

NeutrinoE224

Indoor Base Station Datasheet

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INTRODUCTION

The NeutrinoE224 is an indoor 2x125mW picocell eNodeB (eNB), which offers lower cost access for indoor user equipment (UE) and solve indoor blind area problem and enhance the hotspot capacity. It is specifically used in family, small enterprise, and other indoor scenarios. As with all Baicells products, the NeutrinoE224 supports Long-Term Evolution (LTE) technology, and it operates in Frequency Division Duplexing (FDD) mode.

With high capacity and easy deployment, the NeutrinoE224 FDD series eNB can help mobile operators to provide better coverage and higher capacity with lower network deployment cost and operating expense (OPEX).

This product comes with a standard one-year warranty; an extended warranty is available.

HIGHLIGHTS

NOTE: Features can vary based on model or region.

- Standard LTE FDD Bands 1/2/3/5/7/8
- GUI-based local and remote Web management
- Compact, all-in-one design of internal antenna
- Any IP based backhaul can be used, including public transmission protected by Internet Protocol Security (IPsec)
- Peak rate: Up to DL 150Mbps and UL 50Mbps with 20MHz bandwidth
- 32 RRC connected users
- PoE+ power supply; only one Ethernet cable required for data transmission and power supply
- Configured out of the box to work with Baicells Cloud Core
- Inter operation with all standard LTE Evolved Packet Core (EPC)
- Lower power consumption to reduce OPEX
- Support TR-069 network management interface

TECHNOLOGY

Standard	LTE FDD RAN (3GPP R10 compliant)
Frequency Band	B1 (UL: 1920MHz-1980MHz, DL: 2110MHz-2170MHz) B2 (UL: 1850MHz-1910MHz, DL: 1930MHz-1990MHz) B3 (UL: 1710MHz-1785MHz, DL: 1805MHz-1880MHz) B5 (UL: 824MHz-849MHz, DL: 869MHz-894MHz) B7 (UL: 2500MHz-2570MHz, DL: 2620MHz-2690MHz) B8 (UL: 880MHz-915MHz, DL: 925MHz-960MHz)
Channel Bandwidth	Band1/2/3/7: 5/10/15/20 MHz Band5/8: 5/10 MHz
Multiplexing	MIMO: 2x2 (DL)
Security	Radio: SNOW 3G/AES-128/ZUC Backhaul: IPsec (X.509 AES-128, AES-256, SHA-128, SHA-256)

INTERFACE

Ethernet Interface	One RJ-45 Ethernet backhaul interface (1 GE) and one RJ-45 local Mgmt. interface (1 GE)
Power Supply	12VDC, AC adaptor (multiple standards optional), PoE+, comply with IEEE 802.3at standard
Protocols Used	IPv4/IPv6 (Dual Stack), UDP, TCP, ICMP, NTP, SSH, IPsec, TR-069, HTTP/HTTPS, 1588v2, DHCP
Network Management	IPv4/IPv6, HTTP/HTTPS, TR-069, SSH, Embedded EPC
VLAN/VxLAN	802.IQ/VxLAN
LED Indicators	3 X STATUS LED PWR/LTE/ALM

PERFORMANCE

Peak Data Rate	20MHz: DL 150Mbps, UL 50Mbps 10MHz: DL 75Mbps, UL 25Mbps
User Capacity	32 RRC connected users
Latency	30 milliseconds
Receive Sensitivity	-101dBm

Modulation	MCS0 (QPSK) to MCS28 (64QAM) DL: QPSK, 16QAM, 64QAM UL: QPSK, 16QAM
Transmit Power Range	0 to 21 dBm per channel (combined +24dBm, configurable) (1 dB interval)
Quality of Service	Nine-level priority indicated by QoS Class Identifiers (QCI)
ARQ/HARQ	Supported
Synchronization	GPS, 1588v2, network listening (NL)

FEATURES

Voice	VoLTE, Circuit Switched Fallback (CSFB) to GSM and UTRAN
Inter-RAT Mobility	To GSM, UTRAN and 5G NSA/SA
SON	Self-Organizing Network - Automatic setup - Automatic Neighbor Relation (ANR) - PCI confliction detection
EPC	HaloB (Embedded EPC)
Traffic Offload	Local breakout
UL Interference Detection	Supported
Maintenance	- Local/Remote Web maintenance - Online status management - Performance statistics - Fault management - Local/Remote software upgrade - Logging - Connectivity diagnosis - Automatic start and configuration - Alarm reporting - User information tracing

LINK BUDGET

Antenna Type	Built-in Omni Antenna - Horizontal Beamwidth 360° - Vertical Beamwidth 45°±5 - Polarization: Vertical
RF Antenna Gain	5 dBi @Band7

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	4 dBi @Band1/2/3 2 dBi @Band5/8
Maximum EIRP	29 dBm @Band7 28 dBm @Band1/2/3 26 dBm @Band5/8
Power Control	UL Open-loop/Closed-loop Power Control, DL Power Allocation (3GPP TS 36.213 compliant)

PHYSICAL

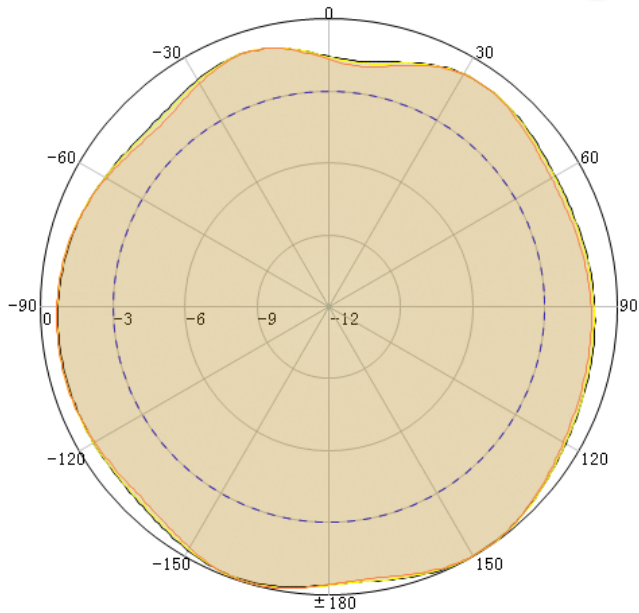
MTBF	≥ 150000 hours
MTTR	≤ 1 hour
Operating Temperature	23°F to 113°F / -5°C to 45°C
Storage Temperature	14°F to 122°F / -10°C to 50°C
Humidity	5% to 95% RH
Power Consumption	Typical 11.25W, maximum 15W
Weight	1.3 lbs / 570g
Dimensions (HxWxD)	8.3 x 8.3 x 1.9 inches 210 x 210 x 45 millimeters
Installation	Ceiling or wall mount, or desktop

MODEL NUMBERS

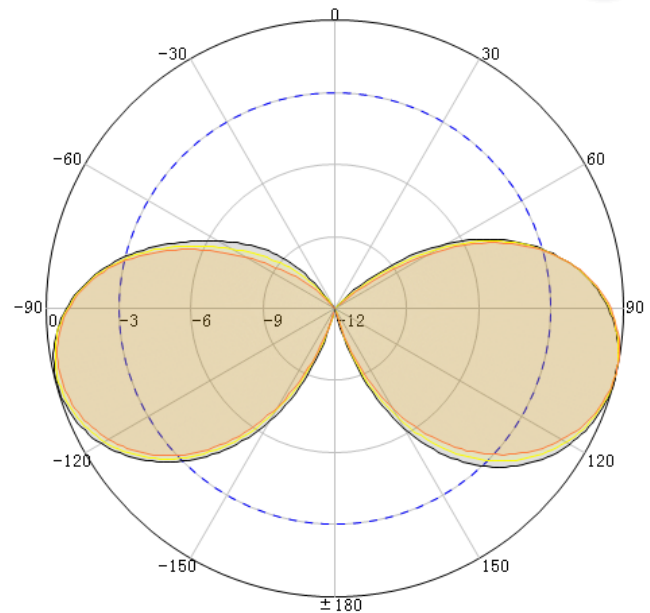
pBS42012	NeutrinoE224 indoor FDD eNB – LTE Release 10, 2x125mW (21 dBm), 2GE, 4 dBi internal antenna, UL1920–1980MHz/DL2110–2170MHz, B1
pBS42040	NeutrinoE224 indoor FDD eNB – LTE Release 10, 2x125mW (21 dBm), 2GE, 4 dBi internal antenna, UL1850–1910MHz/DL1930–1990MHz, B2
pBS42000	NeutrinoE224 indoor FDD eNB – LTE Release 10, 2x125mW (21 dBm), 2GE, 4 dBi internal antenna, UL1710–1785MHz/DL1805–1880MHz, B3
pBS42032	NeutrinoE224 indoor FDD eNB – LTE Release 10, 2x125mW (21 dBm), 2GE, 2 dBi internal antenna, UL824–849MHz/DL869–894MHz, B5
pBS42020	NeutrinoE224 indoor FDD eNB – LTE Release 10, 2x125mW (21 dBm), 2GE, 5 dBi internal antenna, UL2500–2570MHz/DL2620–2690MHz, B7
pBS42104	NeutrinoE224 indoor FDD eNB – LTE Release 10, 2x125mW (21 dBm), 2GE, 2 dBi internal antenna, UL880–915MHz/DL925–960MHz, B8

NOTE: Customized versions can be requested

ANTENNA PATTERN



H-Pattern



V-Pattern