

SBPRO-4K

CONTROL PROCESSOR



DESCRIPTION

The SBPro-4K is an LED playback control processor specially designed by Starview for LED screen applications. It integrates the Android system, sending card and video processing functions into one unit, and allows thirdparty apps to run on it, featuring powerful interaction, display and playback control capabilities.

The SBPro-4K supports a maximum load capacity of 13 million pixels and offers convenient LED screen control via the front panel LCD or a remote control. It also supports wireless screen mirroring across multiple platforms including Windows, macOS, iOS, and Android. To cater to different application scenarios, the SBPro-4K features advanced image processing capabilities and provides 4 modes to let the document presentation, video playback and remote meetings have the optimal display effect.

The SBPro-4K has no requirements of redesigning or changing the screen structure and can be mounted on the wall or placed on a surface or into a cabinet, allowing for quick environment setup and use. It is highly versatile and suitable for a broad range of applications such as corporate showrooms, conference rooms, auditoriums, and outdoor standalone LED displays.

KEY FEATURE

Inputs and Outputs

- 1x HDMI 1.3 input
- 2x HDMI 2.0 inputs
- 2x USB 2.0 inputs
- 1x USB 3.0 input
- 1x HDMI 1.3 output for monitoring and debugging
- 20x Gigabit Ethernet outputs
- 2x OPT outputs (The product ships without optical modules.)
- 4x audio outputs
 - 1x SPDIF digital audio output
 - 1x 3.5-mm audio output
 - 1x HDMI ARC audio output
 - 1x Phoenix audio output
- Output image scaling
 - Width range: 64 to 16384 pixels
 - Height range: 64 to 8192 pixels
 - Total device load capacity \leq 13 million pixels

Note: When using the scaling function, the maximum load capacity is 13 million pixels, while the maximum pixel load for pixel-to-pixel display is 8.8 million. For any questions, please contact Starview technical support.

KEY FEATURE (CONT.)

System Functions

- Android 13.0-based desktop UI system, supporting third-party apps
- Screen drawing and commenting (To use this feature, please purchase a whiteboard activation code separately.)
- Wireless screen mirroring from Windows, macOS, iOS and Android
- Working with Starview software to achieve reverse control
- The speaker can reversely control the LED screen via the terminal.
- Powerful processing performance
 - Quad-core A73 + quad-core A53 ARM processor @2.2 GHz
 - Support high-definition video decoding of H.264 4K@30Hz and H.265 4K@60Hz.
 - 8 GB of onboard RAM
 - 128 GB of storage space
- Excellent playback performance
- Supports playback of 1 stream of 8K video (support for H.265/HEVC and VP9 encoding formats only), 2 streams of 4K video, 5 streams of 1080p video, 9 streams of 720p video, 14 streams of 480p video, or 15 streams of 360p video.

Note:

- 1 stream of 8K video only supports H.265/HEVC (7680×4320@24Hz, bit rate: 14Mbps) and VP9 (7680×4320@30Hz, bit rate: 51Mbps) encoding formats. Decoding and playback of videos with resolutions between 4K and 8K are not supported.
 - Videos with resolutions between 2K and 4K will be converted into 4K videos.
- Playback control via different terminals
 - Intelligent playback control via mobile app: Install Starview software on your smartphone for program editing and publishing and screen control. The HDMI 1 can also be used as program content to enable simultaneous display of internal and external sources.
 - Convenient playback control via remote: Perform playback control of local programs and simple program editing on the screen.

– USB playback: Support standalone playback, plug and play, copy and play.

- Free receiving card connection

Blank spaces do not occupy load capacity, and there's no rectangular frame restrictions, allowing Ethernet port bandwidth to be fully utilized.

Note: For receiving card models that support this feature, please contact Starview technical support.

- Eye comfort mode
- Dual Wi-Fi modes

Allow for Wi-Fi and wireless hotspot connections at the same time.

- HDR

Supports HDR10 and complies with SMPTE ST 2084/SMPTE ST 2086 standards.

- Peak brightness

Real-time analysis and dynamic adjustment are made to each frame to significantly improve the display contrast and image details for better visual experience, and effectively control and lower the display power consumption, extending the service life of the LED screen.

Note: This feature is available when the A10s Pro or A8s Pro receiving card is used.

- AI image enhancement

Enable intelligent recognition of playing content, fine tuning of colors in each frame, and comprehensive optimization of color saturation, brightness, sharpness and dynamic motion compensation.

Note:

- This feature is available for the internal source (Android) and HDMI 1 only.
 - AI image enhancement is effective only during single-window video playback.
 - Effect adjustment
- Offer 4 display modes including standard, meeting, vivid and skin, and allow you to adjust the brightness, color temperature, saturation, contrast, etc.

KEY FEATURE (CONT.)

Device Controls

- Gigabit Ethernet control port with TCP/IP protocol support
- Low-power (less than 0.5 W) mode during standby, and wakeup from standby via infrared remote
- A relay can be connected for convenient power management of LED display
- Intelligent control via mobile app

Download and install Starview Software on your smartphone to easily configure the LED screen within just 10 minutes. The app also allows you to scan QR codes to set up screens, connect and adjust the topology by taking photos, and monitor the status of your devices. For detailed operations, please contact Starview technical

support.

- Control the device with a remote
- Bluetooth 5.1

Can connect to the Bluetooth voice remote, Bluetooth mouse, Bluetooth keyboard, Bluetooth sound system and other common peripherals. Up to 7 peripheral devices can be connected.

- Control via front panel LCD (touch control not supported)
- Support peripherals such as camera, sound system and infrared touch frame.

Please contact Starview technical support for information on supported peripheral device models.

APPEARANCE

Front Panel

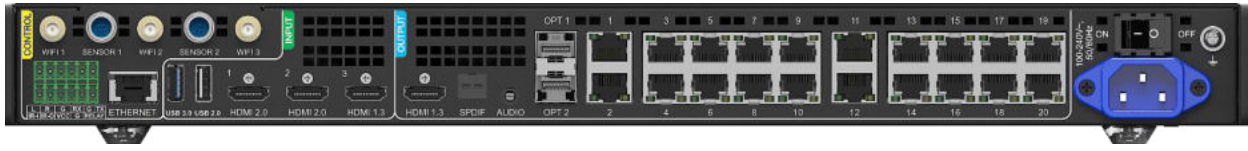


Name	Description
USB 2.0	<ul style="list-style-type: none"> ▪ Support a mouse, keyboard, camera, speaker and other common USB devices. ▪ Can be used for USB playback, firmware update and exporting logs.
Status LED	<ul style="list-style-type: none"> ▪ Solid red: Powered off ▪ Solid green: Functioning normally/Standby ▪ Off: No power supply
Power Button	<ul style="list-style-type: none"> ▪ Press the button to start up/shut down the device. ▪ Hold down the button to restart the device.
IR Receiver	Receive the infrared signal from the remote.
LCD Screen	A 2.0-inch screen with a resolution of 320×240 pixels that displays the device status, menus, submenus and messages for parameter settings
Knob	<ul style="list-style-type: none"> ▪ On the home screen, press the knob to enter the main menu screen. ▪ On the main menu screen, rotate the knob to select a menu item or adjust the parameter value. Press the knob to confirm the operation. ▪ Hold down the knob and BACK button simultaneously for 5s or longer to lock or unlock the buttons.
BACK	Press the button to go back to the previous menu or cancel the current operation.

Note: Press the power button to initiate a shutdown countdown (10s). Once the countdown concludes, the device will automatically shut down. During the shutdown countdown, you can press the power button or the BACK button to cancel the shutdown.

APPEARANCE (CONT.)

Rear Panel



Connector Type	Connector	Description
Input connector	HDMI 1.3	<ul style="list-style-type: none"> 1x HDMI 1.3 Max resolution: 2048×1152@60Hz Min resolution: 800×600@60Hz Standard resolutions supported Custom resolutions supported <ul style="list-style-type: none"> Width range: 800 to 4096 (forced) Height range: 600 to 4096 (forced) Accepts 8-bit and 10-bit input sources. YCbCr and RGB color space settings supported Interlaced signal not supported HDCP 1.4 compliant (Enabled by default) Embedded audio supported
	HDMI 2.0	<ul style="list-style-type: none"> 2x HDMI 2.0 HDMI 1 <ul style="list-style-type: none"> Max resolution: 4096×2160@60Hz Min resolution: 800×600@60Hz Note: HDMI 1 does not support custom resolutions. HDMI 2 <ul style="list-style-type: none"> Max resolution: 4096×2160@60Hz Min resolution: 800×600@60Hz Custom resolutions supported Width range: 800 to 8192 (forced) Height range: 600 to 8192 (forced) Standard resolutions supported Accepts 8-bit and 10-bit input sources. YCbCr and RGB color space settings supported Interlaced signal not supported HDCP 1.4 and HDCP 2.2 compliant (Enabled by default) Embedded audio supported ARC audio supported by HDMI 1
	USB 3.0	<ul style="list-style-type: none"> 1x USB 3.0 and 1x USB 2.0 Support a mouse, keyboard, camera, speaker and other common USB devices.
	USB 2.0	<ul style="list-style-type: none"> Can be used for USB playback, firmware update and exporting logs. Supported image formats: *.jpg, *.jpeg, *.bmp, *.png, *.gif, *.webp Supported video formats: *.mp4, *.mkv, *.mov, *.avi, *.m4v, *.flv, *.webm Supported file systems: FAT32, NTFS
Output connector	1-20	20x RJ45 (1Gbps)
	OPT 1-2	<ul style="list-style-type: none"> 10G OPT outputs Both OPT ports work as primary outputs and cannot be used for loop backup of the Ethernet ports. OPT 1 outputs the data of Ethernet ports 1 to 10 and OPT 2 outputs the data of Ethernet ports 11 to 20. Supports both single-mode and multi-mode fiber cables and can work with fiber converters. Note: The OPT output is prior to Ethernet output and they cannot be used interchangeably.
	AUDIO	<ul style="list-style-type: none"> 3.5-mm audio output Note: Only 3-conductor audio connectors are supported.
	SPDIF	For digital fiber optic audio output
	HDMI 1.3	Output monitoring for device debugging

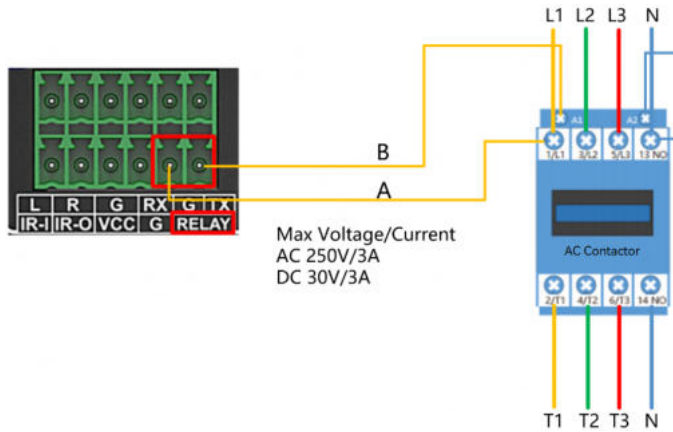
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APPEARANCE (CONT.)

Connector Type	Connector	Description
Control Connector	ETHERNET	Max bandwidth: 1 Gbps Connect to an external network or control software.
	WIFI 1-2	Connect to Wi-Fi AP and Bluetooth antennas.
	WIFI 3	Connect to a Wi-Fi Sta antenna.
	SENSOR 1-2	Connect to light sensors or temperature and humidity sensors.
	Phoenix connector (12 pins)	<ul style="list-style-type: none"> ▪ 1x L: Left channel of output audio ▪ 1x R: Right channel of output audio ▪ 1x GND: Grounding ▪ 1x RS232 for connecting to the central control device <p>– Baud rate: 115200bps</p> <p>– Data bits: 8, stop bits: 1, no parity, no flow control</p> <ul style="list-style-type: none"> ▪ 1x IR-I: Infrared input ▪ 1x IR-O: Infrared output ▪ 1x VCC: 3.3 V power supply ▪ 1x GND: Grounding ▪ 1x RELAY <p>– Connect to a relay to control external power supply.</p> <p>– Voltage: DC 30 V, 3 A / AC 250 V, 3 A</p>
Power connector	100-240V~, 50/60Hz, 2.5A Max	An AC power input connector and switch



A, B: Relay switch signals

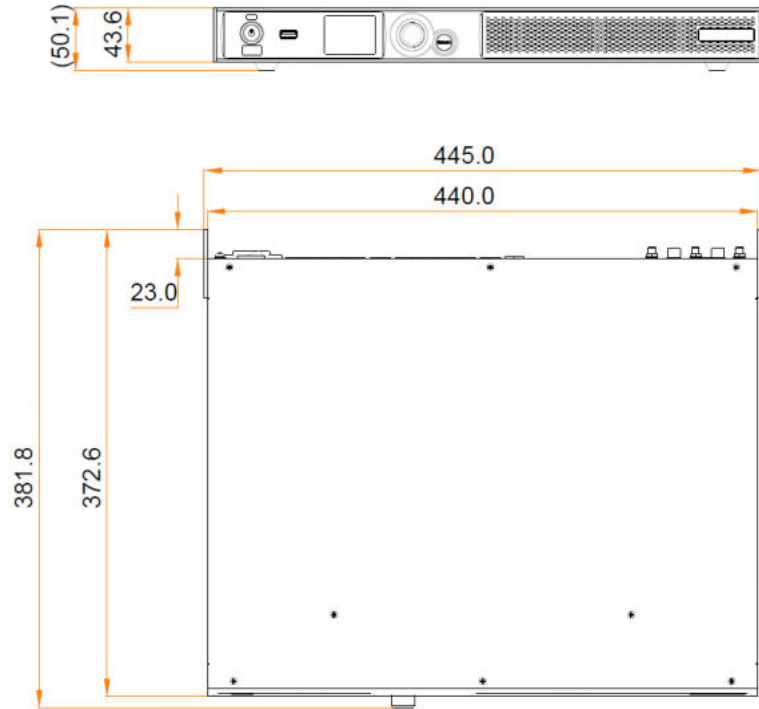
The above wiring diagram is only for illustration purpose. For actual applications, please refer to the relevant AC contactor manual.

Note

For the internal source (Android), the maximum load capacity is 8.8 million pixels and custom resolutions (width range: 800~4096, height range: 600~4096) are supported.

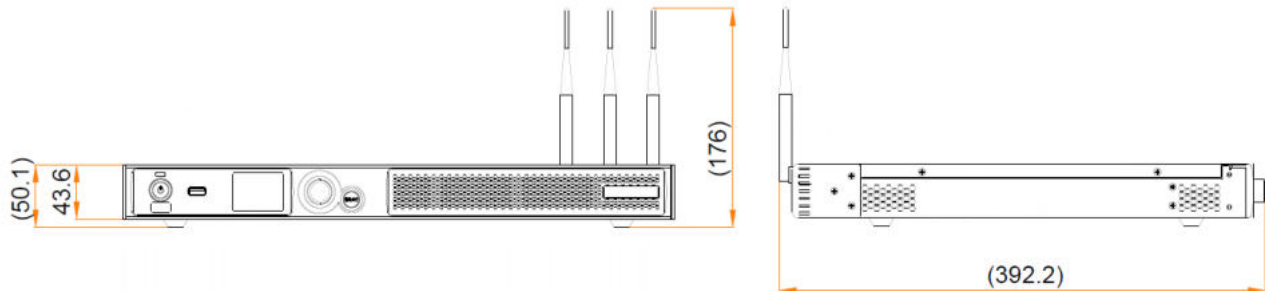
DIMENSION

SBPro-4K



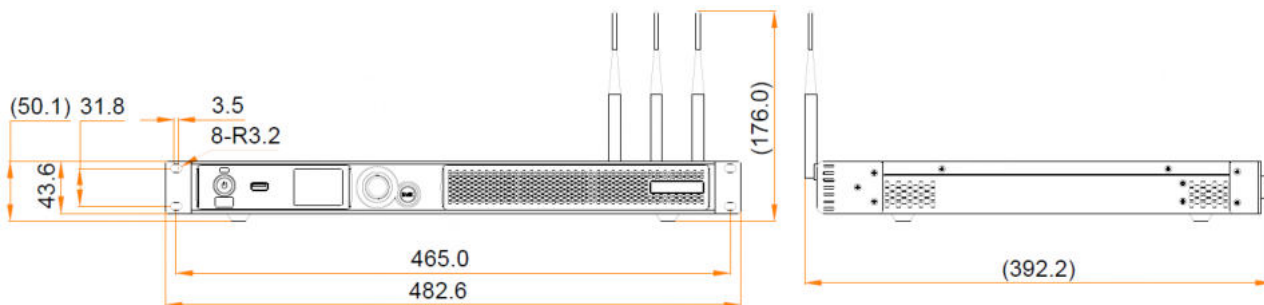
Tolerance: ± 0.3 Unit: mm

SBPro-4K with Antennas (No Hanging Brackets)



Tolerance: ± 0.3 Unit: mm

SBPro-4K with Antennas and Hanging Brackets



Tolerance: ± 0.3 Unit: mm

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APPLICATIONS



Note

The SBPro-4K product package in this diagram is described in the packing list in the specifications table.

The mirroring dongle with a Type-C port is not included with the SBPro-4K product package. Users can place another order to purchase it. To pair the mirroring dongle with the SBPro-4K, connect them using the included Type-C to USB adapter.

Technical specifications

SBPRO-4K

Electrical Specifications	Input voltage	100-240V~, 50/60Hz, 2.5A Max
	Rated power consumption	53.9 W
Storage Space	RAM	8 GB
	Internal storage	128 GB
Operating Environment	Temperature	-20°C to +50°C
	Humidity	5% RH to 85% RH, non-condensing
Storage Environment	Temperature	-20°C to +70°C
	Humidity	5% RH to 95% RH, non-condensing
Physical Specifications	Dimensions	445.0 mm × 381.8 mm × 50.1 mm
	Net weight	4.60 kg
	Gross weight	8.00 kg Note: It is the total weight of the product, accessories, and packing materials packed according to the packing specifications.
	Packing box	590.0 mm × 520.0 mm × 180.0 mm, kraft paper box
	Accessory box	408.0 mm × 294.0 mm × 51.0 mm, white cardboard box
Packing Information	List	<ul style="list-style-type: none"> ▪ 1x SBPro-4K ▪ 1x Power cord ▪ 1x Bluetooth voice remote ▪ 1x Ethernet cable ▪ 1x HDMI cable ▪ 2x Female Phoenix connectors (6 pins) ▪ 3x Antennas ▪ 2x Hanging brackets
IP Rating		IP20 Please prevent the product from water intrusion and do not wet or wash the product.
CMS platform		Starview DSS-SW Content Management System

The current and power consumption may vary depending on the product settings, usage environment and measuring status.

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Performance specifications are typical. Due to constant research, specifications are subject to change without notice. For the most up-to-date specifications, please contact an authorized Starview representative.

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