ZigBee CC2652P Raspberry Pi module V0.4

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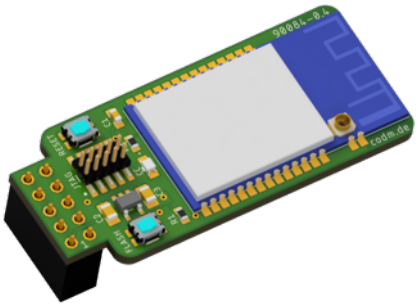
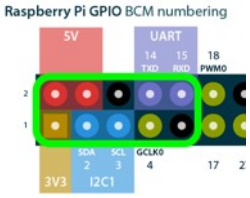


- 2.4 GHz CC2652P7 ZigBee radio module with u.FL antenna socket for use with the Raspberry Pi UART interface
- Designed for direct connection to the GPIO strip of all Raspberry Pi models
- **NEW**: ZigBee LED integrated, lights up when pairing is active
- **NEW**: Now with CC2652P7 instead of CC2652P
- Designed for use with zigbee2mqtt, ioBroker, etc.
- Already flashed with Z-Stack firmware 3.x (Koenkk) for use
- Current version of the Texas-Instruments ZigBee CC2652P7 Cortex-M4F microcontroller with integrated power amplifier (+20dBm)
- Integrated LDO voltage converter (5V/3.3V)
- The existing PCB antenna can be used by modifying a solder jumper

Preparation Raspberry Pi and Serial/UART



1. Connect the U.FL antenna adapter to the antenna socket of the module (orange marking).
2. Plug the module onto the GPIO strip of the switched-off Raspberry Pi (blue marking).
3. Supply Raspberry Pi with power and start
4. Raspberry Pi UART configuration: The module is designed for use with the UART interface. To be able to use this, some configuration is necessary. The serial interface must be made available and the UART activated.
   a. The required device `/dev/serial0` is used for the Bluetooth interface. As this interface must be used for the ZigBee module, Bluetooth must be deactivated or transferred to the miniUART.
   b. First use `sudo raspi-config` under `Interface Options > Serial Port` to answer the question about activating the `login shell over serial` with `No` (!). Answer the subsequent question about `Enable Serial Port Hardware` with `Yes`.
   Then restart the Pi once when exiting `raspi-config`.
   c. After the reboot, add the following line to the file `/boot/firmware/config.txt` at the end of the file, below the `enable_uart=1` added by `raspi-config`:

      ```
      dtoverlay= disable-bt
      ```

      Alternatively, you can also switch the Bluetooth module to `mini UART`:

      ```
      dtoverlay= miniuart-bt
      ```

   d. If you have deactivated Bluetooth, you must deactivate all operating system services that want to access it. The `modem system service` must therefore be deactivated:

      ```
      sudo systemctl disable hciuart
      ```

5. Restart Raspberry Pi

See also: https://www.zigbee2mqtt.io/information/connecting_cc2530.html#to-a-raspberry-pi-zero

Configuration zigbee2mqtt

The current version of zigbee2mqtt comes with a web interface for onboarding. When starting for the first time, you can call this up at `http://<ip-des-pi>:8080` and make settings there. `/dev/serial0` or `/dev/ttyAMA0` should be recognised automatically. `/dev/serial0` is a symlink to `/dev/ttyAMA0`.

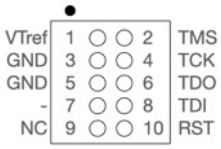
If you want to do it manually, the following configuration must be set in the `data/configuration.yaml` file. `serial0` is used with a baud rate of `115200` (default) with the protocol definition `zstack`.

```
serial:
  port: /dev/serial0
  adapter: zstack
```

https://www.zigbee2mqtt.io/guide/installation/01_linux.html

Firmware update

A JTAG debugger can be connected to the 2x5 pin header on the top (`JTAG`) to update the firmware. Alternatively, the firmware can be updated directly from the Raspberry Pi using the serial bootloader and `cc3538-bsl`.



https://github.com/Koenkk/Z-Stack-firmware/tree/master/coordinator/Z-Stack_3.x.0/bin
https://github.com/codm/cc2652-raspberry-pi-module#firmware

Intended use

This module is designed to be connected to the Raspberry Pi via the GPIO strip (UART) and to provide it with a ZigBee interface (coordinator).
Only the specified intended use is permitted. Any other use leads to exclusion of warranty and liability.

Safety instructions

Keep the module away from heat and sunlight. Avoid contact with dust and the influence of liquids. Only use the module indoors. Protect the module from electrostatic discharge.

Technical data

Short description:	CC2652P RPi Serial Module V0.4, 90084		**Dimension:**	45 x 20mm
Supply voltage:	5V		**Weight:**	4g
Ambient temperature:	+5 to +45°C		**Standard:**	IEEE 802.15.4 (ZigBee Coordinator)

Open source project: Support in the Homegear forum or via shop@codm.de, no telephone support!

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