital modulation scheme, used with higher education multimedia terminals, has the advantages of low bit error rate, stable transmission, strong anti-interference ability, and can be swept to avoid interference. Support wireless adjustment of the microphone volume, making it easy to use. Suitable for intelligent teaching scenarios such as college classrooms.

Feature
*Using digital modulation for transmission, the sound reinforcement is guaranteed to be clear, smooth and noise-free.
* Built-in 3.5mm headphone jack, which can be used with headset or lavalier microphones to free up teachers' hands.
* Support non-inductive access function, automatically binds frequency when turned on, realizing automatic wireless microphone access to the system.
* Support two charging methods, including pedestal microphone charging stand charging and TYPE-C charging.
* Intelligent power consumption management, support intelligent monitoring of microphone usage status for power consumption management. After muting, the microphone will automatically shut down if there is no operation for a period of time to improve battery life.
* 6. Super long battery life, it can be used continuously for more than 8 hours after one full charge, meeting the requirements of all-day use.

Specification

Model	TS-9230MU
Modulation	Pi/4-DQPSK digital modulation method
Pickup cartridge	Capacitive electret
Frequency response	80~16kHz（+1~-3db）
THD+N	＜0.3%
Working time	>8 hours
Wifi communication distance	20m
Working distance	30m
Operating voltage	DC 3.7V
Working current	＜150mA
Battery capacity	1300mAh
Product weight	0.07kg
Product size (L×H×D)	130*40*18mm

Laser pointer with remote control
TS-9230PT

Description
It uses laser technology to realize the pointer function and supports wireless control of display page turning, full screen, laser, hyperlink, volume increase and decrease, power on and off, etc. It is suitable for intelligent teaching scenarios such as college classrooms.

Feature
*Adopting red laser design, laser size 7.4*4, two sections.
* Support volume increase function: short press to increase the volume, and support long press to continuously increase the volume.
* Support volume reduction function: short press to reduce the volume, and support long press to continuously reduce the volume.
* Support two charging methods, including pedestal microphone charging stand charging and TYPE-C charging.
* Support the status feedback function of the blue indicator light. The indicator light is always on when the machine is turned on, and turns off after 2 seconds when the machine is turned off; The indicator lights of all buttons will light up immediately when pressed; the indicator lights will flash quickly when charging and stay on when fully charged.
* With on/off button: press and hold for 2S to turn on, press and hold for 2S to turn off.
* With flip-up button: short press to turn up the page, long press to enable/exit full screen.
* With hyperlink button: click to select, double-click the hyperlink, and long press to switch windows.
* With laser button: The laser buttons light up when pressed.
* With page down button: short press to turn down the page, and long press to turn the screen black when the screen is full.

Specification

Model	TS-9230PT
Laser type	650nm red light, maximum direct distance 200M
Laser power	2.5mW
Transmitting and receiving distance	>30M
Recharging current	300mA
Stand-by current	<20uA
Shutdown current	<20uA
Interface Type	TYPE-C
Input power	DC 5V/1A
Weight	0.032kg

Microphone
TS-9230MZ

Description
It adopts RJ45 composite interface design and connects to classroom terminals through network cables to realize three-in-one transmission of power supply, communication, and audio. It also supports charging of handheld microphones and PPT page turners, and has functions such as switching microphones, NFC lock control management, and terminal linkage. Suitable for intelligent teaching scenarios such as college classrooms.

Feature
*With a magnetic charging stand, support three-way charging management, and can charge two handheld microphones and a PPT page turner.
* Support three-way magnetic lock management, realize terminal linkage, and connect the central control to control the magnetic lock.
* Support remote unlocking, infrared handheld microphone status query, and battery status display functions.
* With RJ45 composite interface design to realize three-in-one transmission of power supply, communication and audio.
* Support docking with classroom terminals to achieve microphone linkage control.
* Support NFC card swiping, providing switch and lock status feedback function. The green prompt light turns on when the lock is unlocked, and the red prompt light turns on when the lock is closed.
* Support fast charging function. The handheld microphone can be fully charged in 2 hours. Support status feedback function. The red indicator light will turn on during charging and the blue indicator light will turn on when fully charged.

Specification

Model	TS-9230MZ
Pickup cartridge	Cardioid directivity
Frequency response	80Hz~16KHz
Input resistance	680Ω
Sensitivity	-41dB±1.5dB（1KHz）
Dynamic Range	>80db
NFC module	Working frequency 13.56MHz, support all ISO14443A protocol cards of M1 card
RJ45 interface	Support three-in-one function, +12V power supply, balanced 520mV output, RS485 communication
Charging power	10W
Charging interface	Contact type
Microphone length	550mm
Base dimensions (L x W x H)	144.8*117.7*47.4mm
Weight	0.61kg

Cloud Controlled Classroom Terminal
TS-9260

Description
It is a wall-mounted multimedia IoT teaching terminal integrating functional modules such as touch display, audiovisual matrix, IoT central control, amplifier and network decoding. Characterized by high equipment integration, strong extendability and powerful functions, it is suitable for conventional classrooms, multimedia classrooms, lecture halls, etc.

Feature
*Built-in 15.6-inch capacitive touch screen, 10-point touch design, resolution 1920x1080, aspect ratio 16:9.
* High equipment integration, diversified functions, built-in audio control, video matrix, IoT central control, amplifier and network decoding and other modules.
* With a built-in matrix switching module, it supports 3 HMDI inputs, 1 wireless projection input, and 2 HDMI outputs, and can realize synchronous audio and video output.
* With a built-in volume control module, it supports 1 Line input, 1 MIC input, and 1 Line output, and can independently manage the volume of the device.
* With built-in 2*20W digital amplifier modules and 2 amplifier output interfaces, it can be directly connected to constant-resistance speakers to meet local sound reinforcement needs.
* With a built-in network broadcast decoding module, it can be used as a digital broadcast decoding terminal, and the extension management controller or broadcast controller can realize functions such as audio broadcast, BGM playback, and scheduled task playback.
* With a built-in video decoding module, the extension management controller realizes the video file or video stream push function, and supports various push methods such as timed push and zonal push.
* With 1 programmable power control interface, it supports delayed power-off function, and the length of the delay time can be customized to ensure that the device is automatically shut down and then powered off, which can effectively protect the device.
* With 1 motorized curtain control interface, it supports control of motorized curtain up/down/stop function. Using the European standard design, it prevents users from connecting other electrical devices to this interface, thereby avoiding damage to the device.
* With 1 IR learning port and 2 independent programmable IR sending ports, it can control IR remote control devices such as cameras, TVs, projectors and air conditioners.
* With 2 weak relay control interfaces, it can trigger and control power supply sequencer, electric control lock and other devices.
* With 1 RS-232 two-way communication interface, it can control projectors, signal switchers, power controllers, dimmers, cameras and other third-party devices.
* With 1 RS-485 control interface, it supports independent programming and access to temperature and humidity, current detection, PM2.5 detection and other sensors. The extension management controller realizes real-time monitoring of the classroom environment, and performs linkage control based on the monitoring data to automatically adjust the classroom to a comfortable learning environment.
* With 2 I/O interfaces, it can realize computer remote on/off control; it can be connected to switch sensor equipment such as biological perception/disconnection alarm, and can realize functions such as door magnetic status feedback.
* With 1 built-in card reader. The extension management controller implements the IC card attendance management function, supports the definition of card swiping mode, and automatically links the class mode/self-study mode when swiping the card.
* With a built-in audio intercom module, the expansion management controller realizes the one-key help intercom function, and teachers and students can communicate by voice through the terminal and the school help center.
* Support the control and management of 8 terminals: teacher web terminal, admin web terminal, Android APP, IOS APP, control panel, H5, WeChat applet, and DingTalk applet, characterized by multi-channel access to users, unified and convenient operation, and real-time synchronization of status. The extension management controller is required.
* Support multiple setting strategies of the classroom control panel, and control the terminal by swiping the card and the control panel keys to avoid unrelated personnel operations. The extension management controller is required.
* Support one-key reset function, support one-key reset to factory state.
* Support the floating ball display function, you can view the ongoing audio broadcasting, video broadcasting and educational announcement and other tasks through the floating ball.
* Support screen management function, set screen saver or screen off, display weather forecast, classroom environment information, and card swiping area and other components; screen saver time, screen dimming time and screen off time can be set to meet the personalized screen display needs of different users.
* Support terminal lock screen setting function; it can be unlocked by account password, QR code, swiping card and other methods.
* Integrated wireless screen projection module, support multiple projection protocols such as DLNA, Mircast, AirPlay, etc. Android mobile terminal and IOS mobile terminal can realize wireless screen projection function.
* The whole system is characterized by flexible scalability and powerful network control functions. Through the network, it can be extended to access serial port IR control modules, I/O modules, relay modules, lighting control modules, etc., so as to realize classroom IoT control, environmental perception and "Internet +" deep fusion. The extension management controller is required.

Specification

Model	TS-9260
Touch screen	15.6-inch capacitive touch screen, 10-point touch
Screen resolution	3840×2160P30, 1920×1080P60
Aspect ratio	16:9
Network interface	Standard RJ45*4
Internet speed	1000Mbps
Video input interface	3*HDMI, HDMI1.4 standard
Video output interface	2*HDMI, HDMI1.4 standard
HDCP protocol	Support
Audio input	1 set of Line in, 1*MIC,
	network broadcast decoding module, 3*HDMI
Audio output	1 set of Line out
Amplifier output	2*20W, constant resistance 8Ω
LINE IN frequency response	80Hz-16kHz (±0.5db)
MIC IN frequency response	200Hz-10kHz (±0.5db)
LINE IN sensitivity	775±40mV
MIC IN sensitivity	10±1mV
LINE OUT harmonic distortion	<0.1%
SPK OUT harmonic distortion	<1%
SNR	>72dB (A)
USB port	1 USB 2.0 Type-C
RS-232 port	1
RS-485 port	1
I/O port	2
IR sending port	2
Weak relay port	2
Power output	1, ~220V 50Hz (400W MAX)
Motorized curtain control interface	1, ~220V 50Hz (100W)
Built-in card reader	1
Built-in speaker	2*1.5W
Total power consumption	60W (MAX)
Working temperature	-10℃~+45℃
Relative humidity	20%~80%, no condensation
Dimension (W×H×D)	294.7×377.4×59mm
Weight	4.3kg

Current Collector
TS-9206AC

Description
As a current sensor, it is a widely used electrical device. When used with the central control system, it can realize automatic control and dispatching functions.

Feature
*Support collecting 1 channel of current signal.
* Upload through the standard ModBus-RTU protocol of the 485 interface, and the maximum communication distance is up to 2000 meters.

Specification

Model	TS-9206AC
Power supply	DC 10~30V
Maximum power consumption	0.3W
Collecting signal	Alternating current
Measuring range	0~30A
Resolution	0.01A
Precision	2.5%FS±0.05A
Transmitter circuit operating temperature	20℃~+60℃, 0%~80%RH (no condensation)
Output signal	RS485 output (standard ModBus-RTU protocol)
Dimension	110×85×44mm

Educational Information Release Terminal
TS-92900

Description
It is a wall-mounted decoding terminal developed based on the Android system. It can be connected to an external LCD display and used with the cloud-controlled classroom system to release media information such as promotional pictures, video files, and video streams.

Feature
*Support the display of pictures, video files, and video streams and other multimedia education information, and the display content can be customized through the background.
* Support timing or timely reception of multimedia information pushed by the server.
* Support entering the screen saver state when there is no task.

Specification

Model	TS-92900
CPU	Rockchip RK3288 quad-core Cortex-A17 GPU Mail-T764
Clock speed	1.8GHz
RAM	2G
Storage	EMMC 16G
Network port	1*RJ45, Gigabit Ethernet port
Video interface	1*HDMI video output, 1080P60
Peripheral interface	USB2.0, OTG interface
IR signal output	1*IR signal output
IR learning	Built-in IR receiver, support IR learning function
Relay	Support triggering 1 relay control signal
I/O port	Support triggering 1 I/O input signal
POE power supply	No need for external power supply, powered by switch
5V power supply	USB 5V power supply
Power consumption	5W
Weight	0.359kg
Dimension (L×W×D)	133×84×28.5mm
Working temperature	-5℃~45℃

10.1-inch Educational Information Release Screen
TS-92910

Description
It is a 10.1-inch wall-mounted LCD display developed based on Android system. Working with the cloud-controlled classroom system, it can be used to release media information such as promotional pictures, video files, and video streams.

Feature
*Support the display of pictures, video files, and video streams and other multimedia education information, and the display content can be customized through the background.
* Support timing or timely reception of multimedia information pushed by the server.
Support entering the screen saver state when there is no task.

Specification

Model	TS-92910
CPU	RK3568, Quad Core 64-bit, Cortex-A55, 2.0G
RAM	LPDDR-2G
Storage	Built-in EMMC-16G (extendable TF card)
Operating system	Android 11.0
Display screen	HD IPS screen
Resolution	1280*800
Viewable area	217(H)×135.6mm(V)
Contrast	1300
Brightness	280cd/m2
Aspect ratio	16:10
Touch screen	10.1-inch capacitive touch screen
Light bar	IO port protocol, external three-color LED light bar (red, green, blue)
Media player	Video format: MPEG-1, MPEG-2, MPEG-4, H.263, H.264, VC1, RV
	Audio format: MP3/WMA/AAC
	Image format: jpeg
Speaker	8Ω 2W×2
Camera	Front 200W
Communication interface	1*1000M adaptive Ethernet port
Rear interface	Support rear output of network port and 485 serial port, suitable for embedded installation
Side control interface	TTL to 485 serial port
Other interfaces	2*external USB 3.0 port (1 of them is USB_OTG)
WiFi/3G/4G/Bluetooth	Support WIFI-2.4G, BT-4.1
POE	Support, IEEE802.3at/af
Power supply	Support POE/DC12V power supply
Total power consumption	≤14W
Standby power consumption	≤1W
Working temperature	-5°C~45°C (the working temperature of the screen is 0°C-40°C)
Color	Silver white
Weight	1.15kg
Dimension (L×W×D)	253.5×163.5×27mm

21.5-inch Educational Information Release Screen
TS-92921

Description
It is a 21.5-inch wall-mounted LCD display developed based on Android system. Working with the cloud-controlled classroom system, it can be used to release media information such as promotional pictures, video files, and video streams.

Feature
*Support the display of pictures, video files, and video streams and other multimedia education information, and the display content can be customized through the background.
* Support timing or timely reception of multimedia information pushed by the server.
* Support entering the screen saver state when there is no task.

Specification

Model	TS-92921
Operating system	Android 6.0.1
Display screen	21.5 inches
Resolution	1920*1080
Aspect ratio	16:9
Brightness	≥350cd/m²(typ.)
Contrast	3000:1(typ.)
Response time	≤12ms(typ.)
Touch screen	G+G tempered glass capacitive screen, support 10-touch mode
WiFi	Built-in high-performance SDIO interface WiFi module, support IEEE 802.11 b/g/n
CPU	RK3288 Quad Core 1.8GHz Cortex-A17
RAM	2G
Storage	16G
Ethernet	10M/100M/1000M Adaptive Ethernet
TF card	Pop-up TF card socket, support up to 128GB TF card
Interface	USB2.0*2, HDMI*1, RJ45*1, DC12V*2, Headphone*1
Speaker	2W×2
Power supply	Single USB power supply/power adapter (DC 12V-3A)
Power voltage	100V~240V,50-60Hz
Rated power consumption	≤30W
Standby power	≤1W
Working temperature	0℃~50℃
Relative humidity	10%~90%RH
Frame color	Gray
Weight	6.6kg
Dimension (W×D×H)	526.4×318×29mm

Temperature and Humidity Sensor
TS-9212RH

Description
The sensor is designed with an LCD display, and can display temperature and humidity in real time. Without screw terminal wiring on the back, it can be installed on a standard 86mm junction box. Using the standard MODBUS-RTU communication protocol, RS485 signal output, the maximum communication distance is up to 2000 meters (measured). And the internal and external probe is optional. It is widely used in classrooms, communication rooms, warehouse buildings, and automatic control places that require temperature and humidity monitoring to realize scene linkage. For example, after the central control obtains the temperature and humidity data, it can make judgments at the bottom layer, and then invoke the corresponding control scene through the preset value, or control a certain device, such as linkage control of air conditioners and so on.

Feature
*LCD display, beautiful appearance.
* The terminal block adopts military-grade spring-type screw-free terminals, which can be connected by pressing and inserting. Even if there is no screwdriver on site, the wire can be connected quickly, and the adaptable wire diameter is 0.3-2.0mm2.
* With high-precision temperature and humidity measurement units, it supports on-site self-calibration, featuring good long-term stability and small drift.
* Adopt dedicated 485 circuit, standard ModBus-RTU communication protocol; communication address and baud rate can be set.
* Power supply: 10~30V DC wide voltage range.
* Parameters can be set by buttons, easy to operate.

Specification

Model	TS-9212RH
DC power supply (default)	10-30V DC
Maximum power consumption	0.4W
Measuring precision	±3%RH (5%~95%RH, 25℃); ±0.5℃ (25℃)
Transmitter circuit operating conditions	-20℃~+60℃, 0%RH~80%RH
Communication protocol	Modbus-RTU communication protocol
Output signal	485 signal
Temperature display resolution	0.1℃
Humidity display resolution	0.1%RH
Temperature and humidity refresh time	1S
Long-term stability	Temperature≤0.1℃/y; Humidity≤1%RH/y
Response time	Temperature≤15s (1m/s wind speed); Humidity≤4s (1m/s wind speed)
Opening size	60mm
Parameter settings	Modify directly by software settings or keys

PM2.5 Sensor
TS-9211PM

Description
It is a particle concentration transmitter that can be used for PM2.5 or PM10 concentration monitoring.

Feature
*Using the principle of laser scattering measurement, sieving through the unique data dual-frequency acquisition technology, the number of particles with equivalent particle diameters per unit volume can be obtained, and the mass concentration of particulate matter with equivalent particle diameters per unit volume can be calculated by a unique scientific algorithm.
* Use the ModBus-RTU protocol to output data through the RS-485 interface; support the standard ModBus-RTU communication protocol, which is convenient for access.
* Measuring range: 0-1000ug/m³, resolution: 1ug/m³.
* Support PM2.5 and PM10 simultaneous output.
* Using unique dual-frequency data acquisition and auto calibration technology, the consistency is up to ±10%.
* Advanced laser anti-attenuation technology is adopted to ensure the long-term stability of the equipment.

Specification

Model	TS-9211PM
DC power supply (default)	10~30V DC
Power consumption	0.5W
Transmitter circuit operating temperature	20°C~+60°C, 0%~80%RH, no condensation
Communication interface	485 communication (modbus) protocol
Baud rate	2400, 4800 (default), 9600
Data bit length	8 bits
Parity mode	None
Stop bit length	1 bit
Default ModBus communication address	1
Function code	03
Parameter settings	Configure through the 485 interface with the provided configuration software
Resolution	1ug/m³
Precision	±10%
Measuring range PM2.5	0~1000ug/m³
Measuring range PM10	0~1000ug/m³
Response speed	≤90S
Preheat time	≤2min
Dimension	110×85×44mm
Installation box	Φ220×168mm (pin 69)

Podium
TS-92JZ

Feature
*The overall design is made of cold-rolled plate and high-quality wood plate.
* The front middle of the podium tabletop will not fall when subjected to the impact force of 170N, and the edge of the table corner is blunted.
* The design of the drawer matches the curvature of the edge of the table, which is practical and aesthetically pleasing.
* Equipped with a storage cabinet, support multi-functional equipment such as classroom terminal, digital power amplifiers,HD recording controller, and PC controller.
* Support the installation of 15.6-inch + 10.6-inch and 21.5-inch + 10.6-inch capacitive touch dual screens. The screen is designed with 2mm tempered glass, and it is connected to the cloud-controlled classroom terminal to realize intelligent control of recording and broadcasting and other teaching systems (optional).
* Support the installation of a multi-function interface module, support 1 channel USB signal, 1 channel keyboard and mouse transparent transmission, 1 channel HDMI signal output and 220V power supply interface.
* L× W × H: 1050 × 1028 × 570mm.

Podium
TS-92JZA

Description
Adopting a steel-wood combination design to meet teachers' teaching, demonstration and storage needs. It is suitable for higher vocational education, primary and secondary classrooms and other places.

Feature
*The overall design is a combination of steel and wood, with a cold-rolled steel plate table body, wooden front panel, desktop and drawers. The thickness of the metal plate of the table body is 1-3mm.
* The front and center of the podium will not tip over when subjected to an impact force of 170N, and the edges of the table corners are designed to be blunt.
* The drawer design matches the curvature of the table edge, making it practical and aesthetically pleasing.
* The podium is equipped with a 10U cabinet, which can accommodate multi-functional equipment such as higher education terminals, digital power amplifiers, recording and broadcasting controller, and PC controller.
* Working temperature: -10°C~45°C.
* Working humidity: 5%~80% relative humidity, no condensation.
* Length×width×height: 1050*570*1028mm.
* Weight: 77.5kg.

Cloud-controlled Classroom Platform Software V4.86
TS-9200R

Description

It is a comprehensive management system applied to classroom audiovisual and lighting services. The system fundamentally changes the traditional control mode of classroom equipment and builds an intelligent and collaborative teaching environment.

Feature

*Support account protection function. If no operation is performed on the web side for a long time, it will automatically log out to protect account security.
* Support multi-level management mode, support different users to log in for management, and support administrators to assign permissions to enable different users to control different classrooms. Administrators can modify basic information such as account number, username, gender, etc., and support the password remembering function.
* The platform software controls classroom terminals and peripheral equipment to realize functions such as audio broadcasting, video push, live video, teacher attendance, classroom management, classroom inspection, platform resources, power consumption statistics, and environmental monitoring.
* The system adopts B/S architecture and C/S architecture, and supports 8 control terminals including teacher web terminal, admin web terminal, Android APP, Apple APP, control panel, H5, WeChat applet, DingTalk applet, and more, realizing multi-channel interaction, unified and convenient operation, and real-time status synchronization.
* The system supports connecting with high-precision GPS-based timing systems, and can independently perform broadcast system timing services without the Internet, making the system time error less than 1/300,000 of a second per year.
* The system supports global display of server time.
* Provide full-duplex voice data exchange, respond to calls and call requests from various intercom terminals, support call modes such as one-key call, one-key intercom, one-key help, one-key alarm, support auto answering, manual answering, and support custom answering tone.
* Support the task prompt function. When the system is executing audio broadcast, video broadcast, educational affairs announcement, and scheduled tasks, it will prompt that the task exists and give a prompt for the number of tasks. At the same time, when there are audio broadcasting and video broadcasting tasks, there is a floating window globally in the background, and the task can be controlled at any time.
* Support viewing the current video/live push task status, and can cancel task playback, control playback progress, adjust volume, etc.
* Support viewing the current audio broadcast task, and can delete and stop the current task.
* Support viewing media files and previewing/listening to video broadcast task materials.
* Support account memory function, you can switch accounts freely to log in, and can switch between 3 accounts at the same time; support automatic logout if no operation is performed for a long time to prevent password loss.
* Support administrators to reset ordinary user passwords, and users to change passwords after logging in for the first time to ensure account and password security.
* Support an overview of the number of all terminals in the classroom, including the total number, the number of online terminals, and the number of offline terminals.
* Support viewing all 6 scheduled tasks that are currently not executed according to audio, video, and scene.
* Support viewing the 6 immediate tasks currently being executed according to audio and video.
* Support viewing the on/off status and quantity of classroom computers, lights, air conditioners, and projection equipment.
* Support viewing the ranking of classroom power consumption according to the time dimensions of yesterday, this week, and this month.
* Support quick entrance to jump to classroom control management, scheduled scene tasks, scheduled video broadcasts, recording and broadcasting terminal configuration pages, and customized quick entrances.
* Support viewing secondary pages of historical operations and jumping quickly.
* Support viewing classrooms with permissions and controlling the classroom's audio, video sources, projectors, curtains, recording and broadcasting, ceiling mics and other equipment.Support control scene mode, supports viewing device status, supports remote control of classroom computer equipment with ops computers, checks host status, supports batch restart of central control host, and realizes remote operation and maintenance functions.
* Support broadcasting to classrooms with permissions.
* Support viewing the monitoring screen of classrooms that have permission.
* Support one-click muting of authorized classroom microphones and desktop microphones, and adjustment of all-in-one audio sources and remote recording and broadcasting sources.
* Support single/batch control of classroom video sources, scene modes, various audio equipment, charging base unlocking, desktop microphone switches and other equipment.
* Support batch viewing of the early warning status of classroom terminals, desktop microphones, U-segment microphones and other equipment to prevent terminal high temperature failures and provide anti-lost early warnings.
* Support starting and ending voice transcription in batches according to classrooms, and uniformly configuring LED display subtitles to transcribe the classroom lecturer's voice in real time.
* Support administrators to configure the front-end device control permissions of each role through centralized control permission management.
* Support automatic detection of terminal devices, adapts to various control functions of the terminal, and provides volume adjustment bars and mute options for HDMI, broadcast, microphone, desktop microphone, hanging microphone, intelligent interactive flat panel, and remote recording.
* Support management and configuration of parameters of multiple audio modes. The module automatically displays the corresponding audio configuration page according to the functions of the central control terminal device. It also supports editing and enabling the mode.
* Support previewing videos and live streaming playback screens, and supports pushing the video to the classroom LED display.
* Support uploading (preview/download/delete) personal teaching resources, and support uploading files in all types of formats. Support previewing public teaching resources on campus to implement U disk courseware-free teaching methods.
* Support batch configuration, and apply configuration information such as device binding, scene mode, trigger linkage, and startup initialization to other terminals to achieve rapid debugging.
* Support remote batch firmware and classroom computer housekeeper client upgrades for terminals.
* Support multiple trigger linkage modes. Through triggering methods such as terminal interfaces, sensors, and user IC card, functions such as automatically turning on the projector, automatically adjusting the temperature and humidity of the classroom environment, teachers swiping cards to enter exclusive scenes, and network commands triggering scene modes can be realized, and support real-time viewing of the usage duration of the currently detected device and batch export of duration tables.
* Support configuring initial boot commands and customizing terminal boot commands.
* Support viewing the terminal name, IP address, device model, serial number, online status, bound classroom, and scene mode, etc. Support searching for devices by filtering the above information.
* Support viewing the device information and running status of the terminal's built-in computer, including IP address, on/off status, CPU usage, memory usage, CPU temperature, cumulative boot time, system disk space, MAC address, upgrade logs, etc. Support the control of the built-in computer on/off.
* Support remote control of a single terminal to achieve classroom volume control, video switching, scene calling and other functions, support viewing the device status and control logs.
* Support viewing classroom monitoring screen, classroom equipment control, computer operating status, teacher class screen and other information on the same interface to grasp detailed classroom dynamics.
* Support adding/editing the recording and broadcasting controller, and "pause/continue recording", "end recording", "start recording" on the recording and broadcasting controller and display the recording time. The recording and broadcasting controller supports linkage control.
* Support adding/editing mic, obtain mic status, and control on/off mic. The mic supports linkage control.
* Support real-time detection of classroom environment temperature and humidity, PM2.5, smoke, door and window opening/closing, and whether there are people.
* Support batch management of multiple cloud-controlled classroom terminals to enter the Class begins or Class ends mode; support disabling cloud-controlled classroom terminals to facilitate maintenance by operation and maintenance personnel.
* Support classroom inspection function. For classrooms where monitoring equipment is installed, school managers or teachers can access the server background to view the situation in the classroom.
* Support configuration of various exclusive scene customization, each scene supports multi-device linkage and multi-independent command combination, and 300+ custom icons.
* Support control of classroom audio, video sources, scene modes, projectors, screens, smart blackboards, lights, curtains, computers, power switches and other equipment, and supports viewing device status and control logs.
* Support adding (editing/closing/disabling/deleting) scheduled scene tasks. By setting the task execution time and cycle period, the classroom equipment can be scheduled to perform specified scene tasks; support setting the start and end times of the class according to the class schedule to perform tasks; Support intelligent identification of task conflicts and prevention of task conflicts.
* Support viewing historical scheduled scene tasks and starting them again with one click.
* Support the automatic creation of a terminal list in the cloud-controlled terminal list by plugging in the cloud-controlled classroom terminal network cable, and displays information such as terminal name, terminal IP, device model, serial number, online/offline status, etc. Support filtering and searching for devices through the above information. ;Support deletion/batch deletion of terminals.
* Support the simulation of running the programmable control interface project file of the cloud-controlled terminal. The control interface can be flexibly customized, and the equipment can be visually controlled through the engineering interface.
* Support automatic generation of control QR codes for scloud-controlled terminals; support export of control QR codes in batches; scans through WeChat or a browser to control with mobile phone.
* Support modifying the corresponding terminal control instructions by upgrading the programmable project files of the cloud-controlled terminal.
* Support a variety of classroom control panel setting strategies, and uses a combination of card swiping and control panel keys to control the terminal to avoid operations by unrelated personnel.
* Support selecting any card reader of the central control terminal for card entry, and can bind it to a user, giving the user the classroom control permissions and validity period of the card; support viewing the card swiping records of the specified card.
* Built-in infrared file database, users can configure it for terminal use, or manually add general infrared code instructions, and the terminal device can receive and process the infrared instruction control after learning.
* Support upload/download/preview/delete interface project files.
* Support docking with Aqara server and adding/configuring Aqara gateway and Aqara sensors, and support Aqara sensor linkage scenarios or control instructions.
* Support terminal audiovisual encoding function. With a live video terminal, it can realize the function of video live broadcast in the school.
* Support video push function. You can choose video files or video streams to push to designated classrooms in groups; it supports massage reminder, preview,forced push and other functions.Supports video push function, you can select video files or video streams to be pushed to designated classrooms in groups, and supports push reminders, push previews, and forced push functions; Support setting up LED display push linkage, which can automatically turn on classroom equipment and automatically switch signal sources while pushing videos to achieve unattended video broadcasting.
* Support viewing historical video broadcast tasks and executing them again with one click.
* Support new (edit/close/disable/delete) scheduled video broadcast tasks. You can set the task execution time and cycle period to regularly make the classroom equipment perform specified scene tasks; support setting the start and end time of the class according to the class schedule to execute the task. ;Support intelligent identification of task conflicts and prevent task conflicts.
* Support viewing historical scheduled video broadcast tasks and starting them again with one click.
* Support audio broadcasting function, choose from music library files or upload voice files locally for broadcasting, support list loop, loop playback, shuffle playback and other play modes.
* Support pushing audio to each classroom, prompting the classroom whether to perform tasks, and you can choose whether to force the task to be pushed.
* Support text broadcast function, input text or upload text files to convert text into speech; the system automatically recognizes Chinese or English text and reads and broadcasts it; support setting the number of cycles; support adjusting the speed of speech for broadcast.
* Support viewing historical audio broadcast tasks and executing them again with one click.
* Support new (edit/close/disable/delete) scheduled audio broadcast tasks. Broadcast tasks can be executed regularly by setting the task start date, end date, cycle period, priority, and task volume;Support three types of audio source broadcasting: music playback, terminal collection, and sound card collection. Music playback supports multiple selection of music files and setting of loop playback, duration, playback tracks, etc. Terminal collection supports selecting the terminal, setting the end time and collection sound quality for terminal collection and broadcasting. Sound card collection supports selecting the sound card, setting the duration and collection sound quality for sound card collection and broadcasting.
* Support the creation of new scheduled ringing task plans, time attributes, and new ringing tasks under the plan.And view the name of the task, execution time, time attributes, type, preview media files/media folders, and audition, When viewing terminal grouping, disabling, editing tasks, deleting tasks, editing/creating ringing tasks, it supports setting task priority, time attributes, audio sources, terminals, etc.
* Support creating new holiday mode. When holiday mode is enabled, all scheduled audio broadcast tasks will not be executed during the period. Holiday tasks are allowed to be created, edited, deleted, and deleted in batches.
* Support creating/editing/deleting/batch deleting one-click alarm tasks, viewing alarm track files or folders, auditioning alarm tasks, and viewing terminal and classroom groupings.
* Support new examination mode strategy, select the time period for examination mode activation and application terminal and classroom grouping.
* Support new remote control tasks and remote microphone tasks, view tasks and remote control names, buttons, task volume and priority, view media files and folders, audition remote control tasks, and view terminal and classroom groupings.
* Support the terminal audio collection and broadcasting function to realize the collection and broadcasting of listening test voice files.
* Support terminal anti-dismantling alarm, terminal disassembly trigger alarm or other terminal linkage trigger alarm; support alarm task to automatically cancel the alarm function.
* Support fire linkage in the whole district and partition, support N±N mode of fire protection, and support manual alarm and digital alarm. Support configuring alarms to trigger terminal collection tasks.
* Support viewing the terminal's location on the map based on online maps/local pictures.
* Support the management of intercom policies, support the creation of new classroom intercom policies, edits policy names and application terminals, and selects intercom transfer modes.
* Support the management of alarm policies, create/edit alarm policies, select the alarm terminal and port, and select the classroom execution terminal, view the abnormal status of the current alarm task, and export the alarm configuration.
* Support educational publicity function, push pictures, video files, video streams and other information to educational publicity terminals or large screens; support adding multiple pictures or video materials from local files or resource libraries; support drag-and-drop sorting of materials; support setting the material carousel time. Support multiple playback modes such as timed playback, interstitial playback, immediate start, specified time start, and idle playback.
* Support adding (filtering/deleting) broadcast terminals, and can bind broadcast terminals to classrooms/spaces; support list viewing of terminal device name, IP address, device model, bound classroom, online and offline information, etc.
* Support viewing, creating, and exporting broadcast terminals, batch editing of volume, and the ability to jump to classrooms to bind broadcast terminals in batches. Support list viewing of terminal device names, IP addresses, device models, and other information.
* Support adding (editing/deleting) academic affairs publicity and distribution terminals, obtaining the online/offline status of the terminal, and setting the screen saver image of the terminal (the display content when there are no tasks) through local file upload and resource library file selection. Support setting date and weather to be displayed on screensaver.
* Support video broadcast push mode setting, you can choose full video push mode (video upload and transcoding speed is faster) and video and audio mixed push mode (enable terminals that cannot decode video files to play the sound in the video)
* Support turning on and off the test mode. When the start mode is turned on, the broadcast can continue to be used normally after the broadcast is disconnected. For example, during the listening test, even if the network is disconnected, the broadcast can still be performed normally.
* Support video file management function, support uploading files in various video formats such as wmv, mpeg, mpg, avi, mov, ram, mp4, mkv, etc., and perform automatic transcoding, which can be pushed to classroom terminals or large screens as video broadcast materials and educational publicity materials.
* Support video stream management function, support adding rtsp, r tmp, flv and other types of stream addresses, which can be pushed to classroom terminals or large screens as video broadcast materials and educational publicity materials.
* Support audio file management function, support adding mp3 audio files, support classifying folders according to folders, support downloading/auditing/deleting audio files, and support audio push to classroom terminals as audio broadcasting materials.
* Support the teaching resources management function, and support uploading files in various formats such as xls, xlsx, doc, docx, ppt, pptx, pdf, etc. Teachers can view them through the mobile app or web terminal to realize collaborative lesson preparation.
* Support viewing the operation guide for instant recording tasks/scheduled recording tasks.
* After the classroom recording controller performs recording, it supports viewing the recording task list, viewing the start and end time of the recording corresponding to the classroom, the recording duration, deleting the record or batch deletion, and jumping to view/download the recording file.
* Support viewing patrol images according to classrooms and classroom groups. When there are multiple recording and broadcasting cameras, support viewing and switching of the corresponding single-screen images or multi-screen images.Support direction control of cameras with adjustable camera directions, and support custom evaluation and custom label evaluation of the classroom
* Support patrol records for on-demand patrol classrooms, and checks the start and end patrol time and duration of the classroom, view classroom inspection evaluations and perform search, reset, delete, and export operations on the feedback list
* Support adding, deleting or batch deleting recording and broadcasting controller individually or in batches, checking the online status of recording and broadcasting controller, support operations of editing device names, IPs, binding classrooms, and exporting lists.
* Support the power consumption statistics function, support the statistics of the equipment power consumption, equipment dynamics, equipment total power trend, equipment real-time status, equipment usage time and other information in the classroom by day, week, and month, and support exporting details in excel form.
* Support the environmental detection function, support the statistics of the temperature trend, humidity trend and PM2.5 trend in the classroom by day, week and month, and support exporting the details in excel form.
* Support teacher attendance management function. Each teacher has an IC card, and only needs to swipe the card before class, and the server background will automatically generate attendance records. The user name, card number, role, swiping time, classroom, equipment and other swiping attendance records can be viewed in the background.
* Support viewing the total number of fixed assets, total assets, damaged number, lost number, unused number, in-use number, and scrapped number by year in the form of line charts and tables, and the respective percentages can be viewed by day.
* Support account management function, you can view and manage information such as username, gender, login account, login password, phone number, role permissions, valid time, login time, and login times; support importing excel sheet to create users in batches, and provide imported templates; support exporting user information in batches. Users can modify their account and basic information such as username and gender.
* Support role management function. Administrators assign corresponding permissions by assigning roles to users so that users cannot perform functions higher than their own permissions. The system has administrator, teacher, ordinary user and other roles by default to facilitate user use.
* Support the creation of new (filtering/editing/delete/batch import/batch delete) classrooms; support template files for batch import; support display of devices currently bound to the classroom.
* Support the creation of new (filtering/editing/delete/batch delete) classroom groups; support the establishment of 2-level group levels;Support adding classrooms to classroom groups and viewing the classroom list; Support selecting table files to import grouping information in batches, and creating a list of groups and their corresponding classrooms at once;Support batch export of classroom groups and their classrooms; provides template files for batch import of tables.
* Support the creation of classroom schedules by importing excel table schedules and provides imported templates;Support the creation of class schedules based on class hours, courses, and teacher information;Support exporting classroom schedules and teacher schedules in excel tables;Support searching for class schedules based on teacher or classroom name;Support docking with school classroom schedules, and supports clearing classroom schedules in batches.
* Support automatically generating teacher timetables based on classroom timetables;
* Support setting class hours based on get out of class time, and tasks can be performed based on class hours.
* Support setting courses, and you can filter whether tasks are executed based on whether there are courses or not.
* Support the management of monitoring equipment, support viewing the name, model, bound classroom, stream address, activation and deactivation status and other information of the monitoring equipment, and support connecting to third-party monitoring platforms.
* Support asset management function: add assets and automatically generate asset QR codes, record information such as requisition, loan, repair, total assets, and damage, and graphically display and export in the form of line charts and tables.
* Support statistics on server memory usage, CPU usage, memory space, disk space, etc. Support synchronizing server time.
* Support management of the priority of the audio broadcast system, system configuration, view registration information, view, export, clear log information, backup and restore of broadcast database and media library, support password input for firmware upgrade
* Support viewing server serial number, remaining service time, upper limit of mobile terminal users, mobile terminal version and other information; support upgrading system service functions through value-added service registration code.
* Support configuring DingTalk interface parameters to connect the platform and DingTalk data to achieve DingTalk login and management.
* Support APP download QR code settings (login page).
* Support manual backup and automatic data backup. The backup time, file size, and backup information of the backup file can be viewed; support scheduled backup according to the execution time or cycle.
* Support the recycle bin function, which can perform secondary recycling disposal on deleted resources.

Android Platform APP Central Control Software V4.54
TS-9200AR

Description
It is a cloud-controlled classroom management software APP developed based on Android system. It integrates device management, audio broadcast, video push and other functions.

Feature
*Support audio broadcast function. You can choose music library files or upload voice files locally for broadcast; list playback, loop playback, shuffle playback and other playback modes are supported.
* Support text broadcast function. Input or upload a text file to convert the text into speech, and the system automatically recognizes Chinese or English and then broadcasts; support setting the number of cycles; support adjusting the speech speed.
* Support speech broadcast function. Users can flexibly speak to the classroom through the microphone of the mobile phone.
* Support classroom inspection function. After configuring the monitoring equipment corresponding to the classroom on the server side, you can view the classroom monitoring screen and initiate a speech to the classroom, so as to effectively supervise the students and improve the efficiency of remote inspection.
* Support the video control function, it can realize the switch control of the built-in matrix of the classroom terminal.
* Support the volume control function, it can control the volume of the microphone, IP broadcast, and HDMI audio source connected to the classroom terminal.
* Support automatic detection of terminal devices, adapt to various control functions of the terminal, and provide volume adjustment bars and mute options including HDMI, broadcast, microphone, desktop microphone, hanging microphone, intelligent interactive flat panel and remote recording.
* Support the environment detection function, it can display the temperature, humidity, PM2.5 and other data collected by the sensors connected to the classroom terminal in real time.
* Support device control function, it can realize the control of power on/off, mode switching, etc. of cameras, projectors, projection screens, smart interactive flat panels, smart blackboards, recording controllers, and air conditioners connected to classroom terminals.
* Support scene recall function, you can add a variety of scene modes such as class starts, class ends, etc. The control terminal can realize the linkage start or switch of all devices in the scene with one key, avoiding cumbersome operation steps.
* Support the video push function, you can push the video or video streaming resources of the server to the corresponding classroom terminal, which is convenient for users to use.
* Support the resource viewing function, you can view the text resources and video resources in the resource library on the server, and you can download them locally.
* Support switching to night mode, convenient for users to use at night.

IOS Platform APP Central Control Software V4.56
TS-9200IR

Description
It is a cloud-controlled classroom management software APP developed based on ios system. It integrates device management, audio broadcast, video push and other functions.

Feature
*Support audio broadcast function. You can choose music library files or upload voice files locally for broadcast; list playback, loop playback, shuffle playback and other playback modes are supported.
* Support text broadcast function. Input or upload a text file to convert the text into speech, and the system automatically recognizes Chinese or English and then broadcasts; support setting the number of cycles; support adjusting the speech speed.
* Support speech broadcast function. Users can flexibly speak to the classroom through the microphone of the mobile phone.
* Support classroom inspection function. After configuring the monitoring equipment corresponding to the classroom on the server side, you can view the classroom monitoring screen and initiate a speech to the classroom, so as to effectively supervise the students and improve the efficiency of remote inspection.
* Support the video control function, it can realize the switch control of the built-in matrix of the classroom terminal.
* Support the volume control function, it can control the volume of the microphone, IP broadcast, and HDMI audio source connected to the classroom terminal.
* Support automatic detection of terminal devices, adapt to various control functions of the terminal, and provide volume adjustment bars and mute options including HDMI, broadcast, microphone, desktop microphone, hanging microphone, intelligent interactive flat panel and remote recording.
* Support the environment detection function, it can display the temperature, humidity, PM2.5 and other data collected by the sensors connected to the classroom terminal in real time.
* Support device control function, it can realize the control of power on/off, mode switching, etc. of cameras, projectors, projection screens, smart interactive flat panels, smart blackboards, recording controllers, and air conditioners connected to classroom terminals.
* Support scene recall function, you can add a variety of scene modes such as class starts, class ends, etc. The control terminal can realize the linkage start or switch of all devices in the scene with one key, avoiding cumbersome operation steps.
* Support the video push function, you can push the video or video streaming resources of the server to the corresponding classroom terminal, which is convenient for users to use.
* Support the resource viewing function, you can view the text resources and video resources in the resource library on the server, and you can download them locally.
* Support switching to night mode, convenient for users to use at night.

Cloud Controlled Educational Computer Terminal Software V7.52
TS-9210PR

Description
It is a cloud-controlled classroom system terminal mainly used to manage computers with built-in OPS modules.

Feature
*Support statistics of OPS computer's on/off status, CPU usage rate, CPU temperature, memory usage rate, cumulative boot time, IP address, MAC address and so on.
* Support data acquisition and reporting, and automatically upgrade the software version.
* Support remote power on/off, and remote network configuration.

Cloud-controlled classroom system

Cloud Controlled Classroom Platform Software V4.86
TS-9200SR

Description
It is an integrated management system applied to classroom audiovisual and lighting services. The system fundamentally changes the traditional control mode of classroom equipment and builds an intelligent and collaborative teaching environment.

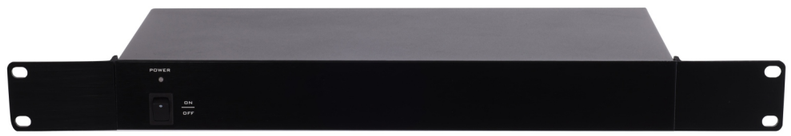
Feature
*The platform software controls classroom terminals and peripheral equipment to realize functions such as audio broadcasting, teacher attendance management, classroom management, classroom inspection, power consumption statistics, and environmental monitoring.
* The system adopts B/S architecture and C/S architecture, and supports 6 control terminals including teacher web terminal, admin web terminal, control panel, H5, WeChat applet and DingTalk applet, realizing multi-channel interaction, unified and convenient operation, and real-time status synchronization.
* The system supports connecting with high-precision GPS-based timing systems, and can independently perform broadcast system timing services without the Internet, making the system time error less than 1/300,000 of a second per year.
* Provide full-duplex voice data exchange, respond to calls and call requests from various intercom terminals, support call modes such as one-key call, one-key intercom, one-key help, one-key alarm, support auto answering, manual answering, and support custom answering tone.
* Support account memory function, you can switch accounts freely to log in, and can switch between 3 accounts at the same time; support automatic logout if no operation is performed for a long time to prevent password loss.
* Support role management function, the administrator assigns roles to users, thereby assigning corresponding permissions, so that users cannot perform functions higher than their own permissions. By default, the system has roles such as administrator, teacher, and common user, which are convenient for users.
* Support account management function, you can view and manage information such as username, gender, login account, login password, phone number, role permissions, valid time, login time, and login times; support importing excel sheet to create users in batches, and provide imported templates; support exporting user information in batches. Users can modify their account and basic information such as username and gender.
* Support programming multiple timing solutions, support flexible selection of terminals and setting time; support timing task execution test, and set repetition cycle; support one-key enable/disable all solutions.
* Support the audio collection and broadcasting function of the terminal to realize the audio file collection and broadcasting for the listening test.
* Support audio broadcast function, you can choose music library files or upload audio files locally; list playback, loop playback, shuffle playback and other playback modes are supported.
* Support text broadcast function: input or upload a text file to convert text into speech, the system automatically recognizes Chinese and English and then broadcasts; support setting the number of cycles; support adjusting the speed of speech.
* Support the floating window function. You can control the task in execution at any time, view the task status, and can cancel task playback, control playback progress, and adjust the volume, etc.
* Support terminal anti-tampering alarm, terminal disassembly will trigger an alarm or trigger other terminals to sound an alarm; support the automatic release alarm function of the alarm task.
* Support batch configuration, and apply configuration information such as device binding, scene mode, trigger linkage, and startup initialization to other terminals to achieve rapid debugging.
* Support multiple trigger linkage modes. Through triggering methods such as terminal interfaces, sensors, and user IC card, functions such as automatically turning on the projector, automatically adjusting the temperature and humidity of the classroom environment, teachers swiping cards to enter exclusive scenes, and network commands triggering scene modes can be realized.
* Support configuring the initial boot command and customizing the terminal boot command.
* Support both zonal and all-zone fire linkage, support fire N±N mode, support manual alarm and digital alarm. Support configuring alarms to trigger terminal collection tasks.
* Support a variety of classroom control panel setting strategies, and use the combination of card swiping and control panel to control the terminal to avoid accidental operations.
* Support viewing the terminal name, IP address, device model, serial number, online status, bound classroom, and scene mode, etc. Support searching for devices by filtering the above information.
* Support remote control of a single terminal to achieve classroom volume control, video switching, scene calling and other functions, support viewing the device status and control logs.
* Support batch management of multiple cloud-controlled classroom terminals to enter the Class begins or Class ends mode; support disabling cloud-controlled classroom terminals to facilitate maintenance by operation and maintenance personnel.
* Support teacher attendance management function. Each teacher has an IC card, and only needs to swipe the card before class, and the server background will automatically generate attendance records. The user name, card number, role, swiping time, classroom, equipment and other swiping attendance records can be viewed in the background.
* Support configuration of various exclusive scene customization, each scene supports multi-device linkage and multi-independent command combination, and 300+ custom icons.
* Built-in infrared file database, users can configure it for terminal use, or manually add general infrared code instructions, and the terminal device can receive and process the infrared instruction control after learning.
* Support the power consumption statistics function, support the statistics of the equipment power consumption, equipment dynamics, equipment total power trend, equipment real-time status, equipment usage time and other information in the classroom by day, week, and month, and support exporting details in excel form.
* Support the environmental detection function, support the statistics of the temperature trend, humidity trend and PM2.5 trend in the classroom by day, week and month, and support exporting the details in excel form.
* Support classroom group management function. Create a new classroom group to manage the terminals, ranging from 1 to 5 levels; support batch import or export of group information in a table.
* Support the creation of class schedules by importing excel sheets, or manually creating class schedules by filling in information such as class hours, subjects, teachers, and classrooms; support exporting class schedules in the form of excel sheets; support setting to perform tasks according to the class schedule, and intelligently identifying task conflicts to prevent task conflicts.
* Support statistics on server memory usage, CPU usage, memory space, disk space, etc. Support synchronizing server time.
* Support the recycle bin function, which can perform secondary recycling disposal on deleted resources.
* Support manual backup and automatic data backup. The backup time, file size, and backup information of the backup file can be viewed; support scheduled backup according to the execution time or cycle.

Classroom hanging microphone system

Microphone Processor

Integrated audio management software V6.17

TS-P110



Description

It is a self-developed high-performance digital audio processor with built-in DSP digital processing chip. It adopts technologies such as adaptive feedback suppression, auto equalization, auto gain and environmental noise reduction to provide users with excellent sound quality. It is applicable to large classrooms,lecture halls and other application environments.

Feature

*Using automatic sound field detection algorithm, the system can automatically configure audio parameters according to the acoustic environment, which is very convenient for users.
* Built-in high-performance DSP processor, it supports automix, adaptive feedback suppression, auto gain, auto equalization, environmental noise reduction and other functions.
* With 1 microphone input, it supports standard 48V phantom power supply.
* With 1 LINE IN input, it supports signal detection function. When it is detected that there is audio input in LINE IN, the microphone will be automatically muted to prevent the front speaker from performing secondary sound reinforcement to the microphone.
* With 2 LINE OUT outputs, 2 sets of external amplifiers can be connected for sound reinforcement in large classrooms or lecture halls.
* With 1 SPK signal detection terminal, when the SPK has audio input, the microphone is automatically muted to prevent the front speaker from performing secondary sound reinforcement to the microphone.
* With 1 RS-485 communication interface, it is used to connect the control panel for parameter setting and control.
* Built-in 4*30W high-efficiency smart digital amplifier, it can be connected to four 8Ω constant resistance speakers to meet the needs of local sound reinforcement.
* Support three-band EQ equalization settings, users can adjust the bass, alto and treble according to the actual effect.
* Support low-cut settings to effectively filter ambient noise and low-frequency noise.
* Support the adjustment of microphone input sensitivity; microphone and LINE IN output volume can also be adjusted independently.
* Support manual noise reduction settings, and support adjustable fifteen noise reduction levels.
* Support sound effect settings to enhance the treble effect. The higher the value, the more prominent the vocals, and the higher the clarity and restoration.
* Support multiple scene presets, and support operations such as scene save, scene recovery, and factory reset, etc.

Specification

Model	TS-P110
Amplifier rated power	4*30W
Amplifier impedance	8Ω
Device interface	1 control industrial terminal, 1 LINE IN, 1 MIC IN, 1 SPK IN, 2 LINE OUT, 4 SPK OUT
MIC IN sensitivity	40mV
MIC IN frequency response (+1dB/-3dB)	80Hz～7KHz
LINE IN frequency response (+1dB/-3dB)	80Hz～16KHz
LINE OUT output level	775mV
LINE OUT output impedance	470Ω
THD	≤1%
SNR	≥73dB
Working temperature	-10℃～45℃
Relative humidity	20%～80%, no condensation
Power voltage	~220V 50Hz
Maximum power consumption	200W
Dimension	349*172*42.5mm
Weight	2Kg

Hanging Microphone

TS-P110DM

Description

Stainless steel cylindrical design, built-in unidirectional polar microphone core, up to -38dB sensitivity, to meet ultra-long distance pickup. Ultra-wide frequency response range, high restoration of human vocal, built-in 48V phantom electric amplification processing circuit, long-distance high-quality sound transmission.It is used with a microphone processor.

Specification

Model	TS-P110DM
Microphone sensitivity	−38dB
Frequency response	100Hz~15KHz
Interface	Standard Balanced Output Terminals (Male)
Working temperature	-10℃~45℃
Relative humidity	20%~80%, no condensation
Power voltage	DC48V
Dimension	22*204mm
Weight	0.1Kg

True Color Touch Screen

TS-P110T

Description

4-inch true color display screen, wall-mounted design, embedded Android system, convenient touch operation. Built-in ARM9 core processor, strong processing performance, to meet various program operation requirements. It communicates and interacts with the microphone processor through the RS-485 protocol to realize the voice control and on-site debugging requirements of the hanging microphone.

Specification

Model	TS-P110T
Display screen	4-inch capacitive touch screen
Resolution	480*480
Interface	Industry Standard Terminal Blocks
Transfer protocol	RS-485
Working temperature	-10℃~45℃
Relative humidity	20%~80%, no condensation
Power voltage	DC24V
Dimension	86*86*35mm
Weight	0.2Kg

Hanging Microphone Bracket
TS-P110ZJ

Description
All-aluminum cylinder design, silver-white bright support, beautiful and lightweight. The telescopic design makes it suitable for classrooms of various heights. And it is used with the hanging microphone.

Specification

Model	TS-P110ZJ
Material	Aluminum
Base size	102mm
Base fixing hole	5mm*4 holes, 62*62mm fixed spacing
Bracket length	660mm (shortened), 1200mm (extended)
Bracket diameter	28mm
Weight	0.36Kg

Hanging Microphone Bracket
TS-P110ZJ-2

Description
All-aluminum cylinder design, silver-white bright support, beautiful and lightweight. The retractable design is suitable for classrooms of various heights. Use with hanging microphone.

Specification

Model	TS-P110ZJ-2
Material	Aluminum
Chassis size	ø102mm
Chassis fixing hole	ø5mm*4 holes, 62*62mm fixed spacing
Bracket length	1060mm (shorten), 2000mm (extend)
Bracket diameter	28mm
Weight	0.52kg

Hanging Microphone Bracket
TS-P110ZJ-3

Description
All-aluminum cylinder design, silver-white bright support, beautiful and lightweight. The retractable design is suitable for classrooms of various heights. Use with hanging microphone.

Specification

Model	TS-P110ZJ-3
Material	Aluminum
Chassis size	ø102mm
Chassis fixing hole	ø5mm*4 holes, 62*62mm fixed spacing
Bracket length	1560mm (shorten), 3000mm (extend)
Bracket diameter	28mm
Weight	0.75kg

Microphone Processor
Integrated audio management software V6.17
TS-P210

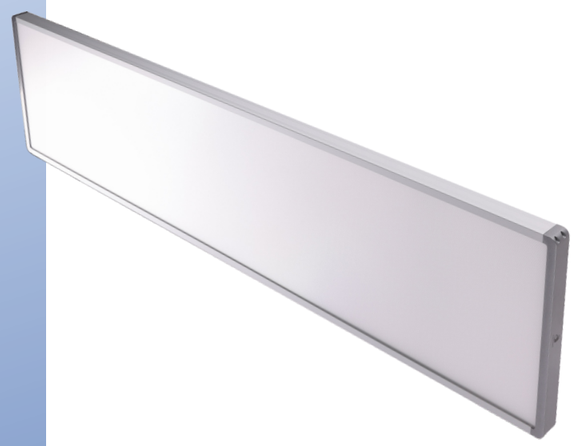
Description
It is a self-developed high-performance digital audio processor with built-in DSP digital processing chip. It adopts technologies such as adaptive feedback suppression, auto equalization, auto gain and environmental noise reduction to provide users with excellent sound quality. It is applicable to large classrooms, lecture halls and other application environments.

Feature
* Using automatic sound field detection algorithm, the system can automatically configure audio parameters according to the acoustic environment, which is very convenient for users.
* Built-in high-performance DSP processor, it supports automix, adaptive feedback suppression, auto gain, auto equalization, environmental noise reduction and other functions.
* With 2 microphone inputs, it supports standard 48V phantom power supply.
* With 1 LINE IN input, it supports signal detection function. When it is detected that there is audio input in LINE IN, the microphone will be automatically muted to prevent the front speaker from performing secondary sound reinforcement to the microphone.
* With 2 LINE OUT outputs, 2 sets of external amplifiers can be connected for sound reinforcement in large classrooms or lecture halls.
* With 1 SPK signal detection terminal, when the SPK has audio input, the microphone is automatically muted to prevent the front speaker from performing secondary sound reinforcement to the microphone.
* With 1 RS-485 communication interface, it is used to connect the control panel for parameter setting and control.
* Built-in 4*30W high-efficiency smart digital amplifier, it can be connected to four 8Ω constant resistance speakers to meet the needs of local sound reinforcement.
* Support three-band EQ equalization settings, users can adjust the bass, alto and treble according to the actual effect.
* Support low-cut settings to effectively filter ambient noise and low-frequency noise.
* Support the adjustment of microphone input sensitivity; microphone and LINE IN output volume can also be adjusted independently.
* Support manual noise reduction settings, and support adjustable fifteen noise reduction levels.
* Support sound effect settings to enhance the treble effect. The higher the value, the more prominent the vocals, and the higher the clarity and restoration.
* Support multiple scene presets, and support operations such as scene save, scene recovery, and factory reset, etc.

Specification

Model	TS-P210
Amplifier rated power	4*30W
Amplifier impedance	8Ω
Device interface	1 control industrial terminal, 1 LINE IN, 2 MIC IN, 1 SPK IN, 2 LINE OUT, 4 SPK OUT
MIC IN sensitivity	40mV
MIC IN frequency response (+1dB/-3dB)	80Hz～7KHz
LINE IN frequency response (+1dB/-3dB)	80Hz～16KHz
LINE OUT output level	775mV
LINE OUT output impedance	470Ω
THD	≤1%
SNR	≥73dB
Working temperature	-10℃～45℃
Relative humidity	20%～80%, no condensation
Power voltage	~220V 50Hz
Maximum power consumption	200W
Dimension	349*172*42.5mm
Weight	2Kg

LED Classroom Light



LED Classroom Light
TL-PL901

Description

It is applicable to classrooms, office areas and other places.

Feature

* Create a high-quality lighting environment, protect eyesight and improve teaching quality.
* No stroboscopic hazard, comfortable for the eyes.
* The light does not shine directly into the eyes and does not distract students.
* Color rendering index up to 90, strong color reproduction ability, closest to natural light, proper protection for students' eyesight.
* No blue light hazard, no noise pollution, no UV radiation.
* High uniformity of light perception, soft and comfortable lighting, making it easy for students to concentrate and improve learning efficiency.
* Through professional lighting design, the illuminance and uniformity are higher than the national standard.
* Environment friendly: Saving more than 50% of electricity under the same illumination; no harmful substances such as mercury and lead.
* The average service lifespan is over 50,000 hours, with low light decay and low maintenance costs.

Specification

Model	TL-PL901
Input voltage/power	AC220-240V 50/60Hz/36W
Number of LEDs/light sources	216PCS
Beam angle	C0/C180 27.8;C90/C270103.1
Color temperature	4000-5300K
Installation method	Hoisting installation
Protection class	IP20
Product size	1221*90*57mm
Package size	1260*345*140mm
Net weight/gross weight	1.6KG/5.8KG (3PCS/box)

LED Classroom Light
TL-PL911

Description
It is applicable to classrooms, office areas and other places.

Feature
* Create a high-quality lighting environment, protect eyesight and improve teaching quality.
* No stroboscopic hazard, comfortable for the eyes.
* The light does not shine directly into the eyes and does not distract students.
* Color rendering index up to 90, strong color reproduction ability, closest to natural light, proper protection for students' eyesight.
* No blue light hazard, no noise pollution, no UV radiation.
* High uniformity of light perception, soft and comfortable lighting, making it easy for students to concentrate and improve learning efficiency.
* Through professional lighting design, the illuminance and uniformity are higher than the national standard.
* Environment friendly: Saving more than 50% of electricity under the same illumination; no harmful substances such as mercury and lead.
* The average service lifespan is over 50,000 hours, with low light decay and low maintenance costs.

Specification

Model	TL-PL911
Input voltage/power	AC220-240V 50/60Hz/36W
Number of LEDs/light sources	240PCS
Beam angle	C0/C180 81.4; C90/C270 80.6
Color temperature	4000-5300K
Installation method	Hoisting installation
Protection class	IP20
Product size	1200*300*100mm
Package size	1240*365*336mm
Net weight/gross weight	3.1KG/11.1KG (3PCS/box)

LED Classroom Light
TL-PL914

Feature
* Create a high-quality lighting environment, protect eyesight and improve teaching quality.
* No stroboscopic hazard, comfortable for the eyes.
* The light does not shine directly into the eyes and does not distract students.
* Color rendering index up to 90, strong color reproduction ability, closest to natural light, proper protection for students' eyesight.
* No blue light hazard, no noise pollution, no UV radiation.
* High uniformity of light perception, soft and comfortable lighting, making it easy for students to concentrate and improve learning efficiency.
* Through professional lighting design, the illuminance and uniformity are higher than the national standard.
* Environment friendly: Saving more than 50% of electricity under the same illumination; no harmful substances such as mercury and lead.
* The average service lifespan is over 50,000 hours, with low light decay and low maintenance costs.

Description
It is applicable to classrooms, office areas and other places.

Specification

Model	TL-PL914
Input voltage/power	AC220-240V 50/60Hz/36W
Number of LEDs/light sources	240PCS
Beam angle	C0/C180 81.4; C90/C270 78.9
Color temperature	4000-5300K
Installation method	Hoisting installation
Protection class	IP20
Product size	1200*300*100mm
Package size	1240*365*336mm
Net weight/gross weight	2.8KG/10.2KG (3PCS/box)

Smart Lighting Controller
TL-PL801

Feature
* Built-in DALI bus power supply; DALI interface can be used for signal input, and also DC 16V external output.
* Support DALI to analog 0-10V dimming.
* Support dual color temperature dimming.
* Support the control of 1 circuit breaker through DALI.
* Support power consumption calculation.

Specification

Model	TL-PL801
Input voltage	100V-240V AC
Frequency	50/60Hz
Power consumption	0.3-2W (no load)
Output load	730W@120V AC, 1320W@220V AC
Working temperature	-20℃~+60℃
Net weight	0.7kg
Size	127*60*30mm (L*W*D)