

M2-MAYA-W1 series



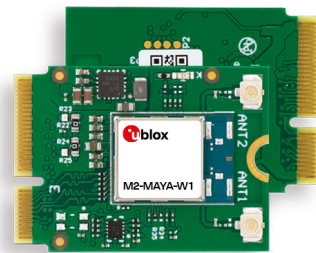
M.2 cards with MAYA-W1 Wi-Fi 4 and Bluetooth 5.2 module

Modules supporting IEEE 802.11a/b/g/n and Bluetooth/Bluetooth Low Energy 5.2

- M.2 type 2230 Key E form factor
- Dual band Wi-Fi 2.4 GHz and 5 GHz 802.11a/b/g/n
- Dual-mode Bluetooth 5.2 (Bluetooth Classic and Low Energy)
- Operation modes: Access point, Station, Wi-Fi Direct and combinations
- Two separate U.FL connectors for Bluetooth and Wi-Fi
- Compatible with NXP i.MX evaluation and development boards



22 x 30 x 2.8 mm



Product description

The M2-MAYA-W1 card combines the maximum performance of the MAYA-W1 Wi-Fi 4 and Bluetooth 5.2 connectivity module with the flexibility and ease of use of a M.2 card. The card supports all features of the MAYA-W1 series modules and is based on the NXP IW416 multiradio chipset. M2-MAYA-W1 can deliver data rates up to 150 Mbit/s. With dual-band 2.4 / 5 GHz and 40 MHz channel-width, M2-MAYA-W1 can work as a Wi-Fi station with different types of access points, such as a simple access point, P2P communication, or a combination of these. Both Bluetooth BR/EDR (classic) and the full feature set of Bluetooth Low Energy 5 are supported. M2-MAYA-W1 is a host-based module that requires a host processor running either Linux or Android operating systems; driver support for the NXP MCUXpresso SDK is also available. It connects to a host processor through SDIO (for Wi-Fi) and high-speed UART (for Bluetooth) interfaces. The MAYA-W1 module featured on the card, like all u-blox modules, undergoes extensive qualification tests to ensure reliability over its lifetime and each M.2 card is fully tested before leaving the assembly line.

Key features

- M.2 type 2230 Key E form factor
- Wi-Fi 4, dual band with data rates up to 150 Mbit/s
- Supports 802.11d/e/h/i/k/r/u/v/w
- Wi-Fi 20 and 40 MHz channels
- Supports up to 8 Stations in AP-mode
- Bluetooth and Bluetooth low energy v5.2
- Supports up to 16 Bluetooth Low Energy connections
- Access point mode for up to 8 stations
- Security: WPA3, WPA2, TKIP/WPA, WEP (64/128 bit), WAPI, AES

M2-MAYA-W161

	M2-MAYA-W161
Grade	
Automotive	
Professional	
Standard	•
Radio	
Chip inside	NXP IW416
Bluetooth qualification	v5.2
Bluetooth profiles	HCI
Bluetooth BR/EDR	•
Bluetooth Low Energy	•
Wi-Fi 4 IEEE 802.11 standards	a/b/g/n
Wi-Fi frequency band [GHz]	2.4 and 5
Bluetooth output power conducted [dBm]	10
Wi-Fi output power conducted [dBm]	18
Antenna type	2 U-FL connectors
OS support	
Android / Linux drivers (from u-blox)	•
RTOS (via NXP i.MX RT MCUs)	•
Interfaces	
High-speed UART (Bluetooth)	1
PCM, I2S (Bluetooth audio)	1
SDIO (Wi-Fi) [version]	3.0
Features	
Micro Access Point [max connects]	8
Wi-Fi direct	•
WPA3	•
RF calibration in OTP	•
Programmed MAC address	•

M2-MAYA-W1 series



Features

Wi-Fi standards	Wi-Fi 4 IEEE 802.11a/b/g/n IEEE 802.11d/e/h/i/k/r/u/v/w
Wi-Fi channels	2.4 GHz: 1-13 5 GHz: 36-165
Bluetooth	v5.2, class 1 and 2 transmission Bluetooth low energy and Bluetooth BR/EDR
Antennas	2 U.FL connectors
Output Tx-power	TBD
Security	128-bit AES hardware encryption

Software features

RF calibration	Available in on-board OTP memory
MAC addresses	Available in on-board OTP memory
Security	WEP 64/128 bit WPA (TKIP, AES) WPA2 (CCMP, AES) WPA3 WAPI
Wi-Fi operational modes	Station, Access-Point, Wi-Fi direct, or any combination of these
Driver support	Free of charge drivers for Linux and Android RTOS (with certain types of NXP MCUs)
Wi-Fi/Bluetooth coexistence	Internal TDM mechanism

Interfaces

Wi-Fi	SDIO 3.0 (4-bit, up to 150 MHz clock)
Bluetooth	4-wire high-speed UART PCM and I2S for audio
Other	GPIOs

Package

Dimensions	22 × 30 × 2.8 mm
Mounting	M.2 Key-E connector 2199230-4 on host platform

Environmental data, quality and reliability

Operating temperature	-40 °C to +85 °C
Standard qualification	

Electrical data

Power supply	3.3 V (from M.2 card voltage pin) 1.8 V (generated by on-card DCDC)
VIO power supply	1.8 V / 3.3 V (default: 1.8 V)

Certifications and approvals

Type approvals	TBD
Bluetooth qualification	TBD

Product variants

M2-MAYA-W161	Standard grade M.2 card module with two separate U.FL antenna connectors for Wi-Fi and Bluetooth
--------------	--

Further information

For contact information, see www.u-blox.com/contact-u-blox.

For more product details and ordering information, see the product data sheet.

Legal Notice:

u-blox or third parties may hold intellectual property rights in the products, names, logos, and designs included in this document. Copying, reproduction, or modification of this document or any part thereof is only permitted with the express written permission of u-blox. Disclosure to third parties is permitted for clearly public documents only.

The information contained herein is provided "as is". No warranty of any kind, either express or implied, is made in relation to the accuracy, reliability, fitness for a particular purpose or content of this document. This document may be revised by u-blox at any time. For most recent documents, please visit www.u-blox.com.