ED-AIC2000

Datasheet

by EDA Technology Co., Ltd

built: 2026-08-18

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 12 million pixels and up to 60 FPS sampling rate for ultra-fast image acquisition
- Liquid module zoom for automatic zooming
- Intergrated modular light source design, each group of light source can be controlled independently
- 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, 32GB eMMC storage

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

Panel I/O	
Power & I/O (12-Pin)	1 x Power & I/O port, 12-Pin aviation connector, which is used to connect the power & I/O 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 DC 24V 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. • 2 x DO: 3-Pin, the signal is defined as DO1/DO2/COMMON. • 1 x Trigger: External trigger signal

Panel I/O	
	• 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 area of light source supports independent configuration.
Lens	M12 Fixed Lens with Liquid Module Zoom

Buttons and Indicators	
TUNE	1 x programmable adjustment button, requires registering a callback function via SDK before use
TRIG	1 x programmable trigger button, requires registering a callback function via SDK before use
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	1 x Network indicators, which is used to view the status of network connection and data communications.

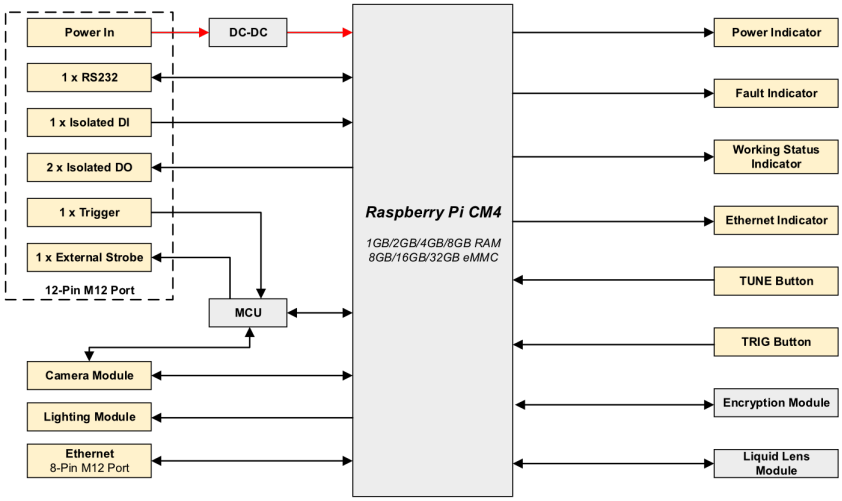
Performance Characteristics	
Image Sensor	12 million pixels
Sampling Rate	Up to 60 FPS
Aiming Point	Red cross laser

Electrical Characteristics	
Input Voltage	DC 24V (±10%) A DC 24V 2A power adapter is recommended.
Power Consumption	36W (Max)

Mechanical Characteristics	
Dimensions	85mm x 60mm x 45.9mm
Weight	About 330g
Installation	Mounting bracket (optional)

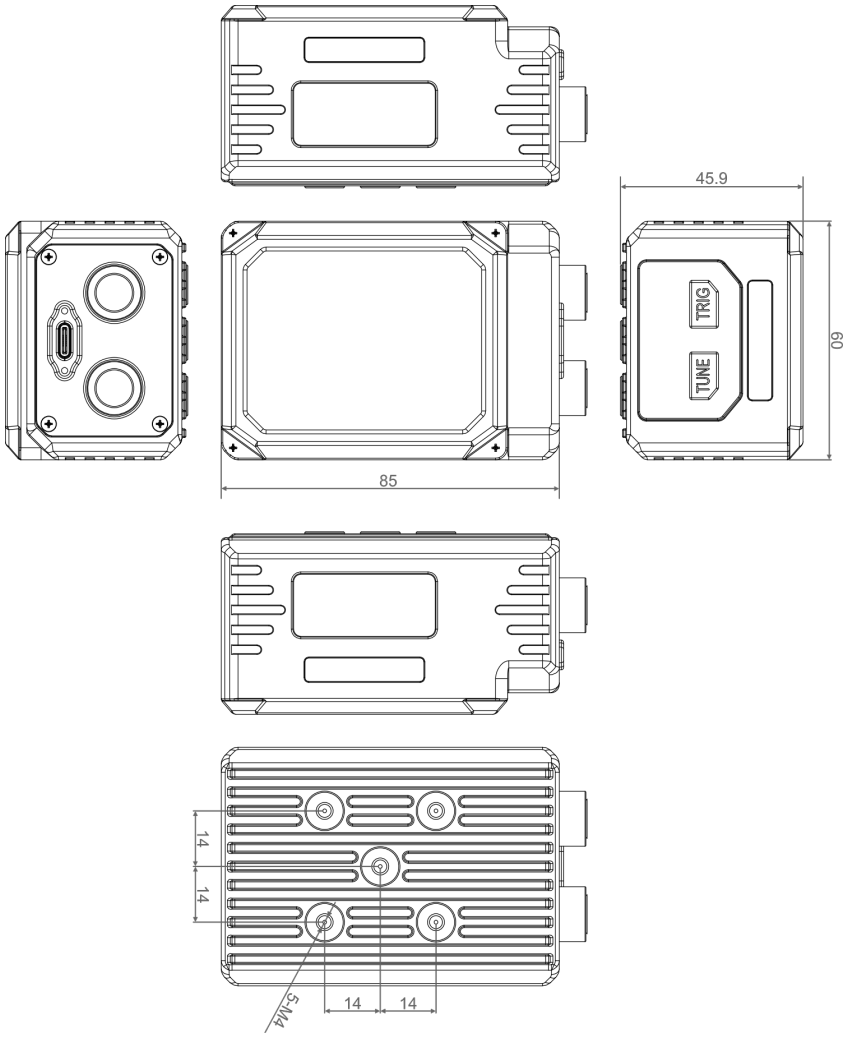
Environmental & Regulatory	
Operating Temperature	0°C ~ 45°C
Storage Temperature	-4°C ~ 60°C
Ambient Humidity	5% ~ 90% (non-condensing)
Shock Resistance Test	IEC 60068-2-27:2008
Vibration Resistance Test	IEC 60068-2-64:2008
Certifications	• FCC ◦ FCC Part 15 Subpart B • CE ◦ EN IEC 62368-1:2020 + A11:2020 ◦ EN 55032:2015 + A1:2020 + A11:2020/EN 55035:2017 + A11:2020 ◦ EN IEC 61000-3-2:2019 + A1:2021 + A2:2024/EN 61000-3-3:2013 + A1:2019 + A2:2021

System Diagram

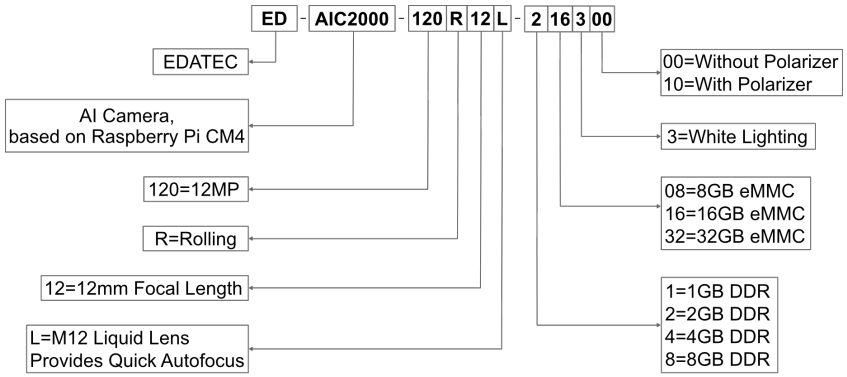


Dimensions

Unit: mm



Ordering Code



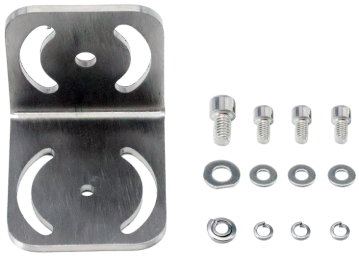
Example

P/N : **ED-AIC2000-120R12L-216300**

Configuration : AI Camera Based on Raspberry Pi CM4, with 2GB DDR, 16GB eMMC, 12MP, Rolling shut, 12mm M12 lens with Liquid Module Zoom, white lighting.

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	
ED-ACC-AIC-PWR-A-03	3m power & I/O cable of 8-Pin M12 female connector to bare wire	
ED-ACC-AIC-PWR-A-05	5m power & I/O cable of 8-Pin M12 female connector to bare wire	
ED-ACC-AIC-DW-FIX001	Mounting Bracket for fixing device 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