

GT202-PMODKIT

Data Sheet

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Rev.1.00 Dec2018

1. Overview

The PMOD interfaced GT202 Wi-Fi module is an add-on device that will interface with many off-the-shelf development kits.

The purpose of this unit is to allow users to add a wireless network interface to a development platform prior to development of their own customized hardware.

The Zephyr Engineering, Inc GT202 module is an intelligent platform for the Internet of Everything. This complete networking platform enables customers to add full-featured Wi-Fi to a wide variety of products with minimal development effort and cost. It supports a network stack along with SSL security, enabling full-featured internet connectivity and reliable information exchange in a small, low-cost system.

The GT202 provides two host interfaces for connecting to local system controllers. A UART based host interface can be used for rapid development and deployment of simple data streams between the local device and the internet cloud. An SPI slave interface is available for applications that require more advanced connectivity to the network.

This *Data Sheet* applies to Longsys GT202_Renesas_Adaptor version 1.01 or Zephyr Engineering, Inc GT202-PMODKIT version 1.1.

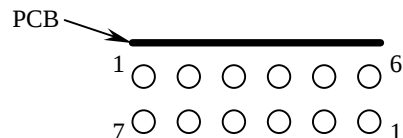
- The GT202 module contains a Qualcomm® Atheros QCA4002 chip. The QCA4002 is a single chip system on a chip (SoC) 1x1 802.11 b/g/n device optimized for low-power embedded applications with single-stream capability for both TX and RX. It has an integrated network processor with a large set of TCP/IP with IPv4/IPv6-based services. These services can be accessed via a serial SPI link or by a UART link connected to an external host CPU. Board I/O Ports and Pin headers provide access to all MCU GPIO and dedicated interface ports and all power interfaces.
 - Single PMOD connector, allowing use of appropriate PMOD compliant peripheral plug-in modules for interfacing to many development systems.
- Board Operating Voltage
 - 3.3V may be supplied through the PMOD header from the development board.

2. Connectors and Jumpers

The PMOD pin out and jumper settings are shown in the next two sections. Note that there is no J1, J4 or J8.

2.1 J9 - PMOD Connector Pin out

Note that the PMOD pin numbering (connector J9) is not the standard numbering scheme for dual-row connectors.



Side View
Looking into connector pins

J9 Pin	Function
1	SPI_CS
2	SPI_MOSI
3	SPI_MISO
4	SPI_CLK
5	GND
6	3.3V
7	SPI_INT
8	CHIP_PWD#
9	n/c
10	n/c
11	GND
12	3.3V

Table 1 J9 PMOD Connector Pin out

2.2 Jumper Settings

2.2.1 J2, J3 – GT202 Boot Select

J2 is HM0 and J3 is HM1. Jumper pins 1 to 2 for logic 0 (gnd) and pins 2 to 3 for logic 1 (Vcc).

Note: Default is SPI

Boot Strap Function	USB / Hostless	SPI (J2)	SDIO (J3)
J2 - HM0	0 (1-2)	0 (1-2)	1 (2-3)
J3 - HM1	0 (1-2)	1 (2-3)	1 (2-3)

Table 2 Host mode – truth table

2.2.2 J6 – Power Options

Jumper J6 pins 1 to 2 for USB power and pins 2 to 3 for PMOD power.

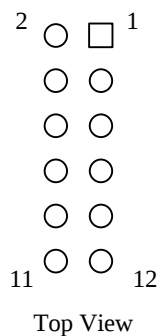
Note: Default is PMOD (2-3)

J6 (Vcc Select)	1-2	2-3
	USB	PMOD

Table 3 Vcc Select Jumper

2.3 J5 – GT202 Connector Pin out

The GT202 pin numbering (connector J5) is the standard numbering scheme for dual-row connectors, shown below.

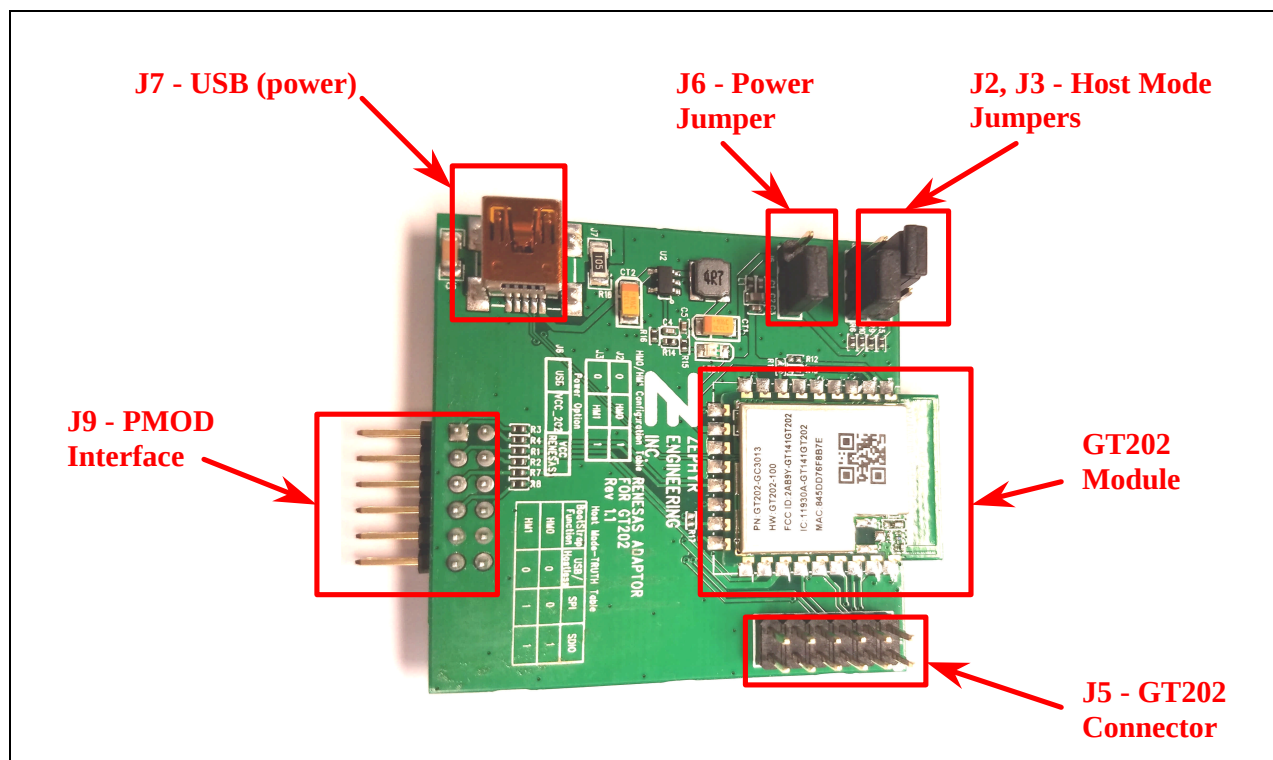


J5 Pin	Function
1	TDO
2	HM0/SDIO_D2/I2S1_SDI
3	I2C_SCK/TCK
4	I2S0_WS
5	I2C_SDA/TDI
6	UART0_CTS
7	TEST_MODE/UART1_TXD
8	UART0_RTS
9	UART1_RXD/TMS
10	UART0_TXD/I2S0_SDI
11	n/c
12	UART0_RXD_7x7/I2S0_SDO/TRST_7x7

Table 4 J5 PMOD Connector Pin out

3. Hardware Layout

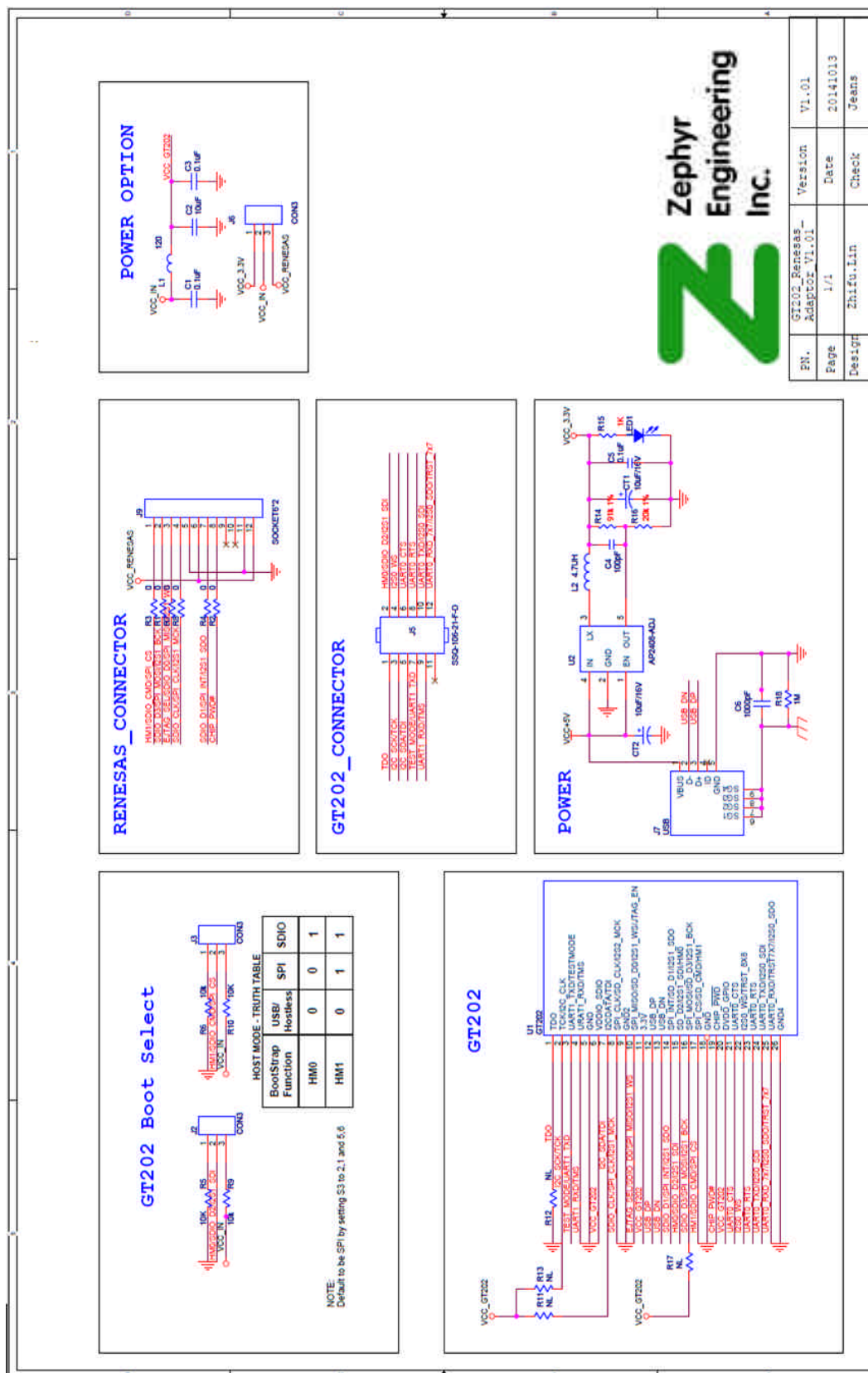
3.1 Hardware Features



3.2 Power Requirements

3.3VDC needs to be supplied by the PMOD interface. Appropriate care should be taken to assure that the PMOD port has been set to 3.3v for the PMOD connector being used. A configuration jumper on the development board usually does this.

4. Electrical Schematics



5. Certifications

Zephyr Engineering, Inc certifies this board complies with the following requirements:

- China SJ/T 113642014, 10years environmental protection use period.
- EU RoHS
- EU EMI/EMC compliance

6. Resources and Support

For more information on how to order this kit from a local distributor, please visit the kit page our website. In addition to ordering information, you will also be able to download schematics, relevant application projects, technical updates and more.

[Zephyr Engineering, Inc web page: zpci.com/gt202pmod](http://zpci.com/gt202pmod)

Revision History

Rev.	Date	Description	
		Page	Summary
1.00	Dec 11, 2018	-	Initial release

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