HUAWEI VP9830/VP9850/VP9860

Overview

Huawei VP9800 series MCUs are next-generation universal transcoding MCUs that feature large capacity, high cost-effectiveness, flexible port allocation, and smooth capacity expansion. The MCUs provide industry-leading 1080p60 full encoding and decoding capabilities and leverage the next-generation HD codec H.265 SCC for data conferencing. The codec supports a resolution of up to 4K and integrates audio, video, presentation, and data to enable seamless communication and collaboration. The MCUs support resource pool management, backup between MCUs in a resource pool, and backup between MCU resource pools, delivering a superb meeting experience.

HUAWEI VP9830/VP9850/VP9860

High performance and universal transcoding, delivering the ultimate meeting experience

Homegrown core technologies, secure and trustworthy

High stability and reliability, enabling high-quality video conferencing

Highlights

High Performance, Universal Transcoding

· Industry-leading 1080p60 full encoding & decoding and continuous presence per port, delivering the ultimate meeting experience to all participants
· A brand-new hardware platform with the universal transcoding capability, which automatically identifies and matches terminals regardless of their bandwidth, resolution, and protocol, removing headache from manually configuring or forcibly preconfiguring consistent settings
· H.264 HP delivers better images at 50% lower bandwidth
· AAC-LD wideband audio for CD-quality audio experience, and three-channel audio technology enables sound localization
· Intelligent presentation adaptation implements content sharing among participants of different types
· Various types of terminals such as meeting room terminals and mobile or desktop terminals in the same meeting, with convergence of audio, video, presentation, and data for seamless collaboration
· Hybrid networking of AVC and SVC reduces the consumption of MCU resources, allows the access of more terminals, and maximizes legacy AVC Terminals. Moreover, SVC terminals on this networking can select desired video layouts and resize video images.
· Up to 4K data conferencing

Homegrown Core Technologies, Secure and Trustworthy

· Key technologies with independent intellectual property rights, including audio and video collection enhancement, audio and video codec, and QoS network optimization (dynamic rate increase and decrease).
· Media, signaling, and management data encrypted through various measures, including H.235, SRTP/TLS, HTTPS, SSH, and SNMPv3, enabling proactive information security protection

Easy to Install, Effortless to Use, Simplified O&M

· Centralized and distributed networking, as well as resource pool deployment, automatic backup, remote disaster recovery, load balancing, and nearby access
· Remote inspection, fault information export, and centralized upgrade; unified management on the SMC for users to check the MCU status in real time, relieving maintenance workload
· Floating license, centrally managed by the SMC for sharing between MCUs and on-demand allocation
· Various methods for starting or joining meetings, such as VMR, SiteCall, one-touch, and URI
· Automatic continuous presence, voice activation, continuous presence per port, and meeting control using the management console, terminal, or IVR
· Desktop sharing, annotation on the shared desktop or whiteboard, and interoperability between data and presentation; dynamic conversion among audio, video, and data resources
· Data conference access from multiple browsers

HUAWEI

Large Capacity, Open Convergence, and Flexible Scalability

· High port density, large capacity, and smooth expansion, reducing customer investment
· Working with the SMC to support cascading of up to six levels through multiple channels and allow for conference recording, facilitating network construction and expansion
· Compatible with H.323 and SIP to support convergent conferencing of telepresence systems, SD/HD endpoints, mobile clients, and audio terminals
· Dynamic allocation of port resources to maximize resource utilization and increase return on investment (ROI)
· Unidirectional large-capacity live broadcast conferencing, with a single MCU supporting access of 500 720p30 sites at 768 kbit/s
· Video push to the connected video wall
· Connected to a surveillance platform for viewing surveillance video during a meeting
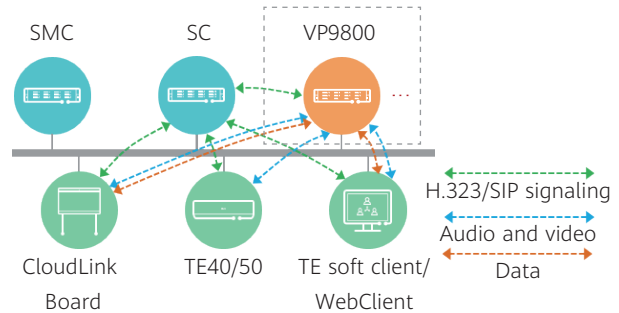
Stable and Reliable with Powerful Network Adaptability

· 24/7 sound system operations
· Resource pool management, backup between MCUs in a resource pool, and backup between MCU resource pools, delivering a superb meeting experience
· SEC guarantees smooth audio and video conferencing against 30% packet loss (SEC: Super Error Concealment)
· Up to 1000 ms anti-jitter capability and Intelligent Rate Control (IRC) deliver the optimal conferencing
· High-reliability real-time embedded operating system that supports QoS policies such as DiffServ (DSCP), IP Precedence, and ARQ
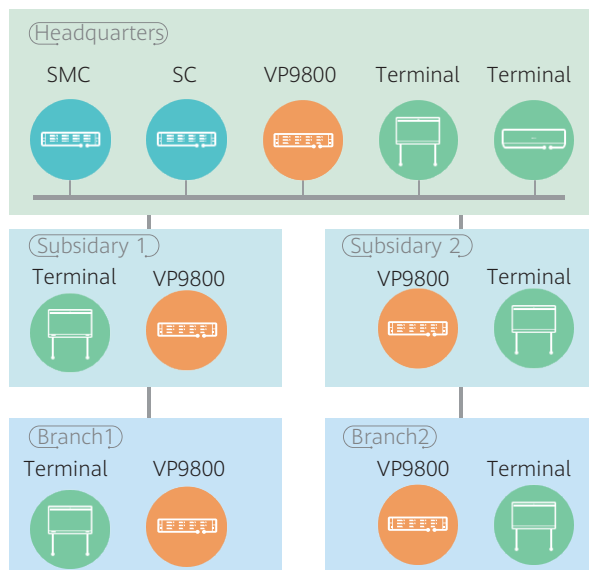
Typical Networks

Centralized Network

· The MCU serves as the core NE for media processing.
· The MCU integrates audio, video, presentation, and data.
· Interoperability between presentation and data is supported.

SMC   SC   VP9800

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CloudLink Board   TE40/50   TE soft client/ WebClient

H.323/SIP signaling
Audio and video
Data

MCU Cascading Network

Headquarters
SMC   SC   VP9800   Terminal   Terminal

Subsidary 1
Terminal   VP9800

Subsidary 2
VP9800   Terminal

Branch1
Terminal   VP9800

Branch2
VP9800   Terminal

· In a cascading network, an upper-level MCU is connected to multiple lower-level MCUs.
· The MCU works with the SMC to allocate participants to different MCUs, adaptable to conferencing in a large region or across regions.
· Multiple cascading channels can be established between the upper-level and lower-level MCUs to transmit media streams at the same time and allow participants to view desired video.

Features

Functions and Features

Service features	· Universal transcoding conferencing, SVC multistream forwarding conferencing, or conferencing that supports both modes · Video conferencing, data conferencing, or hybrid conferencing · Video enabling or disabling · Escalation of P2P conference call to multipoint conference · MCU resource pool management · Meeting scheduling in Outlook and meeting notification by email · Presentation adaptation · Overlapping captions and meeting status icon · Camera control · Meeting control by the administrator or chairperson (chairperson flexibly specified on demand) · Conference cascading of up to five levels, and support for SVC multistream cascading and dynamic multi-channel cascading · Voice activation, continuous presence per port, automatic continuous presence (25 panes at most, special Ontable mode for triple-screen telepresence participants), and up to 60 layouts for automatic and manual continuous presence · SiteCall, audio/video IVR call, call by URI, IP address, or VMR number, Ad hoc, and unified access number · Collaboration functions including whiteboard and screen sharing
Network adaptability	· Standard public-private network traversal implemented with the HUAWEI SC · 64 kbit/s to 8 Mbit/s bandwidth for a video call · IPv6/IPv4 networking · Opus and NetATE ensure clear audio against 80% packet loss · QoS policies such as DiffServ (DSCP), IP Precedence, and ARQ · Up to 1000 ms anti-jitter capability for audio and video, guaranteed by the audio jitter buffer (AJB) algorithm · SEC, which guarantees smooth video against 30% packet loss, and Intelligent Rate Control (IRC) adopted to dynamically adjust the bandwidth for video conferencing · Acoustic echo cancellation (AEC), automatic noise suppression (ANS), and automatic gain control (AGC), amplifying sound quality
Security	· Media, signaling, and management data encrypted through various measures, including H.235, SRTP/TLS, HTTPS, SSH, and SNMPv3
Reliability	· Multiple backup mechanisms for power supplies, network ports, fans, and hard disks (RAID1) · Backup between MCUs in a resource pool and backup between MCU resource pools
Management and maintenance	· Web-based system and meeting parameter settings · Alarm reporting upon abnormal status · Configuration import and export · Remote upgrade · Resource statistics · Log collection

Specifications

	VP9830	VP9850	VP9860
Maximum capacity	· Universal transcoding ports 12 1080p60 ports 25 1080p30 ports 50 720p ports 100 SD ports · SVC ports 400 720p ports	· Universal transcoding ports 25 1080p60 ports 50 1080p30 ports 100 720p ports 200 SD ports · SVC ports 400 720p ports	· Universal transcoding ports 50 1080p60 ports 100 1080p30 ports 200 720p ports 400 SD ports · SVC ports 400 720p ports
Power supply	AC: 100V - 240V < 900 W	AC: 100V - 240V < 900 W	AC: 200V - 240V < 2000 W

Protocols and Standards Compliance

Multimedia framework protocols	IITU-T H.323 and IETF SIP
Video codec protocols	H.265 SCC, H.264 SVC, H.264HP, H.264 BP, H.263
Audio codec protocols	G.711a, G.711u, G.722, G.722.1, G.729, G.729A, iLBC, Opus, AAC-LD
Dual-stream protocols	ITU-T H.239 and BFCP
Network transmission protocols	IPv6/IPv4, TCP/IP, RTP, RTCP, HTTP/HTTPS, SNMP, and DNS/DDNS
Other standards and protocols	H.225, H.235, H.245, H.281, FECC, RFC2833, DTMF, SRTP, TLS, T.120, T.140, and NTP
Video resolution	1080p60, 1080p30, 720p60, 720p30, SD, CIF, QCIF, 180p, and 90p
Presentation/Data resolution	4K, 1080p60, 1080p30, 720p, 16CIF, 4CIF, CIF, WXGA+, WXGA, XGA, SVGA, SXGA, SXGA+, UXGA+, WUXGA+

Physical Specifications

Network ports	GE: 1000 Mbit/s, RJ45　　　　　　Serial port: RJ45
Dimensions (H x W x D)	86.1 mm x 447 mm x 790 mm (3.39 in. x 17.60 in. x 31.10 in.) (2 U)
Weight	Net weight: 25 kg (55.1 lb); gross weight: 30 kg (66.1 lb)
Environmental adaptability	Comprehensive environment, safety, electromagnetic compatibility (EMC), and reliability design, as well as intelligent thermal protection for automatic internal temperature adjustment, ensuring stable system operations
Operating temperature	5°C to 40°C (41°F to 104°F)
Operating humidity	8% to 90% (relative humidity, non-condensing)

MTBF	> 100,000 hours
MTTR	< 1 hour
Certification	Chinese Network Access License (NAL), China Compulsory Certification (CCC), Identification and Classification Report for Air Transport of Goods, CE, and VCCI (VP9830/VP9850)

Ordering Information

Category	Description	Remarks
Main unit	VP9830/VP9850/VP9860	-
Software license (floating)	Number of concurrent ports	Centrally managed and allocated by the SMC
Warranty service	During the warranty period, Huawei offers a faster response to requests for services such as troubleshooting and spare parts delivery and provides additional services including Hi-Care original manufacturer service, media retention service, and Co-Care joint service. For more information, visit: https://support.huawei.com/enterprise/en/service-support	-

Warranty Information

The MCU has a 1-year warranty for hardware and 90-day online technical support for software.

Learn More>>>

Huawei Video
Conferencing Solution

CloudLink Collaborative
Telepresence Products

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