

TURBO X

C5430 SOM



TurboX C5430 SOM (System on Module) is integrated with Qualcomm® QCS5430 SoC, a 6nm processor with superior performance, power efficiency and powerful computing (~ 3.5 TOPS). It supports 4K@60FPS video decoding, 4K@30FPS video encoding, Wi-Fi 6E with DBS, Long Range Bluetooth, four MIPI CSIs, as well as a rich set of peripheral interfaces, including GPIO, UART, I2C, I3C, SPI, DSI, USB 3.1 and PCIe. C5430 SOM is a high performance AIoT SOM for building handheld devices, industrial robots, service robots, rugged tablet and edge computing, providing customers with hardware interfaces and software SDK to validate functions and build the prototype quickly.

Applications



Rugged Handheld



Rugged Tablet



Edge Computing



Service Robot



Industrial Robot

Features

6nm, power efficiency

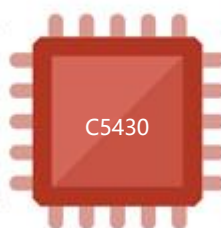
Superior computing capability (~ 3.5 TOPS)

4 x 4-lane MIPI CSI D-PHY
(2 of them compatible with 3-trio MIPI CSI C-PHY up to 48M camera)

Wi-Fi 6E with DBS,
BT5.2 with Long Range Bluetooth

Long life cycle, up to 2028

Rich set of peripheral interfaces,
e.g. PCIe 3.0, USB3.1, USB2.0, DSI



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Specifications

Category	C5430
Platform	<p>Qualcomm® QCS5430 Qualcomm® Kryo™ CPU 670 FP1¹⁾</p> <ul style="list-style-type: none"> • Kryo Gold: Two high-performance cores at 2.1 GHz • Kryo Silver: Four low-power cores at 1.8 GHz <p>FP2</p> <ul style="list-style-type: none"> • Kryo Gold: Four high-performance cores at 2.1 GHz • Kryo Silver: Four low-power cores at 1.8 GHz <p>Qualcomm® Adreno™ GPU 6xx, Adreno 633 VPU, Adreno DPU 1075 Qualcomm® Compute Hexagon™ DSP with dual HVX, Hexagon Co-processor (Hexagon CP) 2.0 and Hexagon Tensor Accelerator Qualcomm® Spectra™ 570L image processing</p>
Memory	6GB+128GB or 8GB+128GB
Connectivity	802.11 ax over PCIe with DBS, 2x2 MIMO (Wi-Fi 6E), Bluetooth 5.2
Video Encode	4K@30FPS for H.264/H.265
Video Decode	4K@60FPS for H.264/H.265/VP9
Display interfaces	<p>1x MIPI-DSI 4-lane; FHD+ (1080x2520) 8L@120FPS; 4K@60FPS display support over DisplayPort</p>
Camera Interfaces	<p>4 x 4-lane MIPI CSI D-PHY (2 of them compatible with 3-trio MIPI CSI C-PHY up to 48M camera)</p>
Peripherals	<p>1 x USB 3.1 with DP, 1 x USB2.0, PCIe (FP2: 1x PCIe Gen3 2-lane), 2 x SoundWire, 2 x SDC(4bit), 3 x DMIC Interfaces, GPIOs, QUPs (UART/I2C/SPI)</p>
Operating Environment	<p>Operation Temperature: -25°C ~ +75°C ²⁾ Operation Humidity: 5%~95%, non-condensing</p>
Form Factor	LGA
Certification	FCC*/CE*/JATE*/TELEC*/KC*
Voltage	3.4V~4.5V, Typ. 3.8V
Dimensions	42.5mm x 35.5mm x 2.7mm
Operating System	Android 13

¹⁾: Default configuration.

²⁾: The SOM operation temperature shall not exceed relevant IC temperature scope.

*: Planning



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