



**MA1000-V016R**

# **4K Surveillance Video Decoder**

**Data Sheet**

## Introduction

MA1000-V016R is a digital decoding server with excellent performance, designed for video surveillance system, equipped with embedded Linux system, stable and reliable. The device supports ultra-high-definition decoding, splicing, splitting, windowing, etc. It can efficiently realize the functions of decoding on the wall, multi-signal input coding, etc., to meet the needs of big data digital surveillance system. It is compatible with the standard ONVIF protocol and supports NVR/DVR devices of mainstream brands (such as Hikvision, Dahua, YUVAD, Xiongmai) for real-time preview and video playback. At the same time, through the external HDMI input coding card, external computer signals can be displayed on the wall or splicing, providing high flexibility for system expansion.

Widely used in supermarkets, office buildings, schools, hotels, factories, transportation, security and other monitoring places, to help users easily realize video surveillance switching and computer wall management.

## Features

- Adopt modular plug-in card structure design, the whole backplane comes with Gigabit load balancing PCIE hardware structure;
- Support H.265+/H.265 /H.264/MPEG2 Main Profile Level5.1, H.264 Baseline/Main/High Profile Level5.0, MPEG4 SP L0~L3/ASP L0~L5, MJPEG/JPEG Baseline decoding;
- Support ONVIF, GB28181, RTSP, RTP, RTMP, TS, PS and other encapsulated format protocols for network decoding and preview, support the platform to integrate the device in the form of SDK; complete operation and maintenance management; support web access, configuration and management;

- Decoding single card module HDMI interface supports one in and two out, maximum support for 1 HDMI 4K@60HZ (3840X2160@60HZ) local signal acquisition (HDMI2.0 or DVI-I adapter) input, 2 4K@60HZ (3840X2160@60HZ) output;
- Can decode and display video streams of 325~4096 pixels in width and 288~2160 pixels in height.
- Maximum single card module support 2 HDMI output 64 split, support HDMI to DVI-I, VGA output, support PAL/NTSL and other standard formats.
- Single card module can simultaneously support two different sources of 64 screen split decoding, a single card can support decoding 144 IPC on the wall;
- Single-port support 1,4,6,8,9,10,16,25,36,49,64 any irregular (MXN) free switching division;
- Output resolution support: 3840x2160@60hz, 3840x2160@30hz, 1920x1200@60hz, 1920x1080@60hz, 1600x1200@60hz, 1440x900@60hz, 1280x1024@60hz, 1280x720@60hz, 1024x768@60hz
- Single card module decoding performance: 1 way = 3200W; 1 way 2400W binocular camera; 2 way = 1200W/4K (800W pixels); 8 way 500W/400/300W/; 24 way = 1080P; 32 way = 720P; 64 way = D1 video decoding;
- Single card module decoding pixels: support 3200W, 2400W, 1200W, 4K (800W), 600W, 500W, 400W, 300W, 200W, 130W, 100W and other standard video decoding;
- The whole 5U 30 screen can support 15-way 3200W/2400W; 30-way 1200W/800W/600W; 120-way 500W/400W/300W; 270-way 200W; 480-way 720P; 2016-way D1; (D1)/CIF/2CIF/QCIF;.
- Support GB28181 national standard protocol, ONVIF, RTSP, DDNS access to take the stream decoding, and decoder software platform can be searched for network cameras such as Hikvision, Dahua, UVision, TPlink and other mainstream brands of camera types for automatic identification;

- Can set the video bit rate of 128Kbps ~ 16384Kbps, support for video images of the horizontal and vertical manual tuning and automatic fine-tuning, the maximum support for decoding 7680X 4320, 25fps video images, support for the TV wall back to the display function, each TV wall supports independent display back to the display of the contents of the display back and the big screen content synchronization.
- Support the overlay display of domain name orientation OSD name and IP address and other decoding channel characters overlay on the wall;
- Support network automatic real-time detection of disconnection;
- Optional HDMI signal input card, so that the computer desktop signal, set-top box output signal casting;
- Support mainstream brands such as Hikvision, Dahua, YUVAD, Xiongmai, Tiandiweiye, etc. NVR/DVR/XVR preview decoding and video files on the wall playback;
- Support web browser B / S architecture visual access, configuration, management and (4-20) real-time decoding and synchronization with the monitoring of the real-time display of the video screen, compatible with Kirin system, letter innovation system, linux system, android system, apple ios system, as well as mobile Android / ios / hongmeng OS system of tablets, cell phone control;
- Can support web browser software console import online or offline 16-level zoom HD vector visualization electronic map, and can be carried out on the vector map of latitude and longitude of the camera to locate the monitoring point, and can be tracked in the electronic map real-time preview of the real-time picture of the monitoring point camera;
- 1080P input maximum cascade splicing curtain wall 120 screen MXN splicing, 4K input maximum cascade splicing curtain wall 480 screen MXN splicing;

- Support external input source primary and secondary code streams encoded simultaneously on the wall support 3840\*2160@60/3840\*2160@30/1920\*1080@60/1920\*1080@50/1600\*1200@60/1440\*900@60/1280\*1024@60/1280\*720@60/1280\*720@50/1024\*768@60/1920\*1080@60/1280\*720@60 and other computer resolution output coding on the wall splicing, support for the coding resolution automatically adapts to the adjustment;
- Support network camera labeling superimposed orientation superimposed, IP address superimposed, channel number superimposed, and network and other abnormal information superimposed;
- Comes with 1 channel 3.5mm audio input and 1 channel 1 audio 3.5mm terminal output, support for 32bit voice input and output;
- Support G.711A, AAC, G.722, G.726, G.711U, MPEG2-L2 audio format encoding and decoding, support active decoding and passive decoding two modes, can realize two-way voice intercom;
- Support encryption of video streams after encoding, external fetch streams need to enter a password to verify, to ensure the security of the video;
- Embedded database, decoder web browser platform control software can export the stream address, parameters, user name, password and name of massive network camera (IPC) in the form of a table to the computer for local storage, or import the massive IPC information in the form of a local table into the decoder internal database for storage;
- The decoder web platform software supports list intelligent search, you can keyword list intelligent search for the name of the surveillance camera, which is very convenient to manage a large number of cameras;
- Support coding automatic reconnection and power failure memory to save the memory function,

the device can be selected according to the network environment fluency superior;

- Support up to 512 monitoring wall scene memory preservation;
- Support scenes and groups by time interval on multiple windows or part of the window rotation

## Specification

| Board interface                 |                                                                                                                                                                                                                                       |
|---------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Outputs                         | 2*HDMI 2.0;1*Audio                                                                                                                                                                                                                    |
| Inputs                          | 1*HDMI;1*Audio                                                                                                                                                                                                                        |
| Ethernet                        | 1 RJ45 10M/100M/1000M                                                                                                                                                                                                                 |
| USB                             | 1*USB2.0                                                                                                                                                                                                                              |
| Video Parameters                |                                                                                                                                                                                                                                       |
| Window overlay                  | Support MXN splicing, cross-screen window roaming, overlay, picture-in-picture                                                                                                                                                        |
| Decoding format                 | H.265+/H.265/H.264/MPEG4                                                                                                                                                                                                              |
| Network video input             | 4K/1080P/720P/D1                                                                                                                                                                                                                      |
| Output resolution               | 3840x2160@60HZ 1920x1080@60HZ 1366x768@60HZ 1280x720@60HZ                                                                                                                                                                             |
| Video decoding display          | 1 screen = 3200W/2400W/1200W/800W/600W; 4 screen = 500W/400W/300W; 6 screen = 200W; 8 screen = 200W; 9 screen = 200W/1080P; 10 screen = 200W/1080P; 16 screen = 720P; 25 screen = D1; 36 screen = D1; 49 screen = D1; 64 screen = D1; |
| Single screen split display     | Support 1/4/6/8/9/10/16/25/36/49/64 split                                                                                                                                                                                             |
| OSD information                 | Supports Chinese and English character overlay, single-line OSD window, and warning information display                                                                                                                               |
| Single machine output interface | 1080P input can cascade splicing curtain wall up to 8 rows x 15 columns, 4K input can cascade splicing curtain wall up to 16 rows x 30 columns                                                                                        |
| Management and maintenance      |                                                                                                                                                                                                                                       |
| Basic application               | Support user login and logout                                                                                                                                                                                                         |

|                           |                                                                            |
|---------------------------|----------------------------------------------------------------------------|
| Upgrade                   | Support network upgrade                                                    |
| Customize                 | Support emergency plan, grouping, patrol                                   |
| <b>Other</b>              |                                                                            |
| Platform docking          | Provide SDK, support third-party software access control;                  |
| Alarm input               | Support network alarm host switch signal access and linkage pop-up window; |
| Decoding display response | ≤1 second                                                                  |
| Power supply              | 220V                                                                       |
| Power consumption         | ≤160W                                                                      |
| Working environment       | Temperature: -10°C — +55°C<br>Humidity: 10% — 90%                          |

## System Diagram

