

QUALCOMM®

AR9287

Highly integrated single-chip PCIe
with 2-stream 802.11n support



AR9287

Highly integrated single-chip PCIe
with 2-stream 802.11n support

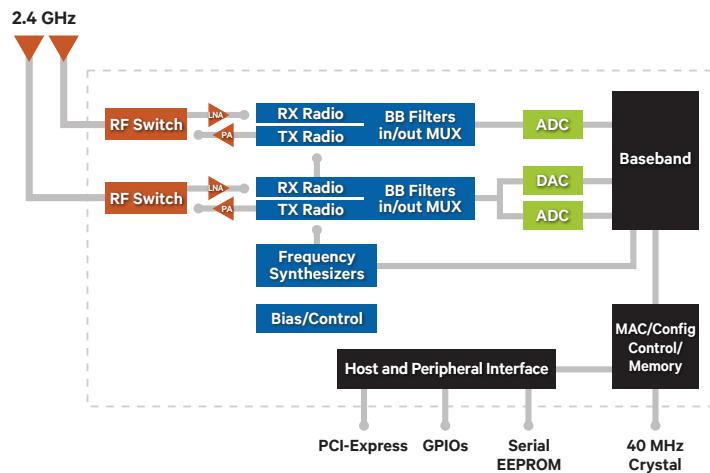


Qualcomm offers the industry's most innovative and complete portfolio of 802.11n wireless LAN chip solutions. Building on the company's Wi-Fi leadership – with enhanced performance, higher integration, smaller formfactors and lower overall cost – to meet the needs of today's 802.11n market.

Solution Highlights

- Single-chip, 802.11n-compliant wireless LAN client solution with integrated MAC, baseband and 2.4 GHz radios
- Based on fourth-generation 802.11n compliant technology
- Support for 2x2 MIMO
- Conserves power with 1x1 downshift using Dynamic MIMO Power Save
- Enables PHY rate of up to 300 Mbps on downlink
- Compliant with IEEE 802.11b, 802.11g, 802.11d, 802.11e, 802.11i, and 802.11n
- Lead-free RoHS compliant

AR9287 Architecture



Technology Overview

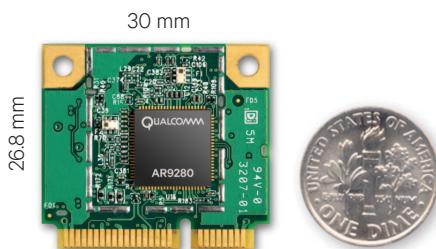
Qualcomm offers the industry's most innovative and complete portfolio of 802.11n wireless LAN chip solutions. This generation of Qualcomm's 802.11n technology builds upon the company's Wi-Fi leadership – with enhanced performance, higher integration, smaller form factors and lower overall cost – to meet the needs of the rapidly growing 802.11n market. Like all Qualcomm's 11n solutions, the new fourth-generation solutions are compliant to the IEEE 802.11n specification.

Qualcomm fourth-generation Wi-Fi solutions feature:

- Leading Integration that delivers end-product cost and form factors to drive broad market adoption of 802.11n products
- Single- and Dual-Band, and Multiple MIMO Configurations that enable OEMs to balance product price/performance for specific applications and market segment requirements
- Rich Media and Peripheral Interfaces that anticipate the requirements for advanced media networking applications and allow end-product feature differentiation
- Easy Network Setup with the industry's simple network configuration software that supports both the PIN and push-button setup methods

Product Overview

The Qualcomm AR9287 is the single-chip, single-band 2.4 GHz solution for PCIe in XSPAN's fourth generation of products. The AR9287 Half-Mini Card is the most integrated and compact 802.11n solution for 2-stream with nearly 20% fewer components than the previous generation single-band PCIe on the market, enabling mainstream computing market applications. It offers the optimal balance of performance, power and price with its single-band, 2x2 MIMO configuration, which features downshift to 1x1 MIMO with Dynamic MIMO Power Save. The AR9287 follows in Qualcomm's drive towards integration – and is the eleventh single-chip client solution to be introduced.



AR9287 Reference Design Highlights

- Compact Half-Mini Card form factor
- Compliant with PCI-Express Mini Card 1.1 standard
- Line rate WLAN to LAN performance
- Interoperability with 802.11b, 802.11g and 802.11n products
- Driver support for Win 7, Windows XP, Vista and Linux operating systems
- Worldwide regulatory compliance

AR9287 Specifications

Frequency Band	2.4 GHz
Network Standard	802.11b, 802.11g, 802.11n
Modulation Technology	OFDM with BPSK, QPSK, 16 QAM, 64 QAM; DBPSK, DQPSK, CCK
FEC Coding Rate	1/2, 2/3, 3/4, 5/6
Hardware Encryption	AES, TKIP, WEP
Quality of Service	802.11e
Communication Interface	PCI-Express
Peripheral Interface	GPIOs, LEDs
Memory Interface	EEPROM
Supported Data Rates	
IEEE 802.11b	1 - 11 Mbps
IEEE 802.11g	6 - 54 Mbps
IEEE 802.11n	6.5 to 300 Mbps

Qualcomm Atheros is a wholly owned subsidiary of Qualcomm Technologies, Inc. and a leading provider of wireless and wired technologies for the mobile, networking, computing and consumer electronics markets. We're focused on inventing technologies that connect and empower people in ways that are elegant and accessible to all.

Our broad connectivity portfolio allows us to offer our global customer base high-performance, end-to-end solutions, featuring Wi-Fi®, GPS, Bluetooth®, FM, Ethernet, HomePlug™ Powerline and PON technologies. By leveraging substantial expertise in RF, signal processing, software and networking we can deliver highly-integrated, low-power, system-level solutions that enable developers to create high-performance, differentiated products.

For more information, please visit us online @ qca.qualcomm.com

