

iWall M4

Modular Video Wall Controllers

User Manual V1.0



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1. INTRODUCTION

The **iWall M4** series video wall controller is a high-performance seamless switching video processing equipment for LCD and LED wall. Adopting pure-hardware FPGA architecture, it delivers high quality signal images and real-time videos. At the same time, it supports windows arbitrary layout, stretching, scaling, roaming and picture in picture. Furthermore, it employs modular design for personalized combination and future expansion, which is a reliable and flexible product for a video wall up to 76X72 (inputs x outputs) in meeting room, show room, command center and data center etc.

2. FEATURES

- 4 windows (layers) on each display
- 4K60Hz signal input
- Multiple video wall groups (up to 4x video walls)
- Signal preview and monitoring
- High resolution background image
- Scrolling text function
- Text overlay on the input source
- With touch screen on the front panel
- Supports redundant PSU (Power Supply Unit)
- Supports RS232, IP and Web GUI controls
- Supports input signals renaming, cropping, text overlay.
- Support Full HD, 4K UHD inputs and Full HD outputs
- Supports multiple formats inputs and outputs such as HDMI, DisplayPort, DVI, IP streaming
- Supports max. 76X72 inputs x outputs
- Supports both LCD and LED video wall
- Supports windows arbitrary layout, stretching, scaling, roaming and picture in picture
- Supports presets save, recall and auto-cycle
- Supports user's role management
- Supports IP camera decoding and streaming
- Supports videowall ON/OFF control
- Supports Bezel Compensation
- Supports drag-and-drop video layers operation
- Supports firmware upgrade
- Pure-hardware design, without Windows OS vulnerability, virus risks, bluescreen errors

- Supports seamless switching input signals
- Supports adaptive input/output slots

3. HARDWARE

3.1 FRONT PANEL

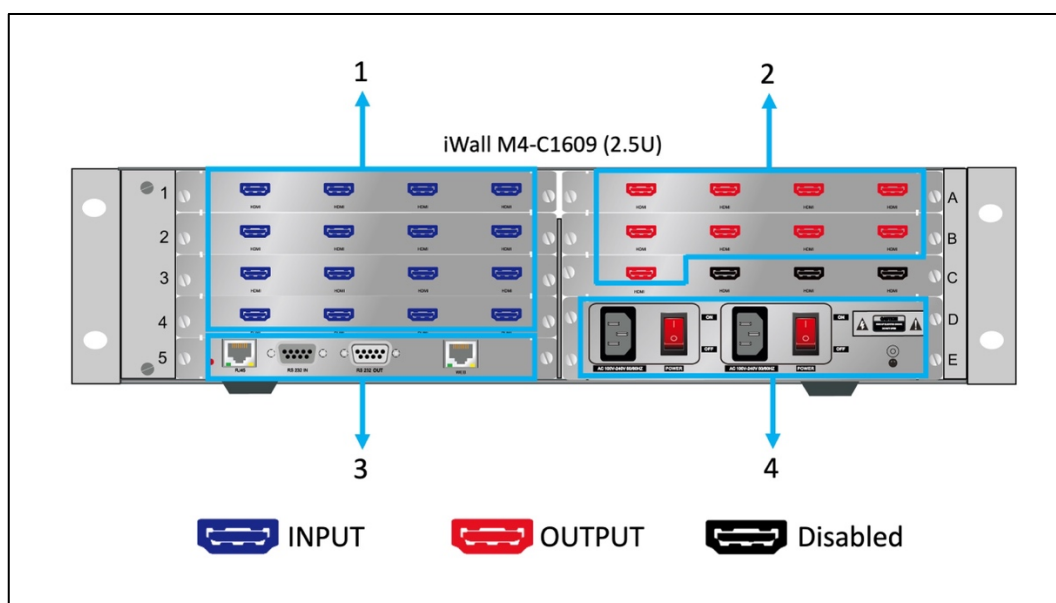


Front Touch Panel	
1	Status: the correspondence between inputs and outputs.
2	Scene: recall the preset.
3	Baud Rate
4	Language switching
5	Buzzer: ON or OFF
6	DHCP

7	IP address: view or modify the IP.
8	Subnet Mask: view or modify.
9	Gateway: view or modify.
10	MAC address: view

3.2 REAR PANEL

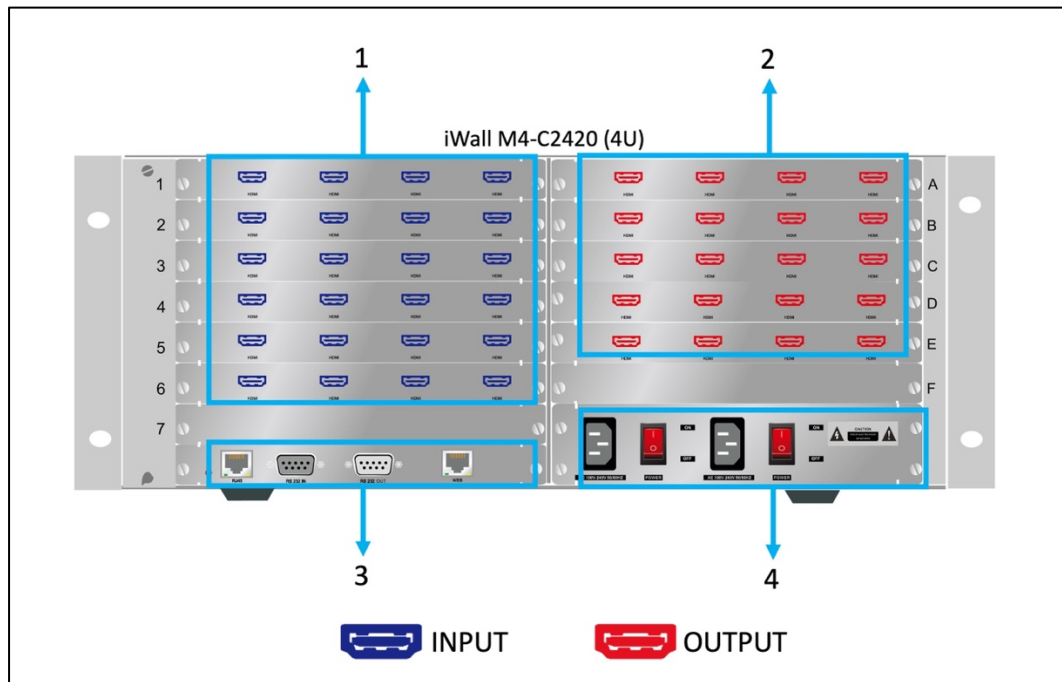
3.2.1 iWall M4-C1609



Model: iWall M4-C1609

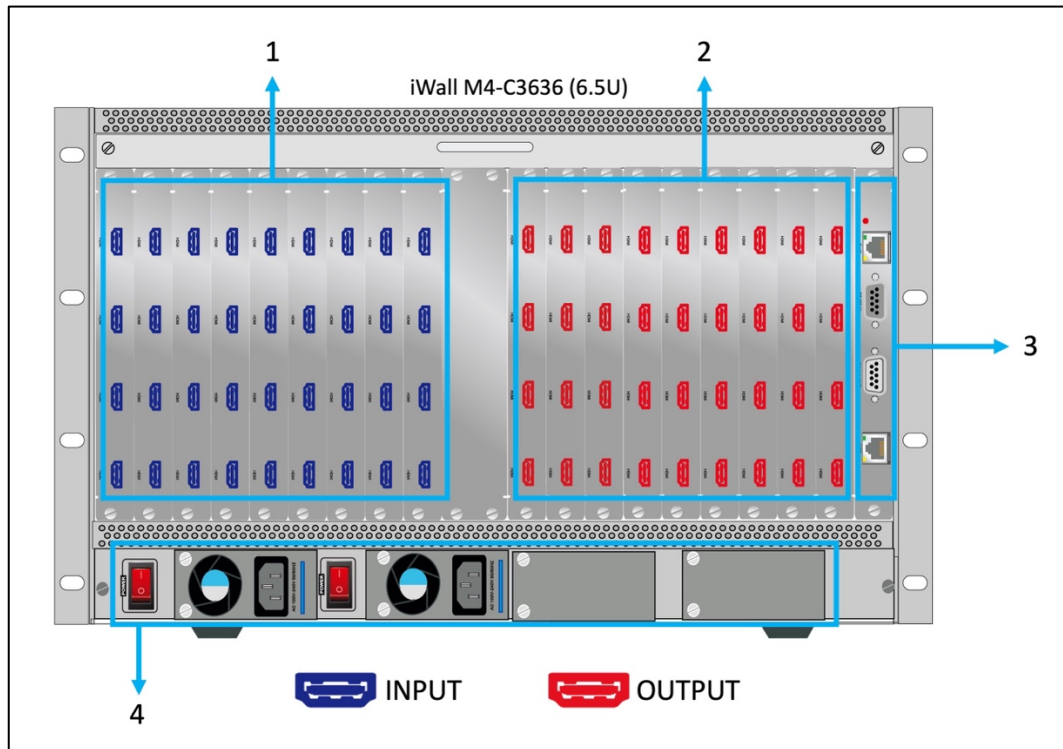
1	INPUT Ports	Input interfaces to be connected with external signals.
2	OUTPUT Ports	Output interfaces to be connected with video wall displays.
3	Control Card	1x RJ45 Control, 1x RS232 IN, 1x RS232 OUT, 1x RJ45 WEB
4	Power Supply	AC100~240V 50/60Hz, Redundant power supply

3.2.2 iWall M4-C2420



1	INPUT Ports	Input interfaces to be connected with external signals.
2	OUTPUT Ports	Output interfaces to be connected with video wall displays.
3	Control Card	1x RJ45 Control, 1x RS232 IN, 1x RS232 OUT, 1x RJ45 WEB
4	Power Supply	AC100~240V 50/60Hz, Redundant power supply

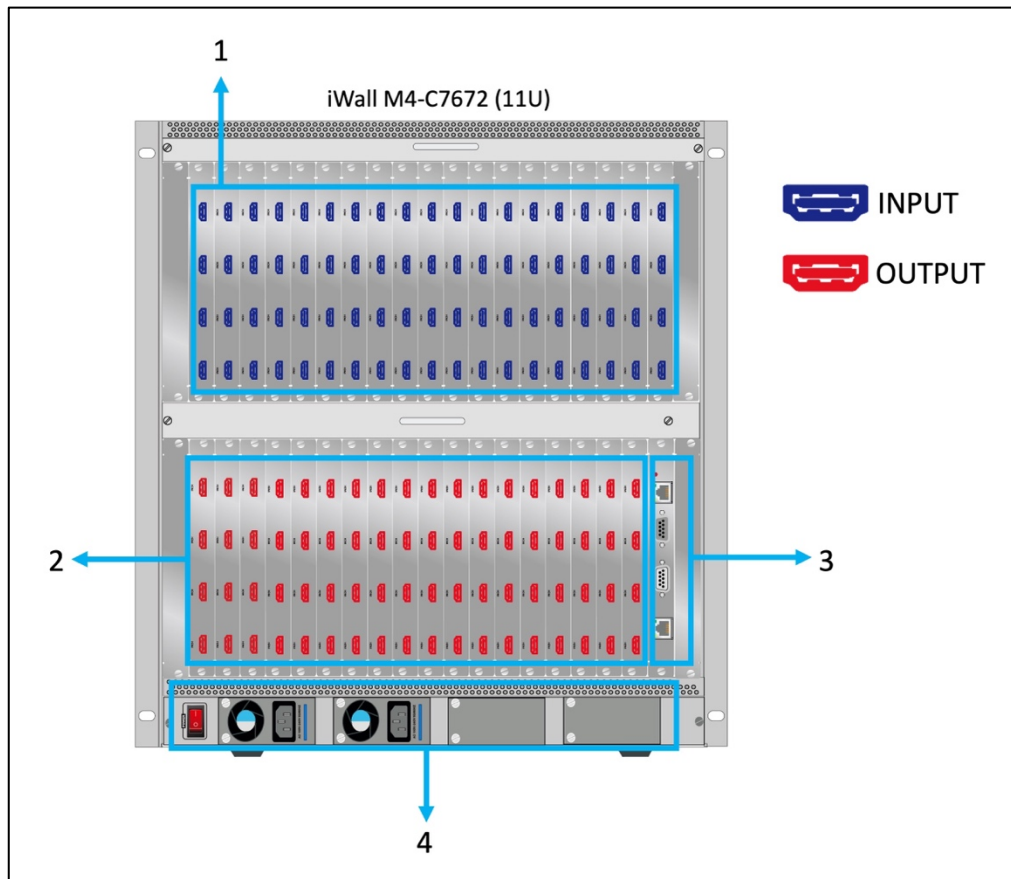
3.2.3 iWall M4-C3636



Model: iWall M4-C3636

1	INPUT Ports	Input interfaces to be connected with external signals.
2	OUTPUT Ports	Output interfaces to be connected with video wall displays.
3	Control Card	1x RJ45 Control, 1x RS232 IN, 1x RS232 OUT, 1x RJ45 WEB
4	Power Supply	AC100~240V 50/60Hz, Redundant power supply

3.2.4 iWall M4-C7672



Model: iWall M4-C7672

1	INPUT Ports	Input interfaces to be connected with external signals.
2	OUTPUT Ports	Output interfaces to be connected with video wall displays.
3	Control Card	1x RJ45 Control, 1x RS232 IN, 1x RS232 OUT, 1x RJ45 WEB
4	Power Supply	AC100~240V 50/60Hz, Redundant power supply

4. CHASSIS SPECS

Model	iWall M4-C1609	iWall M4-C2420	iWall M4-C3636	iWall M4-C7672
Name	Modular Video Wall Controller	Modular Video Wall Controller	Modular Video Wall Controller	Modular Video Wall Controller
Chassis Size	2.5U	4U	6.5U	11U
Max. Input/ Output Slots	4x Input Slots, 3x Output Slots	6x Input Slots, 5x Output Slots	9x Input Slots, 9x Output Slots	19x Input Slots, 18x Output Slots
Max. HD Input/ Output ports	16x9	24x20	36x36	76x72
Input Ports Type	HDMI/ DVI/ DisplayPort/ SDI/IP	HDMI/ DVI/ DisplayPort/ SDI/IP	HDMI/ DVI/ DisplayPort/ SDI/IP	HDMI/ DVI/ DisplayPort/ SDI/IP
Output Ports Type	HDMI/ DVI	HDMI/ DVI	HDMI/ DVI	HDMI/ DVI
Input Resolution	1920 x 1200 60Hz; 4096 x 2160 60Hz	1920 x 1200 60Hz; 4096 x 2160 60Hz	1920 x 1200 60Hz; 4096 x 2160 60Hz	1920 x 1200 60Hz; 4096 x 2160 60Hz
Output Resolution	1920 x 1200 60Hz	1920 x 1200 60Hz	1920 x 1200 60Hz	1920 x 1200 60Hz
Video Layers per Display	Max. 4 video windows on each display	Max. 4 video windows on each display	Max. 4 video windows on each display	Max. 4 video windows on each display
Power Consumption	100W	150W	200W	350W
Power Supply	100-240V, 50/60Hz	100-240V, 50/60Hz	100-240V, 50/60Hz	100-240V, 50/60Hz
Operating Temperature	-20 to +70 °C	-20 to +70 °C	-20 to +70 °C	-20 to +70 °C
Humidity	10%- 90%	10%- 90%	10%- 90%	10%- 90%
Control Methods	Front touch screen; RS232; LAN, Web GUI	Front touch screen; RS232; LAN, Web GUI	Front touch screen; RS232; LAN, Web GUI	Front touch screen; RS232; LAN, Web GUI

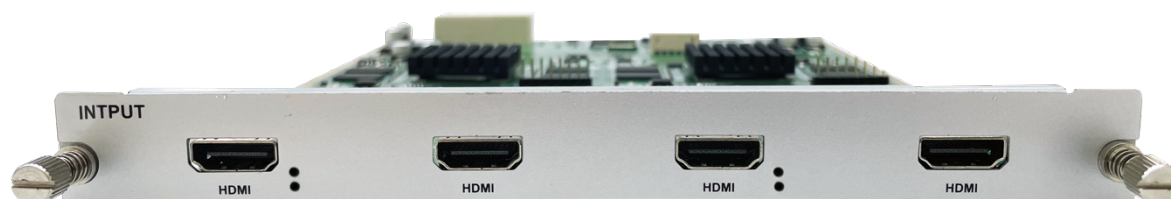
PSUs (Default)	2	2	2	4
Product Dimension	440 x 350 x 112 mm	440 x 350 x 178 mm	440 x 400 x 290 mm	440 x 400 x 490 mm
Net Weight	10kg	13kg	22kg	34kg
Package Dimension	590 x 510 x 225 mm	590 x 510 x 310 mm	592 x 510 x 450 mm	610 x 580 x 690 mm
Gross Weight	13kg	16kg	26kg	41kg

5. CARDS SPECS

5.1 INPUT CARDS

5.1.1 iWall M4-IN-4HDMI

Name: 4 channels 1080P HDMI input card

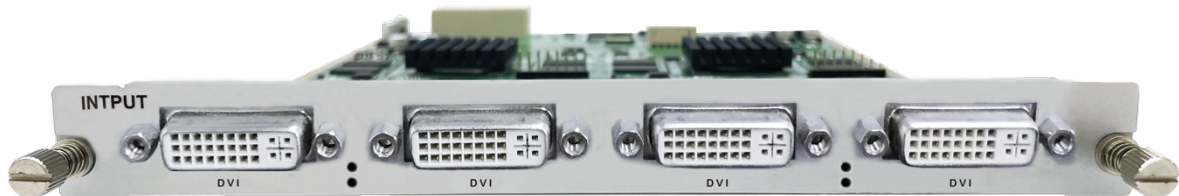


Card Model	iWall M4-IN-4HDMI	
Input Port	4x HDMI Type A ports	
Specification	Format	HDMI 1.3/DVI 1.0
	Signal level	T.M.D.S. 2.9V~3.3V
	Impedance	50Ω

	Resolution	1920 x 1200@60Hz
	Input channels	4

5.1.2 iWall M4-IN-4DVI

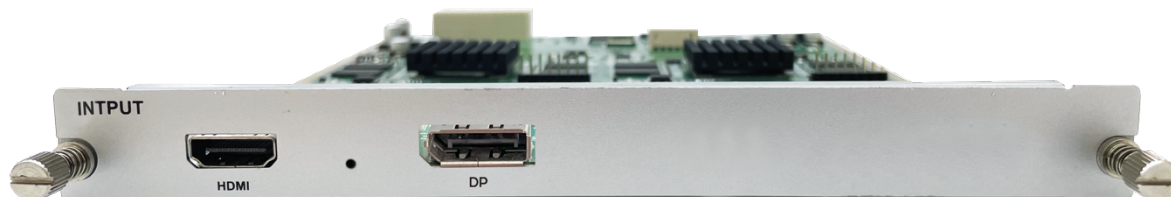
Name: 4 channels DVI input card



Card Model	iWall M4-IN-4DVI	
Input Port	4x 24+5 pin DVI-I	
Specification	Format	DVI 1.0
	Signal level	T.M.D.S. 2.9V~3.3V
	Impedance	50Ω
	Resolution	1920 x 1200@60Hz
	Input channels	4

5.1.3 iWall M4-IN-1HDMI4K

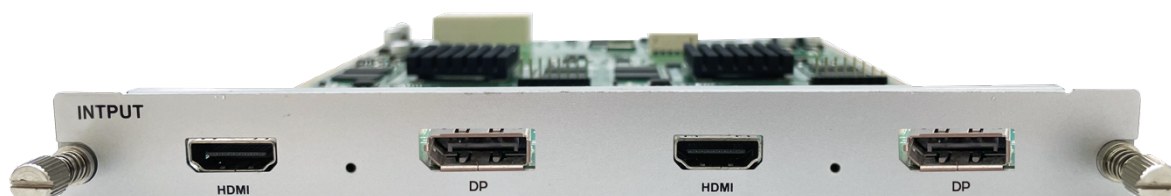
Name: 1 channel 4K60 HDMI or DP input card



Card Model	iWall M4-IN-1HDMI4K	
Input Port	1x HDMI Type A or 1x DP	
Specification	Format	HDMI 2.0 /DVI 1.0
	Signal level	T.M.D.S. 2.9V~3.3V
	Impedance	50Ω
	Resolution	3840 x 2160@60Hz
	Input channels	1

5.1.4 iWall M4-IN-2HDMI4K

Name: 2 channels 4K30 HDMI or DP input card

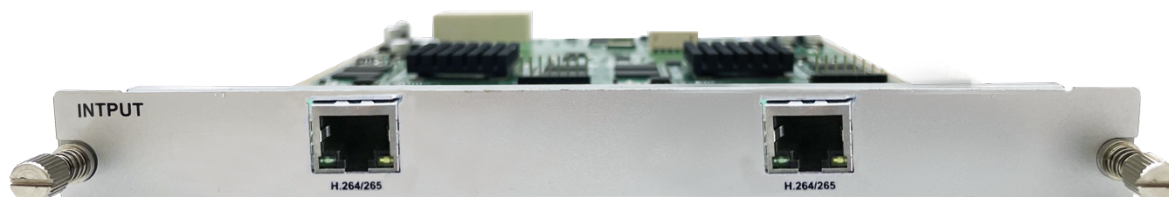


Card Model	iWall M4-IN-2HDMI4K
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Input Port	2x HDMI Type A or 2x DP	
Specification	Format	HDMI 1.4 /DVI 1.0
	Signal level	T.M.D.S. 2.9V~3.3V
	Impedance	50Ω
	Resolution	3840 x 2160@30Hz
	Input channels	1

5.1.5 iWall M4-IN-2IP

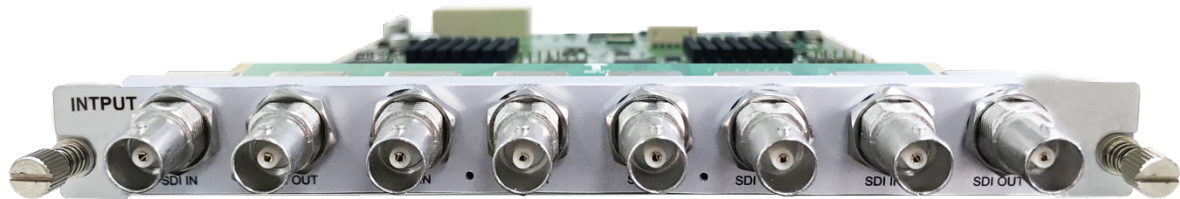
Name: 2 channels IP Streaming input card



Card Model	iWall M4-IN-2IP	
Input Port	2x RJ45	
Specification	Protocol	RTSP, HTTP, ONVIF etc.
	Signal format	H.264, H.265, MPEG-4
	Decoding	2x4K / 8x1080P / 18x720P
	Multiview layers	1/2/4/9/16
	Input channels	2

5.1.6 iWall M4-IN-4SDI

Name: 4 channels SDI input card

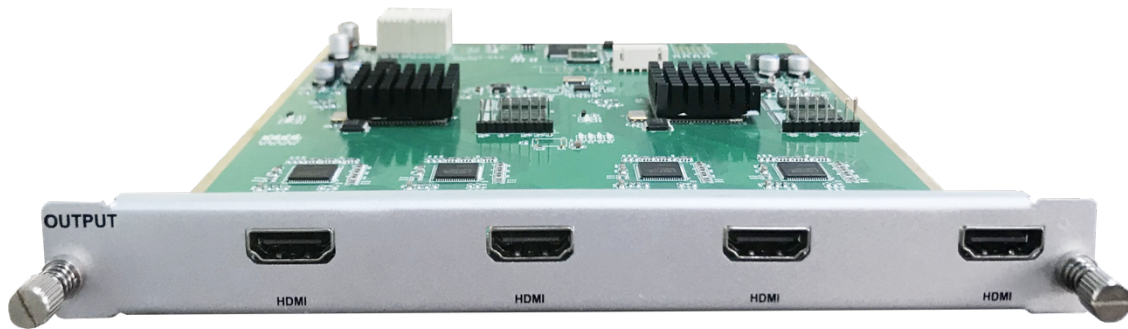


Card Model	iWall M4-IN-4SDI	
Input Port	8x BNC	
Specification	Format	SD/HD/3G-SDI
	Signal level	InputSDI: 1Vpp/ 0.9Vpp Loopout SDI: 0.9Vpp
	Impedance	75Ω
	Resolution	2.97Gbps, 1920x1080@60Hz
	Input channels	4

5.2 OUTPUT CARDS

5.2.1 iWall M4-OT-4HDMI

Name: 4 channels 1080P HDMI output card



Card Model	iWall M4-OT-4HDMI	
Output Port	4x HDMI Type A female	
Specification	Format	HDMI1.3
	Signal level	T.M.D.S.2.9V~3.3V
	Impedance	50Ω
	Resolution	1920x1080@60Hz
	Output channels	4

5.2.2 iWall M4-OT-4DVI

Name: 4 channels 1080P DVI output card

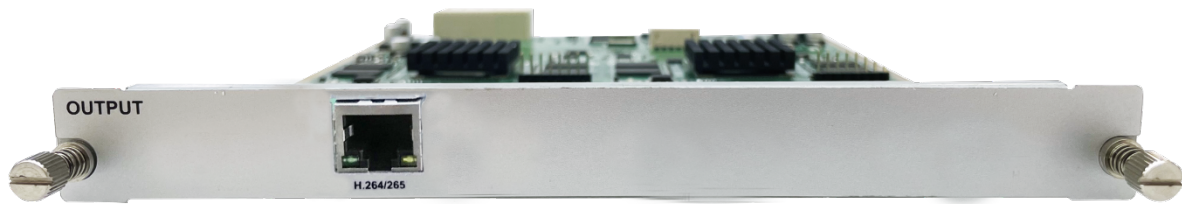


Card Model	iWall M4-OT-4DVI	
Output Port	4x 24+5 pin DVI-I	
Specification	Format	DVI 1.0
	Signal level	T.M.D.S.2.9V~3.3V
	Impedance	50Ω
	Resolution	1920x1080@60Hz
	Output channels	4

5.3 FUNCTIONAL CARDS

5.3.1 iWall M4-PV-IP

Name: 1 channel IP Preview card

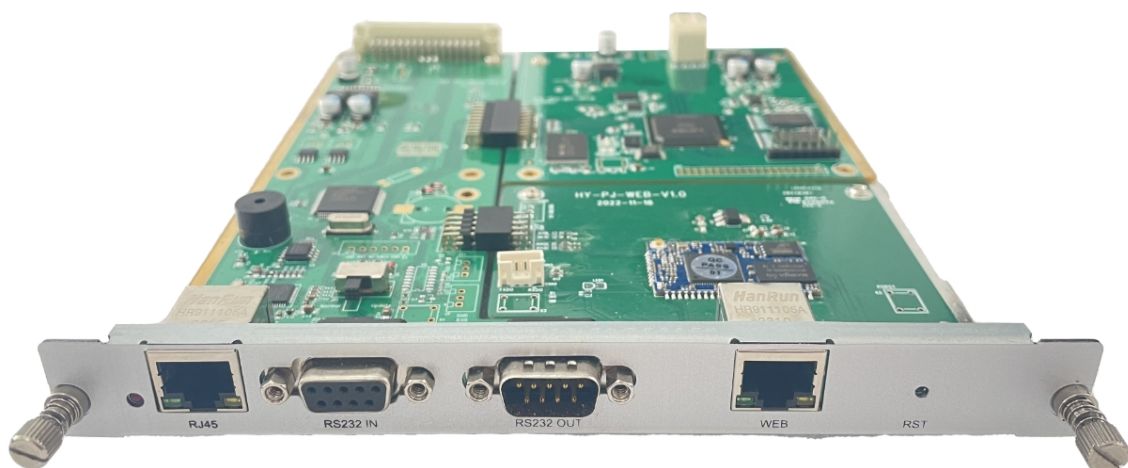


Card Model	iWall M4-PV-IP	
Specification	Interface	1x RJ45
	Protocol	H.264/265
	Preview	Suggest maximum 16 channel sources preview.

5.4 CONTROL CARDS

5.4.1 iWall M4-CTL

Name: Control card



Card Model	iWall M4-CTL	
Specification	Interface	1x RJ45 Control; 1x RS232 IN, 1x RS232 OUT, 1x RJ45 Web
	Protocol	H.264/265

5.5 CARDS & ACCESSORIES DATASHEET

Type	Model	Name	Port Type	Ports Qty.	Resolution	N. W	G. W	Product Dimension	Package Dimension
INPUT Cards	iWall M4-IN-4HDMI	4 channels 1080P HDMI input card	HDMI	4	Up to 1920x1200/60Hz	0.26 kg	0.38 kg	213x168mm	247x220x50mm
	iWall M4-IN-4DVI	4 channels DVI input card	DVI	4	Up to 1920x1200/60Hz	0.26 kg	0.38 kg	213x168mm	247x220x50mm
	iWall M4-IN-1HDMI4K	1 channel 4K60 HDMI or DP input card	HDMI/DP	1	Up to 3840x2160/60Hz	0.24 kg	0.36 kg	213x168mm	247x220x50mm
	iWall M4-IN-2HDMI4K	2 channels 4K30 HDMI or DP input card	HDMI/DP	2	Up to 3840x2160/30Hz	0.26 kg	0.38 kg	213x168mm	247x220x50mm
	iWall M4-IN-2IP	2 channels IP Streaming input card	RJ45	2	Up to 3840x2160/30Hz	0.24 kg	0.36 kg	213x168mm	247x220x50mm
	iWall M4-IN-4SDI	4 channels 3G-SDI input card	3G-SDI	4	Up to 1920x1200/60Hz	0.36 kg	0.48 kg	213x168mm	247x220x50mm
OUTPUT Cards	iWall M4-OT-4HDMI	4 channels 1080P HDMI output card	HDMI	4	Up to 1920x1080/60Hz	0.28 kg	0.4 kg	213x168mm	247x220x50mm

	iWall M4-OT-4DVI	4 channels 1080P DVI output card	DVI	4	Up to 1920x1080/60Hz	0.3 kg	0.42 kg	213x168mm	247x220x50mm
Preview Card	iWall M4-PV-IP	1 channel IP Preview card	RJ45	1	Up to 1920x1080/60Hz	0.24 kg	0.36 kg	213x168mm	247x220x50mm
Control Card	iWall M4-CTL	Control card with Network control, RS232 IN, RS232 OUT and Web Control	RJ45, RS232			0.34 kg	0.46 kg	213x168mm	247x220x50mm
Power Supply	iWall M4-PSU	Redundant Power Supply Unit							