AR5002AP-2X

ATHEROS COMMUNICATIONS

802.11a and 802.11b/g Concurrent WLAN Solution

For concurrent 802.11a and 802.11b/g wireless networks, supporting any wireless client with no performance degradation.

AR5112
2.4/5 GHz dual band Radio-on-a-Chip

AR2112
2.4 GHz Radio-on-a-Chip

AR5312
Wireless System-on-a-Chip

AR5002AP-2X Solution Highlights

- Supports two wireless networks, IEEE 802.11a and 802.11b/g, concurrently
- Connects with any 802.11 wireless client
- Uses digital CMOS technology exclusively, minimizing power consumption and cost while maximizing reliability
- Highly integrated 3-chip set provides unprecedented level of integration, reducing the chip count for a complete dual-band access point or router from nine chips to three
- 2.4/5 GHz dual band Radio-on-a-Chip (RoC)
- 2.4 GHz Radio-on-a-Chip
- Wireless System-on-a-Chip (WiSoC), including integrated 32-bit MIPS R4000-class processor and dual multiprotocol MAC/baseband processing engines that support both RoCs
- Super A/G™ mode delivers 108 Mbps raw data rate and 90 Mbps TCP/IP throughput
- Hardware encryption for the Wi-Fi Protected Access (WPA) and IEEE 802.11i security specifications, provides Advanced Encryption Standard (AES), Temporal Key Integrity Protocol (TKIP) and Wired Equivalent Privacy (WEP) without performance degradation
- Wireless Multimedia Enhancements Quality of Service support (QoS)
- Extended tuning range (2.300-2.500 & 4.900-5.850 GHz) for worldwide use
- Dynamic Frequency Selection/Transmit Power Control (DFS/TPC) for international operation
- Support for draft IEEE 802.11e, h, and i standards
- Enhanced third-generation performance, transmission range and reliability

AR5112 Dual band Radio-on-a-Chip (RoC)

- All CMOS dual band radio chip
- Dynamic IF Dual Conversion architecture provides super-heterodyne performance at Zero IF prices
- Operates from 2.300 - 2.500 GHz and 4.900 - 5.850 GHz
- Integrated third-generation power amplifier (PA) and low-noise amplifier (LNA)
- External PA and/or LNA can be used for special applications
- Enhancements to the transmit and receive chains
- Eliminates all IF filters and most RF filters; no external voltage-controlled oscillators (VCOs) or surface acoustic wave (SAW) filters needed

AR2112 Radio-on-a-Chip for 2.4 GHz WLAN

- Support for IEEE 802.11b, 802.11g
- Operates from 2.300 - 2.500 GHz
- Advanced wideband receiver with best path sequencer for better range and multipath resistance than conventional equalizer-based designs

AR5312 Wireless System-on-a-Chip

- Integrated 32-bit MIPS R4000-class processor
- Two wireless MAC and baseband processing engines support concurrent operations
- Super A/G mode includes dynamic 108 Mbps capability, real-time hardware data compression, dynamic transmit optimization and standards-compliant bursting
- Two 10/100 Ethernet MACs, high speed UART, 16-bit configurable local bus
- Integrated analog-to-digital and digital-to-analog converters
- SDRAM and FLASH memory Interface
- Low power operational and sleep modes

AR5002AP-2X WLAN System Architecture