

Qualcomm

Qualcomm® FastConnect™ 6800

Wi-Fi 6 and Bluetooth 5.1 in an integrated subsystem to exceed industry standards and deliver breakthrough performance for mobile and computing devices.

The Qualcomm FastConnect 6800 is an advanced 14nm 2x2 Mobile Connectivity subsystem supporting the full suite of Wi-Fi 6 and Bluetooth 5.1 features for mobile and computing devices. Built to meet the surging connectivity demands of today's world, the Qualcomm FastConnect 6800 is designed to deliver faster, more secure, and more robust Wi-Fi experiences and enable new Bluetooth audio capabilities such as ultra-high-definition voice and low-latency gaming over wireless headphones, earbuds, and speakers.

Highlights

Gigabit performance

Gigabit-class peak speeds approaching 1.774 Gbps redefine mobile experiences, thanks to 1024 QAM and Dual Band Simultaneous (DBS) operation across 2.4 and 5 GHz bands.



Efficiency and capacity

Offering a dramatic improvement to spectral efficiency, capacity, latency and performance across congested networks with field-proven 8-stream sounding, MU-MIMO, and OFDMA capabilities.



Bluetooth integration

Qualcomm® aptX™ Adaptive audio technology adds premium Bluetooth audio quality and lowers latency, while Qualcomm TrueWireless™ Stereo Plus is designed to support twice the range of legacy products and up to 75% battery life improvement, without compromising audio quality.



Better battery life

Our unique implementation of Target Wake Time (TWT) achieves effectively scheduled data transmission with up to 67% power savings.



Extended range and resilience

Dual Band Simultaneous 2x2 MIMO operation and 8-stream sounding combine for up to 2x throughput and up to 50% better overall coverage.



Advanced security

Supports optional and mandatory elements of WPA-3 Wi-Fi Security protocol to support robust security across a wide range of environments and applications.





FastConnect™ 6800

Features

- Wi-Fi 6 full feature support
- 1-to-many Bluetooth broadcast
- Up to 18dB link margin improvement for Bluetooth

Specifications

Process	
Process Technology:	14 nm
Wi-Fi	
Wi-Fi Standards:	802.11ax, 802.11ac wave 2, 802.11a/b/g, 802.11n
Wi-Fi Spectral Bands:	2.4 GHz, 5 GHz
Peak speed:	1.774 Gbps
Wi-Fi Features:	1024 QAM, 8x8 Sounding, MU-MIMO, Dual-band simultaneous (DBS), OFDMA, Target Wake-up Time (TWT)
Bluetooth	
Bluetooth Version:	Bluetooth 5.1
General Audio	
Audio Technology:	Qualcomm TrueWireless™ Technology, Qualcomm TrueWireless™ Stereo Plus technology, Qualcomm® aptX™ audio technology
Qualcomm® aptX™ audio playback support:	Qualcomm® aptX™ Adaptive
Security Support	
Wi-Fi Security:	WPA3-Enterprise, WPA3-Enhanced Open, WPA3 Easy Connect, WPA3-Personal
Part Number:	QCA6390

For additional Qualcomm product information go to:
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