

# 4G/LTE Enterprise Multi-Service Router

## Broadband Access without Boundaries



### BEC 6300NEL R7



#### Overview

The BEC 6300NEL 4G/LTE Multi-Service Router features a Dual-WAN interface (4G/LTE) and Ethernet WAN (EWAN), 4-port Gigabit Ethernet Switch, Carrier-grade Wi-Fi 802.11n access point, USB, application server, dynamic routing and a robust Firewall. The 6300NEL is a high performance fixed wireless communications platform with advanced software enabling high availability, reliable and secure connectivity for business critical operations.

#### High Availability and Network Resilience

Businesses are dependent on constant and reliable internet connectivity, any downtime can be devastating impacting everything from revenues, reputation and ultimately business viability. The BEC 6300NEL provides Multi-WAN connectivity and Auto failover feature to ensure maximum connectivity and minimum service interruption. This feature provides seamless automatic failover with traffic prioritization in the event of a connectivity failure of the primary WAN interface, traffic is automatically redirected to the secondary WAN interface within seconds. The router will also fallback when the primary interface connection is restored. This functionality operates regardless of whether the primary connection is LTE or a wired connection such as fiber, Cable or DSL.

#### Advanced Quality of Service (QoS) Framework

The 6300NEL supports a QoS framework based on the EPS bearer model. Default bearers are supported for best effort services and multiple dedicated bearers, GBR (guaranteed bit rate) resource types and QoS class of identifiers (QCI) are supported for real-time voice and video applications that require dedicated network resources. BEC's comprehensive QoS capabilities, leverage IP QoS concepts and standards such as DiffServ along with the LTE QoS framework to achieve the best QoE (Quality of Experience) for each subscriber.

#### Secured VPN Connections

The BEC 6300NEL optionally supports comprehensive and robust VPN (Virtual Private Network) protocols for business to establish private encrypted tunnels over the public Internet to secure data transmission between headquarters and branch offices. The 6300NEL supports VPNs of IPSec, GRE, L2TP and PPTP protocols. With a built-in DES/3DES/AES VPN accelerator, the router enhances lsecurity without any performance degradation.

#### Carrier-grade Wireless LAN

The 6300NEL integrates a 802.11n access point supporting data rates of up to 300Mbps. Security functionality includes: WEP 64/128 bit, WPA, WPA2 (PSK, TKIP and AES, 802.1X, SSID broadcast disable and wireless MAC address filtering and MSSID with Client Isolation to enhance the level of transmission security and access control over the Wireless LAN. The router also supports the Wi-Fi Protected Setup (WPS) standard, allowing users to establish a secure wireless network by simply pushing a button. If the network requires wider coverage, the built-in Wireless Distribution System (WDS) repeater function allows users to expand the wireless network without the need for any external wires or cables.

#### Pathway to the Future

The BEC 6300NEL fully supports IPv6 (Internet Protocol Version 6), implementation of IPv6 is growing significantly and multiple transition methods are required to support the coexistence and migration from IPv4. With BEC IPv6 enabled devices, service providers easily adapt IPv6 to their network as we support major transition mechanisms such as Dual-Stack, Dual-Stack Lite, and 6RD .

#### Performance

- High-Performance/Wire-Speed 32-bit MIPS 34K CPU
- Dual-WAN (4G/LTE & EWAN) broadband connectivity and automatic failover for network resilience and reliable connectivity
- Advanced SX Antenna Technology for increased coverage, signal reception and efficiency
- LTE Multi-Service APN Selection and Management
- 4-port Gigabit Switch
- Carrier-Grade Wi-Fi, WPA2/AES and MSSID with isolation
- Redundant Power Connection & Management

#### Enterprise Class Routing and Secured VPN

- BGP and OSPF Dynamic Routing Protocols
- Secured VPN : IPSec, GRE, L2TP and PPTP

#### QoS (Quality of Service)

- Traffic prioritization based-on IP protocol, port number, and IP address
- Enhanced IGMP, Proxy/Snooping and Fast Leave

#### Firewall

- Built-in NAT Firewall
- Stateful Packet Inspection (SPI)
- Prevents DoS attacks including Land
- Attack, Ping of Death, etc.
- VPN pass-through

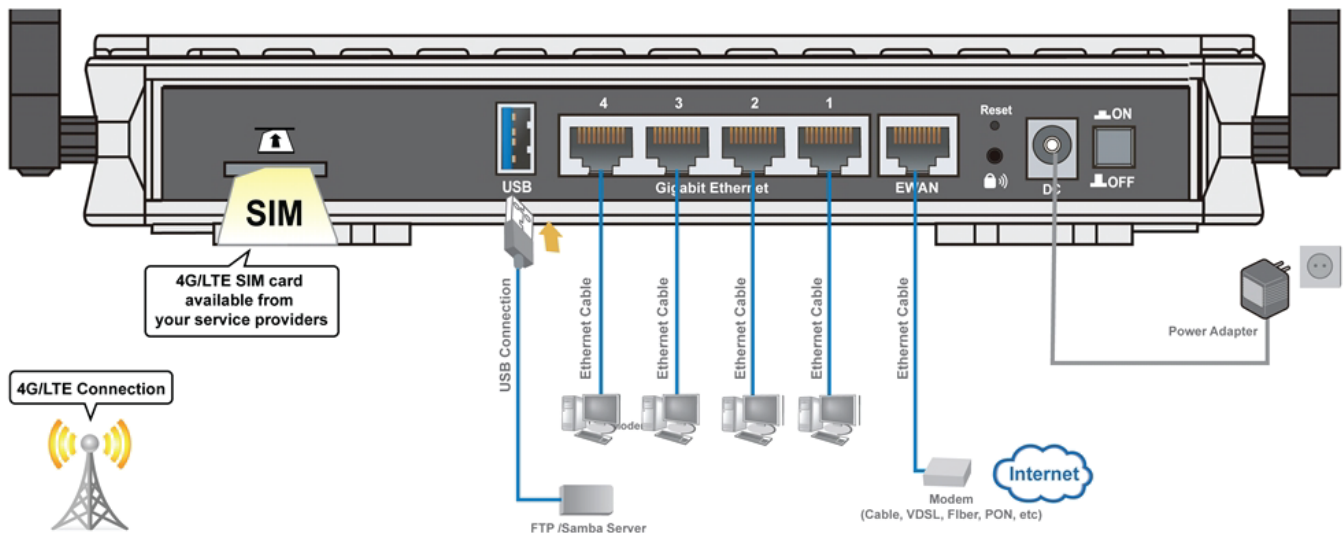
#### Management

- 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 BEC's Cloud-Based device management platform to extend network visibility and control of devices remotely

#### Application/Use Cases

- Residential Fixed Wireless Broadband
- Enterprise/Branch Office Connectivity
- Business Continuity / Failover
- Retail / PoS (Point of Sales)
- Kiosk / Display

## Application Diagram



## Features & Specifications

### Availability and Resilience

- Dual-WAN ports (4G & Ethernet WAN)
- Load balancing - Maximizing bandwidth of outbound traffic
- Auto fail-over between 4G and E-WAN

### Supported Frequency Bands

- LTE Band 41 (TDD) (2496MHz ~ 2690MHz) UL and DL
- Peak downlink speeds up to 150Mbps and peak uplink speeds up to 50Mbps (Cat.4)
- Transmit Power: +23dBm

### Network Protocols and Features

- IPv4, IPv6, IPv4 / IPv6 dual stack
- IP Tunnel IPv6 in IPv4 (6RD)
- IP Tunnel IPv4 in IPv6 (DS-Lite)
- 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 for video service
- MLD proxy and MLD snooping for video service
- Supports port-based Virtual LAN (VLAN)

### Quality of Service Control

- Traffic prioritization based-on IP protocol, port number, and IP address

### USB Application Server

- Storage: FTP server and Samba server

### Firewall

- Built-in NAT Firewall
- Stateful Packet Inspection (SPI)
- Prevents DoS attacks including Land Attack, Ping of Death, etc.
- Access Control
- IP Filtering, MAC Filtering, URL Filtering
- Password protection for system management
- VPN Passthrough

### Wireless

- Compliant with IEEE 802.11n standard
- Backward compatible with IEEE 802.11b and 802.11g standards
- 2.412 ~ 2.484GHz frequency range
- Up to 300Mbps wireless operation rate
- WPS (Wi-Fi Protected Setup) for easy setup
- 64/128 bits WEP supported for encryption
- Wireless security with WPA-PSK/WPA2-PSK
- Supports WDS repeater function
- Multiple SSID with Client Isolation\
- Wireless MAC Filtering
- Wi-Fi Alliance Certified

### VPN/Tunneling (Optional)

- IPSec VPN Tunneling (up to 8 tunnels)
- PPTP VPN Tunneling (up to 4 dial-in/dial-out tunnels)
- L2TP over IPSec VPN Tunneling (up to 4 dial-in/dial-out tunnel)
- GRE (up to 8 tunnels)
- Embedded PPTP / L2TP / IPSec Client and Server
- IKE Key Management
- MPPE Encryption for PPTP
- IPSec DES, 3DES and AES encryption

### Dynamic Routing Protocols (Optional)

- BGP and OSPF

### 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
- SNMP v1, v2, v3, MIB-I and MIB-II support
- Syslog monitoring
- SMS Control function for status and reboot

### Hardware Specifications

#### Physical Interface

- Antenna:
  - 4G LTE: Two (2) detachable antennas
  - Wireless: Two(2) internal antennas
- WAN: 4G/LTE, or Ethernet WAN
- Ethernet LAN: 4-port 10/100/1000Mbps auto-crossover (MDI/ MDI-X) switch
- USB 2.0 : One (1) Interface
- SIM Card Slot (2FF)
- Reset Button
- Wireless On/Off and WPS Push Button
- Power jack
- LED Indicators

#### Physical Specifications

- Dimensions: 7.25"(W) x 1.91"(H) x 5.31"(D) (184.25 mm x 48.5 mm x 135 mm)
- Weight: 1.07kg (2.36lbs)

#### Power Requirements

- Input: 15V DC, 1.6A

#### 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

\*Future Release