ATHEROS®
COMMUNICATIONS

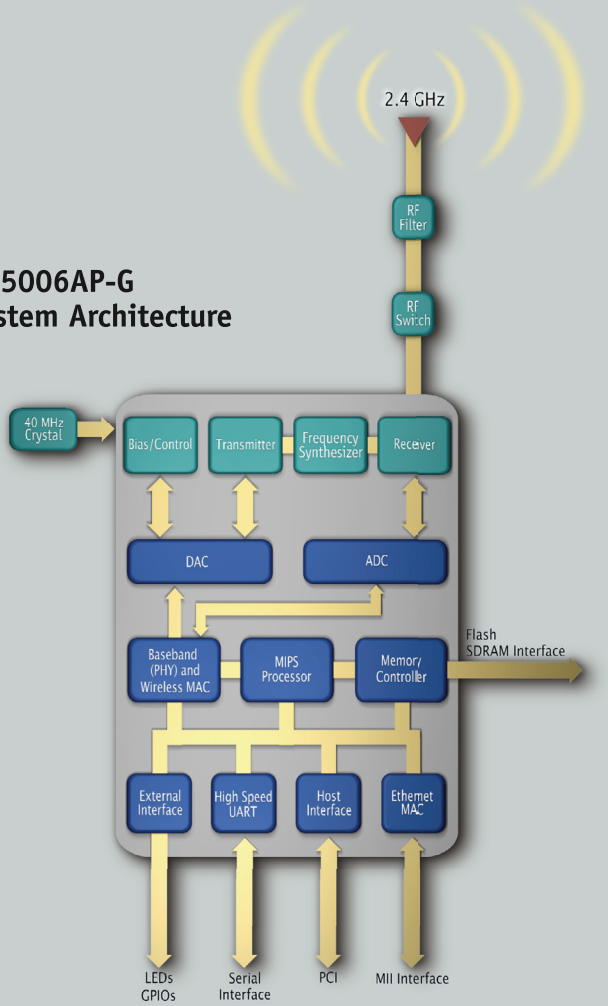
AR5006AP-G

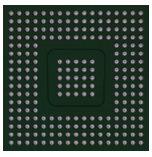
First single chip 802.11b/g solution for 2.4 GHz access points and routers

AR5006AP-G Solution Highlights

- Highly integrated single chip access point solution, including integrated 32-bit MIPS R4000-class processor, multiprotocol MAC/baseband, and Radio
- Support for IEEE 802.11b, 802.11g
- Uses digital CMOS technology exclusively, minimizing power consumption and cost while maximizing reliability
- Power-saving design improvements reduce power consumption by 98%
- Next-generation OFDM radio provides best-in-class range, throughput and power consumption
- Atheros XR™ eXtended Range technology to give Wi-Fi products twice the range of existing designs
- 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 Quality of Service support (QoS)

AR5006AP-G System Architecture



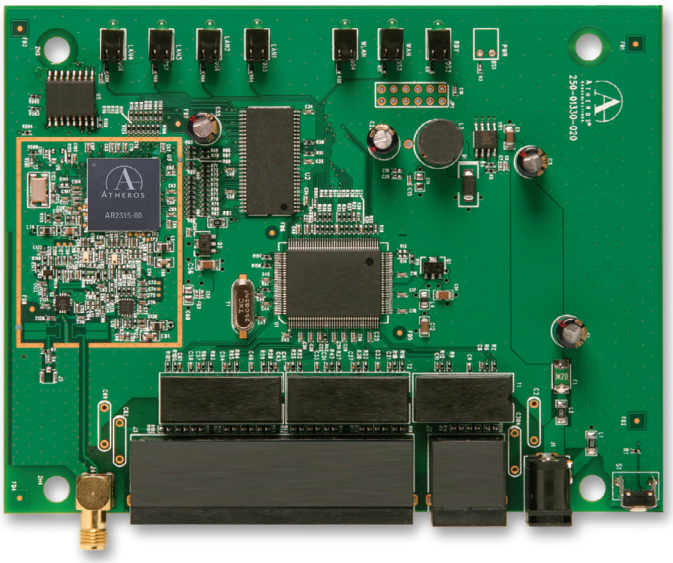


AR2315
Delivers a low power single chip solution for access points and routers

AR2315 Single Chip 2.4 GHz Access Point Solution

- 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
- Eliminates all IF filters and most RF filters; no external voltage-controlled oscillators (VCOs) or surface acoustic wave (SAW) filters needed
- Enhanced transmit and receive chains
- Integrated 32-bit MIPS R4000-class processor
- Wireless MAC and baseband processing engine
- 10/100 Ethernet MAC
- High speed UART
- 16-bit configurable local bus
- Integrated analog-to-digital and digital-to-analog converters
- SDRAM and serial FLASH memory interface
- PCI 2.3 host interface

AR5006AP-G Reference Design Highlights



- Enables various WLAN applications such as access points, routers, and home gateways
- Highly integrated 802.11g access point with industry-leading optimization of cost, power and board area
- Atheros Access Point Software Development Kit to speed time-to-market. One unified SDK for all Atheros Access Point reference designs allows for one common code base across various access point products.
- Supports the latest security standards including IEEE 802.11i
- JumpStart for Wireless™ secure configuration tool
- Atheros eXtended Range support for twice the range of standard Wi-Fi
- Draft IEEE 802.11e support for Quality of Service (QoS)
- Worldwide regulatory compliance
- Support for IEEE 802.11d worldwide roaming

AR5006AP-G Specifications

Frequency Band	2.300 to 2.500 GHz
Network Standard	802.11b, 802.11g
Modulation Technology	OFDM with BPSK, QPSK, 16 QAM, 64 QAM; DBPSK, DQPSK, CCK
FEC Coding Rate	1/2, 1/3, 3/4
Hardware Encryption	AES, TKIP, WEP
Quality of Service	802.11e
Communication Interface	PCI, MII, High Speed UART, Local Bus
Peripheral Interface	GPIOs, LEDs
Memory Interface	FLASH, SDRAM
Supported Data Rates	
IEEE 802.11b	1 - 11 Mbps
IEEE 802.11g	1 - 54 Mbps
Chip Specifications	
Operating Voltage	1.9V +/-5% 3.3V +/-10%
Package Dimensions	15mm x 15mm
Package	233 Plastic Ball Grid Array

Contact your local Atheros representative and ask about the AR5006AP-G or other technology solutions from Atheros:

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For more information on Atheros and Atheros WLAN Technology please visit www.atheros.com

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