

8112V

5G NR Wi-Fi 5 VoIP VPN Router

BEC
by **BILLION**



Ideal Use Cases

- Ultra-High Speed Internet Services
- Delay Sensitive and Bandwidth Intensive Applications
- Fixed Wireless Broadband
- Residential or SOHO Users
- Managed Services



The 8112V 5G NR Wi-Fi 5 VoIP VPN Router is equipped with the new fifth-generation cellular networks, the 5G Sub-6 GHz new radio technology and 4G/LTE dual-connectivity, 4-port Gigabit Ethernet Switch, USB 2.0, dual radio 802.11ax access point with multi-user MIMO, Wi-Fi Hotspot, SIP VoIP, dynamic routings, and a robust Firewall security. The 8112V simplifies implementation, increase deployment flexibility, boost network performance, and most importantly, it will bring you a whole new 5G NR internet experience.

New 5G Radio Technology Overthrow Your Imagination

8112V supports 4G/LTE and 5G Sub-6 GHz with dual connectivity modes, standalone access (SA) fully benefiting from all the 5G capabilities and non-standalone access (NSA) attached to a 4G network up to a gigabit speed to ensure a quick and flexible adaptation to any LTE or 5G NR networks.

Cellular Network and Fixed Broadband Services Ready

The seamless automatic WAN failover with traffic prioritization in the event of an Internet connectivity failure of the primary WAN interface, traffic is automatically redirected to the secondary WAN interface within seconds.

Exceeding Wi-Fi Expectations

Experience the ultra-fast, dual-band 802.11ax with 2.4GHz 2T2R / 5GHz 3T3R. PHY data rate is 3000Mbps. MU-MIMO-equippe 8112V is capable to communicate with multiple end devices simultaneously helping to increase the network efficiency of high-density network.

High Performance and Network Resilience

- 5G NR
 - 3GPP Release 16 NSA/SA Operation, Sub-6 GHz
 - NSA: 3.2 Gbps (DL) / 525 Mbps (UL)
 - SA: 2.4 Gbps (DL) / 900 Mbps (UL)
- 4G/LTE Cat.19 (Max.) 1.6 Gbps (DL) / 200 Mbps (UL)
- Offer 5G, LTE fixed wireless, and Gigabit broadband connectivity
- Automatic Failover and dual WAN interfaces for network resilience and reliable connectivity
- 4-Port Gigabit Auto-MDI/MDI-X Switch
- Advanced SX Antenna Technology for increased coverage, signal reception and efficiency

Enterprise Class Routing and Secured VPN

- BGP and OSPF Dynamic Routing Protocols
- IPSec, GRE, L2TP, PPTP, and OpenVPN
- Advanced secure and simultaneous VPN connections



Ease-of-Use Wireless Hotspot and Captive Portal

The Wi-Fi hotspot is le to share the Internet connection via mobile or a wired connection with any wireless-enabled devices which is completed separate from the private Wi-Fi network. The captive portal enables highly secure connectivity with multiple authentication options and extensive controls for access and bandwidth management.

Integrated SIP VoIP and Advanced Telephony Features

Integrated SIP VoIP and Advanced Telephony Features 8112V is compliant with SIP standard (RFC3261) and supports SIP registrar. This device integrates with two FXS ports by connecting with two standard analog telephones to receive or place calls over VoIP accounts. This unit offers much more great features, Call Waiting, Conference Call, Return Call, etc. The unique Speed Dial Plan provides custom hotkeys of frequently used phone numbers.

24/7 Cloud Management and Network Visibility

Remote monitoring, management, and control of devices in real-time is essential for IoT networking devices, M2M and critical applications. BECentral®, BEC's Cloud Remote Management, is a comprehensive device management platform designed to minimize deployment, lower support expenses, and maximize the operational efficiency and profitability of the operator.

Superior Wireless Technology

- Support 4SS 11ax Wave2 MU-MIMO
- Simultaneous Dual Band Wi-Fi with high-power design
- Wi-Fi Hotspot with Captive Portal
- Supports Wi-Fi Multimedia (WMM) wireless QoS
- Carrier-Grade Wi-Fi, WPA2/AES and MSSID with isolation
- Multiple Operation Modes: Access Point, Bridge and Repeater

Management

- Web-based GUI for remote and local management
- SNMP v1 , v2, v3, MIB-I and MIB-II support
- TR-069 remote management
- SMS Control function for status and reboot
- Supported by BECentral®, BEC's Cloud-Based device management platform, to extend network visibility and control of devices remotely.

Features & Specifications

Availability and Resilience

- Multiple WAN ports (4G/5G, ETH WAN, or Wireless)
- Load Balancing - Maximizing bandwidth of outbound traffic
- Automatic WAN failover

Supported Frequency Bands

• 5G NR Sub-6 GHz

- : Comply 3GPP Rel.16
- : Support Frequency Range 1 Bands (SA & NSA):
n1 / n2 / n3 / n5 / n7 / n8 / n12 / n20 / n25 / n28 / n38 / n40 / n41 / n48 / n66 / n71 / n77 / n78

• 4G / LTE (Cat.19)

- : Support Frequency Bands (FDD & TDD)
- : FDD: B1 / B2 / B3 / B4 / B5 / B7 / B8 / B9 / B12 / B13 / B14 / B17 / B18 / B19 / B20 / B25 / B26 / B28 / B29 / B30 / B32 / B66 / B71
- : TDD: B34 / B38 / B39 / B40 / B41 / B42 / B43 / B48

• Data Transmission

- 5G NSA: DL 3.2 Gbps / UL 525 Mbps
- 5G SA: DL 2.4 Gbps / UL 900 Mbps
- 4G/LTE: DL 1.6 Gbps / UL 200Mbps

Firewall

- Built-in NAT Firewall and Stateful Packet Inspection
- Prevents DoS attacks including Land Attack, Ping of Death, etc.
- Access Control
- IP / MAC / URL / Domain Filtering

VoIP

- Compliant with SIP standard (RFC3261)
- Audio Codec: G.711 A-Law, G.711µ-Law, G.729
- DTMF Method: In-band/out-of-band (RFC 2833), SIP Info
- Caller ID Generation: DTMF, FSK
- FAX Transmission: T.38 Fax Relay, G.711 Pass-through
- Silence Suppression, Voice Activity, Detection(VAD), Comfort Noise Generation (CNG), G.168 Echo Cancellation, Packet Loss Concealment, Call Waiting, Conference Call
- Speed Dial, Return Call, Redial, Don't Disturb
- Call Detailed Records(CDR)

Network Protocols and Features

- IPv4, IPv6, IPv4 / IPv6 dual stack
- IPv6 in IPv4 (6RD) / IPv4 in IPv6 (DS-Lite) / IPv6-464XLAT
- NAT, static routing and RIP-1/2
- Universal Plug and Play (UPnP) compliant
- Dynamic Domain Name System (DDNS)
- Virtual server and DMZ
- SNTP, DNS relay, IGMP proxy and IGMP snooping, MLD proxy and MLD snooping for video service
- Supports port-based Virtual LAN (VLAN)

Carrier Grade Wireless LAN

- Compliant with 802.11ax Dual-Band WiFi
- 2.4GHz AX: 2x2 (Tx/Rx) & 5GHz AX: 3x3 (Tx/Rx)
- 5, 10, 20, 40, 80, 80+80, 160MHz Channel Bandwidth
- Up to 575Mbps (2.4GHz) & 2425Mbps (5GHz) speed
- 64/128 bits WEP supported for encryption
- Wireless security with WPA-PSK, WPA2-PSK, Mixed WPA/WAP2-PSK, (TKIP/AES), 802.1x/RADIUS
- AP, Client Bridge and WDS Operational Modes
- Multiple SSID (4 SSIDs), BSSID, Band
- Wireless MAC filtering, Wireless Client Isolation
- Wi-Fi Hotspot with Captive Portal
- Dynamic, Wi-Fi client rate-limiting
- Supports up to 4 Spatial Streams & TX Beamforming
- Supports Hardware-based Airtime Fairness (QoS)

Quality of Service Control

- Traffic prioritization based-on IP protocol, port number, and IP address
- Uplink and Downlink Bandwidth Control

VPN/Tunneling (Optional)

- IPsec, OpenVPN, PPTP, L2TP VPN Tunneling
- OpenVPN VPN Tunneling
- PPTP VPN Tunneling
- L2TP VPN Tunneling
- GRE (up to 8 tunnels)
- Embedded PPTP / L2TP / IPsec / OpenVPN Client and Server
- IKE Key Management
- MPPE Encryption for PPTP
- IPsec DES, 3DES and AES encryption

USB Application Server

- Storage: FTP server and Samba server

Management

- Quick Installation Wizard
- Web-based GUI for remote and local management
- Firmware upgrade and configuration data upload and download via web-based GUI and over-the-air
- Supports DHCP server/client/relay
- TR-069 supports remote management
- BECentral® Cloud Management
- SNMP v1, v2, v3, MIB-I and MIB-II support
- Syslog monitoring
- SMS Control function for status and reboot

Hardware Specifications

Physical Interface

- Power On/Off button
- Power Jack
- USB 2.0 : (1) port
- Ethernet LAN: 4-port 10/100/1000Mbps auto-crossover (MDI/ MDI-X) switch - 1 x Versatile Port (LAN#4 / WAN)
- SIM Card Slot (2FF)
- FXS: (2) ports RJ11
- Reset button
- Wireless On/Off and WPS push button
- LED indicators

Physical Specifications

- Dimensions: 9.04"(W) x 6.10"(D) x 1.69"(H) (229.5 mm x 155 mm x 43 mm)

Power Requirements

- Input: 15V DC, 2.0A

Operating Environment

- Operating temperature: 32° to 104°F (0° to 40°C)
- Storage temperature: - 4° to 158°F (-20° to 70°C)
- Humidity: 20 ~ 95% non-condensing

Application Diagram

