



The Thundercomm TurboX C8750 SOM is a highly integrated System on Module (SOM) powered by the next-generation flagship Qualcomm® CQ8750S* processor. Built on a cutting-edge 3nm process, it supports both Android and Linux operating systems. TurboX C8750 supports Android, featuring powerful computing, extreme edge AI processing, and robust video and graphics. It is an ideal platform for IoT products that demand powerful computing, advanced imaging, and exceptional graphics rendering.

*For EVT sample, the SoC is SM8750P.

Applications



Smart Camera



Video Conference



Automated Manufacturing Robot



Autonomous Mobile Robot



Collaborative Robot



Delivery Robot

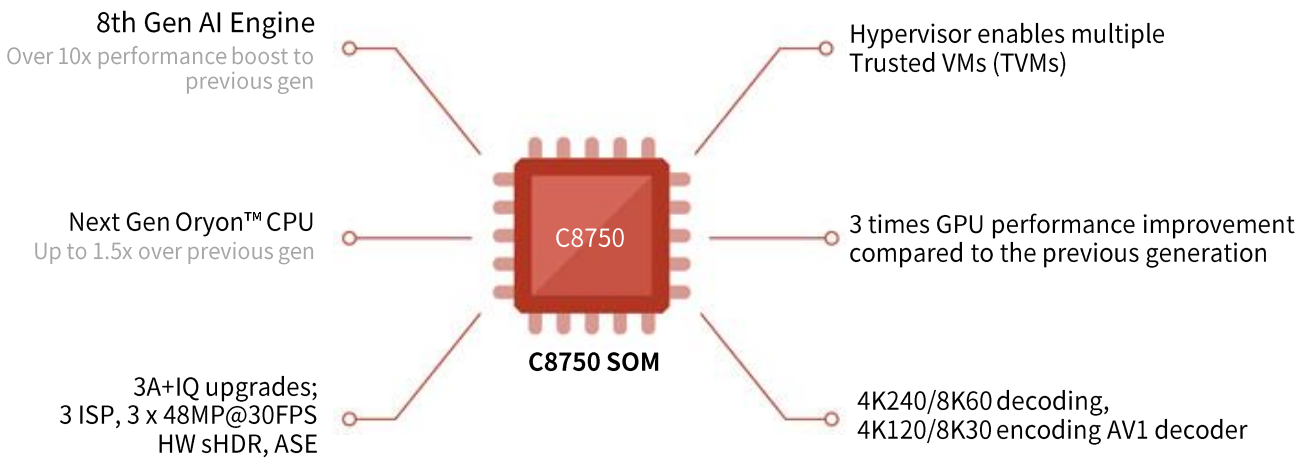


Urban Air Mobility (UAM) Transportation



Edge Computing

Features



TurboX C8750 SOM Specifications

Category	Description
Platform	Qualcomm® CQ8750S Oryon™ CPU, 8 Oryon-core: Prime core, up to 4.32GHz ; Performance cores, up to 3.53GHz Adreno™ 830 GPU GPU Spectra™ ISP
Memory	16GB LPDDR5x + 128GB UFS3.1
AI Performance	On-device personalization and multimodal support Support for mix precision (INT8+INT16) Support for all precisions (INT4, INT8, INT16, FP16)
Connectivity	No built-in Wi-Fi
Display	On-Device Display Support: 4K@60Hz, QHD+@240Hz Maximum External Display Support: 8K@30Hz, 1080@240Hz
Camera	3 x 48 MP@30FPS ISPs 4 x CSI D-PHY-1.2 4-lane 2 x CSI C-PHY-2.0 3-trio compatible with D-PHY 4-lane 5 x concurrent (3 IFEs + 2 IFE-lites)
Video	4K240/8K60 – Video Decode 4K120/8K30 – Video Encode
PCIe	1 x PCIe Gen3 2-lane
USB	1 x USB 3.1 Gen2 with DP1.4
Operating Environment	Operating Temperature: -35°C – 75°C
Voltage	3.2V – 4.5V
Form Factor	LGA
Dimension	39mm x 33mm x 2.75mm (excluding height of the bottom shielding case)
OS Support	Android 15, Linux*
Certificate	RoHS*/Reach*/WEEE*/TSCA*

* Planning

TurboX C8750 Development Kit Specifications

Category	Description
SOM on Board	TurboX C8750 SOM
Display Interface	1 x HDMI OUT 4K 1 x DP V1.4 over Type-C 1 x HS connector
Audio Interface	2 x Speaker Out 1 x HDMI IN with audio (Over I2S interface) 1 x HDMI OUT with audio (Over I2S interface) 1 x 3.5mm headphone connector 2 x DMIC connector, supporting up to 8 DMICs
Camera Interface	2 x 4-lane D-PHY camera, one for ASE camera 2 x 3-trio C-PHY camera, compatible with 4-lane D-PHY 2 x GMSL
Other Interfaces	1 x USB 3.1 Type-C 3 x USB 3.0 Type-A 2 x Micro USB for debug (one for SOM debug, one for 5G module) 1 x TF card socket 1 x SIM card socket 1 x Fan connector 2 x 1000M Ethernet port 1 x M.2 for Thundercomm 5G module 1 x SDIO Wi-Fi 5 module 1 x A+G sensor 1 x Magnetometer 5 x LED
Operating Temperature	-35°C – 75°C
Dimension	201mm x 162.5mm x 35.6mm

Note: For whether a specific functional interface has been enabled, please refer to the latest release note.

