

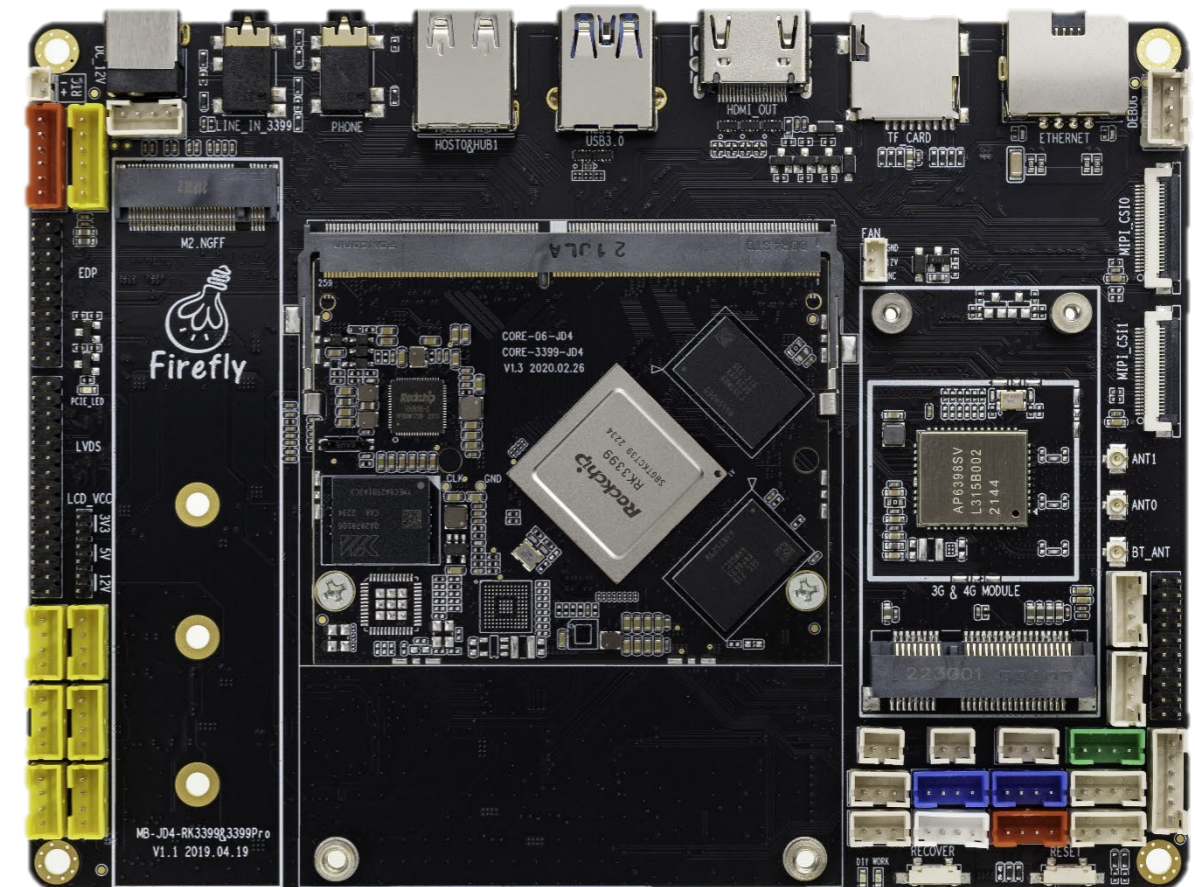


# Six-Core 64-Bit High-Performance Mainboard

- | AIO-3399-JD4(Commercial)
- | AIO-3399K-JD4(Industrial)

V1.3 2023-11-25

T-CHIP INTELLIGENCE TECHNOLOGY



# Product features



## Six-core 64-bit High-performance Processor

Adopts RK3399 six-core 64-bit (A72x2+A53x4) high-performance processor, frequency up to 1.8GHz, integrated quad-core ARM high-end GPU Mali-T860. Provide a variety of storage configuration options, users only need to expand the function backplane to quickly achieve project development.

4K

## Powerful Hardware Decoding Capability

Supports dual LVDS, EDP, HDMI, DP1.2 multiple display output interfaces, dual-screen identical display/dual-screen differential display, supports 4K VP9, 4K 10bits H265/H264, 1080P (VC-1, MPEG-1/2/4, VP8) multi-format video decoding, and 1080P (H.264, VP8) video coding.



## Support For Multiple OS

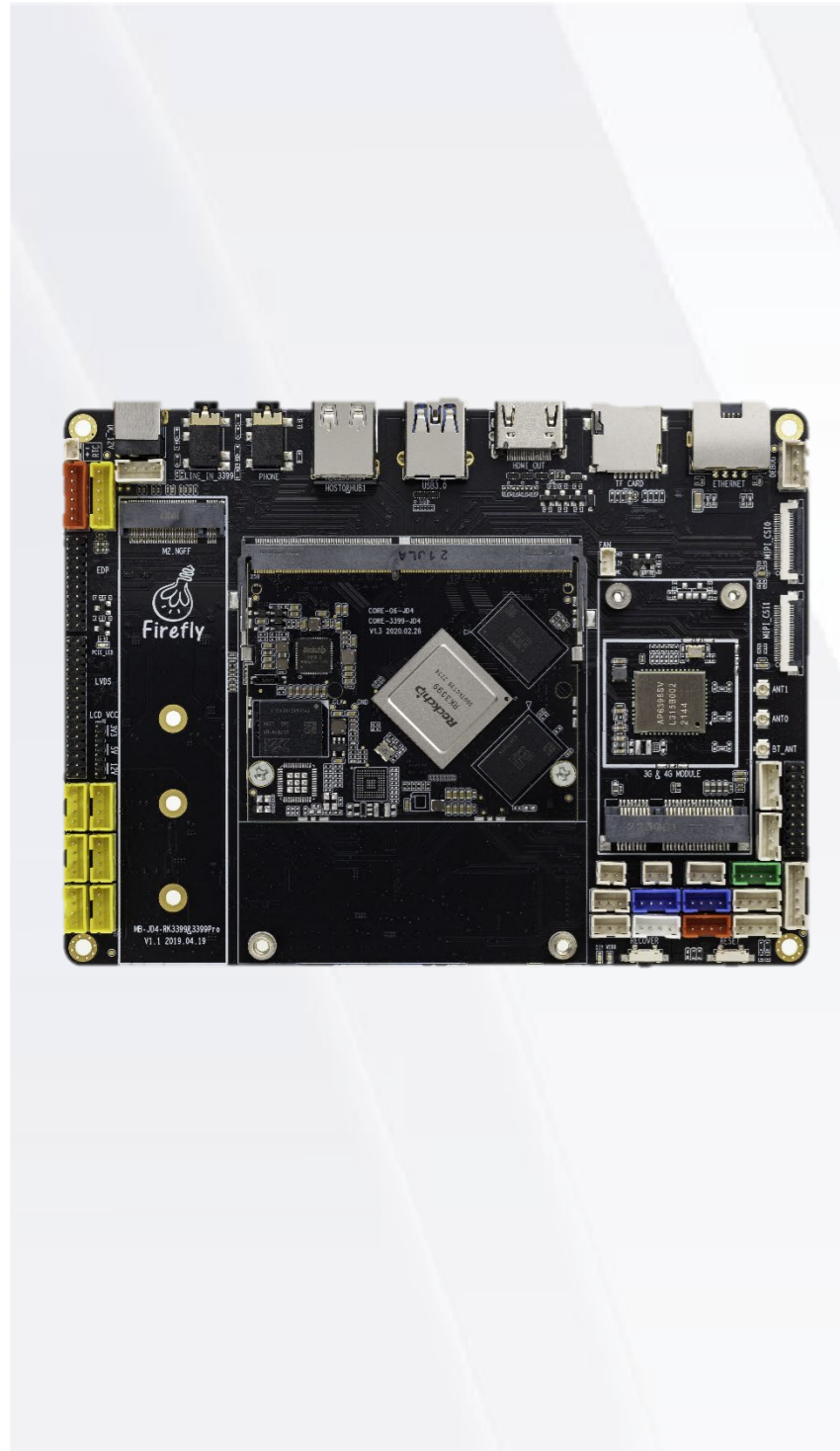
Supports Android, Linux+QT, Ubuntu multiple operating system, the performance is stable and reliable.



## Rich Extension Interfaces

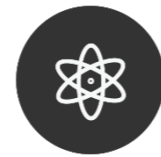
With rich interfaces such as I2C, SPI, UART, ADC, PWM, GPIO, PCIe, USB3.0, I2S (supports 8-way digital microphone array input), and so on.

# Product features



## Accelerate image recognition with dual ISP

Dual ISP, capable of processing at a maximum of 13 MPix/s for a single input or dual 8 MPix/s, supports simultaneous input from two cameras. It enables advanced functions such as panoramic capture, gesture detection, depth sensing, and 3D processing, accelerating image recognition.



## Open Source

Complete with SDK, tutorial, technical information and development tools can be downloaded on the website, making development and learning easier.



## Commercial and industrial grades

Core boards in commercial and industrial grades are available to meet diverse needs across various scenarios. The industrial-grade products operate within a wide temperature range of  $-20^{\circ}\text{C}$  to  $70^{\circ}\text{C}$  for uninterrupted 24/7 stability, meeting industrial needs.



## Application

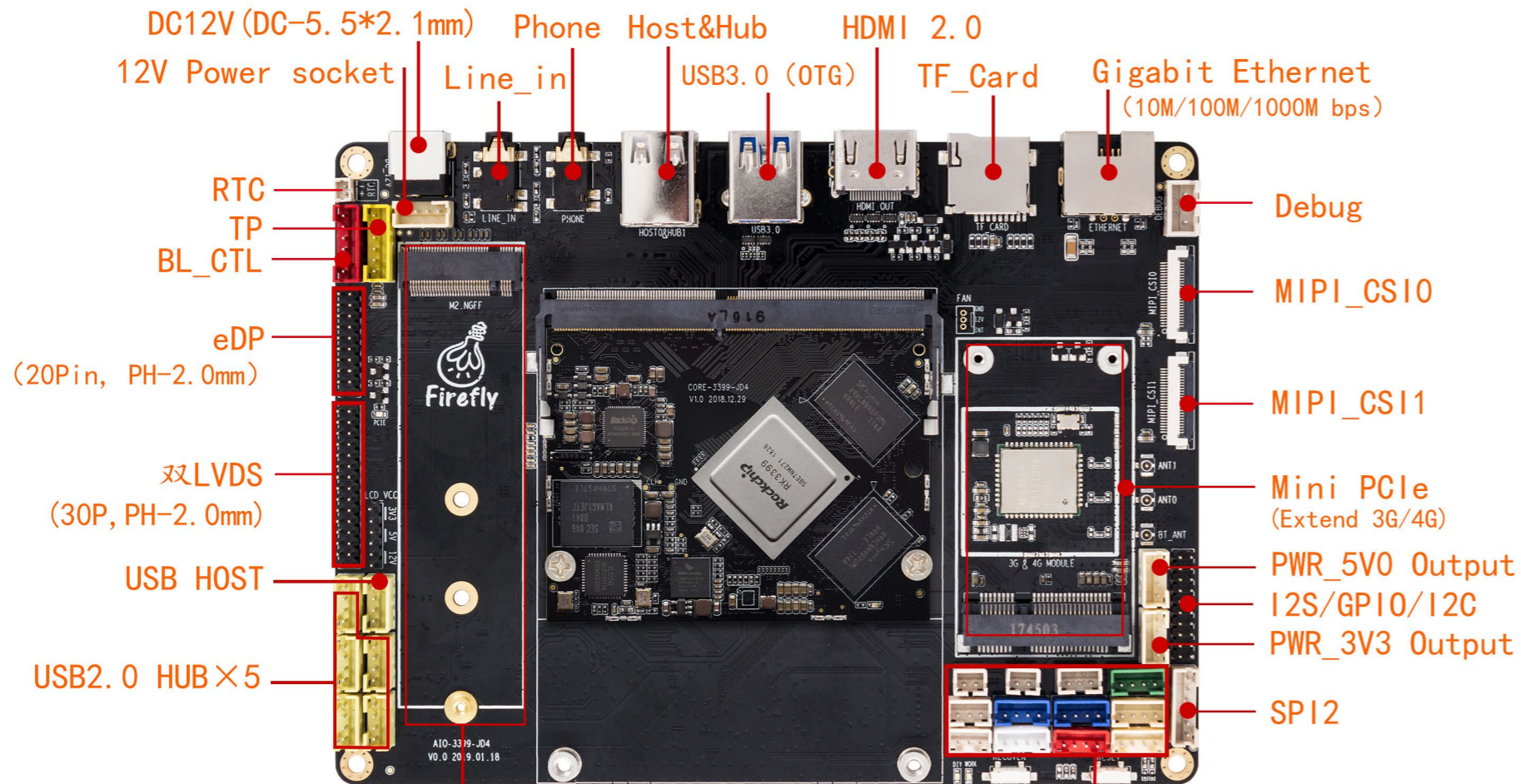
It is suitable for cluster servers, high-performance computing/storage, computer vision, gaming equipment, commercial display equipment, medical equipment, vending machines, industrial computers, etc.

# Specifications

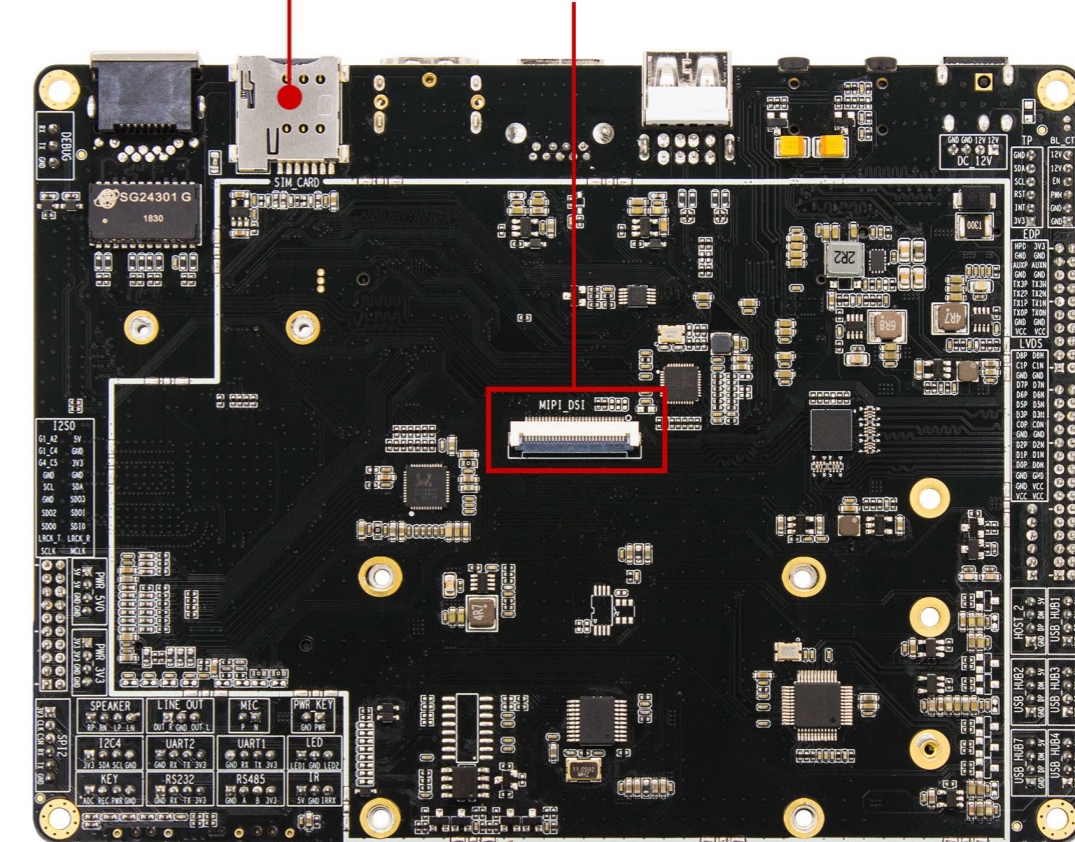


		AIO-3399-JD4(Commercial)	AIO-3399K-JD4(Industrial)
Basic Specifications	CPU	RK3399 Hexa-core 64-bit (Cortex-A72×2 + Cortex-A53×4) processor, up to 1.8G Hz	RK3399K Hexa-core 64-bit (Cortex-A72×2 + Cortex-A53×4) processor, up to 2.0GHz
	GPU	Mali-T860 MP4 quad-core GPU Support OpenGL ES1.1/2.0/3.0/3.1, OpenVG1.1, OpenCL, DX11 Support AFBC (Frame Buffer Compression)	
	VPU	Hardware decoding: 4K@60fps H265/H264/VP9 decoding, multi-format decoding of 1080P videos (VC-1, MPEG-1/2/4, VP8) Hardware encoding: 1080P H.264/AVC/VP8 encoding Video post-processing: deinterlacing, noise reduction, edge/detail/color optimization.	
	RAM	LPDDR4 (2GB/4GB optional)	
	Storage	16GB high-speed eMMC 5.1 ( 16GB/32GB/128GB ) Support TF Card Extended Storage Support M.2 PCIe M-KEY extend NVMe SSD	
	Power	DC input voltage 12V	
	OS	Android, Linux+QT, Ubuntu	
	Size	157.5 mm * 118 mm * 15.3 mm	
	Environment	Operating temperature: -20°C ~ 60°C Operating humidity: 10% ~ 90%RH (non-condensing)	Operating temperature: -20°C ~ 70°C Operating humidity: 10% ~ 90%RH (non-condensing)
Interface Specifications	WiFi	2.4GHz/5GHz ( Support 802.11a/b/g/n/ac ) Support BT4.1	
	Ethernet	10 / 100 / 1000 Mbps Ethernet interface ( RJ45 )	
	Display	1 x HDMI 2.0, support 4K@60HZ output and HDCP 1.4/2.2 1 x MIPI-DSI , support single channel 1080P@60fps output 1 x eDP 1.3 ( 4 lanes with 10.8Gbps ) Support dual-screen identical display/dual-screen differential display	
	Audio	1 x HDMI 2.0 audio output,1 x Line_Out,1 x I2S for audio output and input,1 x Speaker (4Ω, 3W),1 x Phone, 1 x Mic,1 x Line_in Audio input	
	USB	2x MIPI-CSI camera interface ( built-in dual-ISP, Maximum support single 13Mpixel or dual 8Mpixel )	
	Camera	2x MIPI-CSI camera interface ( built-in dual-ISP, Maximum support single 13Mpixel or dual 8Mpixel )	
	Interface	SPI×1, UART×2, Debug×1, RS485×1, RS232×1, ADC×1, I2C, PWM, GPIO, PCIe	

# Interface description



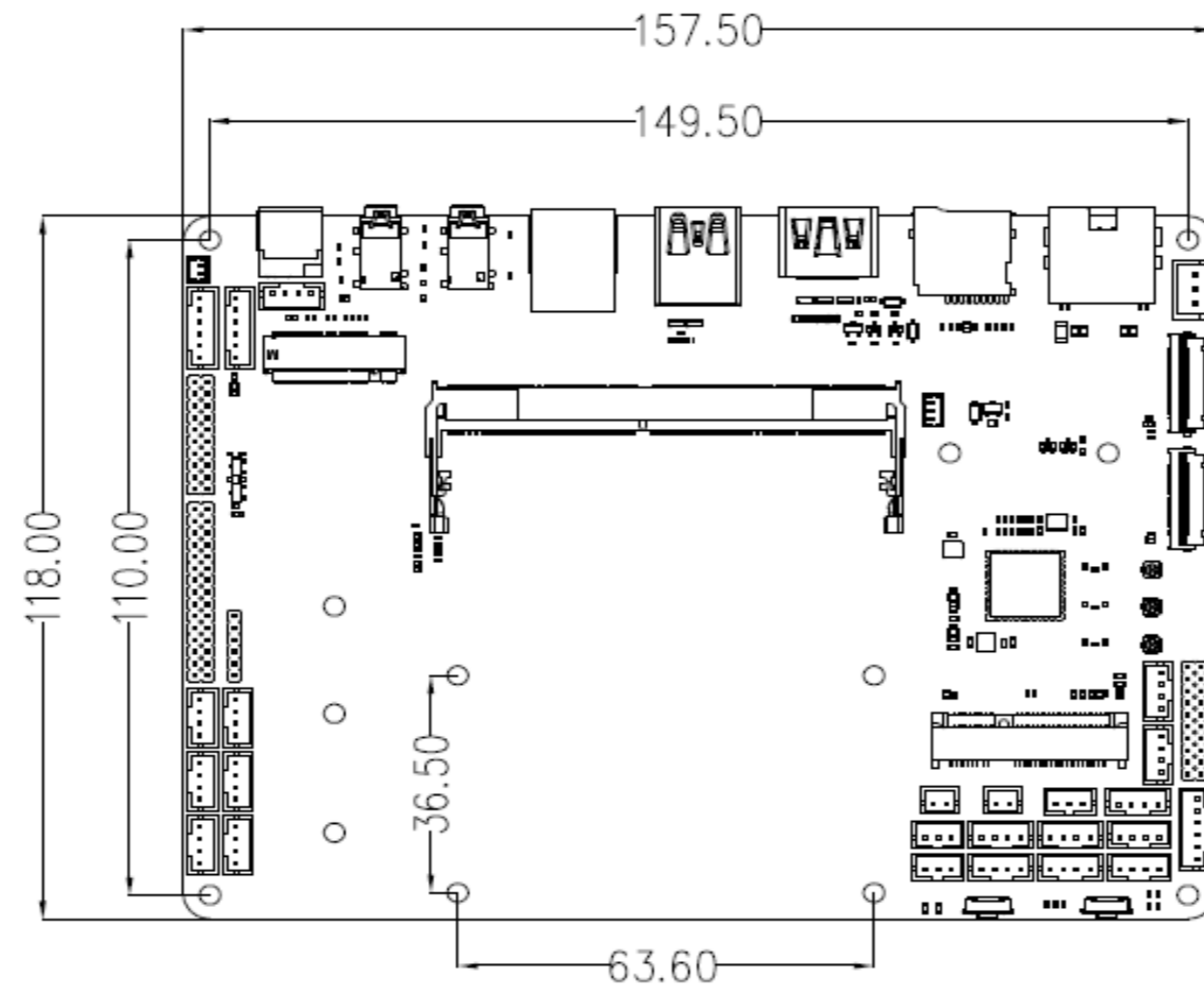
SIM Card ( MicroSIM ) MIPI-DSI



M.2 PCIe M-KEY  
(Extend NVMe SSD)

PWR_KEY	MIC	Line_Out	Speaker
LED	UART1	UART2	I2C4
IR	RS485	RS232	KEY (ADC/REC/PWR/GND)

# Dimension



比例 1.000





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