

TURBO X

CT6490/C6490 SOM

- Digital Signage
- Industrial Robot
- Rugged Handheld
- Rugged Tablet
- Service Robot



The TurboX CT6490/C6490 SOM (System on Module) is integrated with Qualcomm® Snapdragon™ 5G SoC QCM6490/QCS6490, a 6nm processor with superior performance, power efficiency, and powerful computing (14 TOPS). It supports 4K@60FPS video decoding and 4K@30FPS video encoding, Wi-Fi 6E with DBS, Long Range Bluetooth, five MIPI CSIs, as well as a rich set of peripheral interfaces, including GPIO, UART, I2C, I3C, SPI, USB 3.1 and PCIe. The CT6490/C6490 SOM is a high performance AIoT SOM for building handheld devices, industrial robots, service robots, drones and digital signage, providing customers with hardware interfaces and software SDK to validate functions and build the prototype quickly.

Overview

CT6490/C6490 SOM Applications



Rugged Handheld



Rugged Tablet



Digital Signage

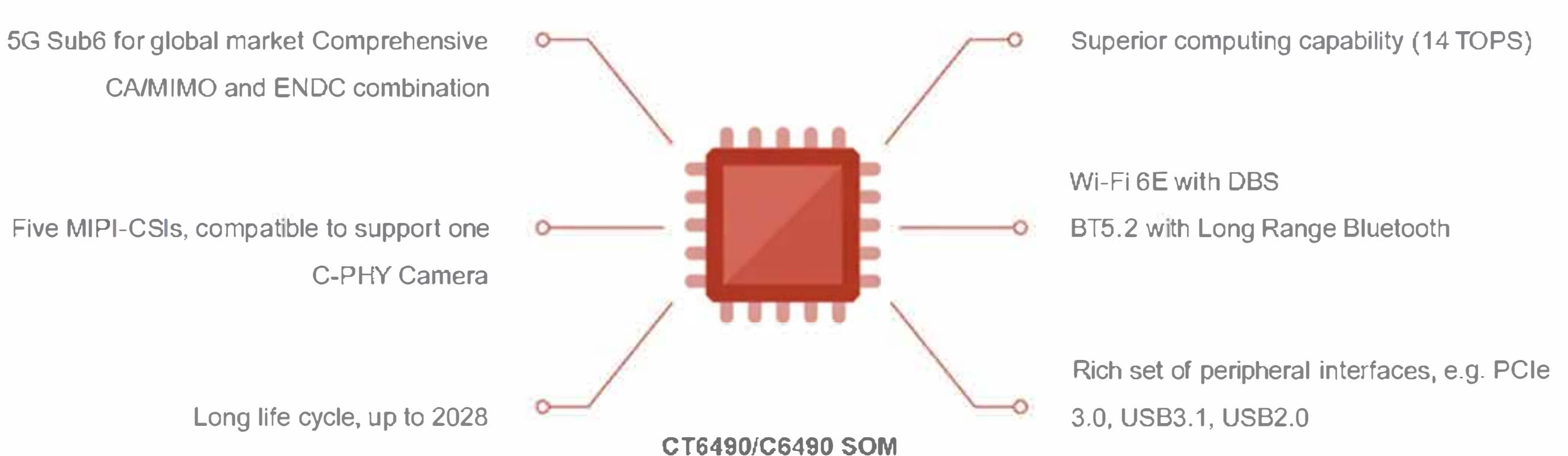


Service Robot



Industrial Robot

CT6490/C6490 SOM Features



Specifications

| Category | C6490 | CT6490-NA | CT6490-EA |
|-----------------------|---|---|---|
| Platform | Snapdragon™ QCS6490 | Snapdragon™ QCM6490 | Snapdragon™ QCM6490 |
| | Qualcomm® Kryo™ CPU 670 | Qualcomm® Kryo™ CPU 670 | Qualcomm® Kryo™ CPU 670 |
| | Qualcomm® Adreno™ GPU 642L, Adreno 633 VPU, Adreno DPU 1075 | Qualcomm® Adreno™ GPU 642L, Adreno 633 VPU, Adreno DPU 1075 | Qualcomm® Adreno™ GPU 642L, 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® Compute Hexagon™ DSP with dual HVX, Hexagon Co-processor (Hexagon CP) 2.0 and Hexagon Tensor Accelerator | Qualcomm® Compute Hexagon™ DSP with dual HVX, Hexagon Co-processor (Hexagon CP) 2.0 and Hexagon Tensor Accelerator |
| | Qualcomm® Spectra™ 570L image processing | Qualcomm® Spectra™ 570L image processing | Qualcomm® Spectra™ 570L image processing |
| Memory | 4GB+64GB or 8GB+128GB | 4GB+64GB or 8GB+128GB | 4GB+64GB or 8GB+128GB |
| Air Interface | NA | 5G Sub6: n2/n5/n12/n14/n25/n26/n30/n41/n48/n66/n70/n71/n77/n78 | 5G Sub6: n1/n3/n7/n8/n20/n28/n38/n40/n41/n77/n78/n79 |
| | | LTE: B2/B4/B5/B7/B12/B13/B14/B25/B26/B29/B30/B41/B46/B48/B66/B71 | LTE: B1/B3/B5/B7/B8/B18/B19/B20/B26/B28A/B28B/B29/B32/B34/B38/B39/B40/B41/B42/B46 |
| | | WCDMA: B1/B2/B4/B5/B6/B8/B19 | WCDMA: B1/B2/B4/B5/B6/B8/B19 |
| | | GNSS: GPS/Beidou/GLONASS/Galileo/NavIC/QZSS, L1/L5 bands supported | GNSS: GPS/Beidou/GLONASS/Galileo/NavIC/QZSS, L1/L5 bands supported |
| Data Rate | NA | Peak Speed : 2.5Gbps DL, 550Mbps UL | Peak Speed : 2.5Gbps DL, 550Mbps UL |
| Connectivity | 802.11 ax over PCIe with DBS, 2x2 MIMO (Wi-Fi 6E), Bluetooth 5.2 | 802.11 ax over PCIe with DBS, 2x2 MIMO (Wi-Fi 6E), Bluetooth 5.2 | 802.11 ax over PCIe with DBS, 2x2 MIMO (Wi-Fi 6E), Bluetooth 5.2 |
| Encode | 4K@30FPS for H.264/H.265 | 4K@30FPS for H.264/H.265 | 4K@30FPS for H.264/H.265 |
| Decode | 4K@60FPS for H.264/H.265/VP9 | 4K@60FPS for H.264/H.265/VP9 | 4K@60FPS for H.264/H.265/VP9 |
| Display interfaces | 1x MIPI-DSI 4-lane; FHD+ (1080x2520) 8L @120FPS | 1x MIPI-DSI 4-lane; FHD+ (1080x2520) 8L @120FPS | 1x MIPI-DSI 4-lane; FHD+ (1080x2520) 8L @120FPS |
| | 4K@60FPS display support over DisplayPort | 4K@60FPS display support over DisplayPort | 4K@60FPS display support over DisplayPort |
| Camera Interfaces | 1 x MIPI-CSI 3-lane C-PHY | 1 x MIPI-CSI 3-lane C-PHY | 1x MIPI-CSI 3-lane C-PHY |
| | 4 x MIPI-CSI 4-lane D-PHY | 4 x MIPI-CSI 4-lane D-PHY | 4x MIPI-CSI 4-lane D-PHY |
| Peripherals | 1 x USB 3.1 with DP, 1 x USB2.0, 1 x PCIe Gen32-lane, 1 x Sound Wire, 1 x SDC for SD card, 3 xDMIC Interfaces, GPIOs, UARTs | 1 x USB 3.1 with DP, 1 x USB2.0, 1 x PCIe Gen32-lane, 1 x Sound Wire, 1 x SDC for SD card, 3 xDMIC Interfaces, GPIOs, UARTs | 1 x USB 3.1 with DP, 1 x USB2.0, 1 x PCIe Gen3 2-lane, 1 x Sound Wire, 1 x SDC for SD card, 3 x DMIC Interfaces, GPIOs, UARTs |
| Operating Environment | Operation Temperature: -25°C ~ 75°C | Operation Temperature: -25°C ~ 75°C | Operation Temperature: -25°C ~ 75°C |
| | Operation Humidity: 5%~95%, non-condensing | Operation Humidity: 5%~95%, non-condensing | Operation Humidity: 5%~95%, non-condensing |
| Form Factor | LGA | LGA | LGA |
| Certifications | FCC"/CE"/JATE"/TELEC"/KC" | FCC"/IC"/GCF"/PTCRB"/AT&T"/Verizon"/TMobile" | CE"/GCF"/KC"/JATE"/TELEC"/CCC"/SRRC"/K"/KDDI" |
| Voltage | 3.8V ~ 4.35V | 3.8V ~ 4.35V | 3.8V ~ 4.35V |
| Dimensions | 42.5mm x 35.5mm x 2.7mm | 43mm x 58mm x 3.0mm (TBD) | 43mm x 58mm x 3.0mm (TBD) |
| Operating System | Android 12 | Android 12 | Android 12 |

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