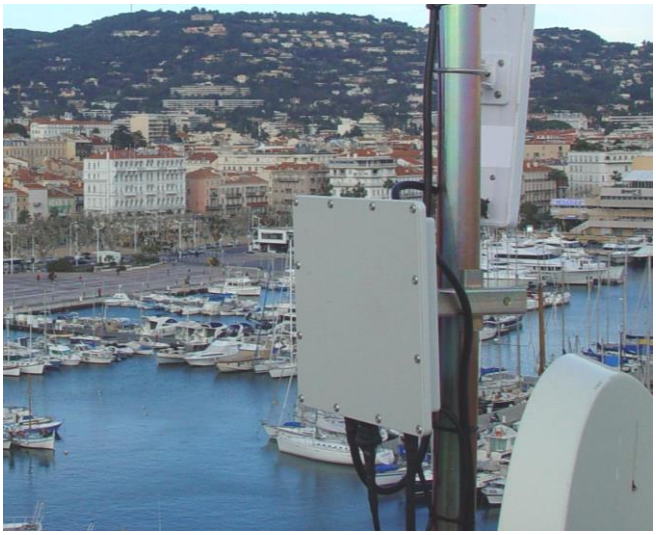
Altai B5 Wireless PTMP Bridge and CPE

Ultra High Capacity, 2x2 MIMO

Altai B5 Wireless PTMP Bridge/CPE

The Altai B5 Wireless PTMP Bridge/CPE 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 PTMP Bridge/CPE 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 PTMP represents a perfectly balanced solution for any type of Point-to-Multiple-Point connectivity.

Super High Throughput and Range Backhauling

LOS / B5 PTMP Bridge 16 dBi, GE	35 km
LOS / B5 PTMP Bridge 16 dBi, 2 x FE	20 km
LOS / B5 PTMP Bridge ext. antenna	20 km
LOS / B5 CPE external antenna	35 km
LOS / B5 CPE 21 dBi antenna	10 km
LOS / B5 CPE 19 dBi antenna	7 km
Throughput / B5 PTMP Bridge	300 Mbps#
Throughput / B5 CPE	300 Mbps#

Benefits of Altai B5 Wireless PTMP Bridge/CPE

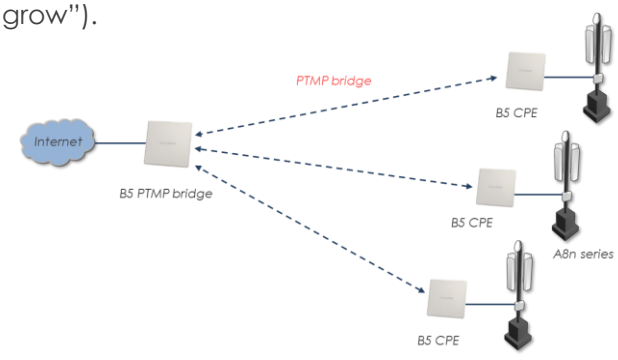
The Altai B5 PTMP is a wireless Point-to-Multiple-Point solution which combines high-speed capability, up to 240 Mbps throughput, with a rich set of best-in-class features and benefits such as leading-edge radio protocols providing unrivalled spectral efficiency and wireless transmissions over distances in excess of 35 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 PTMP Bridge for Backhaul

The Altai B5 PTMP Bridge/CPE 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").



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

- Configurable 4.9 to 5.8 GHz frequency band
- Possible operational distances in excess of 35 km
- High capacity – up to 240 Mbps 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

Altai B5 Wireless PTMP Bridge and CPE

Ultra High Capacity, 2x2 MIMO

Wireless Interface

- Operating Mode: PTMP 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 or 5.8 GHz configurable
- Transmit Power: 23 dBm (max.) for Bridge
  18 dBm (max.) for CPE
- Receiver Sensitivity: -67 to -97 dBm for Bridge
  -67 to -97 dBm for CPE
- 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: 2 versions for B5 PTMP Bridge
  - Integrated 16 dBi Sector
  - 2 x N-female Antenna Port
  3 versions for B5 CPE
  - Integrated 19 dBi Panel
  - Integrated 21 dBi Panel
  - 2 x N-female Antenna Port
- Frequency: 5 GHz
- Polarization: Dual Polarized
- 3-dB Horizontal Beamwidth: 90° (120° -6dB) for Bridge, 11° for CPE
- 3-dB Vertical Beamwidth: 8° for Bridge, 11° for CPE
- Front-to-back Ratio: 35 dB (Min.) for CPE
- Cross-polar discrimination: 28 dB (Min.) for CPE

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 85 mm for PTMP Bridge, 16 dBi
  240 x 240 x 51 mm for PTMP Bridge, Ext. Port
  207 x 207 x 67 mm for CPE, 19 dBi
  305 x 305 x 60 mm for CPE, 21 dBi
  85 x 76 x 36 mm for CPE, Ext. Port
- Weight: 3.7 kg for PTMP Bridge, 16 dBi, GE
  3.0 kg for PTMP Bridge, 16 dBi, 2xFE
  2.3 kg for PTMP Bridge, Ext. Port
  0.15 kg for CPE 19 dBi; 2.2 kg for CPE 21 dBi;
  1.6 kg for CPE Ext. Port
- Network Interface: 10/100/1000 Mbps or 2 x 10/100 Mbps Ethernet port for PTMP Bridge, 16 dBi
  10/100/1000 Mbps for PTMP Bridge, Ext. Port
  10/100 Mbps for B5 CPE, 19 dBi
  2 x 10/100 Mbps for B5 CPE, 21 dBi
  10/100/1000 for B5 CPE, Ext. Port

Power Supply

- Power Source: PoE Injector (±43-56 VDC for PTMP Bridge, 16 dBi GE and Ext. Port;
  +9-56 VDC for PTMP Bridge, 16 dBi 2xFE and CPE; 110-240 VAC, 50/60 Hz)
- Power Consumption: 12 W (Max.) for Bridge, GE and Ext. Port
  7 W (Max.) for Bridge, 2xFE and CPE

Environmental Specification

- Operating Temperature: -40 °C to +60 °C for Bridge/CPE
  0 °C to +40 °C for PoE Injector
- Humidity: 100% Condensing for Bridge/CPE
  95% Non-condensing for PoE
- Weatherproof: IP66 Compliant

Certification

- FCC*/ CE/ Others

Product Ordering Information

Standard Package

- Choices of PTMP Bridge and CPE (Model No.: BR5822):
  - B5 Wireless PTMP Bridge with 16 dBi Ant., 40 Mbps, 2xFE
  - B5 Wireless PTMP Bridge with 16 dBi Ant., 300 Mbps, GE
  - B5 Wireless PTMP Bridge with 2 Ext. Ant. ports, 300 Mbps, GE
  - B5 Wireless CPE with 19 dBi Antenna, 8 Mbps, FE
  - B5 Wireless CPE with 21 dBi Antenna, 8 Mbps, 2xFE
  - B5 Wireless CPE with 2 Ext. Antenna Ports, 8 Mbps, 2xFE
- License Upgradeable to 300# Mbps Maximum Throughput for PTMP Bridge with 2xFE;
  License Upgradeable to 50 or 300# Mbps for CPE
- PoE Injector and Mounting Accessories
- Optional 5 GHz External 16 dBi 90° or 17 dBi 60° Panel Antenna for PTMP Bridge with external ports, and 19 dBi or 24 dBi Panel Antenna for CPE with external ports

** Will be available in future*

 # Maximum net throughput for B5 PTMP Bridge will be 240 Mbps, for B5 CPE will be capped by FE port

B5-PB-131212