vmeet

Visual Distribution System

SG-4000Px

Specification Sheet

Ver 1.0

Physical Reference

SHENZHEN RUIZHONG TECHNOLOGY CO., LTD

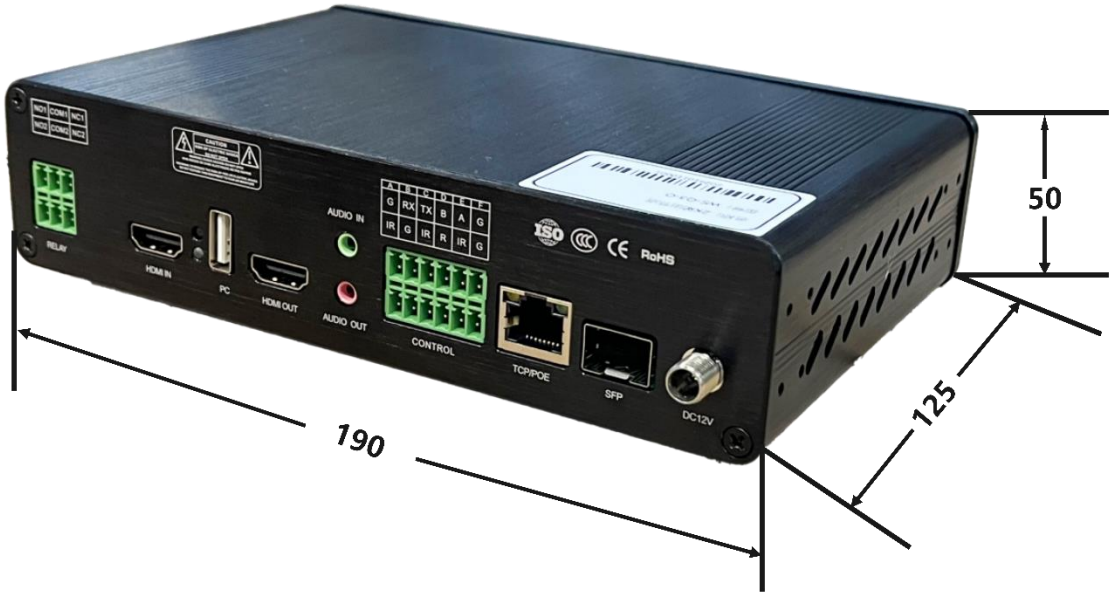
Update Log

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 allows 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.

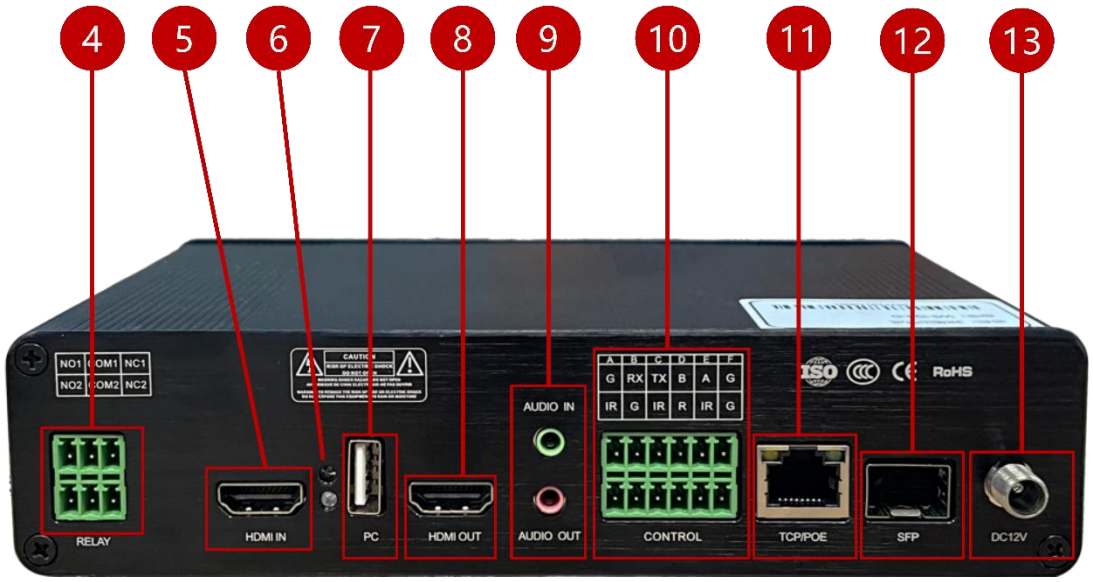
Product Dimensions



Product Appearance

Front Panel

No.	Interface	Quantity	Description
1	LED Indicator	4	• Red: Power indicator; • Yellow: Network indicator; • Blue: Video indicator; • Green: Audio indicator
2	Reset Button	1	• Reset switch
3	USB	2	• 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 (HDCP 2.2)
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	Description
Video Input	Supports 1 HDMI 2.0 high-definition input interface (HDCP 2.2)
Video Output	Supports 1 HDMI 2.0 high-definition output interface (input node is looped out)
OLED Screen	OLED display showing IP network information and audio/video working status
Audio Input	1 x 3.5mm audio input
Audio Output	1 x 3.5mm audio output
Network Port	1 x RJ45 1000M adaptive full-duplex network port, supports POE power supply
Optical Port	1 x SFP optical port
Serial Port	1 x programmable RS232 serial port and 1 x programmable RS485 serial port
IR/IO	1 x infrared input, 1 x infrared output, 1 x IO
USB	2 x USB 2.0, including 1 x USB 3.0
LED Indicators	Red/power light; Yellow/network light; Blue/video light; Green/audio light
DC Power Port	DC 2.0mm round head; 12V/2A adapter
Resolution	Maximum support for 3840x2160@60, downward compatible
CPU	ARM Cortex A7 @1.5GHz, quad-core
DDR	LPDDR4 4GB
Encoding Performance	Supports 1 x 3840x2160@60fps + 1 x 1080P@60fps + 1 x D1@60 + 1 x CIF@60fps (input node)
Decoding Performance	1 x 3840x2160@60fps + 7 x D1 + 1 x 3840x2160 background image; 2 x 2160P30 + 6 x D1 + 1 x 3840x2160 background image; 4 x 1080P60 + 4 x D1 + 1 x 3840x2160; 8 x 1080P30 + 4 x D1 + 1 x 3840x2160 background image background image
Video Format	H.265 Main Profile, Level 5.2 encoding/decoding
Wall Display Count	Default single screen supports simultaneous display and overlay of 16 windows, maximum 36 windows
Audio Format	PCM/G711/G726/AAC-LC
Supported Protocols	Supports RTSP, RTMP, proprietary protocol IGMP v2
Bandwidth Usage	512K-160M
Image Scaling	Supports video scaling from 1/64 to 64x
Background Image Decoding	MJPEG/JPEG Baseline encoding/decoding
Input/Output Timing	Supports maximum 3840x2160@60fps high-definition input/output, input and output timing can be customized
Visualization	Visual signal preview and large screen echo mode, WYSIWYG
Software	Software interface customization, supports WIN/Android/iOS systems
Delay	Input acquisition to output display delay within 50-120ms

Synchronization	LED/LCD large screen point-to-point synchronization, synchronization error within one frame
Image Quality	YUV422 image acquisition, visually lossless quality
Seamless Splicing	Built-in seamless splicing, roaming, scaling, picture-in-picture overlay, customizable segmentation, etc.
	Multiple windows can be opened at any position and size
KVM Control	Supports control software/direct control of signal source PC
Predefined Plans	Supports unlimited saving and retrieval of predefined plans; Supports predefined plan grouping and cycling, with customizable time intervals
Audio	Supports bidirectional audio, visual audio interface; Allows for monitoring, intercom, broadcasting, and meeting operations
Compatibility	Monitoring platform or IPC directly connects to system decoding; Integrates with control center, paperless, recording, video conferencing systems
API	Provides HTTP protocol for third-party software integration, no additional server configuration required
OSD	Editable logo and scrolling subtitles, large screen annotations
USB Pass-Through	Supports data pass-through for USB storage media like USB drives
Operation & Maintenance	Node temperature, memory, CPU, network, audio/video bitrate status, and other parameters
Seat UI	Built-in UI for visual seat management system, enabling takeover, push, collaboration, and other functions
Power Supply	Supports POE and 12V DC dual backup power supply, current ⩽1A
Device Power Consumption	⩽8W
Device Noise	Fanless silent design
Operating Temperature	-10°C to 45°C
Operating Humidity	10%-90% non-condensing
Operating Duration	Continuous operation 7x24 hours
Installation Method	Two units can be installed side by side in a 1U telecom standard cabinet or nine units can be vertically installed in a rack
Note	Supports integrated form of encoding and decoding

Trademark Statement

Declaration

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