

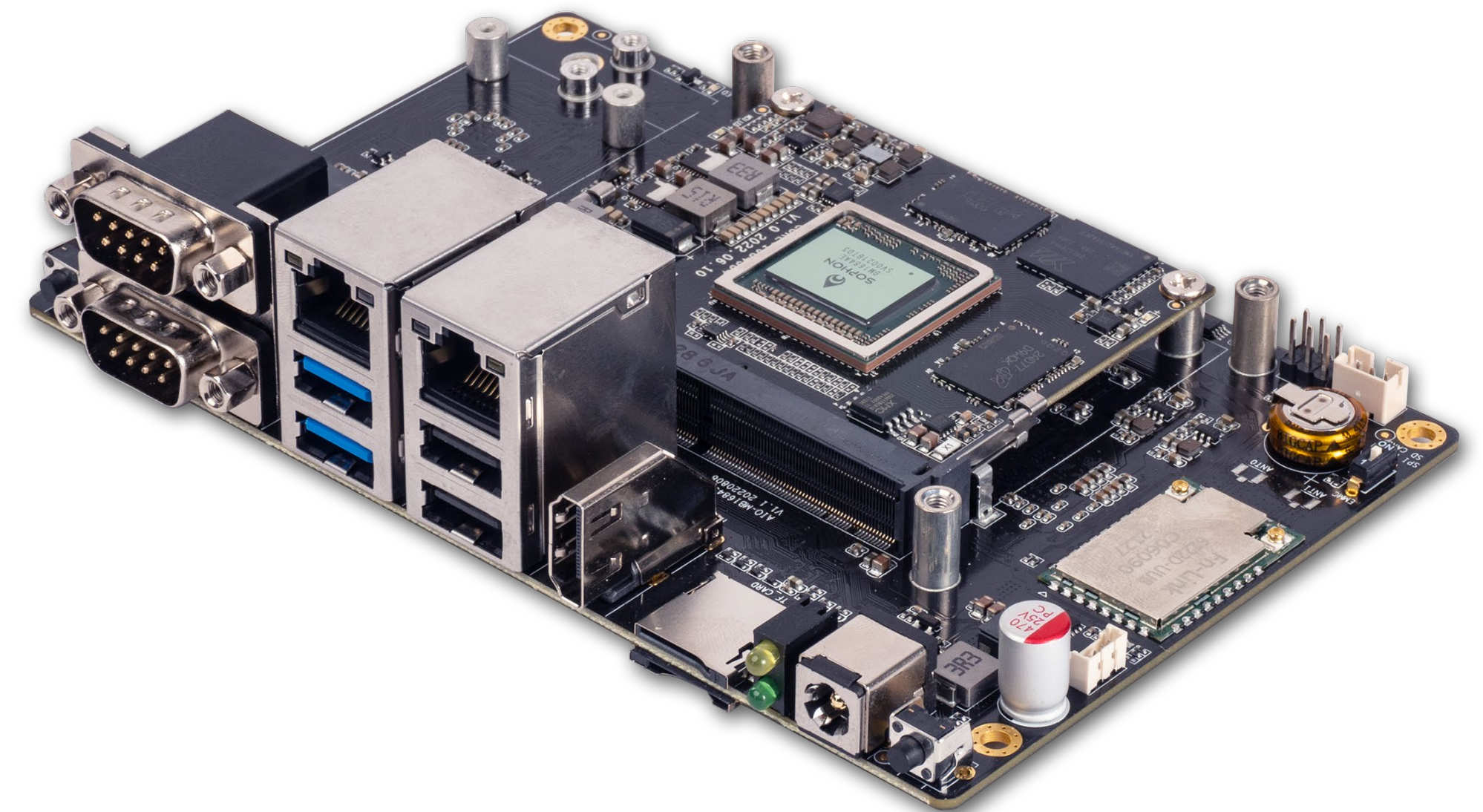


AIO-1684JD4

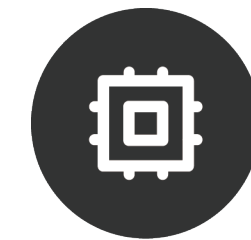
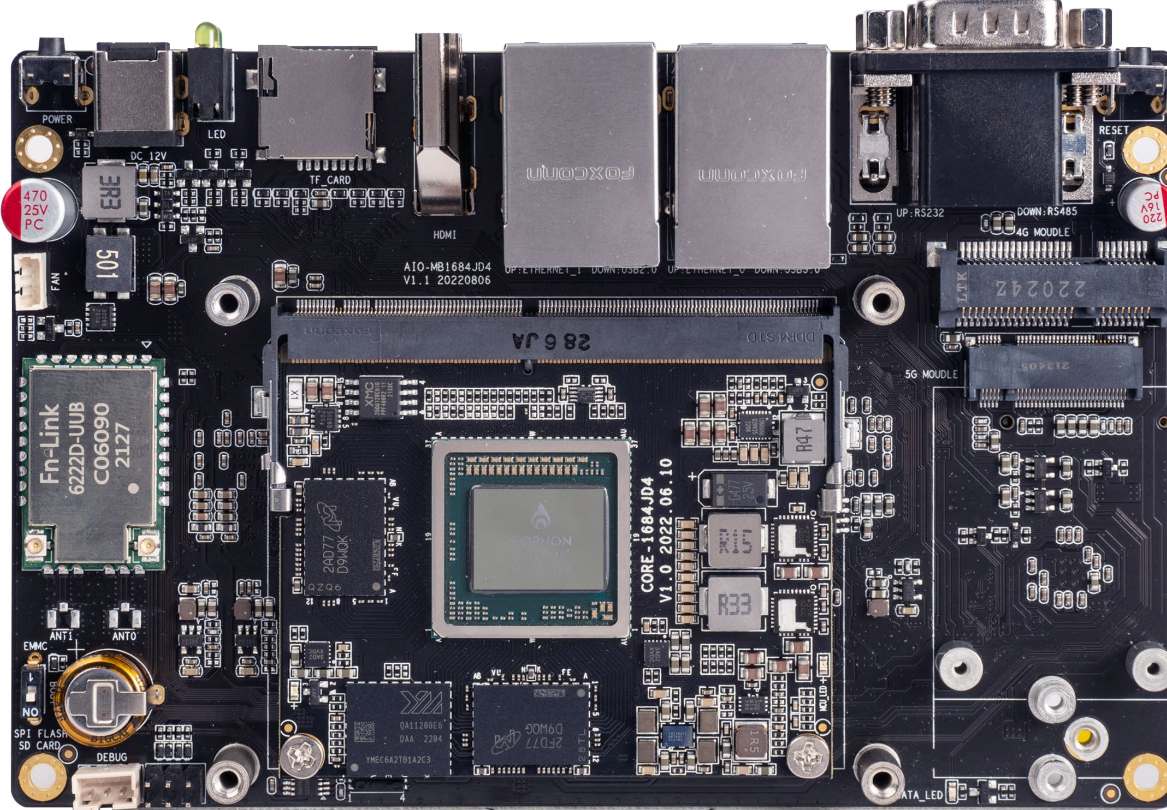
| 8-Core High Computing Power AI Mainboard

T-CHIP INTELLIGENCE TECHNOLOGY

V1.0



Product features



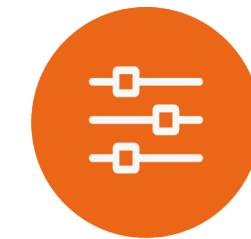
New-gen AI processor

SOPHON AI processor BM1684
up to 17.6T@INT8 or 2.2T@FP32
Super High Computing Power



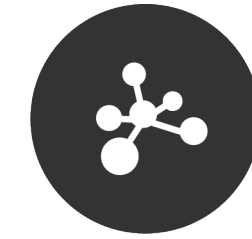
Powerful video AI performance

Up to 32-channel 1080P.264/H.265 video decoding is supported. It can process and analyze more than 16-channel HD video at the same time



A variety of interfaces

With HDMI, mSATA, USB3.0, USB2.0, RS485 and RS232, this computer can be directly applied to AI edge computing products



One-stop toolkit

The MNNSDK2 one-stop deep learning development toolkit provides a series of software tools, It supports Caffe/TF/PyTorch/Mxnet/Paddle



High throughput

Based on INT8 quantified Batch4 measured data, it has higher throughput and energy efficiency ratio



A wide range of applications

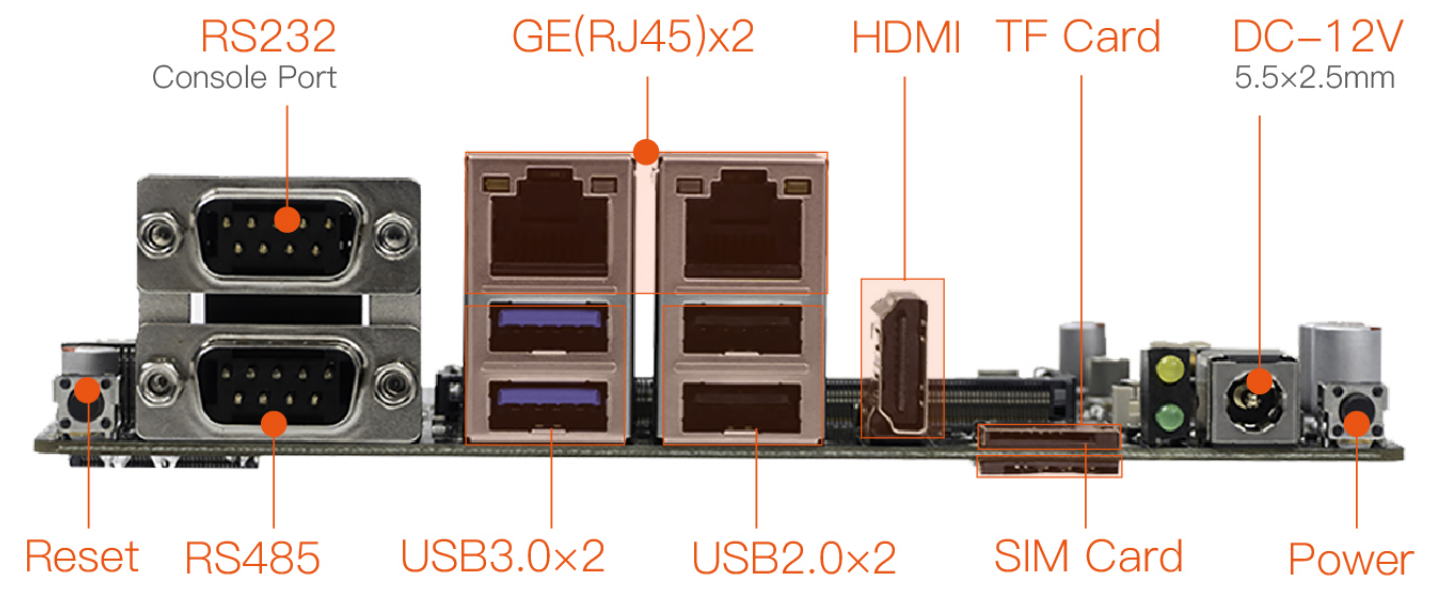
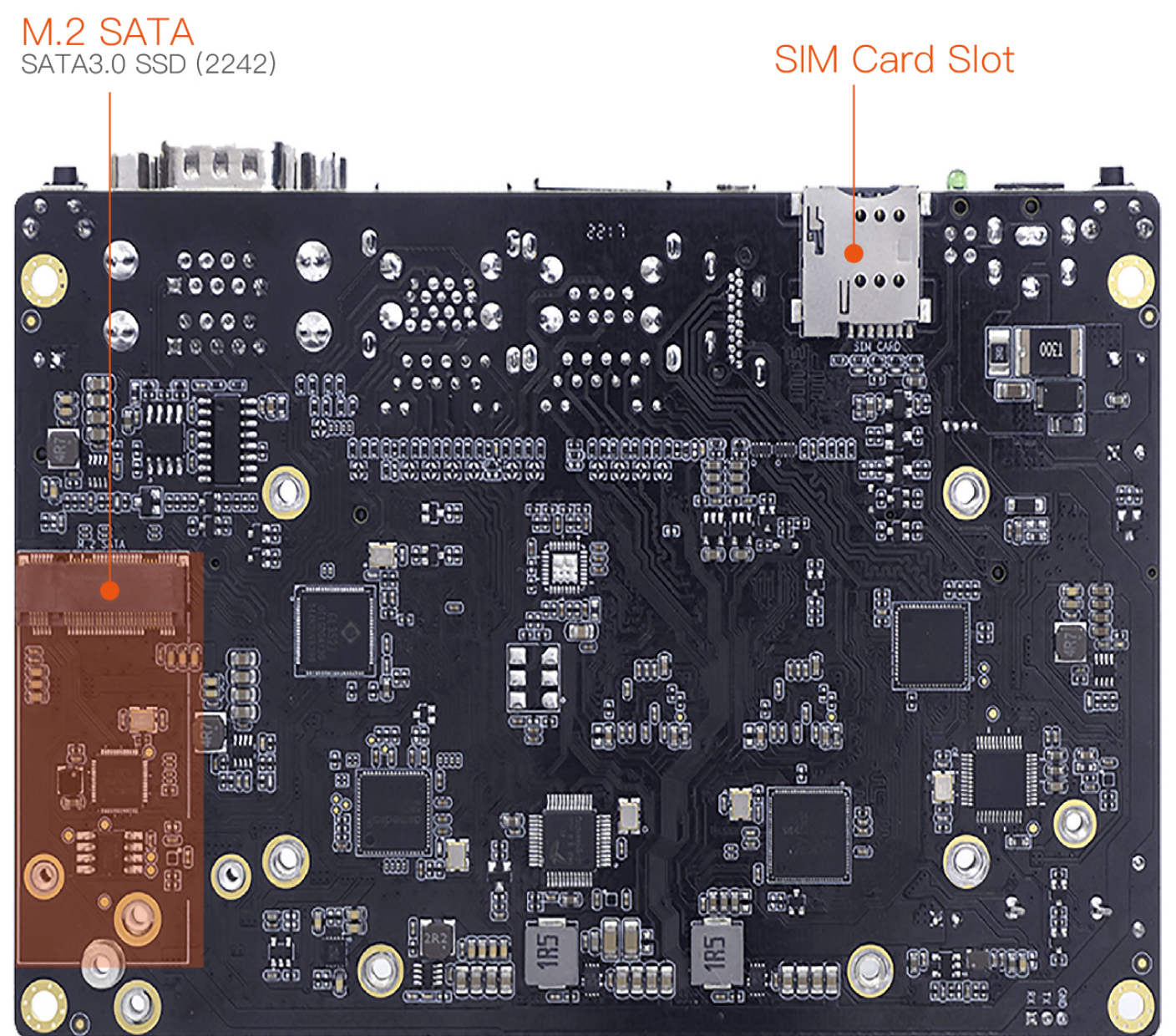
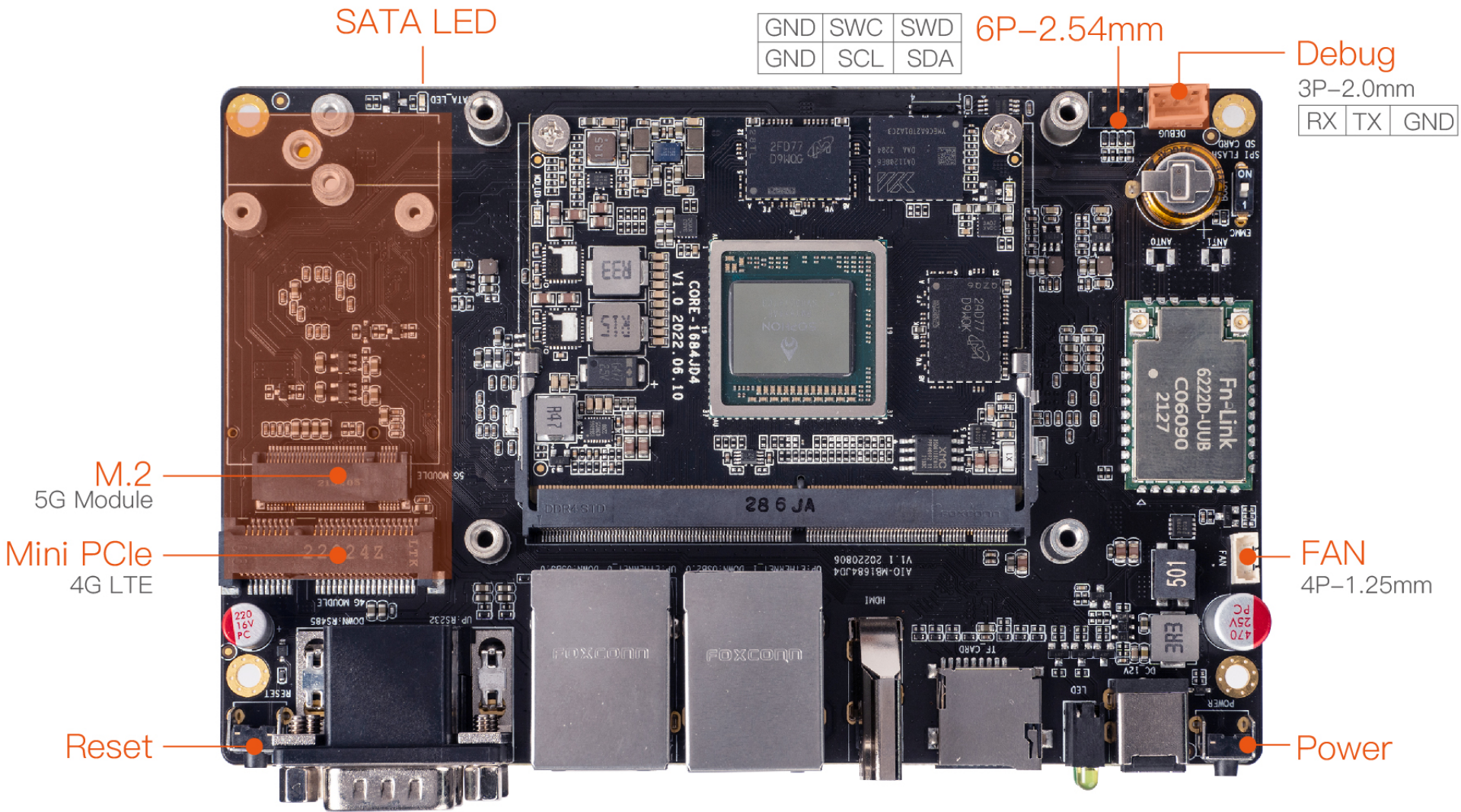
Visual computing, edge computing, general computing power services, Artificial Intelligence, intelligent construction site, intelligent transportation, security surveillance



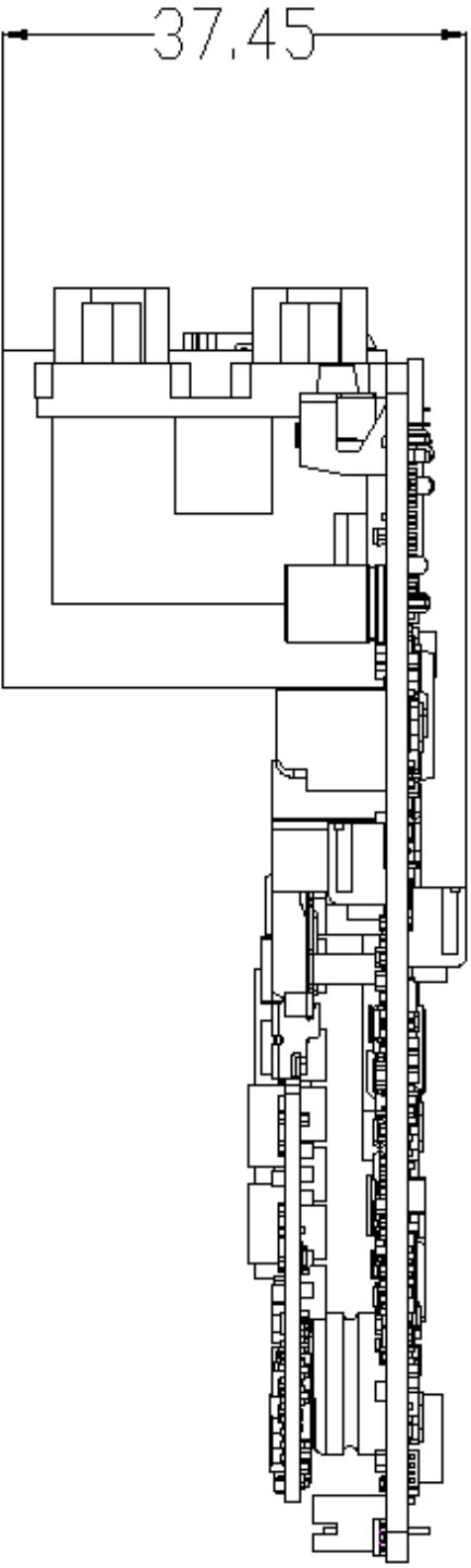
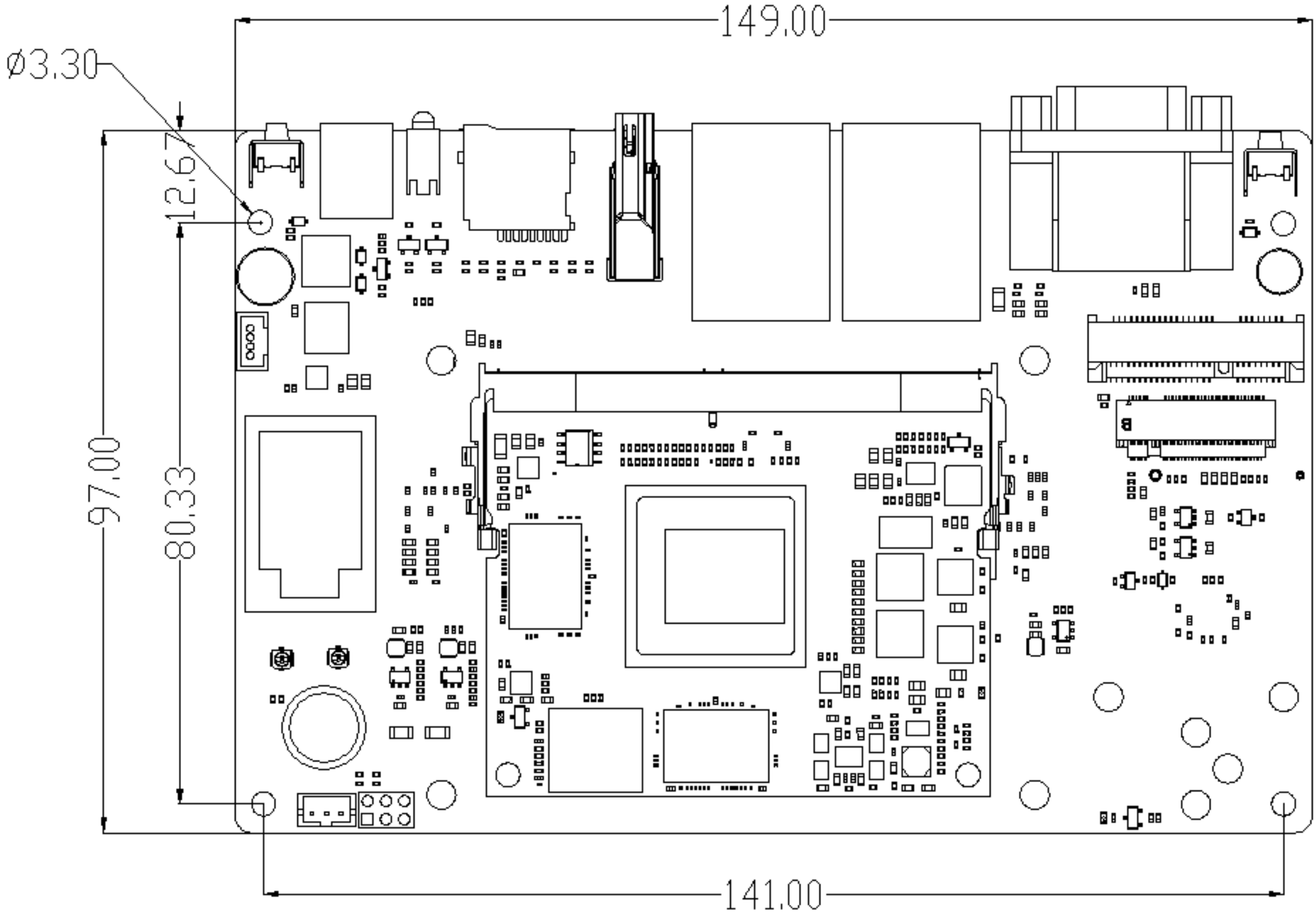
Specifications

Specifications	
Model	AIO-1684JD4
SOC	SOPHON BM1684
CPU	Integrated high-performance ARM A53, 12nm lithography process, clock speed up to 2.3GHz
TPU	Built-in tensor computing module TPU, computing power up to: 17.6T (INT8) / 2.2T (FP32) / 35.2 T (INT8, enable winograd) TPU contains 64 NPU arithmetic units, each NPU contains 16 EU arithmetic units, 1024 EU in total Support mainstream programming frameworks, such as TensorFlow / Caffe / PyTorch / Paddle / ONNX / MXNet / DarkNet
Encoding/Decoding	Up to 32-channel H.265/H.264 1080p@30fps video decoding, 1080p@50fps video encoding MJPEG image encoding and decoding up to 1080P@480fps
RAM	6GB/12GB LPDDR4/LPDDR4X
Storage	32GB/64GB/128GB eMMC
Storage Expansion	M.2 SATA3.0 SSD (2242)×1, TF Card Slot×1
Ethernet	1000Mbps Ethernet ×2
Wireless	2.4GHz/5GHz dual-band WiFi, 802.11a/b/g/n/ac, expanded with 4G LTE (Mini PCIe interface), 5G (M.2)
Video Output	HDMI (1080p@30fps)×1
Audio Output	HDMI Audio ×1
SATA	M.2 SATA3.0 (expanded with 2242 SATA SSD) ×1
USB	USB3.0 (current limit: 1A) ×2, USB2.0 (current limit: 500mA) ×2
Power	DC 12V (DC 5.5×2.5mm)
Other Interfaces	RS232×1, RS485×1
OS	Linux
Dimension	149mm × 97mm × 37.45mm
Power consumption	Normal: 18W (12V/1500mA), Max: 24W (12V/2000mA)
Environment	Operating Temperature: -20°C ~ 60°C Storage Temperature: -20°C ~ 70°C Storage humidity: 10% ~ 90%RH (non-condensing)

Interface description



Dimension





T-CHIP INTELLIGENCE TECHNOLOGY



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