Neutrino-224 Indoor FDD/TDD eNB

INTRODUCTION
As the mobile broadband data market continues to boom and the traffic requirements are soaring day by day, the capacity pressure on mobile operators is also increasing. The most effective way to address this challenge is small cell.

The Baicells Neutrino-224 Indoor eNodeB (eNB) is a 2x125mW wireless broadband access solution based on Long-Term Evolution (LTE) Frequency Division and Time Division Duplexing (FDD and TDD) that employs the efficient System on Chip (SoC) technology. The eNB is easy to deploy and can help mobile operators to provide better coverage and higher capacity with minimal effort.

FEATURES
• Standard LTE network modes:
  - FDD bands 1, 2, 3, 4, 5, 7, and customized
  - TDD bands 40, 41, 42, 43, 48, and customized
• Peak rate with 20 MHz spectrum:
  - FDD: 150 Mbps DL, 50 Mbps UL
  - TDD: 110 Mbps DL, 20 Mbps UL
• Maximum 48 (FDD) and 32 (TDD) concurrent users per cell
• Supports 5/10/15/20 MHz operation bandwidth
• Plug-and-play with SON capabilities
• Power over Ethernet (PoE) supported. Lower power consumption to reduce OPEX.
• Integrated antenna, with flexibility to replace with external antenna
• Local and Web GUI, network management through BaiOMC

HARDWARE SPECIFICATIONS

<table>
<thead>
<tr>
<th>LTE Mode</th>
<th>FDD/TDD</th>
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<tbody>
<tr>
<td>Frequency Bands</td>
<td>FDD: Bands 1/2/3/4/5/7 and custom TDD: Bands 40/41/42/43/48 and custom</td>
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<tr>
<td>Channel Bandwidth</td>
<td>FDD Bands 1/2/3/4/7: 5/10/15/20 MHz TDD: 5/10/15/20 MHz</td>
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<tr>
<td>Max Output Power</td>
<td>21 dBm / antenna</td>
</tr>
<tr>
<td>Receive Sensitivity</td>
<td>FDD: -102 dBm TDD: Bands 40/41: -101 dBm TDD Bands 42/43/48: -100 dBm</td>
</tr>
<tr>
<td>Synchronization Mode</td>
<td>• GPS • Network listening • 1588v2 (TDD only)</td>
</tr>
<tr>
<td>Backhaul Mode</td>
<td>1 RJ-45 Ethernet interface (1 GE)</td>
</tr>
<tr>
<td>MIMO</td>
<td>DL: 2*2</td>
</tr>
<tr>
<td>Dimensions (HxWxD)</td>
<td>6.9 x 5.1 x 1.2 Inches 175 x 130 x 30 millimeters</td>
</tr>
<tr>
<td>Installation Method</td>
<td>Desktop, ceiling or wall mount</td>
</tr>
<tr>
<td>Antenna</td>
<td>5 dBi omni antenna</td>
</tr>
</tbody>
</table>
Power Consumption
- FDD: < 15W
- TDD: < 12W

Power Supply
- 12V DC, AC adaptor (multiple standards optional)
- POE+, IEEE 802.3at standard

Weight
- 1.1 lb (500 g)

Note 1: Different models support different frequency bands.

Note 2: The test method of receiving sensitivity is proposed by the 3GPP TS 36.104, which is based on 5 MHz bandwidth, FRC A1-3 in Annex A.1 (QPSK, R=1/3, 25RB) standard.

SOFTWARE SPECIFICATIONS

<table>
<thead>
<tr>
<th>LTE Standard</th>
<th>3GPP Release 9</th>
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<tbody>
<tr>
<td>Peak Rate</td>
<td>20 MHz</td>
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<tr>
<td></td>
<td>FDD: DL 150 Mbps UL 50 Mbps</td>
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<tr>
<td></td>
<td>TDD: SA1: DL 80 Mbps, UL 20 Mbps SA2: DL 110 Mbps, UL 10 Mbps</td>
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<tr>
<td></td>
<td>10 MHz</td>
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<tr>
<td></td>
<td>FDD: DL 75 Mbps UL 25 Mbps</td>
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<td>TDD: SA1: DL 40 Mbps, UL 7 Mbps SA2: DL 55 Mbps, UL 5 Mbps</td>
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User Capacity
- 48 (FDD) and 32 (TDD) concurrent users per cell

QoS Control
- 3GPP Standard QCI

Modulation Mode
- UL: QPSK, 16QAM
- DL: QPSK, 16QAM, 64QAM

Voice Solution
- CSFB, VoLTE, eSRVCC

Traffic Offload
- Local IP Access (LIPA)
- Selected IP Traffic Offload (SIPTO)

SON
- Self-organizing network:
  - Automatic setup
  - Automatic Neighbor Relation (ANR)
  - PCI confliction detection

UL Interference Detection
- Supported

RAN Sharing
- Supported

Network Management Interface
- TR069 interface protocol

Northbound Interface
- Web service, socket, FTP, and other interface modes

MTBF
- ≥ 100000 hours

MTTR
- ≤ 1 hour

Maintenance
- Remote/local maintenance, based on SSH protocol
- Remote maintenance
- Online status management
- Performance statistics
- Fault management
- Configuration management
- Local or remote software upgrade, loading
- Logging
- Connectivity diagnosis
- Automatic start and configuration
- Alarm reporting
- KPI recording
- User information tracing

ENVIRONMENTAL SPECIFICATIONS

<table>
<thead>
<tr>
<th>Operating Temperature</th>
<th>32°F to 104°F/0°C to 40°C</th>
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<tbody>
<tr>
<td>Humidity</td>
<td>5% to 95%</td>
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GLOBAL PART NUMBERS

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<tr>
<th>TBD</th>
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