

AX6000 8-Stream Wi-Fi 6 Router

Model: MR90X

Wi-Fi 6



// Highlights

- Faster Wi-Fi, Full Immersion - Ultra-Fast Wi-Fi 6 Speeds up to 6 Gbps[†]
- Connect 4× More Devices - OFDMA for More Stable Connections[§]
- 2.5 Gbps Wired Connection - Faster Wired Speeds up to 2.5 Gbps
- Overall Security Protection - Latest WPA3 Wireless Encryption[^]
- Easy App Control - Set up and manage Wi-Fi with the MERCUSYS App



// Applications



Ideal for large homes with multiple rooms and multiple users



Ideal for average Internet users seeking fast downloads, seamless streaming audio, uninterrupted streaming video, and lag-free online gaming

// Features



Parental Controls
Establish appropriate policies to protect children with responsible, safe internet access



Guest Network
Provides a separate network for guests to ensure your security and privacy



Quality of Service
Prioritizes devices you select to perform better



Access Point Mode
Extends a wired network and makes it wireless



IPTV Supported
Supports IGMP Proxy/Snooping, Bridge, and Tag VLAN to optimize IPTV streaming



IPv6 Supported
Allows you to enjoy IPv6 services provided by your ISP and visit IPv6 websites

// Crank Up Your Wi-Fi to 6

The latest Wi-Fi 6 standard applies advanced technology designed to deliver more simultaneous connections, extend Wi-Fi range, and maintain reliably fast data transmissions, satisfying demands for high-performance wireless experiences.

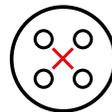


Faster Speeds | Lower Latency | Higher Capacity | Energy Efficient



6 Gbps Wi-Fi 6 Speeds

Featuring 160 MHz channels and 1024-QAM, MR90X offers dramatically fast wireless connections up to 6 Gbps. Experience smooth large-file downloads and uploads, stutter-free VR, and stunning 4K streaming without lag.†



Connect 4× More Devices

With MU-MIMO and OFDMA, MR90X transmits data to and from multiple devices at the same time for 4× more capacity, greatly reducing lag and increasing transmission efficiency under the same conditions.‡



Minimize Buffering and Lag

Powered by a robust quad-core CPU, MR90X handles massive data throughput, allowing numerous bandwidth-intensive tasks to run smoothly at the same time.



Eco-Friendly Power Saving

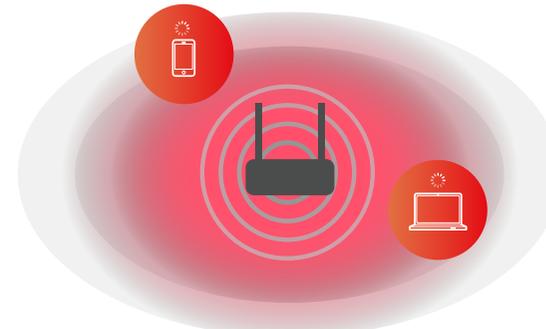
Target Wake Time reduces power consumption for your mobile and IoT devices during data transmissions to extend battery life.‡

// Expansive Wi-Fi Range

Eight powerful high-gain antennas armed with advanced wireless technology provide strong signals throughout your home. Beamforming detects your connected devices and concentrates wireless signal strength towards them, making your connections more stable.



MR90X with Beamforming



Regular Router without Beamforming

// Overall Security Protection

The latest security standard, WPA3, provides improved comprehensive Wi-Fi protection to defend your devices and private information against brute-force attacks.[^]



// Smart Connect

Smart Connect combines the 2.4 GHz and 5 GHz bands into a single Wi-Fi SSID and helps your devices intelligently choose the best available band that has the stronger signal and faster speed, keeping your devices always running optimally.



// Specifications

Hardware

Ports

1× 2.5 Gigabit WAN/LAN Port + 1× 1 Gigabit WAN/LAN Port + 2× Gigabit LAN Ports

Button

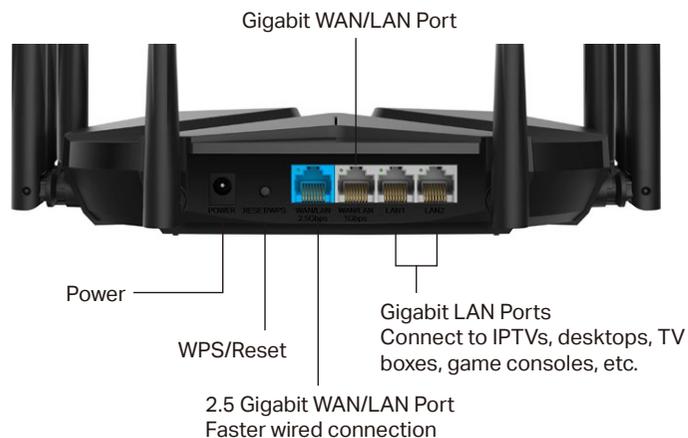
Reset/WPS Button

Dimensions (W x D x H)

8.2 × 6.8 × 1.6 in
(208.8 × 171.6 × 41.7 mm)

Antennas

8× Fixed Omni-Directional Antennas



Wireless

Wireless

4804 Mbps (5 GHz) + 1148 Mbps (2.4 GHz), compatible with 11ax/ac/a/b/g/n Wi-Fi standards†

- OFDMA: Allows simultaneous data transmission to and from several devices sharing one band, satisfying high network capacity demands†
- MU-MIMO: Transfers data to more devices simultaneously, improving overall network efficiency†
- 160 MHz Channel: Doubles the speeds offered by 80 MHz channels for faster connections†
- 1024-QAM: Packs more effective data at once to achieve a 1.25× speed increase over 802.11ac 256-QAM†
- Smart Connect: Intelligently chooses the best available band for each device
- Access Point Mode: Extends a wired network and makes it wireless

EIRP

2.4 GHz < 20dBm (EIRP)
5 GHz < 23dBm (band1、band2)
5 GHz < 30dBm (band3)

Reception Sensitivity

2G:

11g 6Mbps: -97dBm
11g 54Mbps: -79dBm
11n HT20 MCS7:-78dBm
11n HT40 MCS7:-75dBm
11ax HE20 MCS11:-66.5dBm
11ax HE40 MCS11:-65.5dBm

5G:

11a 6Mbps: -95dBm
11a 54Mbps:-76.5dBm
11n HT20 MCS7:-76dBm
11n HT40 MCS7:-73dBm
11ac VHT20 MCS8:-71.5dBm
11ac VHT40 MCS9:-67dBm
11ac VHT80 MCS9:-63.5dBm
11ax HE20 MCS11:-64.5dBm
11ax HE40 MCS11:-63dBm
11ax HE80 MCS11:-58.5dBm
11ax HE160 MCS11:-56dBm

// Specifications

Wireless

Wireless Function

Enable/Disable Wireless Radio, WMM

Security Features

- Guest Network Access
- Wireless Security:
WPA-PSK/WPA2-PSK/WPA3-SAE[△]

Software

WAN Type

Dynamic IP/Static IP/PPPoE/L2TP/PPTP

DHCP

Server, DHCP Client List

NAT Forwarding

Port Forwarding, Port Triggering, UPnP, DMZ

Management

Local Management, Remote Management

Security

SPI Firewall, Access Control,
IP and MAC Address Binding

Guest Network

2.4 GHz Guest Network, 5 GHz Guest Network

VPN Server

OpenVPN, PPTP

Others

Package Contents

- AX6000 Wi-Fi 6 Router MR90X
- Power Adapter
- Quick Installation Guide
- RJ45 Ethernet Cable

Environment

- Operating Temperature:
0°C~40°C (32°F~104°F)
- Operating Humidity:
10%~90% Non-Condensing
- Storage Humidity:
5%~90% Non-Condensing

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†Maximum wireless signal rates are the physical rates derived from IEEE Standard 802.11 specifications. Actual wireless data throughput, wireless coverage, and number of connected devices are not guaranteed and will vary as a result of network conditions, client limitations, and environmental factors, including building materials, obstacles, volume and density of traffic, and client location.

‡Use of 802.11ax (Wi-Fi 6), and features including OFDMA, HE160, MU-MIMO, 1024-QAM, BSS Color, and Target Wake Time(TWT) requires clients to also support the corresponding features. Actual power reduction by Target Wake Time may vary as a result of network conditions, client limitations, and environmental factors. The 160 MHz bandwidth may be unavailable in the 5 GHz band in some regions/countries due to regulatory restrictions. This router may not support all the mandatory features as ratified in Draft 3.0 of IEEE 802.11AX specifications. Further software upgrades for feature availability may be required.

§The 802.11ax white paper defines standardized modifications to both the IEEE 802.11 physical layers (PHY) and the IEEE 802.11 Medium Access Control (MAC) layer as enabling at least one mode of operation capable of supporting improvement of at least four times the average throughput per station (measured at the MAC data service access point) in a dense deployment scenario.

△Use of WPA3 requires clients to also support WPA3.