



B600S

Sphere LED Controller

Specification V4.0



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1 Update Records

Document Version	Hardware Version	Release Time	Update Record
V4.0	ST60 (V3.2.4)	August 1(th), 2025	First release

2 Product Introduction

The B600S is an independent controller featuring 6 Gigabit Ethernet ports for irregular-shaped displays. It supports up to 2.6 million pixels while delivering powerful processing capabilities that optimize load utilization, perfectly supporting any 2K resolution. Capable of offline brightness adjustment for large screens, it offers robust processing power, ultra-stable performance, and exceptional value.

The B600S is widely applicable in non-rectangular LED displays such as sphere LED screens and circular ring displays.



3 Product Features

3.1 Input/Output Interface

- Multiple input interfaces
 - 1×HDMI1.4
 - 1×DVI

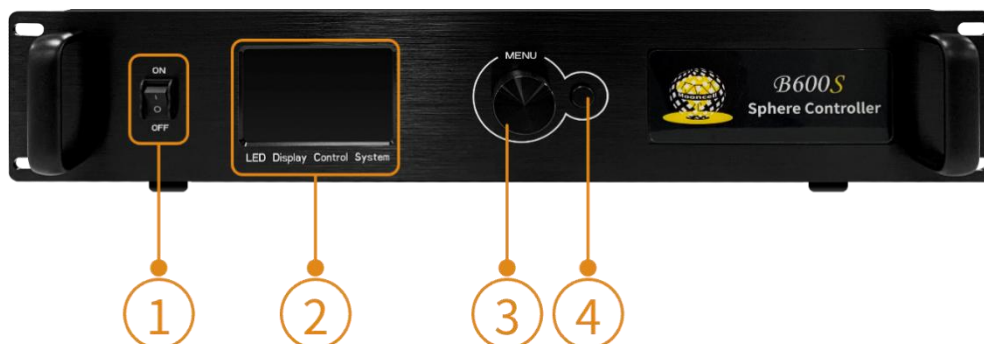
- Output Interface
 - 6 Gigabit Ethernet ports, supporting vertical and horizontal tiling in any configuration
 - Maximum load capacity: 2.6-million pixel
- Audio Interface: 1×AUDIO, Synchronous transmission via network cable
- Control Interface
 - 1×USB interface for communication, enabling multiple sending cards to be controlled from a single PC
 - 1×LAN, 100Mbps Ethernet port for connecting to a host computer for debugging

3.2 Diverse Practical Functions

- Supports Ethernet loopback backup and dual-master backup
- Supports EDID management
- Compatible with multiple input frame rates including 30Hz, 50Hz, 60Hz, and 120Hz
- Supports ST_EXT expansion board for cascaded brightness control and automatic brightness adjustment
- Supports host software monitoring of sending card operating parameters and status
- Supports configuration parameter readback
- Supports Gigabit Ethernet error rate detection

4 Product Appearance

Front Panel

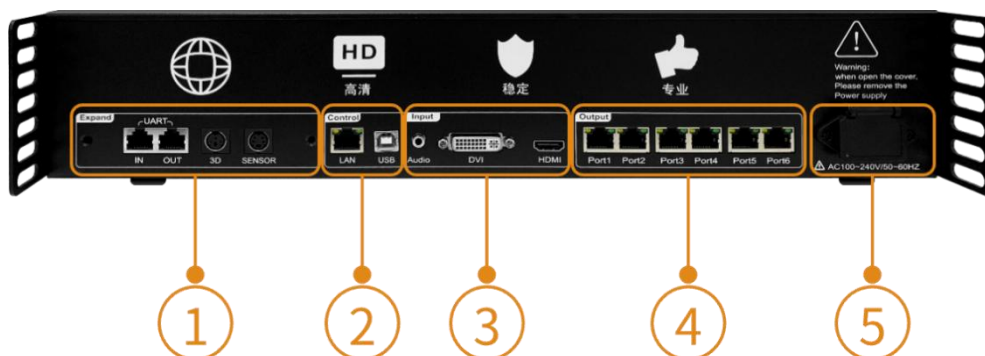


*Product images are for reference only. The actual product shall prevail upon purchase.

4.1 Data Interface Illustration

#	Name	Illustration
1	Switch	Main Control Power Switch
2	LCD	Used to display the device's current status and configure menu item parameters. LCD Resolution: 320×240
3	Rotate Button	1. On the main interface, press the knob to enter the menu operation interface; 2. In the menu operation interface, rotate the knob to select menus; press the knob to select the current menu or enter submenus; 3. After selecting a menu with parameters, rotate the knob to adjust values. Note: Press the knob again to confirm changes after adjustment; 4. Long press to unlock menus
4	ESC	Return/Cancel the current menu or operation

Rear Panel

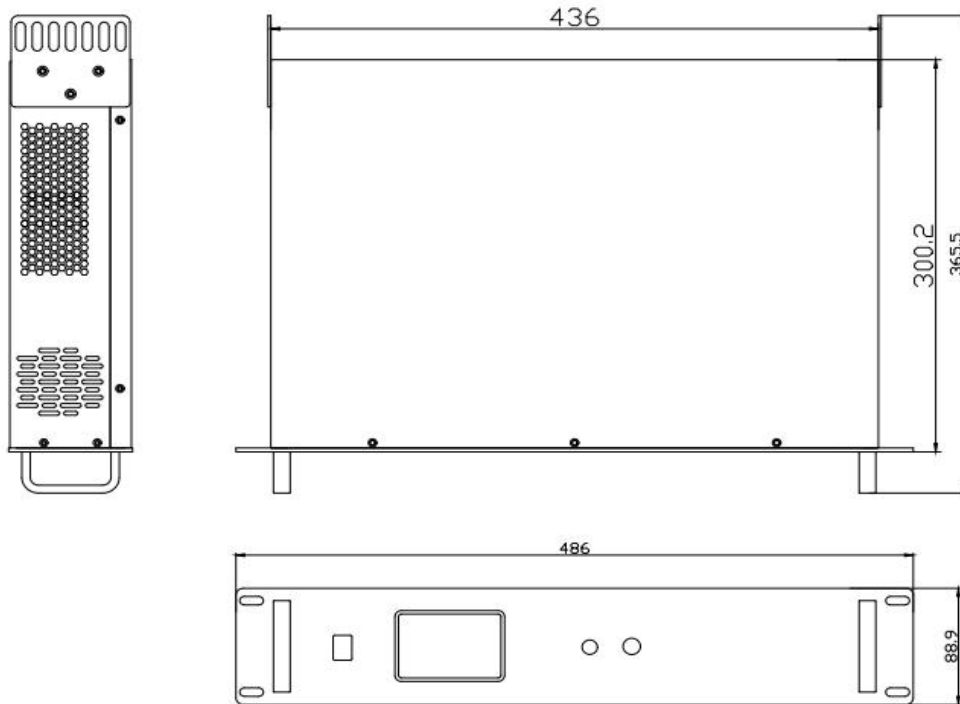


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Rear Panel		
Input Interface		
#	Name	Illustration
3	HDMI	1×HDMI 1.4 port, supporting up to 3840×2160@30Hz resolution video input with backward compatibility.
	AUDIO	1×3.5mm audio input jack
	DVI	1×DVI video signal input port, maximum resolution 1920×1200@60Hz

Output Interface		
#	Name	Illustration
4	Gigabit Ethernet port	◆ 6 Gigabit Ethernet ports ◆ Maximum loading Capacity of each port: 650,000 pixels ◆ Supports loopback backup between ports ◆ Audio transmission supported only via P1 output port
Control Interface		
#	Name	Illustration
2	LAN	100Mbps Ethernet interface for connecting to host computer for debugging
	USB (B-type)	Connects to PC software for communication
Extended Interface		
#	Name	Illustration
1	UART IN/OUT	Serial Port Communication Input/Output
	3D	3D Transceiver Communication Interface
	SENSOR	Light Sensor Communication Interface
AC power interface		
#	Name	Illustration
5	AC power interface	AC-100-240V-50/60HZ AC power interface

4.2 Dimensions



Tolerance: ± 0.3 Unit: mm

5 Product Specification

5.1 Basic Parameters

Loading Capacity	Single Ethernet Port	Maximum load capacity: 655,360 pixels Network port load capacity (width $\times$ height): 1280 $\times$ 512
	Whole unit	2.6 million pixels
Loading Range	Width	128–4096 pixels
	Height	64–2048 pixels
Sphere	Width	4096
Loading Limit	Height	2048
Offset Range	Width	0–4095 pixels
	Height	0–4095 pixels

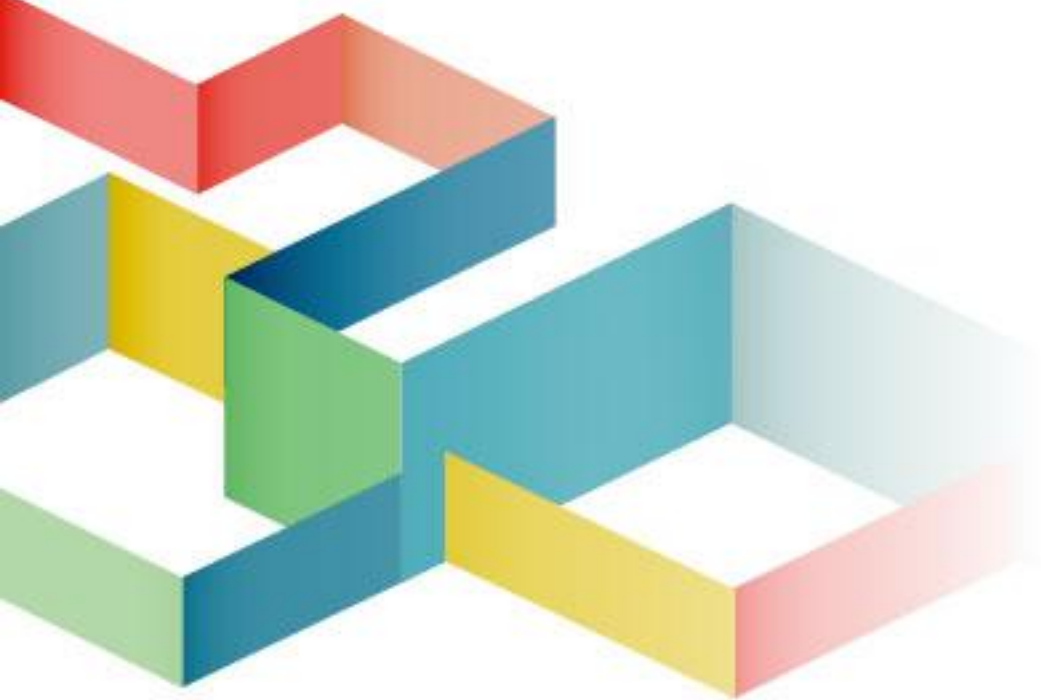
5.2 Specification

Electrical parameters	Rated voltage	AC-100-240V-50/60HZ
	Rated Power	20W
Working environment	Working temperature	-20°C~60°C
	Working humidity	5%RH~85%RH has no condensation.
Storage environment	Temperature	-20°C~70°C
Chassis size	486mmX365.5mmX88.9mm	
Net weight	4.35kg	
Outer packing size	565×445×185mm	
Gross weight of product	5.75 Kg Description: Including wire, accessories	
Packing mode	1 PCS /box	
Accessory	1 × power cord, 1 × USB cable, 1 × HDMI cable, 1 × DVI Cable 1 × certificate	

*Current and power consumption may vary depending on factors such as product usage, environment, and settings.

6 Precautions

- High voltage hazard: This product operates at AC 100V~240V.
- Do not allow liquids or metal fragments and other conductive materials to enter the device, to prevent safety accidents.
- Please use the device in a dry and clean environment.



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