



FCC Part 96 Authorized

Key Features

Designed for Challenging and Rugged Deployments

- IP68 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 TDD Bands 42, 43 & 48

- Category 12 UE with Carrier Aggregation, data rates of up to 430Mbps (DL) / 20Mbps (UL)
- Advanced IP networking functionalities including bridge and router modes
- Deploy LTE Bands 42/43 now and upgrade to LTE Band 48 later
- Advanced secure VPN sessions (Optional)

Patented Dual-Polarization Antenna Technology

- Ensure efficient bi-directional transmission for maximum bandwidth and coverage
- H-Plane & V-Plane Polarization
- Simplicity and high isolation for stable and reliable connections

Ideal Use Case

- Fixed Wireless Broadband
- Last Mile Access
- Mission-critical, performance-intensive networks
- Industrial Connectivity Applications
- Urban and Rural Environments

Package includes Gigabit PoE injector and mounting kit

Overview

The RidgeWave® by BEC 6900R21 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 RidgeWave® by BEC 6900R21 is the ideal solution for industries, businesses, remote locations, residences, rural areas and the under-served.

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® by BEC 6900R21. 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® by BEC 6900R21; 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.

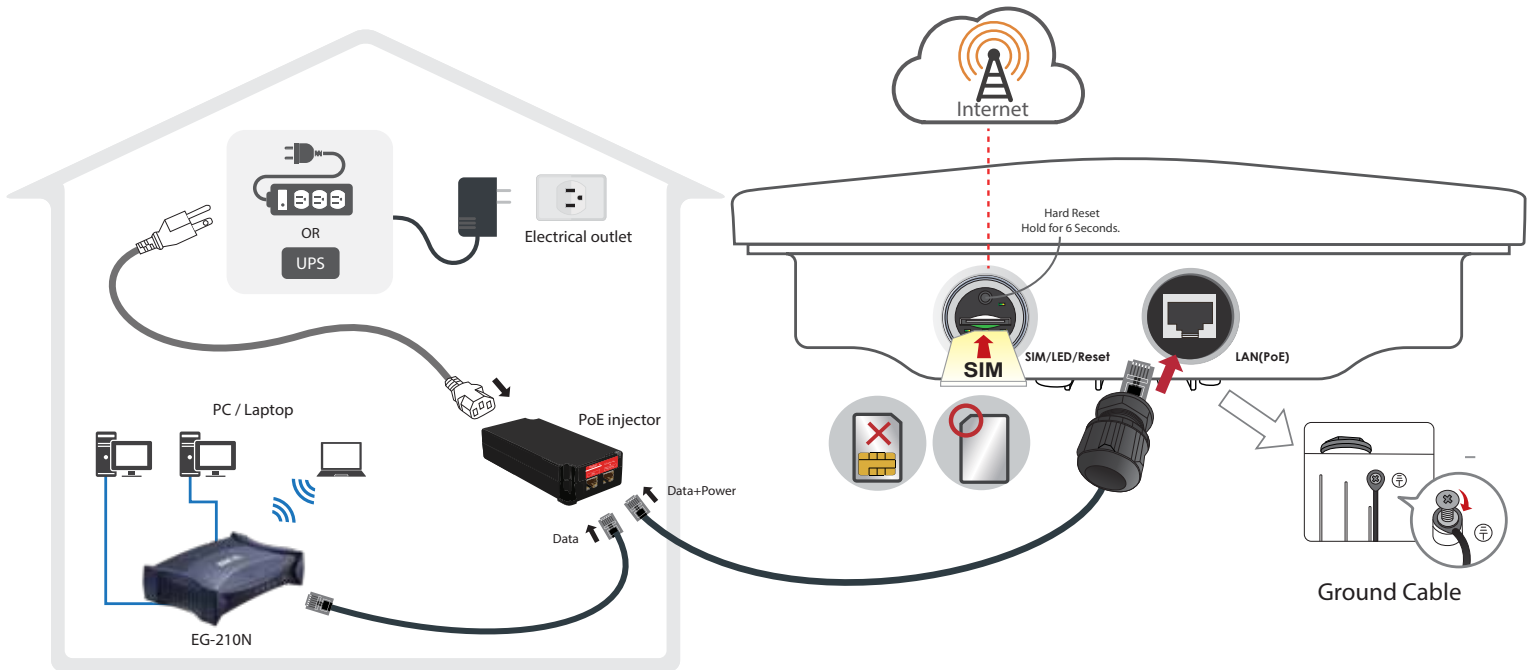
Rugged Weatherproof Design

The RidgeWave® by BEC 6900R21 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® by BEC6900R21 of 4G/LTE Outdoor routers create value, enable new growth opportunities and helps operators maximize network ROI.

Application Diagram



Features & Specifications

Supported Frequency Bands

- Comply 3GPP Rel.12 with Carrier Aggregation
- 4G/LTE: TDD (Cat.12)
 - : B42 (3400MHz ~ 3600MHz)
 - : B43 (3600MHz ~ 3800MHz)
 - : B48 (3550MHz ~ 3700MHz)
- Downlink speeds up to 430Mbps
- Uplink speeds up to 20Mbps
- Carrier Aggregation: Yes, up to 3 carriers (DL) and 2 carriers (UL)
 - : DL 2 x CA: 42 + 42, 48 + 48
 - : DL 3 x CA: 42 + 42 + 42, 48 + 48 + 48
 - : UL 2 x CA: 42 + 42
- LTE Bandwidth: 1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz & 20MHz
- Modulation: 256QAM DL / 64QAM UL
- Maximum Transmit Power 23±2dBm
- LTE Antenna
 - : MIMO Directional (Dual Polarization)
 - : 4x4 MIMO DL
 - : Gain: 15dBi ± 1dBi
 - : CPE-CBSD Category B

Operational Modes

- Bridge or Routed

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
- Supports DHCP server/client/relay

Quality of Service Control

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

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 pass-through

Management

- Web-based GUI for remote and local management
- Firmware upgrade & configuration data upload and download via web-based GUI
- BECentral® Cloud Management
- Syslog monitoring

Hardware Specifications

Physical Interface

- Gigabit LAN Interface with IEEE 802.3at compliant PoE P.D
- SIM slot (for the SIM from Telco / ISP)
- LED Indicators: Power, LAN(PoE), LTE, and Internet

Physical Specifications

- Dimensions: 12.6" (W) x 12.6" (H) x 2.91" (D)
(320mm x 320 mm x 74mm)
- Weight: < 1.5kg
- IP-68 Grade Enclosure

Operating Requirements

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