# Qualcomm® QCS4490/ QCM4490 Processors

Premium connectivity meets next-gen processing with the our QCS4490 and QCM4490 Processors.

The QCS4490 and QCM4490 processors deliver key, advanced features now required by industrial handheld, industrial computing, and other IoT devices. They come loaded with Wi-Fi 6E for multi-gigabit speeds, extended range, and low latency with powerful, efficient processing to handle complex computing tasks. With planned support for Android releases through version 18, you can use this SoC for industrial designs through 2030, helping save costs and development time. We’ve designed a mid-tier solution packed with a lot of purpose.

## Premium connectivity at mid-tier
- Enjoy multi-gigabit speeds, extended range, massive capacity, and ultra-low latency through Wi-Fi 6E
- Wi-Fi 6E harnesses the 6GHz spectrum to extend advanced Wi-Fi 6 MU-MIMO and OFDMA into the new band to deliver reliable performance, even in congested areas

## Next-gen system performance
- Built-in powerful, efficient processing for advanced IoT device computing tasks
- Multi-gen leap to Qualcomm® Kryo™ Octa-core CPU (up to 2x over previous generation in performance benchmarks)
- On-device processing allows for efficient data analysis between device and cloud (intelligent edge computing)

## Longevity and cost savings
- Save costs and development time with extended life platform support
- Planned support for Android releases 13 through 18 allows you to design products up to 2030*

* Subject to change without notice.
**Features**

- Wi-Fi 6E that uses the 6GHz spectrum to extend advanced Wi-Fi 6 MU-MIMO and OFDMA into the new band and deliver reliable performance, even in congested areas
- Delivers speeds of up to 3.6 Gbps, supported by Qualcomm® 4K Quadrature Amplitude Modulation (QAM), 160MHz channel support and unique 4-stream (2x2 + 2x2) Dual Band Simultaneous (DBS)
- 4th generation 5G NR Sub 6 modem with 3GPP Rel. 16 capable and true global carrier support
- Voice over NR (VoNR), 5G location (E-CID)
- Multi-gen leap to Kryo Octa-core CPU (up to 2x over previous generation in performance benchmarks)
- On-device processing allows for efficient data analysis between device and cloud (intelligent edge computing)
- Planned software support for Android releases 13 through 18 allows you to design products up to 2030*
- Save costs by investing in just one IoT chipset for multi-year industrial design, development, and maintenance support from Qualcomm Technologies and ODMs
- Significant reductions in latency and increased responsiveness for latency sensitive applications (voice, video)
- Smooth handoffs and superior connectivity, even in large, complex environments with multiple, high-demand devices such as hospitals and warehouses
- Audio AI accelerator enhances voice quality and voice UI accuracy
- Enhanced camera ISP hardware to support superior image quality
* Subject to change without notice.

**Ordering Information**

<table>
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<tr>
<th>Product</th>
<th>Part Number</th>
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<tbody>
<tr>
<td>QCS4490</td>
<td>QCS-4490-0-AB</td>
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<tr>
<td>QCM4490</td>
<td>QCM-4490-0-AB</td>
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</tbody>
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Please check part numbers for accuracy before ordering.

To learn more visit: [qualcomm.com](http://qualcomm.com)

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**QCS4490/QCM4490 Specifications**

- **Process Node**: 4nm
- **CPU**: Kryo Octa-core CPU: 2x Gold A78 @2.4GHz + 6x Silver A55@2.0GHz, 1MB L3 cache
- **GPU**: Qualcomm® Adreno™ GPU 613
- **Memory**: LPDDR4X/LPDDR5 SDRAM (2 x 16-bit) at up to 3.2GHz
- **Modem**: 5G R16 Sub-6 100MHz (QCM4490 only)
- **Camera**: Qualcomm Spectra™ ISP
- **WLAN**: Wi-Fi 6E (802.11b/g/n/ac/ax) 2x2 160MHz, 4K QAM, 2x2 DBS (Qualcomm® WCN6856) Bluetooth® 5.2
- **Video decodes**: Up to 1080p60D for H.264/H.265/VP9
- **Video encodes**: Up to 1080p60E for H.264/H.265
- **Audio**: eNPU processor, Integrated SVA, 1MB shared LPI with sensor
- **USB3.1 type-C, eMMC v5.1, SD3.0, UFS3.1, PCIe
- **Secure boot, Debug secure, HW encryption, Qualcomm® Trusted Execution Environment (TEE), pIMEM, TME1.0
- **Location**: Gen 9 VT v5, GPS, Beidou, GLONASS, Galileo, dual-frequency L1/L5, Navic

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QCS4490/QCM4490 Target Applications

- Industrial Handheld
- Retail POS Devices
- Control & Automation
- Industrial Computing Devices
- Industrial & Personal Security Panels

**Block Diagram**

![Block Diagram](image_url)