

M2-MAYA-W1 series



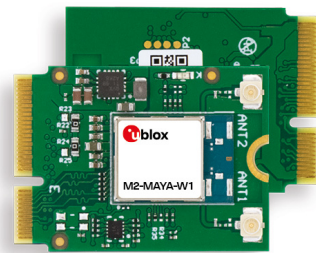
M.2 cards with MAYA-W1 Wi-Fi 4 and Bluetooth 5.2 module

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	•

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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	Europe (RED), US (FCC), Canada (ISED), Great Britain (UKCA)
Bluetooth qualification	TBD

Product variants

M2-MAYA-W161-00C	M.2 Type 2230 Key E card with MAYA-W161 Wi-Fi 4 and Bluetooth 5.2 module. SDIO interface for Wi-Fi, UART interface for Bluetooth; NXP IW416 chipset.
M2-MAYA-W161-10C (EVK)	M2-MAYA-W161 module delivered as an evaluation kit together in a box with 2 patch antennas

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.

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