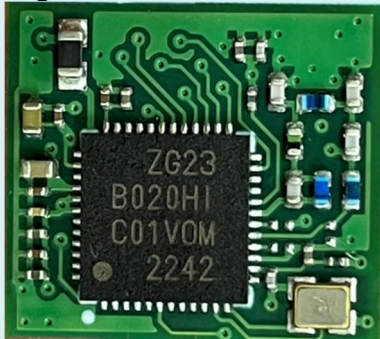


Fully Integrated Z-Wave Wireless Module



The Trident IoT TZM8202 is a cutting-edge Z-Wave solution that combines an EFR32ZG23B020F512IM48 SoC with a built-in Z-Wave and Z-Wave Long Range RF transceiver, along with a crystal and passive RF components. With its compact size and integrated components, the TZM8202 is a pin for pin, drop-in replacement of the SiLabs ZM5202 that enables single microcontroller Z-Wave and Z-Wave Long Range solutions, while implementing the improvements of the SiLabs 800 series SoC. All without the need to redesign your product hardware.

Designed to meet the demands of any Z-wave Plus ver 2 device the TZM8202 excels in data and link management. To cater to the growing needs of feature-rich Home, Security and Industrial Control applications, the TZM8202 offers an impressive 64kB of SRAM and 512kB of flash memory. Moreover, its incredibly-low sleep current ensures that battery-operated devices enjoy extended lifespans.

The TZM8202 truly shines when it comes to Z-Wave Long Range, multiplying the range by more than 16 times compared to the ZM5202. This remarkable advancement empowers devices to communicate over longer distances without sacrificing power efficiency.

Incorporating the TZM8202 into your projects promises lower power consumption, extended range capabilities, and access to the advanced features of Z-Wave Plus v2, all at a competitive price when compared to the 5202.

Upgrade to the Trident IoT TZM8202 today and experience a new era of Z-Wave innovation. Embrace the future of smart, robust, and energy-efficient solutions.

Key Benefits to Customers

- **Pin-to-pin compatibility with ZM5202 provides a fast upgrade path to lower power and longer range (1 mile+ LR)**
- Hardware AES, SHA, ECDH security
- Z-Wave + Z-Wave LR

Key Features:

- Optimized ARM Cortex-M33 Core and RF Transceiver
- 512 kB Flash, 64 kB SRAM
- UART, 2 I2C interfaces, 3 EUSARTS
- 10 GPIOs with wakeups/ interrupts
- 8 channel DMA controller
- 12 channel Peripheral Reflex System
- Low-Energy Sensor Interface (LESENSE)
- 2-channel DAC
- ADC: 12-bit @ 1MSPS
 - 16-bit @ 76.9kSPS
- Tx mode current: 85.5mA @20dBm
 - 25.0 mA @ 14dBm
 - 9.9 mA @ 0dBm
- Rx mode current: 4.4 mA
- Active mode current:
 - 26µA/MHz @39MHz
- DeepSleep current:
 - 1.5µA with 64kB RAM
 - 1.2µA with 16kB RAM

Radio Transceiver

- Rx Sensitivity:
 - -108.1 dBm @ 100kbps 915MHz GFSK
 - -109.8 dBm @ 100kbps 915MHz O-QPSK
- Z-Wave 9.6/40/100kbps data rates
- Hardware-assisted frequency agility with up to 3 channels
- Covers all Z-Wave regions with no change in hardware

Secure Vault: High

- True Random Number Generator(TRNG)
- ARM TrustZone
- Secure Boot (Trust Secure Loader)

Tools:

- SiLabs Simplicity Studios for seamless development