Release Notes

BreezeNET B14

(Available as EasyBRIDGE Product Bundle B14-EB)

December 2003

System Description

General

BreezeNET B14, the newest addition to the BreezeNET family, is a high performance wireless bridge system that provides high-capacity, high-speed, long range point-to-point connectivity. BreezeNET B14 operates in the Unlicensed UNII band of 5.8 GHz and utilizes advanced technologies to support optimal performance even in RF dense environments.

Alvarion introduces the BreezeNET B14 EasyBRIDGE, available as Product Bundle B14-EB. B14-EB is a convenient bundle that has all the necessary equipment for a high speed point-to-point bridging solution for backhauling, leased line replacement and building-to-building connectivity.

BreezeNET B14 operates in Time Division Duplex (TDD) mode, using Orthogonal Frequency Division Multiplexing (OFDM) modulation with Forward Error Correction (FEC) coding. The enhanced multi-path resistance capabilities of OFDM modem technology enables operation in near and non-line-of-sight (NLOS) environments, such as buildings, foliage or ridgelines, enabling deployment of PTP links in previously inaccessible situations. Features include adaptive modulation for automatic selection of modulation schemes to maximize data rate and improve system spectral efficiency.

BreezeNET B14 supports security sensitive applications through optional use of authentication and/or data encryption, utilizing AES or WEP 128-bit keys. The system supports VLAN based on IEEE 802.1Q, enabling secure operation and Virtual Private Network (VPN) services, allowing tele-workers or remote offices to conveniently access their enterprise network.

System components are managed using a simple to use and friendly tool, BreezeCONFIG. It can be also managed using standard SNMP management systems for remote setting of operational modes and parameters.

The BreezeCONFIG utility is an SNMP-based application designed to manage BreezeNET B14 system components and upgrade unit software versions. The System Administrator can use the BreezeCONFIG utility to control any number of units from a single location, including updated configuration files to multiple units simultaneously, thus radically reducing the time spent on unit configuration maintenance.

BreezeNET B14 System Components

- **Base Unit (BU) and Remote Bridge (RB)**

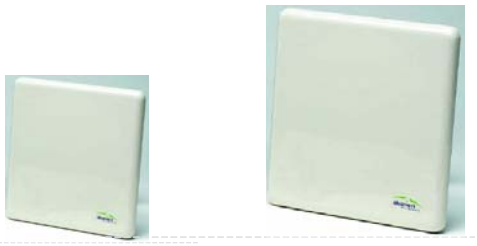
The BreezeNET B14 B14-EB system includes a Base Unit (BU), typically installed at the main site, and a Remote Bridge (RB) installed at the remote site.

The BU and the RB unit have an identical mechanical look and are each composed of two parts, the Indoor Unit (IDU) and the Outdoor Unit (ODU). The IDU and ODU are connected to each other using a simple to install 65ft (20m) outdoors rated CAT-5 cable with a 1'x1' 23 dBi panel antenna.

- For maximum capacity and range performance in links greater than 13 miles (21km) a high gain (2'x2') 28 dBi or (3ft) 31.2 parabolic antenna is available for use with the B14-EB system.

Note the higher gain antenna option is not available as part of the BreezeNET B14-EB bundle

[B14-EB Indoor and Outdoor Unit + 23 dBi Antenna]



- Optional 28 dBi / 31.2 dBi Antenna

BreezeNET B14 Performance

- **Range of the BreezeNET B14**

23 dBi Antenna – The maximum range for B14-EB operation at full capacity performance when using the 23 dBi antenna is 13 miles (21km). The maximum range for operation at minimum capacity performance is 25 miles (40km).

28 / 31.2 dBi Antenna – The maximum range for B14-EB operation at full capacity performance when using the 28 dBi antenna is 25 miles (40 Kilometers). The maximum range for operation at minimum capacity performance when using the 31.2 dBi antenna is up to 31 miles (50km).

- **Maximum Net Throughput of the BreezeNET B14**

The BreezeNET B14 transmits up to 7Mbps, delivering NET 7Mbps simultaneous throughput in each direction.

Max NET throughput in each direction	7Mbps

BreezeNET B14 Key Benefits and Advantages

- **Cost Efficient:** High capacity system for a very fast payback.
- **Simple to Install and Optimize:** Cost saving installation and maintenance with low cost indoor to outdoor unit cable, full LED diagnostics for antenna alignment.
- **Robust Radio Technology**: OFDM modulation 64QAM, 16QAM, QPSK, BPSK, delivering unmatched link capacity and ensuring NLOS (Non-Line-of sight) capability. Automatic Transmit Power Control (ATPC) and Adaptive modulation facilitates superior performance and automatically adjusts transmission to enable continuous and robust link performance.
- **Advanced Security**: Advanced security including authentication and/or data encryption, utilizing AES or WEP 128-bit keys, host user based and protocol filtering, and 802.1Q VLAN functionality.
- **Easy-to-use Management**: SNMP-based remote management system, enabling simple unit configuration and simultaneous configuration of multiple units. Easy over the air SW upgrade and configuration.
- **Service Parameters**: Service Parameters, including user filtering based on IP address and controlling maximum information rate (MIR) for both downlink and uplink transmission.

Product Availability

BreezeNET B14 EasyBRIDGE (B14-EB) is commercially available from Dec 7 2003.

Technical Documentation and Application Software

The following Information is are available:

- BreezeNET B14 Data Sheet

The following documentation is shipped with each BU, on CD:

- BreezeNET B14 System manual
- BreezeCONFIG User manual
- BreezeNET B14 Quick Installation Guide

Also available on the CD:

- The Proprietary Alvarion BreezeNET B14 MIB File
- The BreezeCONFIG Application Software
- Set Factory Defaults Application Software

Note: The Set Factory Defaults Utility is intended to enable management access to a unit in cases where such access is not possible due to wrong or unknown configuration of certain parameters. This includes cases such as unknown Management VLAN ID and wrong management access filtering. The utility performs the same operation as Set Complete Factory Defaults, restoring the default factory configuration of all parameters, except for Passwords, general FTP parameters and BU's Frequency (see System Manual for more details).