



# Video Conference Controller(Specifications P160C10D)

Embedded software: HD video conference MCU embedded software V1.120

## VCS8000



### Description:

It is a new generation server integrated with CMS, CRS, MCU, GK, live broadcast and storage function, plug-in module design, HD resolution, bringing you excellent video conferencing experience.

### Feature:

- \* It adopts embedded operating system(non-Windows operating system); adopts carrier-grade design and modular plug-in design, which can work online 7\*24 hours without interruption.
- \* Support ITU-T H.323, IETF SIP protocol, compatible with H.323, SIP, RTSP, VCS and other protocols.
- \* It supports 64Kbps-8Mbps bandwidth rate and QCIF, CIF, 4CIF, 480P, D1, 720P, 1080P video resolution; supports the holding of mixed speed, mixed video format, mixed protocol conference.
- \* Support H.264, H.264 MP, H.264 HP, H.265 video codec protocol, support G.711A, G.711U, G.722, iLBC, G.722.1, G.722.1C, OPUS\_16K, OPUS\_24K and OPUS\_48K audio coding and decoding protocols, best sound quality is up to 48KHz.
- \* Support data chart function. Display the CPU usage and memory usage of the server according to the length of the day, week, month, year, etc.; support real-time statistics and display of the number of terminal devices online, conference details (including the number of conferences, conference name, conference status, conference duration etc.), the resource data of the server is clear and easy to understand.
- \* One MCU supports 10 groups of physical conferences, supports 160 channels of 1080P concurrent users, and supports 100 concurrent virtual conferences.
- \* Support MCU cascading function. It can support more than 1000 users under cascading mode; The MCU can form a resource pool and form a distributed architecture of the MCU to realize unified management of MCU resources, dynamically allocate MCU resources, and back up.
- \* Support H.239 digital dual-stream technology, both main and auxiliary streams can reach 1080P.
- \* The VCS conference mode supports all terminals simultaneously transmitting auxiliary streams (for example: N terminals in one meeting can send N auxiliary streams at the same time); supporting mixed pictures of mainstream and auxiliary stream; Auxiliary video can be 1080P60fps HD effects when the main video is 1080p60fps.
- \* H.323 conference mode supports multi-screen layout, up to 64 screens per screen; support screen automatic split function.
- \* Support the screen polling function, which can specify the polling window screen, the polling site, and the polling time.
- \* H.323 conference mode supports directly viewing the live video of the conference in the conference control interface; and support the snapshot function of the preview screen of the conference site, and save it to the server as jpg image mode.
- \* Built-in GK module, support terminal register E.164 extension number, and call each other.
- \* Built-in conference recording module, which can record and store multiple conference video and audio in real time.
- \* The server is with 240G storage space, which is used to store data files such as voting, check-in, name, shared files, recorded video, photo pictures, etc.; support extended storage capacity to 4TB.
- \* Support video remote attendance function, you can set the attendance theme, screen layout, main venue, main venue display window, named site display window, after the end of the attendance, the attendance excel form can be generated, download and saved.
- \* Support the broadcast site. In the broadcast site mode, the conference layout is switched to display only the broadcasted site. All the sites in the conference can only view the broadcast site.
- \* Support RTSP video stream docking device, monitoring IP camera can directly take part in the conference through the RTSP video stream docking mode, it can seamlessly docking with the monitoring platform.
- \* Built-in video wall output function. Can directly output HDMI high-definition signal to connect to large screen display. Support 20-channel HDMI video output interface
- \* VCS conference mode supports data conference functions such as electronic whiteboard, electronic voting, conference sign-in, file sharing, etc.
- \* Support network ping test, route tracking test, network bandwidth test, etc. in the background web management interface; support real-time display of audio, mainstream, and auxiliary stream network status, including packet loss rate, code stream, frame rate, delay, etc.
- \* Support FEC error correction function, when the data packet loss rate is less than 20% and not continuous packet loss, the picture will not appear blurred or severe mosaic; ensure the smoothness of the meeting.
- \* With live broadcast function, support RTMP, HLS live broadcast mode; you can arbitrarily select a venue or composite media stream in the conference as a live broadcast source, and can switch live broadcast sources at any time.
- \* Support the browser to access the link address through the browser or player to watch the live broadcast, with live access password management function; The live viewer is not limited, you can check the viewer number in the background management.
- \* Support the mobile phone device to watch the live broadcast of the conference by scanning code (QR code), and can perform text chat during the live broadcast of the conference.
- \* It can set the conference password, conference control password, administrator password; support AES 128-bit dynamic encryption algorithm, H.235 video conference encryption standard to ensure the security of the conference.
- \* With the SDK development manual, it can schedule a meeting, get a meeting list, stop a meeting, delete a meeting, call offline members, set members to view content, set recording, set live broadcast, set polling, adjust the camera, send scroll messages, settings Features such as banners, switching screen layouts, and controlling the floor of each venue can be seamlessly integrated with third-party systems.
- \* Support to notify the conference information by SMS or email, corresponding notification messages can be set for conference hold, conference change, and conference cancellation; for the mobile APP client, support APP message notification function.
- \* Support Chinese and English subtitles, banners, scrolling messages, display the venue name, to meet the conference auxiliary display function.
- \* Support video soft terminal access conference and realize data dual stream function. In VCS mode, it can also support functions such as electronic whiteboard, voting, conference sign-in, etc. Soft terminal supports to be installed on Windows or MAC computer version, IOS or Android phone tablet.
- \* Support intelligent flow control, including notification of coding and code rate to adjust automatically. When coding is started, the MCU will automatically adjust the coding parameters of the terminal according to the window size displayed by the terminal on the MCU. After code rate start to adjust, the MCU will adjust the code rate according to the packet loss, delay, and the like of the transmitted signal.
- \* It has a rich audio processing mechanism and management mode. Support lip synchronization, intelligent multi-channel mixing, echo cancellation, automatic gain, noise cancellation, site speech management; Supports automatic conversion to mute after joining the meeting, the background management terminal supports all mute, all speech, all closed sound functions etc.
- \* Support the voice control mode. When the terminal speaks, the picture width in the screen layout is distinguished by different colors to prompt the site to speak.
- \* VCS conference supports the mode of chairman to control the conference. In this mode, the chairman terminal can perform functions such as conference management and screen layout.
- \* Support audio and video encoding selection function, which can realize audio and video synchronous encoding or pure audio encoding.
- \* Support the function of re-inviting the terminals to participate in the conference; when setting always invitation, after the terminal is abnormally dropped, the MCU will re-invite the terminal to join the conference every 10 seconds until the terminal joins the conference. When setting a limited invitation; you need to set the number of invitations. If the invitation exceeds the set number of times, the MCU will not invite any more. If setting never invitation, the MCU will not invite the terminal to join the conference after the terminal is abnormally dropped.
- \* Support the camera of the remote control terminal in the background to move up, down, left and right, focus, and zoom.
- \* It can be set whether the display position, font color, background color, font size and font transparency of the name and name are displayed in all the conference sites.
- \* Support banner function, add banner on the conference screen, and set whether to enable banner and banner font size, font color, background color and transparency.
- \* Support scrolling message function, can send scrolling messages, and can set whether to enable scrolling and scrolling message font size, font color, background color, transparency and number of scrolling.
- \* Support a lot of conference management function, like conference time extension, end conference, cascade screen setting, designated chair site, auto fill, switch layout, audio reception, audio transmission, video reception, video transmission, video adjustment, information inquiry, name speech, deprivation of chairman, disconnect/call, group management site, specified viewing screen etc.
- \* The management interface can realize Chinese and English WEB management. It includes device management, user management, conference management, supports remote maintenance methods such as Telnet and ssh, and performs partition management according to user characteristics and regional characteristics.
- \* Support system hardware monitoring function, which can monitor the working status of each hardware module of the system in real time, also with abnormal alarm function.
- \* Support remote control and remote upgrade function.
- \* Support user rights management, and assign different management and usage rights to different level users.
- \* Support voice priority and QOS policy mode.
- \* Support IPV4 and IPV6 protocols, with the ability to cross routers and firewalls to ensure system security and support the setting of QOS, NAT, H.245 tunnel and other parameters.
- \* Support dual power supply backup, each power supply is independent, only one power supply can work normally; when two power supplies are connected, one power supply is disconnected, it will not affect the normal operation of the system.
- \* Support dual-system hot backup. When the main server fails to work due to network disconnection or power failure, the central management server transfers the conference and related data on the primary server to the standby server. The switching time is less than 10s.
- \* It supports dual network ports, two independent IP can be set, two independent networks can be interconnected inside and outside the MCU, and the terminals in the two networks can be interconnected.

### Specification:

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|---------------------------------|--|
| Model                           | VCS8000(P160C10D)  |
| Capacity capability             | 160 users  |
| Number of simultaneous meetings | 10 groups of physical meetings   |
| Number of boards                | 6 boards(5 resource boards and 1 network board)                        |
| Video output                    | 20 HDMI ports  |
| Power supply                    | 100VAC~240VAC 50Hz~60Hz  |
| Network port                    | 2 RJ45 standard network ports, 100M/1000M                              |
| Operating temperature           | 0°C ~35°C (working status) -40°C ~55°C (not-working status)            |
| Relative humidity               | 10%~80% (working status) 0%~95% (not-working status) (No condensation) |
| Ambient noise                   | Less than 50dBA  |
| Dimension                       | 558×484×220mm  |
| Weight                          | 23.5Kg   |