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Description of Operation

The WB4343W Wi-Fi®/Bluetooth®/Bluetooth Smart Mini Module is a complete standalone solution for designers looking to take advantage of the high data rate of Wi-Fi, to interface to legacy Bluetooth Classic devices already in the field, and to utilize the low power consumption and mesh network capabilities of Bluetooth Smart. They eliminate design risk and significantly reduce time-to-market for a multitude of M2M applications.

These devices are footprint-compatible with CEL's existing line of ZigBee®, Thread, and Bluetooth®-based modules, allowing solutions which easily transition between multiple wireless networking standards via drop-in compatible module hardware.

Based on the Broadcom BCM4343W transceiver and the ST Micro STM32 microprocessor, the Cortet Mini Module combines the BCM4343W's 32-bit ARM® Cortex®-M3 MCU, integrated ROM & RAM, 2.4 GHz radio, LNA, PA, and internal transmit/receive RF switch with an ultra low power, high performance 32-bit ARM® Cortex®-M4F MCU with FPU, 512KB flash, 128kB SRAM, and all necessary crystals and filtering.

This device leverages the world-class WICED™ SDK toolset from Broadcom, and are capable of running the WICED stack plus the product application code without requiring an additional microprocessor. They are optimized for small size and low power consumption, and can be run directly from a rechargeable mobile platform battery. They include Broadcom's Enhanced Collaborative Coexistence algorithms and hardware mechanisms, allowing for an extremely collaborative Wi-Fi and Bluetooth coexistence.

The module includes up to 25 GPIOs and supports the following digital interfaces: SPI, USART and I2C. There are also 4 ADC inputs and timers. The module contains a PCB trace antenna that is self matched to 50 ohms.