EC-A1684JD4

8-Core High Computing Power AI Computer

Product features

New-gen AI processor

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

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

High throughput

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

Powerful video AI performance

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

One-stop toolkit

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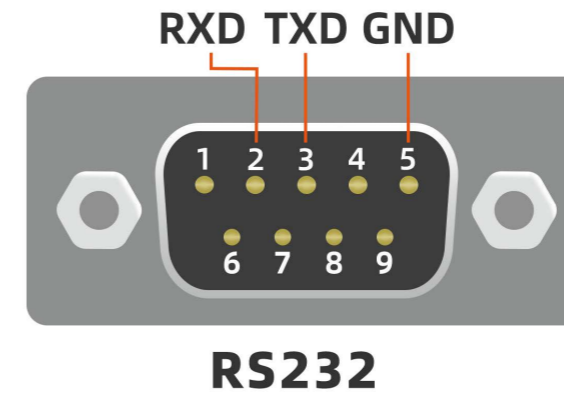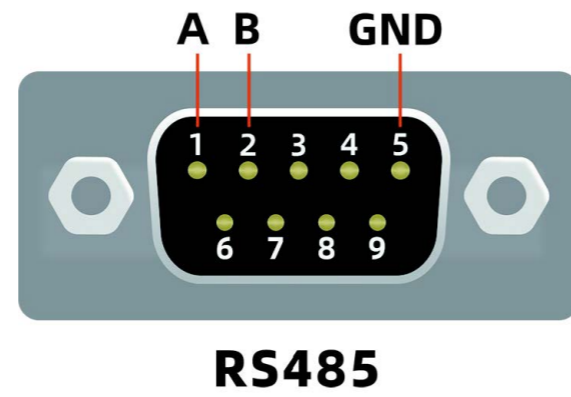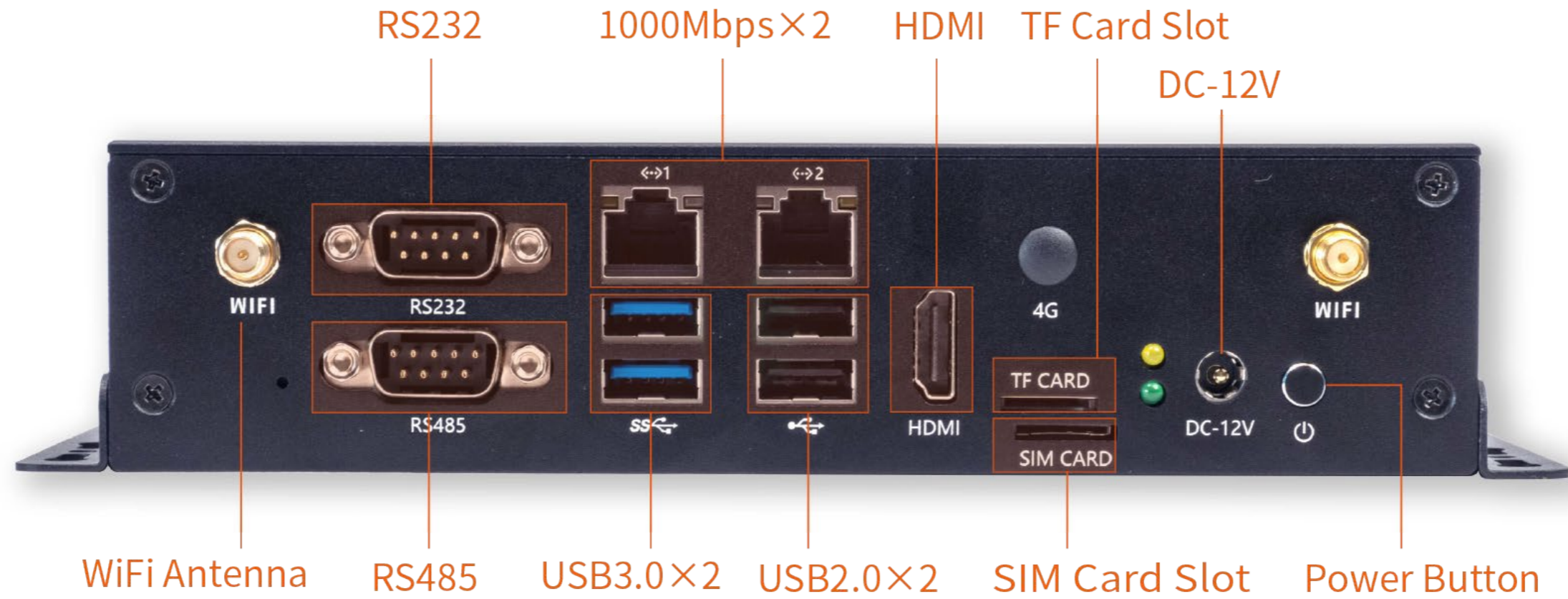
A wide range of applications

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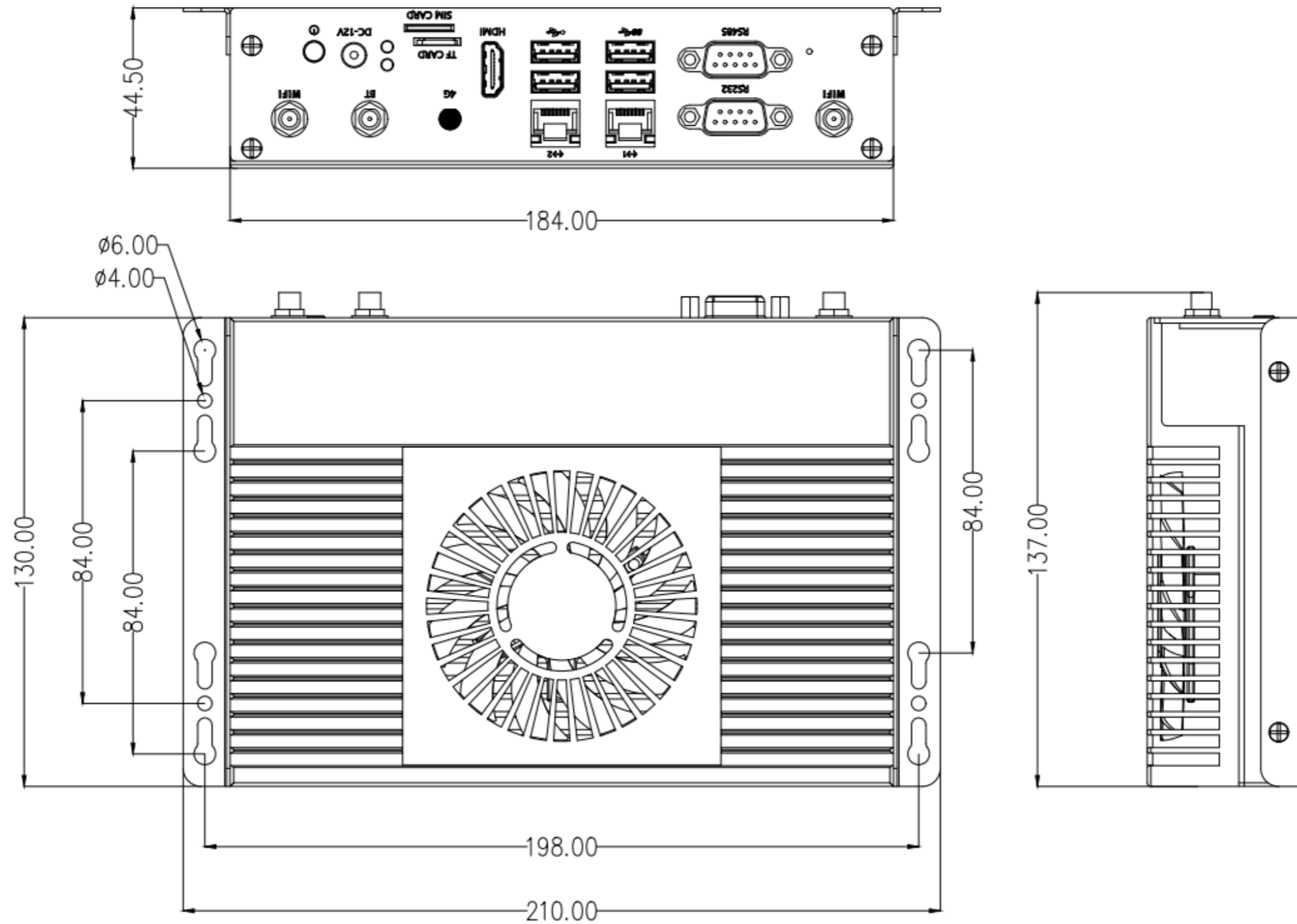
Specifications

Specifications	
Model	EC-A1684JD4
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 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	DC12V (DC5.5×2.5mm)
Power consumption	Normal: 18W(12V/1500mA), Max: 24W(12V/2000mA)
Other Interfaces	RS232×1, RS485×1
OS	Linux
Size	210mm × 130mm × 44.5mm
Environment	Operating Temperature: -20℃ ~ 60℃, Storage Temperature: -20℃ ~ 70℃, Storage humidity: 10% ~ 90%RH (non-condensing)

Interface description

RS232

1000Mbps×2

HDMI

TF Card Slot

DC-12V

WIFI

RS232

4G

WIFI

TF CARD

SIM CARD

DC-12V

HDMI

SS

WiFi Antenna

RS485

USB3.0×2

USB2.0×2

SIM Card Slot

Power Button

A B   GND

1 2 3 4 5

6 7 8 9

RS485

RXD TXD GND

1 2 3 4 5

6 7 8 9

RS232

Dimension

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