

Product brief

AIROC™ CYW20835 Bluetooth® LE system on chip

Reliable Bluetooth LE connectivity with High-Performance Compute

Infineon's delivers market-proven AIROC™ Bluetooth and Bluetooth LE SoCs enabling flexible, low-power, and high performance wireless connectivity. From cost-optimized, easy-to-use Bluetooth LE system on chips (SoCs) to higher end Dual-Mode Bluetooth (Bluetooth LE, Basic Rate, Enhanced Data Rate) SoCs – Infineon's AIROC™ Bluetooth solutions are industry proven and support a host of differentiated feature sets / values including: multiple low power modes, superior RF performance, CapSense capacitive-sensing, efficient MiPs, and a comprehensive Bluetooth dedicated SDK with extensive code examples.

The AIROC™ CYW20835 Bluetooth® LE SoC provides reliable Bluetooth LE connectivity, core spec compliant to 5.2, along with high-performance compute capability integrating an Arm® Cortex®-M4 processor with floating point unit. It is a highly integrated device with multiple serial interfaces, PWMs, analog and digital microphone interfaces, and more. The AIROC™ CYW20835 is designed to support the entire spectrum of Bluetooth® Low Energy use cases for home automation, lighting, accessory, HID, medical, industrial, and sensor nodes as well as being fully Bluetooth® Mesh compliant.

The AIROC™ CYW20835 is supported in the AIROC™ Bluetooth SDK within ModusToolbox™ Software and Tools with copious code examples and documentation enablement for Bluetooth LE data transfer, HID and Bluetooth Mesh use cases. Infineon also provides in-house AIROC™ CYW20835 globally certified modules for rapid time to market. For more information, please visit our AIROC™ CYW20835 [Getting Started web page](#).

AIROC™ CYW20835 benefits

- > Reliable and robust connectivity due to superior RF performance
- > Ability to do compute at the edge for Bluetooth LE use cases
- > Built on market proven wireless IP – maximum interoperability
- > Reduction in development time with Bluetooth software enablement for Bluetooth LE data transfer, HID and Bluetooth Mesh use cases
- > Rapid time-to-market with in-house AIROC™ Bluetooth LE Modules that are globally certified with Developer Kits to get started quickly
- > Bluetooth support in the [Infineon Developer Community](#) with direct access to online applications support engineers

Key features

MCU Features:

- > 96-MHz ARM® Cortex®-M4 microcontroller unit MCU with floating point unit (FPU)
- > Supports serial wire debug (SWD)
- > Runs Bluetooth stack and application

Bluetooth Sub-System Features:

- > Complies with Bluetooth core specification version 5.2 with LE 2-Mbps support
- > Supports Adaptive Frequency Hopping (AFH)
- > Programmable Tx power up to 12 dBm
- > Rx sensitivity -94.5 dBm (Bluetooth LE)

Peripheral Features:

- > 6x 16-bit PWMs
- > 24 GPIOs
- > Analog and Digital microphone interfaces
- > I2C, I2S, UART, SPI and PCM interfaces
- > Up to 8x20 programmable key-scanning matrix interface
- > Quadrature decoder

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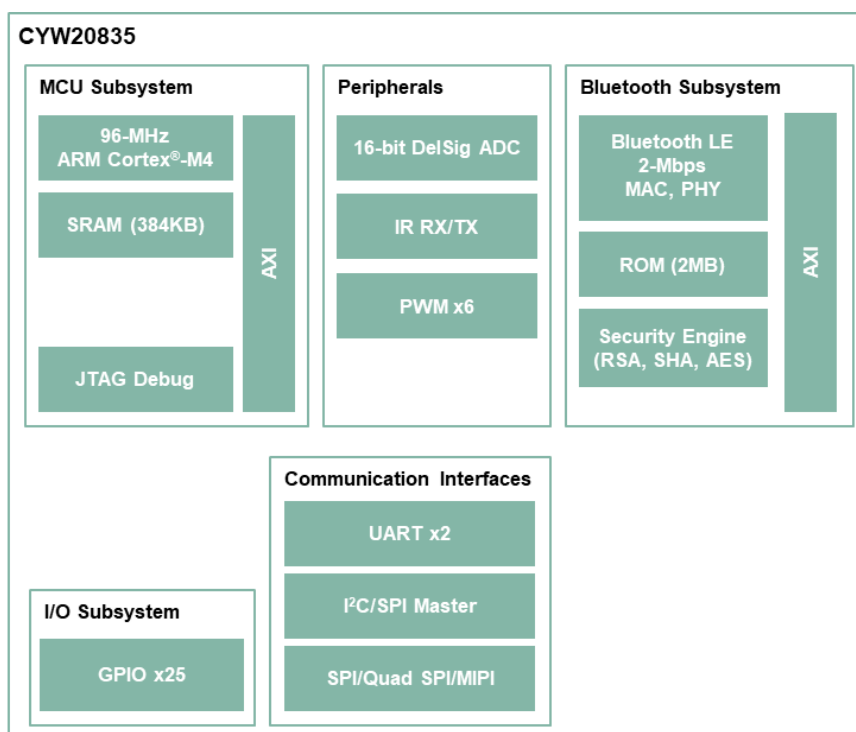
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Key applications

Smart Home Automation	Residential Lighting, Household Appliances, Thermometer, Controller panel, Tools
Smart Building	Access / Occupancy Control, Air Quality / Ambient Monitoring, Commercial Lighting
Industrial	Factory Automation, Industrial Lighting, Sensor nodes, Sensor Hub / Control, Industrial Robotics, Asset Tracking
Medical / Healthcare	Blood Pressure Monitors, Thermometer, Nebulizers, CPAP Machines, Fall-Detect Devices, Hospital Sensors

Product summary

Name	Description	Temperature range [°C]	Package
CYW20835	AIROC™ CYW20835 Bluetooth LE SoC	-30C to +85C	7 mm x7 mm 60-pin quad flat no-lead (QFN)
CYW20835 PCB Antenna Module	Fully certified AIROC™ Bluetooth LE module with PCB Antenna (CYBLE-343072-02)	-30C to +85C	13.31x21.89x1.95 mm SMT
CYW20835 External Antenna Module	Fully certified AIROC™ Bluetooth LE module with External Antenna (CYBLE-333074-02)	-30C to +85C	13.31x21.89x1.95 mm SMT



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Warnings

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