

vmeet

Visual Distribution System

SG-2000Px

Specification Sheet

Ver 1.0



Physical Reference

SHENZHEN RUIZHONG TECHNOLOGY CO., LTD



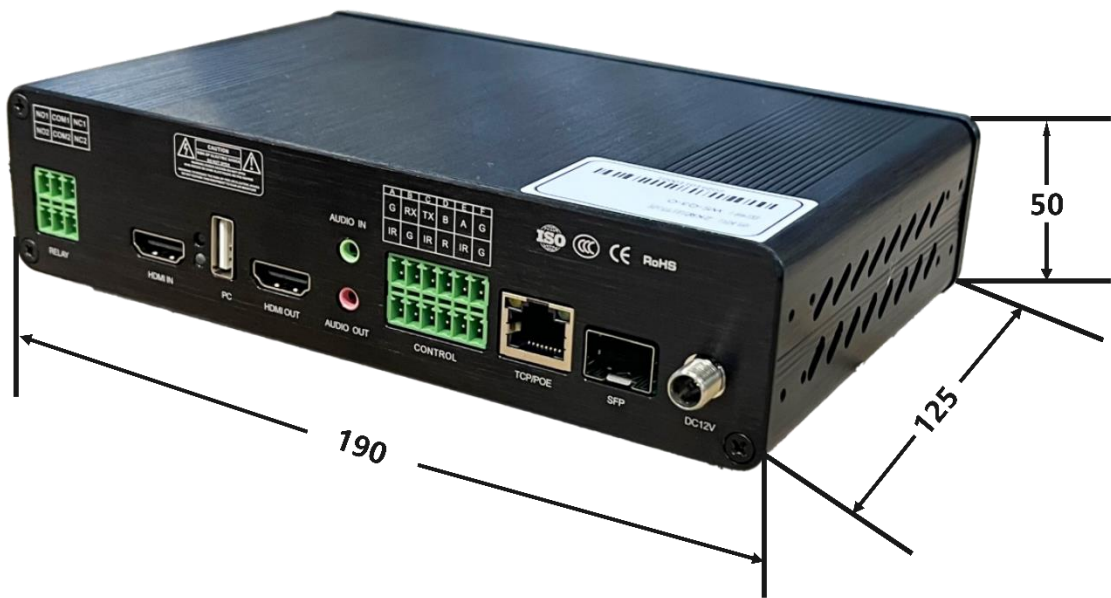
Update Log

Release Version	Release Date	Update Note
V1.0	10/18/2024	• Initial Release

Product Features

- ◆ A single hardware node supports switching between input/output/workstation/all-in-one types without the need for additional firmware upgrades. Available in both 2K and 4K models.
- ◆ Supports high-resolution, point-to-point display on large LCD/LED screens, achieving visually lossless image quality.
- ◆ End-to-end display latency is approximately 60ms, with an extreme low of under 30ms.
- ◆ Field and frame synchronization technology ensures real-time synchronization of spliced images even after prolonged operation.
- ◆ Customizable visual operation interface; the control software can run on PC, mobile platforms (iOS, Android, HarmonyOS), and provides centralized control of audio, video, environment, and third-party devices via platform-based software.
- ◆ Bidirectional audio support with 16-channel audio mixing, applicable for scenarios such as monitoring, intercom, public address, and conferencing.
- ◆ Unlimited preset saving; supports pre-layout and preset polling operations.
- ◆ The system can provide a recovery function, automatically restoring the system to its previous state after a power outage.
- ◆ Supports RS232, RS485, relays, IR/IO, and other central control interfaces, with customizable command formats via an editor.
- ◆ Through the built-in OSD menu, all tasks—such as screen sliding, pushing to large screens, workstation control, taking over, control requests, and visual intercom—can be completed with a mouse, offering a PC-like operational experience. It also supports hotkey operations.
- ◆ Remote KVM control, allowing all signal sources to be remotely controlled by workstations and control software, with three levels of user permissions.
- ◆ Supports IPC-encoded cameras and IPC network camera signal access with direct output to large screens, without requiring third-party transcoding servers. It also supports camera zoom, pan, and tilt functions.
- ◆ Visualized operation and maintenance platform detects system device operating status, provides graphical parameters, operation logs, and fault alarms.
- ◆ Provides a complete HTTP API protocol, enabling integration of control software functions and node operation and maintenance data, without needing an additional server configuration.
- ◆ Supports optical network redundancy, dual power supply backup with POE and DC, fanless design with zero noise, OLED display showing network parameters, node type, and audio-video status in a scrolling format. Indicator lights have a call-out function.

Product Dimensions

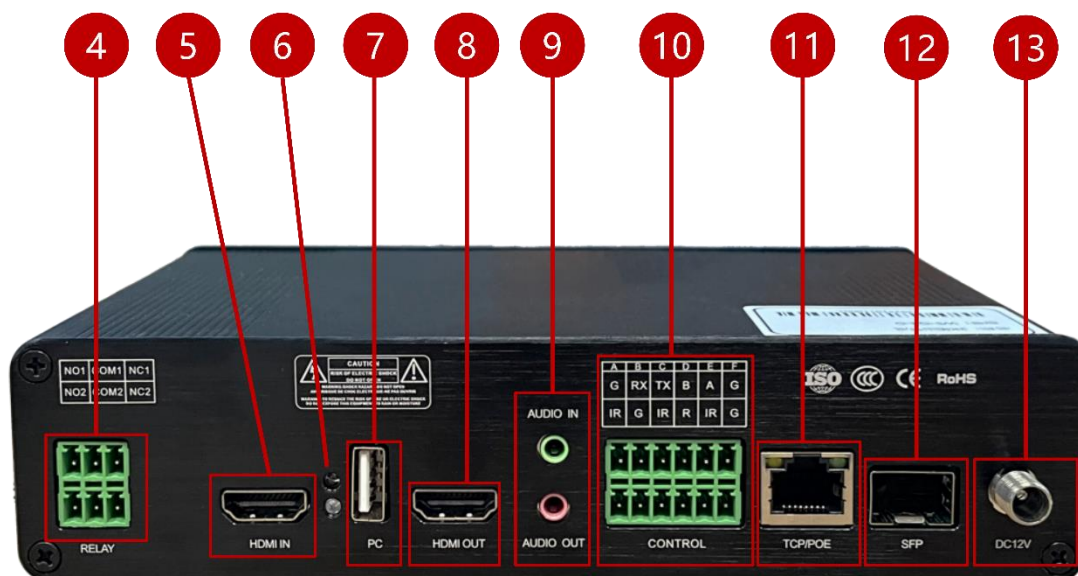


Product Appearance



Front Panel

No.	Interface	Quantity	Description
1	LED Indicator	4	<ul style="list-style-type: none">Red: Power indicator;Yellow: Network indicator;Blue: Video indicator;Green: Audio indicator
2	Reset Button	1	<ul style="list-style-type: none">Reset switch
3	USB	2	<ul style="list-style-type: none">2 USB ports for keyboard and mouse



Rear Panel

No.	Interface	Quantity	Description
4	Relay Interface	1	• 2-channel relay interface
5	HDMI Input	1	• HDMI 2.0 high-definition input interface (HDCP2.2)
6	LED Indicator	1	• Audio and video status indicator
7	USB	1	• BIOS reset button
8	HDMI Output	1	• HDMI 2.0 high-definition output interface (loop-out for input node)
9	Audio	2	• 3.5mm audio input interface • 3.5mm audio output interface
10	Control Interface	1	• 1 RS232 Phoenix terminal interface • 1 RS485 Phoenix terminal interface • 3 IO/IR Phoenix terminal interfaces
11	Network Port	1	• 1 RJ45 1000M adaptive full-duplex network port, supports POE power supply
12	Fiber Port	1	• 1 SFP fiber port
13	Power Supply	1	• DC 2.0mm round connector; • 12V/2A adapter

Note:

The appearance of the product shown in this document is for reference only. Please refer to the actual product appearance you purchased.

Specifications

Specification	Details
Video Input	Supports 1 HDMI 1.4 high-definition input interface (HDCP 2.0)
Video Output	Supports 1 HDMI 1.4 high-definition output interface (loop-out for input node)
OLED Screen	OLED display shows IP network information and audio/video working status
Audio Input	1x 3.5mm audio input
Audio Output	1x 3.5mm audio output
Network Port	1x RJ45 1000M adaptive full-duplex network port, supports POE power supply
Optical Fiber Port	1x SFP optical port
Serial Port	1x programmable RS232 serial port and 1x programmable RS485 serial port
IR/IO	1x IR input, 1x IR output, 1x IO port
USB	3x USB 2.0 ports
LED Indicators	Red (power), Yellow (network), Blue (video), Green (audio)
DC Power Port	DC 2.0mm round head; 12V/2A adapter
Resolution	Supports up to 3840x2160 @ 30Hz, downward compatible
CPU	ARM Cortex A9 dual-core @ 1.1GHz
DDR	DDR4 2Gb
Encoding Performance	Simultaneously supports 1x 3840x2160 @ 30fps + 1x 1080P @ 60fps + 1x D1 @ 60fps + 1x CIF @ 60fps (for input nodes)
Decoding Performance	1x 3840x2160 @ 30fps + 3x D1 + 1x 3840x2160 base image 2x 1080P @ 60fps + 2x D1 + 1x 3840x2160 base image 4x 1080P @ 30fps + 5x D1 + 1x base image
Video Format	H.265 Main Profile, Level 5.0 encoding/decoding; H.264 Baseline/Main/High Profile, Level 5.1 encoding/decoding
Video Windows	By default, supports 16 simultaneous windows per screen, with a maximum of 16 windows
Audio Format	PCM/G711/G726/AAC-LC
Supported Protocols	Supports RTSP, RTMP, private protocol IGMP v2
Bandwidth Usage	1M-40M
Image Scaling	Supports 1/64 to 64x video scaling
Base Image Decoding	MJPEG/JPEG Baseline encoding/decoding
Input/Output Timing	Supports up to 3840x2160 @ 30fps high-definition input/output, downward compatible
Encoding and Decoding	Supports integrated encoding/decoding in one unit
Visualization	Visualized signal preview and large-screen echo mode for WYSIWYG operation
Software	Customizable software interface, supports WIN/Android/iOS systems
Latency	Input capture to output display latency within 50-120ms

Synchronization	Point-to-point synchronization for LED/LCD large screens, with a synchronization error within one frame
Image Quality	YUV422 image capture, visually lossless quality
Splicing	Built-in seamless splicing, roaming, scaling, PIP overlay, and custom segmentation features
KVM Control	Supports control software/console direct control of signal source PCs
Presets	Supports unlimited preset saving and recall, with preset grouping and polling, and adjustable time intervals
Audio	Supports bidirectional audio with a visualized audio interface, enabling monitoring, intercom, public announcements, and conference operations
Compatibility	Direct system decoding of monitoring platforms or IPC input, supporting integration with central control, paperless systems, recording, and video conferencing
API	Provides HTTP protocol for third-party software integration without the need for a server
OSD	Editable logos and scrolling subtitles, large-screen annotations
Maintenance	Displays parameters such as node temperature, memory, CPU, network, and audio/video stream status
Console UI	Embedded UI enables a visual console management system, allowing for takeover, pushing, and collaboration functions
Power Supply	Supports POE and 12V DC dual backup power supply, with current $\leq 1A$
Device Power Consumption	$\leq 8W$
Device Noise	Fanless, silent design
Operating Temperature	-10°C to 45°C
Operating Humidity	10%-90%, non-condensing
Operating Time	Continuous 7x24 hour operation
Installation Method	Install two devices side by side in a 1U telecom-standard rack or vertically install nine devices on a rack (vertical rack installation charged separately)
Video Input	Supports 1 HDMI 1.4 high-definition input interface (HDCP 2.0)



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