ED-AIC2000

Datasheet

by EDA Technology Co., Ltd

built: 2024-11-20

ED-AIC2000

Industrial Smart Camera Based on Raspberry Pi CM4

- Broadcom BCM2711, quad core Cortex-A72 (ARM v8) 64-bit SoC @ 1.5GHz
- Up to 8GB LPDDR4 RAM and 32GB eMMC storage
- High-resolution image sensor of 2 million pixels (2.3 million pixels and 12 million pixels are optional) and up to 70 FPS sampling rate for ultra-fast image acquisition
- Optional liquid module zoom for automatic zooming
- Intergrated modular light source design, each group of light source can be controlled independently
- 3 colors are optional for light sources
- Support brightfield and darkfield modes for optimal lighting on normal, etched, high-gloss or textured surfaces
- High-quality industrial blue aluminum alloy case, supporting bracket mounting

Specifications

System	
CPU	Broadcom BCM2711, quad core Cortex-A72 (ARM v8) 64-bit SoC @ 1.5GHz
VPU	H.265 (HEVC), up to 4Kp60 decode H.264, up to 1080p60 decode, 1080p30 encode
GPU	OpenGL ES 3.1 & Vulkan 1.0
Memory	Options for 1GB, 2GB, 4GB, 8GB LPDDR4-3200 SDRAM
Storage	Options for 8GB, 16GB, Storage 32GB eMMC storage

Software	
Operating System	Raspberry Pi OS 64-bit
Communication Protocol	Ethernet/IP, Modbus TCP, TCP/IP and MC

Panel I/O	
Power & IO (12-Pin)	1 x Power & IO port, 12-Pin aviation connector, which is used to connect the power & IO cable (12-Pin M12 connector to bare wire) to access external signals. The signals include power supply, RS232, DI and DO. • 1 x DC IN: 2-Pin, it supports 10V~30V input and the signal is defined as DC-/DC+. • 1 x RS232: 3-Pin, the signal is defined as TX/RX/GND. • 1 x DI: 2-Pin, the signal is defined as DI/COMMON.

Panel I/O	
	• 2 x DO: 3-Pin, the signal is defined as DO1/DO2/COMMON • 1 x Trigger: External trigger signal • 1 x External Strobe: Control signal of screen flicker
Communication (8-Pin)	1 x Communication port, 8-Pin aviation connector, which is used to connect the ethernet cable (8-Pin M12 connector to RJ45 connector) to enable camera to access the network.

Light Source and Lens	
Light Source	4 areas for LED light source, each eara of light source supports independent configuration. Light source colors are optional in red, blue and white.
Lens	M12 Fixed Lens and M12 Fixed Lens with Liquid Module Zoom are optional.

Buttons and Indicators	
TUNE	1 x Adjusting button, one-click button for Auto Focus
TRIG	1 x Trigger button, one-click button for camera trigger
Power indicator	1 x Power indicator, which is used to check the status of camera power-on and power-off.
Fault indicator	1 x Fault indicator, which is used to check the fault status of camera.
Working status indicator	1 x Working status indicator, which is used to check the working status of camera.
Network indicator	2 x Network indicators, which is used to view the status of network connection and data communications.

Performance Characteristics	
Image Sensor	2 million pixels, 2.3 million pixels and 12 million pixels are optional.
Sampling Rate	Up to 70 FPS
Aiming Point	Red cross laser
Polarizer	Half polarizer and full polarizer are optional.

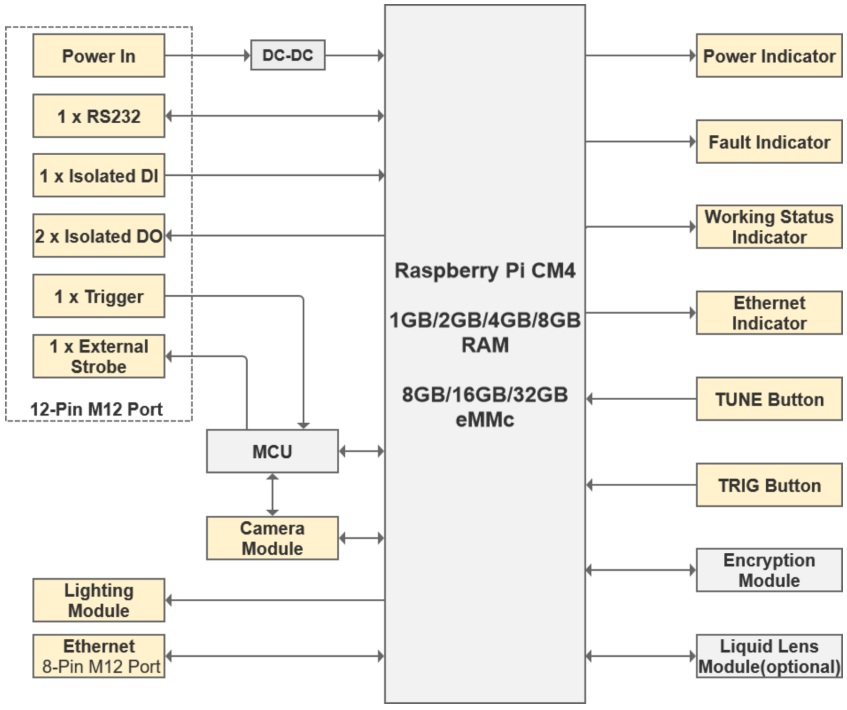
Electrical Characteristics	
Input Voltage	10V ~ 30V DC
Power Consumption	36W (Max)

Mechanical Characteristics	
Dimensions	85mm x 60mm x 45mm
Weight	150g

Mechanical Characteristics	
Installation	Bracket mounting(the bracket is optional)

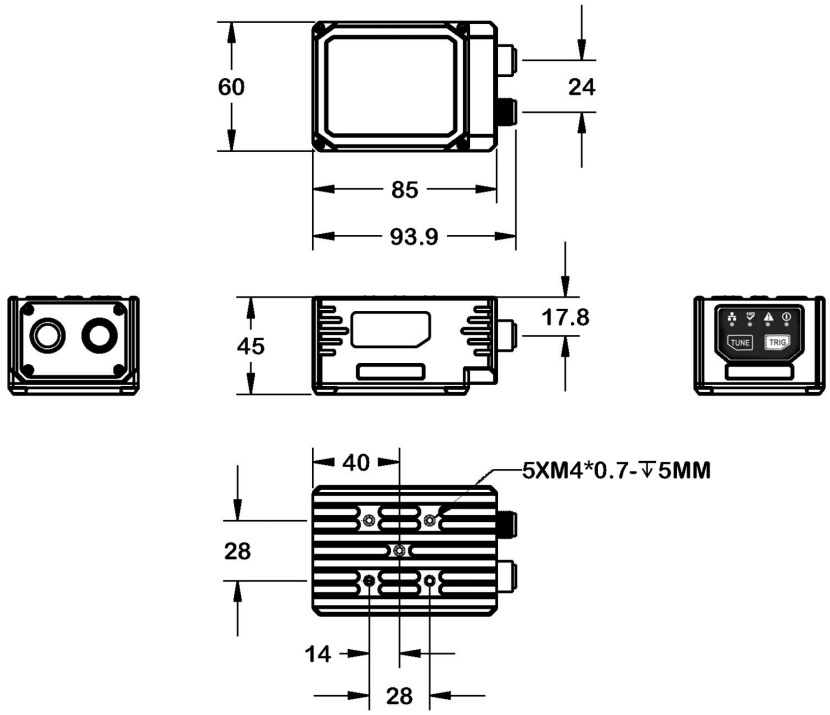
Environmental & Regulatory	
Operating Temperature	0°C ~ 45°C
Storage Temperature	-4°C ~ 60°C
Ambient humidity	5% ~ 90% (non-condensing)
Protection degree	IP65
Shock resistance	EN 60068-2-27, 30 g; 11ms; 3 impacts per axial direction
Vibration resistance	EN 60068-2-6, 14 mm @ 2 ~ 10 Hz, 1.5mm @ 13 ~ 55 Hz 2 g @ 70 ~ 500 Hz, 2-way 2 hours per axial direction
Certifications	• FCC ◦ FCC 47 CFR Part 15 Subpart B • CE ◦ EN IEC 62368-1/EN IEC 62311/EN IEC 61000-3-2/EN IEC 61000-3-3 ◦ EN 55032/EN 55035 ◦ EN 301 489-1/EN 301 489-3/EN 301 489-17/EN 301 489-52 ◦ EN 301 328/EN 301 440/EN 301 511/EN 301 908-1/EN 301 908-2

System Diagram

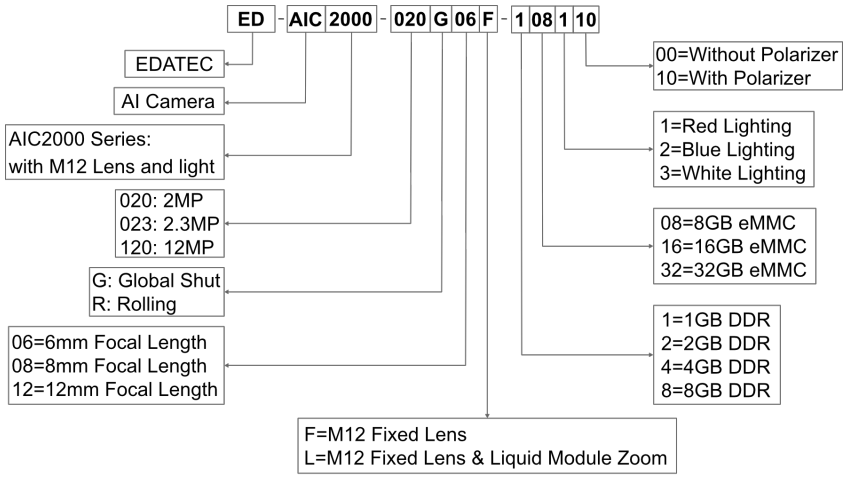


Dimensions

Unit: mm



Ordering Code



Example

P/N : **ED-AIC2000-020G06F-108110**

Configuration : AI Camera Based on Raspberry Pi CM4, with 1GB DDR, 8GB eMMC, 2MP, global shut, 6mm M12 fixed lens, red lighting and polarizer.

Optional Accessories

Optional cables and mounting accessories are available.

Ordering Code	Description	Picture
ED-ACC-AIC-ETH-A-03	3m ethernet cable of 8-Pin M12 male connector to RJ45 connector	
ED-ACC-AIC-ETH-A-05	5m ethernet cable of 8-Pin M12 male connector to RJ45 connector	

Ordering Code	Description	Picture
ED-ACC-AIC-ETH-A-10	10m ethernet cable of 8-Pin M12 male connector to RJ45 connector	
ED-ACC-AIC-ETH-A-15	15m ethernet cable of 8-Pin M12 male connector to RJ45 connector	
ED-ACC-AIC-PWR-A-03	3m power&IO cable of 8-Pin M12 female connector to bare wire	
ED-ACC-AIC-PWR-A-05	5m power&IO cable of 8-Pin M12 female connector to bare wire	
ED-ACC-AIC-PWR-A-10	10m power&IO cable of 8-Pin M12 female connector to bare wire	
ED-ACC-AIC-PWR-A-15	15m power&IO cable of 8-Pin M12 female connector to bare wire	
ED-ACC-AIC-POL-001	Half polarizer	
ED-ACC-AIC-POL-002	Full polarizer	
ED-ACC-AIC-DW-FIX001	Bracket for fixing between product and profile	
ED-ACC-AIC-DW-FIX002	1 x Screw M4*8 + 3 x washers 1 x Screw M6*10 + 1 x T-type nut	

Packing List

- 1 x ED-AIC2000 Unit