Installation Guide for Raspberry Pi 3 Model B+ Module Integration

1. Purpose

The purpose of this document is to provide information on how to use a Raspberry Pi 3 Model B+ as a radio module when integrating into a product.

Incorrect integration or use may infringe compliance rules meaning recertification may be required.

2. Module Description

The Raspberry Pi 3 Model B+ module has an IEEE 802.11b/g/n/ac 1x1 WLAN, Bluetooth 4.2 and Bluetooth LE module based on the Cypress 43455 chip. The module is designed to be mounted, with appropriate screws, into an end product. The module must be placed in a suitable location to ensure WLAN performance is not compromised. The module contains an on-board dual band WLAN + Bluetooth antenna.

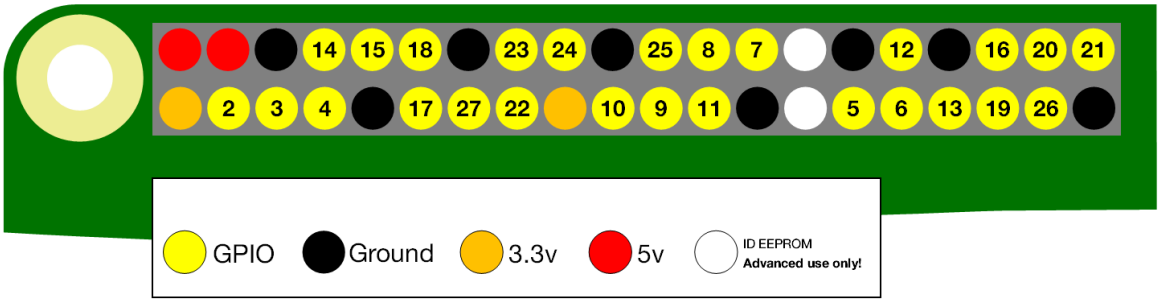
3. Integration into Products

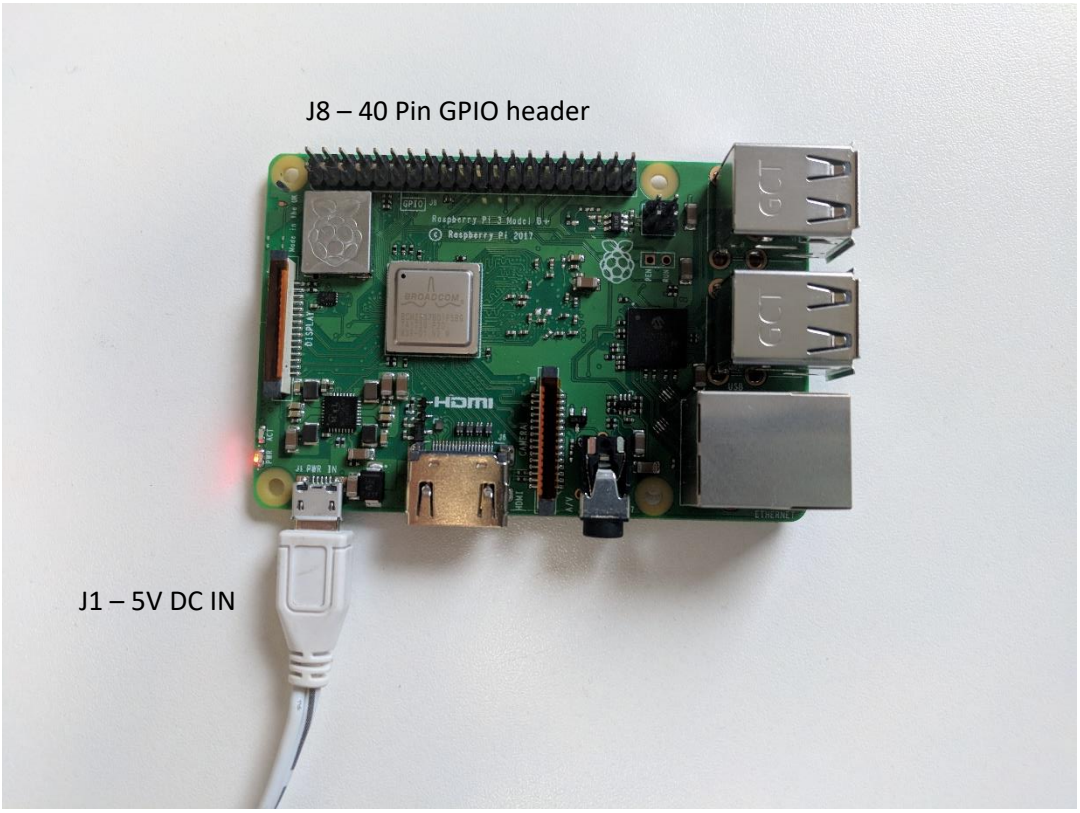
Module & Antenna Placement

A separation distance greater than 20cm will always be maintained between the antennas and any other radio transmitter if installed in the same product.

The module is physically attached and held in place by screws

In order to connect the module to the system micro USB power cable is connected to J1 on the board. The supply should be 5V DC minimum 2.5A. Power can also be supplied on the 40 Pin GPIO header (J8); Pins 1 + 3 connected to 5V and pin 5 to GND.





Dependent on intended usage the following ports can / should be connected;

J6 – HDMI

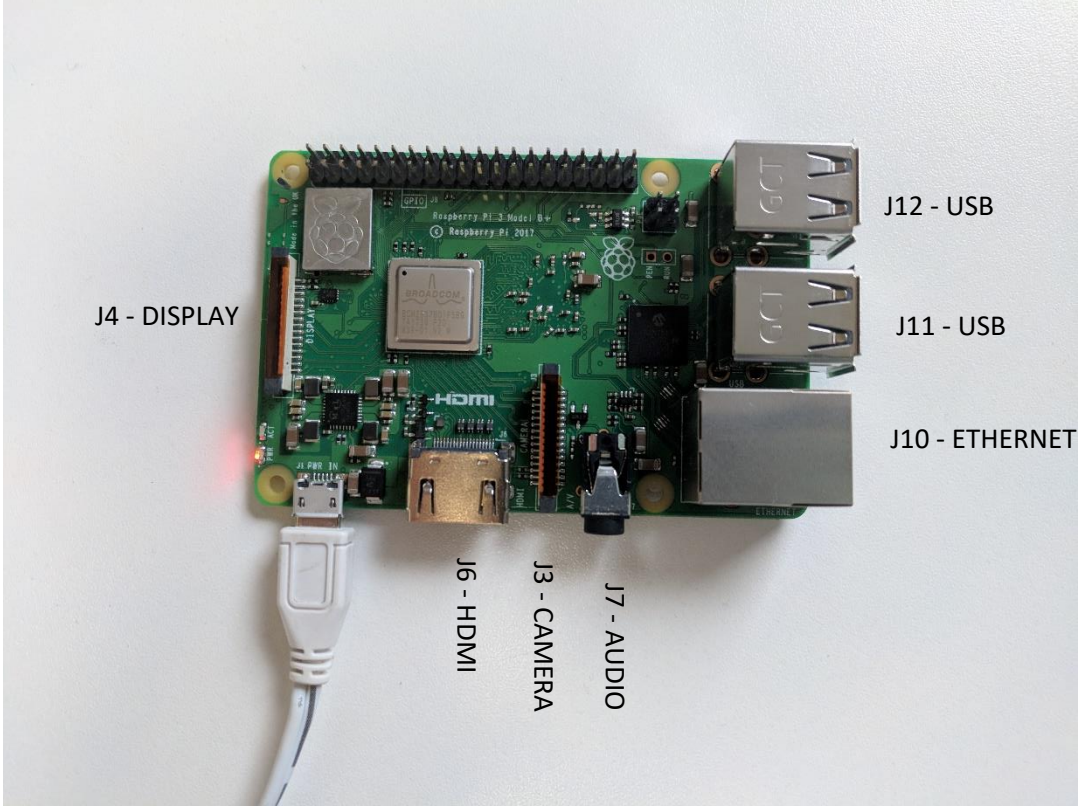
J7 - AUDIO

J10 – Ethernet

J11 + 12 – USB A

J4 – DSI Display (for use with Official Raspberry Pi display, sold separately)

J3 – CSI Camera (for use with Official Raspberry Pi Camera module, sold separately)

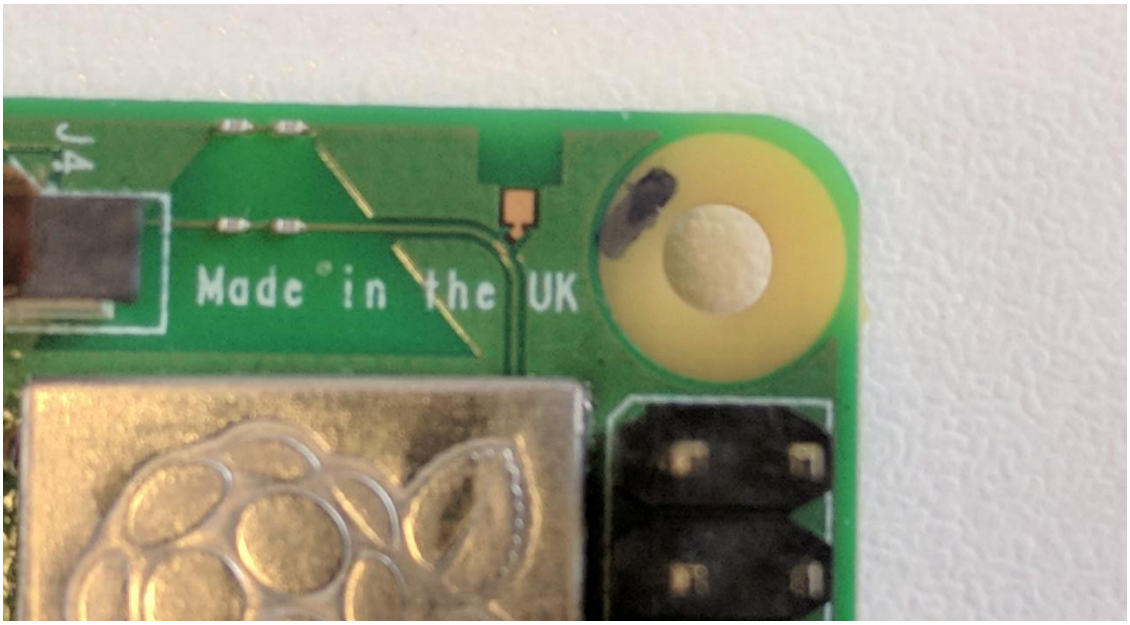


Any external power supply used with the Raspberry-Pi shall comply with relevant regulations and standards applicable in the country of intended use.

At no point should any part of the board be altered as this will invalidate any existing compliance work. Always consult professional compliance experts about integrating this module into a product to ensure that all certifications are retained.

4. Antenna Information

The antenna on board is a Dual band (2.4GHz and 5GHz) PCB niche antenna design licensed from Proant with Peak Gain: 2.4GHz 3.5dBi, 5GHz 2.3dBi. It is important that the antenna is placed in a suitable place inside the product to ensure optimal operation. Do not place close to metal casing.



5. End Product Labelling

A label is to be fitted to the exterior of all products containing the Raspberry Pi 3 Model B+ module. The label must contain the words “Contains FCC ID: 2ABCB-RPI3BP” (for FCC) and “Contains IC: 20953-RPI3P” (for ISED).

6. FCC Compliance

This device complies with Part 15 of 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

FCC Caution: Any changes or modification not expressly approved by the party responsible for compliance could void the user’s authority to operate.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment.

This device is installed to be operated with a minimum 20cm distance between the antenna and the user.

7. ISED Compliance

English

This device complies with ISED’s 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

This radio transmitter (IC: 20953-RPI3P) has been approved by ISED Canada to operate with the antenna types listed above in section 4 with the maximum permissible gain indicated. Antenna types not included in this list, having a gain greater than the maximum gain indicated for that type, are strictly prohibited for use with this device.

The operation of the device in the band 5150–5250 MHz is only for indoor use to reduce the potential for harmful interference to co-channel mobile satellite systems.

This equipment complies with ISED RSS 102 radiation exposure limits set forth for an uncontrolled environment. This equipment is installed to be operated with a minimum 20cm distance between the antenna and the user.

Please note that high-power radars are allocated as primary users (i.e. priority users) of the bands 5250- 5350 MHz and 5650-5850 MHz and these radars can cause interference and/or damage to LELAN (License Exempt Local Area Network) devices.

French

Cet appareil est conforme au(x) standard(s) RSS exempts de licence d'Industrie Canada. Son exploitation est soumise aux deux conditions suivantes :

(1) cet appareil ne doit pas occasionner d'interférence et (2) cet appareil doit supporter toutes les interférences, y compris celles qui pourraient provoquer un mauvais fonctionnement de cet appareil.

Cet émetteur radio (IC: 20953-RPI3P) a été approuvé par Industrie Canada pour fonctionner avec les types d'antenne énumérés ci-dessus (section 4) avec le gain d'antenne maximal autorisé indiqué. Les types d'antennes non inclus dans cette liste ayant un gain supérieur au gain maximal indiqué pour ce type sont strictement interdits pour une utilisation avec cet appareil.

L'utilisation de l'appareil dans la bande de fréquences 5150-5250 MHz est uniquement valable en intérieur pour réduire le risque de brouillage nuisible au fonctionnement des systèmes mobiles par satellite partageant les mêmes canaux.

Cet appareil est conforme aux limitations de la norme IC RSS-102 concernant l'exposition aux radiations dans un environnement non contrôlé. Cet appareil doit être installé et utilisé avec une distance minimale de 20 cm entre l'antenne et le corps de l'utilisateur.

Veuillez noter que les radars haute puissance sont définis comme utilisateurs principaux (i.e. utilisateurs prioritaires) des bandes 5250- 5350 MHz et 5650-5850 MHz, et que ces radars peuvent causer des interférences et/ou endommager les appareils LE-LAN (réseau local exempt de licence).