Noiseless Acoustics Ltd

MNi-4th March 2020

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.

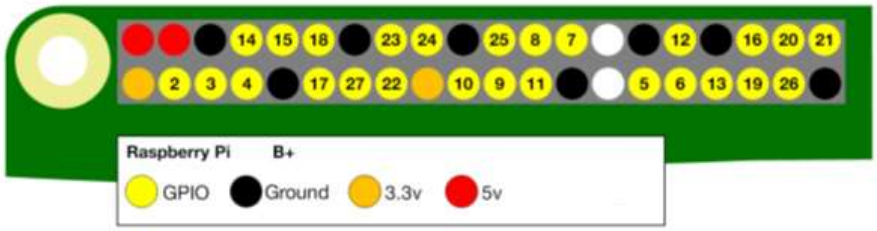
2. Module Description

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

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.



J1 – 5V DC IN

J8 – 40 Pin GPIO header

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

J6 – HDMI

J7 - AUDIO

J10 – Ethernet

J11 + 12 – USB A

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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)

J12 - USB

J11 - USB

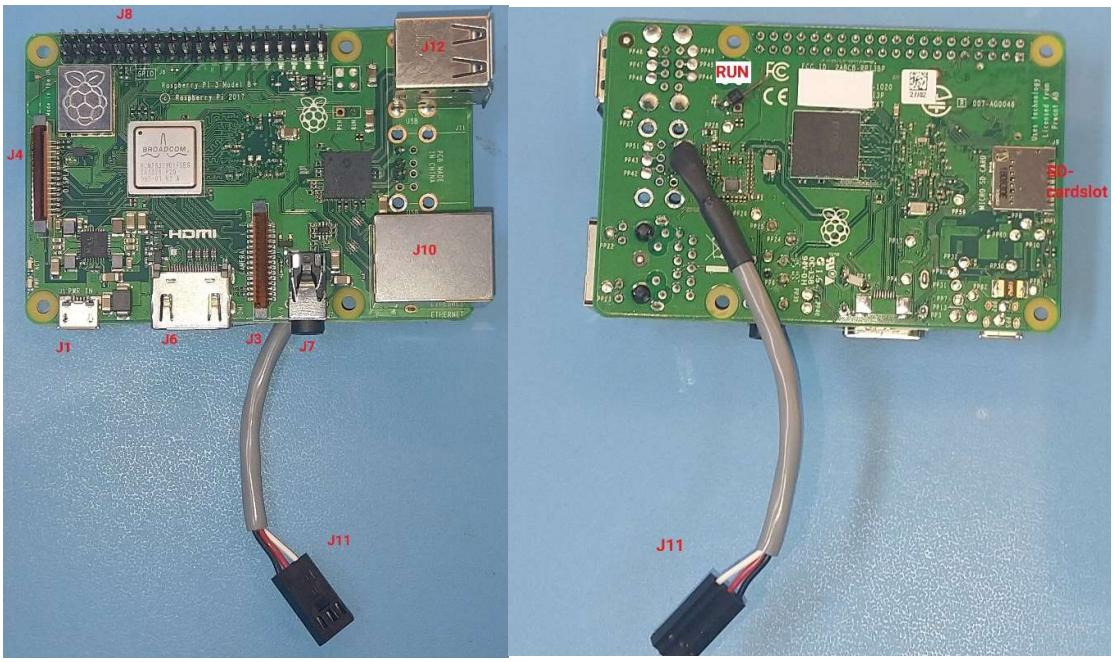
J4 - DISPLAY

J10 - ETHERNET

J6 - HDMI

J3 - CAMERA

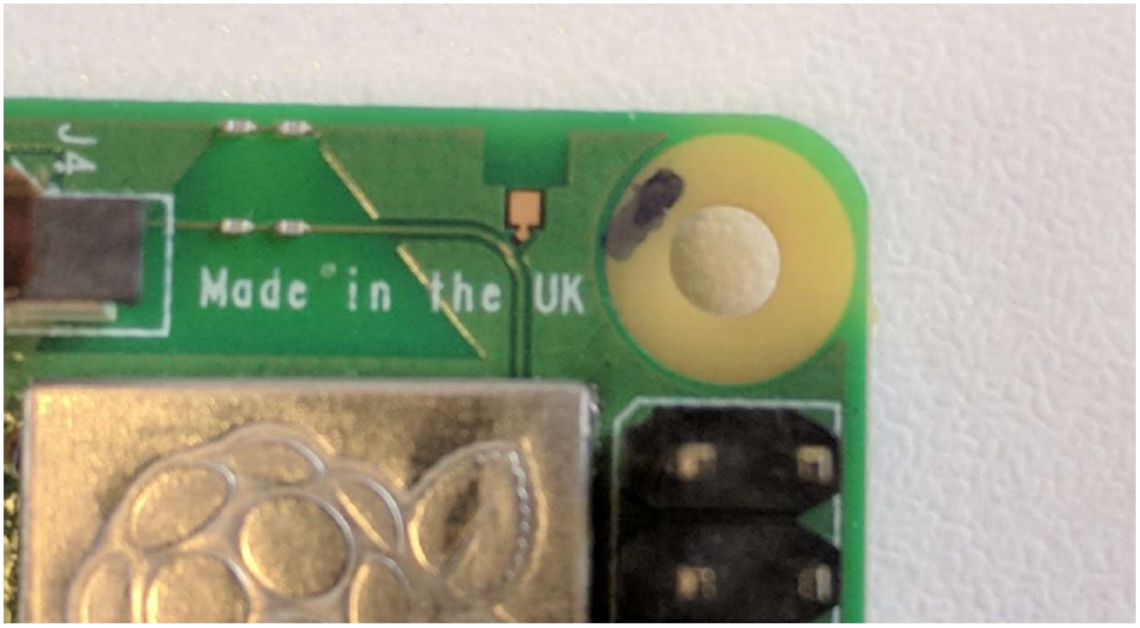
J7 – AUDIO



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

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 or to an e-label of all products containing the Raspberry Pi 3 Model B+ module. The label must contain the words “Contains FCC ID: 2AVNR-RPI3BP” (for FCC)

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.

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