

## Connect Series | | **ConnectZED** ZigBee module



**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. SE & HA Application Profiles are also available in addition to a dual profile [SE+HA] variant.

### 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, HA & SE+HA app. profiles available]
- ❑ Single chip & dual-processor options supported.

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

### 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, HA or SE+HA app. profile.  
Module customisation [on request].

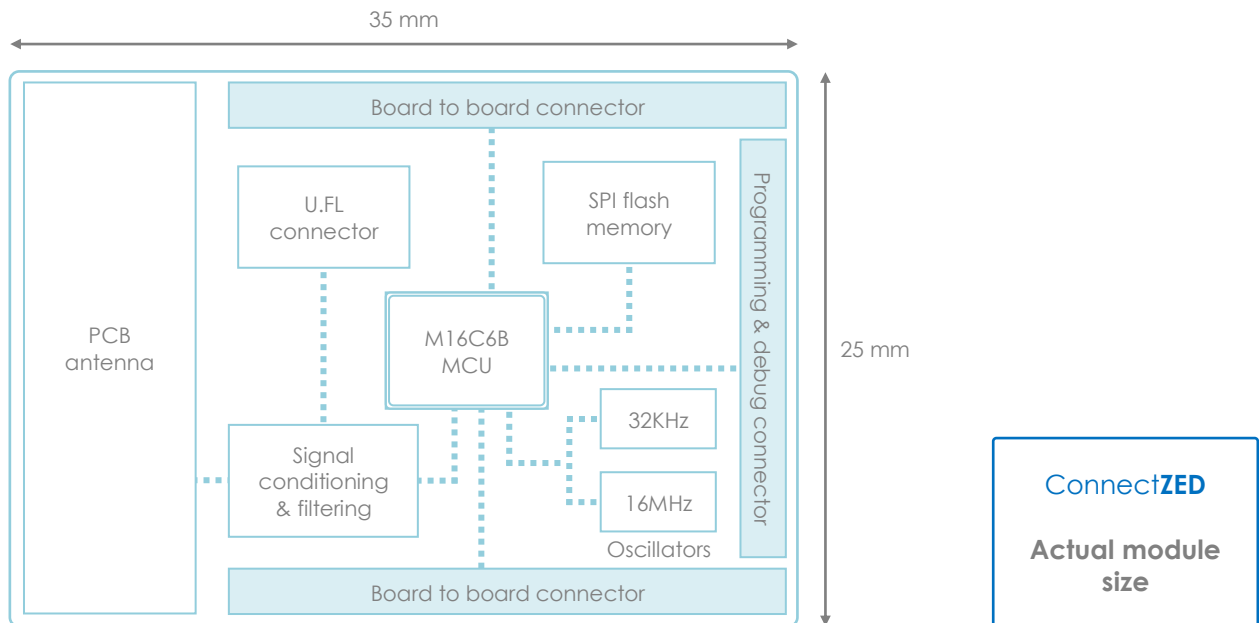


## Technical specifications

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 250m
- 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



[www.andtr.com](http://www.andtr.com)

[info@andtr.com](mailto:info@andtr.com)

AND Technology Research Ltd., 4 Forest Drive, Theydon Bois, Essex. CM16 7EY. UK

+44 (0) 1992 814655 | Tel

andtr. | Skype