RidgeWave
by BEC

4G / LTE

LTE Carrier Aggregation

300/50 Mbps
Cat 6

IP67

Gigabit PoE

QoS

Firewall

BECentral

Key Features

High Performance
- Category 6 UE with Carrier Aggregation & data rates of up to 300Mbps (DL) /50Mbps (UL)
- Advanced IP networking functionalities including bridge and router modes
- Supporting North America and Global LTE Bands FDD, TDD & 3G/2G Fallback options (Bands depend on module configuration)

Designed for challenging/rugged deployments
- IP67 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)

Patented Dual-Pol dual polarization antenna technology ensures faster and efficient bi-directional transmission.
- H-Plane & V-Plane Polarization
- Precise alignment achievable with multi-angle, multi-position pole mount brackets
- Simplicity and high isolation for stable and reliable connections

Ideal Use Case
- 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® 6900 of 4G/LTE Outdoor routers bring secure, high performance mission-critical cellular connectivity to outside locations and harsh environments. The rugged, compact IP-67 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® 6900 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® 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 by 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
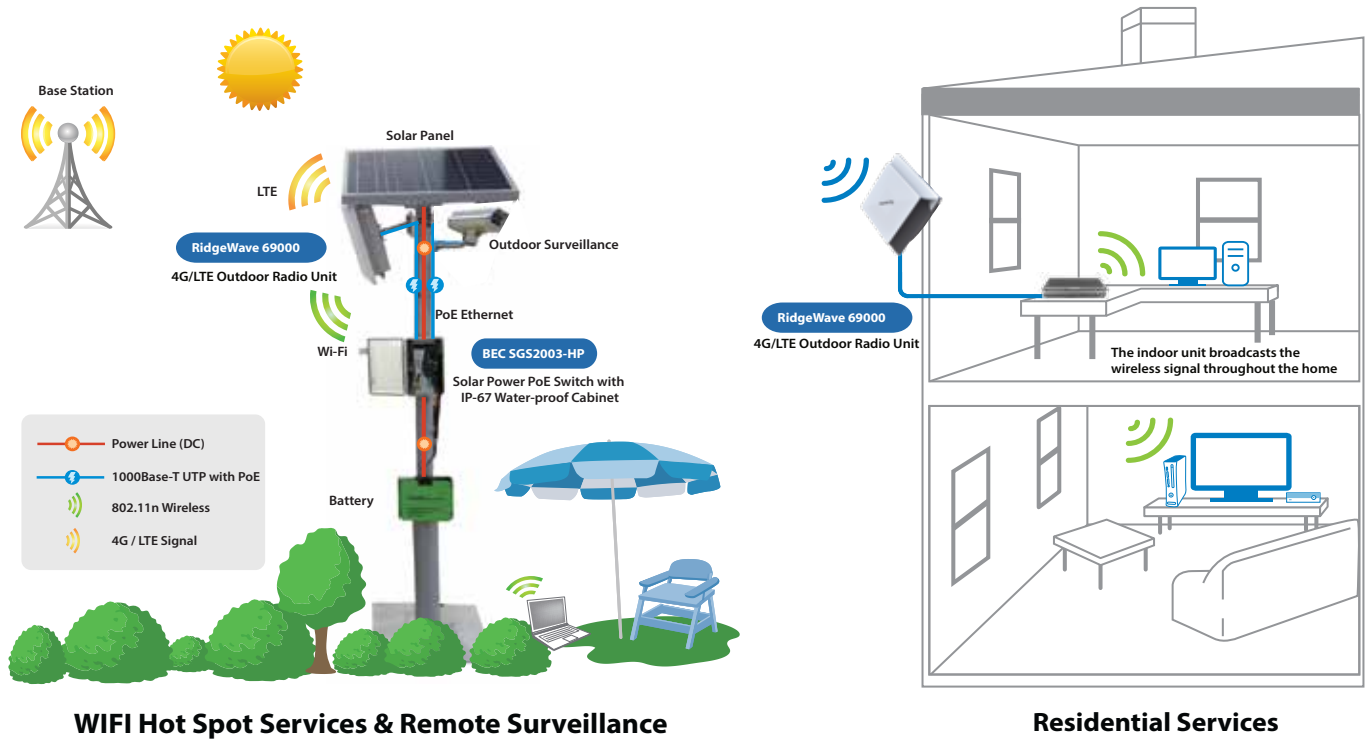
Rugged Weatherproof Design
The RidgeWave by BEC® 6900is an industrial-grade outdoor fixed wireless router with an IP67 rated enclosure to withstand extreme weather conditions and harsh rugged deployments.
In addition to outdoor, it can be installed in environments such as: manufacturing plants, industrial automation, stadiums, convention halls, stadium facilities, school campuses or virtually any venue requiring a robust wireless solution.

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

Application Diagram

WIFI Hot Spot Services & Remote Surveillance

Residential Services

Features & Specifications

Supported Frequency Bands*
- LTE Band 1   (1920–1980 MHz UL | 2110–2170 MHz DL)
- LTE Band 2   (1850–1910 MHz UL | 1930–1990 MHz DL)
- LTE Band 3   (1710–1785 MHz UL | 1805–1880 MHz DL)
- LTE Band 4   (1710–1755 MHz UL | 2110–2155 MHz DL)
- LTE Band 5   (824–849 MHz UL | 869–894 MHz DL)
- LTE Band 7   (2500–2570 MHz UL | 2620–2690 MHz DL)
- LTE Band 8   (880–915 MHz UL | 925–960 MHz DL)
- LTE Band 12 (699–716 MHz UL | 729–746 MHz DL)
- LTE Band 13 (777–787 MHz UL | 746–756 MHz DL)
- LTE Band 20 (832–862 MHz UL | 791–821 MHz DL)
- LTE Band 25 (1850–1915 MHz UL | 1930–1995 MHz DL)
- LTE Band 26 (814–849 MHz UL | 859–894 MHz DL)
- LTE Band 29 (717–728 MHz DL Only)
- LTE Band 30 (2305–2315 MHz UL | 2350–2360 MHz DL)
- LTE Band 41 (2492-2690 MHz TDD)
- UMTS/HSPA+: B1, B2, B4, B5, B8
- GSM/GPRS/EDGE (850/900/1800/1900)
- LTE FDD (Cat. 6) Data Rate: DL up to 300Mbps & UL up to 50 Mbps
- LTE Bandwidth*: 1.4, 3, 5, 10, 15, 20 MHz
- Max. Output Power: 23dBm
- Carrier Aggregation
  - DL LTE-FDD
    - 20 MHz intraband non-contiguous
    - 40 MHz interband
  - DL LTE-TDD
    - 40 MHz intraband contiguous and
      non-contiguous
    - 40 MHz interband

* Different product SKU for some band combinations

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

Operational Modes
- Bridge or Routed

Carrier Aggregation Combinations
- LTE Band 1:   1 + 8
- LTE Band 2 :   2 + 2/5/12/13/29
- LTE Band 3:   3 + 7/20
- LTE Band 4:   4 + 4/5/12/13/19
- LTE Band 5 :   5 + 2/4/30
- LTE Band 7 :   7 + 3/7/20
- LTE Band 8:   8 + 1
- LTE Band 12 : 12 + 2/4/30
- LTE Band 13:   13 + 2/4
- LTE Band 20 : 20 + 3/7
- LTE Band 30 : 30 + 5/12
- LTE Band 41:   41 + 41

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

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

Physical Specifications
- Dimensions: 8.5" (W) x 7.5" (H) x 3.0" (D) (257mm x 227 mm x 91mm)
- Weight: 1.81kg (4lbs)
- IP-67 Grade Enclosure

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