

QV840

4x4 802.11ac Wave 2 Wireless LAN Chipset Solution



PRODUCT BRIEF

Features

- Member of high performance QSR1000 family, QV840 combines high PHY/data link speed with reliable data throughput for most demanding Wi-Fi applications
- 802.11ac Wave 2 4x4 MIMO: 4 spatial streams
- Operating frequencies: 4.9 to 5.85GHz
- Max modulation 256QAM (MCS9)
- Channel width 20/40/80MHz
- Up to 1.733Gbps PHY rate in 80MHz mode
- Digital Transmit Beamforming: both Explicit and Implicit
- Dual-core ARC-based network processor with hardware assist blocks managing multiple 802.11 connections
- Embedded DPS engine to hardware accelerate, aggregation, de-aggregation, and packet re-ordering
- Host SoC full offload
- Wi-Fi Alliance certified MU-MIMO access point and client
- 802.11 Standards:
 - 802.11a/n/ac
 - 802.11e QoS
 - 802.11h DFS and TPC
 - 802.11i MAC Security Enhancements
 - 802.11k Radio Resource Management
 - 802.11r Fast BSS Transitions
 - 802.11u Interworking with External Networks
 - 802.11v Wireless Network Management
 - 802.11w Protected Management Frames
- Quantenna Smart Channel Selection (dynamic selection at runtime)
- Quantenna SuperDFS for optimized Spectrum usage (includes seamless DFS re-entry)
- Quantenna iQStream for advanced video-grade QoS
- Quantenna universal repeater
- ViSiON-ready for cloud-based Wi-Fi management

Interfaces

Host	External Memory	Peripheral
<ul style="list-style-type: none">• 2 RGMII/MII• PCIe Gen 2.0	<ul style="list-style-type: none">• DDR2/3 support: Reference designs use 128MB or 256MB 16-bits DDR• SPI Flash• Serial EEPROM	<ul style="list-style-type: none">• GPIO• UARTs• SPI• I2C

Certifications

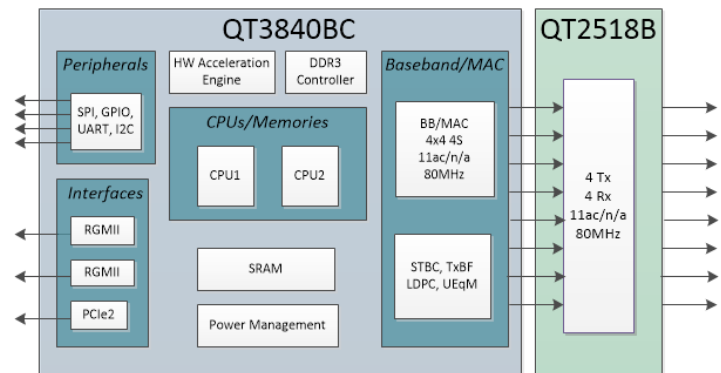
Wi-Fi Alliance Certifications in Quantenna name (model number QHS840)

- Wi-Fi Certified a/n/ac Wave 2
- WPA2-Personal
- WMM

Additional Compliance for Certification by System Integrator

- Worldwide Regulatory Domains compatible.

Block Diagram



Applications

Thanks to its full-offload Wi-Fi capability and interfaces, QV840 can be hosted by most network processors and offer maximum performance for applications such as:

- Multimedia Service Provider Home Gateways
- Retail Routers
- Set-Top Boxes
- Enterprise Routers
- Public Hotspots

It is also possible to build the following applications with a self-hosted QV840, i.e. without the addition of any network processor:

- Video Bridge
- Access Point
- Repeater, Extender, Mesh Nodes

Software Support

Quantenna SDK allows rapidly integrating the most advanced wireless features onto your Linux-based system. A simple Quantenna Configuration and Status API (QCSAPI) allows the management of the Wi-Fi chipset by any Linux Host without complex integration or hardware dependency. The totality of 802.11 MAC is managed onboard Quantenna Baseband.

Integration on Android-based Systems is also possible.

Contact

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