

COMPLETE SOLUTIONS FOR IMAGE PROCESSING & DISPLAY CONTROL



Micagent

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LED/LCD VIDEO WALL PROCESSOR

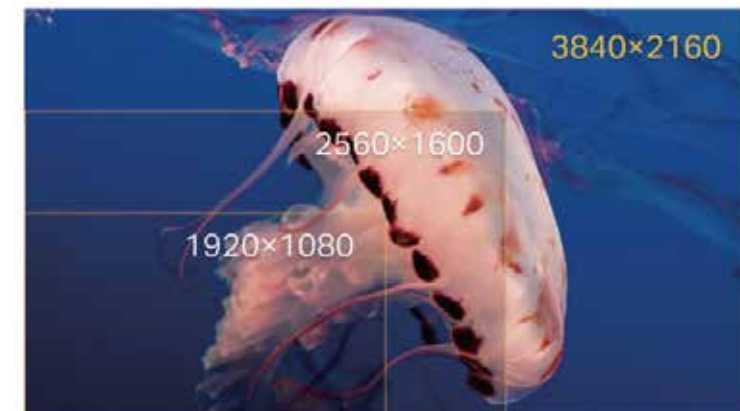
Video wall processor using high-capacity adjustment FPGA array + DSP high-speed image processing program, seamless bus-based hardware architecture, for a variety of input signal sources, within the RGB24bit/60Hz processing, to ensure that the input signal is highly reproducible; at the same time, built-in high-performance scaling engine, support for multi-screen input and output seamless splicing. Fundamentally ensure full real-time processing of all input signal sources, the output image is clear, smooth, no delay; applicable to security monitoring, command and control, exhibition display, scientific research and education, multimedia conferencing, IOT big data center and other industries.



Features

Real 4K. Really wonderful

Supports 3840×2160@30Hz input and output; Backward compatible with 1080p; Combined 4K displays achieve 16K visual effects.



Multi-Layer Display

Single output port supports 2/4 layers; Single card supports shared 8-layer resources; Signal sources can be opened, scaled, and roamed arbitrarily on the video wall.



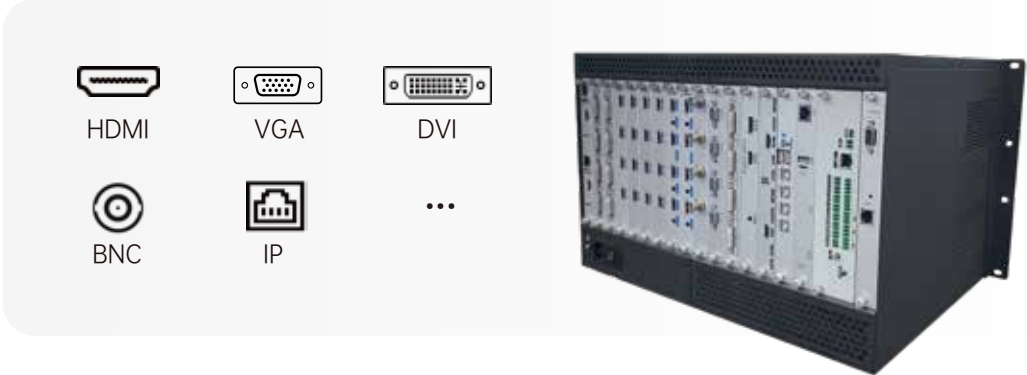
High-Performance IPC Decoding

Supports ONVIF, RTSP, GB28181 compliant IP cameras/NVRs; Single IP decoding card capacity: 2× 4K streams, 8× 5MP/4MP/3MP streams, 18× 1080p streams, 32× 720p streams, 72× D1 resolution streams.



Multi-Format Signal Input/Output

Support VGA, DVI, HDMI, SDI, BNC, IPC, DP (transfer) and other signal interfaces.flexible selection , applicable to various scenarios.



Voice & Semantic Control

Mobile app enables voice control for video wall presets, window magnification, LED welcome messages, window positioning/movement.



Preview and monitor.

With the preview monitoring card, the status of input and output signals can be monitored in real time.



Integrated center control

Support the built-in central control system, can realize multiple RS232, RS485, etc. to the conference room equipment audio, curtains, power, lighting, air conditioning, conference head cameras, etc. to carry out unified control.



LED subtitle display

Customizable scrolling subtitles, you can edit the display content, font, color, bringing more flexible and rich display for large screens.

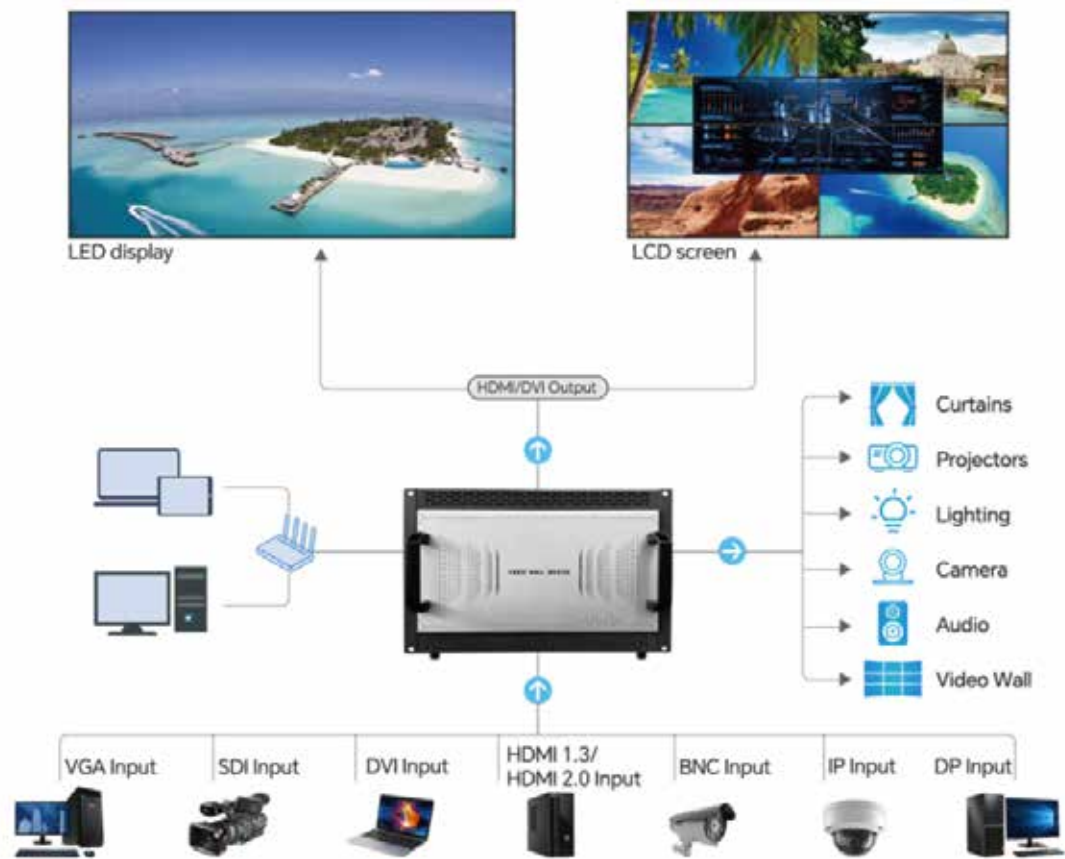


Diversified control methods

Supports C/S clients and browser-based B/S control via TCP/IP networks & RS232 serial ports. Enables real-time multi-user operations for defining, scheduling, and centralized management of heterogeneous signal sources.



System Diagram



Parameters

Chassis Specification					
Chassis Height	2U	3U	6U	12U	24U
Number of Inputs	8	16	36	72	144
Number of Outputs	12	20	36	72	144
Support 2.6M pixel sending box	12	20	36	72	144
Output Voltage	110-400V AC				
Frequency	50/60Hz				
Dimensions (W×D×H)	48×33×10mm	48×33×16mm	48×35×26.5mm	48.5×44.5×53mm	48.5×44.5×93.5mm
Backup Power Module (Option)	×	✓	✓	✓	✓

Input Board			
Port Type	Signal Type	Ports Qty	Resolution
HDMI	HDMI1.3	2	1920×1080@60HZ&EDID management
SDI	3G SDI	4	1080i@60hz 1080P@60hz 720P@60hz
DVI	DVI-D	4	1920×1080@60hz&EDID management
DP(adapter)	DP 1.1	1	3840×2160@60Hz/30Hz & EDID Management (Optional)
HDMI (4K@30HZ)	HDMI2.0	2	3840×2160@30Hz&EDID Management(Optional)
HDMI (4K@60HZ)	HDMI2.0	1	3840×2160@60Hz&EDID Management(Optional)
HDMI (8K@30HZ)	HDMI2.0	1	7680×2160@30Hz&EDID Management(Optional)
VGA	RGBHV	4	1080P/60hz
BNC	Analogue coaxial	4	D1

Output Board			
Port Type	Signal Type	Ports Qty	Resolution
HDMI	HDMI1.0	2/4	1920×1080@60Hz,2560×816@60Hz, 1440×1440@60Hz and custom
HDMI 4K	HDMI2.0	2	3840×2160@30Hz/1920×1080@60hz. 2560×816@60Hz/1440×1440@60Hz and custom
DVI	DVI-D	2/4	1920×1080@60Hz/1440×1440@60Hz and custom

MATRIX SWITCHING SYSTEM

A high-performance routing platform designed for synchronized/asynchronous AV signal distribution, enabling crosspoint switching of any input source to output channels. Deployed in broadcast facilities, conference venues, video walls, distance learning, and command centers. Features include power-fail scene recall, LCD status monitoring, embedded/discrete audio-video switching, and RS-232 control integration with PCs, remotes, and central management systems.



Modular Seamless Matrix Switcher

(MA-Seamles 0808 / 1616 / 3232 / 4040)



Features

Modular card design , support AV, VGA, HDMI, DVI, SDI, HDBaseT and other arbitrary signal input and output.

The highest resolution support 4K@30Hz;

Arbitrary signal input and output;

Real-time seamless switching;

Adaptive input signal resolution, adjustable output resolution;

HDMI interface compatible with DVI1.0 and HDMI1.4, support HDCP1.2, support for Blu-ray players, support for DeepColor;

AV and VGA analog input digital processing, ADC maximum sampling frequency of 205Mhz, internal image processing 24-bit processing, color reproduction is true, the highest resolution to 1920x1200@60Hz;

AV input integrates advanced 3D adaptive comb filter and de-interlacing processing, automatic PAL, NTSC standard recognition;

SDI input support 3G/HD/SD-SDI, rate 143Mbps ~ 2.97Gbps, compatible with SMPTE 259M, 292M, 344M, 424M, ITU R BT.601, ITU RBT.1120 serial video standards;

Supports analog audio input and output;

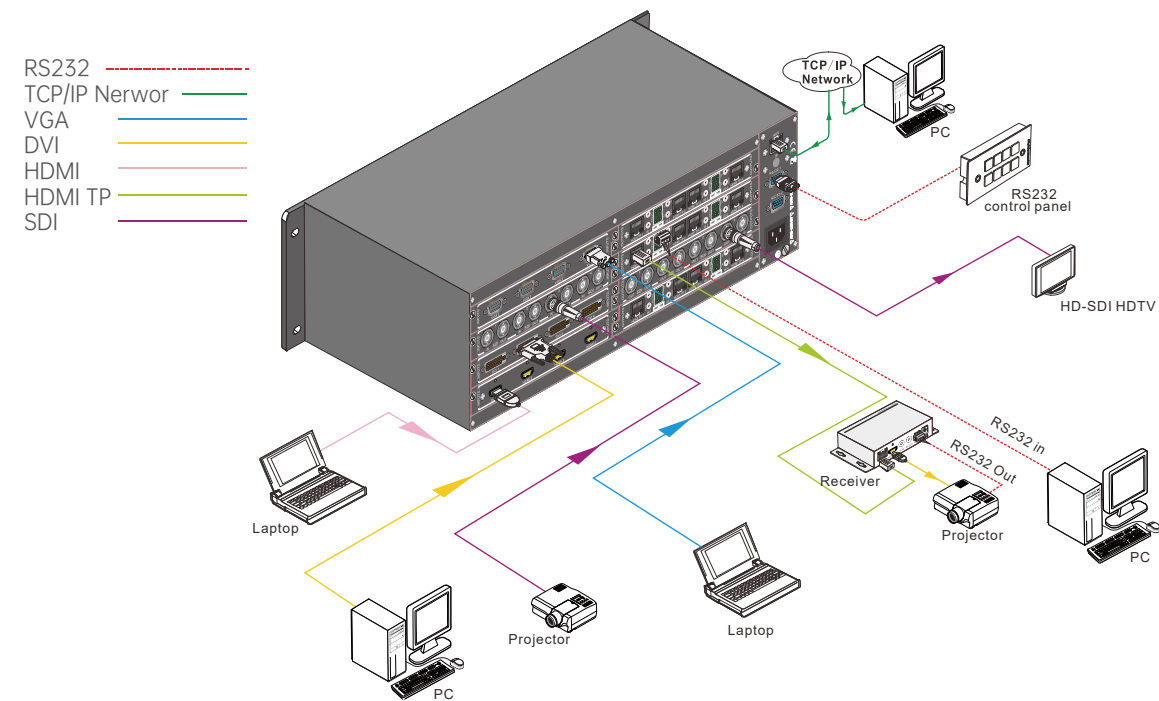
Front panel built-in 2.8 inch LCD display, beautiful and fast;

Support scene storage and recall

Support RS232 and Ethernet control (optional), open control protocol, convenient for third-party serial port control;

Support power failure scene protection.

System Diagram



Parameters

	Input	Output
AV Signal		
Video Impedance	75Ω	75Ω
Video Level	1Vp-p	1Vp-p
Video Format	NTSC, PAL Adaptive	NTSC, PAL Adaptive
Video Interface	BNC	BNC
Audio Interface	3.5mm stereo jack	3.5mm stereo jack
Audio Level	0.5-2.0Vp-p	0.5-2.0Vp-p
Audio Impedance	600Ω	600Ω
Audio Sample Rate	48Khz	48Khz
VGA Signal		
Video Impedance	75Ω	75Ω
Video Level	0.7V	0.7V
Video Resolution	640x480@60Hz -1920x1200@60Hz	640x480@60Hz -1920x1200@60Hz
Synchronized Input	Independent line field	Independent line field
Video Interface	DB15FM	DB15FM
Audio Interface	3.5mm stereo jack	3.5mm stereo jack
Audio Level	0.5-2.0Vp-p	0.5-2.0Vp-p
Audio Impedance	600Ω	600Ω
Audio Sample Rate	48Khz	48Khz

	Input	Output
HDMI		
Video Clock Frequency	25Mhz-225Mhz	25Mhz-225Mhz
Protocol Standard	DVI1.0 /HDMI1.4/ HDCP1.2	DVI1.0 /HDMI1.4/ HDCP1.2
Input Resolution	Max 4K30 automatic recognition	Maximum 4K30
Video Interface	Type A 19pin HDMI	Type A 19pin HDMI
Audio Interface	3PIN3.81 Phoenix Terminal	3PIN3.81 Phoenix Terminal
Audio Level	0.5-2.0Vp-p	0.5-2.0Vp-p
Audio Impedance	600Ω	600Ω
Audio Sample Rate	48Khz	48Khz
SDI		
Speed	143Mbps to 2.97Gbps	143Mbps to 2.97Gbps
Standard	SMPTE259M, 292M, 344M, 424M, audio compatible with SMPTE291	SMPTE259M, 292M, 344M, 424M, audio compatible with SMPTE291
Interface Type	BNC	BNC
HDBaseT		
Transmission Distance	≤100m (cat5,cat6)	≤100m (cat5,cat6)
Maximum Resolution	4K30	4K30
DVI		
Clock Frequency	25Mhz-225Mhz	25Mhz-225Mhz
Protocol standard	DVI1.0 /HDMI1.3/ HDCP1.2	DVI1.0 /HDMI1.3/ HDCP1.2
Input Resolution	Max 4K30, automatic recognition	Max 4K30
Video Interface	DVI 24+5	DVI 24+5
Audio Interface	Customized DVI cables required	Customized DVI cables required

Fixed Matrix Switch

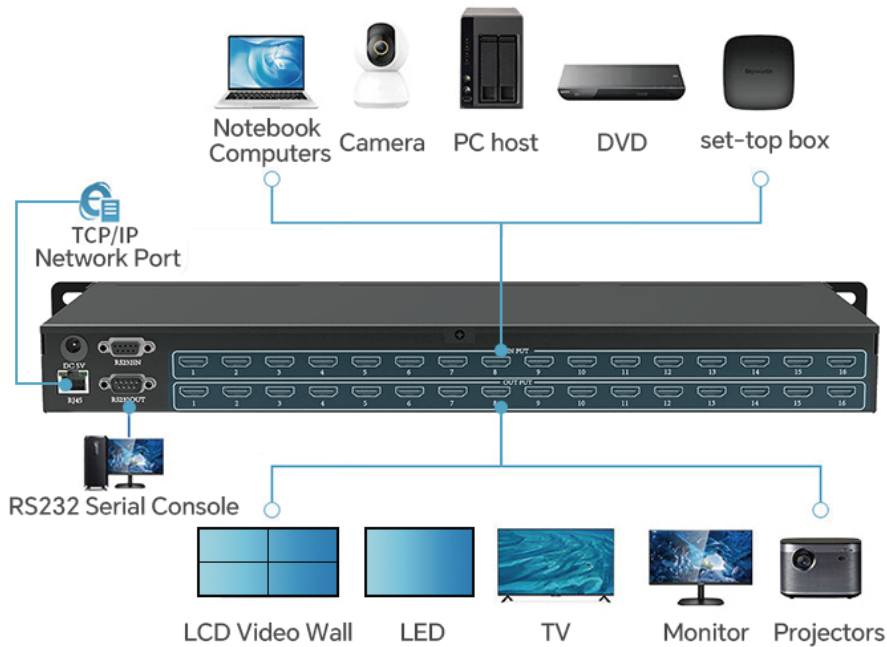
(MA3000-0404 / 0808 / 1616 / 1632)



Features

- HDMI 1.3 Protocol Support: Each channel supports resolutions up to 1920×1080@60Hz. Backward compatible with lower versions.
- Audio-Video Synchronous Switching with Independent Audio Output (Optional)
Supports embedded audio; offers independent audio output interface. Supports LPCM 7.1CH, Dolby TrueHD, Dolby Digital Plus, and DTS-HD Master Audio transmission. Ensures synchronous switching of audio and video signals. The last HDMI output channel can be optionally configured for independent audio output.
- Supports power-off memory function and up to 8 scene presets.
- The front-panel LCD screen provides real-time display of matrix switching status and system configuration information.
- Multiple Control Methods: Supports front-panel keypad, RS-232 serial control, and IR remote control. Optional TCP/IP network control module available for IP-based operation.
- HDCP Protocol Support (Optional for First HDMI Input)
The first HDMI input channel can optionally support HDCP protocol to ensure compatibility with copy-protected content sources such as Blu-ray players, set-top boxes, and other encrypted HD devices.
- ESD protection design compliant with IEC standards
- Optional TCP/IP Network Control Module (Tablet App Control)
supporting basic control functions such as signal switching, scene recall, and more.

System Diagram



Parameters

Model	0404	0808	1616	1632
Input Ports	4	8	16	16
Output Ports	4	8	16	32
Dimensions(mm)	440x240x44	440x240x44	440x317x88	440x317x88
Interface Bandwidth	13.5Gbps			
Control Interface	RS-232, 9-pin female D-sub and 9-pin male D-sub connectors			
Pin Assignment	9-pin female D-sub: Pin 2 = TX, Pin 3 = RX, Pin 5 = GND 9-pin male D-sub: Pin 2 = RX, Pin 3 = TX, Pin 5 = GND			
Max Resolution	HDPC: 1920×1200 @ 60Hz HDTV: 1920×1080 @ 60Hz			
Bit Clock Jitter	< 0.15 Tbit			
Operating Temperature	0°C ~ +50°C			
Operating Humidity	20% ~ 70% (non-condensing)			
Power Supply	100V AC ~ 240V AC, 50/60Hz (Universal Power Supply)			

Modular Matrix Switcher

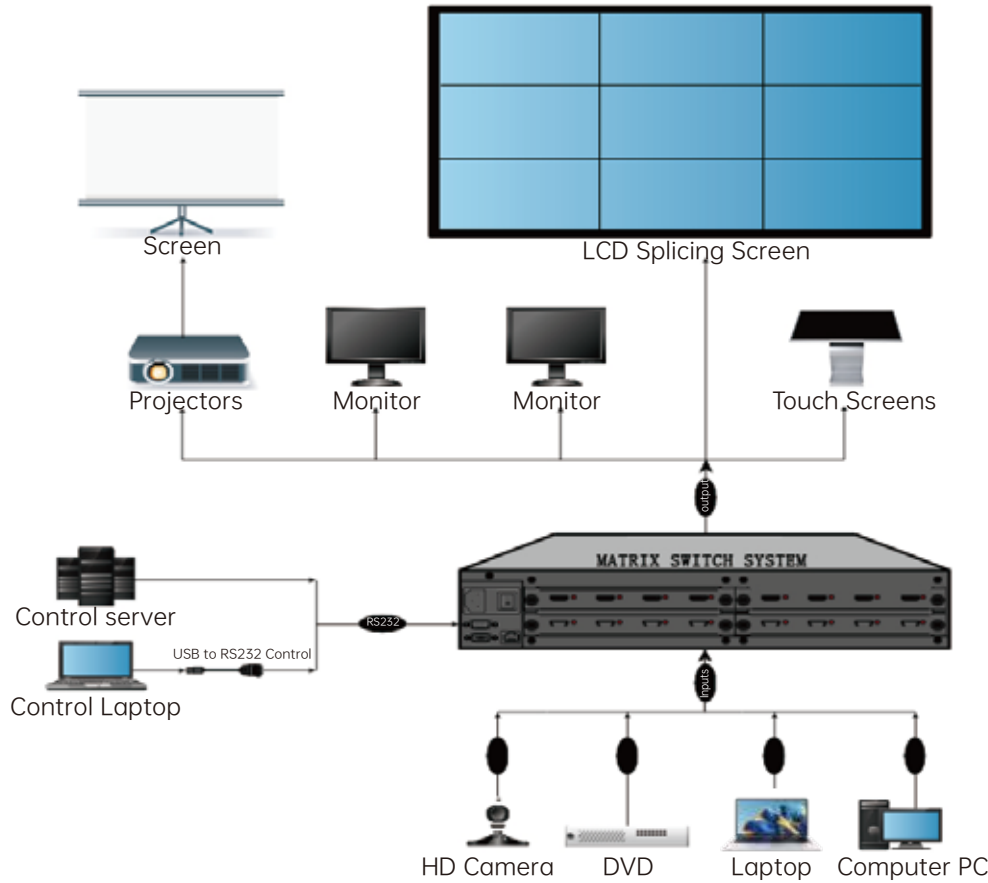
(MA3000-C0808 / 1616 / 3232 / 4040)



Features

- Pure hardware architecture: no operating system, no hard disk. boot time < 1 second.
- Maximum resolution supported: HDCP 1920x1200P@60Hz 24bit; HDTV 1920x1080P@60Hz 36bit.
- Hot-swappable input/output boards.
- Supports Power-off memory and scene protection.
- Multiple control options: front panel keys, IR remote, 2x RS-232, and RJ45 network port; compatible with various control environments.
- Built-in universal power supply.
- Full metal chassis, compatible with standard rack mount.
- Supports user-defined standby LOGO on the front panel LCD (for models with LCD panel).
- HDCP decoding supported; compatible with Blu-ray DVD and similar devices.

System Diagram



Parameters

Model	0808	1616	3232
Number of input cards/ Ports	2 cards / 8 channels	4 cards / 16 channels	8 cards / 32 channels
Number of output cards/ Ports	2 cards / 8 channels	4 cards / 16 channels	8 cards / 32 channels
Dimensions(mm)	440x315x83	440x315x133	440x320x308
Interface Bandwidth	13.5Gbps		
Control Interface	RS-232, 9-pin female D-sub and 9-pin male D-sub connectors		
Pin Assignment	9-pin female D-sub: Pin 2 = TX, Pin 3 = RX, Pin 5 = GND 9-pin male D-sub: Pin 2 = RX, Pin 3 = TX, Pin 5 = GND		
Max Resolution	HDCP: 1920×1200 @ 60Hz HDTV: 1920×1080 @ 60Hz		
Bit Clock Jitter	< 0.15 Tbit		
Operating Temperature	0°C ~ +50°C		
Operating Humidity	20% ~ 70% (non-condensing)		
Power Supply	100V AC ~ 240V AC, 50/60Hz (Universal Power Supply)		

Irregular video wall controller

(MA1000-SPLICER-YX)

Micagent introduces its Irregular video wall controller, delivering custom warping and geometric correction for irregular content display. This integrated solution combines multimedia playout control, digital signage management, cluster orchestration, and application platform capabilities with robust interactive performance.



Special-shaped Splicing



8K Playback



Information Release



Large Storage



Window Roaming



Cluster Management

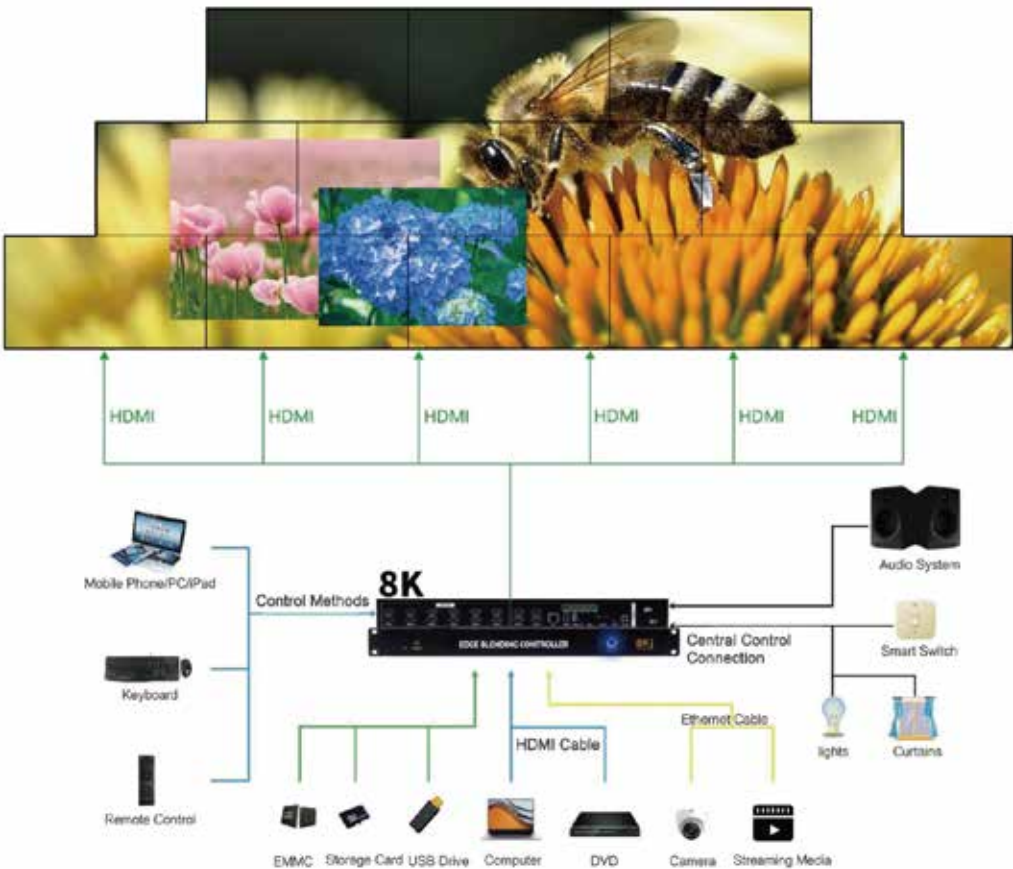


Timing Plan

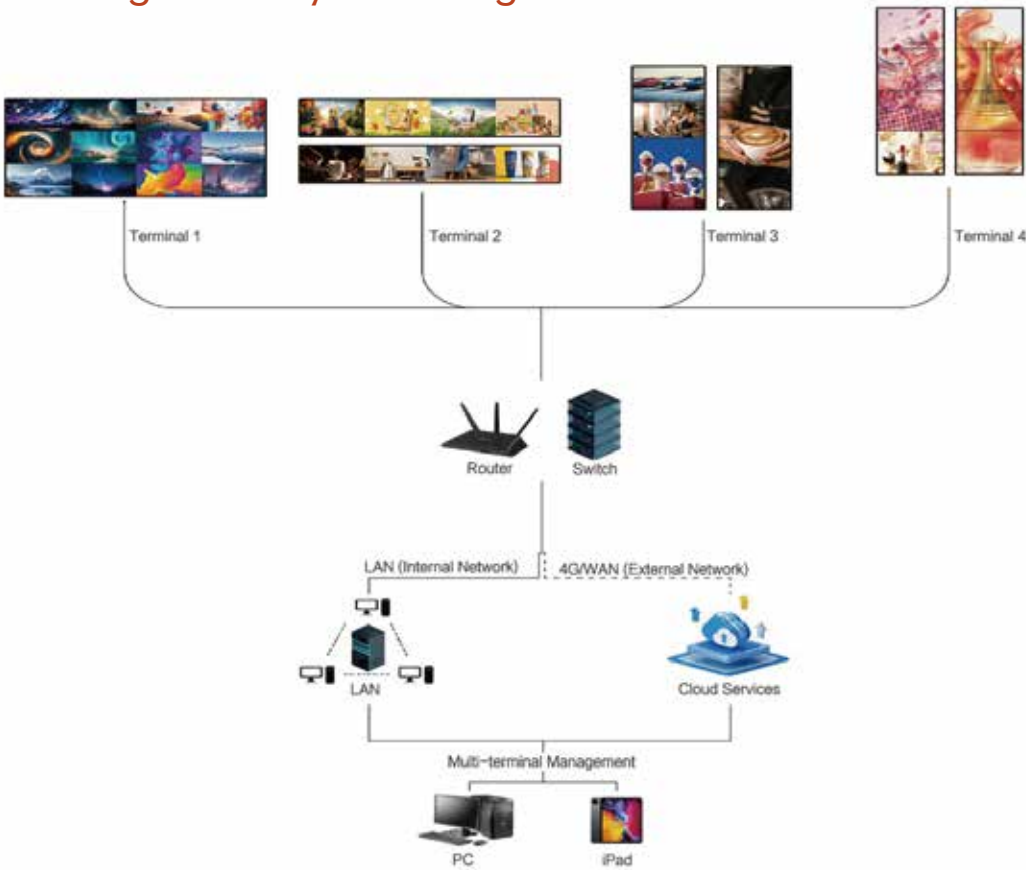


Central Control

System Diagram



Cloud Management System Diagram



Parameters

CPU	Octa-core 64-bit, 8nm LP advanced process, up to 2.4GHz
GPU	Supports AFBC (Frame Buffer Compression), Mali-G610 MC4, 8K Encode/Decode.
NPU	Built-in AI accelerator (6Tops)
RAM	4GB standard (expandable to 32GB LPDDR4x)
Storage	64GB eMMC5.1 standard
Power	12V DC input
Operating Temperature	0°C - 50°C
Operating Humidity	10% RH to 75% RH (non-condensing)
Storage Temperature	-25°C to +125°C
Chassis Dimensions	482×262×44mm
Included Items	1×Power Adapter, 1×Certificate of Compliance, 1×Infrared Remote Control

HDMI Video Wall Controller

(MA1000-SPLICER0104 / 0109)

MA1000-SPLICER Series Video Wall Controller Supports 1×4K HDMI input and 4 / 9× 2K HDMI outputs. This device segments a full HDMI signal into multiple partitions distributed to display units (e.g., rear-projection cubes, LCD monitors), constructing a dynamic video wall from multiple HD display components. Ideal for high-definition conferencing, film production, digital education, and multimedia advertising applications.



System Diagram



Parameters

Suppor Protocols	HDMI 1.4; HDCP 1.4
HDMI Pixel Bandwidth	340MHz, All Digita
HDMI Interface Bandwidth	Total bandwidth 10.2Gbps
Input Maximum Resolution	3840*2160@30Hz; and downward compatible
Maximum Output Resolution	1920*1080@60Hz
Video Interface	HDMI-A Connector
Recommended HDMI Cable Length	Less than 5 meters at 1920X1080@60Hz
Audio Interface	3.5mm stereo audio jack
Audio Format	44.1k,48k,96k,176k,192k
Power Supply	DC 12V
Maximum Power Consumption	MAX 7W
Operating Temperature	-5°C ~ +70°C
Operating Humidity	5% ~ 90

MA-Pixel Series Multi-Display Processor



MA-Pixel series delivers ultra-large resolution to video walls with zero loss, scaling, latency, or stutter. Supports DP input up to 5760×3240@30Hz and HDMI 1.4 input up to 3840×2160@60Hz.This pixel-to-pixel processor enables diverse tiling modes:Landscape: 1×3, 3×2, 3×3, 3×1, 3×2 configurations.

Ideal for big data visualization, military mapping, traffic monitoring, financial displays, government agencies, and interactive applications requiring ultra-high-resolution detail.



Ultra-high Resolution



Free Splicing



High Frequency



Point-to-point Display

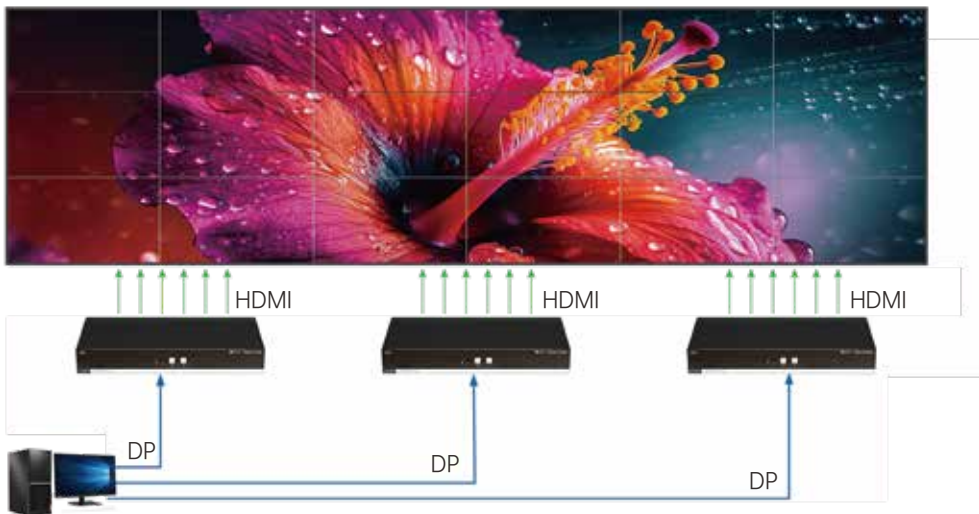


EDID Recognition



High-performance Chip

System Diagram



Parameters

Input signal	DP or HDMI1.4 switchable
DP maximum resolution	5760x3240@30HZ
HDMI maximum resolution	3840X2160@60HZ
Color depth	24bit,16.77 million colors
Output resolution	1024×768@60HZ, 1280×800@60HZ, 1280×720@60HZ, 1920×1080@60HZ, 1920×1200@60HZ, optional
Output refresh rate	60Hz and 30HZ optional
Color depth	24bit,16.77 million
Input voltage	110-220V

MULTI-VIEWER PRODUCTS

KVM HDMI 4X1 Multi-Viewer

(MA5401-KVM)

- Supports 4 HDMI inputs, 1 HDMI output
- Supports multi-view display for 4 HDMI sources
- Maximum input resolution: 4K@30Hz with backward compatibility
- Output resolutions: 4K@60Hz/30Hz, 1080P@60Hz, 2560x1600@60Hz
- Supports IR remote switching
- Audio output format: PCM 2.0
- Supports 24/30/36-bit color depth
- HDMI I/O transmission distance: Up to 15m
- Single keyboard/mouse controls 4 PCs or hosts
- USB compatibility: Windows/Linux/macOS/Android with plug-and-play operation



HDMI 8X1 Multi-Viewer

(MA5801)

- Supports 8 HDMI inputs, 1 HDMI output
- Supports 8-way HDMI multi-view display
- Enables seamless switching between 8 HDMI sources (frame-accurate)
- Supports IR remote control
- HDCP 1.4 and DVI 1.0 compliant
- Input resolutions: 1080P, 720P, 1080i, 1024×768, 1360×768, etc.
- Output resolutions: 1080P@60HZ, 2560x1600@60HZ, 2560x1440@60HZ, 3840x2160@30HZ.
- Audio/video compositing: Real-time embedding of distinct audio tracks with video sources
- HDMI I/O transmission distance: Up to 15m



HDMI 9X1 Multi-Viewer

(MA5901)

- Supports 9 HDMI inputs, 1 HDMI output
- Supports multi-view display for 9 HDMI sources
- Input resolutions: 1080P, 720P, 1080i, 1024×768, 1360×768, etc.
- Output resolutions: 4K@30Hz, 2560x1440@60Hz, 2560x1600@60Hz, 1080P@60Hz
- Supports IR remote switching
- HDMI1.4, HDCP1.4 and DVI 1.0 compliant
- HDMI I/O transmission distance: Up to 15m



4K HDMI 16X1 Multi-Viewer

(MA5161-4K)

- Supports 16 HDMI inputs, 1 HDMI output
- Supports multi-view display for 16 HDMI sources
- Input resolutions: 1080P, 720P, 1080i, 1024×768, 1360×768, etc.
- Output resolutions: 4K@30Hz, 2560x1440@60Hz, 2560x1600@60Hz, 1080P@60Hz
- Supports IR remote switching
- HDMI1.4, HDCP1.4 and DVI 1.0 compliant
- HDMI I/O transmission distance: Up to 15m



HDMI 16X1 Multi-Viewer

(MA5161)

- Supports 16 HDMI inputs, 1 HDMI output
- Supports multi-view display for 16 HDMI sources
- Input resolutions: 1080P, 720P, 1080i, 1024×768, 1360×768, etc.
- Output resolutions: 1080P@60Hz
- Supports IR remote switching
- HDMI1.4, HDCP1.4 and DVI 1.0 compliant
- HDMI I/O transmission distance: Up to 15m



4K 1×4 HDMI SPLITTER

- Supports up to 3840*2160@30Hz Ultra HD resolution
- Compliant with HDMI 1.4 standard
- Compliant with HDCP 1.4 (High-bandwidth Digital Content Protection)
- Enhanced compatibility to effectively match sources and displays
- Built-in auto-adjustment system for smooth, clear, and stable images
- Integrated ESD protection circuit;
- Plug-and-play installation



1×8 HDMI Splitter
(MA-ES108)



1×10 HDMI Splitter
(MA-ES110)



1×16 HDMI Splitter
(MA-ES116)

Cooperation Case



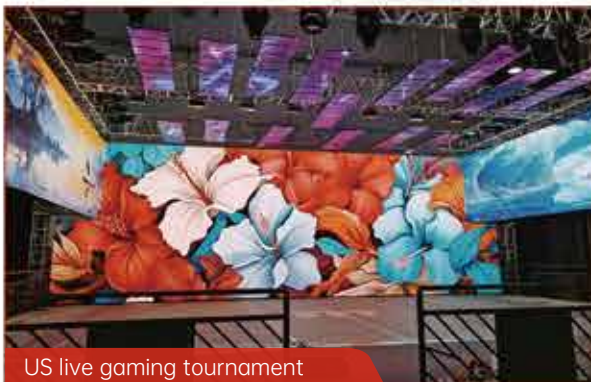
Alberta Innovation Center



Zhuhai City Planning Museum



Southern Grid Control Hall



US live gaming tournament



Beijing Highway Monitor Center



Hydrological Monitoring Center