AirConnect® BEC 8231

5G CBRS Outdoor Router

3GPP Rel-16 | 5GNR sub-6 GHz | 4G LTE Cat.19 | MIMO DL 4 X 4 | Carrier Aggregation

CBRS n48 SA | 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
- OnGo Certified Deployments

The BEC AirConnect® 8231 5G CBRS Outdoor Router unlocks diverse fixed wireless access (FWA) market opportunities and provides subscribers with a broadband experience surpassing your rivals. Invest in technology innovation from BEC that enables the delivery of extreme data speeds, lower latencies, broader coverage, and increased network capacity.
We are committed to driving the adoption of fixed wireless access with innovative hardware, software, and next-generation technologies such as 5G n48 SA. Our connectivity solutions are trusted and widely deployed to help businesses broaden their service offerings, create value and drive revenue growth.

OnGo

Redefining Fixed Wireless Access

The AirConnect® 8231 allows providers to reap the most beneficial and anticipated capabilities of 3GPP Release 16 compliant 5G NR over n48 CBRS shared spectrum. In addition, the platform is designed for pure 5G greenfield standalone networks yet offers the flexibility and migration path of existing 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 embedded 4X4 MIMO directional antenna delivers a maximum of 38 dBm EIRP ensuring increased capacity, maximum bandwidth, and extended coverage.

Rugged Weatherproof Design

The AirConnect® by BEC 8231 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 real-time 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
  : 5G SA (Standalone) Operation
  : sub-6 GHz carrier aggregation

- 4G/LTE Cat.19
  : LTE: 5CA DL / 2CA UL (Carrier Aggregation)
  : Peak Data Rate: 1.6Gbps (DL) / 200Mbps (UL)
- Advanced IP networking functionalities including bridge and router modes
- Advanced secure VPN sessions (Optional)

Patented Dual-Polarization & Dual Slant Antenna

- Embedded High-Gain 4x4 MIMO Antenna
- H-Plane & V-Plane Polarization
- Frequency Range: 3400 - 3800 MHz
- Peak Gain: 15.5dBi ± 1dBi
- Ensures exceptional RF performance for maximum bandwidth and coverage
- Precise alignment achievable with multi-angle and multi-position pole

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
- L2PS Mounting kit
- Grounding Wire
- M25 Cable Glands
- Mylar film SIM Protection

AirConnect® BEC 8231

5G CBRS Outdoor Router

Features & Specifications

Compliance

- 3GPP Release 16
- FCC Part 96 CAT B CPE-CBSD
- OnGo Certified

Supported Frequency Band

- **5G NR sub-6 GHz**
  : Support Frequency Range 1 Band (SA): n48
  : Carrier Aggregation: sub-6 GHz (TDD+TDD)
  : Channel Bandwidth: 10MHz, 20MHz & 40 MHz
  : Modulation: 256QAM DL / 256QAM UL

- **4G / LTE (CAT 19 DL / CAT 18 UL)**
  : Support Frequency Bands (TDD): B48
  : Carrier Aggregation: 5CA DL / 2CA UL
  : Channel Bandwidth: 5MHz, 10MHz, 15MHz & 20MHz
  : Modulation: 256QAM DL / 64QAM UL

- **BEC SX High-Gain MIMO Antenna**
  : Directional (Dual Polarization & Dual Slant)
  : 4x4 MIMO DL / 2x2 MIMO UL
  : 2T4R Antenna Chain
  : Gain: 15.5dBi ± 1dBi
  : Maximum Transmit Power: 38dBm EIRP

Quality of Service Control

- Supports the DiffServ approach
- Traffic 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

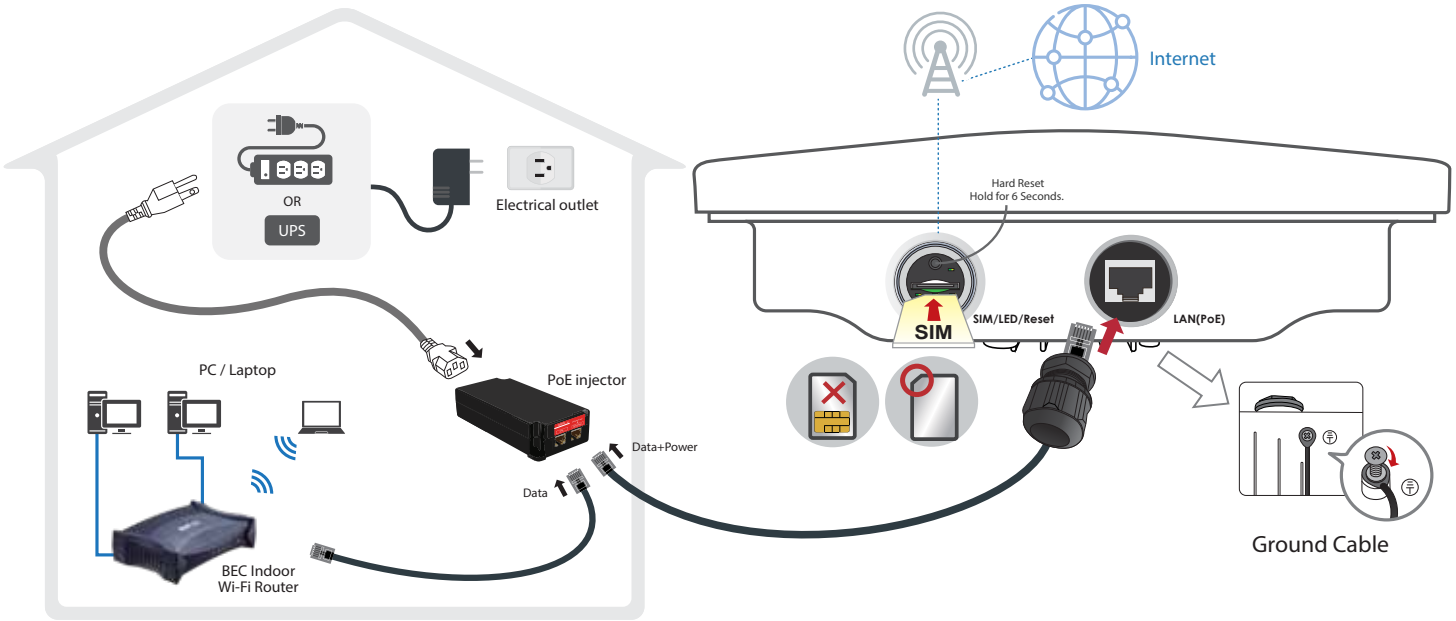
- Quick Installation Wizard
- Web-based GUI for remote and local management
- Firmware upgrade and configuration data upload & download via web-based GUI or BECentral®
- DHCP server/client/relay
- TR-069 supports remote management
- BECentral® Cloud Management
- SNMP and Syslog monitoring

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



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