

# BreezeULTRA P6000

## High Capacity PtP solution

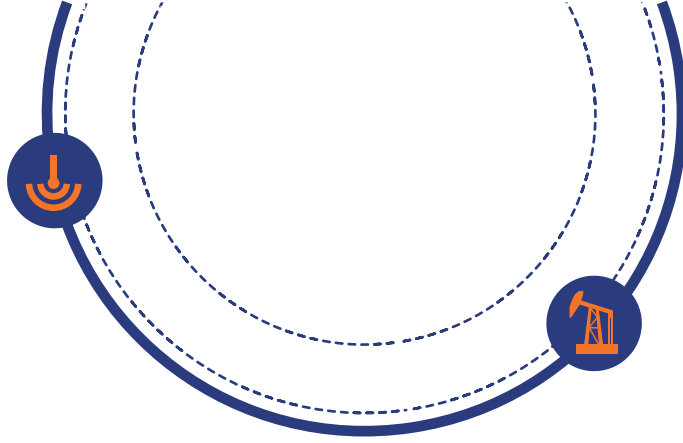
### Product Highlights

- Licensed Exempt frequencies: 5.1-5.9 GHz
- Up to 50km / 32 miles
- Channel combined technique (20 MHz + 20 MHz, 40 MHz + 40 MHz)
- Optimized interference mitigation and NLOS performance
- Ease of installation and configuration
- Integrated or external antenna

### Main Segments

- Corporate/Enterprise
- Mining
- Oil & Gas
- Transportation
- WISP
- Mobile Backhaul
- Education
- Public Safety





# Dual Radio BreezeULTRA™

Capacity Unleashed.

## Living in a Hyper-Dynamic World

We live in a hyper-dynamic world of “instant on” and “anytime, anywhere” access. A world where it’s all about capacity: the capacity to share ideas with new friends and business partners; the capacity to take advantage of new business opportunities; and the capacity to connect and deliver. But in rural communities from Kansas to Kenya, 60% - 90% of the people don’t have broadband access due to the high costs and low profits of running wire. And in metropolitan areas, too many people compete for a finite amount of bandwidth that is affected by trees, tall buildings and electrical interference.

The challenge for operators, businesses and consumers is to find the right balance between connectivity, capacity and coverage; a balance that is practical, profitable and affordable.

## BreezeULTRA: Capacity Unleashed.

To help you meet the challenges of today’s hyper-dynamic world, Alvarion brings you the BreezeULTRA family of products, the ultimate wireless broadband solution for the license-exempt market. BreezeULTRA offers you a bold combination of multiplicity, performance, organic growth and simplicity.



### Performance

Overcome your wireless deployment challenges with superior capacity and packet processing for voice, video and data. BreezeULTRA offers up to 600 Mbps gross throughput per radio and long range.



### Organic Growth

Pay for your network as your needs grow. Enable additional sectors with a software license, enhancing performance from 300 Mbps to 600 Mbps.



### Simplicity

Simple to order, install, and operate, Alvarion’s BreezeULTRA is a powerful solution that reduces operating expenses.

## Product Highlights

- Transmit voice, video and data at 600 Mbps per radio (gross)
- Optimize performance of voice, video and data using QoS
- Support non-line-of-sight coverage and mitigate interference with OFDM, MIMO, Diversity Techniques and DFS
- Precisely meet bandwidth needs with fully flexible uplink/downlink
- Quickly add capacity by purchasing additional software licenses
- Auto failover and auto recovery

## Markets

## Applications

## Business Benefits



### Smart Cities

- Voice, video and data for municipal offices
- Provide high-speed Internet to schools and neighborhoods
- Video surveillance for public spaces
- Traffic monitoring and control

- Eliminate costly leased E1/T1 lines
- Transform municipalities from service consumers to service providers
- Rejuvenate city centers
- Increase quality of life and satisfaction



### Public Safety

- Video surveillance for public spaces
- Traffic monitoring and control
- Voice, video and data for departments and police
- Video surveillance backhaul

- Enhance feeling of public security
- Improve security at sensitive facilities
- Eliminate costly leased E1/T1 lines



### Education

- Create high-speed educational networks
- Comply with digital inclusion initiatives
- Improve inter-facility communications and share resources

- Improve educational services
- Bridge the digital divide
- Access remote resources for eLearning



### Corporate & Enterprise

- Voice, video and data for all offices
- Access to remote applications
- Building-to-building connectivity
- Video conferencing and remote training

- Increase intra-office communication
- Reduce OPEX with VoIP
- Eliminate costly leased E1/T1 lines



### Transportation

- Support intelligent Traffic Systems (ITS)
- Offer Internet access in stations
- Support Passenger Information Systems (PIS)
- Provide voice, video and data for back office

- Reduce fuel consumption
- Keep commuters connected and satisfied
- Streamline sales and business processes
- Eliminate costly leased E1/T1 lines



### Mobile Backhaul

- Small cell backhaul
- Non line-of-sight (NLOS) solution
- Fiber replacements or extensions
- High spectral efficiency

- Backhaul of 2G / 3G / LTE base stations
- Improve backhaul in dense urban environments
- Smooth migration to Next Generation Networks



### Mining

- Monitor structural integrity of pits
- Stream Doppler radar to onsite office
- Monitor pump houses, power and more
- Provide voice, video and data to site

- Improve safety and security
- Stay apprised of changing conditions
- Better manage resources and reduce downtime
- Eliminate costly leased E1/T1 lines



### Oil & Gas

- Support ship-to-rig and rig-to-shore connections
- Monitor pumps, power and more
- Enable voice, video and data communications

- Provide secure, all-weather communications
- Better manage resources and reduce downtime
- Reduce costly satellite communication fees



### WISP

- High throughput for urban and rural areas
- Support multiple applications with different uplink/downlink needs
- Support high-quality services in low-profit areas
- Backhaul for congested networks

- Adjust bandwidth to meet the needs of your applications
- Reduce CAPEX and OPEX

# Specifications

## Alvarion Technologies

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in your area, please visit

[www.alvarion.com](http://www.alvarion.com)

PTP (P6000)

### Configurations

No. of Radios	P6000-350: 1 Radio P6000-600: 2 Radios Upgrade License BreezeULTRA P6000 B350 to B600
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### Radio & Modem

Gross Throughput	P6000-350: 300 Mbps P6000-600: 600 Mbps
Range	Up to 54 km / 34 miles
Frequency	4.9 GHz, 5.1-5.9 GHz
Radio Type	MIMO (2x2), OFDM TDD
Modulation	OFDM, BPSK, QPSK, QAM16, QAM64
Channel BW	5*, 10*, 20, 40 MHz
Output Power (at antenna port)	Up to 24 dBm (dependent upon regulation) (Up to 27 dBm two Tx chain)
Antenna	Internal Antenna: 4.9 -5.9 GHz, 8° dual polarized, 23 dBi External Antenna: 4.9-5.9 GHz, 8°/ 6°, dual polarized, 23 / 28 dBi, N-Type 50 ohm

### Networking & Management

Standards	802.1p/Q, IEEE 802.3 CSMA/CD, 802.3at (PoE Out), SNMP v2, MIB II, WMM DSCP, fast packet processing, MIR per direction (UL/DL), concatenation, burst mode, small packet optimization to support voice, QoS, Ethernet type, TCP/UDP port, VLAN-ID
Security Authentication:	ESSID, password protection, Pre-shared key (PSK) Data encryption: WPA2 AES 128 bit - 802.11i
Management	Local/remote monitoring via Web interface, Telnet, CLI, SNMP and configuration upload/download
Remote Management	Via LAN or wireless link
Access Control	Multilevel password, configuration of remote direction (from Ethernet only, wireless only, or both sides)
Upgrade & Configuration	Via TFTP, Web

### Physical & Environmental

Dimensions	44 x 38 x 13 cm (17.32 x 14.96 x 5.12 in.)
Weight	P6000-350: 7 kg (15.43 lbs.); all others: 6.2 kg (13.67 lbs.)
Temperature	-40°C to 55°C (-40°F to 130°F)
Humidity	5% - 95% non-condensing, weather-protected

### Electrical

Power Consumption	20W-40W
Input Power	100-240 VAC, 50-60Hz
Interfaces	1 x 10/100/1000BaseT (PoE In), 1 x 10/100/1000BaseT 802.3at (PoE out)

### Compliance

Radio	FCC P15.247, FCC P15.407, ETSI: EN 302 502 (v1.2.1), EN 301 893 (v1.5.1), IC RSS-210 (Canada)
EMC	FCC P15 Class B, EN55022 Class B, ETSI: EN 301 489-1/-17
Safety	EN 60950-1, EN 60950-22
Environmental	EN 300 019 part P2-4 Class4.1E, IP67

## About Alvarion Technologies

Alvarion Technologies is a global provider of autonomous Wi-Fi networks designed with self-organizing capabilities that enable constantly optimized performance. We are guided by our belief that the sustainability of any network stems from the combined strength of its elements. We have developed an approach that is transforming Wi-Fi from a "dumb pipe" into a goldmine of actionable data. Alvarion designs solutions for Carrier Wi-Fi, Enterprise Connectivity, Smart City, Smart Hospitality, Connected Campuses and Connected Events that are both complete and heterogeneous to ensure ease of use and optimize operational efficiency. Carriers, Local Governments and Hospitality sectors worldwide deploy our intelligent Wi-Fi networks to enhance productivity and performance, directly and for the long term. With over 25,000 sites in over 95 countries, our experience and know-how has enabled us to become a proactive contributor to the evolution of the Global Communications Network. As in everything we do, our commitment to elevating the Wi-Fi experience is reflected in our offering.



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