Ideal Use Cases

- **Fixed Wireless Broadband**
- **Last Mile Access**
- **Mission-Critical & Performance Intensive Networks**
- **Industrial Connectivity Applications**
- **Urban and Rural Environments**

Gigabit LTE Outdoor Router

The RidgeWave® by BEC 7000 Gigabit LTE Outdoor router adapts LTE Category 18 technology and delivers peak data rates of 1.2Gbps downlink and 150Mbps uplink, making it fastest commercially available outdoor router today. Purpose-built for performance, the BEC 7000 integrates high-gain MIMO antenna technology for increased efficiency and coverage in near to non-line-of-sight (NLOS) conditions. Fixed Wireless Access (FWA) at 1Gbps data rates make the BEC 7000 a practical alternative to wired broadband options such as Fiber to the Home (FTTH) or Hybrid fiber-coax (HFC).   Network Operators can deliver equivalent broadband speeds and capacity to regional, rural, remote locations, and the underserved over 4G LTE.

Innovative MIMO Antenna Technology
Operators need innovative antenna technology to meet capacity and throughput demands in challenging deployment scenarios such as Fixed Wireless Access (FWA). The MIMO high-gain embedded dual-polarization/dual slant antenna technology ensures faster and efficient bi-directional transmission for maximum bandwidth and coverage. BEC 7000 is optimized to work in non-line-of-sight (NLOS) conditions, where either visual line-of-sight or Fresnel zone clearance is obstructed (or both) where desirable signal strength was difficult to achieve.

Rugged Weatherproof Design
The RidgeWave® by BEC 7000 is built to last, fully ruggedized with industrial-grade components.   Unique to BEC devices are GORE® Vents for pressure equalization, humidity, and airflow, this accompanied with lighting/ESD Protection and the IP68/UL 50E enclosure ensure protection against dirt, harmful ingress of water and extreme temperatures for years of dependable operation.
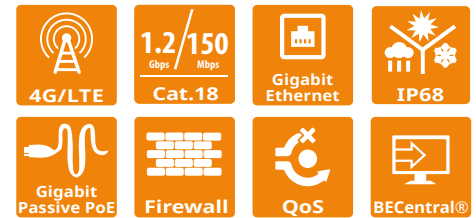
24/7 Cloud Management and Network Visibility
The BEC 7000 integrates seamlessly with BECentral®, BEC's cloud-based remote management platform as a complete solution, for managing large-scale UE deployments. Administrators can remotely provision, monitor, upgrade, and troubleshoot devices from a single centralized location in real-time. BECentral® extends network visibility with RF signal measurements, historical analysis/charts, proactive alerts/notifications, connectivity management, and well-defined API to facilitate application development or integration into other platforms.

For CAF II or other ETC support recipients, BECentral® fully supports scheduling, testing, report generation, and submission for FCC Performance Measures. BECentral® is a comprehensive device management platform designed to minimize deployment, lower support expenses, and maximize the operational efficiency and profitability of the operator.

4G/LTE | **1.2/150** Gbps/Mbps **Cat.18** | **Gigabit Ethernet** | **IP68**

Gigabit Passive PoE | **Firewall** | **QoS** | **BECentral®**

Designed for Challenging and Rugged Deployments

- IP68 / UL-50E Hardened enclosure for protection against dust and water ingress
- Industrial-grade components for greater reliability
- GORE ™ vent for pressure equalization, humidity, and air flow
- Electrostatic Discharge (ESD) & Surge protection
- Wind tunnel tested/rated for successful operation up to 132mph (F2 Tornado Speeds)

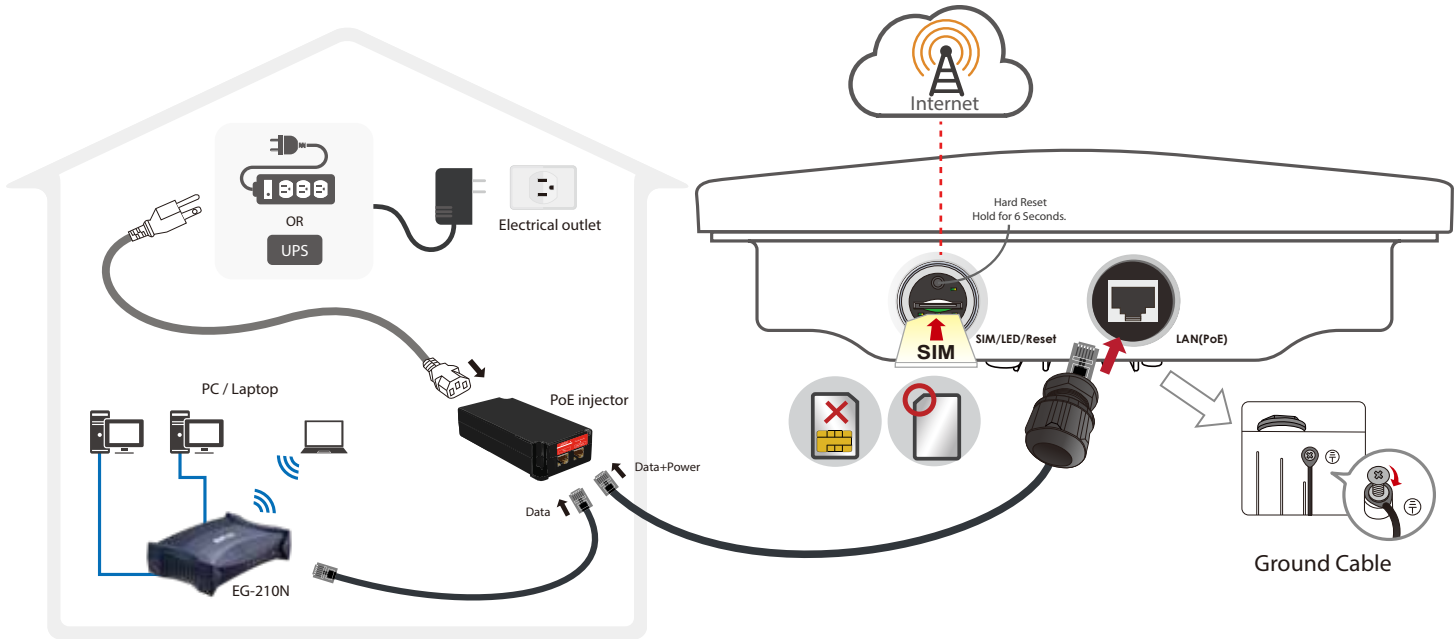### High Performance and Support for LTE FDD / TDD Bands

- 3GPP Release 12, Category 18, with data rates of up to 1.2Gbps (DL) / 150Mbps (UL)
- Offers multiple LTE frequency band support
- Carrier Aggregation to increase date rates, 5CA DL and 2CA UL
- Advanced IP networking functionalities including bridge and router modes
- Advanced secure VPN sessions (Optional)
- 3G Fallback technology

Patented Dual-Polarization / Dual Slant Antenna Technology

- Embedded High-Gain 4x4 MIMO Antenna
- H-Plane & V-Plane Polarization
- Ensures exceptional RF performance for maximum bandwidth and coverage
- Precise alignment achievable with multi-angle, multi-position pole mount brackets
- High isolation for stable and reliable connectivity

Package includes Gigabit PoE injector and Mounting Kit

Application Diagram

- OR
- UPS
- Electrical outlet
- PC / Laptop
- PoE injector
- Data+Power
- Data
- EG-210N
- Internet
- Hard Reset Hold for 6 Seconds.
- SIM
- SIM/LED/Reset
- LAN(PoE)
- Ground Cable

Features & Specifications

Supported Frequency Band

- Comply 3GPP Rel.12 with Carrier Aggregation (5CA DL & 2 CA UL)
- 4G/LTE: FDD/TDD (Cat.18)
  - Band 2 (1850–1910 MHz UL | 1930–1990 MHz DL)
  - Band 4 (1710–1755 MHz UL | 2110–2155 MHz DL)
  - Band 5 (824–849 MHz UL | 869–894 MHz DL)
  - Band 7 (2500–2570 MHz UL | 2620–2690 MHz DL)
  - Band 12 (699–716 MHz UL | 729–746 MHz DL)
  - Band 13 (777–787 MHz UL | 746–756 MHz DL)
  - Band 14 (788–798 MHz UL | 758–768 MHz DL)
  - Band 17 (704–716 MHz UL | 734–746 MHz DL)
  - Band 25 (1850–1915 MHz UL | 1930–1995 MHz DL)
  - Band 26 (814–849 MHz UL | 859–894 MHz DL)
  - Band 29 (717–728 MHz DL Only)
  - Band 30 (2305–2315 MHz UL | 2350–2360 MHz DL)
  - Band 66 (1710–1780 MHz UL | 2110–2170 MHz DL)
  - Band 71 (663–698 MHz UL | 617–652 MHz DL)
  - Band 41 (2496-2690 MHz TDD)
- 3G/WCDMA: B2 / B4 / B5
- **Channel Bandwidth**
  1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz & 20MHz
- **RF Characteristics**
  Maximum Transmit Power: 23 ± 2dBm
  Modulation: 256QAM DL / 64QAM UL
- **LTE Antenna**
  : 2x2 and 4x4 MIMO Directional (Dual Polarization & Dual Slant)
  : Frequency Range: 617-698MHz (2x2 MIMO),
   1710-2170MHz (4x4 MIMO), and 2300-2690MHz (4x4 MIMO)
  : Peak Gain from 6 ~ 8dBi

Quality of Service Control

- Supports the DiffServ approach
- Traffic prioritization based-on protocol, port number and IP address

Network Protocols and Features

- NAT, static routing and RIP-1/2
- NAT supports PAT and multimedia applications
- Virtual server and DMZ
- SNTP, DNS relay and DDNS
- IGMP snooping and IGMP proxy

Operational Modes

- Router or Bridge

Management

- Quick Installation Wizard
- Web-based GUI for remote and local management
- Firmware upgrade and configuration data upload & download via web-based GUI or BECentral®
- DHCP server/client/relay
- TR-069 supports remote management
- BECentral® Cloud Management
- SNMP and Syslog monitoring

Hardware Specifications

Physical Interface
- Gigabit LAN Interface with IEEE 802.3at compliant PoE P.D (25.5W)
- SIM Card Slot: One (1), Mini SIM (2FF)
- LED Indicators: Power, LAN(PoE), LTE Signal Strength and Internet

Operating Environment
- Operating temperature: -40℃ to 60℃ (-40°F to 140°F)

Surge/ESD Protection
- Surge Protection: K.21 enhanced mode 6KV
- ESD Protection: Contact: ± 8KV / Air: ±15KV