

Altai B5 Wireless PTP Bridge

The Altai B5 Wireless PTP Bridge is designed to be used in Altai Super WiFi systems to provide carrier-grade ultra long range and high throughput backhaul bridging.



The Altai B5 comprises of a number of high-performance antenna options which operate in both LOS and NLOS environments, in both licensed and unlicensed frequency bands.

Featuring highest performing hardware and operating system coupled with most innovative radio technology providing with best sensitivity, increased output power across all modulations and wide dynamic range, Altai B5 represents a perfectly balanced solution for any type of Point-to-Point connectivity.

Super High Throughput and Range Backhauling

LOS Bridge / B5 external antenna	80 km
LOS Bridge / B5 28 dBi antenna	50 km
LOS Bridge / B5 23 dBi antenna	20 km
LOS Bridge / B5 Lite 23 dBi antenna	15 km
LOS Bridge / B5 Lite 19 dBi antenna	10 km
Throughput / B5	300 Mbps#
Throughput / B5 Lite	300 Mbps#

Benefits of Altai B5 Wireless PTP Bridge

The Altai B5 is a wireless Point-to-Point solution which combines high-speed capability, up to 240 Mbps throughput, with a rich set of best-in-class features and benefits such as leading-edge radio protocols providing unrivalled spectral efficiency and wireless transmissions over distances in excess of 80 km.



Cost Effective to Deploy

Altai's diverse range of solutions enables service providers of all types to build higher capacity networks with even fewer network elements, thereby significantly reducing their overall CAPEX and subsequent OPEX throughout the life of their network.

Altai B5 Wireless PTP Bridge for Backhaul

The Altai B5 product family is an optimal solution for mobile operators and all other service operators requiring multi-megabit capacity for their backhaul links. In all these applications, our solutions offer operational cost saving benefits such as quick deployment, ease of configuration and the ability to upgrade existing infrastructures via software download to cater for new requirements (i.e. "pay as you grow").



Right diagram: Altai B5 with 23 dBi integrated antenna
Left diagram: Altai B5 with external antenna ports

As an integral part of our Super WiFi network infrastructure, the B5 PTP provides the following:

- Configurable 4.9 to 6.0 GHz frequency band
- Possible operational distances in excess of 80 km
- High capacity – up to 280 Mbps net throughput
- 2x2 MIMO innovative technology
- "Pay as you grow" software upgradeable capacity feature
- 5/10/20/40 MHz channel widths
- Unique plug & play out-of-box ultra-long LOS and NLOS backhaul solution
- Gigabit Ethernet port and flexible uplink/downlink reallocation
- Advanced Quality-of-Service support, reliable and robust design

Wireless Interface

- Operating Mode Point to Point Bridging*
- Technology MIMO 2x2 OFDM 64/128
- Modulation BPSK 1/2 to QAM64 5/6
- Operating Frequency 4.9, 5.2, 5.3, 5.4, 5.8 or 6.0 GHz configurable
- Transmit Power 23 dBm (max.) for B5
18 dBm (max.) for B5 Lite
- Receiver Sensitivity -67 to -97 dBm
- Channel Bandwidth 5/10/20/40 MHz
- VoIP/ RTP Aware Superpacketing
- DFS
- Automatic Bitrate Control
- Automatic Transmit Power Control
- Automatic Distance Learning
- Channel Time Adjustment
- Spectrum Analyzer Mode
- Channel Testing Tools

Antenna

- Antenna type 3 versions for B5
 - Integrated 23 dBi Panel
 - Integrated 28 dBi Panel
 - 2 x N-female Antenna Port
- 2 versions for B5 Lite
 - Integrated 19 dBi Panel
 - Integrated 23 dBi Panel
- Frequency 5 GHz
- Polarization Dual Polarized
- 3-dB Horizontal Beamwidth 9° for 23 dBi, 5° for 28 dBi
- 3-dB Vertical Beamwidth 9° for 23 dBi, 5° for 28 dBi
- Front-to-back Ratio 35 dB (Min.)
- Cross-polar discrimination 28 dB (Min.)

Networking

- Ethernet-over-IP Tunneling
- ARP Protocol Support
- Fully-fledged Layer 2 Switch – Transparent Transport for MPLS, stacked VLAN etc., Multiple Switching Groups, Full VLAN, 802.1q and 802.1ad, STP/rSTP, IGMP Snooping, Trunk Groups
- RIPv2/ OSPFv2/ Static Routing
- L2/ L3 Firewall
- NAT (Multipool, H.323-aware)
- DHCP Client/ Server/ Relay
- Dynamic Adaptive Polling
- Pseudo-radio Interface

Security

- Line-speed AES128 over-the-air encryption
- Storm/ Flood Protection
- Password Protection
- Protocol Messages Encryption
- Secure Command-line Access via SSH Protocol

Management

- Web-based Administration Tool
- Command-line – SSH, Telnet, Serial Port, Remote Shell
- Remote Firmware Upgrade (HTTP, FTP)
- SNMPv1/ v3, MIB II, Private MIB
- Configurable SNMP Traps
- Automatic Over-the-Air Firmware Upgrade

Quality-of-Service

- 16 Priority Queues
- IEEE 802.1p Support
- IP TOS. DiffServ Support
- Full Voice Support
- Traffic Limiting – Absolute, Relative, Mixed
- Traffic Redirection

Physical Specification

- Dimension 370 x 370 x 90 mm for B5 23 dBi
600 x 600 x 75 mm for B5 28 dBi
240 x 240 x 51 mm for B5 Ext. Port
207 x 207 x 67 mm for B5 Lite 19 dBi
305 x 305 x 73 mm for B5 Lite 23 dBi
- Weight 3.5 kg for B5 23 dBi; 6.8 kg for B5 28 dBi
2.3 kg for B5 Ext. Port; 1.0 kg for B5 Lite 19 dBi; 2.0 kg for B5 Lite 23 dBi
- Network Interface 10/100/1000 Mbps Ethernet port for B5
10/100 Mbps for B5 Lite 19 dBi
2 x 10/100 Mbps for B5 Lite 23 dBi, PoE Output at the Second Ethernet Port
RS-232 Serial Port for B5

Power Supply

- Power Source PoE Injector (±43-56 VDC for B5, +9-56 VDC for B5 Lite, 110-240 VAC, 50/60 Hz)
- Power Consumption 12 W (Max.) for B5
7 W (Max.) for B5 Lite

Environmental Specification

- Operating Temp. -40 °C to +60 °C for Bridge Unit
0 °C to +40 °C for PoE Injector
- Humidity 100% Condensing for Bridge Unit
95% Non-condensing for PoE
- Wind Loading Up to 200 km/h (124 mph) for B5 with 28 dBi Antenna
- Weatherproof IP66 Compliant

Certification

- FCC**/ CE/ Others

Product Ordering Information

Standard Package

- 4 choices of Bridge (Model No.: BR5822):
 - B5 Wireless PTP Bridge with 23 dBi Antenna
 - B5 Wireless PTP Bridge with 28 dBi Antenna
 - B5 Wireless PTP Bridge with 2 Antenna Ports (N-female)
 - B5 Lite Wireless PTP Bridge with 19 dBi Antenna
 - B5 Lite Wireless PTP Bridge with 23 dBi Antenna
- 300# Mbps Maximum Throughput
- PoE Injector and Mounting Accessories
- Optional 5 GHz External 32 dBi Dish or 34 dBi Dish Antenna for B5 with External Ports

Contact Us

- Email: sales@altaitechnologies.com

* The external antenna port model also supports PTMP operating mode
** Will be available in future

Maximum net throughput for B5 will be 280 Mbps, for B5 Lite will be capped by the FE port

B5-PB-140414

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