OVERVIEW

The Cypress CYW43907 embedded wireless system-on-chip (SoC) is ideal for Internet of Things (IoT) applications. It supports all rates defined in IEEE 802.11 a/b/g/n specifications. The device includes an ARM® Cortex™-based applications processor, a single stream IEEE 802.11n MAC/baseband/radio, a dual-band 5 GHz and 2.4 GHz transmit power amplifier (PA), and a receive low-noise amplifier (LNA). It also supports antenna diversity for improved RF performance in difficult environments.

Using advanced design techniques and process technology to reduce active and idle power, the device is designed for embedded applications that require minimal power consumption and a compact size. The device includes a power management unit (PMU) for simplifying system power topology and, for battery-powered applications, allows for direct battery operation while maximizing battery life.

HIGHLIGHTS

- WICED™ SDK v3.6 ready
- 1x1 11n DB/Integrated power amplifier (iPA) 300 MHz CR4 with optional PA bypass for wireless microcontroller units (MCUs)
- IEEE 802.11 b/g/n specifications
- Robust WiFi module that includes SISO 802.11 b/g/n (2.4 GHz) and integrated PA. LNA TR-switch
- Core processor: Cortex CR4 @ 60 MHz and 1 MB RAM/640 KB ROM
- External memory interface: Quad-SPI Flash
- Always On power management block
- Standard I/O: SDIO 3.0 master/device, dedicated UART, I²C, SPI, GPIO 17

APPLICATION PROCESSOR FEATURES

- ARM Cortex-R4 32-bit RISC processor
- 2 MB of on-chip SRAM for code and data
- An on-chip cryptography core
- 640 KB of ROM containing WICED SDK components such as RTOS and TCP/IP stack
- 17 supported GPIOs
- Q-SPI serial flash interface to support up to 40 Mbps of peak transfer
- Dedicated fractional PLL for audio clock (MCLK) generation
- USB 2.0 and SDIO 3.0 host and device modes

GENERAL FEATURES

- Supports battery voltage range from 3.0V to 4.8V with an internal switching regulator
- Programmable dynamic power management
- 6 KB OTP memory for storing board parameters
- 316-ball WLBGA (4.91 mm x 5.85 mm, 0.4 mm pitch)

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**PRODUCT OVERVIEW**

**CYW43907 Block Diagram**

**ORDERING INFORMATION**

- **Part number**: CYW43907KWBG
- **ORDERING INFORMATION**: 316 bump WLCSP (4.583 mm x 5.533 mm, 0.2 mm pitch)

**ORDERING INFORMATION**

Contact your local Cypress Representative

For additional information on WICED modules currently in production, go to:
[https://community.cypress.com/community/wiced-wifi](https://community.cypress.com/community/wiced-wifi)