



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 .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	
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) / 35.2 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	DC12V (DC5.5×2.5mm)
Other Interfaces	RS232×1、RS485×1
OS	Linux
Dimension	149mm × 97mm × 37.45mm
Power consumption	Normal: 18W (12V/1500mA) , Max: 30W (12V/2500mA)
Environment	Operating Temperature: -20°C ~ 60°C Storage Temperature: -20°C ~ 70°C Storage Humidity: -40% ~ 70 %



