



Ideal Use Cases

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

4G/LTE-A Pro CBRS Outdoor Router

The RidgeWave® BEC 6900 Series of 4G LTE Outdoor routers bring secure, high performance mission-critical cellular connectivity to outside locations and harsh environments. The rugged, compact IP68 rated enclosure enables it to stand up to dirt, harmful ingress of water, humidity and extreme temperatures for years of dependable operation. The BEC 6900 is the ideal solution for industries, businesses, remote locations, residences, rural areas and the underserved.

Innovative MIMO Antenna Technology

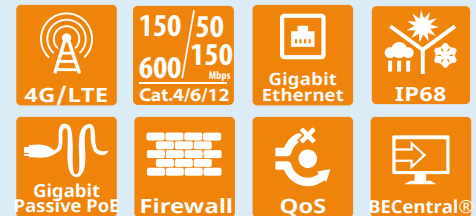
Homes and businesses with a weak or nonexistent wireless signal can benefit from the extended range and reach of the RidgeWave® BEC 6900. Multiple MIMO antenna technology options allow service providers to select the optimal solution for their environment or application whether LOS (Line of Sight) or NLOS (Non-Line of Sight). Physical size and weight were key design considerations of the RidgeWave® BEC 6900, it can be mounted directly on exterior walls, chimneys, lightweight poles and used for retrofitting applications such as the replacement of older generation wireless technology.

Rugged Weatherproof Design

The RidgeWave® BEC 6900 is an industrial-grade outdoor fixed wireless router with an IP68 rated enclosure to withstand extreme weather conditions and harsh rugged deployments. In addition to outdoor, it can be installed in environments such as: manufacturing plants, industrial automation, stadiums, convention halls, stadium facilities, school campuses or virtually any venue requiring a robust wireless solution. The RidgeWave® BEC 6900 of 4G/LTE Outdoor routers create value, enable new growth opportunities and helps operators maximize network ROI.

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 Based 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. BECentral® provides access to critical information for LTE Network diagnostics and troubleshooting, such as: signal quality measurements (RSSI, RSRP, RSRQ and SINR), network status/APN, location ID and Cell ID. Additional functionality includes OTA firmware upgrades (individual or batch), multi-user account management, local network configuration settings on the RidgeWave® BEC 6900.



Designed for Challenging and Rugged Deployments

- IP68 / UL-50E hardened enclosure with industrial-grade components
- Designed for the toughest industrial environments
- Rugged compact design, deploys easily in space-constrained areas
- Electrostatic Discharge (ESD) & Surge protection
- IEEE 802.3at Power over Ethernet (PoE)

High Performance and Support for LTE FDD / TDD and 3G/2G

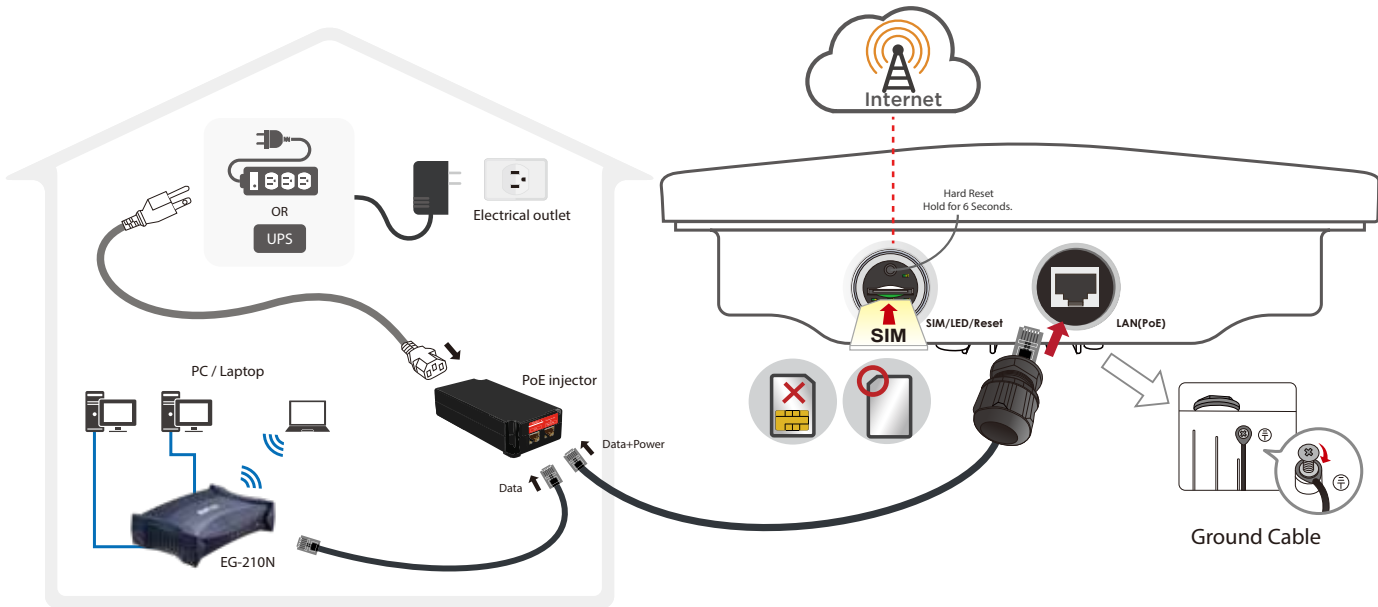
- LTE UE up to category 12 compliant with Carrier Aggregation, data rates of up to 600Mbps (DL) / 150Mbps (UL)
- Advanced IP networking functionalities including bridge and router modes
- Offer North America and Global LTE bands with 2G/3G fallback & failover option

Patented Dual-Polarization / Dual Slant Antenna Technology

- Ensure efficient bi-directional transmission for maximum bandwidth and coverage
- H-Plane & V-Plane Polarization
- Precise alignment achievable with multi-angle, multi-position pole mount brackets
- Simplicity and high isolation for stable and reliable

Package includes Gigabit PoE injector and Mounting Kit

Application Diagram



Features & Specifications

Supported Frequency Band

- **Supporting North America and Global Bands**
LTE Bands FDD, TDD & 3G/2G fallback options
(LTE Bands dependent on model variant)
- **Model: 6900 R7-Q**
CAT 4
LTE Bands: 41
- **Model: 6900 R15**
CAT 6 with 2CA DL
LTE Bands: 1-5, 7, 8, 12, 13, 20, 25, 26, 29, 30 & 41
- **Model: 6900 R17**
CAT 4
LTE Bands: 12 & 17
- **Model: 6900 R17W**
CAT 4
LTE Bands: 2, 4, 12 & 17
- **Model: 6900 R17-AF**
CAT 4
LTE Bands: 2, 4, 5, 12, 17, 14, 66 & 71
- **Model: 6900 R18 (CBRS)**
CAT 6 with 2CA DL
LTE Band: 48
- **Model: 6900R21 / 6900R21-G (CBRS)**
CAT 12 with 3CA DL and 2CA UL
LTE Band: 48
- **Channel Bandwidth**
1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz & 20MHz
- **RF Characteristics**
Maximum Transmit Power: 23 ± 2dBm
Sensitivity: -96dBm
- Web-based GUI for Configuration and Management Center
- LTE Antenna
: MIMO: 2x2, 4x2 or 4x4 (dependent of model variant)
: Directional Dual Polarization
: Gain from 5dBi ~ 16dBi (dependent of model variant)

Operational Modes

- Bridge or Routed

Network Protocols and Features

- Built-in Firewall, 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

Quality of Service Control

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

Management

- Quick Installation Wizard
- Web-based GUI for remote and local management
- Firmware upgrade and configuration data upload & download via web-based GUI
- 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
- WAN: 3G/4G LTE
- SIM Card: One (1) slot 2FF Size
- LED Indicators: Power, LAN(PoE), LTE Signal Strength and Internet

Power Specifications

- Input: PoE-PD (802.3at PD compliant (25.5W))

Operating Environment

- Operating temperature: -40°C to 70°C (-40°F to 158°F)