



EC-A1684JD4 FD

17.6TOPS High Computing Power AI Embedded Computer

T-CHIP INTELLIGENCE TECHNOLOGY

V 1.0



Product features



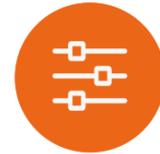
New-gen AI processor

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, SATA(M.2), USB3.0, USB2.0, RS485 and RS232, it can be directly applied to AI edge computing products



One-stop toolkit/SOPHON SDK

SOPHON SDK one-stop deep learning development toolkit provides a series of software tools, it supports Caffe/TF/PyTorch/Mxnet/Paddle



Fanless design

Equipped with an industrial-grade, all-metal enclosure, an aluminum alloy structure, and a fanless design, the device provides efficient heat dissipation and stays completely silent



A wide range of applications

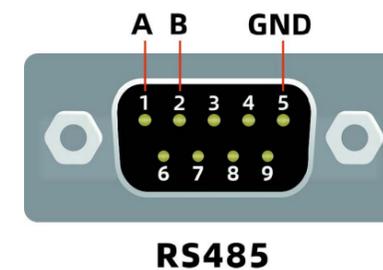
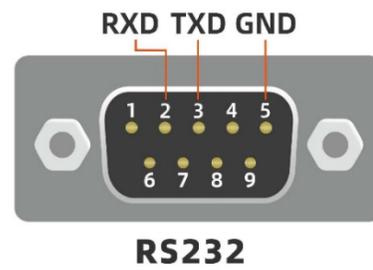
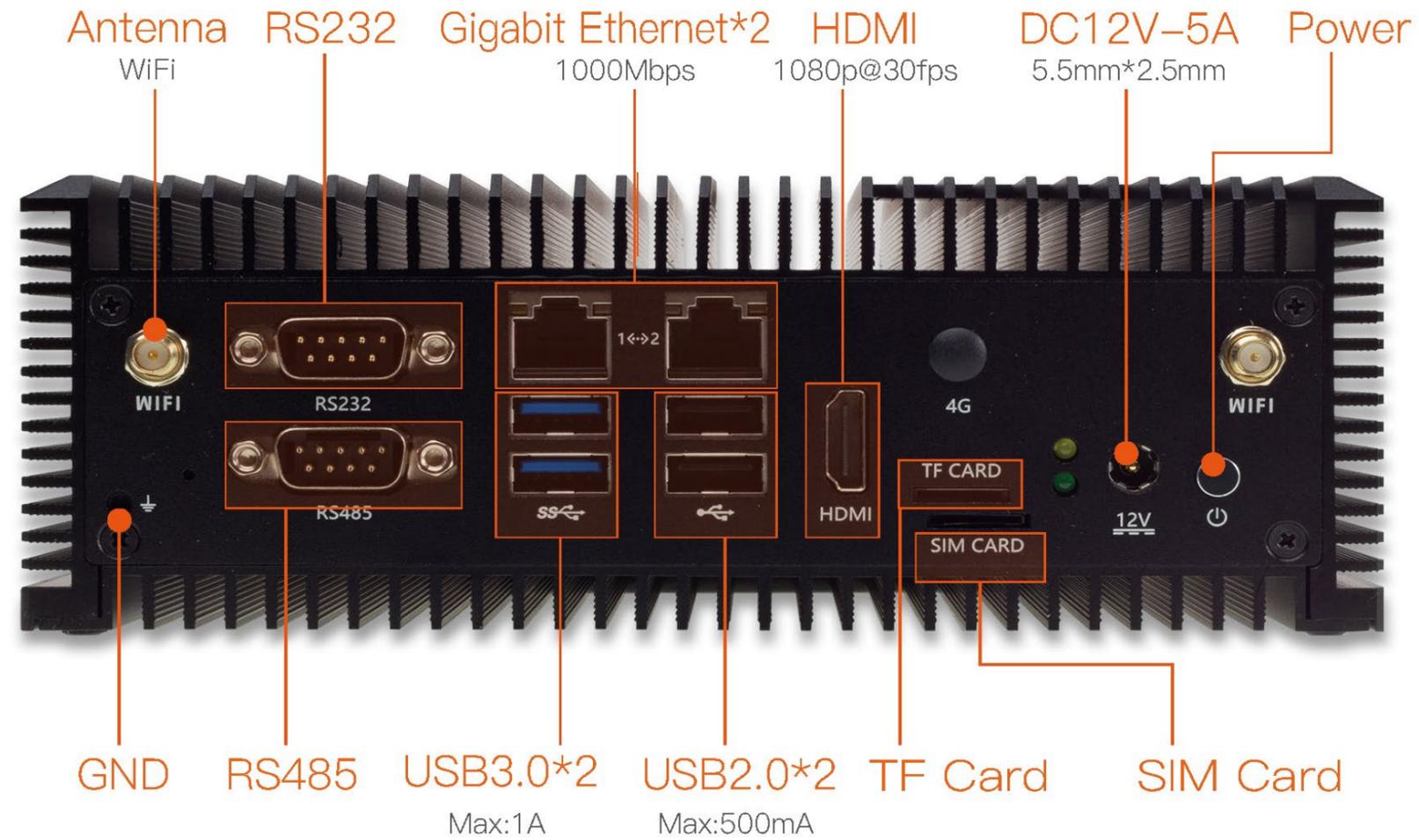
Visual computing, edge computing, general computing power services, Artificial intelligence, intelligent construction site, intelligent transportation, security surveillance

Specifications

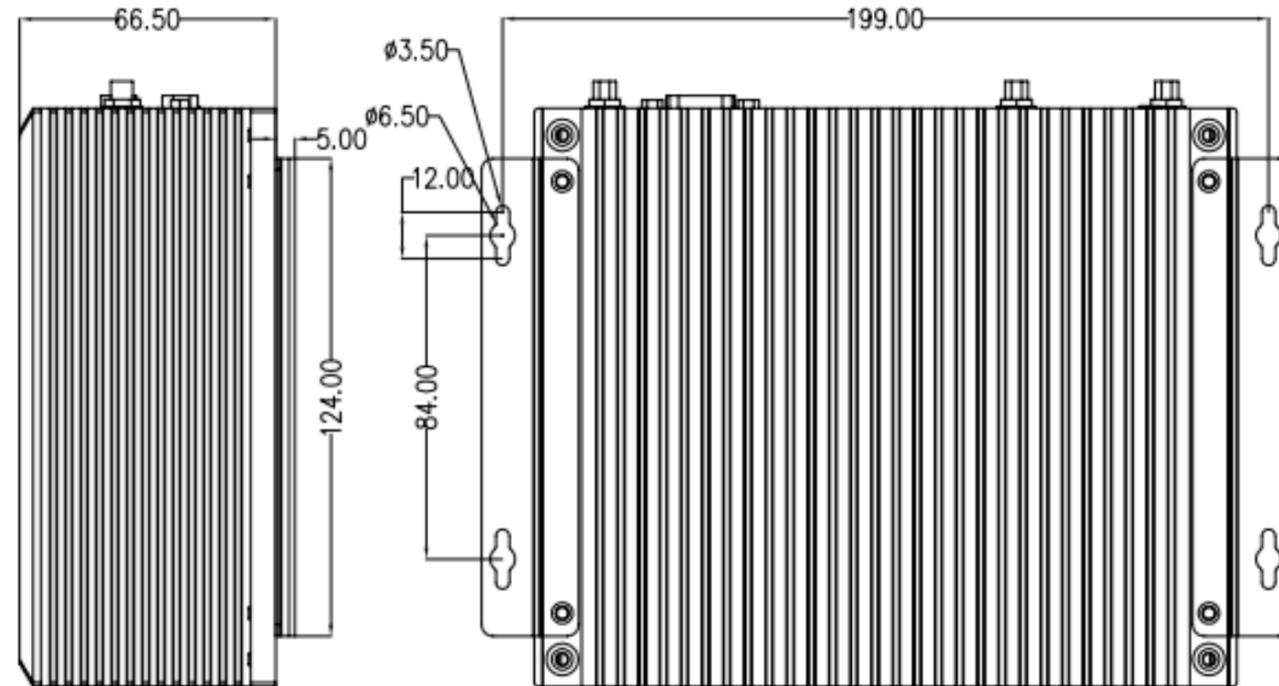
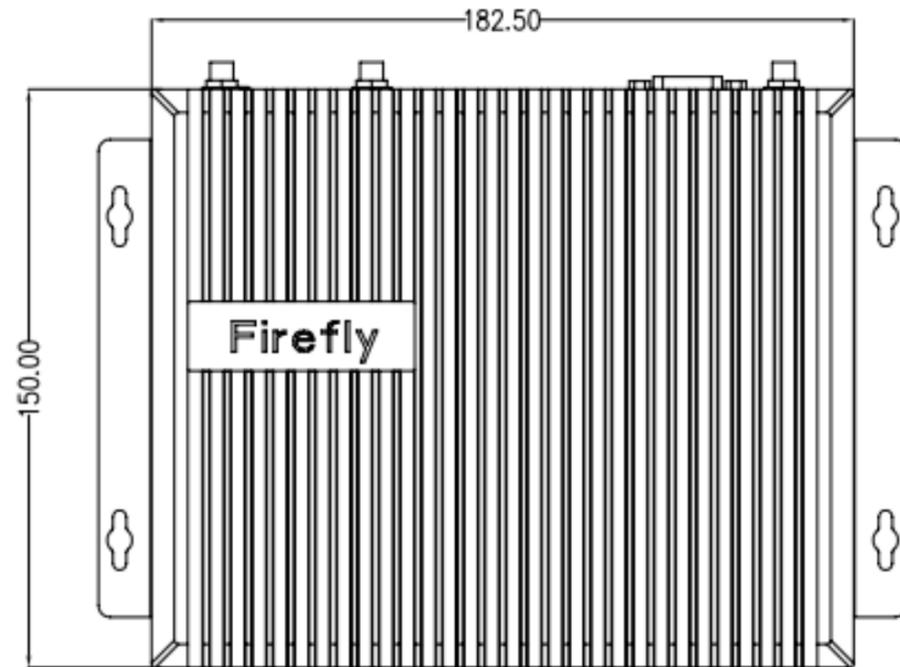
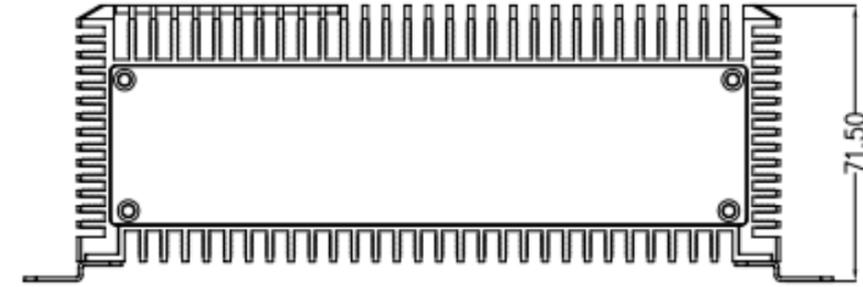
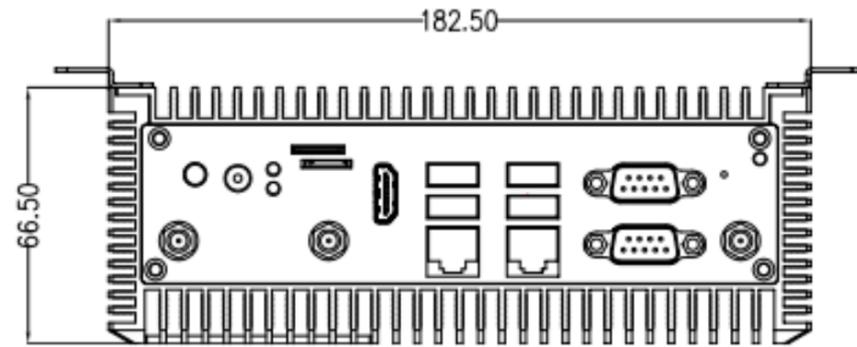


Specifications	
SOC	SOPHON BM1684
CPU	Integrated high-performance ARM A53, 12nm lithography process, clock speed up to 2.3GHz
TPU	Built-in tensor computing module TPU, computing power up to: 17.6T (INT8) / 2.2T (FP32) / 35.2T (INT8, enable winograd) TPU contains 64 NPU arithmetic units, each NPU contains 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/256G 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
USB	USB3.0 (current limit: 1A) *2, USB2.0 (current limit: 500mA) *2
Power	DC 12V/5A (DC 5.5×2.5mm)
Power consumption	Normal: 18W(12V/1500mA), Max: 24W(12V/2000mA)
Other Interfaces	RS232*1, RS485*1
OS	Linux
Dimension	182.5mm * 150.0mm * 66.5mm
Weight	≈ 1.8kg
Environment	Operating Temperature: -20°C ~ 60°C, Storage Temperature: -20°C ~ 70°C, Storage humidity: 10% ~ 90%RH (non-condensing)

Interface description



Dimension





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