

Anjoy Vision (ShenZhen) Information Technology Co.,Ltd.

## Product Specification Data Sheet

**Model: MC-J82H (AI ISP)**

| Customer ACK | Review | Approval |
|--------------|--------|----------|
|              |        |          |

| Update Date | HW Version | Notes           |
|-------------|------------|-----------------|
| 2026/07/22  | V1.0       | Initial Release |

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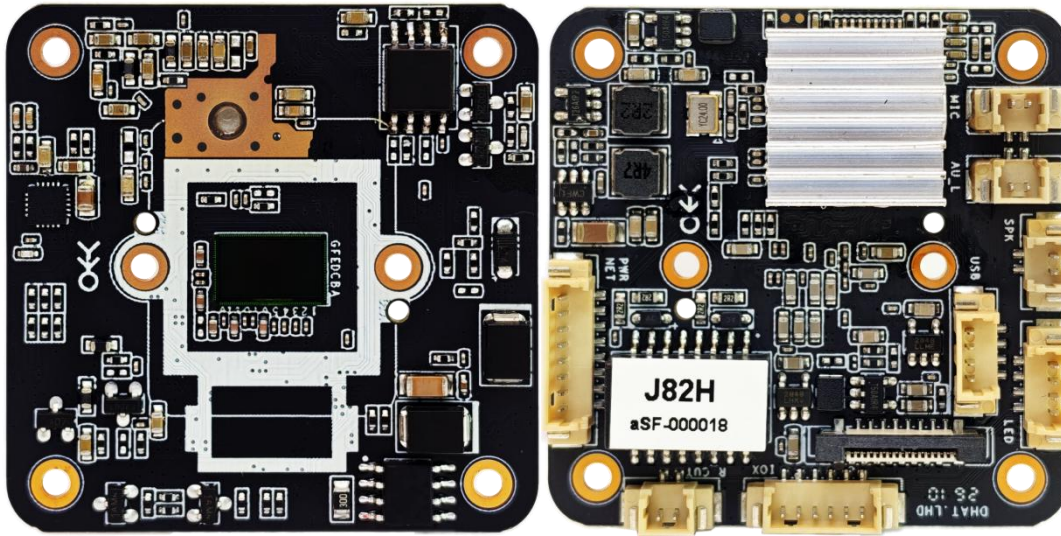
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## 1. Product Image (Single board 42x42)



## 2. Key Features

- **Processor:** Dual-core ARM Cortex-A7 1.2GHz SoC, 2GB DDR4, 16MB Flash ROM.
- **Image Sensor:** 1/1.8" 8MP large-format sensor with built-in ISP, delivering exceptional day and night vision performance.
- **Video Compression:** H.265 video encoding with adjustable multi-resolution frame rates and dynamic bitrate control, reducing network transmission and storage requirements by half.
- **Image Optimization:** Supports electronic shutter, automatic day/night switching, auto white balance, backlight compensation (BLC), highlight compensation (HLC), and face overexposure prevention.
- **Advanced Image Processing:** Supports Wide Dynamic Range (HWDR/DWDR), 2D/3D Digital Noise Reduction (DNR), image mirroring/flipping, image cropping, and anti-flicker.
- **OSD & Privacy:** Supports multi-line OSD text overlay, custom titles, and privacy mask settings.
- **IR-CUT & Lighting:** Supports multiple day/night control modes and lighting control modes.
- **Smart Detection:** Supports intelligent alarm functions with precise detection of human figures, vehicles, and non-motorized vehicles, as well as face detection and capture.
- **Event Linkage:** Supports event-triggered actions including snapshot/recording, audio-visual alarms, mobile push notifications, relay output, FTP upload, and Email alerts.
- **False Alarm Filtering:** Supports filtering of stationary targets to prevent false alarms, customizable arming schedules, and custom alarm audio upload.
- **Remote Access:** Supports remote live view and playback via mobile app or PC at any time, with two-way audio intercom functionality.
- **Cloud Storage:** Supports cloud storage services with encrypted data transmission and storage, ensuring evidence security even if the device is damaged.
- **Browser Compatibility:** Supports plugin-free HTML5 access across multiple browsers, with excellent compatibility with Windows, Linux, and Mac operating systems.
- **PTZ & Lens Control:** Supports PTZ control and motorized lens control, with transparent pass-through for various Pelco commands (cruising, tracking, reset, lens learning, etc.).
- **Protocol:** Supports ONVIF protocols, ensuring compatibility with most third-party NVRs and management platforms on the market.
- **Network Protocols:** HTTP(s), RTSP, RTMP, FTP, SMTP, DHCP, NTP, DST, P2P, Hik, NFS (Network Storage), etc.
- **USB Host Expansion:** Supports USB Host peripherals (USB WiFi adapters, USB storage devices, etc.).
- **FPC Expansion:** Supports a 16-Pin FPC full-function tail board extension (Micro-SD card slot, Reset button, speaker output, amplifier enable, alarm input, relay output).

### 3. Technical Specifications

| Model                   | MC-J82H                                                                                                                                                                                                                      |
|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| System Architecture     | Embedded Linux, ARM 1.2GHz SoC, 1G DDR4, 16MB Flash ROM, AI-ISP                                                                                                                                                              |
| Image Sensor            | 1/1.8" 8MP CMOS                                                                                                                                                                                                              |
| Compression Standard    | H.264 / H.265 / H.265+                                                                                                                                                                                                       |
| Shutter Speed           | Auto, 1/10s - 1/10,000s                                                                                                                                                                                                      |
| Digital Noise Reduction | Supports 2D/3D DNR                                                                                                                                                                                                           |
| Wide Dynamic Range      | Supports HWDR/DWDR, >100dB                                                                                                                                                                                                   |
| Encoding Mode           | H.264 / H.265 / H.265+                                                                                                                                                                                                       |
| Bitrates                | Adjustable from 512 Kbps to 12 Mbps,VBR/CBR                                                                                                                                                                                  |
| Main Stream             | 25fps@8MP(3840x2160)/(3072x2048)/30fps@5MP(2592x1944)/(2880x1620)/4MP(2560x1440)/3MP(2304x1296)/1080P/720P                                                                                                                   |
| Sub Stream              | 30fps@720x480 /640x480 (VGA)/640x360(360P)/352x288(CIF)                                                                                                                                                                      |
| Audio Encoding          | Supports G.711U, G.711A, AAC; supports noise reduction and echo cancellation                                                                                                                                                 |
| Audio Interface         | 1-channel Input / 1-channel Output, 1-channel speaker out                                                                                                                                                                    |
| Photosensitive Mode     | Image-sensor photosensitive / CDS photosensitive                                                                                                                                                                             |
| Lighting Mode           | 2-channel PWM output; supports Auto / Dual-light / IR / Full-color(Default)                                                                                                                                                  |
| OSD Overlay             | Supports channel name, date/time, custom titles, and multi-line OSD overlay                                                                                                                                                  |
| Privacy Mask            | Supports up to 4 areas                                                                                                                                                                                                       |
| Smart Detection         | Motion detection, human detection, vehicle detection, non-motorized vehicle detection (with static target filtering), face detection                                                                                         |
| Alarm Linkage           | Supports arming linkage for audio-visual alarms, snapshot/recording, mobile push notifications, alarm output, border flashing, FTP and Email;<br>Supports custom alarm audio upload                                          |
| PTZ / Lens Control      | Supports motorized lens control and PTZ control;<br>supports transparent pass-through of preset commands                                                                                                                     |
| Reset Function          | Supports hardware reset and software reset                                                                                                                                                                                   |
| Alarm Interface         | 1-channel Input / 1-channel Relay Output (requires K10 extend board)                                                                                                                                                         |
| IR-CUT                  | Supports 1-channel IR-CUT port (typical value: 12V 40-60Ω)                                                                                                                                                                   |
| Network Protocols       | HTTP(s)/RTSP/RTMP/FTP/SMTP/DHCP/NTP/ DST/P2P/Hik/NFS                                                                                                                                                                         |
| ONVIF Compatible        | Yes, compatible with most of the third-part NVR                                                                                                                                                                              |
| Multi-Browser Support   | Compatible with Firefox, Chrome, Edge, Safari, 360 Browser, etc.<br>(Windows / Linux / Mac)                                                                                                                                  |
| P2P Cloud Service       | Supports mobile remote P2P access and cloud storage                                                                                                                                                                          |
| Network Port            | 1x RJ-45, 10/100Mbps auto-negotiation                                                                                                                                                                                        |
| Expansion Features      | Supports USB Host expansion (USB WiFi adapter, USB storage, etc.);<br>Supports 16-pin FPC full-function board expansion;(K10: Micro-SD card slot, Reset button, speaker output, amplifier enable, alarm input, relay output) |
| Operating Conditions    | Power Input: 12VDC $\pm$ 10%; Temperature: -30°C to 60°C; Humidity: 10% to 90% RH                                                                                                                                            |

## 4. Pin-out Definitions

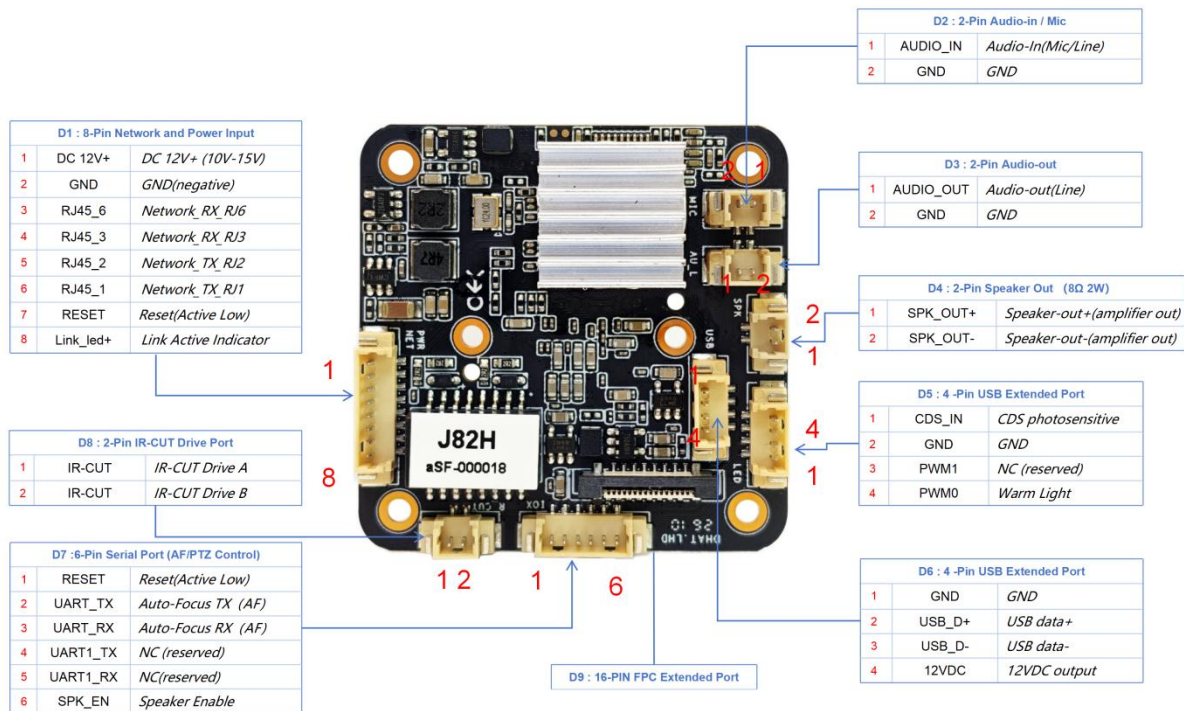


Figure 1 : Encoding Board



### Notes:

1. The large red numbers near the inner side of the main board indicate the pin sequence; the detailed pin definitions are listed in the tables above.
2. The USB interface outputs 12VDC by default. Please use our proprietary expansion board or implement your own power conversion to supply peripherals.

| Tag | Port Functions                        | Pin | Pin Definitions | Description                   |
|-----|---------------------------------------|-----|-----------------|-------------------------------|
| D1  | 8-Pin Network and Power               | 1   | DC 12V+         | DC 12V+ (10V-15V)             |
|     |                                       | 2   | GND             | GND(negative)                 |
|     |                                       | 3   | RJ45_6          | Network_RX_RJ6                |
|     |                                       | 4   | RJ45_3          | Network_RX_RJ3                |
|     |                                       | 5   | RJ45_2          | Network_TX_RJ2                |
|     |                                       | 6   | RJ45_1          | Network_TX_RJ1                |
|     |                                       | 7   | RESET           | Reset(Active Low)             |
|     |                                       | 8   | Link_led+       | Link Active Indicator         |
| D2  | 2-Pin Audio-in / Mic                  | 1   | AUDIO_IN        | Audio-In(Mic/Line)            |
|     |                                       | 2   | GND             | GND                           |
| D3  | 2-Pin Audio-out                       | 1   | AUDIO_OUT       | Audio-out(Line)               |
|     |                                       | 2   | GND             | GND                           |
| D4  | 2-Pin Speaker Out<br>(8Ω 2W)          | 1   | SPK_OUT+        | Speaker-out+(amplifier out)   |
|     |                                       | 2   | SPK_OUT-        | Speaker-out-(amplifier out)   |
| D5  | 4-Pin Light Control                   | 1   | CDS_IN          | CDS photosensitive (3.3V-12V) |
|     |                                       | 2   | GND             | GND                           |
|     |                                       | 3   | PWM1            | IR Light (reserved)           |
|     |                                       | 4   | PWM0            | Warm Light                    |
| D6  | 4-Pin USB Extended Port               | 1   | GND             | GND                           |
|     |                                       | 2   | USB_D+          | USB data+                     |
|     |                                       | 3   | USB_D-          | USB data-                     |
|     |                                       | 4   | 12V             | 12VDC output                  |
| D7  | 6-Pin Serial Port<br>(AF/PTZ Control) | 1   | RESET           | Reset(Active Low) hold 5s     |
|     |                                       | 2   | UART_TX         | Auto-Focus TX (AF)            |
|     |                                       | 3   | UART_RX         | Auto-Focus RX (AF)            |
|     |                                       | 4   | UART1_TX        | NC (reserved)                 |
|     |                                       | 5   | UART1_RX        | NC(reserved)                  |
|     |                                       | 6   | SPK_EN          | Speaker Enable                |
| D8  | 2-Pin IR-CUT Drive Port               | 1   | IR-CUT          | IR-CUT Drive A                |
|     |                                       | 2   | IR-CUT          | IR-CUT Drive B                |
| D9  | 16-PIN FPC Extended<br>Port           | 1   | IO_OUT          |                               |
|     |                                       | 2   | IO_INPUT        |                               |
|     |                                       | 3   | SD_CD           |                               |
|     |                                       | 4   | SD_D1           |                               |
|     |                                       | 5   | SD_D0           |                               |
|     |                                       | 6   | GND             |                               |
|     |                                       | 7   | SD_CLK          |                               |
|     |                                       | 8   | GND             |                               |
|     |                                       | 9   | SD_CMD          |                               |
|     |                                       | 10  | SD_D3           |                               |
|     |                                       | 11  | SD_D2           |                               |
|     |                                       | 12  | VDD             |                               |
|     |                                       | 13  | KEY_RST         |                               |

|  |  |    |        |  |
|--|--|----|--------|--|
|  |  | 14 | 3.3VDC |  |
|  |  | 15 | 3.3VDC |  |
|  |  | 16 | 3.3VDC |  |

## 5. Optional Expansion Boards

| Name                 | Model | Function Descriptions                                                                                                                       |
|----------------------|-------|---------------------------------------------------------------------------------------------------------------------------------------------|
| Expansion Tail Board | K10   | 16-Pin FPC full-function tail board;(Expands Micro-SD card slot, Reset button, speaker output, amplifier enable, alarm input, relay output) |
| AF Board             | H-AF  | Supports 4x / 5x motorized AF lenses on the market                                                                                          |
| WiFi Board           | MT-W3 | 2.4G WiFi6 Bluetooth                                                                                                                        |
|                      |       |                                                                                                                                             |
|                      |       |                                                                                                                                             |
|                      |       |                                                                                                                                             |
|                      |       |                                                                                                                                             |



**Note:** Expansion boards require dedicated firmware for support.



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