



BEC Ultimum®

The Ultimate Residential Gateway with BEC Power Boost VDSL2/ADSL2+/Bonded/FTTH

BEC 8920NX



The BEC Ultimum® 8920NX is an all-in-one Ultimate Residential Gateway featuring multiple Internet interfaces, Gigabit LAN interfaces, High-Power 802.11n, QoS, Security and robust firewall security. The 8920NX delivers ultra-reliable triple-play services via major broadband technologies, ADSL2+ / VDSL2 / xDSL bonding / FTTH; Service Providers can utilize one gateway for a variety of service plan speed and different interface of connection. The gateway offers Gigabit speed with five (5) Gigabit Ethernet ports, one of the ports can configure for FTTH/Broadband connectivity. The 8920NX delivers reliable, secure and easy to manage network through the robust firewall help to enforce security policies to restrict network activities from preventing outsider attacks, VLANs up to 16 VLAN rules to support on various network services on different LAN segments, Quality of Service (QoS) optimizes network traffic and bandwidth utilization, and provides management tools such as SNR adjustment, traffic monitoring, system log, remote-access management, etc through a user-friendly, intuitive, web-based GUI. Users can easily enjoy high bandwidth services such as High Definition IPTV, streaming video, interactive gaming, over-the-top (OTT) applications to multiple devices throughout the home.

Flexible Deployment Options

The BEC 8920NX integrates multiple WAN options ADSL2+ / VDSL2 / Bonded ADSL / Bonded VDSL2 interface and a second 10/100/1000 Gigabit Ethernet WAN interface which can be used for broadband connectivity to any other Ethernet broadband device. Service Providers can benefit from flexible development options, offering a wide range of service package for subscribers, reducing truck roll when subscribes upgrading package plan providing possible lifespan for the investment all in one unit.

Quality of Service

Quality of Service (QoS) gives users' full control over outgoing data traffic. Priority can be assigned by the router to ensure that important transmissions like gaming packets, VoIP calls or IPTV/streaming content passes through the gateway is also controlled to ensure that users do not saturate bandwidth with their browsing activities.

Robust Firewall Security

The NAT default firewall has advanced anti-hacker pattern-filtering protection features that automatically detect and block Denial of Service (DoS) attacks. In addition, Packet Filtering provides high-level security for access control. Built with Stateful Packet Inspection (SPI), the router enables users to determine whether or not a data packet is allowed to pass through the firewall to the private LAN.

Optimal Wireless Speed and Coverage

BEC's Wi-Fi Power Boost technology maximizes the wireless performance by providing extended coverage, greater capacity and higher data rates at greater distances. Eliminate Dead Zones! More than 4X the coverage of standard 802.11n products transmitting at 100mW with data rates up to 600Mbps for 2.4Ghz (33% faster than standard 802.11n).

High performance & reliability and easy to manage and access:

- Compliant with all ADSL2+/VDSL2 single and bonding standards
- Dual-WAN VDSL2/ADSL2+ or Gigabit Ethernet WAN
- 5-port Gigabit Ethernet LAN with 1 port GigaConnect® (Configurable LAN/WAN)
- VDSL2 Profiles supported for single line and bonded: 8a/b/c/d, 12a/b, 17a
- Auto-sensing ADSL2+ / VDSL2 / EWAN
- Seamless Auto fallback to VDSL2 and ADSL2+
- IPv4 / IPv6 Dual Stack, DS-Lite and 6RD
- Web-based GUI for remote and local management
- SNMP Agent, Syslog Monitoring
- TR-069 remote management

Interoperability:

- Interoperable with all major DSLAMs
- Multimode ADSL2+ / ADSL2 / ADSL / VDSL2
- Improved physical layer rates, better range, superior performance, less transmission errors with G.vector, G.inp and bonding

VQP (Video Quality Prioritization)

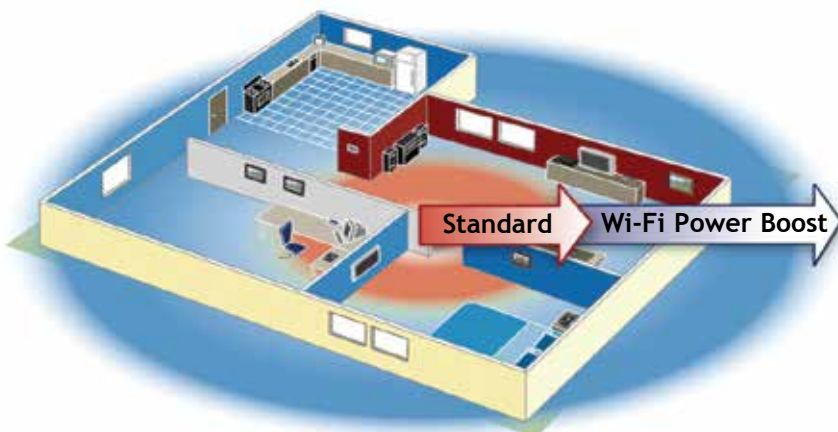
- Automatic prioritization of delay sensitive traffic for applications such as: Video
- Supports IPTV Applications / MMR
- Bandwidth management control for optimized network resource allocation

Superior Wireless Technology

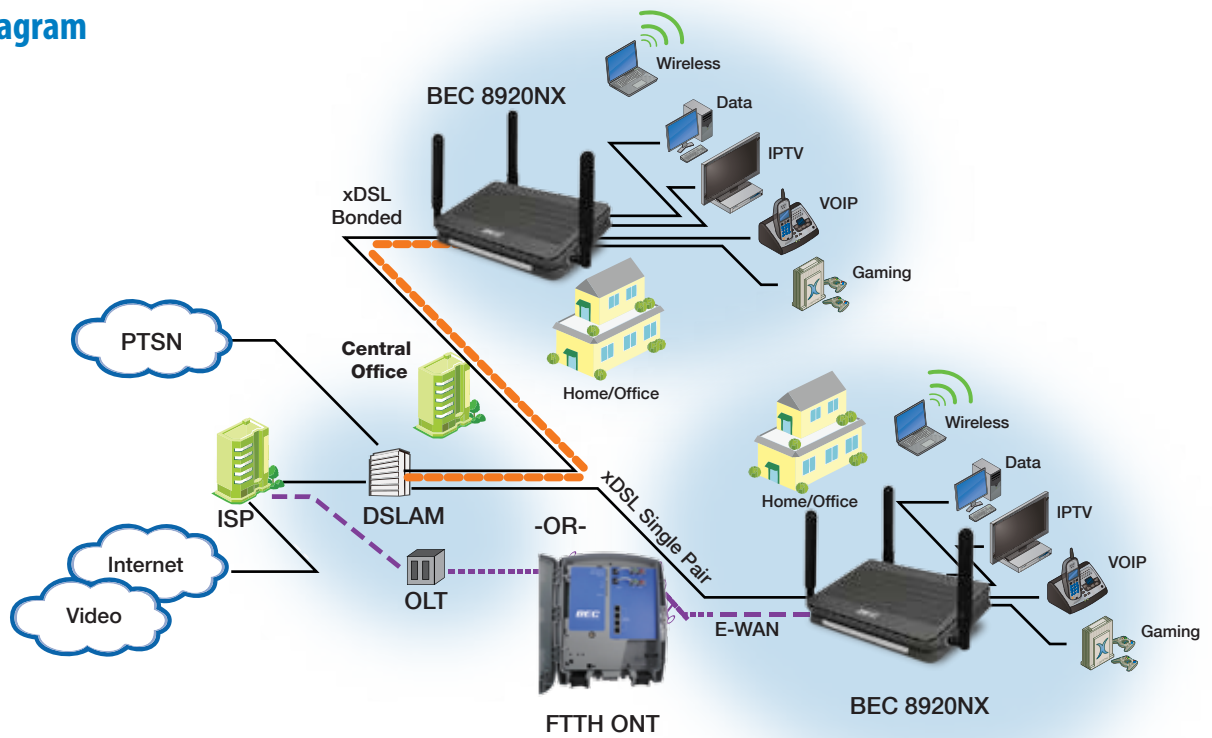
- BEC Wi-Fi Power Boost for increased performance and extended coverage
- 2.4GHz 3T3R MIMO, up to 600Mbps data rate
- WPS v2 for quick wireless setup
- WDS repeater function
- Multiple wireless SSIDs with wireless guest access and client isolation
- Wireless Security with WPA-PSK / WAP2-PSK
- Wireless LAN schedule control

Ideal for

- Whole home network access
- SOHO users
- Faster Streaming and Online gaming



Application Diagram



- xDSL Single Pair mode
- - - xDSL Bonded mode
- - - FTTH E-WAN mode

Features & Specifications

Availability and Resilience

- Dual-WAN Interfaces (VDSL2/ADSL2+ & E-WAN)
- Auto fail-over and failback

VDSL Compliance

- Compliant with ITU-T G.993.2, G.994.1 and G.997.1 VDSL2 Standards
- VDSL2 Profiles for one line: 8a, 8b, 8c, 8d, 12a, 12b, 17a, 30a
- VDSL2 Profiles for two line: 8a, 8b, 8c, 8d, 12a, 12b, 17a
- ADSL / 2 / 2+ fallback modes
- PTM and ATM mode including dual latency
- Supports VDSL2 band plan: 997 and 998

ADSL Compliance

- Compliant with ADSL Standards
 - Full-rate ANSI T1.413 Issue 2
 - G.dmt (ITU-T G.992.1)
 - G.lite (ITU-T G.992.2)
 - G.hs (ITU-T G.994.1)
- Compliant with ADSL2 Standards
 - G.dmt.bis (ITU-T G.992.3)
 - ADSL2 AnnexM (ITU-T G.992.3 Annex M)
- Compliant with ADSL2+ Standards
 - G.dmt.bis plus (ITU-T G.992.5)
 - ADSL2+ AnnexM (ITU-T G.992.5 Annex M)
- Comply ITU-T G.998.1 and G.998.2

Network Protocols and Features

- IPv4, IPv6, IPv4 / IPv6 dual stack
- IP Tunnel IPv6 in IPv4 (6RD)
- IP Tunnel IPv4 in IPv6 (DS-Lite)
- IPv6 stateless/stateful address auto-configuration
- IPv6 router advertisement / IPv6 over PPP / DHCPv6
- NAT, static routing and RIP-1/2

Network Protocols and Features (Cont.)

- Universal Plug and Play (UPnP) compliant
- Dynamic Domain Name System (DDNS)
- Virtual server, DMZ, SNTP, DNS relay, etc
- Supports port-based Virtual LAN (VLAN)

IPTV Applications

- IGMP proxy and snooping, MLD proxy and MLD snooping for video service
- Virtual LAN (VLAN)
- Quality of Service (QoS)

Quality of Service Control

- Supports the DiffServ approach
- Traffic prioritization and bandwidth management based-on IP4/v6 protocol, port number, and IP address
- Supports port shaping

Wireless

- Compliant with IEEE 802.11 b/g/n standards
- 2.4GHz High Power 3x3 MIMO
- Up to 600Mbps wireless data rate
- WPS (Wi-Fi Protected Setup) for easy setup
- Supports WPS v2
- 64/128 bits WEP supported for encryption
- Wireless security with WPA-PSK/WPA2-PSK
- Multiple wireless SSIDs with wireless guest access and client isolation
- Supports WDS repeater function
- Supports Wireless LAN schedule control

USB Application Server

- Storage: FTP server and Samba server

Management

- Quick Installation Wizard
- Web-based GUI for remote and local management (IPv4 / IPv6)
- Firmware upgrade and configuration data upload and download via web-based GUI
- Embedded Telnet server for remote and local management
- Supports DHCP server/client/relay
- TR-069 supports remote management
- Supports SNMPv1, v2, MIB-I and MIB-II
- Supports Syslog monitoring, Mail alert, push service, etc.

Hardware Specifications

Physical Interface

- DSL: Single xDSL RJ-11 Interface
- USB 2.0 for 3G/4G WAN Backup
- Ethernet MDI/MDIX Switch: 5-port Gigabit 10/100/1000Mbps
- E-WAN: RJ-45 Gigabit Ethernet WAN (on Ethernet 5)
- Wireless On/Off button
- WPS push button
- Reset Button
- Power jack
- Power switch
- WLAN: 3 external antennas

Physical Specifications

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

Physical Requirement

- Input: 15V DC, 2A

Operating Environment

- Operating temperature: 0 ~ 40°C
- Storage temperature: -20 ~ 70°C
- Humidity: 20 ~ 95% non-condensing