Wireless comms. || ConnectZED ZigBee module

get connected

ConnectZED modules provide both a rapid prototyping & a manufacturing solution for products requiring RF mesh networking capability using the ZigBee protocol stack. Designed to fit onto a host board & be powered from that board, a number of connectivity & aerial options are available to meet specific design needs.

The ConnectZED ZigBee module features a versatile Renesas M16C MCU core, onboard SPI flash memory together with a highly optimised RF PCB antenna front end design, with a U.FL connector for external antenna connection. Available in two forms for host connectivity, DIL connectors for plugging into a prototype board, or pad connectors for surface mount assembly; communications ports for programming & debugging are also included. Further, the modules can be supplied, with or without screening can protection depending on customer requirements.

The M16C device is pre-programmed with the ZigBee Pro stack from Renesas & is licensed for use. Smart Energy [SE] Application Profile is also available.

Features

- ☐ 2.4GHz ZigBee module integrating a 2.4GHz IEEE 802.15.4 compliant transceiver.
- ☐ High dynamic ranges transmit & receive.
- ☐ Channel filtering supports 16 channels.
- ☐ M16C Renesas architecture.
- ☐ PCB antenna & U.FL coaxial connector.
- ☐ SPI Flash memory.
- ☐ Compact size: 25mm x 35mm.
- ☐ Tested to European EMC standards.
- ☐ FCC approvals. [pending]
- ☐ Includes ZigBee Pro Stack [SE app. profile available]
- ☐ Single chip & dual-processor options supported.

ConnectZED || At a glance ☒

[Features]

PCB antenna & U.FL connector.
On board SPI flash memory.
Low cost, ZigBee networking.
Supports all ZigBee modes.
Debug & programming support.
Production ready solution.
Pre-programmed.

[Options]

Chip antenna.
Additional RF shield.
DIL/surface mount connection.
SE application profile.
Module customisation [on request].

Add 'mesh' networking to your products **simply & easily** – no specialist RF or ZigBee software engineering skill required
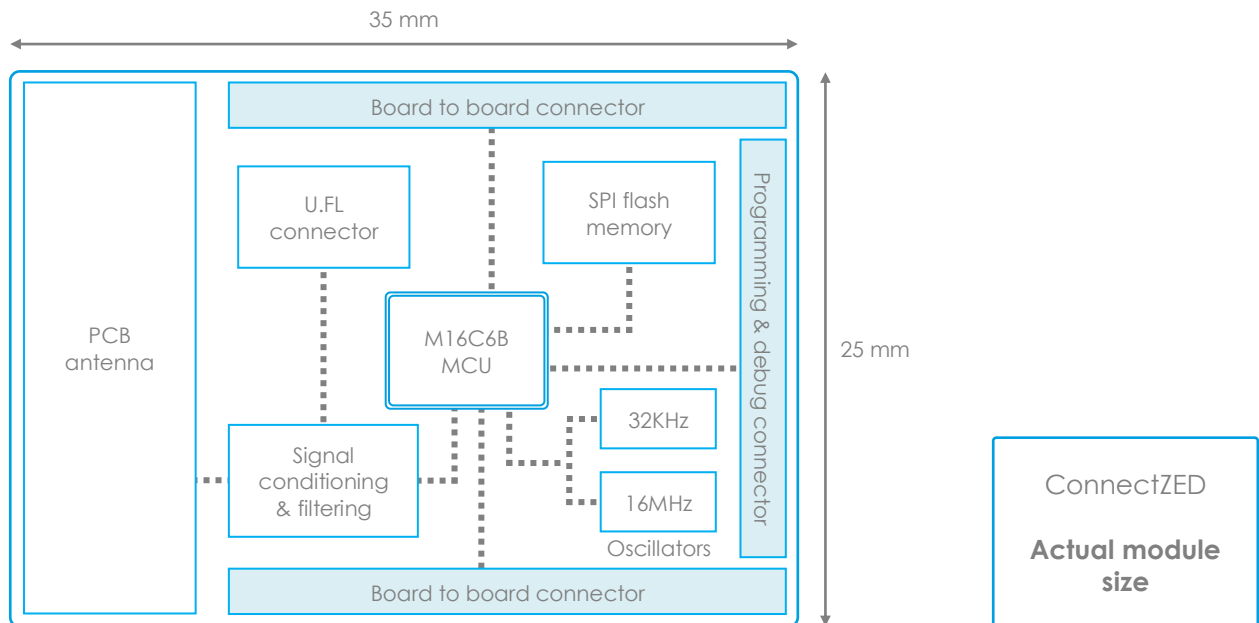
Technical specifications
Preliminary information.

- Dimensions 25mm x 35mm x 5mm
- Up to 256kB ROM, 8kB Data Flash & 20kB RAM
- 256kB or 512kB SPI flash memory
- 2.4 - 2.48 GHz operation
- RX Sensitivity -94dBm [estimated]
- TX Power 0dBm [estimated]
- 94dBm link Budget
- Free space range 120m
- Output Power 0dBm per I, Q channel
- Temperature range -20 to +85°C
- Communications port for programming & debugging
  - Protocol [T.B.D.]
- PCB antenna
- On-board U.FL coaxial connector for external antenna
- FCC Approval [T.B.D.]
- European Regulations
  - Radio   EN 300 328 v1.7.1
  - EMC   EN 301 489-17 v2.1.1
  - Safety   EN 60950-1:2006

Module layout

ConnectZED

Actual module size

UK TECHNOLOGY
THE VITAL COMPONENT

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