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

Product Specification Data Sheet

Model：MC-L12C *(Black Light)*

Customer ACK	Review	Approval

Update Date	HW Version	Notes
2026/07/17	V1.0	Initial Release

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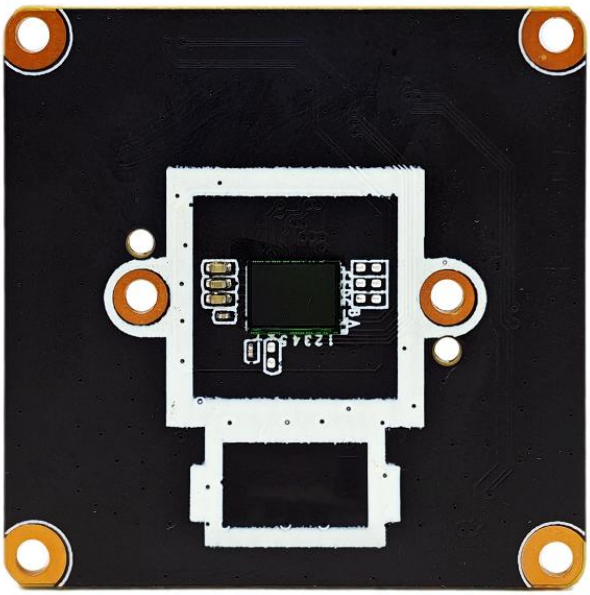
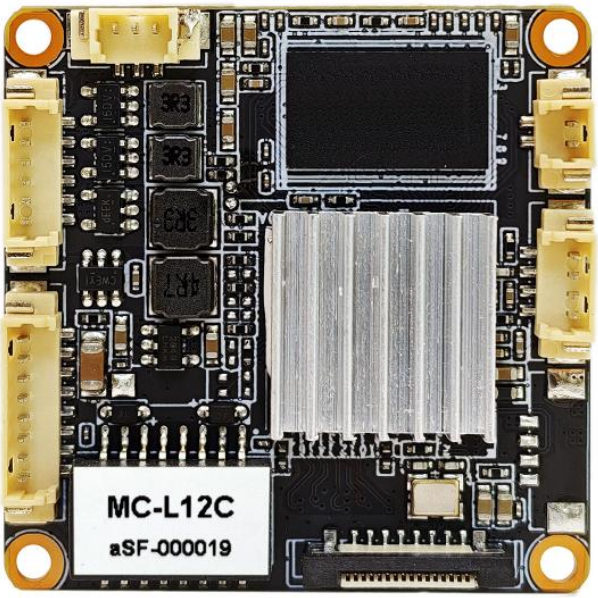
1. Product Image (Dual-board 38x38)





2. Key Features

- **Processor:** Dual-core ARM Cortex-A7 1GHz SoC, 2GB DDR3, 16MB Flash ROM.
- **Image Sensor:** 1/2.7" 5MP large-format sensor with built-in SoC 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 across 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-L12C
System Architecture	Embedded Linux, ARM 1GHz SoC, 2GB DDR3, 16MB Flash ROM
Image Sensor	1/2.7” 5MP 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 8 Mbps,VBR/CBR
Main Stream	30fps @ 5MP (2592x1944) / (2880x1620) / 4MP (2560x1440) / (1920x1920) / 3MP (2304x1296) / (1200x1200) / 1080P / 720P; 60fps@1080P
Sub Stream	30fps @ 704x576 (D1) / 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
Photosensitive Mode	Image-sensor photosensitive / CDS photosensitive
Lighting Mode	2-channel PWM output; supports Auto / Dual-light / IR / Full-color modes
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; Supports custom alarm audio upload
PTZ / Lens Control	Supports motorized lens control and PTZ control; 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. (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.); 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 ±10%; Temperature: -30°C to 60°C; Humidity: 10% to 90% RH

4. Pin-out Definitions

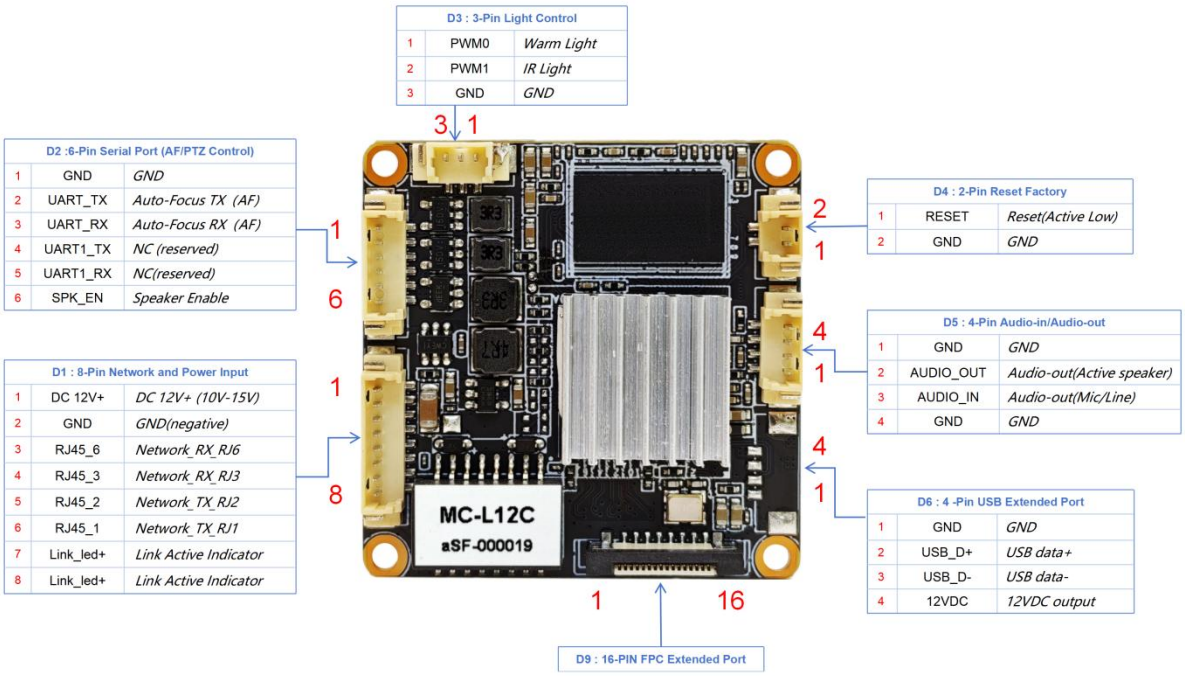


Figure 1 ： Encoding Board

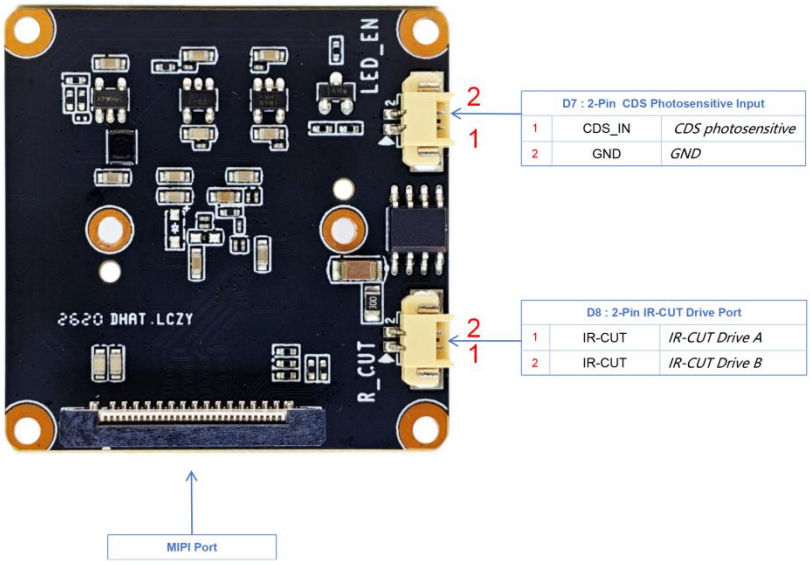


Figure 2 ： Image-sensor Board

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 Input	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	Link_led+	*Link Indicator*
		8	Link_led+	*Active Indicator*
D2	6-Pin Serial Port (AF/PTZ Control)	1	GND	*GND*
		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*
D3	3-Pin Light Control	1	PWM0	*Warm Light*
		2	PWM1	*IR Light*
		3	GND	*GND*
D4	2-Pin Reset Factory	1	RESET	*Reset(Active Low) hold 5s*
		2	GND	*GND*
D5	4-Pin Audio-in/Audio-out	1	GND	*GND*
		2	AUDIO_OUT	*Audio-out(Active speaker)*
		3	AUDIO_IN	*Audio-out(Mic/Line)*
		4	GND	*GND*
D6	4-Pin USB Extended Port	1	GND	*GND*
		2	USB_D+	*USB data+*
		3	USB_D-	*USB data-*
		4	12V	*12VDC output*
D7	2-Pin CDS Photosensitive Input	1	CDS_IN	*CDS photosensitive*
		2	GND	*GND*
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 Expansion 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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