BEC 8230

LTE/5G NR Dual Mode Outdoor Router

AIRCONNECT by BEC TECHNOLOGIES

Ideal Use Cases

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

LTE / 5G NR Dual Mode Outdoor Router

The AirConnect® by BEC 8230 of LTE/5G NR Dual Mode Outdoor Router adapts the latest fifth-generation of mobile network technology, 5G Sub-6 GHz and 4G/LTE new radio dual-connectivity. The BEC 8230 integrates high-gain MIMO antenna technology to increase transmission efficiency and extend distance coverage in the line-of-sight (LOS) networks. By supporting both 5G SA and NSA network modes, the BEC 8230 can deliver faster internet connectivity and also use 4G/LTE as alternative whereas the areas do not have the 5G network ready. The BEC 8230 simplifies implementation, increase deployment flexibility, boost network performance, and most importantly, it will bring you a whole new 5G NR internet experience.

New 5G Radio Technology Overthrow Your Imagination

BEC 8230 supports 4G/LTE and 5G Sub-6 GHz with dual connectivity modes, stand-alone access (SA) fully benefiting from all the 5G capabilities and non-standalone access (NSA) attached to a 4G/LTE network up to speed of gigabit to ensure a quick and flexible adaptation to any LTE or 5G NR networks.

Innovative MIMO Antenna Technology

Operators need innovative antenna technology to meet capacity and throughput demands in challenging deployment scenarios such as Fixed Wireless Access (FWA). The MIMO high-gain embedded dual-polarization/dual slant antenna technology ensures faster and efficient bi-directional transmission for maximum bandwidth and coverage. .

Rugged Weatherproof Design

The AirConnect® by BEC 8230 is built to last, fully ruggedized with industrial-grade components. Unique to BEC devices are GORE® Vents for pressure equalization, humidity, and airflow, this accompanied with lighting/ESD Protection and the IP68/UL 50E enclosure ensure protection against dirt, harmful ingress of water and extreme temperatures for years of dependable operation.

24/7 Cloud Management and Network Visibility

The BEC 8230 integrates seamlessly with BECentral®, BEC's cloud-based remote management platform as a complete solution, for managing large-scale UE deployments. Administrators can remotely provision, monitor, upgrade, and troubleshoot devices from a single centralized location in real-time. BECentral® extends network visibility with RF signal measurements, historical analysis/charts, proactive alerts/notifications, connectivity management, and well-defined API to facilitate application development or integration into other platforms.

Designed for Challenging and Rugged Deployments

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

High Performance and Support for 4G/LTE and 5G NR Networks

- 5G NR
  : 3GPP Release 15 NSA/SA Operation, Sub-6 GHz
  : SA (Max.) DL 2.1Gbps (DL) / 900Mbps (UL)
  : NSA (Max.) DL 2.5Gbps (DL) / 650Mbps (UL)
- 4G/LTE Cat.16 (Max.) 1Gbps (DL) / 200Mbps (UL)
  : 3 x CA (Carrier Aggregation) RF bandwidth
- Advanced IP networking functionalities including bridge and router modes
- Advanced secure VPN sessions (Optional)

Patented Dual-Polarization / Dual Slant Antenna Technology

- Embedded High-Gain 4x4 MIMO Antenna
- H-Plane & V-Plane Polarization
- Ensures exceptional RF performance for maximum bandwidth and coverage
- Precise alignment achievable with multi-angle, multi-position pole mount brackets
- High isolation for stable and reliable connectivity

Package includes Gigabit PoE injector and Mounting Kit

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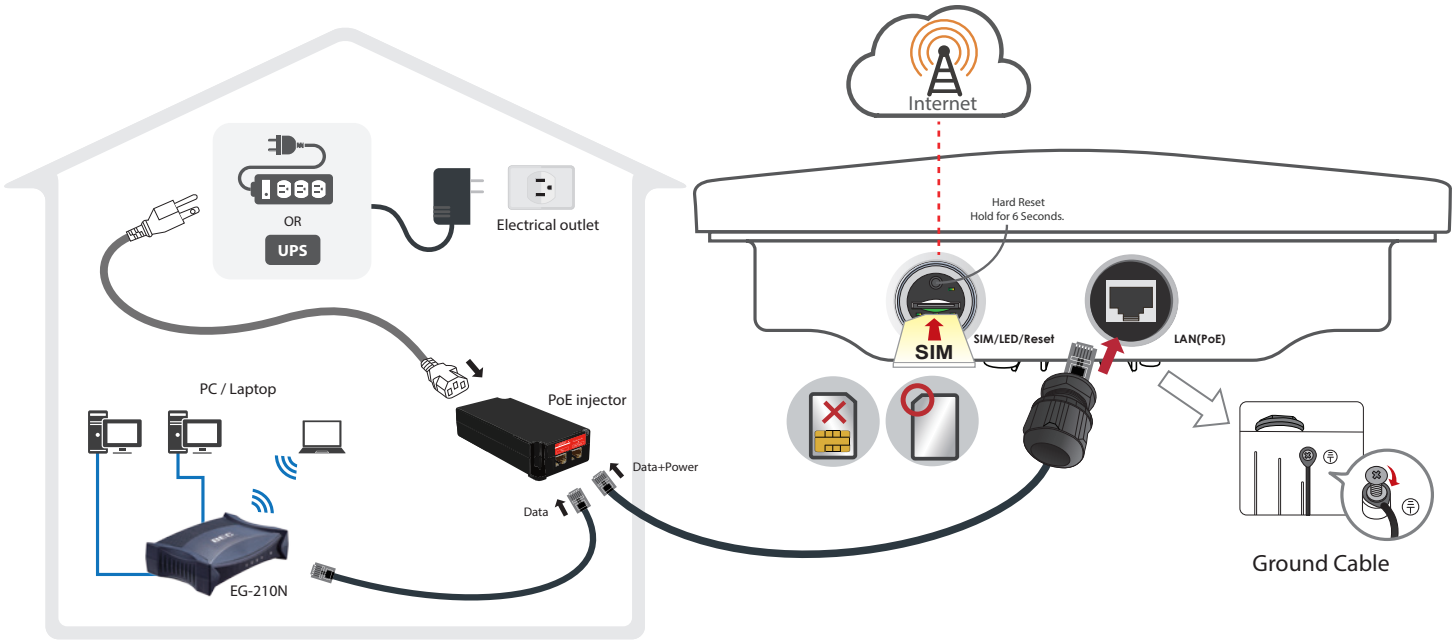
Application Diagram



Features & Specifications

Supported Frequency Band

- **5G NR Sub-6 GHz**
  : Comply 3GPP Rel.15
  : Support Frequency Bands (FDD & TDD)
  - 5G NSA: n41 / n77 / n78
  - 5G SA: n1 / n2 / n3 / n5 / n7 / n8 / n12 / n20 / n25 / n28 / n38 / n40 / n41 / n48 / n66 / n71 / n77 / n78

- **4G / LTE (Cat.16)**
  : Support Frequency Bands (FDD & TDD)
  : FDD: B1 / B2 / B3 / B4 / B5 / B7 / B8 / B12 / B13 / B14 / B17 / B18 / B19 / B20 / B25 / B26 / B28 / B29 / B30 / B32 / B66 / B71
  : TDD: B34 / B38 / B39 / B40 / B41 / B42 / B43 / B48

- **Data Transmission**
  5G NSA: DL 2.1Gbps / UL 900Mbps
  5G SA: DL 2.5Gbps / UL 650Mbps
  LTE: DL 1.0Gbps / UL 200Mbps

- **4G/LTE/5G SX Antenna**
  : 2x2 and 4x4 MIMO Directional (Dual Polarization & Dual Slant)
  : Frequency Range: 617-698MHz, 1710-2170MHz, 2300-2690MHz, and 3400-4000MHz
  : Peak Gain up to 9dBi 4x4 MIMO
  : 4x4 MIMO
  5G DL: n1/n2/n3/n7/n25/n38/n40/n41/n48/n66/ n77/n78
  LTE DL: B1/B2/B3/B4/B7/B25/B30/B38/B39/B40/B41 B42/B43/B48/B66
  : 2x2 MIMO
  5G UL: n41/n77/n78
  LTE DL: B5/B8/B12/B13/B14/B17/B18/B19/B20/B26 B28/B29/B32/B71. UL: All other bands
- 4G/5G Management Center in web-based GUI

Quality of Service Control

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

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

Operational Modes

- Router or Bridge

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 60°C (-40°F to 140°F)

Surge/ESD Protection

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