

Third-Generation WLAN Solutions Overview

The Atheros AR5002 chipset family supports multiple WLAN standards for universal connectivity, security without compromise, best-in-class throughput performance and range, with optimizations for different market segments and price points.



OVERVIEW

Atheros third-generation AR5002 multi-mode chipsets support all of today's wireless local area network (WLAN) standards, as well as the draft 802.11h standard, and cover all worldwide wireless networking spectrum. A universal WLAN client based on the multi-mode chipsets can be connected to any access points using any 802.11 technology worldwide.

A key feature of all Atheros third-generation chipsets is security without compromise. The chipsets fully support Wi-Fi Protected Access (WPA) and the IEEE 802.11i draft security standards in hardware with high-speed encryption engines for both the Temporal Key Integrity Protocol (TKIP) and the government-level Advanced Encryption Standard (AES) with no performance degradation.

The AR5002 chipsets implement Atheros Super $G^{\mathbb{M}}$ and Super A/ $G^{\mathbb{M}}$ capabilities to deliver 108 Mbps raw data rate and 90 Mbps TCP/IP throughput for 802.11g and 802.11a/g wireless LANs.

A single driver and firmware code base supports all the chipsets, providing both backward and forward compatibility with Atheros' legacy and next-generation multi-standard designs.

ACCESS POINT CHIPSETS

The new access point chipsets feature Wireless System-on-a-Chip (WiSoC) designs that integrate the wireless and wireline functionality needed to implement a complete access point or router. The AR5002AP-2X features dual-band concurrent support for 802.11a/b/g clients, with enterprise-class security and performance. The AR5002AP-X provides multi-standard support for small-office and medium-enterprise customers who primarily want to use 2.4 GHz technology with an interest in upgrading to 5 GHz capability. The AR5002AP-G supports single-band 802.11b/g for value-priced, datacentric access points and home gateways. The AR5002AP-A provides multi-purpose media-center support for the 5 GHz 802.11a demands of consumer electronics products.

CLIENT CHIPSETS

The third-generation client chipsets include two-chip AR5002X 802.11a/b/g solutions for universal wireless connectivity anywhere in the world, AR5002G 802.11b/g solution for value-priced consumer applications, and AR5002A 802.11a solution optimized for high-performance consumer electronics and Voice over Internet Protocol (VoIP) applications.

