



EC-A1684XJD4 FD

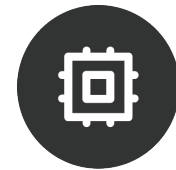
32T High Computing Power AI Embedded Computer



T-CHIP INTELLIGENCE TECHNOLOGY

V 1.0

Product features



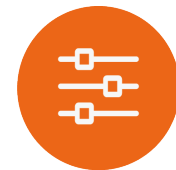
New-gen AI processor

SOPHON AI processor BM1684X
32TOPS (INT8), 16TFLOPS (FP16/BF16),
2TFLOPS (FP32)
Super High Computing Power



Powerful video AI performance

32-channel H.265 1080p video decoding
32-channel H.265 1080P HD video full process
processing (decoding+AI analysis)
12-channel H.265 1080p video encoding



A variety of interfaces

HDMI, M.2 SATA, USB3.0, USB2.0, RS485
, 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



F a n l e s s d e s i g n

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

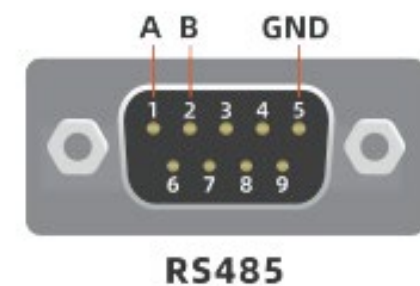
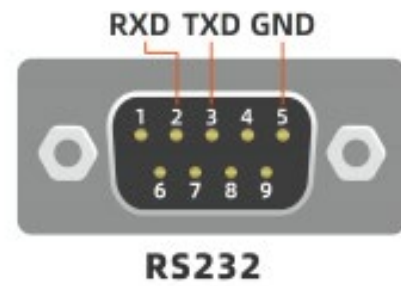
visual computing, edge computing, general
computing power services, Artificial
Intelligence, intelligent construction site,
transportation, security surveillance

Specifications

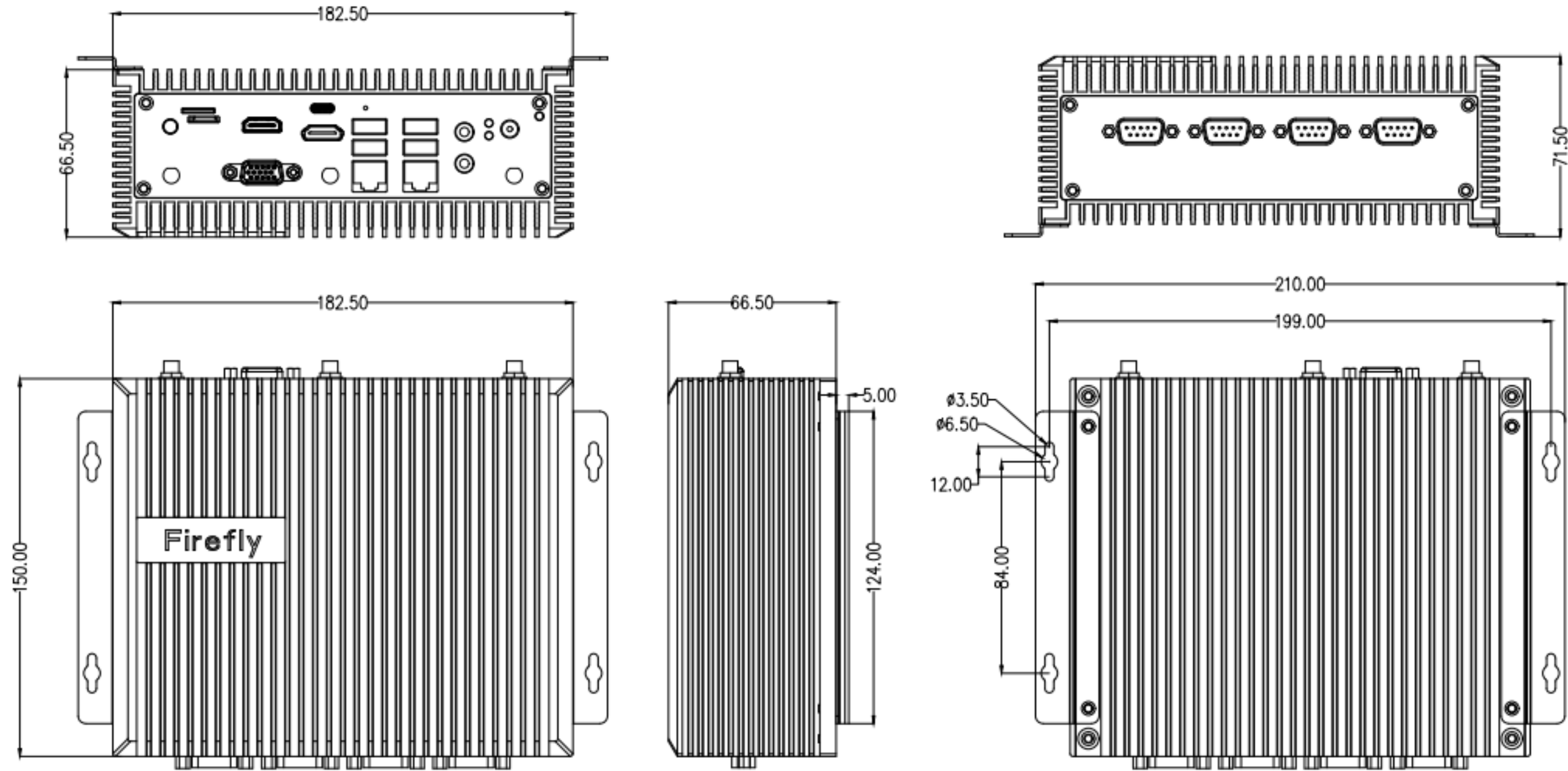


	Specification
SOC	SOPHON BM1684X
CPU	Integrated high-performance ARM A53, 12nm lithography process, clock speed up to 2.3GHz
TPU	Built-in tensor computing module TPU, computing power up to: 32TOPS (INT8), 16TFLOPS (FP16/BF16), 2TFLOPS (FP32) Support mainstream programming frameworks, such as TensorFlow / Caffe / PyTorch / Paddle / ONNX / MXNet / DarkNet
Encoding/Decoding	32-channel H.265/H.264 1080p@25fps video decoding 32-channel 1080P@25fps HD video full process processing (decoding+AI analysis) 12 -channel H.265/H.264 1080p@25fps video encoding
RAM	6GB/12GB/16GB LPDDR4/LPDDR4X
Storage	32GB/64GB/128GB/256GB eMMC, 128MB SPI Flash, 1*M.2 SATA3.0 SSD (2242), 1*TF Card
Ethernet	2*Gigabit Ethernet (1000Mbps/RJ45)
Wireless	2.4GHz/5GHz Dual-band WiFi, 802.11a/b/g/n/ac, extended to 4G LTE (Mini PCIe), 5G (M.2)
Video Output	1*HDMI (1080p@30fps)
USB	2*USB3.0 (Max: 1A), 2*USB2.0 (Max: 500mA)
Interface	1*RS232, 1*RS485
OS	Linux
Power	DC 12V/5A (DC 5.5*2.5mm)
Power consumption	Normal: 26.4W(12V/2200mA), Max: 42W(12V/3500mA)
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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