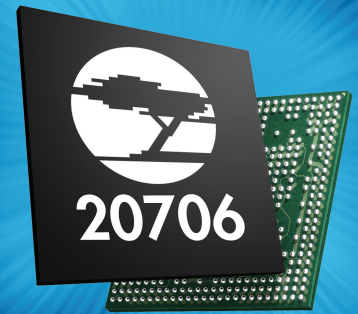


CYPRESS

CYW20706: BLUETOOTH SoC FOR EMBEDDED WIRELESS DEVICES



PRODUCT OVERVIEW

OVERVIEW

The Cypress CYW20706 is a single-chip Bluetooth 4.2-compliant, embedded System-on-a-Chip (SoC) with an integrated baseband processor, a 2.4 GHz transceiver, an ARM® Cortex™-M3 processor, ROM and RAM, as well as an integrated Bluetooth stack. Manufactured using the industry's most advanced 40 nm CMOS low-power process, the CYW20706 employs the highest level of integration to eliminate all critical external components, thereby minimizing the device's footprint and the costs associated with implementing Bluetooth solutions.

The CYW20706 is the optimal solution for embedded and IoT applications. Built-in ROM firmware provides access to both BLE and Bluetooth Classic.

The CYW20706 Bluetooth Baseband Core (BBC) implements all of the time-critical functions required for high-performance Bluetooth operation.

The BBC manages the buffering, segmentation, and routing of data for all connections. The BBC also buffers data that passes through it, handles data flow control, schedules SCO/ACL and TX/RX transactions, and monitors Bluetooth slot usage. The BBC also optimally segments and packages data into baseband packets, manages connection status indicators, and composes and decodes HCI packets.

In addition to these functions, it independently handles HCI event types, and HCI command types.

KEY FEATURES

- WICED™ Smart Ready SDK v1.3.2 ready
- HCI solution with Bluetooth Low Energy (BLE) support
- BDR/EDR/BLE operation modes

CYW20706	
✓	Wearable devices
✓	Connected home
✓	Point of Sale devices
✓	Cellular radios

APPLICATIONS

- Home automation
- Point-of-sale input devices
- Blood pressure monitors
- "Find me" devices
- Heart rate monitors
- Proximity sensors
- Thermometers
- Wearables

FEATURES

- Up to 96 MHz integrated ARM® M3 microcontroller
- Integrated PA with up to +10 dBm output power
- Integrated peripherals such as PWM, ADC, and Triac control
- Complies with Bluetooth Core Specification version 4.2 including BR/EDR/BLE
- Supports Cypress proprietary LE data rate of up to 2 Mbps
- Supports Adaptive Frequency Hopping (AFH)
- Excellent receiver sensitivity
- On-chip power-on reset (POR)
- Support for serial flash interfaces
- Integrated low dropout regulators (LDO)
- On-chip software controlled power management unit
- PCM/I²S Interface
- Infrared modulator
- IR learning
- On-chip support for serial peripheral interface (master and slave modes)
- Cypress Serial Communications interface (compatible with NXP I²C slaves)
- Package type:
 - 49-pin FBGA Package (4.5 mm x 4.0 mm)
 - RoHS compliant



