



**ATHEROS**  
COMMUNICATIONS

## AR5007AP-G Product Overview

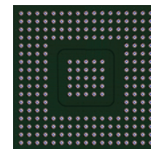
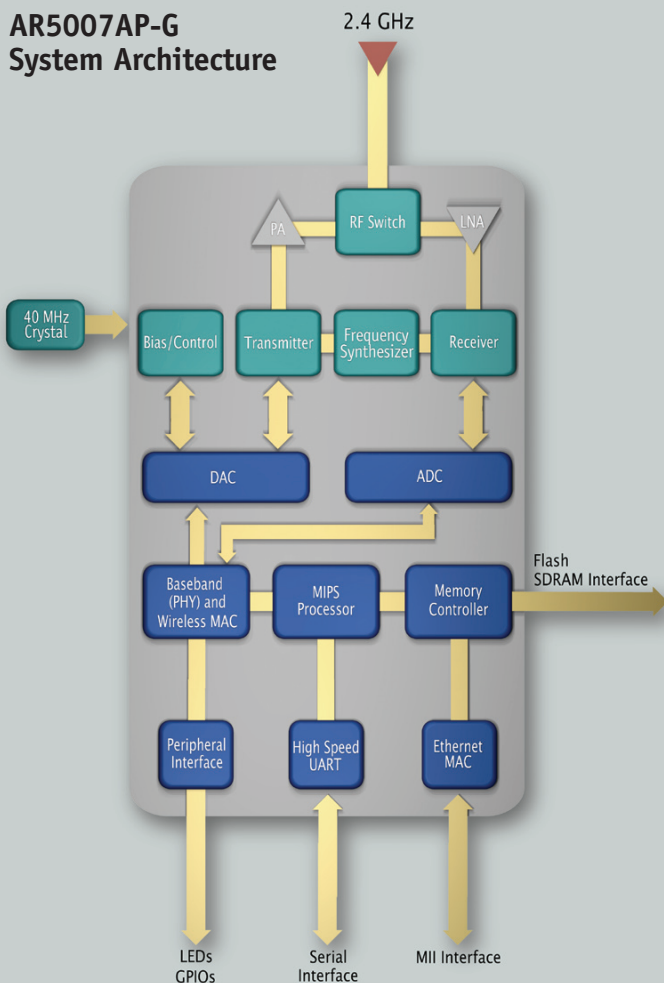
With the maturity of 802.11b/g technology, delivering cost effective products becomes increasingly important. Introducing the Atheros AR5007AP-G, the lowest cost single chip 802.11b/g access point and router solution. The AR5007AP-G reduces the total solution cost by 40% compared to previous generation single chip system-on-chip solutions by integrating RBOM components on-chip. With this high level of integration, the AR5007AP-G significantly reduces the total BOM and manufacturing cost of an access point or router product.

The AR5007AP-G supports industry standard 802.11b, 802.11g, security and Quality of Service (QoS). Full reference design support is available.

# AR5007AP-G

*Lowest cost single chip 802.11b/g access point and router solution*

## AR5007AP-G System Architecture



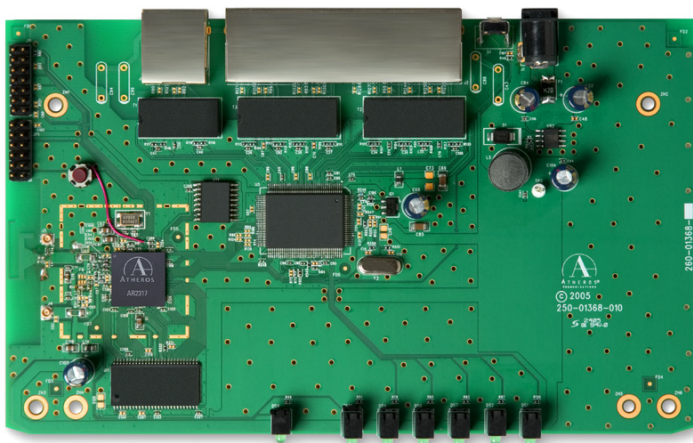
## AR2317

*Delivers the lowest cost solution through industry leading integration*

## AR5007AP-G Solution Highlights

- Highly integrated, lowest cost 802.11b/g WLAN system-on-chip solution
- Integrated 32-bit MIPS R4Kc processor
- WLAN MAC and baseband processing engine
- WLAN radio operates from 2.300 - 2.500 GHz
- 10/100 Ethernet MAC
- High speed UART
- SDRAM and serial FLASH memory interface
- Integrated power and low noise amplifiers (PA and LNA)
- Integrated RF switch
- Eliminates all IF filters and most RF filters; no external voltage-controlled oscillators (VCOs) or surface acoustic wave (SAW) filters needed
- Integrated analog-to-digital and digital-to-analog converters
- Lower passive component count
- Requires only one external 3.3V power supply
- Compliant with IEEE 802.11b, 802.11g, 802.11d, 802.11e and 802.11i
- Atheros XR® (eXtended Range) technology gives Wi-Fi products twice the range of existing designs
- Supports Atheros JumpStart for Wireless™ secure configuration tool

## AR5007AP-G Reference Design Highlights



- Enables various WLAN applications such as access points and routers
- Atheros Access Point Software Development Kit to speed time-to-market
- Linux and VxWorks drivers available
- Supports the latest security and Quality of Service (QoS) standards
- Atheros XR (eXtended Range) support for twice the range of standard Wi-Fi
- JumpStart for Wireless™ for simple configuration of a home WLAN network
- Worldwide regulatory compliance

## AR5007AP-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, 2/3, 3/4
Hardware Encryption	AES, TKIP, WEP
Quality of Service	802.11e
Communication Interface	MII, High Speed UART
Peripheral Interface	GPIOs, LEDs
Memory Interface	FLASH, SDRAM
Supported Data Rates	
IEEE 802.11b	1 - 11 Mbps
IEEE 802.11g	6 - 54 Mbps
Chip Specifications	
Operating Voltage	3.3V +/-10%
Package	260 Plastic Ball Grid Array
Package Dimensions	12mm x 12mm

## Atheros XR (eXtended Range) technology

Providing users with double the range of standard WLAN technologies. It is the first technology in the market developed to specifically address the issue of dead spots with wireless LAN implementations in home, business and hot spots.

- Fully interoperable with standard 802.11 clients
- Extended coverage in the home or office
- No configuration required



Contact your local Atheros representative and ask about the AR5007AP-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](http://www.atheros.com)  
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