Overview

Documentation

Software

Hardware

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.

Automotive V QCA6696

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

Product license agreement

Fully-featured Wi-Fi 6 with 802.11ax and features

consumer experiences.

that go beyond spec requirements for improved

Dual Band Simultaneous Wi-Fi

connectivity rates.

Dual-band simultaneous Wi-Fi with MU-MIMO for

multiple users and use cases, 1.774 Gbps PHY

Bluetooth 5.2 Ready

Crystal-clear voice and improved Bluetooth features

to improve in-car audio.

Included as a part of Qualcomm® Snapdragon™

Automotive Cockpit Platforms and in the

Integrated with Snapdragon

Qualcomm[®] Connected Car Reference design.

Specifications

Bluetooth

Audio

Interfaces

Wi-Fi

 1024 QAM on both bands for peak PHY throughputs up to 1.774 Gbps

• 802.11ax on both 2.4 GHz and 5 GHz (Dual Band

• Bluetooth 5.2 • Bluetooth LE Long Range

Simultaneous) with Dual MAC

• Flexible Audio Interface Architecture

Features

- existence Proven Bluetooth Synergy stack
- an antenna shared with Wi-Fi • Qualcomm® aptX™ HD Encode and Decode

• Bluetooth supported on a separate antenna or on

Advanced proprietary LTE/Wi-Fi Co-

- Cutting Edge Security WPA3
- Enhanced Open (Opportunistic Wireless Encryption)
 - Easy Connect (Device Provisioning Protocol)

Product =

Passpoint for Hotspot 2.0

Status =

Neighborhood Aware Network (Wi-Fi Aware) 2.0

Standards: 802.11ac, 802.11ax, 802.11a, 802.11b, 802.11g, 802.11n

Channels: 20 MHz, 80 MHz, 40 MHz

Peak QAM: 1024 QAM

MIMO Configuration: 8x8, 8x8 (ready), 2x2 Spatial Streams: Up to 2

Generation: Wi-Fi 4, Wi-Fi 6, Wi-Fi 5

Spectral Bands: 2.4 GHz, 5 GHz

Connect, WPA3 (ready) Features: 8x8 Sounding, Target Wake Time, 8x8 Sounding (ready), MU-MIMO

Links: Dual eSCO, Dual A2DP

Supported Interfaces: I2S, PCIe, UART

Wi-Fi MIMO

Configuration

Specification Version: Bluetooth® 5.2

Security: WPA3 Security Protocol, WPA3 Enhanced Open, WPA3 Easy

Qualcomm® aptX™ audio technology support: Qualcomm® aptX™ Audio

Wi-Fi Peak

Speed

0 Gbps

0 Gbps

0 Gbps

0 Gbps

Wi-Fi Peak

QAM

Ξ

Ξ

Master I²S Modes: PCM

Compare related products.

Wi-Fi Spectral

Bands

Active 802.11ac 2.4 GHz 8x8 1024 QAM QCA6696 802.11ax 5 GHz 8x8 (ready) Chipset 802.11a 2x2 802.11b 802.11g 802.11n

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Wi-Fi Standards ≡

Active 802.11ac 2.4 GHz 2x2 **QCA6595AU** 802.11a 5 GHz 1x1 Chipset 802.11b 802.11g 802.11n Active 2x2 802.11ac 2.4 GHz **QCA6574AU** 802.11a 5 GHz Chipset 802.11b 802.11g 802.11n 802.11ac 2.4 GHz 1x1 QCA6564AU 802.11a 5 GHz Chipset

802.11b

802.11g

802.11n

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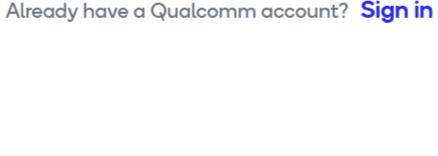
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tackle some of its most important challenges. Our leading-edge AI, high performance, low-power computing, and unrivaled connectivity deliver proven solutions that transform major industries. At Qualcomm, we are engineering human progress.





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