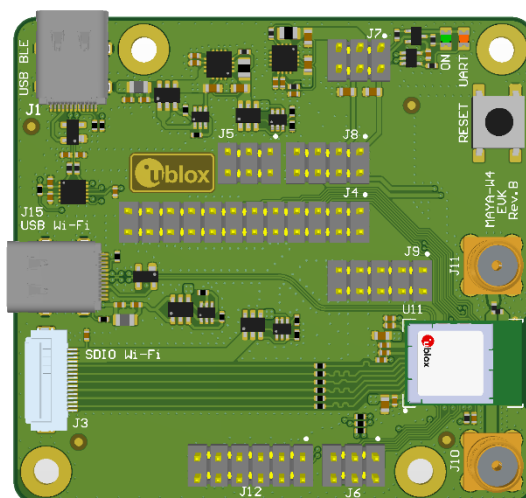


# EVK-MAYA-W4

## Evaluation kit for MAYA-W4 host-based modules

### User guide



### Abstract

This document describes how to set up the EVK-MAYA-W4 evaluation kit to evaluate MAYA-W4 series multiradio modules with Wi-Fi 6, Bluetooth 5.4, and 802.15.4.

# Document information

|                               |                                               |             |
|-------------------------------|-----------------------------------------------|-------------|
| <b>Title</b>                  | <b>EVK-MAYA-W4</b>                            |             |
| <b>Subtitle</b>               | Evaluation kit for MAYA-W4 host-based modules |             |
| <b>Document type</b>          | User guide                                    |             |
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| <b>Disclosure restriction</b> | C1-Public                                     |             |

This document applies to the following products:

| <b>Product name</b> | <b>Type number</b>   | <b>Hardware version</b> |
|---------------------|----------------------|-------------------------|
| EVK-MAYA-W471       | EVK-MAYA-W471-00C-00 | Rev. B                  |
| EVK-MAYA-W476       | EVK-MAYA-W476-00C-00 | Rev. B                  |

 EVK-MAYA-W4 is supplied strictly as an "evaluation kit" only. It has not been RF certified with worldwide agencies and may not be offered for sale as an end-user product.

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# 1 Kit description

The MAYA-W4 series comprises ultra-compact, multiradio modules with Wi-Fi 6, Bluetooth Low Energy 5.4, and IEEE 802.15.4 connectivity. MAYA-W4 supports IEEE 802.11 a/b/g/n/ac/ax standards with dual band 1x1 2.4 / 5 GHz Wi-Fi, 20 MHz channel bandwidth, and PHY data rates up to 115 Mbit/s. The modules can work as a simple access-point, station, in P2P communication, or combinations of these modes.

The modules require a host processor and connect to it through SDIO or USB for Wi-Fi, high-speed UART or USB for Bluetooth, and SPI for 802.15.4. The supported operating systems include Linux and Android.

EVK-MAYA-W4 allows an external host processor to access several practical features for testing and evaluating the connectivity options supported in MAYA-W4 series modules, including:

- SD card adapters to access the SDIO host interface
- USB interface to easily access the Bluetooth UART interface via a USB-to-UART bridge
- USB interface for Wi-Fi and Bluetooth, selectable through host interface configuration
- SMA connectors for external antennas
- GPIO pins and other module interfaces are accessible through pin headers
- Multiple power supply options

For more information about MAYA-W4 modules, see also the MAYA-W4 series data sheet [\[1\]](#) and system integration manual [\[2\]](#).

## 1.1 Overview

[Table 1](#) lists the available evaluation kit versions:

| Evaluation kit | Ordering code     | Description                                                                                                                         | Suitable for evaluating |
|----------------|-------------------|-------------------------------------------------------------------------------------------------------------------------------------|-------------------------|
| EVK-MAYA-W471  | EVK-MAYA-W471-00C | Evaluation kit for MAYA-W471:<br>Two external antennas for dual-band Wi-Fi 6<br>and shared Bluetooth Low Energy/802.15.4            | MAYA-W4x1, MAYA-W4x0    |
| EVK-MAYA-W476  | EVK-MAYA-W476-00C | Evaluation kit for MAYA-W476:<br>Single embedded PCB antenna for shared<br>dual-band Wi-Fi 6, Bluetooth Low Energy,<br>and 802.15.4 | MAYA-W4x6, MAYA-W4x3    |

**Table 1: Available MAYA-W4 evaluation kits**

## 1.2 Kit includes

Table 2 shows the various components included in the EVK-MAYA-W4.

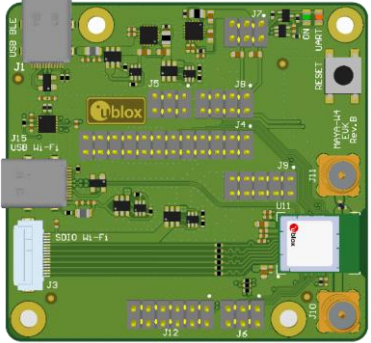
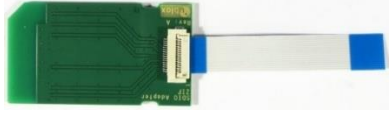
| Part                      | Description                                                                                                                                                                                                                                                                     | Outline                                                                              |
|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| Evaluation board (EVB)    | <p>Evaluation board for the MAYA-W4 series modules.</p> <p>EVK-MAYA-W471 includes SMA antenna connectors that connect to external antennas for Wi-Fi and Bluetooth/802.15.4.</p> <p>EVK-MAYA-W476 uses the internal PCB antenna on the MAYA-W76 module.</p>                     |    |
| M.2 Key E adapter         | <p>M.2 Key E adapter to connect to M.2 host sockets. Two flat cables are included in the EVK to connect the adapter to ZIF connectors on the EVB:</p> <p>Molex 15166-0255 102.00 mm Cable Length, 24 Circuits</p> <p>Molex 15166-0167, 102.00 mm cable length, 16x circuits</p> |   |
| Micro SD/SDIO adapter     | <p>Micro SD to ZIF adapter for Wi-Fi SDIO host communication. The adapter is compatible with host sockets designed for micro-SD cards and supporting SDIO.</p> <p>Flat cable: Molex 15166-0167, 102.00 mm cable length, 16x circuits</p>                                        |  |
| Full-size SD/SDIO adapter | <p>Full-size SD to ZIF adapter for Wi-Fi SDIO host communication. The adapter is compatible with host sockets designed for full-size SD cards and supporting SDIO.</p> <p>Flat cable: Molex 15166-0167, 102.00 mm cable length, 16x circuits</p>                                |  |
| Type-C USB cable          | <p>Type-C USB cable for Bluetooth host communication over UART connected via on-board (EVB) FTDI USB-to-UART bridge, or for Wi-Fi/Bluetooth host communication through the MAYA-W4 USB interface.</p>                                                                           |  |
| External antennas         | <p>2 x Tri-band Wi-Fi/Bluetooth antennas, Linx Technologies ANT-DB1-RAF-SMA (EVK-MAYA-W471)</p>                                                                                                                                                                                 |  |

Table 2: EVK-MAYA-W4 component list

## 1.3 Software

MAYA-W4 series modules are based on the NXP IW610 chipset family. The drivers and firmware required to operate MAYA-W4 series modules are developed by NXP and are integrated into the Linux BSP for the NXP i.MX application processors [3].

The documentation for the NXP software releases includes Wi-Fi and Bluetooth release notes and a list of supported software features.

The driver source code is provided free of charge as open-source software under NXP licensing terms and conditions. As an open-source resource, the drivers can be integrated or ported to other non-NXP based host platforms. Yocto recipes for the driver and firmware, that can be used to develop custom Linux-based systems, are part of the NXP i.MX Linux BSP.

The latest version of the driver source code and Wi-Fi/Bluetooth firmware is available from the following open-source repositories<sup>1</sup>:

- Wi-Fi driver: <https://github.com/nxp-imx/mwifiex>
- Firmware: <https://github.com/nxp-imx/imx-firmware>

 Use the repository branches matching to the latest Linux BSP release version. At the time of this document publication, this is release 6.6.36\_2.1.0.

Yocto recipes for the driver and firmware (`nxp-wlan-sdk`, `kernel-module-nxp-wlan`, `firmware-nxp-wifi`) are included in the NXP [meta-imx](#) and [meta-freescale](#) layers.

The Wi-Fi driver uses the TCP/IP stack from the Linux kernel for data transmission and the `cfg80211` subsystem in the kernel for configuration and control. Bluetooth uses the `hci_uart` or `btmnpuart` driver from the Linux kernel and BlueZ host stack. For further information about initialization and configuration of the Wi-Fi and Bluetooth features, see also the MAYA-W4 system integration manual [2] and the NXP User Manual UM11490 [4].

[Contact](#) your local u-blox support team for information about additional software options for the MAYA-W4 series modules.

## 1.4 System requirements

The evaluation kit has the following system requirements:

- Host (PC or embedded system) with one or more of the following connection options:
  - Micro or full-size SD card slot for access to Wi-Fi through the SDIO host interface
  - USB 2.0 interface for access to the Bluetooth UART interface through USB-to-UART bridge
  - USB 2.0 interface for access to Wi-Fi and Bluetooth through the USB host interface
- Supported operating systems:
  - Linux / Android

## 1.5 Operating conditions

[Table 3](#) describes the recommended operating conditions for the EVK-MAYA-W4. For more information about power supply requirements, see also the MAYA-W4 series data sheet [1].

| Symbol | Parameter                  | Min. | Typ  | Max. | Units |
|--------|----------------------------|------|------|------|-------|
| 3V3    | Power supply voltage 3.3 V | 3.14 | 3.3  | 3.46 | V     |
| 1V8    | Power supply voltage 1.8 V | 1.71 | 1.80 | 1.89 | V     |
| VIO    | I/O supply voltage 1.8 V   | 1.71 | 1.80 | 1.89 | V     |
|        | I/O supply voltage 3.3 V   | 3.14 | 3.30 | 3.46 | V     |
| VIO_SD | SDIO supply voltage 1.8 V  | 1.71 | 1.80 | 1.89 | V     |
|        | SDIO supply voltage 3.3 V  | 3.14 | 3.30 | 3.46 | V     |

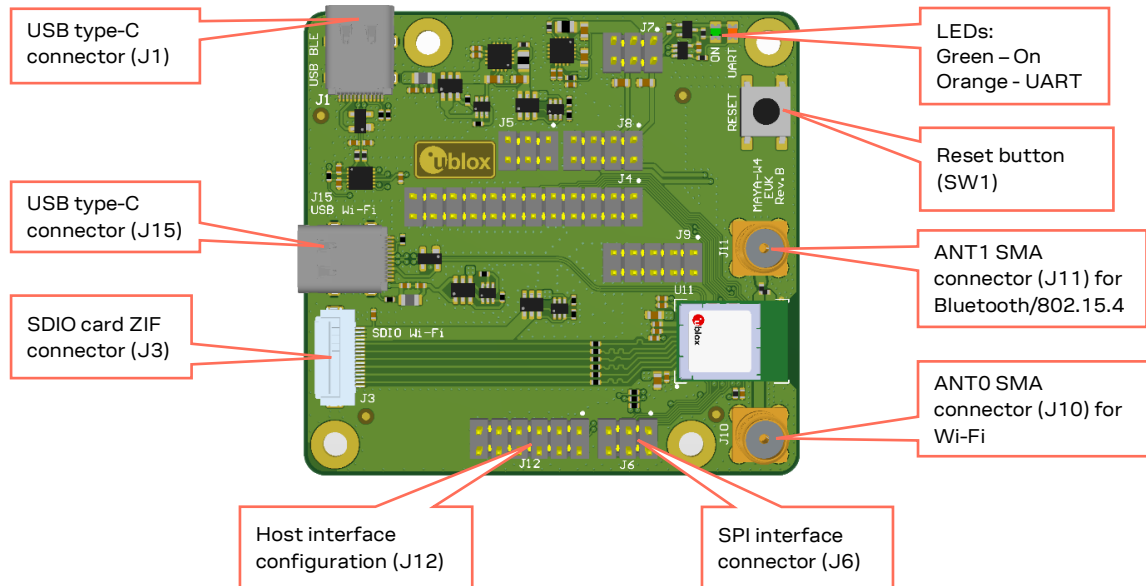
**Table 3: EVK-MAYA-W4 operating conditions**

<sup>1</sup> Support for IW610 on GitHub is pending. Contact u-blox support for software options.

## 2 Getting started

This chapter describes the basic settings and procedures to get started with the MAYA-W4 EVK. All referenced connectors, jumpers, and LEDs are shown in [Figure 1](#).

For more detailed information about the available connectors and configuration options, see also [Board description](#).



**Figure 1: Evaluation board of EVK-MAYA-W471 overview showing main connectors**

To evaluate MAYA-W4 series module using EVK-MAYA-W4:

1. Connect the external antennas to EVK-MAYA-W4. Two external antennas for Wi-Fi and Bluetooth/802.15.4 radios are included in the EVK, which, unless you are using a MAYA-W4 module variant with internal antenna, must be connected to the SMA connectors (J10 and J11) on the evaluation board.

For more information about the antenna connectors, see also [Antenna interfaces](#).

2. Set the jumpers on J12 to select the required [Host interface configuration](#) for the Wi-Fi, Bluetooth, and 802.15.4 radios. The available options are SDIO-UART-SPI and USB-USB-SPI.
3. Connect the host interfaces to the host system. The EVB and supplied SDIO adapters use zero insertion force (ZIF) connectors and flat cables for connecting the adapters. To connect the cables, gently flip up the small locking flap of the connector, align and insert the flat cable with the blue marking pointing upwards, and then close the locking flap.
  - For SDIO connection through an SD card socket on the host system, connect the micro or full-size SD card adapter with the flat cable to the SDIO connector (**J3**) on the EVB. Then insert the adapter card into the host socket. The [SDIO interface](#) is used for Wi-Fi communication with the MAYA-W4 series module.
  - A USB-to-UART bridge on the evaluation board accesses the high speed UART interface on the MAYA-W4 module for Bluetooth communication. To use the Bluetooth UART interface through USB, connect the supplied USB cable to the USB type-C connector **J1** on the EVB. Then connect the cable to a USB interface on the host system. For information about accessing the UART interface for Bluetooth directly, see also [UART interface](#).

- MAYA-W4 supports a [USB interface](#) for Wi-Fi and Bluetooth communication. To use Wi-Fi and Bluetooth through USB, set the [host interface configuration](#) for USB-USB-SPI operation and connect the supplied USB cable to the USB type-C connector **J15** on the EVB. Then connect the cable to a USB interface on the host system.
  - The SPI interface connector (**J6**) on the EVB is used to access the IEEE 802.15.4 radio over the SPI interface on the MAYA-W4 module. Connect the signals on the pin header to the host system through wires. See also [SPI interface](#).
4. Power on the host system. The Supply LED (**D2**) on the EVB should turn green to indicate proper power supply. At this point the module should be detected by the host system.
-  The SDIO and USB host sockets are used as default power supply sources for the EVB. For information about other supply options, see also [Power supply configuration](#).
5. Install the necessary driver software for the MAYA-W4 series module, as described in [Software](#).

## 3 Board description

### 3.1 Block diagram

Figure 2 shows a block diagram of the MAYA-W4 evaluation board with the SD card adapter.

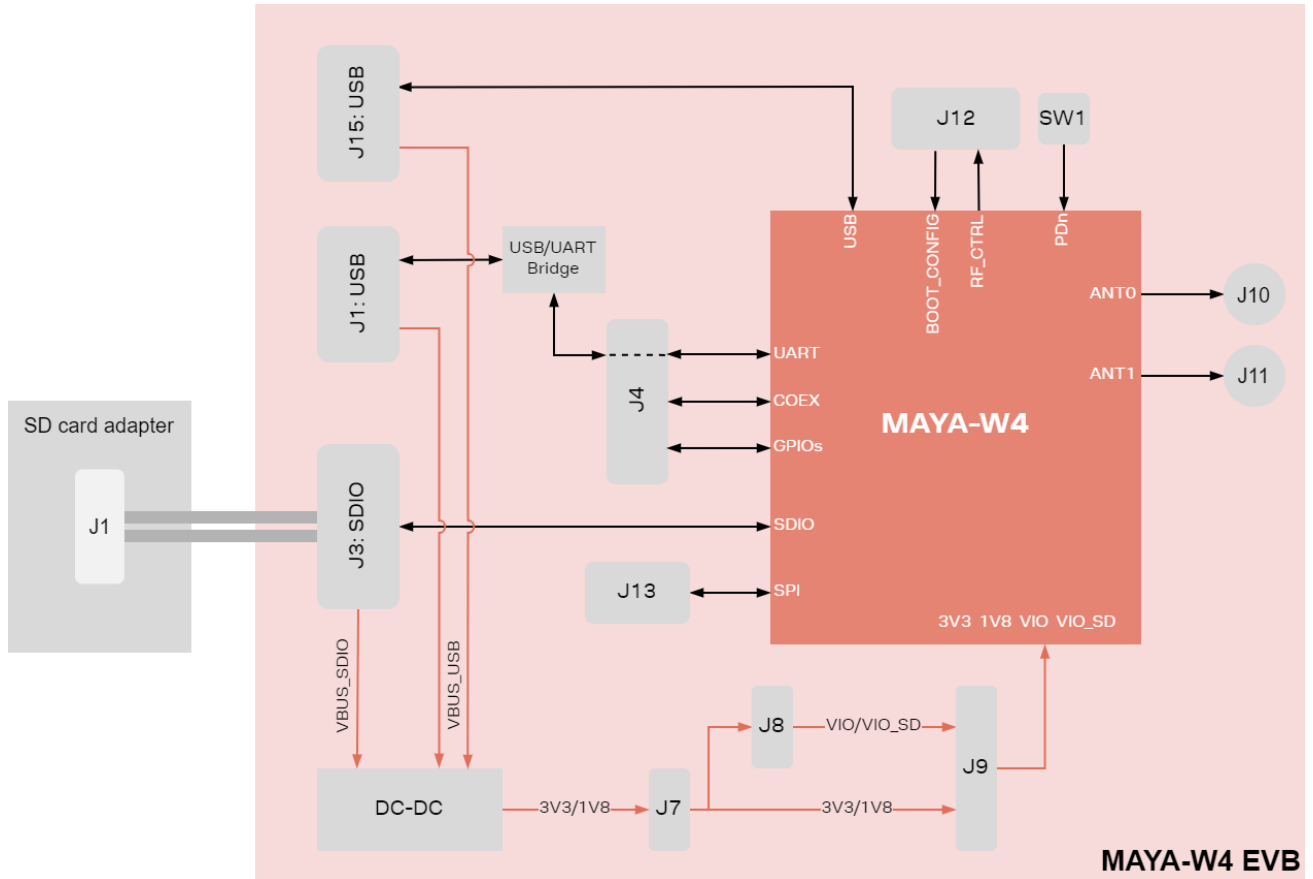


Figure 2: MAYA-W4 EVB block diagram

## 3.2 Jumpers and connectors

The EVB exposes all MAYA-W4 module interfaces through connectors or pin headers.

Figure 3Error! Reference source not found. shows an outline of the evaluation board and the placement of the connectors and pin headers for jumper configuration. Default jumper positions are highlighted in red.

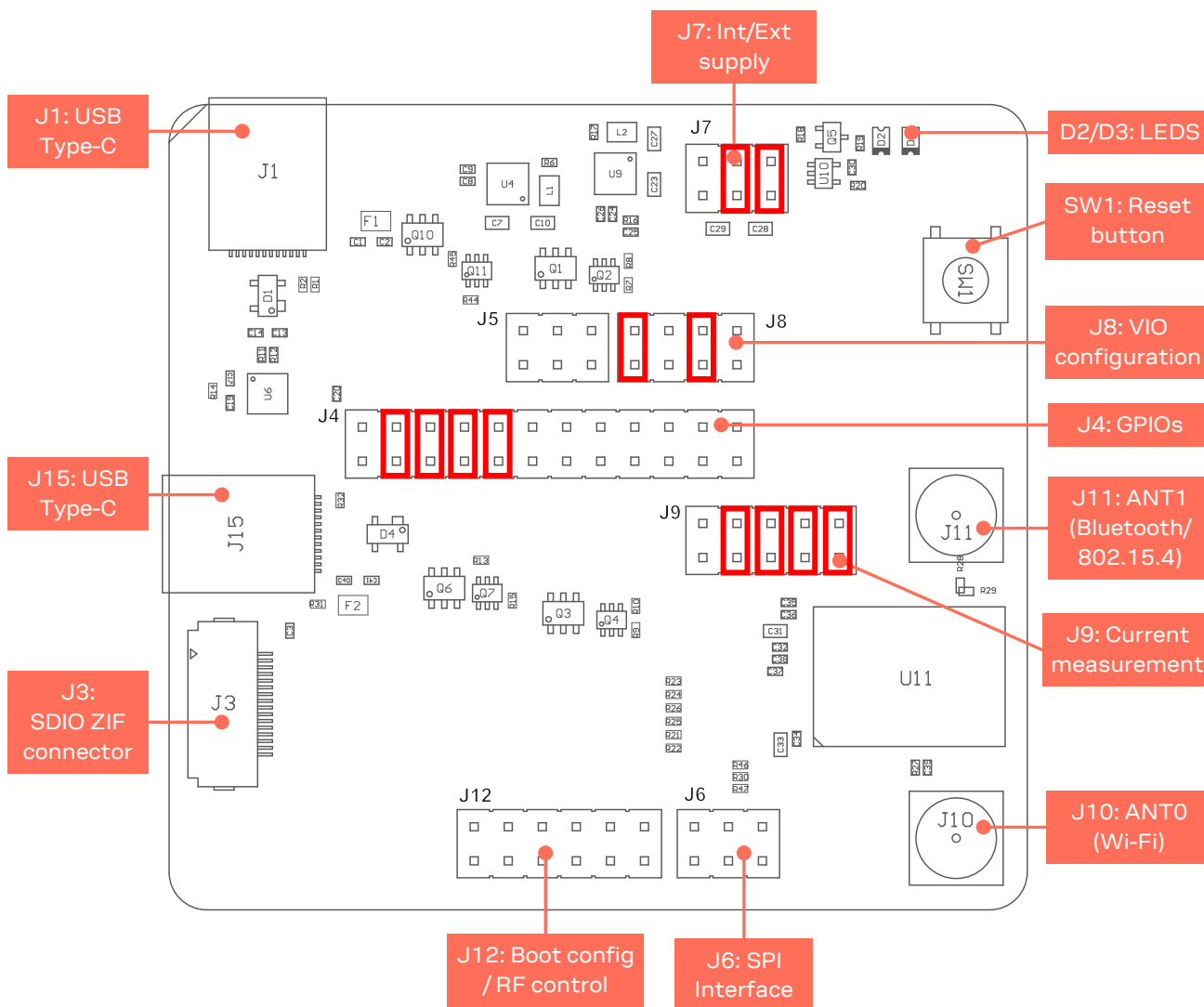


Figure 3: MAYA-W4 EVB connectors and default jumper configuration

Table 4 provides a summary of the connectors and pin headers shown in Error! Reference source not found..

| Designator | Function                           | Description                                                                |
|------------|------------------------------------|----------------------------------------------------------------------------|
| J1         | USB connector                      | USB type-C connector for Bluetooth <a href="#">UART interface</a>          |
| J3         | SDIO ZIF connector                 | ZIF connector for <a href="#">SDIO interface</a>                           |
| J4         | GPIOs                              | Module <a href="#">GPIOs</a> , <a href="#">UART interface</a>              |
| J6         | SPI interface                      | Pin header for <a href="#">SPI interface</a>                               |
| J7         | Internal/external supply selection | Pin header for <a href="#">Internal or external power supply</a> selection |
| J8         | I/O voltage configuration          | Pin header for <a href="#">I/O voltage configuration</a>                   |

| Designator | Function                | Description                                                                                     |
|------------|-------------------------|-------------------------------------------------------------------------------------------------|
| J9         | Current measurement     | Pin header for <a href="#">Current measurements</a>                                             |
| J10        | ANT0                    | SMA connector for Wi-Fi <a href="#">Antenna interface</a>                                       |
| J11        | ANT1                    | SMA connector for Bluetooth/802.15.4 <a href="#">Antenna interface</a>                          |
| J12        | BOOT config, RF control | Pin header for <a href="#">Host interface configuration</a> and <a href="#">RF control</a> pins |
| J15        | USB connector           | USB type-C connector for WiFi and Bluetooth <a href="#">USB interface</a>                       |
| SW1        | Reset button            | <a href="#">Reset button</a>                                                                    |
| D2/D3      | LEDs                    | Power supply and UART activity indicator <a href="#">LEDs</a>                                   |

**Table 4: MAYA-W4 evaluation board connectors**

### 3.3 Power supply configuration

MAYA-W4 series modules are supplied with 3.3 V (**3V3**), 1.8 V (**1V8**), and selectable **VIO/VIO\_SD** voltages. Power supply for the EVB can be provided through the SDIO or any of the USB host interfaces and internal DC-DC, or from external sources. The following power supply options are available on the EVB:

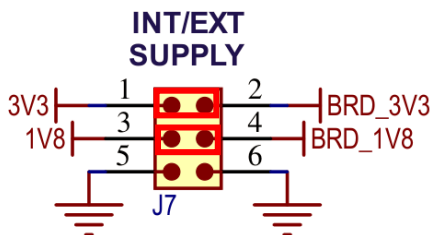
- SDIO or USB interfaces: The EVB is powered from the SDIO or USB host sockets. All internal voltages are generated by DC-DC converters on the EVB.
- External sources: 3.3 V and 1.8 V voltages for the board are supplied from external power sources through connector **J7**.

The current consumption of the MAYA-W4 module can be measured individually on each supply rail through connector **J9**. The **VIO** and **VIO\_SD** voltages for the MAYA-W4 module are configured by jumper setting on pin header **J8**.

#### 3.3.1 Internal or external supply

The EVB can be supplied through the host interfaces and voltages generated by internal DC-DC. To use internal supplies, place jumpers on pins 1-2 and 3-4 of pin header **J7** (default configuration).

To use external power sources, remove the jumpers and connect the supplies directly to the **BRD\_3V3** (pin 2), **BRD\_1V8** (pin 4), and **GND** (pin 5 and 6) pins on **J7**.



**Figure 4: Internal/external supply (J7)**

#### 3.3.2 I/O voltage configuration

The **VIO** and **VIO\_SD** voltages for the MAYA-W4 module can be selected from the 1.8 V or 3.3 V board supplies by placing jumpers between the board and VIO supply pins on **J8**. The default configuration is to use 1.8 V for both **VIO** (3-4) and **VIO\_SD** (7-8).

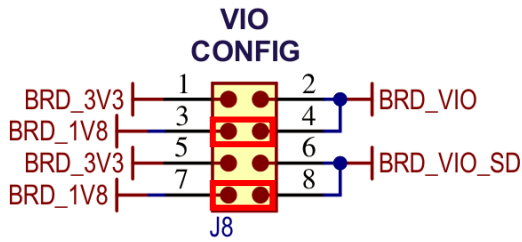


Figure 5: VIO configuration (J8)

### 3.3.3 Current measurement

Pin header **J9** allows the current consumption in the MAYA-W4 module to be measured individually on each supply rail. By default, all voltages on the EVB are routed through the jumpers on **J9** to supply the module. To perform a current measurement, remove the jumper and place an ammeter or current probe between the board and module supply pins on **J9**.

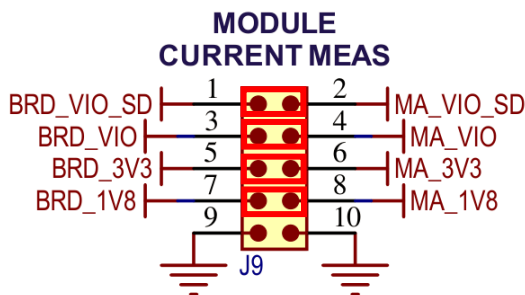


Figure 6: MAYA-W4 current measurement (J9)

## 3.4 Host interface configuration

The MAYA-W4 module supports multiple host interfaces: SDIO 3.0 and USB 2.0 for Wi-Fi, UART and USB 2.0 for Bluetooth, and SPI for the IEEE 802.15.4 radio. The host interfaces are selected through the module's configuration pins CON[2:0], which are available as BOOT[2:0] on pin header **J12**. The supported host interface configurations and **J12** jumper settings are shown in [Figure 7](#) and described in [Table 5](#) and. Internal pull-up/down resistors set the default configuration for CON[2:0] to "011".

| J12 jumper settings |             |             | Host interface configuration |           |                       |
|---------------------|-------------|-------------|------------------------------|-----------|-----------------------|
| BOOT2 (5-6)         | BOOT1 (3-4) | BOOT0 (1-2) | Wi-Fi                        | Bluetooth | 802.15.4 <sup>2</sup> |
| 0 - open            | 1 - open    | 1 - open    | SDIO                         | UART      | SPI                   |
| 1 - set             | 0 - set     | 1 - open    | USB                          | USB       | SPI                   |
| Others              |             |             | Reserved                     |           |                       |

Table 5: Host interface configuration

<sup>2</sup> The 802.15.4 radio is not supported in all MAYA-W4 module variants. See the data sheet [\[1\]](#) for more details.

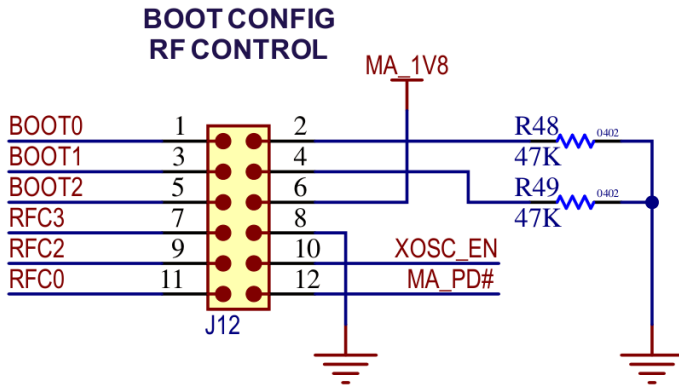


Figure 7: Host interface configuration (J12)

### 3.5 SDIO interface

Micro SD and full-size SD card adapters are included in the EVK to connect the evaluation board to SDIO capable host sockets. To use one of the SDIO card adapters, connect it with the flat cable to the ZIF connector **J3** on the EVB. All SDIO signals are directly connected to the MAYA-W4 module through 22  $\Omega$  series resistors. The SDIO interface can be used for power supply of the EVB.

#### SDIO Wi-Fi Interface

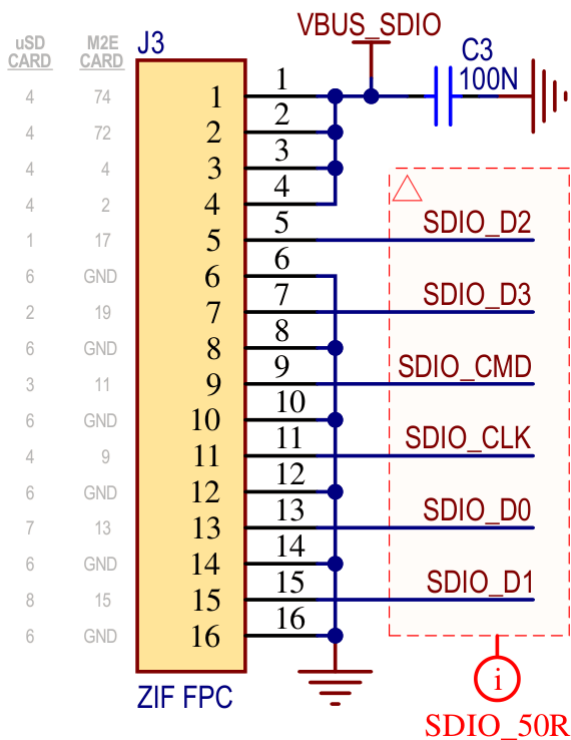


Figure 8: SDIO ZIF connector (J3)

### 3.6 UART interface

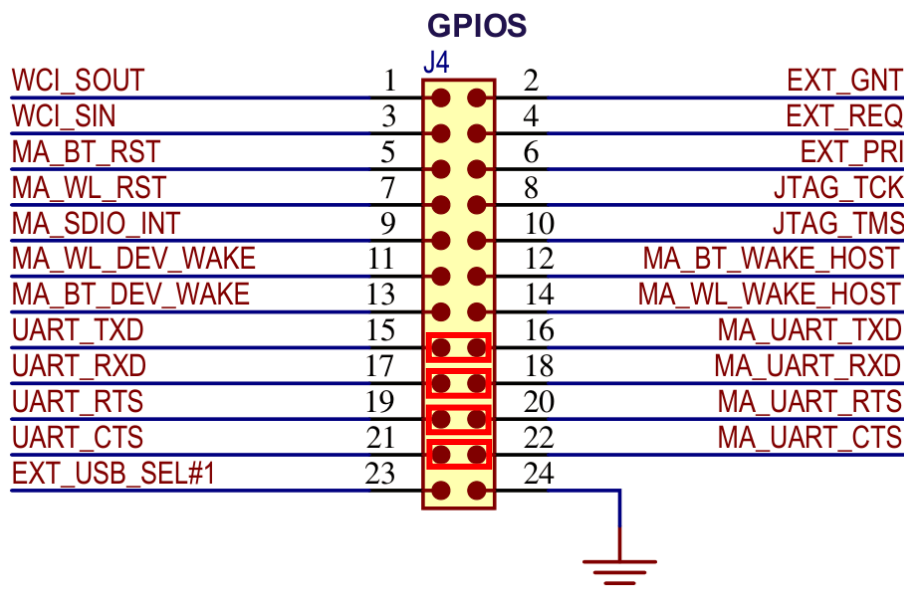
MAYA-W4 provides a UART host interface for Bluetooth communication. The UART interface can be either accessed directly through pin header **J4** or through USB type-C connector **J1** and a USB-to-UART bridge.

To access the UART interface directly, remove the jumpers from **J4** and connect the host UART signals to pin header **J4** as shown in [Table 6](#).

| J4 pin | Pin name    | I/O | Description                                                          |
|--------|-------------|-----|----------------------------------------------------------------------|
| 16     | MA_UART_TXD | O   | UART serial data output signal. Connect to host RX                   |
| 18     | MA_UART_RXD | I   | UART serial data input signal. Connect to host TX                    |
| 20     | MA_UART_RTS | O   | UART request-to-send output signal (low active). Connect to host CTS |
| 22     | MA_UART_CTS | I   | UART clear-to-send input signal (low active). Connect to host RTS    |
| 24     | GND         | -   | Ground                                                               |

**Table 6: UART interface (J4)**

The EVB includes a USB-to-UART bridge (FT234XD) for accessing the UART interface through USB. Access is provided through the USB type-C connector **J1**. The USB type-C connector can be used for the EVB power supply. To access the UART interface through USB, place jumpers on **J4** in positions 15-16, 17-18, 19-20, and 21-22 to connect the FTDI with MAYA-W4 UART signals.



**Figure 9: UART interface (J4)**

## 3.7 USB interface

A USB 2.0 device interface is supported on USB type C connector **J15**. The USB interface can be configured as host interface for Wi-Fi and Bluetooth. See also [Host interface configuration](#). The USB type-C connector can be used for the EVB power supply.

## 3.8 SPI interface

[Figure 10](#) shows pin header **J6** which provides direct access to the SPI interface for the IEEE 802.15.4 radio on EVK-MAYA-W4.

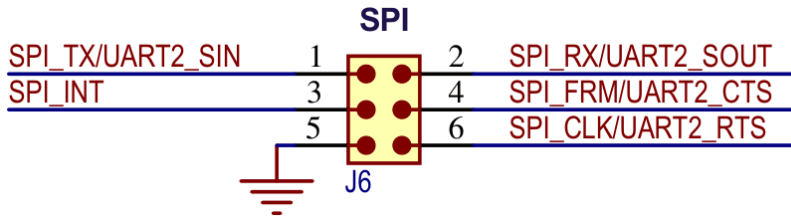


Figure 10: SPI interface connector (J6)

The SPI interface supports a maximum clock speed of 10 MHz. [Table 7](#) describes the function of the SPI pins on **J6**.

| J6 pin | Pin name | I/O | Description                  |
|--------|----------|-----|------------------------------|
| 1      | SPI_TX   | O   | SPI transmit output signal   |
| 2      | SPI_RX   | I   | SPI receive input signal     |
| 3      | SPI_INT  | O   | SPI interrupt output signal. |
| 4      | SPI_FRM  | I   | SPI frame input signal       |
| 5      | GND      | -   | Ground                       |
| 6      | SPI_CLK  | I   | SPI clock input signal       |

Table 7: SPI interface description

## 3.9 GPIOs

MAYA-W4 GPIOs and external coexistence interfaces are accessed through pin header **J4**, as shown in [Figure 11](#).

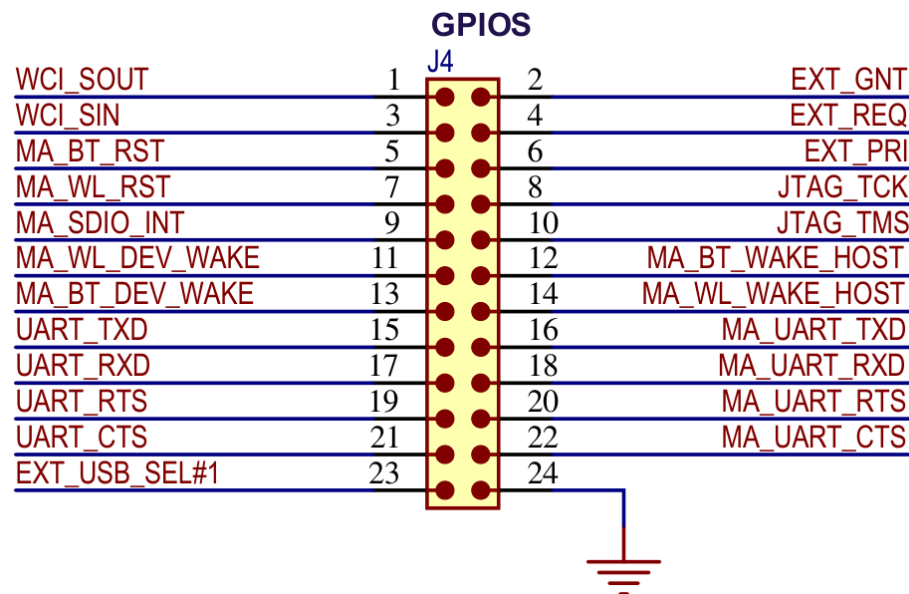


Figure 11: GPIOs (J4)

## 3.10 Antenna interfaces

The evaluation board of EVK-MAYA-W471 includes two standard 50  $\Omega$  female SMA connectors for connecting external antennas or measurement instruments. EVK-MAYA-W476 uses the internal PCB antenna of MAYA-W476.

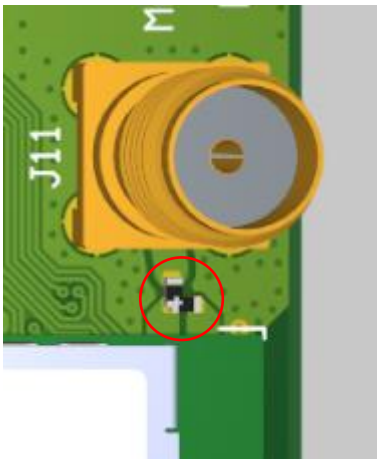
[Table 8](#) describes the available radio interfaces of the MAYA-W4 module and the respective antenna interfaces on the EVB.

| Product name  | Module antenna interface | Function                                          | Antenna interface on EVB |
|---------------|--------------------------|---------------------------------------------------|--------------------------|
| EVK-MAYA-W471 | RF_ANT0                  | Dual-band Wi-Fi                                   | SMA connector J10        |
|               | RF_ANT1                  | Shared Bluetooth and 802.15.4                     | SMA connector J11        |
| EVK-MAYA-W476 | Internal PCB antenna     | Shared dual-band Wi-Fi, Bluetooth, - and 802.15.4 |                          |

**Table 8: Antenna interface configuration**

 Connect the external antennas supplied with EVK-MAYA-W471 to the SMA connectors **J10** and **J11**. If 2.4 GHz Wi-Fi and Bluetooth are used at the same time, position the antennas at a 90° angle to each other, or use a coaxial RF cable to increase isolation between the antennas.

The antenna interface of EVK-MAYA-W476 can be changed to SMA connector **J11** by removing the 0 Ω horizontal resistor R29 and populating the vertical R28 resistor instead, as shown in [Figure 12](#).



**Figure 12: Hardware modification for using SMA connector J11 on EVK-MAYA-W476**

## 3.11 RF control

MAYA-W4 RF control signals are provided on pin header **J12**, as shown in [Figure 7](#).

## 3.12 LEDs

[Table 9](#) describes the function and designation of the available LEDs on the EVK-MAYA-W4 evaluation board.

| Function     | Description                                          | Designator | Color  |
|--------------|------------------------------------------------------|------------|--------|
| Power supply | Board 3.3 V and 1.8 V power supply status indication | D2         | Green  |
| UART         | UART RX/TX activity indication                       | D3         | Orange |

**Table 9: LED function**

## 3.13 Reset button

Press the **SW1** button on the EVB to reset MAYA-W4 by deasserting the module's **PDn** signal. As the firmware is stored in volatile memory only, it must be downloaded to the module after each reset.

## 3.14 Schematics

Complete schematics for the MAYA-W4 evaluation board are available on request. For further information, [contact](#) your local u-blox support team.

# Appendix

## A Glossary

| Abbreviation | Definition                                  |
|--------------|---------------------------------------------|
| EVb          | Evaluation board                            |
| EVK          | Evaluation kit                              |
| HCI          | Host controller interface                   |
| I/O          | Input / output                              |
| I2S          | Inter-Integrated circuit sound              |
| LED          | Light-Emitting Diode                        |
| LDO          | Low-dropout regulator                       |
| LPO          | Low-power oscillator                        |
| LTE          | Long-Term Evolution                         |
| MAC          | Medium access control                       |
| MIMO         | Multiple input multiple output              |
| MMC          | Multimedia card                             |
| PC           | Personal computer                           |
| PCI          | Peripheral component interconnect           |
| PCIe         | Peripheral component interconnect express   |
| PCM          | Pulse-code modulation                       |
| PTA          | Packet Traffic Arbitration                  |
| SD           | Secure digital                              |
| SDIO         | Secure digital input output                 |
| UART         | Universal asynchronous receiver/transmitter |
| USB          | Universal serial bus                        |
| Wi-Fi        | Wireless local area network                 |
| WCI-2        | Wireless Coexistence Interface 2            |
| ZIF          | Zero Insertion Force                        |

**Table 10: Explanation of the abbreviations and terms used**

## Related documents

- [1] MAYA-W4 series data sheet, UBXDOC-465451970-3358
- [2] MAYA-W4 system integration manual, UBXDOC-465451970-3372
- [3] [Embedded Linux for i.MX Applications Processors](#)
- [4] [NXP UM11490 - Feature Configuration Guide for NXP-based Wireless Modules on i.MX 8M Quad EVK](#)

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## Revision history

| Revision | Date        | Name       | Comments        |
|----------|-------------|------------|-----------------|
| R01      | 06-Dec-2024 | lber, mzes | Initial release |
| R02      | 13-Aug-2025 | lfar       | Published       |

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