AirConnect® BEC 8232-HG

5G sub-6 GHz 2.5 GHz & 3.5 GHz Outdoor Router

3GPP Rel-16 | 5GNR sub-6 GHz | 4G LTE Cat.19 | MIMO DL 4 X 4 | Carrier Aggregation | SA Modes | IP68 | Gigabit Passive PoE | Firewall | BECentral®

Ideal Use Cases

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

The BEC AirConnect® 8232-HG 5G sub-6 GHz 2.5/3.5 GHz Outdoor Router unlocks diverse fixed wireless access (FWA) market opportunities and provides subscribers with a broadband experience surpassing your rivals.

Designed for performance, the BEC AirConnect® 8232-HG is 3GPP Release 16 compliant supporting 5G sub-6 GHz and Standalone (SA) mode and Gigabit LTE CAT 19. Invest in technology innovation from BEC that enables the delivery of extreme data speeds, lower latencies, broader coverage, and increased network capacity.
Our connectivity solutions are trusted and widely deployed to help customers broaden their service offerings create value and drive revenue growth.

Redefining Fixed Wireless Access

The BEC AirConnect® 8232-HG empowers providers with advanced 5G NR SA capabilities across on the 2.5 GHz and 3.5 GHz mid-band spectrum, achieving an ideal balance of coverage and speed. Its versatility also supports both 5G greenfield standalone networks and assisting in the transition from 4G LTE networks.

Advanced MIMO Antenna Technology

Operators need antenna technology to meet capacity and throughput demands in challenging deployment scenarios such as Fixed Wireless Access (FWA). The high-gain embedded 4X4 MIMO directional antenna ensures increased capacity, maximum bandwidth, and extended coverage.

Rugged Weatherproof Design

The BEC AirConnect® 8232-HG is built to last, fully ruggedized with industrial-grade components. Unique to BEC devices are GORE® vents for pressure equalization, humidity, and airflow, thus improving performance reliability and longevity. The enclosure is IP68/UL 50E rated for protection against dirt, water ingress, and operation in extreme temperatures. Furthermore, enhanced safety lighting/ESD protection to ensure years of dependable operation.

BECentral® CloudEdge Services

BECentral® CloudEdge is an Industry-leading cloud-based service platform designed to accelerate LTE and 5G Wireless WAN connectivity for deployments of any scale. The platform enables zero-touch provisioning and provides visual dashboards with realtime analytics, detailed reporting, historical analysis, performance monitoring, proactive alerts/notifications, and API extensibility for 3rd party integration.

High Performance & Support for 5G NR & LTE Networks

- 5G NR
  3GPP Release 16 Compliant
  SA: n41 (2496MHz ~ 2690MHz) and n48 (3400MHz ~ 3800MHz)
  sub-6 GHz CA: (TDD + TDD, 2CA)

- 4G/LTE
  LTE CAT 19 DL | LTE CAT 18 UL
  Bands: B41 (2496MHz ~ 2690MHz) and B48 (3400MHz ~ 3800MHz)
  LTE CA: 5CA DL / 2 CA UL

Patented Dual-Polarization & Dual Slant Antenna

- Embedded High-Gain 4x4 MIMO Antenna
- H-Plane & V-Plane Polarization
- Frequency Range: 2496MHz ~ 2690MHz and 3400MHz ~ 3800MHz
- Maximum Peak Gain: 12 dBi
- Ensures exceptional RF performance for maximum bandwidth and coverage
- Precise alignment achievable with multi-angle and multi-position pole mount brackets (require RT4R ODU mount)
- High isolation for stable and reliable connectivity

Designed for Challenging and Rugged Deployments

- IP68 / UL-50E 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 rated, successful operation up to 132mph (F2 Tornado Speeds)

Package includes

- 35W Passive PoE Injector (2) RJ-45 - (1) Data+Power and (!) Data
- L2PS Mounting kit (defualt) - RT4R Mount (Optional)
- Grounding Wire
- M25 Cable Glands

AirConnect® BEC 8232-HG

5G sub-6 GHz 2.5 GHz & 3.5 GHz Outdoor Router

Features & Specifications

Supported Frequency Band

- **5G NR sub-6 GHz**

: Support Frequency Band (SA) :
n41: 2496MHz ~ 2690MHz and n48: 3400MHz ~ 3800MHz
: Carrier Aggregation: sub-6 GHz (TDD+TDD, 2CA)
: Channel Bandwidth: Up to 120 MHz bandwidth
: Modulation: 256QAM DL / 256QAM UL

- **4G / LTE (CAT 19 DL / CAT 18 UL)**

: Support Frequency Bands :
B41: 2496MHz ~ 2690MHz and B48: 3400MHz ~ 3800MHz
: Carrier Aggregation: 5CA DL / 2CA UL
: Channel Bandwidth: 1.4/3/5/10/15/20 MHz
: Modulation: 256QAM DL / 64QAM UL

- **BEC SX High-Gain MIMO Antenna**

: Directional (Dual Polarization & Dual Slant)
: 4x4 MIMO DL / 2x2 MIMO UL (SA Only)
: 2T4R Antenna Chain
: 2496MHz ~ 2690MHz Maximum Peak Gain: 10 .0 ~ 11.3 dBi
: 3400MHz ~ 3800MHz Maximum Peak Gain: 10 .6 ~ 11.9 dBi

- **Transmitting Power**

:5G NR bands: Class 3 (23 dBm ±2 dB)
:5G NR HPUE Bands: n41 Class 2 (26 dBm +2/-3 dB)
:LTE bands: Class 3 (23 dBm ±2 dB)
:LTE HPUE Bands: B41 Class 2 (26 dBm ±2 dB)

- **Maximum PHY-Data Transmission Rates**

5G SA: 2.4 Gbps (DL) / 900 Mbps (UL)
5G NSA: 3.2 Gbps (DL) / 525 Mbps (UL)
LTE: 1.6 Gbps (DL) / 200 Mbps (UL)
(The presented data rates are theoretical only, and the actual value depends on network conditions.)

Quality of Service Control

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

Operational Modes

- Router or Bridge

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

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**

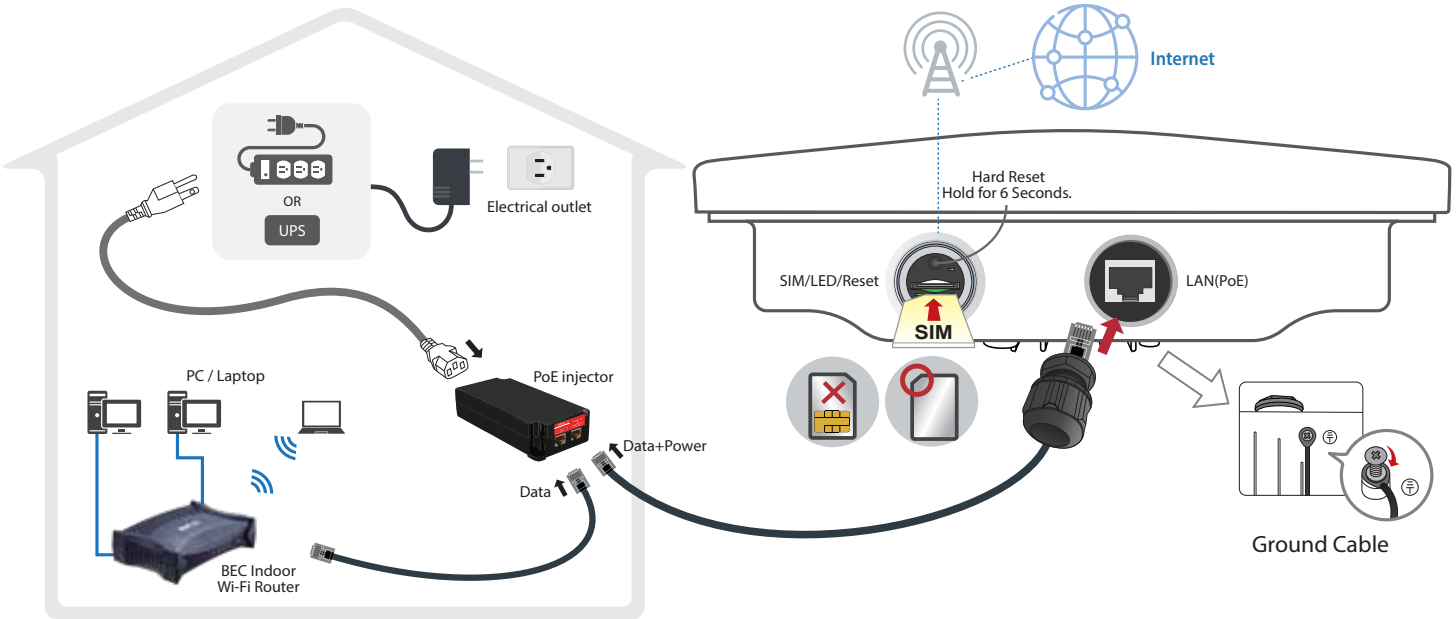
: Gigabit LAN Interface with IEEE 802.3at compliant PoE P.D (25.5W)
: SIM Card Slot: One (1), Mini SIM (2FF)
: LED Indicators: Power, LAN(PoE), LTE Signal Strength, and Internet

- **Operating Environment**

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

- **Surge/ESD Protection**

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



 Copyright © BEC Technologies, Inc. All rights reserved