Video conferencing host

TF-VCS00804D

Description

The system runs core equipment and is responsible for functions such as data sending and receiving, data exchange, and data processing. It has six built-in service functions, including GK, CMS, CRS, live broadcast, storage, and MCU, to meet the needs of high-definition video conferences.

Feature

*Conference capacity: up to 4 groups of physical conferences, 20 groups of virtual conferences, 8 concurrent 1080P users.

*The chassis structure adopts carrier-grade architecture design and internal modular slot design, which can flexibly expand system capacity to meet online 7*24 hours of uninterrupted operation.

*MCU adopts an embedded operating system, and distributed deployment can realize unified management, dynamic allocation, and mutual backup of resources to form a resource library. In cascade mode, it can support up to 1,000 users to join conferences.

*MCU supports dual-machine hot backup, and the data transfer time is less than 10S; when the main server is disconnected from the network or power outage occurs, the central management server will transfer the meeting-related data of the main server to the backup server.

*It supports multiple IP networks (IPV4 and IPV6), supports the ability to cross firewalls and routers, supports QOS policy mode, supports voice priority function, and supports the setting of parameters such as NAT and H.245 tunnels.

*In a conference, different video formats such as CIF, 4CIF, 720P, and 1080P can be mixed simultaneously (expandable to support 4K30fps video resolution) without affecting the overall effect of the conference. Each terminal can join the conference at any of the above video resolutions and rates of 64Kbps-8Mbps.

*Supports mixed protocol conferences, ITU-T H.323, IETF SIP protocols, and devices compatible with H.323, SIP, RTSP, VCS and other protocols can join the conference together.

*Supports quick access to equipment monitoring information (number of terminal devices online), system monitoring information (meeting details (including number of meetings, meeting name, meeting status, meeting duration, etc.), system resource usage of the operating platform (CPU usage and memory usage), system resource monitoring information displayed through charts by day, week, month, year, etc., making it easy to view the system running status.

*The system should be able to realize the automatic re-invitation function if the terminal disconnects abnormally. The system has a mechanism to automatically invite the user to join the conference every 10 seconds after the terminal disconnects abnormally. It can also customize the automatic re-invite mode, and the MCU can be set to invite unlimited times to join the conference until joining the conference. End, you can also limit the number of invitations. If the invitation frequency exceeds the set value, no more invitations will be made.

*Supports dynamic dual-stream function and H.239 dual-stream protocol. The main and auxiliary images in the dual stream can be encoded using H.264 at the same time, and both the main and auxiliary streams can reach 1080P. In VCS mode, M terminals can send M auxiliary streams at the same time in the same conference, and support mixed images of the main and auxiliary streams.

*The image encoding format should support H.263, H.263+, H.264, H.264 HP, and H.265 protocols; the audio encoding format should support G.711, G.722, G.722.1, G.722.1C, and OPUS audio codec standards to achieve the best sound restoration effect.

*12. Support 19 multi-screen layout, up to 64 screens per screen, support for automatic split-screen function; auxiliary streaming screen can be synthesized in the multi-picture, the screen window to support auto-fill, voice stimulation, video polling, auxiliary streaming display and other functions, and can be in the same interface to directly watch the conference real-time video; support for multi-picture polling function, the maximum support for four 1080P conference at the same time 64 split-screen multi-picture polling capabilities; support for specifying polling windows, polling venues, polling intervals and so on.

*MCU has a built-in conference recording module, which can record and store multiple conference videos and audios in real time; it supports up to 4 1080P conferences with 64-screen multi-image recording at the same time; it supports live broadcasting, RTMP, and HLS live broadcasting; it supports up to 4 1080P conferences with 64-screen multi-image live broadcasting at the same time, and you can select any conference venue or synthetic media stream as the live broadcast source, and you can switch the live broadcast source at any time. Conference storage includes data files such as videos, photos, shared files, roll calls, sign-ins, and voting.

*Supports RTMP and HLS video streaming live modes. The live video source can be set to any conference or composite streaming media, and the live source can be switched at will.

*It supports various viewing methods (scanning QR code with mobile phone, PC browser, accessing live link address with player login password), the number of live viewers is not limited by the number of concurrent viewers, and text communication is possible during the live viewing process. The number of viewers can be checked through the background management.

*The MCU server supports remote upgrade, remote control, remote maintenance (Telnet, ssh) and other functions. It supports different levels of users and has different permission management.

*Remote maintenance supports the use of network ping test, route trace test, and network bandwidth test; the test results can display audio, mainstream, and auxiliary stream network status on the management page, including packet loss rate, code stream, frame rate, delay and other parameters.

*Supports real-time monitoring of the working status of hardware modules, and displays an early warning when a hardware function module fails.

*BS management architecture, WEB adopts Chinese and English management interface design; system equipment management, user management, conference management can be realized by logging in to the Web, and regional authority management can be divided according to user characteristics.

*The system should have flexible conference management functions. For meetings currently being held, operations such as extending the meeting time, specifying the viewing screen, specifying the chairman's venue, calling the roll, canceling the chairman, disconnecting/paging, group management, automatic filling, changing the layout, sending and receiving audio and video, video adjustment, information query, ending the meeting, and cascading screen settings can be set.

*It adopts diversified audio processing technology and supports automatic mute, lip synchronization, echo cancellation, automatic gain, noise cancellation, and intelligent mixing.

*It supports background management of all terminals' mute, speaking and blocking functions, and supports voice incentive mechanism. When the system determines that a certain venue is speaking, the screen layout border will display different colors to prompt that the venue is speaking.

*The system should have strong anti-packet loss capability and FEC forward error correction function, with a packet loss rate of less than 20%, clear and continuous voice, clear and smooth video, and no freeze or mosaic.

*It supports terminal roll call before the meeting. The roll call can set the roll call theme, screen layout, and specify the main venue, main venue or the venue being called display window. After the roll call is completed, it supports Excel spreadsheet export.

*By setting the cycle of cyclic switching and the venues to be automatically polled, the images of these venues can be sent to other venues in turn. The polling window screen, polling venue, polling number and time can be specified.

*Supports broadcasting of venues. After enabling the broadcasting venue mode, all venues can only watch the images of the broadcasting venue.

*Support third-party systems to call the system's API to schedule meetings, obtain meeting lists, stop meetings, delete meetings, call offline members, set members' viewing content, set recording, set live broadcast, set polling, adjust cameras, send scrolling messages, set banners, switch screen layouts, control the speaking rights of each venue, etc.

*The MCU has a built-in TV wall processing board, which supports up to 8-channel HDMI high-definition signal output for large-screen display.

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*The MCU has a built-in GK module, eliminating the need to configure an additional independent GK processing server. It supports registering E.164 extension numbers and calling each other using extension numbers.

*Supports the use of RTSP video streams to connect to monitoring equipment, and IP network cameras can directly join the conference to achieve seamless access to the monitoring platform.

*Supporting dynamic rate intelligent adjustment, this system can intelligently adjust the bandwidth of video conference transmission according to the operation of the IP network. When other unexpected services occur in the IP network that occupy more bandwidth, the MCU will automatically adjust the coding parameters of the terminal according to the size of the window that the terminal displays on the MCU.

*When the bandwidth returns to normal and the video conferencing service returns to normal, the MCU will automatically adjust the MCU's encoding rate based on packet loss and delay of the sent signal.

*It has Chinese and English subtitles and banner functions, supports adding banners on the conference screen, and sending rolling subtitles; banners and rolling subtitles support font size, font color, background color, and transparency settings, and the number of scrolling times can be customized.

*Supports displaying the venue name. The venue name display position, font color, background color, font size, and font transparency can all be customized.

*Multi-channel meeting notification mode, extended support for SMS, email notification, mobile APP client information notification push, information push content includes meeting convening, meeting change, meeting cancellation, etc.

*The H.323 conference mode allows you to quickly capture the conference preview and save it to the server in jpg format.

*It supports chairman mode and free mode. The chairman's venue can realize meeting management and screen layout; it supports file sharing, meeting sign-in, electronic voting, and electronic whiteboard.

*The system should have high security measures and encryption system, support AES 128-bit dynamic encryption algorithm, H.235 video conferencing encryption standard, and support conference control password and administrator password settings.

*It supports mixed conference joining of soft terminals and hard terminals. The soft terminal supports flexible use of multiple versions, including Windows, MAC computer version, IOS, Android mobile phone and tablet version, and supports dual-stream data function.

*Supports the audiovisual encoding selection function on the background management page, supports audiovisual synchronous encoding and audio independent encoding.

*Supports remote control of camera pan/tilt rotation, focus adjustment, zoom and other functions, and remote control of the terminal's camera up, down, left, right, and zoom operations in the background.

*Supports dual networks and can connect any two networks, allowing terminals in two networks to join the same conference at the same time.

Specification

Load capacity	8 users
Physics conference	4
Resource board	2
Network board	1
HDMI output	8
Working power supply	AC 100V～240V 50Hz～60Hz
Network port	2 x Rj45
Network speed	100M/1000M
Operating temperature	0℃ ～35℃
Storage temperature	-40℃～55℃
Working humidity	10%～80% (no condensation)
Storage humidity	0%～95% (no condensation)
Working noise	< 50dBA
Equipment size	484*530*176mm
Weight	15Kg