

## Optimized License-Exempt Broadband Wireless Access

# BreezeACCESS<sup>®</sup> EZ

**BreezeACCESS EZ presents a cost-effective solution for Wireless Internet Service Providers (WISPs) and an array of broadband wireless applications in urban and rural deployments. BreezeACCESS EZ offers superior capacity and range, with enhanced QoS and security, providing optimal support throughout the 5 GHz frequency band.**

### Range of Features for Premium Value

- Effective delivery of powerful broadband with capacity of up to 23 Mbps per Access Unit (AU-EZ), throughput of up to 12 Mbps per Subscriber Unit (SU-EZ) and multiple subscribers per sector
- Extended coverage range of up to 12 km LOS (FCC)
- Enhanced QoS with MIR/CIR per SU per direction (UL/DL), enabling operators to control network and effectively define Class of Service (COS)
- TDD OFDM technology supporting non-line-of-sight (NLOS) deployments
- Embedded security mechanism with hardware-based AES FIPS 197 encryption, enabling secured wireless links without sacrificing throughput
- Enhanced networking with complete VLAN tagging functionality (802.1q)
- Single SU integrating all enhanced features for the entire 4.9-5.9 GHz band



## System Components

Alvarion's BreezeACCESS EZ solution consists of a central Access Unit (AU-EZ) which provide access to multiple outdoor Subscriber Units (SU-EZ)

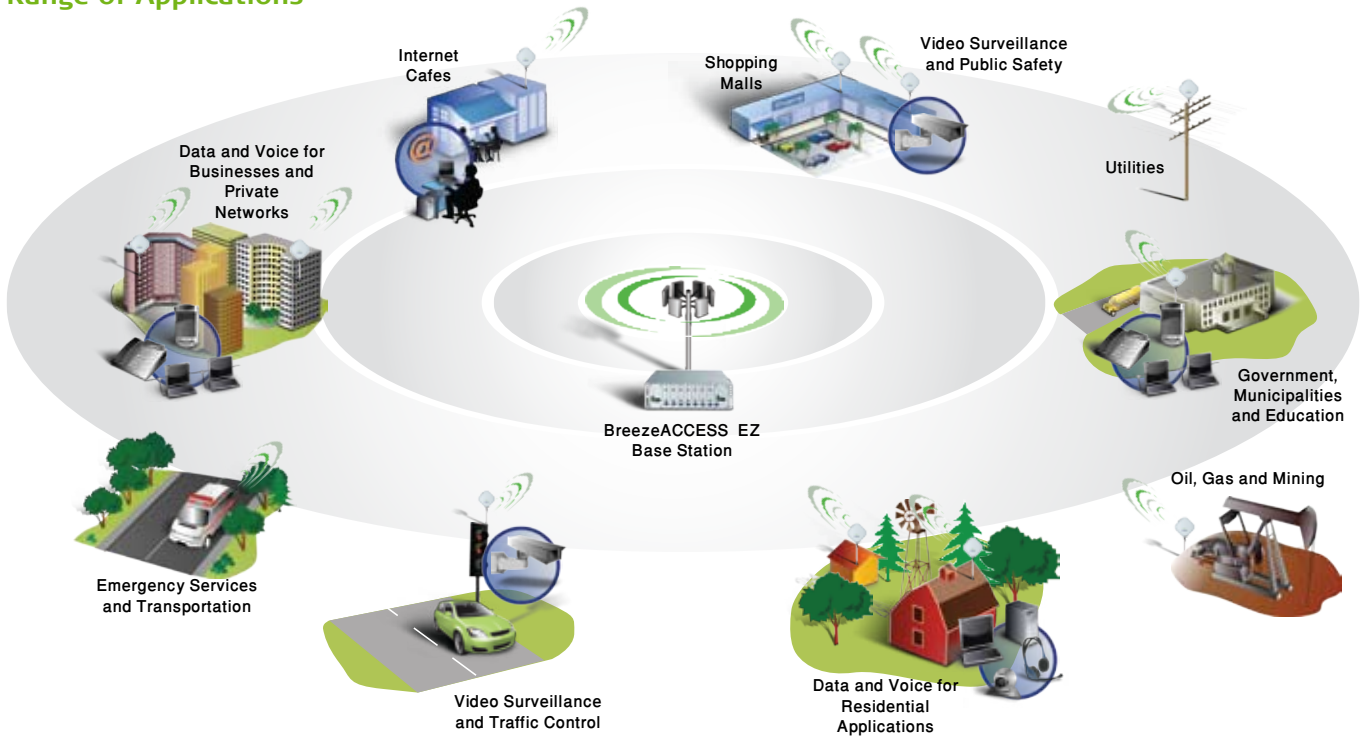


AU-EZ is a single sector, stand-alone base station which consists of a network interface/power supply indoor unit (IDU) and an outdoor radio unit (ODU). The AU-EZ can be deployed using a variety of high-gain external antennas (60/90/120/360)



Each SU-EZ features a wireless connection to the AU-EZ providing an efficient platform for continuous broadband access. The SU-EZ consists of an outdoor wireless radio with an integrated high performance 17 dBi flat panel antenna, and the same IDU as the AU-EZ for power supply and network interface. Designed for fast installation and configuration, the SU-EZ includes complete mounting bracket, visual antenna alignment navigation and intuitive web-based user interface.

## Range of Applications



Internet Cafes

Shopping Malls

Video Surveillance and Public Safety

Utilities

Data and Voice for Businesses and Private Networks

BreezeACCESS EZ Base Station

Government, Municipalities and Education

Emergency Services and Transportation

Video Surveillance and Traffic Control

Data and Voice for Residential Applications

Oil, Gas and Mining

## Range of Benefits

- **Experience and Maturity**

BreezeACCESS EZ is an integral part of the BreezeACCESS family of broadband wireless access systems which is deployed extensively around the world.

- **Affordable and Cost-Effective**

The BreezeACCESS EZ solution combines reduced equipment and deployment costs with the ability to deploy multiple subscriber units per sector. This cost-effective solution enables WISPs to seamlessly extend services to residential customers previously unable to afford them, while securing rapid ROI for a compelling business case.

- **Enhanced Functionality and Performance**

BreezeACCESS EZ features enhanced functionality which enables the effective deployment of up to 150 SUs per sector. Maximum and committed information rates (MIR\CIR), support various Class of Service (CoS) models for a variety of applications.

- **Flexible and Simple Network Expansion**

BreezeACCESS EZ is a complete out-of-the-box solution designed with an array of advanced features which facilitate network deployment and expansion. These features include: networking (802.1q), security (FIPS-197), QoS (CIR\MIR), control (ATPC) and management (BreezeConfig, Web).

- **Distribution Oriented**

BreezeACCESS EZ is an all-in-one box solution which best supports distribution needs. BreezeACCESS SU EZ features a single part number for the entire 5 GHz frequency band, addressing all cross-geographical market requirements.



“*Alvarion’s wireless network is providing safe and proprietary connectivity between homes and schools, enabling us to bridge the digital divide and give schoolchildren an equal opportunity for development of ICT skills.*”

Colin Scott, Senior Adviser Strategic  
Director for e-Learning  
Hartlepool Borough Council, UK

- **Quick Installation**

Subscriber units designed with an integral antenna can be easily deployed using the SNR alignment LED bar, enabling operators to minimize OPEX and expedite deployment rates.

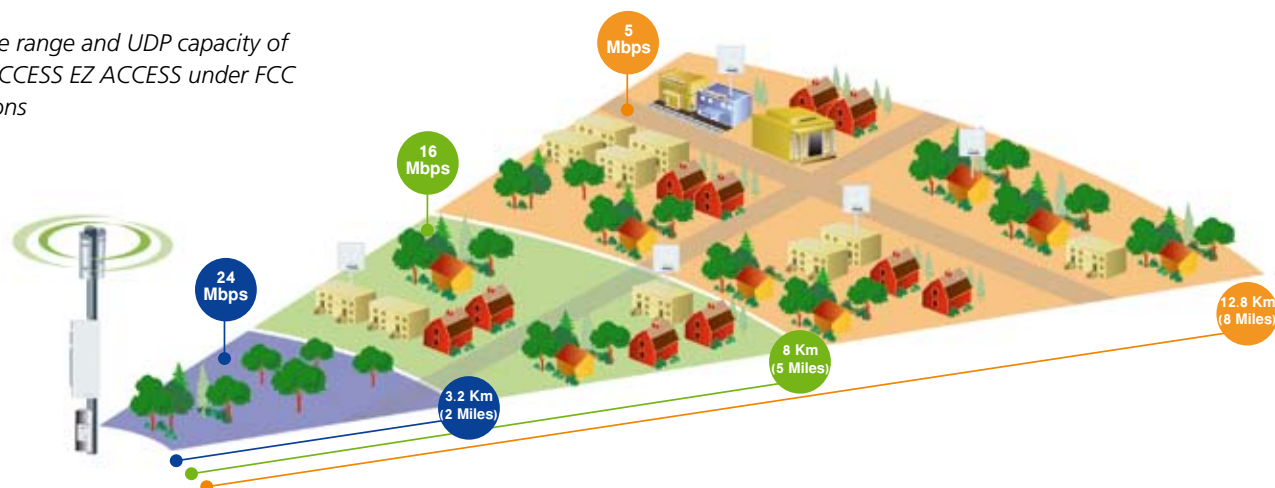
- **Reliable and Robust**

A ruggedized outdoor solution, BreezeACCESS EZ operates over an extended temperature range in a variety of environments.

- **Empowering Communities**

BreezeACCESS EZ provides an affordable solution to bridge the digital divide by offering vast opportunities for enhanced communication, public safety, education, business and social development.

Coverage range and UDP capacity of BreezeACCESS EZ ACCESS under FCC regulations



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## Specifications

### Radio and Modem

Frequency	AU-EZ: 5.15-5.35 GHz, 5.47-5.725 GHz, 5.725-5.875 GHz SU-EZ: 4.9-5.875 GHz	
Media Access	Time Division Duplex (TDD)	
Channel Bandwidth	10 MHz (Future support), 20 MHz	
Radio Technology	Orthogonal Frequency Division Multiplexing (OFDM)	
	<b>Subscriber Unit EZ</b>	<b>Access Unit EZ</b>
Max Throughput/Capacity	12 Mbps full duplex	23 Mbps aggregated capacity
Max Tx. Power @ Antenna Port	-9 dBm to 18 dBm, 3 dB steps	-10 dBm to 21 dBm, 3 dB steps
Antenna	Integrated Flat Panel Antenna, 17dBi, 24 AZ x 18 EL	Choice of Detached Antennas: ³ 16dBi, 60 AZ x 10 EL ³ 17dBi, 90 AZ x 6 EL ³ 15dBi, 120 AZ x 6 EL ³ Omni 8dBi, 360 AZ x 4.5 EL* *Not available for 5.4/5.3 FCC

### Data Communications

VLAN and QoS support	802.1Q, MIR/CIR per SU per direction (UL/DL), Advanced Automatic Transmit Power Control (ATPC)
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### Configuration and Management

Management Options	SU-EZ: Web-Based, Telnet, SSH, SNMP AU-EZ: Telnet, SNMP	
Management Access	Local via Ethernet Port or remotely over the Wireless Link	
IP Address Assignment	Automatic (DHCP Client), Manual	
Configuration File	Upload/Download via FTP/TFTP	
	<b>Subscriber Unit EZ</b>	<b>Access Unit EZ</b>
Software Upgrade	Download via FTP/TFTP with Backup Image File of running version for safe operation	Download via FTP/TFTP with Dual Image File allowing downgrade to previous version
Security	WEP 152, SSL 0.95A, SSH v2 AES 128 FIPS 197 compatible	WEP 152 AES 128 FIPS 197 compatible

### Mechanical, Electrical and Environmental

	SU-EZ Outdoor Unit	AU-EZ Outdoor Unit	Indoor Unit
Size	195 x 190 x 74 mm	305 x 117 x 57 mm	140 x 66 x 35 mm
Weight	1.47 kg	1.8 kg	0.3 kg
Power	Typical: 10W Max: 40W	Typical: 12W Max: 25W	AC In: 85-265 VAC, 50-60 Hz DC Out: 55 VDC, 1 A max
Operating Temperature	-40 C to 55 C	-40 C to 55 C	0 C to 40 C
Operating Humidity	5% to 95%, non-condensing. Ingress Protection for Outdoor Units: IP65		

### Standards Compliance

Safety	UL/CUL (CSA60950-1, UL60950-1, UL-50) CE/CB (EN60950 include IPX4 /IEC 60950-1)
Radio	EN 301 893 (V 1.5.1), EN 302 502 (V 1.2.1) EN 301 489 (DC power), FCC Part 15E 15.407
EMC	CE Class B (EN55022, EN55024), EN 301 489-1/17 FCC Class B Part 15
Hazardous Substances	RoHS Compliant

### About Alvarion

Alvarion is the largest WiMAX pure player, ensuring customer long-term success with fixed and mobile solutions for the full range of frequency bands. Based on its OPEN WiMAX strategy, the company offers superior wireless broadband infrastructure and an all-IP best-of-breed ecosystem in cooperation with its strategic partners. Alvarion has delivered over 200 commercial WiMAX deployments worldwide.