4G/LTE Outdoor Router

with Carrier-Grade Wi-Fi Hotspot

BEC 4700AZ

BEC TECHNOLOGIES

4G / LTE	300/50 Mbps Cat6	LTE Carrier Aggregation	((AC)) 802.11ac	MU-MIMO	Hotspot
Gigabit LAN / WAN	IP68	PoE	IPv6 Support	Firewall	BECentral

Key Features

BEC SX-Series Wideband Adaptive Antenna
- Embedded Polarized multi-element design
- Supporting North America and Global LTE Bands FDD, TDD & 3G/2G Fallback options (Bands depend on module configuration)
- Category 3 and Category 6 models with Carrier Aggregation

High performance and Network Resilience
- Offers 4G/LTE broadband connectivity (3G Fallback is optional)
- Multi-WAN interfaces: 4G/LTE, Wi-Fi WAN, Gigabit EWAN for network resilience and reliable connectivity

Carrier-Grade Wireless-LAN
- High-Power Design
- Simultaneous Dual Band Wi-Fi
- Six external Omni-direction N-Type MIMO Antennas
- Supports Wi-Fi Multimedia (WMM) wireless QoS
- MSSID with Client Operation
- Multiple Operation Modes: Access Point, Client, and Bridge

Designed for Challenging/Rugged Deployments
- IP68 hardened enclosure with Industrial-grade components
- Gore® Vent technology integration
- Designed for the toughest industrial environments
- Rugged compact design, deploys easily in space constrained areas
- Electrostatic Discharge (ESD) & Surge protection

BECentral® Cloud Management
- BECentral® (BEC's Cloud Based Remote Management) to extend network visibility and control of devices remotely
- Simplified cloud complexity - easy to deploy, manage and control
- Enhance security for accessing BECentral® portal

Ideal Use Case
- Boat Marina
- Campgrounds/RV Parks / Public Park
- Urban Space
- Remote Connectivity

Package includes Gigabit PoE injector and Mounting Kit

Top

Bottom

Overview
BEC 4700AZ 4G/LTE Outdoor Router with 802.11ac integrated with the latest generation of Mobile Wireless and Wi-Fi technologies, 4G/LTE and 11ac Wave 2 with dual-band Wi-Fi hotspot, to provide Internet service over cellular network and support secure data transfer & customized guest Wi-Fi networks outdoor.

BEC 4700AZ is purpose-built to extend and secure the Internet access via ultra-fast 4G/LTE network to outside locations, and temporary sites such as fair/sport/conference, boat marine, campground / RV parks, public parks, urban space, etc., where the fixed broadband connectivity is not available. Network operators can benefit from the BEC 4700AZ by providing new business models, building differentiated services and exploring new revenue generating opportunities.

Innovative LTE Antenna Design
BEC 4700AZ integrates the BEC SX-Series wideband multi element adaptive antenna design into a single compact housing which provides improved signal quality, increased signal range, coverage and increased data transfer rates across multiple frequency bands. The antenna allows service providers to select the optimal solution for their environment or application whether LOS (Line of Sight) or NLOS (Non-Line of Sight).

New Experience with Wi-Fi Speed and Coverage
With the next wireless generation, 802.11ac, integrated in the BEC 4700AZ, the router delivers fast Wi-Fi speeds of up to 2000Mbps. The BEC 4700AZ supports a link rate up to 300Mbps in 2.4GHz frequency range & 1700Mbps in 5GHz range and is also backward compatible with existing 802.11 a / b / g / n wireless equipment in the network. The Wireless Protected Access (WPA-PSK/WPA2-PSK) and Wireless Encryption Protocol (WEP) features enhance the level of transmission security and access control over Wireless LAN. BEC 4700AZ also supports the Wi-Fi Protected Setup (WPS) standard for easy and secure establishment of a wireless home network. If the user's network requires wider coverage, the built-in Wireless Distribution System (WDS) repeater function expands the wireless network without needing any external wires or cables.

Rugged Weatherproof Design
BEC 4700AZ is an industrial-grade outdoor fixed wireless router with an IP68 rated enclosure to withstand extreme weather conditions, harsh rugged environments, humidity and extreme temperatures for years of dependable operation.   In addition, built-in 8000V lightning and 15KV ESD protection design protects against storm/lightning surges and ensuring robust and reliable operation.

Application Diagram
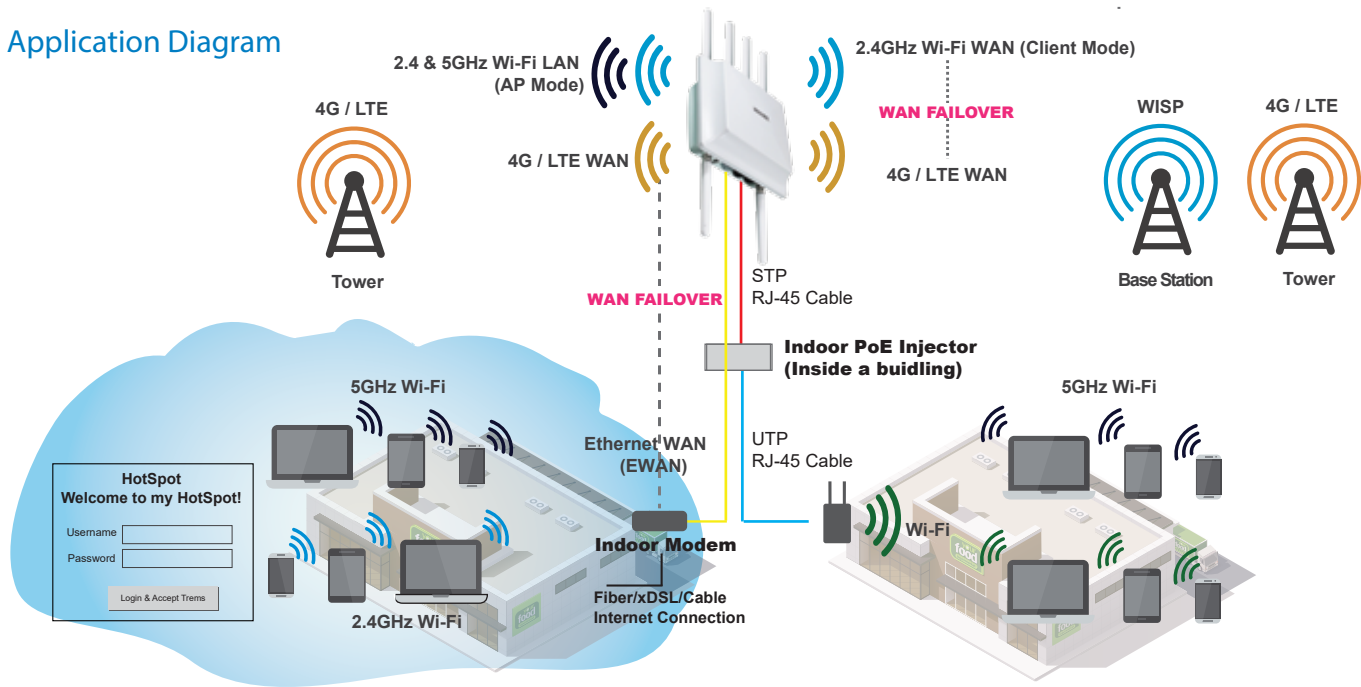
Scenario #1
WANs: 4G/LTE and Ethernet WAN of 4700AZ
LAN: Wi-Fi Hotspot (2.4GHz) and Wi-Fi Emplyee (5GHz) of 4700AZ

Scenario #2
WANs: Wi-Fi (2.4GHz)
LAN: Wi-Fi (5GHz) of 4700AZ and Ethernet of Indoor Modem

(4700AZ to PoE) Outdoor-rated STP CAT5e RJ-45 Ethernet Cable	(Indoor Modem to Fiber/xDSL/Cable Connection) Indoor-rated UTP RJ-45 Ethernet Cable	
(PoE to Indoor Modem) Indoor-rated UTP RJ-45 Ethernet Cable	(LTE WAN (4700AZ) to EWAN (4700AZ) Auto-WAN Failover Technology	
(EWAN(4700AZ) to Indoor Modem) Outdoor-rated STP CAT5e RJ-45 Ethernet Cable		

Features & Specifications

Supported Frequency Bands
- LTE Bands: 1, 2, 3, 4, 5, 7, 8, 12, 13, 20, 25, 26, 29, 30, 41
- WCDMA: B1, B2, B3, B4, B5, B8
- Cat. 6 Data Rate: 300Mbps(DL) & 50Mbps(UL)
- LTE Bandwidth: 5, 10, 15, 20 MHz
- Max. Output Power: 23dBm
- Transmit Power: +23dBm
- Sensitivity: -96dBm

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

LTE Antenna
- Embedded MIMO Directional
- Gain: Wideband (6~8dBi)

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, URL Filtering
- Password protection for system management
- VPN pass-through

Operational Modes
- Bridge or Routed

Network Protocols and Features
- IPv4, IPV6 or IPv4 / IPv6 Dual Stack
- DHCP v4 / v6
- NAT, static (v4/v6) routing and RIP-1/2
- NAT supports PAT and multimedia applications
- Dynamic Domain Name System (DDNS)
- Virtual server and DMZ
- SNTP, DNS proxy
- IGMP & MLD snooping and IGMP & MLD proxy
- Transparent Bridging

Quality of Service Control
- Supports the DiffServ approach
- Traffic prioritization based-on protocol, port number and IP address
- 802.11e WMM (Wireless Multimedia)

Carrier Grade Wireless LAN
- Compliant with IEEE 802.11 a/b/g/n/ac standards
- 2.4GHz & 5GHz frequency range
- 20/40-MHz channel bandwidth
- Up to 300Mbps (2.4GHz) & 1700Mbps (5GHz) wireless data phy rate
- 64/128 bits WEP supported for encryption
- Wireless security with WPA-PSK, WPA2-PSK, Mixed WPA/WAP2-PSK, (TKIP/AES), 802.1x/Radius
- AP, Client, and Bridge(WDS) Operational Modes
- Multiple SSID (4 SSIDs), BSSID
- Wireless MAC filtering, Wireless Client Isolation
- Dynamic, Wi-Fi client rate-limiting

Wi-Fi Antennas
- (2) External 2.4GHz N-Type Antennas
- (4) External 5GHz N-Type Antennas

Management
- Web-based GUI for remote and local management
- Universal Plug & Play (UPnP)
- Access control by services or protocols
- Firmware upgrade and configuration data upload and download via web-based GUI
- Network Time Protocol (NTP)
- Physical layer/protocol diagnostic test tool
- Syslog monitoring
- Supports SNMP v1/v2/v3, MIB-1 and MIB-II
- BECentral® Cloud Management

Hardware Specifications
Physical Interface
- (2) Gigabit Ethernet Interfaces
- IEEE 802.3at PD complaint (25.5W)
- (6) Wireless N-Type Connectors with arrester
- SIM slot (for the SIM from Telco / ISP)
- Reset Button
- LED Indicators: Power/Boot, LAN(PoE), EWAN, WI-FI, LTE RSSI, and Internet

Physical Specifications
- Dimensions: 12.6" (W) x 12.6" (H) x 3.46" (D) (320mm x 320mm x 88mm)
- Weight: 2kg (4.4lbs)
- Industrial-grade IP68 and Vent integration enclosure
- Top cover material UL-746C compliant for UV-resistant

Temperature Requirements
- Operating: -40° ~ 60°C (-40º~140ºF)
- Storage: -40° ~ 65°C (-40º~149ºF)

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