JANNATEC Technologies

CC1020 Module

Integration Guide

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1. Revision History

REV	DESCRIPTION	ORIGINATOR	DATE
1.0	Initial Release	J. Buie	October 6, 2022

2. Release Approval

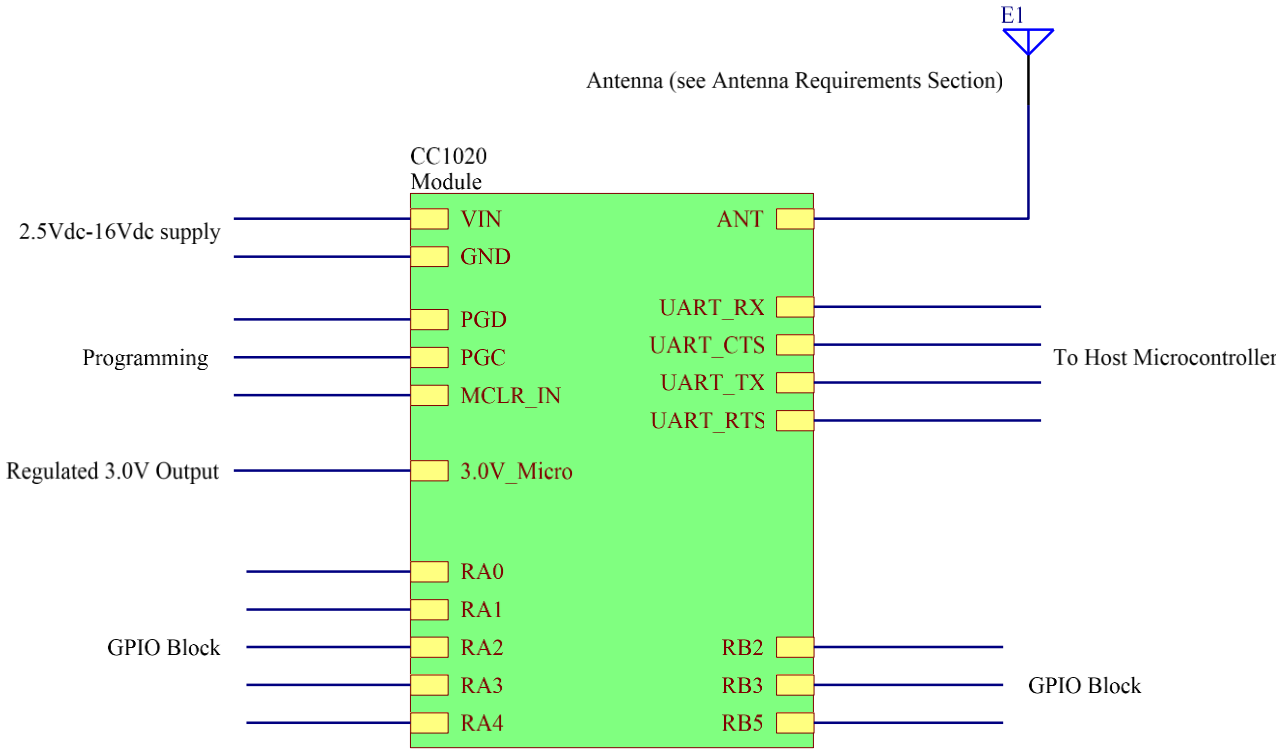
	NAME	SIGNATURE
Prepared by	Jason Buie	
Approved by		
Approved by		

A company of the SCHAUENBURG International Group

3. Background

This guide has been developed to aid in the integration of the CC1020 module from mechanical, RF and electrical perspectives.

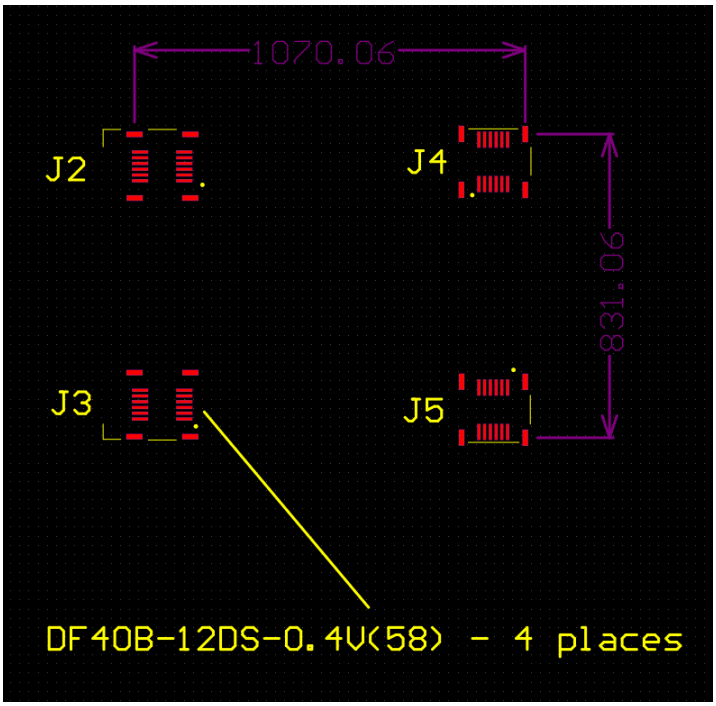
4. Interface Diagram



5. Connectivity

5.1. Power, Programming, Host UART and GPIO

Connections for power, programming, host UART and GPIOs are made through 4 low profile connectors populated on the bottom of the CC1020 module. The mating connectors required are Molex DF40B-12DS-0.4V(58).



Pinout – J2

PIN	SIGNAL
1	VIN
2	MCLR_IN
3	VCC
4	RA0
5	VCC
6	RA1
7	GND
8	PGD
9	GND
10	PGC
11	GND
12	3.0V_Micro

Pinout – J3

PIN	SIGNAL
1	RB3
2	UART_RX
3	RA2

4	UART_CTS
5	RA3
6	UART_TX
7	RA4
8	UART_RTS
9	RB5
10	RB2
11	N/C
12	N/C

Pinout – J4

PIN	SIGNAL *
1	J4 COMMON
2	J4 COMMON
3	J4 COMMON
4	J4 COMMON
5	J4 COMMON
6	J4 COMMON
7	J4 COMMON
8	J4 COMMON
9	J4 COMMON
10	J4 COMMON
11	J4 COMMON
12	J4 COMMON

*****No signals on J4 pins. Connect together for mechanical support.

Pinout – J5

PIN	SIGNAL *
1	J5 COMMON
2	J5 COMMON
3	J5 COMMON
4	J5 COMMON
5	J5 COMMON
6	J5 COMMON
7	J5 COMMON
8	J5 COMMON
9	J5 COMMON
10	J5 COMMON
11	J5 COMMON
12	J5 COMMON

*****No signals on J5 pins. Connect together for mechanical support.

5.2. RF Connection

RF connection to the CC1020 module is done through an onboard U.FL connector. This module must only be used with a 1” U.FL coaxial jumper to the host board and an approved antenna.

6. Antenna Requirements

The CC1020 module has been given modular IC and FCC certifications with two antenna configurations. Use of antenna configurations other than is described below must not be used.

6.1. Ceramic Antenna on Host Board

A 1” U.FL coaxial jumper is used to make the RF connection between the CC1020 module and the host board. The host board is populated with a Pulse W3014 (-0.5dBi) ceramic antenna or equivalent.

6.2. Low Profile Mobile Antenna

A 1” U.FL coaxial jumper is used to make the RF connection between the CC1020 module and the host board. A minimum of 17’ of RG58 makes the connection between the host board and an NMO magnetic mount with a PCTEL MLPV800 (3dBi) or equivalent.

7. Specifications

Input Voltage: 3.5-16Vdc

Input Current: 25mA max

Max EIRP with certified antenna configurations: -1.5dBm

Length: 30mm (1.18”)

Width: 21.6mm (0.85”)

Height: 4.95mm (0.185”)

8. RF Certification

8.1. Host Product Labelling:

The host product must be labeled with the following:
“Contains FCC ID: 2AZ9PCC1020”
“Contains IC: 7085A-CC1020”

8.2. Host Product Manual Statements:

The host product user's manual must contain the following statements when the JAWS Transceiver Module is installed.

FCC –
"Changes or modifications not expressly approved by Jannatec Technologies could void the user's authority to operate the device."

"This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation."

"To comply with RF exposure compliance requirements, the antenna used for this transmitter must be installed to provide a separation distance of at least 20cm from all persons and must not be co-located or operated in conjunction with any other antenna or transmitter."

INDUSTRY CANADA -
This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause
undesired operation of the device.

French:
Cet appareil est conforme avec Industrie Canada exempts de licence standard RSS (s).
L'utilisation de ce dispositif est autorisée seulement aux conditions suivantes : (1) il ne
doit pas produire de brouillage et (2) l' utilisateur du dispositif doit étre prêt à accepter
tout brouillage radioélectrique reçu, même si ce brouillage est susceptible de compromettre le fonctionnement du dispositif.

Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry
Canada. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that necessary for successful communication.

French:
Sous la réglementation d'Industrie Canada, ce transmetteur radio ne peut fonctionner en utilisant une antenne d'un type et un maximum (ou moins) gain approuvées pour
l'émetteur par Industrie Canada. Pour réduire le risque d'interférence aux autres

utilisateurs, le type d'antenne et son gain doivent être choisis de manière que la puissance isotrope rayonnée équivalente (PIRE) ne dépasse pas ce qui est nécessaire pour une communication réussie.

Caution: Exposure to Radio Frequency Radiation.
To comply with RSS 102 RF exposure compliance requirements, for mobile configurations, a separation distance of at least 20 cm must be maintained between the
antenna of this device and all persons. This device must not be co-located or operating in
conjunction with any other antenna or transmitter.
French:
Pour se conformer aux exigences de conformité 102 RSS RF exposition, pour des
configurations mobiles, une distance de séparation d'au moins 20 cm doit être maintenue
entre l'antenne de cet appareil et toutes les personnes. Cet appareil ne doit pas être colocalisés
ou fonctionnant en conjonction avec une autre antenne ou transmetteur.