



B800ES

Sphere LED Controller

Specification V4.0



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1 Update Records

Document Version	Hardware Version	Release Time	Update Record
V4.0	ST1200 (V3.2.4)	August 2 (th), 2025	First release

2 Product Introduction

The B800ES is an independent controller featuring 8 Gigabit Ethernet ports for irregular-shaped displays. It supports up to 5.2 million pixels while delivering powerful processing capabilities that optimize load utilization, perfectly supporting any 4K resolution. Capable of offline brightness adjustment for large screens, it offers robust processing power, ultra-stable performance, and exceptional value.

The B800ES 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×DP1.2 (Choose 1 of the 2 options)

- Output Interface
 - 8 Gigabit Ethernet ports, supporting vertical and horizontal tiling in any configuration
 - Maximum load capacity: 5.2 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
 - 1×RS232 serial port for connecting to central control equipment

3.2 Diverse Practical Functions

- Supports Ethernet loopback backup and dual-master backup
- Supports multiple preset resolutions and custom resolution settings
- Compatible with multiple input frame rates including 30Hz, 50Hz, 60Hz, and 120Hz
- Supports host software monitoring of sending card operating parameters and status
- Supports configuration parameter readback
- Supports Gigabit Ethernet error rate detection
- Supports 3D display, active 3D display

4 Product Appearance

Front Panel

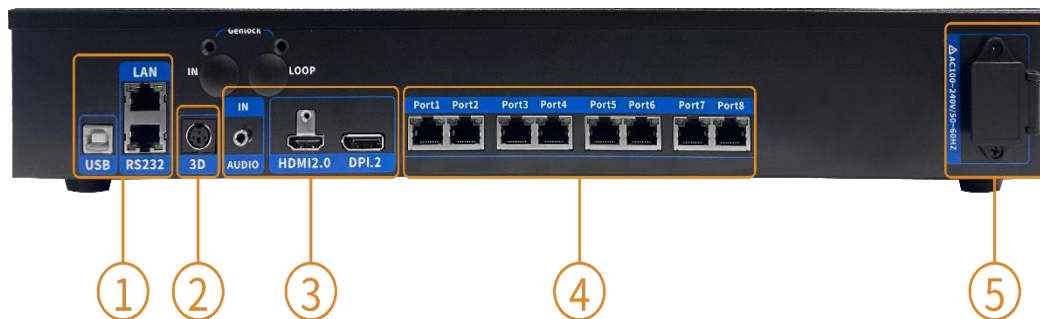


*Product images are for reference only. The actual product shall prevail upon purchase.

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

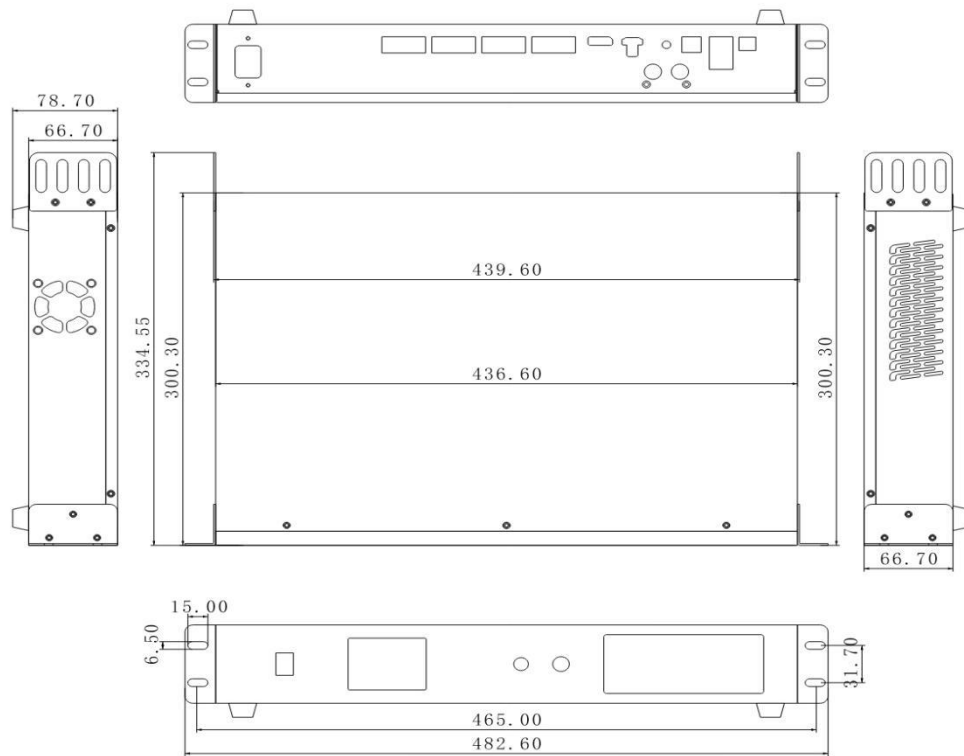


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Rear Panel		
Input Interface		
#	Name	Illustration
3	HDMI2.0	1×HDMI 2.0, supports up to 3840×2160@60Hz with backward compatibility. Maximum customizable graphics card width: 7680 Maximum customizable graphics card height: 7680
	AUDIO	1×3.5mm audio input jack
	DP1.2	1×DP1.2, video signal input interface. Maximum resolution 3840×2160@60Hz, backward compatible. Graphics card customizable maximum width 7680 Graphics card customizable maximum height 7680

Output Interface		
#	Name	Illustration
4	Gigabit Ethernet port	◆ 8 Gigabit Ethernet ports with a combined load capacity of up to 5.2 million pixels ◆ Maximum loading Capacity per port: 650,000 pixels at 8-bit resolution
Control Interface		
#	Name	Illustration
1	LAN	100Mbps Ethernet interface for connecting to host computer for debugging
	USB (B-type)	Connects to PC software for communication
	RS232	1×RS232 interface for connecting to central control equipment
Extended Interface		
#	Name	Illustration
2	3D	Connect the 3D transmitter
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	5.2 million pixels
Loading Range	Width	640—7680 pixels
	Height	480—7680 pixels
Sphere Loading Limit	Width	7680
	Height	4096
Offset Range	Width	0—7680 pixels
	Height	0—4095 pixels
Note: When enabled the F5, height input is limited to 4096; when disabled, it is limited to 8192. Enabled by default.		

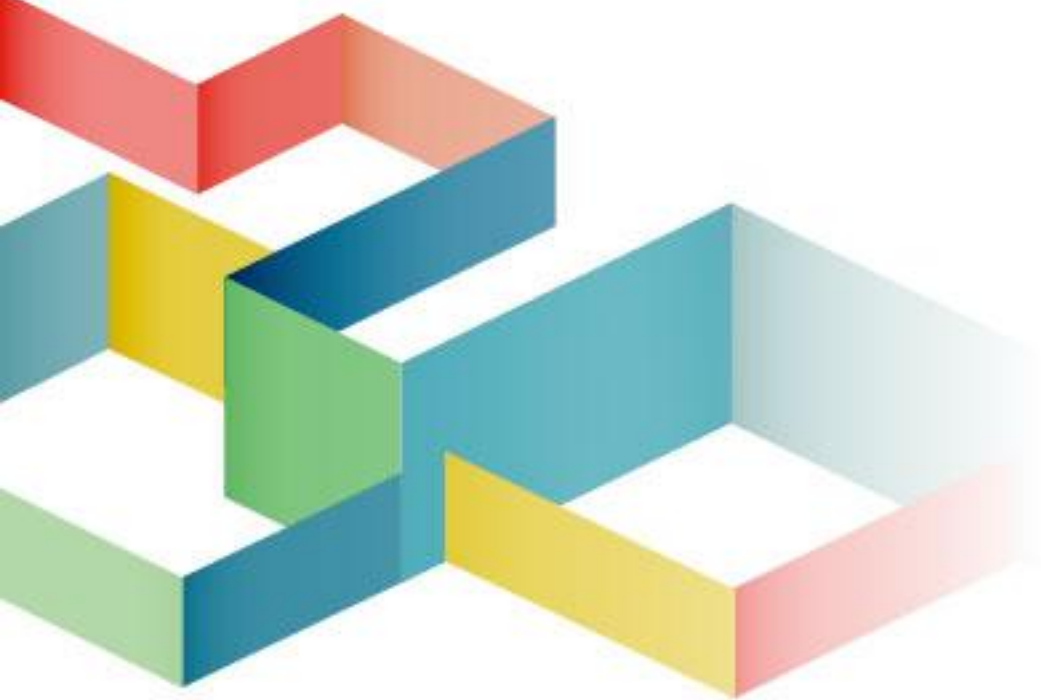
5.2 Specification

Electrical parameters	Rated voltage	AC-100-240V-50/60HZ
	Rated Power	70W
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	482.6mm×334.55×78.7mm	
Net weight	3.43kg	
Outer packing size	515×130×375mm	
Gross weight of product	4.8 Kg Description: Including wire, accessories	
Packing mode	1 PCS /box	
Accessory	1 × power cord, 1 × USB cable, 1 × HDMI cable, 1*DP 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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