

V Series Video Splicer

Specification V4.0



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1 Update Records

Document Version	Hardware Version	Release Time	Update Record
V4.0	V1.0.0	July 18(th), 2025	First release
V4.1	V1.0.0	December 8(th), 2025	Update the front panel image of the product

2 Product Introduction

The V-Series Video Splicer is Mooncell's newly launched ultra-intelligent and cost-effective video signal processing equipment. Featuring a modular 3U/5U/7U/14U standard chassis design, it supports both digital and analog signals, enabling seamless display of 4K@60Hz and lower resolution video signals across video walls of various specifications. With 4:4:4 color processing technology, it delivers rich colors, sharp image quality, and exceptionally realistic visual effects for large-screen displays. The Mooncell V-Series Video Splicer comprehensively meets ultra-high-definition application requirements in scenarios including command and dispatch centers, conference and reporting halls, exhibition centers, data operation centers, and broadcasting studios..

3 Product Characteristics

3.1 Modular Design: Free Mixing Combination

- Chassis network port load capacity
 - 3U: 40 network ports output, maximum load 26 million pixels
 - 5U: 60 network ports output, maximum load 39 million pixels
 - 7U: 100 network ports output, maximum load 65 million pixels
 - 14U: 200 network ports output, maximum load 130 million pixels

- Maximum input channels
3U: 36 channels 2K, 24 channels 4K@30Hz, 6 channels 4K@60Hz
5U: 48 channels 2K, 24 channels 4K@30Hz, 12 channels 4K@60Hz
7U: 80 channels 2K, 40 channels 4K@30Hz, 20 channels 4K@60Hz
14U: 160 channels 2K, 80 channels 4K@30Hz, 40 channels 4K@60Hz
- Single network port supports maximum width/height: 65,536 pixels
- Supports input signals: DVI, HDMI1.3, HDMI1.4, HDMI2.0, DP1.2, VGA, SDI, etc.
- Single output card supports 10 Gigabit network ports output, directly connecting to LED display receiving cards

3.2 Diversified Display Function

- Display functions
Arbitrary layering among all signals, multi-screen free roaming and scaling
Supports irregular display screen splicing
Supports frame synchronization function
Supports intelligent irregular splicing
Supports HDMI audio input
- WEB control for convenient operation
Supports PC scenes, can save scene files
Supports modifying EDID of input interfaces
Supports signal source cropping and local zoom
Supports intelligent resolution setting, different resolutions can be used between network ports
- Backup design for stability and reliability
Supports input signal hot backup

4 Application Scenarios

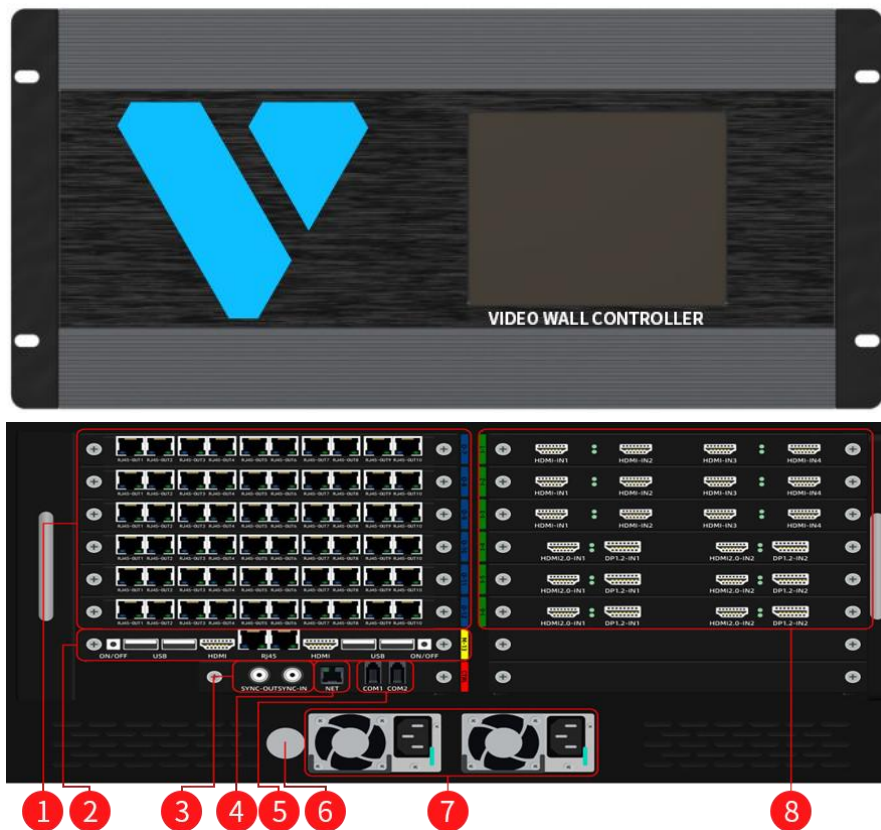
4.1 V300 Front/Rear Panel Interfaces



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

#	Illustration
1	Output Slots: 4x RJ45 x 10
2	Power Switch
3	Power Jack
4	3D-IN Interface (Not Supported)
5	GenLock Synchronization Cascade
6	RJ45 Network Port
7	RS232 Serial Port
8	2K/4K Input Slots (Optional Board): HDMI 2.0 x2 / DP 1.2 x2 / HDMI 1.3 x8 / HDMI 1.3 x4 / DVI x4 / HDMI 1.4 x4 / VGA x4 / 3G-SDI x4
9	2K Input Slots (DVIx4/HDMI1.3x4/VGAx4/3G-SDIx4)

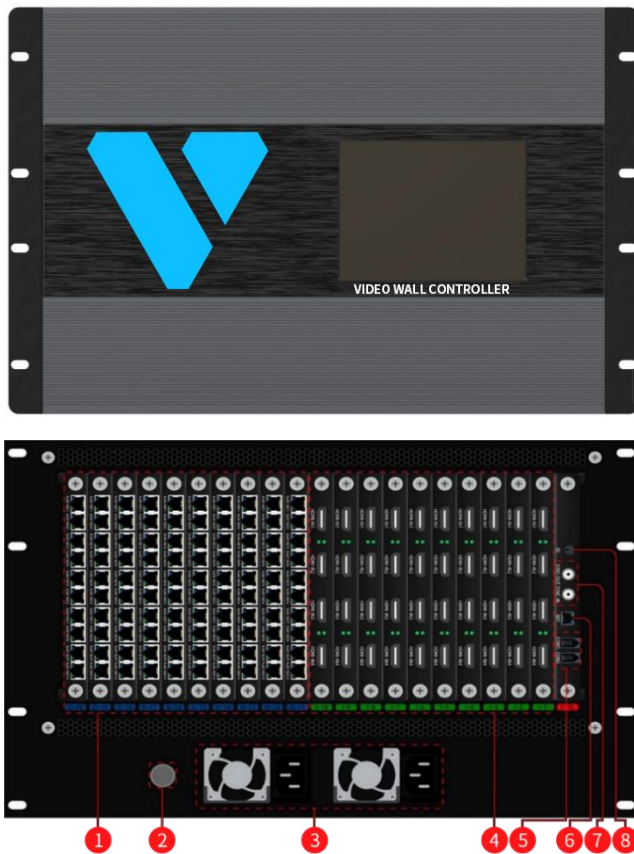
4.2 V500 Front/Rear Panel Interfaces



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#	Illustration
1	Output Slots: 6x RJ45 x10
2	Echo Slot
3	Genlock Synchronization Cascade
4	RJ45 Network Port
5	RS232 Serial Port
6	Power switch
7	Redundant power supply
8	Input slots (2K/4K) (DVIx4 / HDMI 1.3x4 / HDMI 2.0x2 / DP 1.2x2 / HDMI 1.3x8 / HDMI 1.4x4 / VGAx4 / 3G-SDIx4)

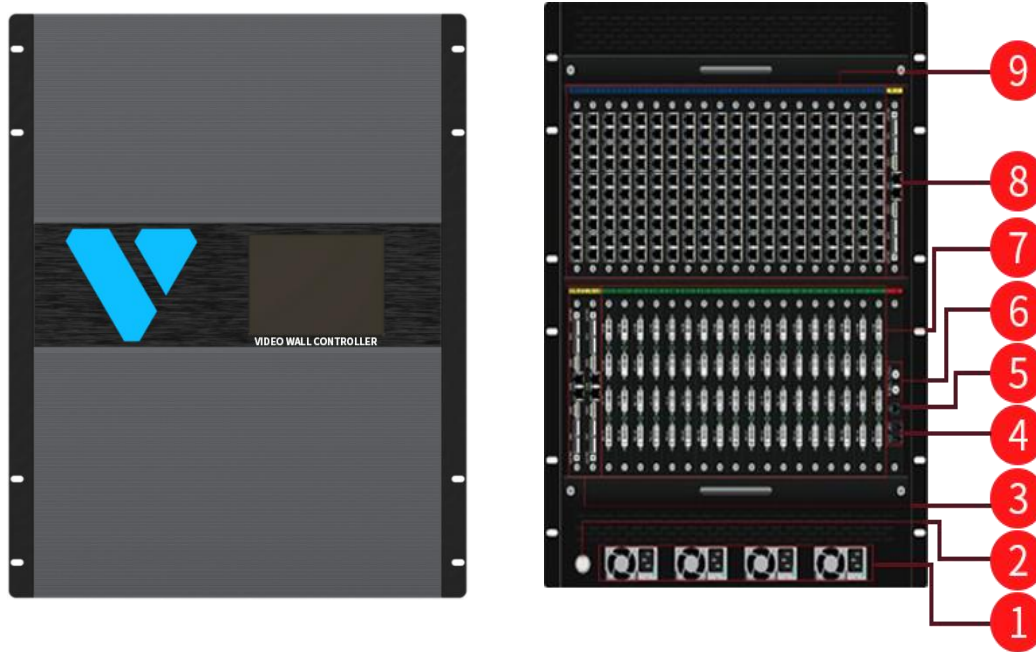
4.3 V700 Front/Rear Panel Interfaces



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

#	Illustration
1	Output slots: 10 RJ45 ports
2	Power switch
3	Power jack
4	2K/4K Input Slots (Optional Board): DVIx4 / HDMI 1.3x4 / HDMI 2.0x2 / DP 1.2x2 / HDMI 1.3x8 / HDMI 1.4x4 / VGAX4 / 3G-SDIx4
5	RS232 Serial Port
6	RJ45 Ethernet Port
7	GenLock Synchronization Cascade
8	3D-IN Interface (Not Supported)

4.4 V1400 Front/Rear Panel Interfaces



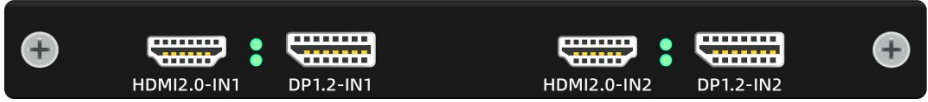
*Product images are for reference only. The actual product shall prevail upon purchase.

#	Illustration
1	Power Supply
2	Power Switch
3	Echo Card and Input Card Slot (Shared)
4	RS232 Serial Port
5	RJ45 Ethernet Port
6	GenLock Synchronization Cascade
7	2K/4K Input Slots (Optional Boards: DVIx4 / HDMI 1.3x4 / HDMI 2.0x2 / DP 1.2x2 / HDMI 1.3x8 / HDMI 1.4x4 / VGAX4 / 3G-SDIx4)
8	Return to Card Slot
9	Output Slot: 20 RJ45 x 10

5 Board Specifications

5.1 Input Interface

Interface	Signal Specification
4×DVI	
	• Supports only VESA standard DVI-D digital signals: • Maximum single-port resolution: 2048×1152@60Hz • Minimum single-port resolution: 800×600@60Hz • Supports EDID customization • Interface indicator status description: • Illuminated: Input source normally connected • Not illuminated: No signal source connected or signal source abnormal
4×HDMI1.3	
	• Complies with EIA/CEA-861 standard, HDMI1.3×4 standard: • Maximum single-port resolution: 2048×1152@60Hz • Minimum single-port resolution: 800×600@60Hz • Supports EDID customization • Interface indicator status description: • Illuminated: Input source normally connected • Not illuminated: No signal source connected or signal source abnormal
4×HDMI1.4	

	• HDMI1.4 standard: • Supports 3840x2160@30Hz, 3840×1080@60Hz • Supports EDID customization • Interface indicator status description: • Illuminated: Input source normally connected • Not illuminated: No signal source connected or signal source abnormal
2×HDMI2.0	 • HDMI2.0×2 standard: • Supports 3840×2160@60Hz, 4096×2160@60Hz, 1920×4800@60Hz, 7680×1080@60Hz • Maximum width: 7680 pixels • Maximum height: 4800 pixels • Supports EDID customization: ○ Compatible with HDMI1.4 and HDMI1.3 video input • Interface indicator status description: • Illuminated: Input source normally connected • Not illuminated: No signal source connected or signal source abnormal
2×DP1.2	 • DP1.2×2 standard: • Supports 3840×2160@60Hz, 4096×2160@60Hz, 1920×4800@60Hz, 7680×1080@60Hz • Maximum width: 7680 pixels • Maximum height: 4800 pixels • Supports EDID customization: Compatible with DP1.1 video input • Interface indicator status description: • Illuminated: Input source normally connected • Not illuminated: No signal source connected or signal source abnormal

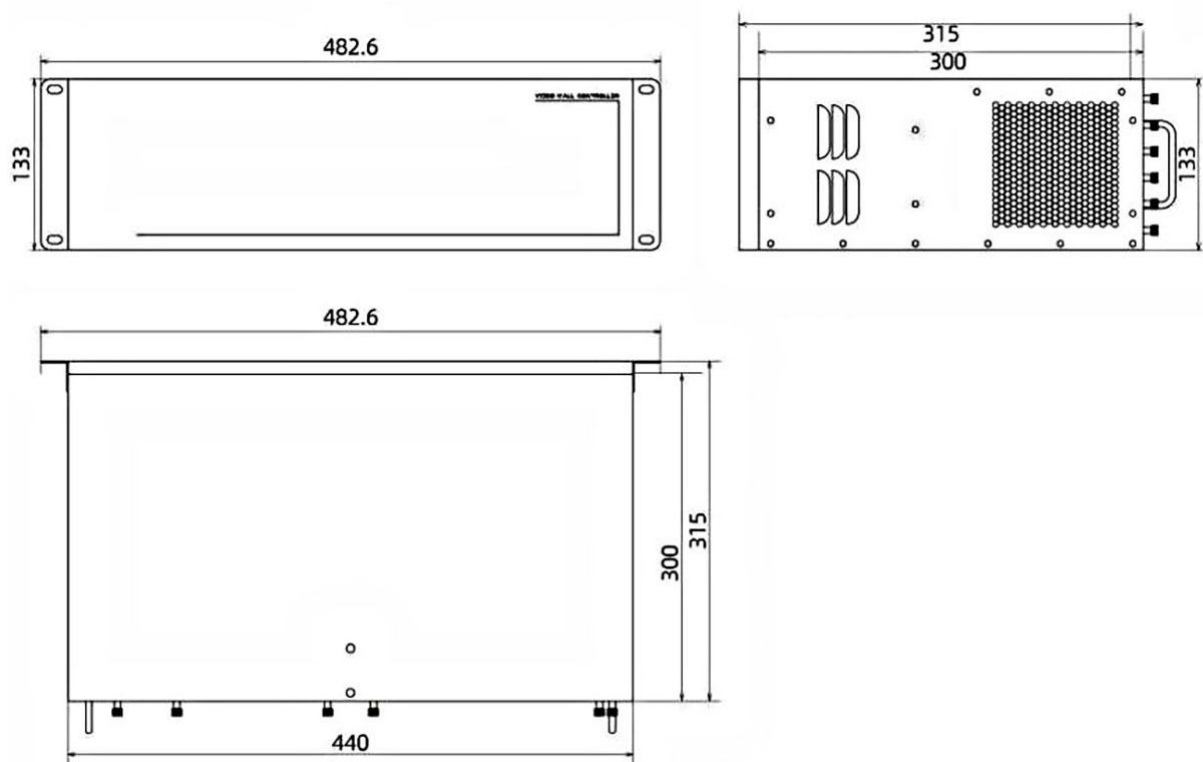
8×HDMI1.3	 • One card with 8 ports, HDMI1.3 standard: • Maximum single-port resolution: 2048×1152@60Hz • Minimum single-port resolution: 800×600@60Hz • Supports EDID customization • Only supports YCbCr 4:2:2 color depth processing • Interface indicator status description: • Illuminated: Input source normally connected • Not illuminated: No signal source connected or signal source abnormal
8×VGA	 - Complies with VESA standard, supports 1920x1080@60Hz • Interface indicator status description: - Illuminated: Input source normally connected - Not illuminated: No signal source connected or signal source abnormal
4×3G-SDI	 3G-SDI interface, compatible with HD-SDI and SD-SDI standards: - Supports ST-424 (3G), ST-292 (HD), and SMPTE 259 SD standard video source input - Maximum single-channel support: 1920×1080@60Hz video input - Supports 1080i/576i/480i deinterlacing processing Interface indicator status description: - Illuminated: Input source normally connected - Not illuminated: No signal source connected or signal source abnormal

5.2 Output Interface

Interface	Signal Specification
10×RJ45	 • RJ45 Gigabit Ethernet port: • Maximum single-port load capacity: 650,000 pixels • Load capacity at 8-bit output color depth: 650,000 pixels • Load capacity at 10-bit output color depth: 480,000 pixels • Compatible with all Mooncell series receiving cards

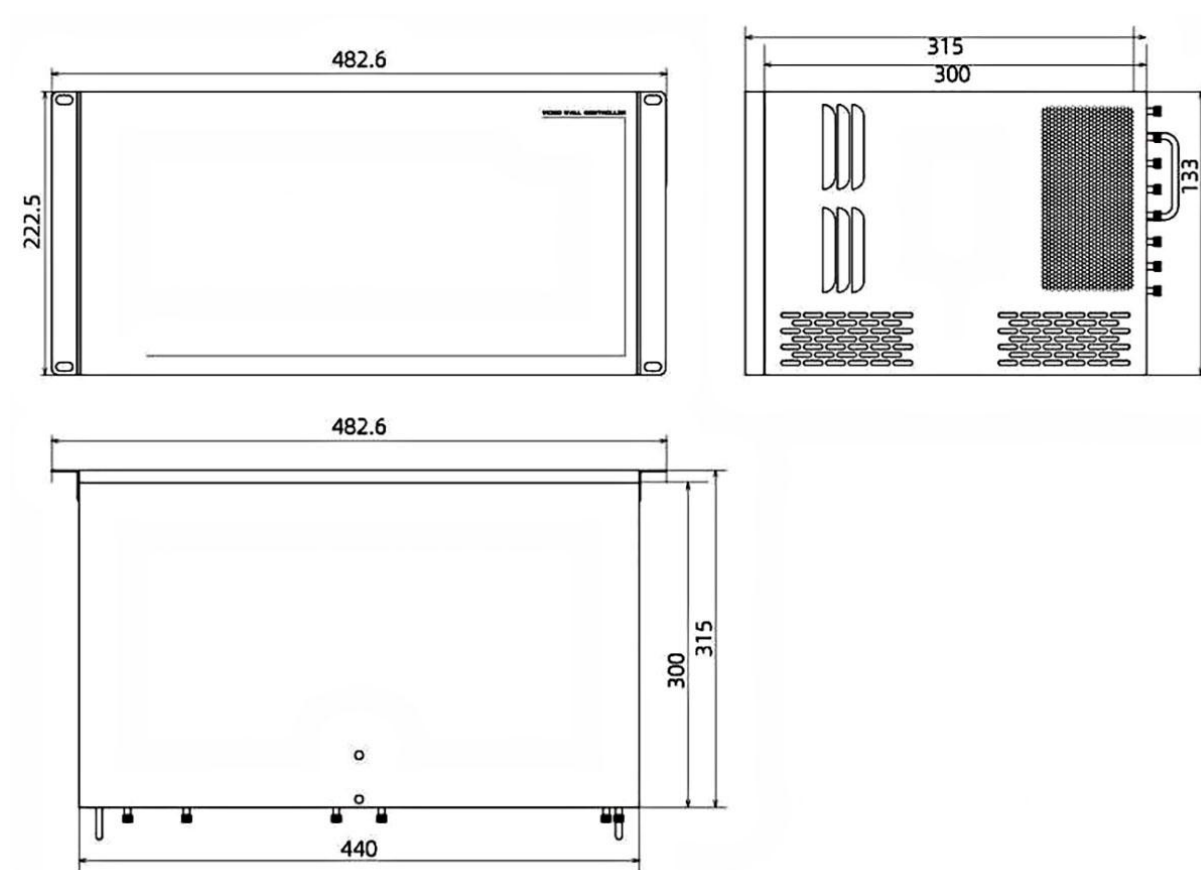
6 Dimensions

6.1 V300



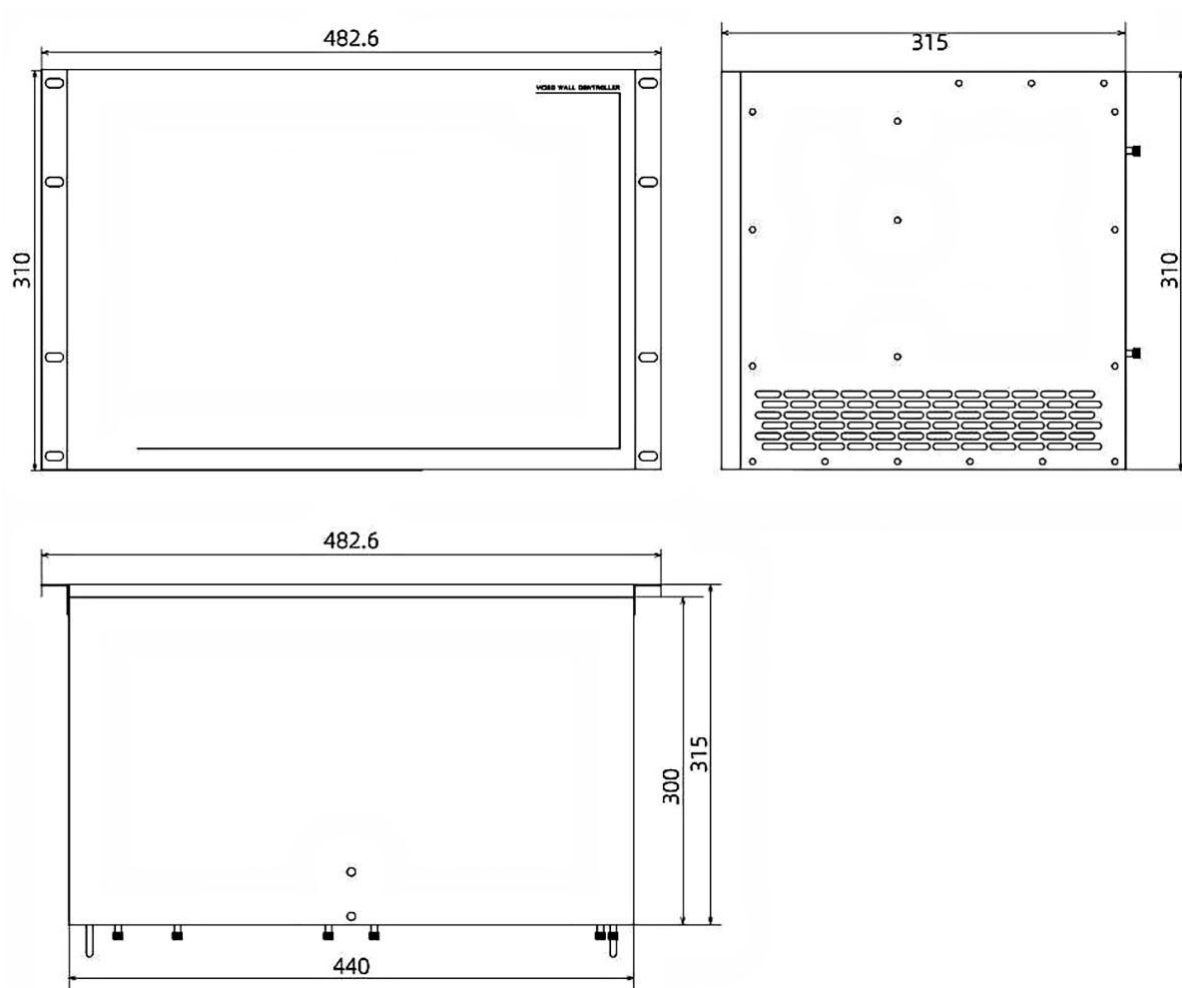
Tolerance: ± 0.3 Unit: mm

6.2 V500



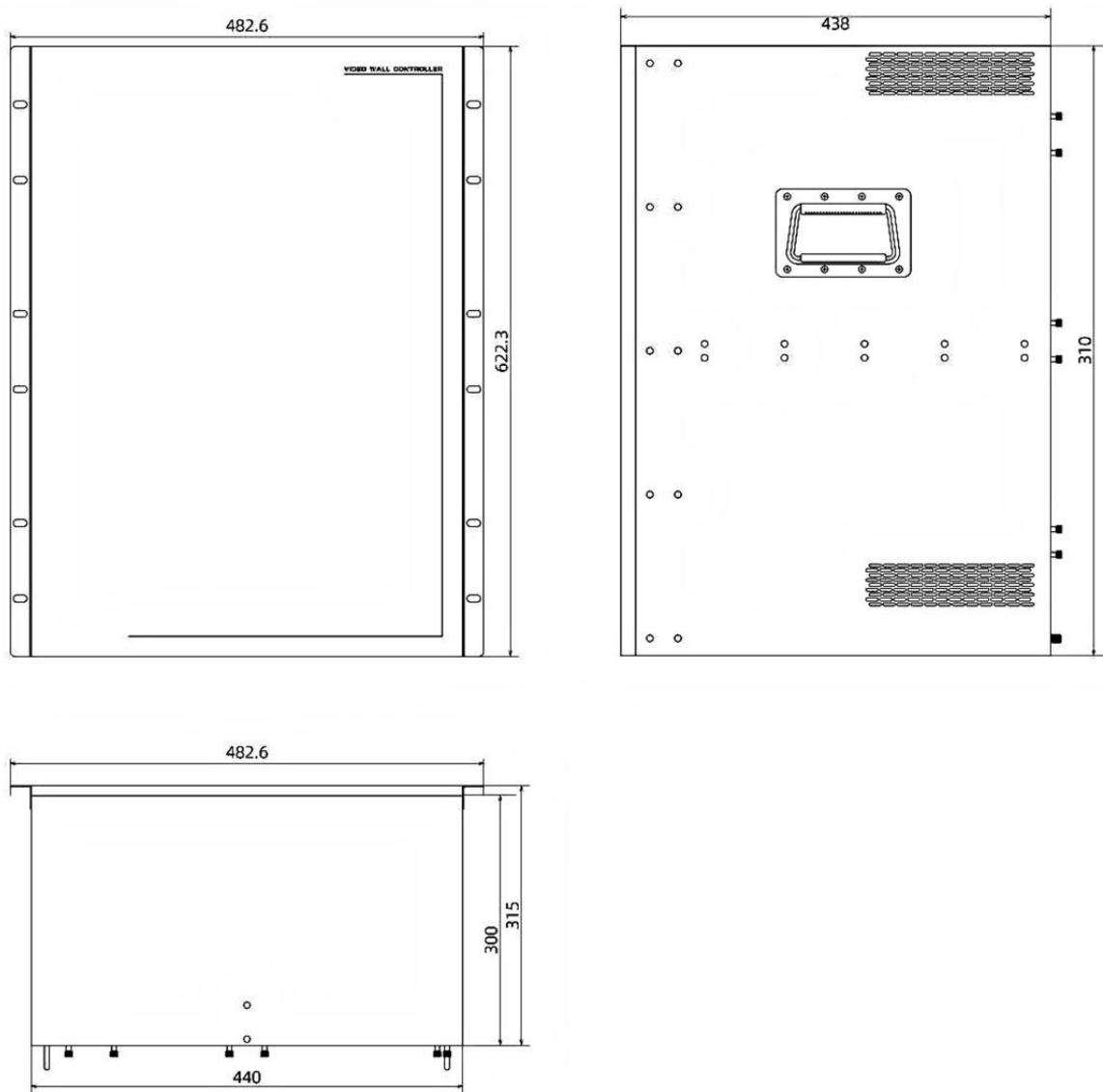
Tolerance: ± 0.3 Unit: mm

6.3 V700



Tolerance: ± 0.3 Unit: mm

6.4 V1400



Tolerance: ± 0.3 Unit: mm

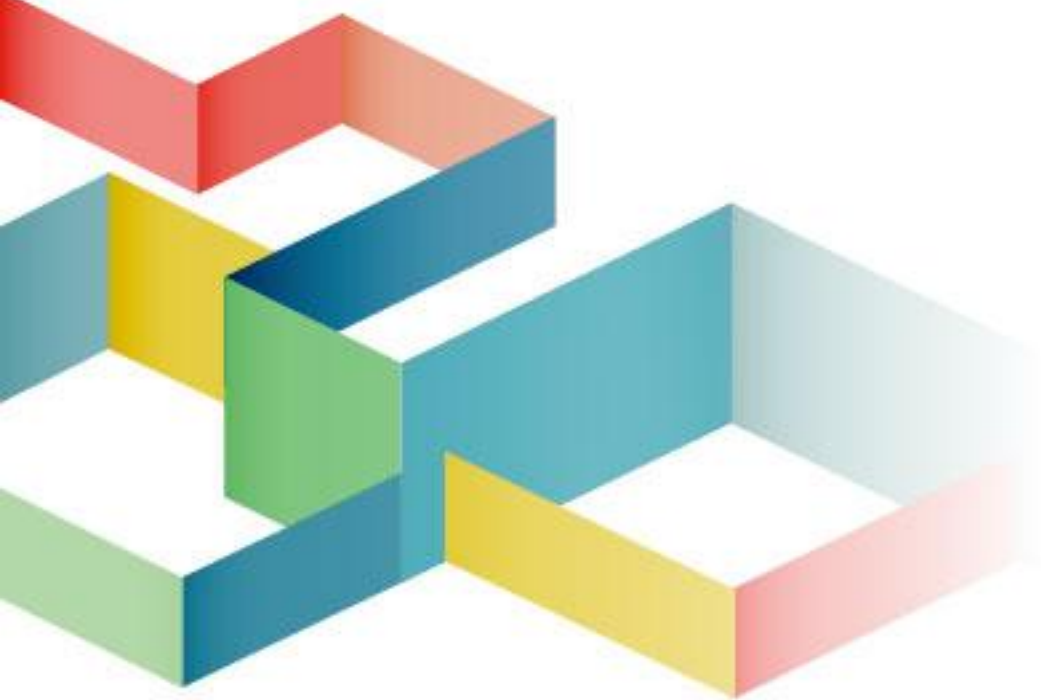
7 Product Specification

V Series Video Splicer				
Model	V300	V500	V700	V1400
Chassis	3U	5U	7U	14U
Maximum Input Channels	2K-36 channels 4K30-24 channels 4K60-6 channels	2K-48 channels 4K30-24 channels 4k60-12 channels	2K-80 channels 4K30-40 channels 4k60-20 channels	2K-160 channels 4K30-80 channels 4k60-40 channels
Gigabit Ethernet Output Channels	40 channels	60 channels	100 channels	200 channels
Single Ethernet Port Output	650000 Pixels			
Maximum Layers	32	48	80	160
Maximum Ethernet Output	26 million Pixels	39 million Pixels	65 million Pixels	130 million pixels
Single Ethernet Port Max Width/ Height	1920/1920			
HDR10 (10-bit enabled)	Maximum bandwidth per port: 1440 Maximum load per port: 480,000 Pixels (Only the first 8 ports can be used)			
Audio	Supports HDMI audio input			
Echo Card	Not supported	Not supported	Not supported	Not supported
Dimensions				
Specification	3U	5U	7U	14U
Size(mm)	482.6×315×133	482.6×315×222.5	482.6×315×310	482.6×438×662.3
Chassis Weight	7.8 kg, ±0.5 kg tolerance	13.7Kg, ±0.5 kg tolerance	15.0Kg, ±0.5 kg tolerance	30.0Kg, ±0.5 kg tolerance
Total Power Consumption	204W	550W×2	550W×2	550W×4
Supply Voltage	110~240V			
Supply Frequency	50~60Hz			

Heat Dissipation	Fan cooling
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8 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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