



5G NR AX1800 Wi-Fi 6 Router

5G-8649AX

FEATURES

- **5G NR Mobile Network:** Supports 5G NR Sub-6 NSA, 5G NR Sub-6 SA, LTE-FDD, LTE-TDD, LTE-LAA, and WCDMA
- **Wi-Fi 6 AX1800 High-Speed:** Max. Wi-Fi speed up to 1775Mbps (2.4GHz at 574Mbps and 5GHz at 1201Mbps)
- **Reliable Failover:** Automatic failover between 5G NR (supports Dual-SIM cards) and wired Ethernet
- **Efficient MU-MIMO:** Simultaneously serves multiple devices for data transmission with improved wireless connection capacity
- **High Performance Wi-Fi:** Beamforming, AirTime Fairness, Band Steering, and 802.11r/k Fast Roaming enhance Wi-Fi performance
- **Best Compatibility and Performance:** Equipped with a Qualcomm solution and backward compatible with 4G and 3G networks
- **Powerful Management Features:** Supports essential network management features for business users to optimize the network performance
- **Plug-and-Play, Flexible Deployment:** Equipped with wall-mounted hole for wall-mounted or desktop placement

OVERVIEW

The EDIMAX 5G-8649AX 5G NR Wi-Fi router offers both wireless and wired internet connections using 5G NR, eliminating the need for fixed broadband. By inserting a SIM card, it connects to the 5G NR network, making it ideal for areas without fixed broadband or requiring mobile or non-stop connectivity.

Designed for business users, the 5G-8649AX features a built-in RM520N-GL solution (Qualcomm® Snapdragon X62) for reliability, compatibility, and high performance. Features include wireless/wired connectivity, strong mobility, multi-device support, easy installation, and backup connectivity in case of fixed broadband outages.

Wi-Fi 6 AX1800 technology provides faster speeds and greater coverage, offering speeds up to 574Mbps on 2.4GHz and 1201Mbps on 5GHz, making it suitable for streaming and video conferencing. Reliable, durable, flexible, scalable, and secure, the router is ideal for temporary use, frequent movement, or non-stop connectivity. Providing stable internet service with a backup network makes it an efficient networking solution.

Rapid Internet Deployment for Both Wi-Fi & Wired Connectivity

The rapid deployment advantage of 5G NR routers eliminates the need for wired broadband installation. Simply purchase and insert a SIM card for plug-and-play convenience, and an internet connection is established. By accessing the 5G NR mobile network through a SIM card, it provides stable wireless and wired internet connections, suitable for various network needs. For mobile users, as long as there is 5G NR signal coverage, internet access is easily attainable. Its flexibility and convenience make it particularly suitable for temporary use or frequent movement, ideal for temporary offices, events, activities, or locations without wired broadband service.

Reliable Failover for Continuous Connectivity

Network stability is crucial for business users. The 5G-8649AX, designed for enterprises and SMEs, utilizes the RM520N-GL solution (Qualcomm® Snapdragon x62) for reliability, compatibility, and high performance. It features two SIM card slots, automatically switching to SIM2 if SIM1 disconnects. Fixed broadband and 5G NR can also backup each other. This is vital for users requiring uninterrupted network service, like payment system, online meetings, remote work, and video streaming. In emergencies, such as natural disasters or construction damage that disrupt fixed broadband, the 5G NR router provides emergency network support, ensuring critical communications and data transfers remain uninterrupted.

Powerful Management Tool for Network Optimization

Designed for business networks, the 5G-8649AX offers network managed functions with advanced essential features such as Blacklist/Whitelist, TTL (Time To Live), VPN Client (L2TP and PPTP), Guest Wi-Fi Isolation, Network Diagnosis, Hidden SSID, Port Forwarding, Access Control, Internet Priority (Cellular Only or Wired to Cellular), and more. Experience fast and easy operations with just a few simple clicks, through the user-friendly web-based management utility, your network is ready to use with ease.

SPECIFICATIONS

HARDWARE

Interface	1 x RJ45 10/100/1000Base-T WAN Port 3 x RJ45 10/100/1000Base-T LAN Ports 2 x Standard SIM Card Slots
Button	Reset Button
LED Indicator	- Power/SYS: System Power Status 5G/4G: Signal Strength 5G: Connected Status 4G: Connected Status - WAN: Connected Status - Wi-Fi: Connected Status - SIM1: SIM Card Inserted Status - SIM2: SIM Card Inserted Status
Antenna	6 x External High Gain Antennas 4 x 5G NR Antennas 2 x Wi-Fi 2.4GHz/5GHz Antennas
Power Requirement	DC: 12V/1.5A
Power Consumption	14.5W (Full Loading)
Power Saving	Qualcomm® 5G PowerSave 2.0
Mounting	Wall Mount/Desktop
Housing	Metal Case
Dimensions	230 (W) x 148 (D) x 28 (H) mm (Antenna not included) (9.06 (W) x 5.83 (D) x 1.10 (H) inches)
Weight	1070g (2.34lb)

WI-FI

Standard	Wi-Fi 6 IEEE 802.11a/b/g/n/ac/ax
Frequency Band	2.4GHz: 2.412 ~ 2.472GHz 5GHz: 5.180~5.240GHz *Subject to local regulations.
Maximum Data Speed	2.4GHz: 574Mbps 5GHz: 1201Mbps
Operation Channels	2.4GHz : CH 1-13 5GHz : CH36-64, 100-144, 149-165
Concurrent Clients	Up to 200 Clients • 2.4GHz: Up to 100 Clients • 5GHz: Up to 100 Clients

SECURITY

Encryption	WPA3-Personal/WPA2-AES
Hidden SSID	Supported
Guest Wi-Fi (Isolation)	Supported

CELLULAR

Band	5G NR Sub-6 NSA (Non-Standalone): Bands n1, n2, n3, n5, n7, n8, n12, n13, n14, n18, n20, n25, n26, n28, n29, n30, n38, n40, n41, n48, n66, n70, n71, n75, n76, n77, n78, n79 5G NR Sub-6 SA (Standalone): Bands n1, n2, n3, n5, n7, n8, n12, n13, n14, n18, n20, n25, n26, n28, n29, n30, n38, n40, n41, n48, n66, n70, n71, n75, n76, n77, n78, n79 LTE-FDD: Bands B1, B2, B3, B4, B5, B7, B8, B12, B13, B14, B17, B18, B19, B20, B25, B26, B28, B29, B30, B32, B66, B71 LTE-TDD: Bands B34, B38, B39, B40, B41, B42, B43, B48 LTE-LAA (Licensed Assisted Access): Band B46 WCDMA: Bands B1, B2, B4, B5, B8, B19
PHY Data Rate (Max.)	5G Sub-6 NSA Download: 3.4Gbps / Upload: 550Mbps 5G Sub-6 SA Download: 2.4Gbps / Upload: 900Mbps LTE Download: 1.6Gbps / Upload: 200Mbps WCDMA Download: 42Mbps / Upload: 5.76Mbps

SOFTWARE

Port Forwarding	Supported
Network Diagnosis	Supported
VPN Client	Supported L2TP and PPTP
Whitelist/Blacklist	Supported
TTL (Time To Live)	Supported
Internet Priority	Supported • Cellular Only • Wired to Cellular
Auto Channel Adjustment	Supported
Management	- Account Management (Access Control) - Scheduling Restart - Backup/Recovery - LED Control - On/Off - Schedule On/Off - SSH Control - Custom DNS - Custom APN

OTHERS

Environmental Condition	Temperature: • Operating: 0 ~ 40°C (32°F ~ 104°F) • Storage: -40 ~ 70°C (-40°F ~ 158°F) Humidity: • Operating: 10 ~ 90% (Non-condensing) • Storage: 10 ~ 90% (Non-condensing)
Certification	CE

Maximum performance, actual data rates, and coverage will vary depending on network conditions and environmental factors. Product specifications and design are subject to change without notice.

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