



Product Overview

Altai BX500-N is an attractively priced 500 Mbps Point-to-Point outdoor radio unit with an integrated antenna, that operates in the 5 GHz band.

The BX500-N includes a field proven air interface that ensures best-in-class link connectivity in harsh spectrum for backhaul and access as well as wireless CCTV and additional applications that require robust connectivity. For this purpose, Altai BX500-N was designed to deliver an impressive packet switching power as well as jumbo frame support to guarantee full capacity, regardless of traffic packet size.

Enabling minimum TCO, Altai BX500-N is extremely reliable and durable, complying with IP67 standard. The unit features a built-in GPS for TDD synchronization. The unit also can be used as a subscriber unit for the BX600 series, enabling an initial low-cost deployment using PtP while seamlessly migrating to PtMP with network growth.

Product Highlights

- » Up to 500 Mbps PtP radio unit
- » 22 dBi integrated antenna
- » 4.9 – 6.0 GHz
- » Up to 40 km
- » Built-in GPS
- » Dying gasp
- » Dynamic channel bandwidth
- » 350K packets-per-second
- » Supports Jumbo frames
- » Operates also as PtMP SU
- » Highly durable – IP67

Architecture

- Outdoor unit with integrated antenna and built-in GPS

Network Interface

- Data Interface: 1 x 1 GE RJ45 Port with PoE PD
- PoE and ODU Interfaces: Outdoor CAT-5e; Maximum Cable Length: 75m for 1000Base-T

Radio

- Wireless Topology: PtP Unit / PtMP Subscriber Unit
- Maximum Capacity: 500 Mbps Net Aggregate Throughput (Up to 250 Mbps per Direction)
- Range: Up to 40 km
- Frequency: 4900 MHz – 6090 MHz *
- Channel Bandwidth: Configurable: 10, 20, 40, 80 MHz *
- Dynamic Bandwidth Selection: 20/40/80 MHz
- Modulation: OFDM (BPSK/QPSK/16QAM/64QAM/256 QAM)
- Error Correction: FEC k = 1/2, 2/3, 3/4, 5/6
- Adaptive Modulation/Coding: Supported
- Duplex Technology: TDD
- DFS: Supported *
- Antenna Modes: MIMO 2x2, Diversity, Adaptive MIMO/Diversity
- Dynamic Bandwidth Mgmt.: Committed Information Rate (CIR) and Best Effort Service Level (in PtMP Mode)
- Nomadic Mode: Supported (in PtMP Mode)
- Maximum TX Power: 26 dBm *
- Encryption: AES128
- TDD Intra-Site Synchronization: Supported via Ethernet, Built-in GPS Receiver **
- Uplink/Downlink Allocation: Configurable: Symmetric or Asymmetric

Antenna

- Integrated Antenna: 22 dBi
- Gain: 2.0: 1
- VSWR: 10° (Typical)
- 3 dB Azimuth Beamwidth: 10° (Typical)
- 3 dB Elevation Beamwidth: Dual Linear (Vertical and Horizontal)
- Polarization: -12 dB (Typical)
- Sidelobes Level: -25 dB (Typical)
- Cross Polarization: 25 dB
- F/B Ratio: 30 dB (Typical)
- Port-to-Port Isolation: DC Grounded
- Lightning Protection: DC Grounded

Networking

- QoS: Packet Classification to 4 Priority Queues according to 802.1P or Diffserv
- VLAN Support: 802.1Q, QinQ, 4094 VLANs
- MTU Size: Up to 9216 bytes ***
- ODU Management: IPv4/IPv6 Dual-Stack; SNMPv1, SNMPv3; HTTP/HTTPS using Web Browser
- Dying Gasp Notification: Supported (for Remote PtP Unit)
- 802.1x: Supported (for PtMP Mode)
- Option 82: Supported (for PtMP Mode)
- DHCP Filtering: Supported (for PtMP Mode)
- IGMP Snooping: Supported (for PtMP Mode)
- PPPoE Filtering: Supported (for PtMP Mode)
- RADIUS Authorization: Supported (for PtMP Mode)
- RADIUS User Authentication: Supported
- Syslog: Supported

Physical Specification

- Dimension: 325 (w) x 325 (h) x 64 (d) mm
- Weight: 2 kg

Power Supply

- Power Consumption: < 13W
- Power Feeding: Power provided over ODU-IDU Cable
- PoE Input Voltage Range: 24 - 56VDC (PoE Voltage >= 55VDC is required for dying gasp support)

Environmental Specification

- Operating Temperature: -35 °C to 60 °C
- Humidity: 100% Condensing
- Enclosure Protection: IP67 per EN/IEC 60529, NEMA Type 4 Enclosure

Regulatory Compliance

Radio

- USA: FCC 47CFR Part 15.407
- EU: ETSI EN 301 893; ETSI 302 502

Safety

- USA: UL/CSA-C22.2 62368-1, UL/CSA-C22.2 60950-22
- EU: EN/IEC 62368-1, EN/IEC 60950-22

EMC

- USA: FCC 47CFR Part 15 Subpart B, Class B
- EU: ETSI EN 301 489-1, ETSI EN 301 489-4, ETSI 301 489-17

Product Ordering Information

BX500-N (Part No.: AT-2954-6HC5)

- BX500-N PtP Unit
- Mounting Kit
- IP67 Cable Gland

Optional Accessories

- PoE Injector with DC Input 24VDC – 57VDC
- PoE Injector with AC Input 100VAC – 240VAC

Contact Us

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BX500N-PB-20220606

* May be limited by regulation

** Will be enabled via software upgrade

*** Depends on base station MTU size in case of PtMP operation

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