

Quantenna QAC2300 802.11ac Reference Design Kit



Highlights

- 2 Gbps Wi-Fi router solution
- 802.11ac draft standard with 4x4 MIMO technology
- Dual-band, dual-concurrent: 5 GHz 11ac + 2.4 GHz 802.11n
- 4 spatial streams, 1.7 Gbps data rate
- 2 Gbps (2,000 Mbps) total throughput: 1.7 Gbps .11ac + 450 Mbps 802.11n = 2.15 Gbps
- Implicit/Explicit digital beamforming
- Up to 4 spatial streams with support for unequal modulation per stream
- Near-zero Packet Error Rate (PER)
- DFS support
- Low-Density Parity Check (LDPC)
- Ultra-simplified setup, auto detection of access point and bridge mode
- Wi-Fi Protected Setup (WPS) push-button
- Real-time monitoring of PHY layer statistics

Applications

- Retail gigabit solution for:
 - Wireless routers
 - Access points
 - High-end consumer electronics
- Optimized for bandwidth-intensive retail and consumer electronics applications

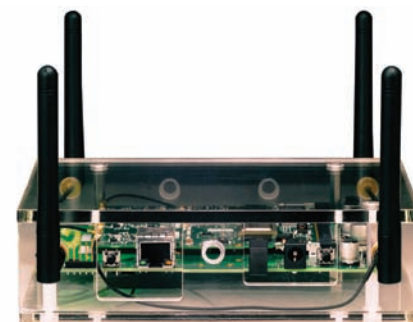
802.11ac Gigabit-Wireless Solution for Retail Wi-Fi Routers and Consumer Electronics

Overview

The QAC 2300 is the world's first IEEE 802.11ac solution. Building on Quantenna's 4X4 MIMO foundation, it enables 2 Gbps wireless speeds on routers, access points, and consumer electronics.

The QAC2300 two-chip solution includes a new 4x4 MIMO digital baseband chip that supports the latest draft 802.11ac specifications, combined with Quantenna's shipping radio frequency (RF) chip that already supports 802.11ac.

Quantenna's new QAC2300-RDK reference design includes schematics, layout, and design guidelines. The reference design enables rapid time to market with 2 Gbps dual-band, dual-concurrent operation (5 GHz 802.11ac plus 2.4 GHz 802.11n) using PCI-e or dual RGMII interfaces.



Specifications	
Frequency Band	5.18-5.850 GHz
Supported IEEE 802.11 Networking Standards	Draft 802.11ac, 802.11 a/n
Other IEEE and Wi-Fi Standards	802.11d, 802.11e (WMM, WMM-PS), 802.11h, 802.11i, WPA/WPA2, 802.11j, 802.11k, WPS
Channel Bandwidth	20 MHz, 40 MHz, 80 MHz
I/O Interfaces	PCI-e, RGMII
Peripheral Interfaces	GPIOs, UARTs, LEDs, SPI flash
Memory Interface	DDR2 DRAM
Power Requirement	12V DC
Antenna Connectors	Four 50 ohm, 5GHz U.FL

Package Content

- Schematics
- Layout
- Design guidelines

Ordering Information

QAC2300-RDK



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