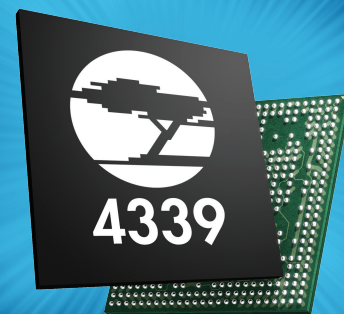


CYPRESS

CYW4339: WIRELESS CONNECTIVITY SINGLE-CHIP IEEE 802.11 a/b/g/ AC/Bluetooth® 4.0/BLE/FMRX



PRODUCT OVERVIEW

OVERVIEW

The Cypress CYW4339 is a fifth-generation combo device that provides the highest level of integration for a mobile or handheld wireless system with integrated IEEE 802.11 a/b/g and single-stream IEEE 802.11n/ac (MAC/ baseband/radio), Bluetooth 4.0 + HS, FM radio receiver, and Bluetooth Low Energy (BLE).

An integrated power management unit (PMU), power amplifiers (PA), and low-noise amplifier (LNA) address the needs of mobile devices that require minimal power consumption and compact size. The CYW4339 provides a small form-factor solution with minimal external components to keep the cost down for mass volumes and allows flexibility in size, form, and function.

The CYW4339 implements the industry's most-advanced radio coexistence algorithms and hardware mechanisms to allow an extremely collaborative WLAN and Bluetooth coexistence scheme, along with coexistence support for external radios (such as GPS and LTE). The result is an enhanced overall quality for simultaneous voice, video, and data transmission on a handheld system.

HIGHLIGHTS

- Dual-band IEEE 802.11b/g/n/a/ac radio
- Bluetooth Core Specification Version 4.0 + HS compliant with provisions for supporting future specifications
- FM receiver: 65 MHz to 108 MHz FM bands support the European Radio Data Systems (RDS) and the North American Radio Broadcast Data System (RBDS) standards
- Integrated WLAN and Bluetooth power amplifiers, LNA, and PMU
- Supports standard SDIO v3.0 (208 MHz, 4-bit), PCIe Gen2, UART, HSIC, and USB 2.0 full-speed (12 Mbps)

CYW4339	
✓	Mobile Phones
✓	Handheld Devices
✓	Tablets

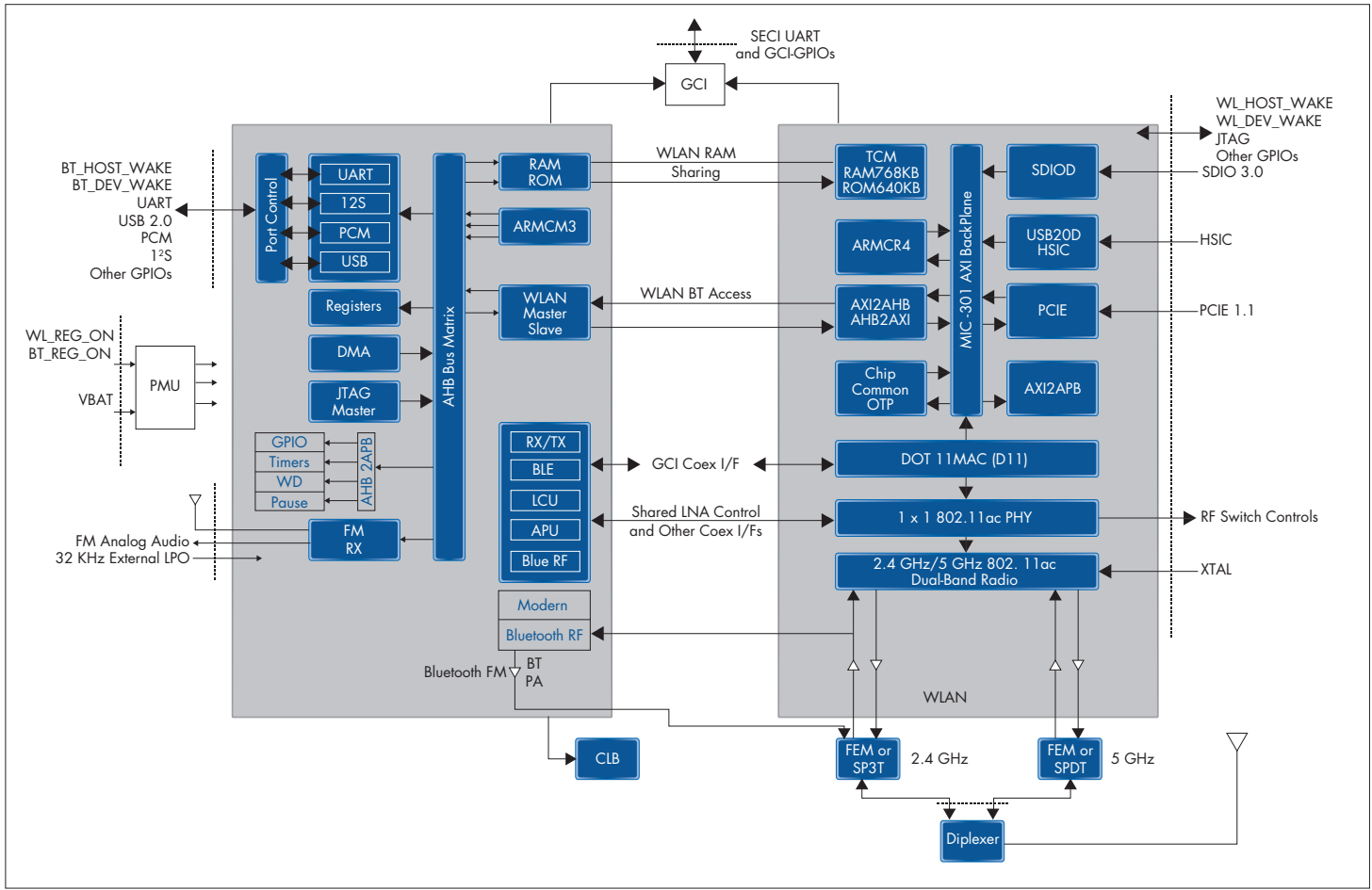
BENEFITS

- Low power consumption
- Small solution area
- Low BOM count and cost
- Best-in-class coexistence
- Multiple packages to meet requirements for different form factors

FEATURES

- Single-stream IEEE 802.11ac support for 80MHz channels provides PHY layer rates up to MCS9 (433 Mbps) for typical upper-layer throughput in excess of 300 Mbps
- Supports a single antenna shared between WLAN 5G, WLAN 2.4G, and Bluetooth blocks
- Supports 20, 40, and 80 MHz channels with optional SGI (256-QAM modulation)
- Full IEEE 802.11a/b/g/n legacy compatibility with enhanced performance
- TX and RX low-density parity-check (LDPC) codes for improved range and power efficiency
- Supports RX space-time block coding (STBC)
- Supports IEEE 802.11ac beamforming
- Supports standard SDIO v3.0 (including DDR50 at 50 MHz and SDR104 at 208 MHz, 4-bit)
- PCIe™ mode (FCBGA only) complies with PCI Express base specification revision 2.0 for x1 lane and power management base specification
- Supports optional external antenna diversity
- Shared Bluetooth / WLAN receive signal path eliminates the need for an external power splitter while maintaining excellent sensitivity for both
- Supports BT SIG WCI-2 coexistence standard to support additional wireless technologies such as Global Coexistence Interface (GCI), LTE, or GPS
- Integrated ARM® CR4™ processor and on-chip memory for complete WLAN subsystem functionality, minimizing the need to wake up the application processor for standard WLAN functions
- OneDriver™ software architecture for easy migration from existing embedded WLAN and Bluetooth devices as well as future devices
- Worldwide regulatory support: Global products supported with worldwide homologated design





CYW4339 Block Diagram

Part number	ORDERING INFORMATION
CYW4339NKKFBG	160 ball FCBGA (8 mm x 8 mm, 0.4 mm pitch)
CYW4339XKUBG	145 ball WLBGA (4.87 mm x 5.413 mm, 0.4 mm pitch)
CYW4339XKWBG	286 bump WLCSP (4.87 mm x 5.413 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>

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