



CINCINNATI TECHNOLOGIES

A member of Computime Group Limited

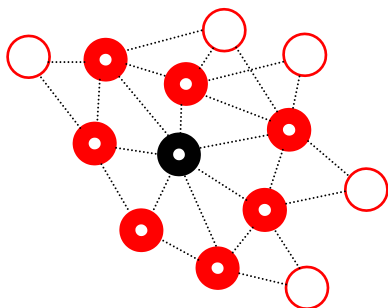


CT-EM2608

100-mW ZigBee Network Processor Module

Features

- 100 mW transmitter power for extended range operation
- Small form factor: 32.4mm x 25.4mm x 4.2mm
- Integrated or remote antenna options
- EmberZNet stack for ZigBee compliant mesh networking
- Integrated AES encryption accelerator
- Over-the-air reprogrammability
- RSSI for range estimation and CSMA operation
- ZigBee application profiles or application specific firmware available
- Worldwide operation in the 2.4 GHz ISM band



Flexible

Cincinnati Technologies' CT-EM2608 module combines Ember's EM260 ZigBee System-on-Chip with EmberZNet mesh network technology with a 100-mW transmitter power amplifier to become a high performance radio that's easy to integrate. An embedded microcontroller implements the complete ZigBee protocol stack from the PHY to the network layer. Your application software runs externally and communicates to the CT-EM2608 through a simple SPI-slave or UART interface. This allows OEMs to implement their application in the microcontroller of their choice. This is especially advantageous for applications that are already microprocessor based and have room for the small amount of firmware required to operate the radio link. Two antenna configurations can be selected: integrated on-board or remote via an MMCX connector.

Extended Range and Coverage

100 milliwatts of transmit power provide the superior range, penetration and coverage needed when radio nodes are far spaced and separated by walls and floors. Mesh networking further extends the reach through nodes operating as self-healing RF repeaters.

Battery Operation

The CT-EM2608 is designed to achieve ultra-low sleep currents for long life battery operation. It takes advantage of the EM260's low operating and sleep currents and the integrated EmberZNet networking library makes it easy to incorporate short activity cycles.

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CT-EM2608 100-mW ZigBee Module

Applications

Residential & Commercial Smart Energy



Home Automation



Monitoring of Remote Systems



Security Systems & Lighting Controls



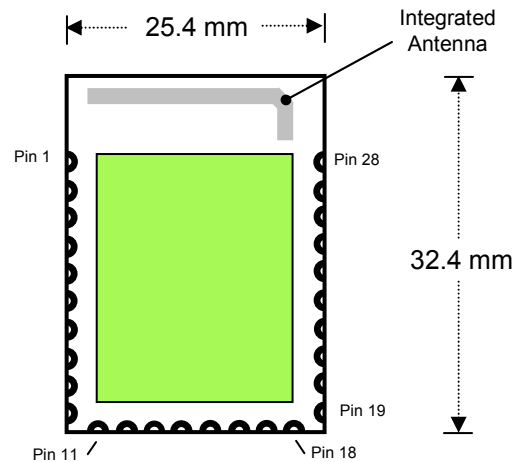
Sensor Networks



Specifications

- Frequency Range: 2400 to 2483.5 MHz
- RF Channels: 16
- Transmit Power: -15 dBm to +20 dBm, software programmable
- Receiver Sensitivity: -96 dBm typical (1% PER)
- Supply Voltage: 2.7 to 3.6V
- Transmit current: 190 mA typical at 100 mW
- Receive Current: 36 mA normal / 38 mA boost
- Air Link Data Rate: 250 kbps
- Sleep Current: 5 uA typical
- Dimensions: 32.4mm x 25.4mm x 4.2mm
- Operational Temperature: -40 to +85C

Package



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