

IPQ40x8 / IPQ40x9

Industry's First Wave 2 802.11ac Wi-Fi System-on-Chip for Routers, Gateways and Access Points



Fully Integrated System-on-Chip Single chip 2x2+2x2 Dual Band, Dual Concurrent SoC with Wave 2 11ac

The IPQ40x8/x9 represents another leap forward utilizing 11ac to prepare home networks for the next generation of connected services, apps, systems and things. This highly integrated product is the latest addition to the Qualcomm® Atheros Smart Gateway Platform, a product of Qualcomm Atheros, Inc. that enables OEM's to take Wave 2 11ac benefits to mainstream markets. Optimized features, size, cost and power efficiency make this the most versatile solution yet.

Highly configurable

Supports multiple configurations of two 2.4GHz and/or 5GHz Wi-Fi radios or even tri-band (with 60GHz) with a 3rd radio on PCIe. Additional support for a rich set of interfaces including USB 3.0, LCD, SD/eMMC, multi-channel audio, LTE and Ethernet.

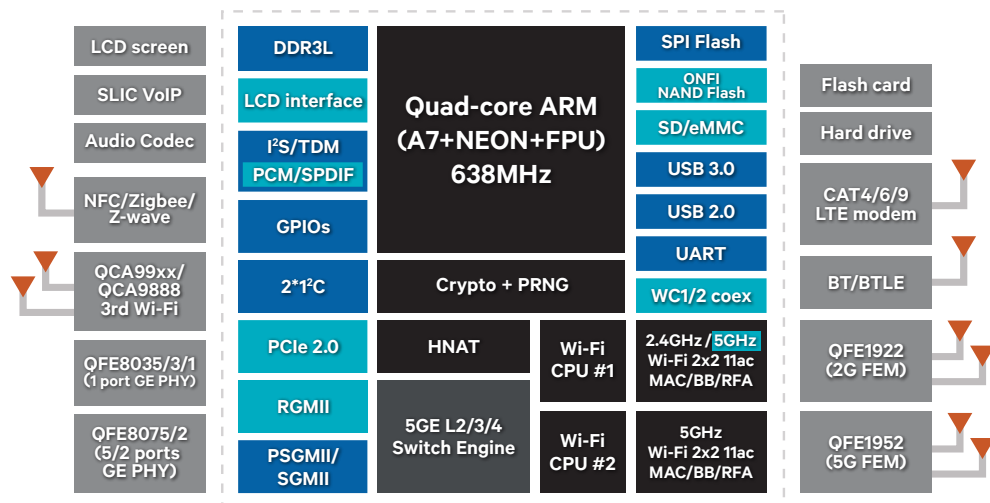
Small form-factor

Integrated design enables significantly reduced size footprint (as small as 2.5 x 2.5 inch) to enable smaller DBDC 11ac Wi-Fi gateways, access points and wireless repeaters.

Cost-effective performance

Brings advanced capabilities (including 802.11ac Wave 2 MU-MIMO) to main-stream with this highly integrated SoC. Product features include quad-core A7 processor + DBDC 2-stream 11ac Wave 2 Wi-Fi + 5 port Gigabit Ethernet Switch.

Quad-core A7 with FPU & NEON	32KB instruction cache 32KB data cache per core 256KB L2 cache (shared) Dynamic Frequency Scaling
Flash and memory	SPI (x1b), ONFI (x8b), SD/MMC (x1/8b) flash X8/16 DDR3L memory up to 1333 MHz data rate
Wi-Fi subsystem	2x2/2GHz (or 5 GHz) 11ac + 2x2/5GHz 11ac Wave 2 Wi-Fi on-chip Dedicated CPU and subsystem per Wi-Fi band for Wi-Fi offloading and feature growth
Network Subsystem	Integrated L2/3 switch/router and ACL Hardware NAT engine Traffic steering Seamless integration with Linux network stack
Security	Crypto engine: Secure boot, Trust Zone: PRNG
High Speed I/O	1x PCIe, 1x PSGMII/SGMII, 1x USB 3.0
Other peripherals	USB 2.0, TDM/PCM, I ² S, SPDIF, I ² C, SPI, UART, WC1/2, 1xRGMII, 2xRMII



 indicates only supported in IPQ40x9

Versatile design for a wide range of products



Range Extender



Smart Home Gateway



Enterprise APs



Residential CPEs



Wi-Fi Backhaul



LTE Gateway