

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
CYW54907KWBG7	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

Cypress Semiconductor Corporation

198 Champion Court, San Jose CA 95134
 phone +1 408.943.2600
 toll free +1 800.858.1810 (U.S. only)

© 2017 Cypress Semiconductor Corporation. All Rights Reserved. Cypress and Cypress logo are registered trademarks of Cypress Semiconductor Corp. ARM and Cortex are registered trademarks of ARM Limited. All other trademarks are the property of their respective owners.

002-18963 Rev**

