Product summary

MAYA-W5

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Host-based Wi-Fi™ 6 multiradio modules for the IoT

Standard

Professional

Automotive

Cost-efficient, small, secure modules for IoT applications

- Dual-band Wi-Fi 6 1x1, 20 MHz channels
- Bluetooth® LE, qualified against Bluetooth Core 5.4
- Compact design with integrated PCB antenna
- Secure boot, secure firmware, and secure OTP memory
- Global certification

10.4 x 14.3 x 1.9 mm

Product description

The MAYA-W5 series host-based modules are designed, built, and tested to meet the high reliability and quality requirements of industrial and commercial applications, such as building automation, professional appliances, energy management, smart homes, healthcare, and more.

The MAYA-W5 modules provide SISO Wi-Fi 6 operation with 20 MHz channel width and improved network availability in dense Wi-Fi environments. The modules can work as access point, station, in P2P connections, or combinations of these, supporting MU-MIMO and Wi-Fi security features such as WPA3, WPA2, WMM, AES.

MAYA-W5 features Bluetooth LE, qualified against Bluetooth Core 5.4.

At 10.4 x 14.3 mm, the MAYA-W5 modules are among the most compact Wi-Fi 6 SMD modules with integrated antenna operating at industrial temperature range −40 °C to +85 °C.

All u-blox modules undergo extensive qualification tests to ensure reliability over their life-time, and each module is fully tested before leaving the assembly line.

MAYA-W5 is based on the TI CC3351 chipset.

	MAYA-W566
Grade	
Automotive	
Professional	•
Standard	
Radio	
Chip inside	TI CC3351
Bluetooth qualification	5.4 (Low Energy)
Bluetooth profiles	HCI
Bluetooth Low Energy	•
Bluetooth output power [dBm]	up to 18
Wi-Fi IEEE 802.11 standards	a/b/g/n/ac/ax
Wi-Fi frequency band [GHz]	2.4 / 5
Wi-Fi output power [dBm]	18
Antenna type	pcb
Number of antennas	1
OS support	
Android drivers (from TI)	•
Linux drivers (from TI)	•
RTOS (TI)	•
Interfaces	
High-speed UART (Bluetooth)	1
SDIO (Wi-Fi) [version]	2.0
SPI (Wi-Fi)	•
Features	
Micro access point [max connects]	16
Wi-Fi direct	•
WPA3	•
RF calibration in OTP	•
Programmed MAC address	•
Secure boot	•

pcb = internal PCB antenna

MAYA-W5

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Features

Wi-Fi standards	Wi-Fi™ 6 IEEE 802.11a/b/g/n/ac/ax IEEE 802.11d/e/h/i/r/w
Wi-Fi channels	2.4 GHz: 1-13 5 GHz: 36-165
Bluetooth	Bluetooth® LE, long range, power management Qualified against Bluetooth Core 5.4
Antennas	1 embedded PCB antenna
Wi-Fi output Tx-power	18 dBm (Wi-Fi 6, 5 GHz, 20 MHz channel)
RX sensitivity	Wi-Fi 6 2.4 GHz: −95 dBm (indicative) Wi-Fi 6 5 GHz: −94 dBm (indicative) Bluetooth LE: −100 dBm (@ 1 Mbps, indicative)
Security	128-bit AES hardware encryption Secure boot, secure firmware, and secure OTP memory

Software features

RF calibration	Available in on-board OTP memory
MAC addresses	Available in on-board OTP memory
Security	WPA2 (CCMP, AES) WPA3
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
Wi-Fi / Bluetooth coexistence	Internal coexistence between Wi-Fi and Bluetooth LE PTA interface for external radio coexistence

Interfaces

Wi-Fi	SDIO 2.0 (4-bit, up to 52 MHz clock) SPI
Bluetooth	4-wire high-speed UART
Coexistence	3-/ 1-wire PTA
Other	GPIOs

Package

Dimensions	10.4 × 14.3 × 1.9 mm
Mounting	Soldering, 90 pins (LGA)

Environmental data, quality, and reliability

Operating temperature −40 °C to +85 °C
Moisture sensitivity level 4
RoHS and REACH compliance

Electrical data

RF power supply	3 – 3.6 VDC
I/O power supply	1.62 - 1.98 VDC

Certifications and approvals

Type approvals	Europe (RED); US (FCC); Canada (ISED) Other certifications will be considered upon request
Bluetooth qualification	Qualified against Bluetooth Core 5.4 Bluetooth LE

Support products

EVK-MAYA-W566	Evaluation kit for MAYA-W566

Product variants

MAYA-W566-00B	Professional grade module with embedded PCB antenna for dual-band Wi-Fi and Bluetooth (under development)

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.