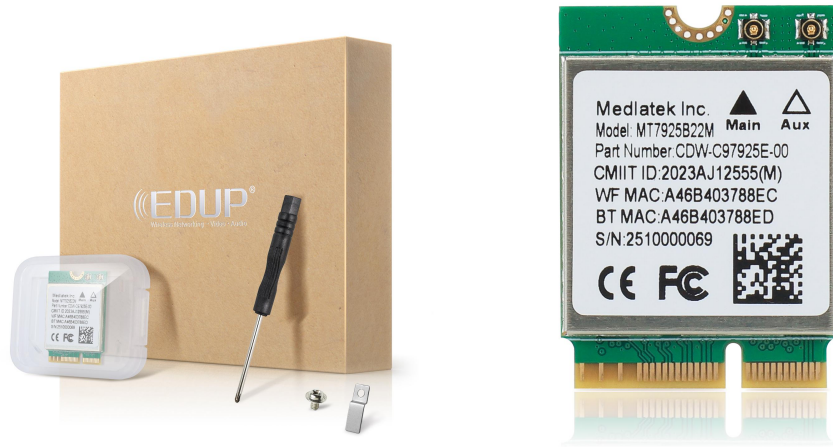# MT7925 Wi-Fi 7 + Bluetooth 5.4 Module Specification

1. Product Overview

The MT7925B22M is a high-performance M.2 wireless module that supports the latest Wi-Fi 7 (IEEE 802.11be) and Bluetooth 5.4 technologies. Specifically designed for laptops, mini PCs, and embedded systems, it delivers high-speed, reliable, and stable wireless connectivity, fully compatible with both AMD and Intel platforms.

Paired with a Wi-Fi 7 router, it provides enhanced throughput, ultra-low latency, and improved reliability through Multi-Link Operation (MLO), Multi-RU, and 4K-QAM support — ensuring faster and more stable wireless connections for demanding applications.

The module integrates a 2×2 dual-band Wi-Fi subsystem and a Bluetooth v5.4 subsystem into a compact module. Its optimized RF and baseband architecture, intelligent MAC offload engine, and hardware data accelerators provide excellent performance, reduce CPU load, and extend battery life, while maintaining stable throughput over longer distances.

2. Key Features

- MT7925 chipset, supports AMD & Intel platforms

- Tri-band Wi-Fi 7: 2.4GHz / 5GHz / 6GHz

- High-speed wireless performance: up to 6.5 Gbps

- Supports IEEE 802.11 n/ac/ax/be standards

- Bluetooth 5.4 + BLE, up to 7 BT links connections

- Multi-Link Operation (MLO), OFDMA, MU-MIMO for multi-device efficiency

- WPA3 advanced security protocol

- Low-power design, optimized for compact or desktop systems

- M.2 Version: IPEX4 antenna connectors; PCIe Version: SMA antenna connectors

3. Technical Specifications

Item	Specification	Notes
Interface	M.2 Key E (PCIe + USB 2.0)	-
Dimension	22mm × 30mm	M.2 Module Size
Wireless Standard	IEEE 802.11a/b/g/n/ac/ax/be (Wi-Fi 7)	Tri-band support
Bluetooth Version	Bluetooth 5.4 + BLE	Up to 7 BT links
Frequency Band	2.4GHz / 5GHz / 6GHz	Tri-band operation
Data Rate	Up to 6.5Gbps (6GHz: 2882Mbps + 5GHz: 2882Mbps + 2.4GHz: 688Mbps)	Maximum theoretical speed
Antenna Interface	IPEX4	
System Support	Windows 11 (64-bit), Linux Kernel 6.7+ (built-in driver)	
Security	WPA3 / WPA2 / WPA / WEP	Enhanced protection
Operating Temperature	-10°C ~ +70°C	Typical operating range

Storage Temperature	-40°C ~ +90°C	-
Humidity	5% ~ 90% (non-condensing)	-

4. Application

Designed for laptops, mini PCs, and embedded systems, providing ultra-fast, stable, and reliable wireless connectivity for both consumer and industrial applications.

5. Advantages

- Optimized RF and baseband architecture for superior wireless performance and stability

- Intelligent MAC offload engine reduces host CPU load and improves efficiency

- Hardware data accelerators ensure stable throughput and energy efficiency

- Supports demanding applications with ultra-low latency and high reliability

- Compact module design suitable for space-constrained devices