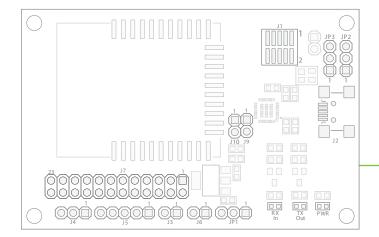
RapidConnect Development Board

Rapid**Connect**

7357PA24-DFV



Power

JP1 is used to select between USB or user-provided DC power sources. To use the USB connection as a power source, the shorting jumper on JP1 should be on pins 1-2 (this is the default position). To use an external DC power source, the shorting jumper must be moved to pins 2-3. The on-board LDO will convert either USB-provided 5V or user-provided external power to 3.3V.

USB Connection

5V up to 250mA

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

Recommended DC Power Source 4-5VDC 250mA

Absolute Max Input Voltage

6.5VDC (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 & JP3 jumper installed on pins 1-2 (the default positions for those jumpers)

Normal USB operation

JP2 & JP3 jumper installed on pins 2-3

External TTL UART enabled on connector J4, USB disabled (Note: the device can still be powered via USB while in TTL mode)



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The RapidConnect Development Board provides developers with a selection of convenient interfaces to a RapidConnect ZigBee module.

When connected via USB to a PC running RapidSE Desktop or RapidHA Desktop, the Development Board offers the same functionality as the RapidConnect USB stick. Additionally, the Development Board offers UART and SPI connectivity for integration directly with third-party hardware.

I/C

J1 – Ember Debug and Programming InSight Port

 Pin 1 = +3.3v
 Pin 6 = JCLK/SWCLK

 Pin 2 = JTDO/SWO
 Pin 7 = JTMS/SWDIO

 Pin 3 = nJRST
 Pin 8 = nReset

 Pin 4 = JTDI
 Pin 9 = PTE

 Pin 5 = GND
 Pin 10 = PTD

J2 - mini-B USB Connector

J3 - Bootloader Mode

Installed = Bootloader mode enabled

J4 - EM357 UART (3V) Connection

Pin 1 = PB1 (module TX) Pin 2 = PB2 (module RX)

Pin 3 = GND

EM357 SPI Port (slave mode)

J7 Pin 10 = PB1 (MISO) J7 Pin 7 = PB4 (SELECT)
J7 Pin 11 = PB2 (MOSI) J7 Pin 1 = GND

J7 Pin 8 = PB3 (CLK)

(Note: USB mode must be disabled before SPI can be used)

J5 - EM357 Spare GPIO

 $\begin{array}{ll} \mbox{Pin 1} = \mbox{PB1} & \mbox{Pin 4} = \mbox{PB4} \\ \mbox{Pin 2} = \mbox{PB2} & \mbox{Pin 5} = \mbox{GND} \end{array}$

Pin 3 = PB0

J6 – Alternate Power Connection

Pin 1 = Vin Pin 2 = GND See Power Section

J10 Pin 1 = PB2

J9 – CTS/RTS connector

Pin 1 = CTS (USB transceiver TTL input) Pin 2 = RTS (USB transceiver TTL output)

J7 & J10 – EM357 GPIO

J10 Pin 2 = PB3J7 pin 13 = PC1J7 Pin 1 = GND J7 pin 14 = No Connection J7 Pin 2 = PB1J7 pin 15 = No Connection J7 pin 3 = GNDJ7 pin 16 = PB7 J7 pin 4 = PB4J7 pin 17 = JRSTJ7 pin 5 = PA4J7 pin 18 = NRESET J7 pin 6 = PA5J7 pin 19 = JTDIJ7 pin 7 = PB4J7 pin 20 = JTMSJ7 pin 8 = PB3J7 pin 21 = JTDO J7 pin 9 = PA6J7 pin 22 = JTCK

J7 pin 12 = PB0

This development board employs a radio module with FCC ID: XFFZGB357PA10