8235
5G NR High-Capacity Outdoor Router

BEC by *BILLION*

5GNR sub-6 GHz	**4G LTE Cat.19**	**NSA / SA** Modes	**2FF SIM Card**	**eSIM** Optional	**2.5 Gigabit**
IP68	**PoE(PD)**	**VPN**	**Firewall**	**TR-069**	**BECentral® CloudEdge**

Ideal Use Cases
- Fixed Wireless Broadband
- An Alternative Solution for Last Mile Access
- Mission-Critical & Performance Intensive Networks
- Industrial Connectivity Applications
- Suburban and Rural Environments

The 8235 5G NR High-Capacity Outdoor Router unlocks diverse fixed wireless access (FWA) market (* Sub urban area) opportunities and provides subscribers with a broadband experience surpassing your rivals. Designed for performance, the 8235 is 3GPP Release 16 compliant, supporting 5G sub-6 GHz Non-Standalone (NSA) and Standalone (SA) modes and CAT 19.
Invest in technology innovation from BEC by BILLION 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 off.

Redefining Fixed Wireless Access
The 8235 supports 5G Sub-6 GHz and 4G/LTE with dual connectivity modes, standalone access (SA) fully benefiting from all the 5G capabilities, and non-standalone access (NSA) attached to a 4G network up to a gigabit speed to ensure a quick and flexible deployment to any 5G NR or LTE network.

Rugged Weatherproof Design
The 8235 is built to last, fully ruggedized with industrial-grade components. Unique to devices are GORE® vents for pressure equalization, humidity, and airflow, thus improving performance reliability and longevity. The enclosure is IP68 rated for protection against dirt, water ingress, and operation in extreme temperatures. Furthermore, enhanced safety lighting/ESD protection ensures years of dependable operation.

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 4×4 MIMO DL / 2×2 MIMO UL directional antenna ensures increased capacity, maximum bandwidth, and extended coverage.

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: 7 Gbps (DL) / 2500 Mbps (UL)
  NSA: 5.6 Gbps (DL) / 900 Mbps (UL)

- **4G/LTE (CAT 19)**
  : LTE: 5CA DL / 2CA UL (Carrier Aggregation)
  : Peak Data Rate: 1.6 Gbps (DL) / 200 Mbps (UL)
  (The presented data rates are theoretical only, and the actual value depends on network conditions.)

Patented Dual-Polarization & Dual Slant Antenna

- Embedded High-Gain 4×4 MIMO DL / 2×2 MIMO UL Antenna
- H-Plane & V-Plane Polarization
- Ensures exceptional RF performance for maximum bandwidth and coverage
- Precise alignment achievable with multi-angle and multi-position pole mount brackets
- High isolation for stable and reliable connectivity

Designed for Challenging and Rugged Deployments

- IP68 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

Package includes Gigabit PoE injector and Mounting Kit

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Features & Specifications

Supported Frequency Band*1

- **5G NR sub-6 GHz (3GPP Rel-16)**
  EU version:
  NSA/SA: n1, n3, n5, n7, n8, n20, n28, n38, n40, n41, n75, n77, n78
  NA version:
  NSA: n2, n5, n7, n12, n13, n14, n25, n26, n30, n38, n41, n48, n66, n70, n71, n77, n78
  SA: n2, n5, n7, n12, n13, n14, n25, n26, n29, n30, n38, n41, n48, n66, n70, n71, n77, n78
  Carrier Aggregation:
  4CA DL / 2CA UL

- **4G LTE (CAT 19 DL / CAT 18 UL)**
  EU version:
  FDD: B1, B3, B5, B7, B8, B20, B28, B32
  TDD: B38, B40, B41, B42, B43
  NA version:
  FDD: B2, B4, B5, B7, B12(17), B13, B14, B25, B26, B29, B30, B66, B71
  TDD: B38, B41, B42, B43, B48
  Carrier Aggregation:
  5CA DL / 2CA UL

Network Protocols and Features

- IPv4, IPv6*2
- Dual APN*2
- Keep Alive
- NAT, Virtual Server, and DMZ
- Static Routing, Dynamic Routing (RIP-1/2)
- SNTP, DNS relay
- Universal Plug & Play (UPnP)
- Supports DHCP server/ client

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
- VPN pass-through

Management

- Password protection for system management
- Web-based GUI for remote and local management
- Firmware upgrade and configuration data backup and restore via Web-based GUI
- TR-069(CWMP)*2, SNMP
- Syslog monitoring
- BECentral® Cloud-Based Remote Management

Hardware Specifications
Physical Interface

- 2.5Gigabit Ethernet port (w/ 802.3at PoE PD) x1(One)
- Embedded eSIM x1(One Optional)*2
- 2FF mini-SIM slot x1(One)
- Reset Button x1(One)
- LED Indicators: Power/Boot, LAN(PoE), 5G Signal, Internet
- Wi-Fi 802.11n 2.4GHz 1x1 (for Installation only)
- Grounding connector x1(One)
- Vent x1(One)

External Connector

- One(1) Ethernet port: RJ-45
- One(1) SIM slot: 2FF mini-SIM
- One(1) Grounding connector
- One(1) Vent

IP Rating

- IP68 grade enclosure

Power Requirements

- PoE 802.3at(PD)

Physical Specifications

- Dimensions: 321 x 210 x 77.6mm
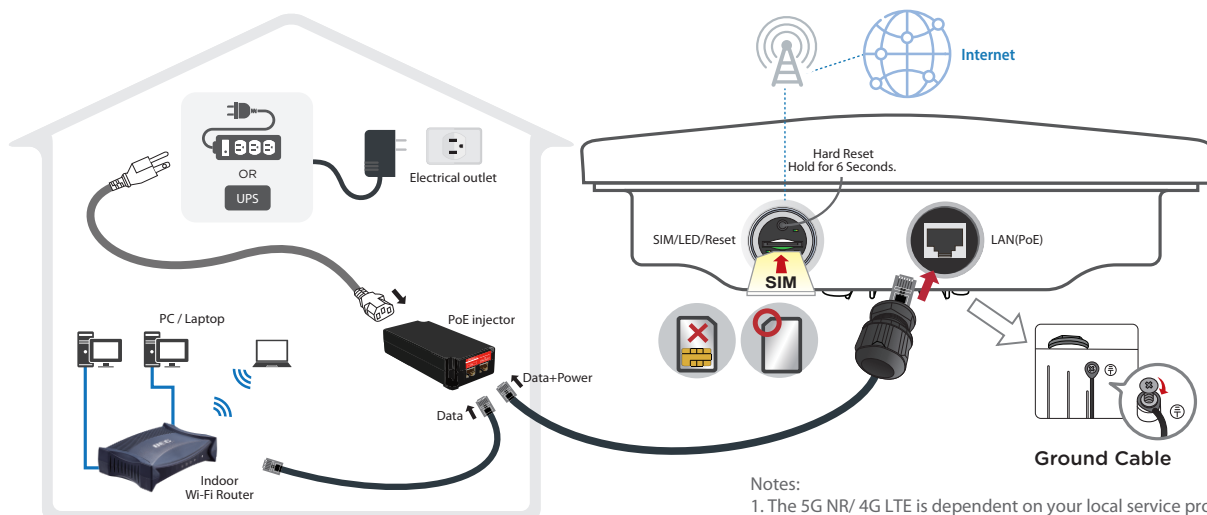
Mounting

- Pole mount, Wall mount

Operating Requirements

- Operating: -40°C to 60°C

Surge/ESD Protections

- Surge Protection: K.21 common mode ±6KV
- ESD Protection: IEEE 61000-4-2 Contact: ±8KV / Air: ±15KV

Electrical outlet

OR / UPS

PC / Laptop

PoE injector

Data+Power

Data

Indoor Wi-Fi Router

Internet

Hard Reset Hold for 6 Seconds.

SIM/LED/Reset

SIM

LAN(PoE)

Ground Cable

Notes:
1. The 5G NR/ 4G LTE is dependent on your local service provider.
2. Only upon request for Telco/ ISP tender projects.
3. Specifications in this datasheet are subject to change without prior notice.