UHD video terminal NT90MB (Specification B500-8)

UHD video conference with MCU terminal embedded software V2.3

Description

The new 4K split-type high-definition video conferencing terminal supports H.265 technology, can achieve ultra-high-definition 4K60 effect with ultra-low bandwidth, integrates rich audio and video interfaces, and is suitable for various small and medium-sized meeting places.

Features

* Employs a split-type architecture with a built-in hardware video processing unit. It utilizes a dual-operating system design, combining domestically developed embedded Linux and Android 12, supporting switching between the two systems.
* Supports ITU-T H.323 and SIP standard protocols, offering excellent compatibility; supports H.239 and BFCP dual-stream protocols, with both main and auxiliary streams capable of 4K60 resolution; both main and auxiliary screens can output 4K60 resolution signals.
* Supports call bandwidth from 64Kbps to 8Mbps; supports CIF, 4CIF, 720P, 1080P, and 4K video resolutions.
* Supports high-definition video signal input of 1280×720@60fps/50fps/30fps/25fps, 1920×1080@60fps/50fps/30fps/25fps, and 3840×2160@60fps/50fps/30fps.
* Supports high-definition video signal output of 1024×768@60fps, 1280×720@60fps, 1920×1080@60fps/30fps, and 3840×2160@60fps/30fps.
* Supports H.261, H.263, H.263+, H.264, H.264 HP, and H.265 video codec protocols; supports G.711, G.722, G.722.1, G.722.1C, and OPUS audio codec protocols, with audio quality up to 48kHz.
* Built-in MCU module, supporting 8-party conferences, with smooth expansion to 16 parties; supports mainstream auxiliary stream conferences via the built-in MCU; supports joining conferences via PC or mobile devices.
* Supports terminal control via 2.4G remote control, web, touch, mouse, and keyboard; supports remote control air mouse control mode.
* Supports arbitrary opening and closing of remote video feeds, and allows drag-and-drop repositioning of the video window within the screen layout.
* The terminal adopts a B/S management architecture, allowing remote management via a web browser login, supporting both Chinese and English language options. The terminal's web page supports real-time playback of meeting footage and audio.
* The terminal's UI allows users to toggle the web interface on/off and change the web password. It also features a whitelist function; only devices with whitelisted IP addresses can log in to the terminal's backend and view the web page. Other IP addresses are considered unauthorized users and denied access to the terminal's backend.
* Supports setting auxiliary streams for full-screen or composite display during meetings; and supports combining two main stream feeds into one for transmission to the remote end, with selectable screen layouts.
* The auxiliary stream interface supports plug-and-play functionality, automatically sending feeds after they are connected. It also supports one-click sending/ending of auxiliary streams and screen layout switching via remote control.

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* Supports single-screen dual-display and dual-screen dual-display applications, enabling multi-screen layouts and supporting various common layout types such as picture-in-picture.
* Supports PTZ control of remote meeting rooms.
* Supports switching between mainstream video signal sources and audio input/output during meetings.
* Features a USB interface for connecting USB storage devices; supports meeting recording, allowing direct recording of video and audio during meetings; supports program upgrades and data packet capture via USB storage devices.
* Supports video polling, allowing selection of polling window, polling interval, and participants; supports voice activation, allowing setting a voice activation window that automatically switches to the loudest speaker.
* Supports wireless streaming; computers only need one software installation and a network connection to the terminal to achieve wireless streaming sharing, without external hardware.
* Supports joining meetings without registration; simply enter the meeting number to join, and choose between interactive or live streaming mode.
* Supports third-party systems using API calls to adjust camera settings, set banners, switch screen layouts, and control speaking privileges in different meeting rooms.
* Features a rich array of audio and video interfaces, including 4 audio input ports (1 HDMI, 2 3.5mm, 1 RJ45); 2 audio output ports (1 HDMI, 1 3.5mm); and 3 high-definition video input ports and 2 high-definition video output ports, all supporting 4K60 resolution.
* Supports a packet loss recovery mechanism for IP networks. Even with 30% network packet loss, audio remains clear and continuous, and video is smooth and clear without stuttering or pixelation. Even with 80% network packet loss, audio remains clear and smooth, allowing for accurate understanding.
* Excellent network adaptability. Automatically adjusts resolution based on network conditions to ensure smooth meetings.
* Supports automatic noise suppression, automatic gain control, automatic echo cancellation, lip-sync, and other audio processing functions.
* Supports meeting room mute and volume control, with adjustable volume output.
* Supports voice priority and QoS policy modes.
* Supports IPv4 and IPv6 protocols, supports NAT traversal, and has the ability to bypass routers and firewalls, ensuring system security.
* Supports H.235 signaling encryption under the H.323 protocol; supports TLS and SRTP encryption under the SIP protocol; media streams support AES128/256, SM3, and SM4 national cryptographic algorithms to ensure conference security.
* Possesses excellent management and maintainability, supporting local audio and video loopback diagnostics; one-click local audio and video testing; supports network ping testing on the user interface; supports querying call logs and historical records.
* Supports viewing media information for audio, main video, and auxiliary video streams, including protocol, format, bitrate, number of packets sent and received, data volume of packets sent and received, packet loss rate, number of lost packets, jitter, latency, sender and receiver addresses, and encryption status.
* Supports power management for device power-on startup and fan control, allowing configuration of whether the device automatically starts upon power-on and whether the fan is enabled.
* The terminal has built-in data conferencing functions such as electronic whiteboard, electronic voting, and file sharing to meet the application needs of remote training and teaching scenarios.
* Features banner functionality, allowing users to add banners to the video feed and configure banner settings, including font type, size, color, background color, coordinates, and content.
* Features auxiliary stream annotation functionality, enabling real-time annotation on both sending and receiving auxiliary streams. It allows for three different pen thicknesses, five pen colors, and annotation shapes such as circles, squares, arrows, and lines. Annotation permissions can be enabled for all participants when sending the auxiliary stream.
* Features web-based interactive whiteboard functionality, allowing users to control the whiteboard from the terminal via the web. It allows for three different pen thicknesses, ten pen colors, and annotation shapes such as circles, squares, arrows, and lines. Backgrounds can be set to solid color or image. When operating the whiteboard via the web, the terminal's output screen synchronously displays the whiteboard content. Screen mirroring of the whiteboard can be configured, allowing other participating terminals to view the same content. The whiteboard supports pagination, up to 5 pages.
* Equipped with AI real-time speech-to-text functionality, eliminating the need for an additional integrated speech-to-text system. The terminal can transcribe audio from meetings into subtitles in real-time and output them to the display. It can display both real-time and translated subtitles simultaneously, or display them separately, supporting both Chinese and English transcription. Users can also customize subtitle background color, font color, background transparency, font type, and font size.
* Equipped with AI simultaneous interpretation functionality, eliminating the need for additional equipment. The terminal can translate and play back audio transmitted from a remote location, supporting Chinese-English translation, with selectable playback speed and tone.
* Supports extended motion compensation, enhancing low-frame-rate video received during meetings to improve video smoothness.
* Supports extended image enhancement, upscaling low-resolution video received during meetings to higher resolution, improving image clarity while saving bandwidth.
* On Android systems, the device app store offers downloads of mainstream video conferencing software such as Tencent Meeting Rooms, DingTalk, ZOOM, and Microsoft Teams.
* On Android systems, users can view spreadsheets, documents, and other materials on the device.
* Features packet loss alarm functionality, displaying a notification when packet loss is detected. *By pairing with a specific camera, it supports infrared pass-through function, allowing the infrared remote control to transmit infrared signals to the terminal through the camera, thereby achieving the purpose of remotely controlling the terminal with the infrared remote control.

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Specification

Framework agreement	Comply with ITU H.323 and SIP protocols
Video input	3-channel HDMI video input interface
Video output	2-channel HDMI video output interface
Audio input	4-channel audio input interface, MIC IN×1 (supports 48V phantom power), LINE IN×1, HDMI×1, Rj45×1
Audio output	2-channel audio output interface, HDMI×1, LINE OUT×1
Network	1 Gigabit Ethernet port, RJ45×1; 1 WIFI network (optionally 5G network)
USB interface	1 USB2.0 port and 1 USB3.0 port, which can be used to connect expansion devices or online upgrades
Video protocol	Support H.261, H.263, H.263+, H.264, H.264 HP, H.265 video standard protocols
Dual-stream protocol	Support H.239 and BFCP dual-stream protocols
Display mode	Supports 4:3 and 16:9
Cooling method	Built-in cooling fan
Environmental requirement temperature	0℃ ~ 35℃ (working state) -40℃ ~ 55℃ (non-working state)
Relative humidity	10% ~ 80% (working state) 0% ~ 95% (non-working state) (no condensation)
Device size	327mm×180mm×37.5mm (including machine feet)
Power supply	DC 12V
Weight	1.54kg