Product summary

M2-MAYA-W3 card

M.2 card with MAYA-W3 Wi-Fi™ 6E, Bluetooth® module

S

Standard

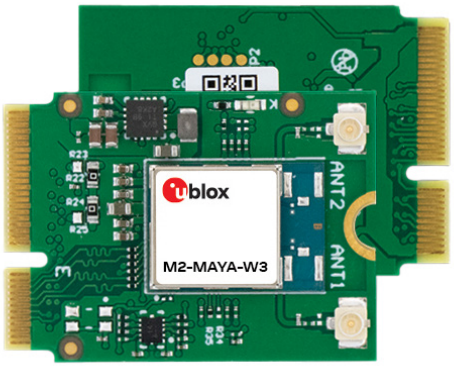
Professional

Automotive

Module supporting IEEE 802.11ax, Bluetooth/Bluetooth Low Energy

- M.2 type 2230 Key E form factor
- Tri-band Wi-Fi 2.4 GHz and 5/6 GHz 802.11ax
- Bluetooth Dual-Mode, qualified against Bluetooth Core 6.0
- Operation modes: Access point, Station, Wi-Fi Direct, and combinations
- Also available as an evaluation kit including antenna (M2-MAYA-W383-10C)

22 x 30 x 2.8 mm



Product description

The M2-MAYA-W3 card combines the maximum performance of the MAYA-W3 Wi-Fi 6E and Bluetooth Core 6.0 connectivity module with the flexibility and ease of use of an M.2 card. The card supports all features of the MAYA-W383 module and is based on the multiradio CYW55513 chipset.

M2-MAYA-W3 supports Wi-Fi 6E (802.11ax) – designed for up to 143 Mbit/s data rate and operation in dense Wi-Fi environments. It also supports single-stream MU-MIMO operation. With tri-band 2.4/5/6 GHz and 20 MHz channel-width, the card can operate as access point, station, in P2P communication mode, or in any combination of these.

M2-MAYA-W3 supports the basic feature set of Bluetooth Low Energy, including support for isochronous channels for LE Audio.

The MAYA-W383 module featured on the card, like all u-blox modules, undergoes extensive qualification tests to ensure reliability over its lifetime, and each module is fully tested before leaving the assembly line.

Key features

- M.2 type 2230 Key E form factor
- Wi-Fi 6E, tri-band, single stream, supporting MU-MIMO
- 20 MHz Wi-Fi channels
- Supports 802.11a/b/g/n/ac/ax
- Bluetooth 6.0 support including audio
- Wi-Fi security: WPA3, WPA2, WAPI, AES
- High-Power Bluetooth: up to +14 dBm
- Secure boot

	M2-MAYA-W383
Grade	
Automotive	
Professional	
Standard	•
Radio	
Chip inside	CYW55513
Bluetooth qualification	6.0
Bluetooth profiles	HCI
Bluetooth BR/EDR	•
Bluetooth Low Energy	•
Wi-Fi 6 IEEE 802.11 standards	a/b/g/n/ac/ax
Wi-Fi frequency band [GHz]	2.4 and 5/6 GHz
Bluetooth output power conducted [dBm]	Up to 14
Wi-Fi output power [dBm]	18
Antenna type	1 U.FL connector
OS support	
Android / Linux drivers	•
RTOS	•
Interfaces	
High-speed UART (Bluetooth)	1
PCM, I2S (Bluetooth audio)	1
SDIO (Wi-Fi) [version]	3.0
Features	
Micro access point [max connects]	12
Wi-Fi direct	•
WPA3	•
RF calibration in OTP	•
Programmed MAC address	•
Secure boot	•

M2-MAYA-W3 card

S

Features

Wi-Fi standards	Wi-Fi 6 IEEE 802.11a/b/g/n/ac/ax IEEE 802.11d/e/h/i/k/r/u/v/w/az
Wi-Fi channels	2.4 GHz: 1-13 5 GHz: 36-177 6 GHz: 1-233
Bluetooth	6.0, class 1 and 2 transmission Bluetooth Low Energy and Bluetooth BR/EDR
Antennas	1 U.FL connector
Output power	TBD
Security	128-bit AES hardware encryption Secure boot

Software features

RF calibration	Available in on-board OTP memory
MAC addresses	Available in on-board OTP memory
Security	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, Android RTOS

Interfaces

Wi-Fi	SDIO 3.0 (4-bit, up to 208 MHz clock)
Bluetooth	4-wire high-speed UART PCM and I2S for Bluetooth classic audio
Other	GPIOs

Package

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

Environmental data, quality, and reliability

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

Electrical data

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

Certifications and approvals

Type approvals	Europe (RED); US (FCC); Canada (ISED) Other certifications will be considered upon request
Bluetooth qualification	6.0

Product variants

M2-MAYA-W383-00C	M.2 Type E 2230 Key E card with MAYA-W383 Wi-Fi 6E and Bluetooth 6.0 radio module. Includes one separate antenna U.FL connector for Wi-Fi and Bluetooth/802.15.4
M2-MAYA-W383-10C (EVK)	M2-MAYA-W383 module delivered as an evaluation kit together in a box with 1patch antenna

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.

UBXDOC-465451970-3778 - R02