
BreezeNET B Family

Release Note for Version 2.0.20 Software

North America - 5.8 GHz



June 2004



Introduction

BreezeNET B software version 2.0.20 is officially released and will replace version 1.2. This new software version supports all BreezeNET B products in the 5.8 GHz band, including BreezeNET B14 and B28 EasyBRIDGE Bundles.

- Note the BreezeNET B Family of products DO NOT support software version 2.0.21

New Software Features in Version 2.0

Turbo Mode

Version 2.0 supports a new mode of operation called “Turbo Mode”. In the Turbo Mode the BreezeNET B uses a 40MHz frequency channel (2x default 20MHz channel). Turbo Mode operation can increase net throughput of the BreezeNET B link, especially for links that suffer from low performance due to challenging link budget conditions such as extra long distance or RF absorbing NLOS terrain. Alternatively, Turbo Mode can extend the range of the PtP link while net throughput capacity is maintained. The maximum system net throughput does not change when using the Turbo Mode, for example a BreezeNET B14 link will not exceed 7 Mbps and a B28 link cannot exceed 22 Mbps.

Improved Adaptive Modulation

Version 2.0 uses a new Adaptive Modulation Algorithm that significantly improves system performance when operating under heavy multipath conditions. This important enhanced feature is transparent to the end user and can automatically increase throughput and capacity performance in multipath transmission links.

Automatic Distance Learning

Version 2.0 software automatically measures and sets the distance between the BU and RB upon association. There is no need to configure the link distance parameter manually.

Antenna Gain

Version 2.0 adds this parameter to define the net gain of a detached antenna. The antenna gain is important especially if there is a country regulation on max EIRP. This parameter is not applicable in FCC because regulations do not define an EIRP limit for 5.8 GHz PtP links. Note when upgrading from version 1.2 to 2.0 the default setting for Antenna Gain is “Don't Care”, this setting will not change until you enter a value.



Management IP Filtering & SNMP TRAP Destination IP List

Version 2.0 increases the Management IP Filtering list and SNMP TRAP Destination IP list from 3 to 10, allowing up to 10 Management stations. All configuration and management is available via SNMP, Telnet and BreezeCONFIG ACCESS 2.0.

Country Dependent Parameters

Each country has its regulation code regarding radio transmission in its applicable operating bands, ultimately affecting configuration parameters such as frequency selection, DFS (not applicable in FCC 5.8 GHz), TX power, EIRP, etc. Note for each country dependent BU/RB unit one or more sets of these parameters are pre-configured in the factory and function as Read-Only in BreezeNET B 5.8 GHz units.

Feature Upgrade Licensing

Version 2.0 provides a Feature Upgrade option to enter a Licensing String for upgrading the BU/RB unit to support new BreezeNET B features and/or options. * Note this feature is currently not available in North America.

New Hardware Features in Version 2.0

Compact IDU

Version 2.0 units are now shipping with a new universal indoor unit (IDU) power supply. The new IDU is black in color and more compact in size (6 x 16 x 3.3 cm) than previous IDU. It has identical functionalities and specifications including voltage requirements 110 and 220 VAC. Note the new IDU has one unmarked LED that is always OFF (support of future hardware feature).

Compatibility and Interoperability

While version 2.0.20 is backward compatible with version 1.2 it is recommended that software version 2.0.20 be loaded on both BU/RB units in each PtP link throughout your network. This enables existing BreezeNET B equipment to benefit from new features and system enhancements to maximize overall system performance. Version 2.0.20 software is available in the Customer Service section of the Alvarion website www.alvarion-usa.com



Documentation

Information in this release note is complementary to the product documentation provided with the BreezeNET B system, including System Manual and Release Notes. The BreezeNET B System Manual covers all relevant topics associated with the BreezeNET B Family of products. It is recommended to download the most recent System Manual from the Alvarion web site as it is being updated periodically www.alvarion-usa.com

Important Notes

- In case Authentication Encryption is used, note that the RB will not associate with the BU if its Default Key does not match the BU Default Multicast Key. Alternately, when running Open System Data Encryption Enabled both BU/RB must have matching Default Keys.
- When data encryption security is needed it is highly recommended to use the robust and advanced AES feature since WEP data security will reduce the throughput by 10%.
- The system was checked with SNMPC version 5.1.11e.
- Extra care should be taken when configuring VLAN management and management IP filtering in order not to break the communication connection with the unit. In case of a connection break, use the "Restore to Factory Default Utility" to restore unit to factory setting parameters.
- When performing "Set Factory Defaults", the Maximum TX power is set to its maximum value.
- Although the minimum level for maximum TX Power per modulation is defined as -10 dBm, when ATPC is enabled the unit TX power may be less than this minimum value.
- The system provides TFTP functionality for SW and configuration download. In case FTP functionality is required, an additional IP address is required for the FTP client. In addition, FTP parameters change requires a system reset. * Note FTP functionality cannot be part of VLAN management.
- When upgrading to v2.0 "Burst mode" and "Software retry" may be changed to enable and disabled respectively (improves performances based on field experience). It is recommended to enable "Burst mode" which will automatically disable "Software retry". For further information on Burst Mode and Software Retry refer to the BreezeNET B System Manual.

Limitations and Known Issues

- BU/RB sensitivity may be slightly changed as function of frequency (+/-2dB).
- The prioritization mechanism is disabled when the traffic rate reaches the maximum information rate supported by the RB.



- When you “Show Country Dependent Parameters” for 1020 – Country Group FCC
 - “Max TX Power” (@ antenna port) value reads 36dBm while it should show 30dBm. In practice the actual value in use is less than 30dBm, depending on modulation level.
 - “Max EIRP” value reads 100dBm; this value is not applicable as an FCC regulation does not define a limit for 5.8 GHz PtP links.
- It is not possible to configure FTP IP address with the same value as the unit’s IP address. Attempting to do so will display an error when telnet is used and no error will be raised when SNMP (BreezeCONFIG) is used. Note that the FTP Client settings are not reverted to defaults upon issuing a “Set Full Factory defaults” command.
- It is not possible to use the next combination of parameters in the RB: DHCP Client (enabled or Automatic) with User IP Filtering enabled, unless the IP address or the Subnet that the DHCP will assign is configured as part of the User IP Filtering addresses.

Fixed Issues

- As part of the improved Adaptive Modulation feature, the rare cases of harsh multipath conditions impacting the actual rate, but showing high SNR value has been resolved
- The RB can now re-associate with a BU within less than 2 seconds after link failure where Re-association with Best AU enabled took 2 minutes in the previous version
- Adaptive Modulation now works well when there is an interference signal that varies in power and duration

Product Ordering Information

Alvarion Model Number	Description	Alvarion Part Number
B14-EB	BreezeNET B14 EasyBridge Bundle	929210
B28-EB	BreezeNET B28 EasyBridge Bundle	929211