geratech®

EGE-VWC2-W-XU

Hardware- Based Audio Supported

Modular Video Wall Controller

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1. Overview

EGE-VWC2-W-XU is a high-performance video processing server without any operating system. It delivers high quality signal images and real-time video as it adopts large-capacity high-speed FPGA array and processing mechanism of CrossPoint data routing and exchange. Thanks to its hardware-based structure, it features extremely high stability, fast startup speed and supports 365x24 hours of uninterrupted and stable operation. It can be widely used in security monitoring, exhibitions, military command, education and scientific research, government announcements, commercial displays and other industries.

2. Features
- Max 4 layers per screen
- Maximum 144 displays with 15 RU
- Maximum 144 full HD video sources with 15 RU
- Side-by-side, overlap, and picture in picture image positioning
- Output mapping on software, no need for fixed cable-to-display correspondence
- Seamless switching between sources
- Arbitrary cropping and content enlargement for the input image
- Bezel compensation for displays
- Automatic detection of input signals indicates the I/O status on the control software
- Built in matrix-switcher function, any source image can be routed to any display
- Supports the pre-operation mode to avoid possible wrong operation
- Total 32 preset modes to be recalled in future
- Free easy-to-use configuration and control software

3. Optional Functions

- DVI I/O board available
- 4K HDMI up to 3840x2160 resolution
- Embedded HDMI audio from any source can be routed to each HDMI output and 3.5mm audio output
- OSD text on HDMI input source
- Vector subtitle display board
- Web Brower control via cross-platform from Windows, iOS, MacOS, Android, HDMI, DVI, VGA, CVBS, SDI, IP, DP, YPbPr, HDBaseT, Optical Fiber inputs
- HDMI, DVI, VGA, CVBS, SDI, HDBaseT, Optical Fiber outputs
- 2/4 input ports option to save cost
- Support mobile phone, tablet computer, laptop screen mirroring push function.
- Support redundant power supply, one normal power supply and one backup power supply. If the normal power supply fails, it will automatically switch to the backup power supply.
- Push multiple web pages, videos, pictures and other media resources onto video wall, and all media resources can be displayed on a single screen or spliced to achieve point-to-point uncompressed display
- IP stream real-time decoding, support H.265, ONVIF, RTSP and other network streaming media protocols, compatible with mainstream brands of network cameras (IPC), NVR, video streaming servers, etc.; a single network port supports up to 64 channels of D1, 32 Channel 720P, 16 channels 1080P, 4 channels 4K decoding.
- Built-in Media player for media fiels such as rmvb, avi, mpeg, dat, mov, mkv, wmv, mp3, wma, wav, jpg, gif png; and support PDF, dynamic web page, weather, time, scrolling subtitles, etc.

4. Modular Chassis Architecture

1U Chassis

1 input slot, 1 output slot, chassis dimension 837x250x445mm, weight <= 5 KG, power consumption <=50W
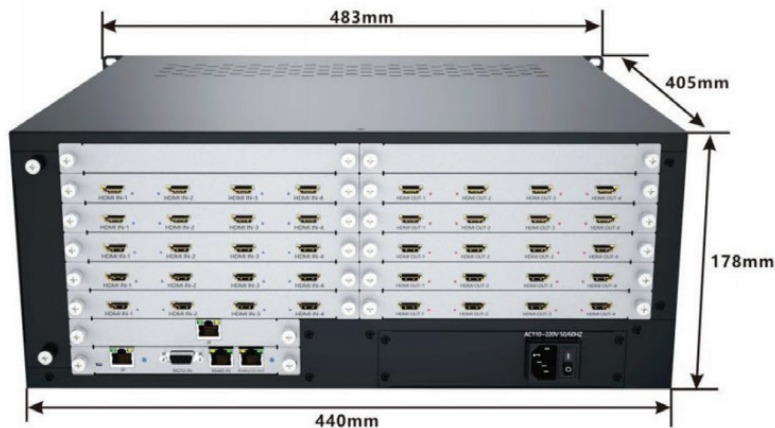

2U Chassis

2 input slot, 4 output slot, chassis dimension 483x370x89mm, weight <= 10 KG, power consumption <=100W
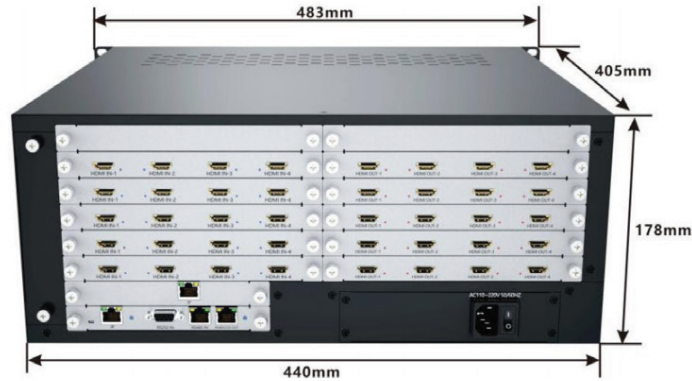

4U-C16 Chassis

4 input slot, 8 output slot, chassis dimension 483x405x178mm, weight <= 20 KG, power consumption <=200W
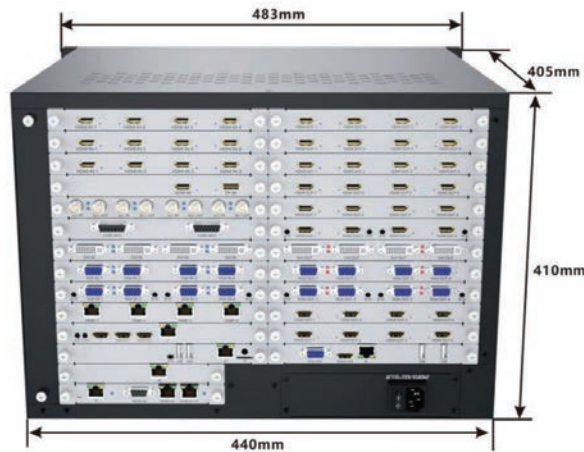
4U-C34 Chassis

4 input slot, 4 output slot, chassis dimension 483x405x178mm, weight <= 20 KG, power consumption <=200W
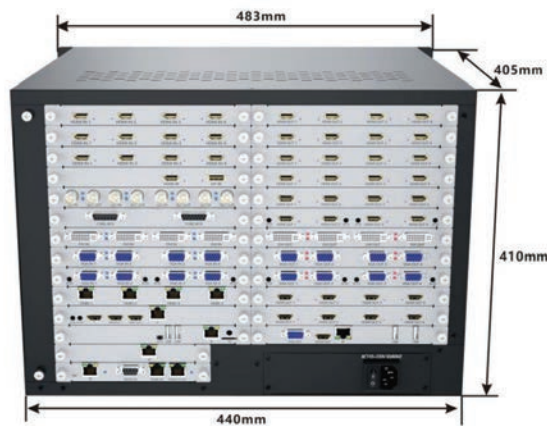

7U-C72 Chassis

18 input slot, 9 output slot, chassis dimension 483x405x410mm, weight <= 30 KG, power consumption <=350W

7U-C144 Chassis

18 input slot, 18 output slot, chassis dimension 483x405x410mm, weight <= 30 KG, power consumption <=350W

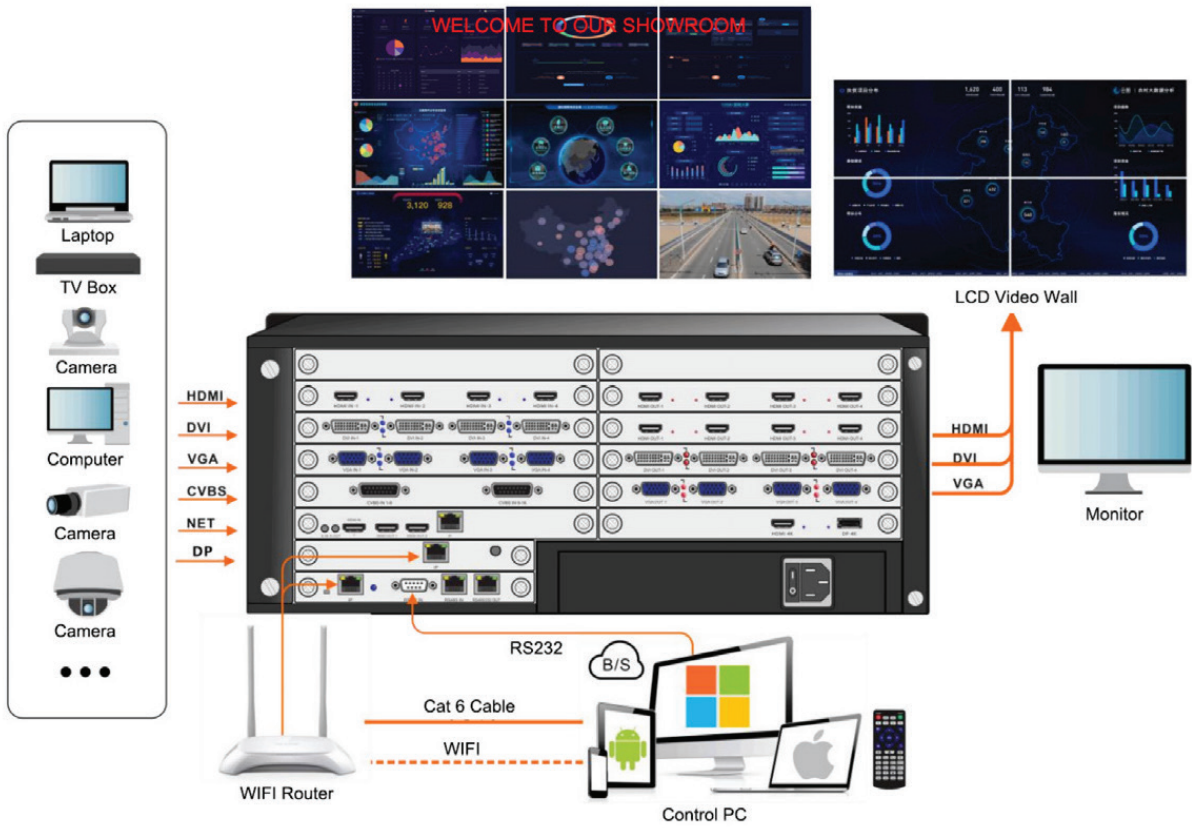| Type	Name	Parameters
Output Board	HDMI output board	4/2 channels of HDMI Type A (Female), Suppport HDMI1.3 and HDCP,max output resolution 1920*1080@60Hz;supports embedded HDMI audio output when input card supports audio in;
	DVI-D output board	4/2 channels of DVI, 24+5 Pin, DVI-I(Female,Digital Signal Only) Max output resolution 1920*1080@60Hz;
	VGA output board	4 channels of DVI, 24+5 Pin, DVI-I(Female,Digital Signal Only),Max output resolution 1920*1080@60Hz;
	CVBS output board	4 channels of CVBS outputs (Female BNC connector), Max output resolution 720*576@60Hz;
	SDI output board	4 channels of SDI outputs (Female BNC connector), Max output resolution 1920*1080@60Hz;
	HDBaseT output board	4 channels of HDBaseT outputs (RJ45 Connector), Max output resolution 1920*1080@60Hz, transmit up to 70 meters far away;
	Optical fiber output board	4 channels of Fiber Optics outputs, Max output resolution 1920*1080@60Hz, transmit up to 10 KM;
Input Board	HDMI input board (Basic)	4/2 channels of HDMI Type A (Female), Suppport HDMI1.3 and HDCP,max output resolution 1920*1080@60Hz;
	DVI input board	4/2 channels of DVI ,24+5 Pin, DVI-I(Female,Digital Signal Only),Max output resolution 1920*1080@60Hz;
	VGA input board	4/2 channels of VGA, Max output resolution 1920*1080@60Hz;
	CVBS input board	Support PAL/NTSC format, support brightness, contrast, gray scale, saturation adjustment;16 or 8 channels
	4K HDMI1.4 input board	Support 1 channel of HDMI1.4 input, the maximum support resolution is 3840x2160@30Hz;

	IP Plus input board	One port supports to decode 4 channels of 4K or 16 channels of 1080P or 32 channels of 720P or 64 channels of D1 video decoding, supports H.264 and H.265 video compression formats; each IP Plus board supports 4 IP channels, each IP channel supports 1/4/9/16 screen split;
	HDMI input board (Enhanced)	4 channels of HDMI Type A (Female), Suppport HDMI1.3 and HDCP☐max output resolution 1920*1080@60Hz;Support embedded audio inside HDMI;support OSD on HDMI source☐OSD text font type and size , background and foreground color can be adjusted by control software;
	VGA input board (Enhanced)	DB-15M port, max resolution 1920*1080@60Hz, support separate 3.5mm audio inputs; support OSD text on the VGA source;
	YPbPr input input board	DB-15M port, max resolution 1920*1080@60Hz, connect via DB-15M to R G B component adapter cable provided;
	HDMI Rotation input board	HDMI1.3 digital interface, support HDCP, maximum support resolution 1920*1080@60Hz; support 90 degree, 180 degree, 270 degree real-time rotation function;
	SDI input board	Support 4-channels of SDI input (BNC female), maximum support resolution 1920*1080@60Hz;
	HDBaseT input board	Supports 4 channels of HDBaseT input, maximum input resolution of 1920*1080@60Hz, transmit up to 70 meters through Cat6 network cable;
	Optical fiber input board	Support 4 channels of fiber optic input, maximum input resolution 1920*1080@60Hz, maximum transmission distance 10KM;
	Android input board	Support 1 channel Android system signal input (each channel maximum output resolution 1080P), configuration: CPU: Cortex-A7 eight-core; memory: 1GB DDR3; storage: 8GB eMMC; support CS, BS architecture information posting system; support digital title , Scrolling banner posting, support electronic clock, real-time weather and other control display, support independent editing of graphic information;

	Mobilephone/ Tablet Wireless screen push input board	Configuration: CPU: Cortex-A17 quad-core 1.8GHz; memory: 1GB DDR3; storage: 8GB eMMC; 1 RJ45 100M Ethernet port; ios system can directly use the built-in airplay mirroring function, Windows and Android systems need to install professional Projection software. You can directly mirror mobile phones, tablets, and computers in the same local area network to the display screen.
Other Function	WEB MCU Control Board	Integrated with WEB server board inside MCU; supports Web Brower control through different OS platforms such as Windows, IOS, MAC OS, Android, Linux;
	Subtitle Board	Supports ultra-high-definition point-to-point vector subtitle; Subtitle running-speed can be set arbitrarily, and subtile font and color are adjustable. Subtitle occupies the top iwindow layer by default.
	RPSU (only for 4U/7U)	When the normal power supply fails, it will automatically switch to the backup power supply.
	RPSU (only for 10U/15U)	When the normal power supply fails, it will automatically switch to the backup power supply.
	Windows-based Preview output board	Support the real-time network preview of input soruce to avoid misoperation of switching signals in important occasions; support the visual echo function of the entire large-screen signal, real-time control of the large-screen display status; single card supports up to 8 channels of high-definition signals Monitoring, customers can choose to configure multiple Preview boars to preview more channels of sources; Only used for Windows-based control software

	Multiplatform-based Preview output board	Support the real-time network preview of input soruce to avoid misoperation of switching signals in important occasions; support the visual echo function of the entire large-screen signal, real-time control of the large-screen display status; single card supports up to 8 channels of high-definition signals Monitoring, customers can choose to configure multiple Preview boars to preview more channels of sources; support Windows, IOS, MAC OS, Android, Linux, Kylin and other operating systems
	Digital Signage Control System	Digital Signage Control system is designed based on the C/S architecture, and supports various media such as videos, pictures, texts, web pages, etc. to be displayed on the ultra-high resolution windows desktop according to the preset layout. At the same time, it can also integrate the display of daily information such as weather forecast, clock information, and flight subtitles; multiple computers can be controlled simultaneously without being affected. The operating software supports common operations such as signal creation, name naming, pattern creation, pattern polling, signal scaling, signal splicing, signal superimposition, signal topping, signal bottoming, signal clearing, etc. The server of digital signage system must be installed with license.
	Front panel OSD display and menu buttons	2.4-inch full-color LCD screen and buttons to display real-time device information and fast switching of input signals, load and save

Chassis					
Type	Input Slot	Output Slot	MCU Slot	Max Input	Max Output
1U*	1	1	1	4	4
2U*	2	4	1	8	16
4U-C16*	4	8	1	16	32
4U-C34*	8	4	1	32	16
7U-C72	18	9	1	72	36
7U-C144	18	18	1	72	72
10U-C144	27	18	1	108	72
15U-C144	36	18	1	144	72
15U-C288	36	36	1	144	144
Power Supply	AC100~240V, 50/60Hz				
Working Temperature	0-50°C				
Working Humidity	10%-90% non-condensation				

5. DIAGRAM