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Wi-Fi 6 and Bluetooth 5.2 in an integrated, automotive connectivity SoC that exceeds current industry standards and delivers breakthrough performance

The Qualcomm® QCA6696 System-on-Chip (SoC) is a premium automotive connectivity SoC supporting the full suite of Wi-Fi 6 and Bluetooth 5.2 features for automotive use cases.

Built to meet surging connectivity demands in vehicles today and over the coming years, the QCA6696 is equipped with Dual MAC, Dual Band Simultaneous (DBS) capability to deliver faster, more secure, and more robust Wi-Fi experiences, including 2x2+2x2 MIMO. QCA6696 also designed to deliver new Bluetooth audio capabilities such as ultra-high-definition voice, music...


more

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Wi-Fi 6-Ready

Fully-featured Wi-Fi 6 with 802.11ax and features that go beyond spec requirements for improved consumer experiences.




Dual Band Simultaneous Wi-Fi

Dual-band simultaneous Wi-Fi with MU-MIMO for multiple users and use cases, 1.774 Gbps PHY connectivity rates.



Bluetooth 5.2 Ready

Crystal-clear voice and improved Bluetooth features to improve in-car audio.



Integrated with Snapdragon

Included as a part of Qualcomm® Snapdragon™ Automotive Cockpit Platforms and in the Qualcomm® Connected Car Reference design.

Features

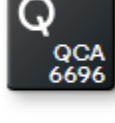
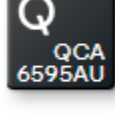
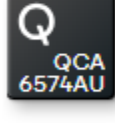
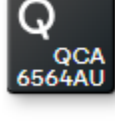
- 802.11ax on both 2.4 GHz and 5 GHz (Dual Band Simultaneous) with Dual MAC
- 1024 QAM on both bands for peak PHY throughputs up to 1.774 Gbps
- Bluetooth 5.2
 - Bluetooth LE Long Range
 - Flexible Audio Interface Architecture
 - Advanced proprietary LTE/Wi-Fi Co-existence
 - Proven Bluetooth Synergy stack
- Bluetooth supported on a separate antenna or on an antenna shared with Wi-Fi
- Qualcomm® aptX™ HD Encode and Decode
- Cutting Edge Security
 - WPA3
 - Enhanced Open (Opportunistic Wireless Encryption)
 - Easy Connect (Device Provisioning Protocol)
- Passpoint for Hotspot 2.0
- Neighborhood Aware Network (Wi-Fi Aware) 2.0

Specifications

Wi-Fi	Generation: Wi-Fi 4, Wi-Fi 6, Wi-Fi 5 Standards: 802.11ac, 802.11ax, 802.11a, 802.11b, 802.11g, 802.11n Spectral Bands: 2.4 GHz, 5 GHz Channels: 20 MHz, 80 MHz, 40 MHz MIMO Configuration: 8x8, 8x8 (ready), 2x2 Spatial Streams: Up to 2 Peak QAM: 1024 QAM Security: WPA3 Security Protocol, WPA3 Enhanced Open, WPA3 Easy Connect, WPA3 (ready) Features: 8x8 Sounding, Target Wake Time, 8x8 Sounding (ready), MU-MIMO
Bluetooth	Specification Version: Bluetooth® 5.2 Links: Dual eSCO, Dual A2DP
Audio	Qualcomm® aptX™ audio technology support: Qualcomm® aptX™ Audio
Interfaces	Supported Interfaces: I²S, PCIe, UART
Master I²S	Modes: PCM

Qualcomm Snapdragon, Qualcomm aptX, Qualcomm Wi-Fi 6 and Qualcomm Connected Car Reference Design are products of Qualcomm Technologies, Inc. and/or its subsidiaries.

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Product ▾	Status ▾	Wi-Fi Standards ▾	Wi-Fi Spectral Bands ▾	Wi-Fi MIMO Configuration ▾	Wi-Fi Peak QAM ▾	Wi-Fi Peak Speed ▾
 QCA6696 Chipset	● Active	802.11ac 802.11ax 802.11a 802.11b 802.11g 802.11n	2.4 GHz 5 GHz	8x8 8x8 (ready) 2x2	1024 QAM	0 Gbps
 QCA6595AU Chipset	● Active	802.11ac 802.11a 802.11b 802.11g 802.11n	2.4 GHz 5 GHz	2x2 1x1	—	0 Gbps
 QCA6574AU Chipset	● Active	802.11ac 802.11a 802.11b 802.11g 802.11n	2.4 GHz 5 GHz	2x2	—	0 Gbps
 QCA6564AU Chipset	—	802.11ac 802.11a 802.11b 802.11g 802.11n	2.4 GHz 5 GHz	1x1	—	0 Gbps

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