

# BreezeMAX™ PRO CPE

Alvarion System - Intel Chip

## Product Highlights

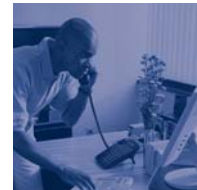
- WiMAX outdoor CPE
- Integrated Intel® PRO/Wireless 5116 broadband interface
- Non-line-of-sight (NLOS) operation functionality
- 10Mbps net throughput per CPE
- Data, voice, and WiFi interfaces
- Seamless integration into existing BreezeMAX networks
- Carrier-Class SNMP management



BreezeMAX PRO is the first commercially deployed CPE to use the new Intel PRO/Wireless 5116 broadband interface WiMAX chip and represents a major industry milestone toward the widespread adoption of WiMAX standard products. BreezeMAX PRO is the result of a joint strategic development agreement between Alvarion and Intel, which began in mid-2003.

BreezeMAX is Alvarion's WiMAX platform that uses OFDM technology for advanced non-line-of-sight (NLOS) functionality and is designed for operators to offer broadband IP-based data and voice services. Its carrier-class design supports broadband speeds and quality of service (QoS) for voice and multimedia applications enabling operators to offer multiple services to thousands of subscribers with a single base station.

The BreezeMAX platform has been designed from the ground up according to the IEEE 802.16-2004 standard and is the base for Alvarion's future mobile solution targeted towards the emerging IEEE 802.16e standard for mobile broadband services.



BreezeMAX Family



BreezeMAX PRO CPEs

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## BreezeMAX PRO Benefits

### Investment protection

- Built to the specifications of IEEE 802.16-2004
- Seamless integration into existing BreezeMAX networks

### Low cost and easy installation

- Dynamic adaptive modulation on a per burst basis to maximize bandwidth throughput and link robustness at all times even in harsh environments
- Automatic transmit power control (ATPC) for quick and easy installation and to maximize performance while minimizing interference

### Reduced infrastructure needs

- Fewer sites required as a result of high capacity, long reach and NLOS capabilities
- Support for multiple subscriber profiles within the same sector and network

### Lower operating expenses

- Higher capacity per sector reduces site leases per cell
- Over the air software downloads with dual flash "fail-safe" mechanism
- Remote management support via SNMP

### Carrier-Class network management system – AlvariSTAR NMS

- Network surveillance, monitoring, configuration & fault management
- Simplified deployment and maintenance, including multiple device configuration, service provisioning prior to CPE installation to minimize installation time, software upgrade management and more
- Comprehensive fault management (reporting, color-coding, correlation, suppression, filtering, forwarding, e-mail notification) to minimize service downtime
- Performance monitoring of over-the-air traffic, wireless link performance and quality of service statistics to identify problems or bottlenecks and optimize resource usage

## Specifications

### Radio

Frequency	3.3 GHz: UL:3316-3350MHz DL: 3366-3400.0MHz and UL:3376-3400MHz DL: 3300-3324MHz 3.5 GHz: UL:3399.5-3500.0MHz DL: 3499.5-3600.0MHz 3.6 GHz: UL:3600-3700.0MHz DL: 3700-3800.0MHz
Radio access method	TDMA FDD
Channel bandwidth	1.75MHz, 3.5MHz
Central frequency resolution	125KHz
Maximum output power	20dBm±1dB
Modulation	BPSK, QPSK, 16QAM, 64QAM
Antenna	17 dBi typical, 18 o AZ x 18 o EL, vertical/horizontal polarization, compliant with EN 302 085, V1.2.2 Range 1
Antenna port	50 ohm

### Data Communications

Data	IEEE 802.3 CSMA/CD
Air interface	IEEE 802.16-2004
VLAN support	IEEE 802.1Q
Traffic classification	Layer 2 IEEE 802.1p, IP DiffServ Code Points DCSP

### Electrical Characteristics

Power source	100–240 VAC, 50-60 Hz
Power consumption (max)	16.5W

### Physical and Environmental

Dimensions	30.5x30.5x7.5 (2.4Kg)
Operating temperature	-40°C to 55°C
Operating humidity	5%-95% non condensing, weather protected

### Standards and Regulations

Radio	ETSI EN 301 021 V.1.6.1, ETSI EN 301 753 V.1.1.1
EMC	ETSI EN 301 489-1
Safety	EN 60950 (CE), CB, IEC 60 950 US/C (TUV)
Environmental	ETS 300 019 part 2-1 T 1.2 & part 2-2 T 2.3, part 2-4 T 4.1E