



The RapidSE Development board provides developers with a selection of convenient interfaces to a RapidSE ZigBee Smart Energy module.

The Development board provides the same functionality as the RapidSE USB stick in connection with a PC running RapidSE Desktop, as well as UART and SPI connectivity for integration directly with third party hardware.

Power

Both USB and an alternative user-provided DC connection are available. To use the alternate connection the shorting jumper on JP1 must be moved to pins 2&3. Shorting pins 1&2 will source power from USB. The onboard regulator is used to convert either USB provided 5V or user provided power, to 3.3V.

USB Connection

5V up to 200mA

Alternate Power Connector (J6 - See I/O section)

Recommended DC Power Source

4-12VDC 200mA

Absolute Max Input Voltage

18VDC (Note: Higher voltage levels will result in damage to the unit).

LEDs

Three LED indicators are provided:

TX – Flashes when the module transmits serial data

RX – Flashes when the module receives serial data

PWR – Lights when there is 3V power present on the board

Connectivity

JP2 – Connectivity Selector

Installed = Normal USB operation

USB communications with radio module enabled

Uninstalled = USB disabled

External TTL UART enabled on connector J4

I/O

J1 – Ember SIF Connection

J1 is the Ember Programming Connector

J2 – mini-B USB Connector

J3 – EM250 GPIO

J3 is an 18 pin header. This connection maps to all of the 17 GPIO pins on the EM250

Pin 1 = GPIO0

Pin 2 = GPIO1

...

Pin 17 = GPIO16

Pin 18 = GND

J4 – EM250 UART (3V) Connection

Pin 1 = GPIO10 (RX)

Pin 2 = GPIO9 (TX)

Pin 3 = GND

J5 – EM250 Master SPI Port

Pin 1 = GPIO9 (MOSI)

Pin 2 = GPIO10 (MISO)

Pin 3 = GPIO11 (CLK)

Pin 4 = GPIO3 (Select)

Pin 5 = GND

J6 – Alternate Power Connection

Pin 1 = Vin

Pin 2 = GND

See Power Section

This development board employs a radio module with FCC ID: T7VEM250B