



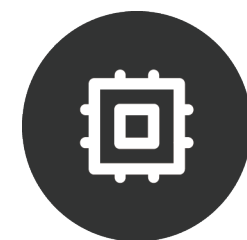
CSA1-N8S1684

| 8-node 140Tops Cluster Server

V1.1



Product features



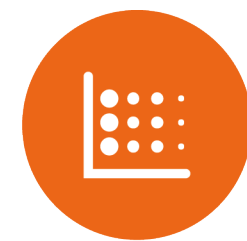
Strong Computing Power

Provide up to 140T peak computing power or 17.6T FP32 high-precision computing power.



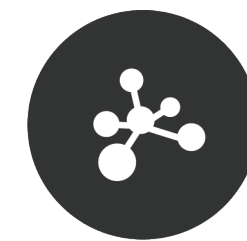
Ultra-High Performance

Support 128-channel 1080P HD video whole-process processing and 304-channel full HD video hardware decoding and 16-channel encoding.



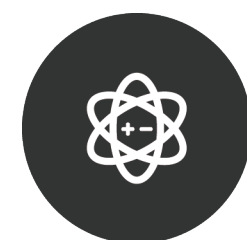
High Computing Density

In the way of high-density integration and tight deployment, a single Cluster Server is equipped with 8*BM1684 to reduce TCO.



Rapid Migration

Support Caffe/TensorFlow/PyTorch/MXNet/Paddle Lite and other mainstream deep learning frameworks.



Rich Algorithms

Support algorithm migration of pedestrian/vehicle / non-vehicle / object recognition, video structurization, trajectory behavior analysis, etc.



Rich Scenarios

Support intelligent park / security/ industrial control / commerce, etc.Flexible deployment in multiple fields and scenarios.

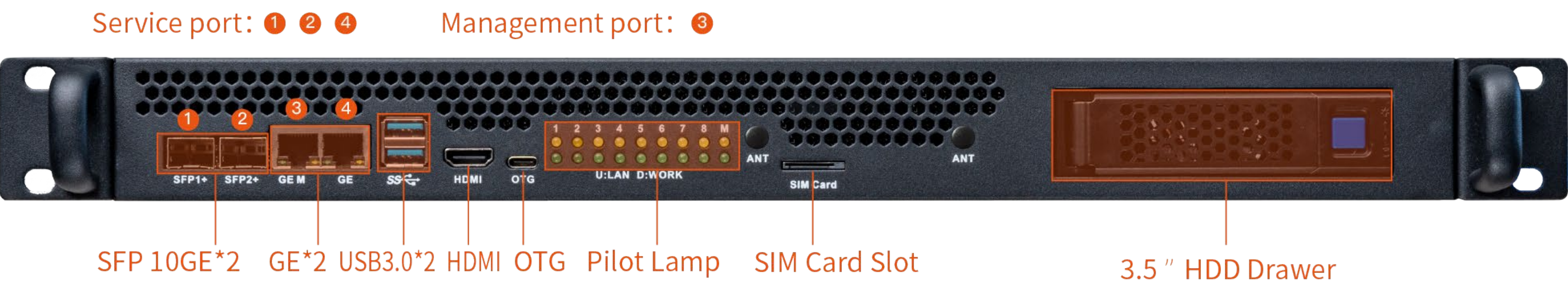
Specifications



Specifications	
Name	Algorithmic Cluster Server
Model	CSA1-N8S1684
AI	140T@INT8、17.6TFLOPS@FP32
Encoding Decoding	Video Decoding: H.264 & H.265: 1080P @11520fps Video decoding resolution: 8192 * 8192 / 8K / 4K / 1080P / 720P / D1 / CIF Video Encoding: H.264 & H.265: 1080P @600fps Video Encoding resolution: 4K / 1080P / 720P / D1 / CIF Image Decoding: JPEG: 4800 pictures/sec @1080P
Nodes	8 compute nodes(up to 64 ARM cores) + 1 control node
CPU	Compute node: BM1684, 8-core (A53*8) 64-bit processor, up to 2.3GHz Control node: RK3588S, 8-core (4×Cortex-A76+4×Cortex-A55) 64-bit CPU, up to 2.4GHz
RAM	12GB LPDDR4 × 8
Storage	32GB eMMC × 8 Expandable 3.5" SATA3.0 HDD × 1
Network	GE RJ45 network ports ×2 (one main core board network port and one ordinary network ports) SFP 10GE × 2 4G LTE/5G (optional)
Display	HDMI 2.0, up to 4K@60Hz (Main core board display)
USB	2 ↑ USB3.0 HOST、1 ↑ Type-C (for processor core board debugging)
Fan	5 high-speed cooling fans
Power	300W AC power (input: 100V AC ~ 240V AC)
System	Linux
BMC	Integrated BMC management system provides management interface based on Web. Supports secondary development.
Framework	Deep Learning Framework: TensorFlow / PyTorch / Paddle / Caffe / ONNX / MXNet / DarkNet
Dimension	Standard 1U rack-mounted server: 490mm x 390mm x 44.4mm
Environment	Operating temperature: 0°C - 50°C, Storage Humidity: 8%~95%RH(non-condensing)

Interface description

Front View



Back View





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