

CYPRESS

CYW54907: WICED™ IEEE 802.11ac IOT SYSTEM ON CHIP WITH EMBEDDED APPLICATIONS PROCESSOR



PRODUCT OVERVIEW

INTRODUCTION:

CYW54907 is an advanced IEEE 802.11ac wireless MCU designed for Internet-of-Things (IoT) applications. This solution incorporates a high-performance ARM® Cortex®-R4 applications processor and an advanced IEEE 802.11ac WLAN subsystem to deliver high-performance wireless connectivity for embedded and IoT applications.

KEY WI-FI FEATURES

- IEEE 802.11ac compliant WLAN MAC/PHY with 256-QAM
- Single spatial stream (1x1) for up to 433.3 Mbps PHY data rates
- Supports 20/40/80 MHz channels with optional SGI
- Full IEEE 802.11a/b/g/n legacy compatibility with enhanced performance
- On-chip power amplifiers and LNAs for both 2.4 GHz and 5 GHz bands
- WPA/WPA2 and WPS security with HW-accelerated AES and TKIP support
- Worldwide regulatory support for global products
- Advanced coexistence engine for optimum performance

KEY APPLICATIONS PROCESSOR FEATURES

- 320MHz ARM® Cortex®-R4 32-bit RISC processor
- 2 MB of on-chip SRAM for applications code and data buffering
- Q-SPI serial flash interface to support up to 40 Mbps peak transfer rate
- On-chip ROM includes IPv6 network stack with TCP/UDP, IP and multiple higher-level protocols
- On-chip security core with customer-programmable OTP (one-time programmable) for key storage and signing
- USB 2.0 host and device modes
- SDIO 3.0 host and device modes
- Support for UART, SPI, I²C, and I²S serial interfaces
- RMII/MII interface for wired Ethernet support
- Separated applications/WLAN power domains for optimized power consumption
- Dedicated fractional PLL for audio clock (MCLK) generation for synchronized audio
- Easy-to-use WICED SDK support for rapid application development and software investment reuse

FEATURES

IEEE 802.11ac MAC/PHY/RF

- 256-QAM modulation
- 20/40/80 MHz channel Up To 433.3 Mbps
- Dual-band 2.4/5 GHz radio
- Full IEEE 802.11a/b/g/n compatibility
- WPA/WPA2 and WPS support

APPLICATIONS PROCESSOR

- 320MHz ARM® Cortex®-R4 CPU
- 2 MB of on-chip applications SRAM
- USB 2.0 and SDIO 3.0 interfaces

PACKAGE

316-Bump WLCSP (4.95 x 5.89mm, 0.2mm pitch)



APPLICATIONS

Wireless Audio | Connected Home | Smart Appliances | IoT Bridge



CYW54907 Block Diagram

CYW54907 SUMMARY

| Part number | Application | Pin/Package |
|---------------|-----------------------|---|
| CYW54907KWBGT | 802.11ac Wireless MCU | 316-Bump WLCSP (4.95 x 5.89mm, 0.2mm pitch) |

GET STARTED NOW

For more information, please visit www.cypress.com/products/wireless-connectivity

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