EP-AX1678 Wi-Fi 6E USB Adapter

PRODUCT SPECIFICATION

Wi-Fi 6E AX3000M

Model: EP-AX1678

1. Introduction

The EP-AX1678 Mini is a compact Wi-Fi 6E USB adapter with an integrated internal antenna for portability and convenience. Despite its MINI size, it delivers full AXE3000 performance up to 3 Gbps, enabling smooth HD/4K/8K streaming, lag-free online gaming, and stable video conferencing. Plug-and-play USB 3.0 allows easy upgrades for laptops and desktops without replacing internal components. It is backward compatible with Wi-Fi 6 and legacy Wi-Fi standards while unlocking the 6 GHz express lane on Wi-Fi 6E routers or mesh systems.

2. Appearance

- Compact USB Wi-Fi adapter with streamlined MINI design.

- Dimensions: 64.7 × 20.9 × 11.4 mm

3. Key Features

• Mini Form Factor: Lightweight and ultra-compact with built-in internal antenna.

• Tri-Band Wi-Fi 6E: 2.4 GHz (574 Mbps), 5 GHz (1201 Mbps), 6 GHz (1201 Mbps).

• Ultra-Fast Speed: AXE3000, up to 3 Gbps, 2.5× faster than Wi-Fi 5.

• Integrated Antenna: No external antenna, streamlined appearance, ideal for portable use.

• Stronger Signal: Built-in FEM (PA + LNA) for enhanced signal and coverage.

• Secure Connection: Supports WPA3 for enterprise-level encryption.

• Operating System Support:
  - Windows 10 (32/64-bit) – 2.4 GHz & 5 GHz
  - Windows 11 (64-bit) – 2.4 GHz, 5 GHz & 6 GHz
  - Linux (≥Kernel 5.19) – Plug-and-play.

• Seamless Compatibility: Works with 802.11ax/ac/a/b/g/n devices.

• 6 GHz Access: Requires Windows 11 and a Wi-Fi 6E router/mesh system to use the 6 GHz band.

• Linux Performance Highlights:
  - Maximum Wi-Fi 6 throughput without stability issues.
  - Extremely stable in both Client and AP modes.
  - Excellent 5 GHz Wi-Fi 6 AP mode performance.

4. Technical Specifications

Item	Specification
Chipset	MTK7921AU
Interface	USB 3.0 Hi-Speed
Wireless Speed	2.4 GHz: up to 600 Mbps (20/40 MHz) 5 GHz: up to 1200 Mbps (20/40/80 MHz) 6 GHz: up to 1201 Mbps (20/40/80 MHz)
Frequency Range	2.4 / 5 / 6 GHz
Max. Transmit Power	20 dBm (EIRP)
Modulation Techniques	BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM, 1024-QAM
Operating Modes	Ad-Hoc / Infrastructure
Wireless Security	WEP 64/128-bit, WPA/WPA2, WPA-PSK/WPA2-PSK (TKIP/AES), WPA3
Temperature Range	Operating: -20°C ~ 70°C Storage: -40°C ~ 90°C
Humidity	Operating: 5% ~ 95% (non-condensing) Storage: up to 90% (non-condensing)
Supported OS	Windows 10 / 11, Linux (see Key Features)
Dimensions (H × W × D)	64.7 × 20.9 × 11.4 mm