
BreezeMAX 3000

Software Version 2.0.1
Official Release Note - Update

May 2006
Rev. B

General

This document details the content, functions and limitations of BreezeMAX software version 2.0.1. It corresponds to software versions 2.0.1.38 of the NPU (Network Processing Unit), 2.0.1.61 of the AU (access unit) and 2.0.1.59 for the SU (subscriber unit).

Introduction

BreezeMAX version 2.0.1 includes several new features as well as bug fixes and further system stability improvements.

This update includes some fixes to critical bugs that were found in previous modular BS version 2.0.

This software version supports also multi frequency bands, and is suitable for all the BreezeMAX 3300, 3500 and 3600 product lines.

New Software Features Supported

In terms of feature set, the version includes the following new software features:

- **Modem Multi Channel**
This feature allows connecting up to two outdoor units to the indoor unit (either modular or micro base station), and sharing the capacity of the indoor unit to more than one sector.
- **Transparent VLAN**
VLAN Transparency is required in situations where there is a need for all VLAN-tagged or any untagged frames of a certain subscriber to be transparently transported to the upstream operator's backhaul/backbone network.
- **Hybrid VLAN**
This feature allows configuring a CPE to support both tagged and untagged frames.
- **Broadcast VLAN**
This feature allows transmitting broadcast traffic to subscribers having different VLANs.
- **Filtering capabilities**
This feature allows configuring L2 or L3/L4 filtering rules in the base station.
- **MAC Deny list**
This feature allows to configure a list of MAC addresses which will be blocked by the system
- **Counters Improvements**
Many system counters were revised and updated.
- **Admission control**
This feature enables three different access levels (Monitor, Installer and Administrator) to the base station monitor in order to prevent unauthorized access to specific menus.
- **Trap configuration**
This feature allows to enable/disable each trap in the system and to set its priority on an individual basis.

- **Support for large Ethernet packets**
The system supports transmission of packets of up to 1550 bytes, in order to allow 802.1QinQ packets and MPLS packets to pass transparently through the system.
- **SU common name configuration**
The SU common name is now available as RW via the base station.

A detailed description of the new BreezeMAX features is included in the respective manuals.

Fixed Bugs

Base station critical updates

This section refers to the problems that were fixed in the update version for the modular base station (this refers to the fixes included in NPU from version 2.0.1.29 to version 2.0.1.38 and in AU from version 2.0.1.51 to version 2.0.1.61).

- In some specific scenarios when managing the base station through SNMP, the SNMP agent was stuck due to a problem in releasing memory buffers. This caused the unit to stop responding to SNMP commands.
- In some specific scenarios when managing the base station through Telnet, the telnet was stuck due to a problem in releasing system resources. This caused the unit to stop responding to telnet commands.
- The AU unit randomly performed reset due to a problem in the bandwidth contention request mechanism
- In case status information from the outdoor unit was requested through SNMP from the base station, while one or more subscriber units was in the process of performing network entry, the AU performed reset.
- CIR and EIR Utilization % counters were fixed to reflect the actual utilization of CIR and EIR.
- In software version 2.0, a change in the MIB was introduced in one of the indexes data type. This change caused service provisioning functionality to become read-only. In other words, service provisioning cannot be done via AlvariSTAR version 2.6 when using BreezeMAX NPU/uBST version 2.0. A patch for AlvariSTAR version 2.6 solving this problem is already available. To receive this version, please contact Alvarion Customer Service unit.

Base station fixes from release 1.5

- In case of changing the band of an operating Access Units (e.g. from band A to band B or vice versa), it is required to follow these steps:
 - Disconnect the Access Unit outdoor radio.
 - Change the central frequency to the new band (via monitor/telnet/SNMP).
 - Connect the new Access Unit outdoor radio.
- If the new outdoor radio is connected prior to changing the central frequency to the new band, it is not possible to change the original frequency to the new band range.

- IPsec traffic may have difficulties if there is a PPPoE service defined in the Base Station. In this case, it is necessary to configure a VPL ID for the PPPoE services.
- The SU Ethernet port status always shows its status as "UP" when using SNMP (even when the SU port is not connected).
- In rare cases after base station reset, the SUs do not associate to the AU. In such cases it is required to disable and enable ODU admin status in the AU monitor or to disconnect and reconnect the IF cable to maintain normal operation.
- When working in multi channel enable, in rare cases the monitor shows illegal operation message "failed to load param group 37". When such event occurs it is required to reconfigure the AU parameters to maintain normal operation.
- The LED in the AU outdoor radio unit labeled "Eth" actually displays wireless link status and not Ethernet link status.

Subscriber unit critical updates

This section refers to the problems that were fixed in the update version for the subscriber units (this refers to the fixes included in SU from version 2.0.1.51 to version 2.0.1.59).

- Fixed a problem which caused misdetection of the SU band (this fix is needed to support 3.3Ghz and 3.6Ghz frequency bands)
- CIR and EIR Utilization % counters were fixed to reflect the actual utilization of CIR and EIR.
- In case a BreezeMAX CPE in 3.3Ghz is upgraded to version 2.0, the frequency will change to a default value of 3401.75 MHz. To avoid this, the CPE needs to be upgraded to SW version 1.5 prior to upgrading to version 2.0.

Subscriber units fixes from release 1.5

- In BreezeMAX PRO CPE units, the FDB size in SU is 254 MAC addresses, instead of 512 as stated in the specifications.
- BreezeMAX PRO CPE units located in NLOS conditions may perform reset during heavy traffic.

Known Problem & Limitations

Base station

- The maximum configured CIR/MIR value for multicast connection forwarding rule is 2.5 Mbps for BreezeMAX PRO and PRO-S CPEs and 4.5 Mbps for BreezeMAX CPEs.
- When performing downgrade from version 2.0 to previous version while the AU is connected to two radios (multi channel feature enabled), the radio connected to channel 2 must be physically disconnected. The radio must be disconnected even if the channel is disabled.
- In order to allow management of voice gateways and networking gateways, IP connectivity between the AlvariSTAR system and the VG/NG is needed (i.e. management host is connected through the data port).
- The management port is for local management only. The management port may be used only when the network is different from the data port (i.e. another router interface). The restriction evolves from preventing using the same physical router MAC address for both data and management ports.
- Configuring an IP address 0.0.0.0 for either the data or management port is not allowed
- Setting factory default should be done from local RS-232, as management IP address is changed during the process.
- When NPU data port operates in 1 GbE mode, the maximum cable distance is 70 meters.
- In case of installations with more than 2000 connections on one AU or micro base station, if the unit is reset, some of the connections of a specific subscriber may not start until the subscriber transmits traffic.
- Managing the NPU/uBST from the CPE side is not possible (either telnet or AlvariSTAR).
- NPU version 1.0.x will not work (no associations of SUs) with AU version 1.5 and AU version 2.0.
- The bridge aging table in the NPU/uBST uses a fixed time definition for aging that is user configurable with default of 10 minutes.
- When using the modem multi channel feature, the spacing between frequencies for the same AU IDU should be a multiple of 875 KHz from each center.
- If one ODU unit is already connected with traffic running through it, and the second ODU unit is connected, there is a small interference period of 350 milliseconds on the first ODU unit. Traffic may be interrupted and even some CPEs may resynch.
- When testing Point-to-Point bidirectional UDP traffic, the ratio between downlink and uplink traffic may not be symmetric (downlink traffic will take higher bandwidth than uplink traffic).
- The Password saved in backup file is in clear text.
- When the base station is running version 2.0 and a CPE is using older SW versions, parameters not supported in previous CPE versions cannot be configured at the base station and are displayed as NA (i.e. common name and hybrid VLAN).

- In the modular base station, a trap is missing when the second PIU generates a fault.
- When upgrading to version 2.0 and in case the frequency configured in the system is in the range shared by bands “a” and “b” (3550MHz to 3553.5MHz at the base station), the NPU assumes that the band used is band “a”. In case an AU ODU unit band “b” is installed, it is required to configure the correct band immediately after the version upgrade.
- When the bandwidth available at the base station backbone is less than the traffic at the wireless side, the prioritization of service types may not be maintained (it may happen that a RT service is not prioritized to a BE service)

Subscriber units

- Bandwidth of 1.75 MHz is not supported in BreezeMAX PRO and PRO-S CPE units.
- In case ATPC is disabled, and TX power is set below 10 dB, the BreezeMAX PRO and PRO-S CPE units might transmit with an inaccuracy of up to 5 dB.
- BER test is no longer supported in any BreezeMAX CPE units.
- RSSI display may show an inaccuracy of up to 4 dBm in BreezeMAX PRO and PRO-S CPE units. This inaccuracy affects only the displayed values of the RSSI, but does not affect system functionality or sensitivity values of the unit.
- In BreezeMAX PRO and PRO-S CPE units, the ability to transmit a continuous OFDM signal was removed from the system features.
- In some specific frequencies, the receiver dynamic range of the BreezeMAX PRO and PRO-S CPE may be affected and the unit may experience lower immunity to interferences.
- Performance in short packets in Point to Point scenarios for uplink traffic in BreezeMAX PRO and PRO-S CPEs for version 2.0 is lower than in previous software versions by 25%
- When the base station is running version 2.0 and a BreezeMAX PRO or PRO-S CPE is using SW version 1.0.2, it may occur that while transmitting broadcast or multicast traffic to the CPE, the CPE loses synchronization.
- In BreezeMAX PRO and PRO-S CPE units, the number of concurrent connections per SU is limited to 92, instead of 128 as stated in the specifications.
- The WEB monitor application does not ask for password after SU is reset.
- Alvarion's Voice Gateway will not work properly in case Hybrid VLAN mode is enabled on one of the services passing through the VG.
- Software download to a BreezeMAX PRO or PRO-S CPE may fail in case uplink traffic is higher than 2.5Mbps.
- When downloading a previous saved configuration file to a CPE, the Common name and Location parameters are not updated

- In BreezeMAX PRO CPE units, the following parameters are not present in the SU's monitor: Serial Number, RF Card HW Revision & Boot Version.

Backward Compatibility & Upgrade Procedure

Upgrade to the current version can be done from all previous versions.

The following guidelines exist when upgrading to version 2.0.1:

- Save a full backup configuration prior the upgrade.
- Upgrade first the NPU/uBST to version 2.0.
- After the NPU is up and running with version 2.0.1, upgrade the AU's to version 2.0.1 (this step is not needed for uBST)
- After the NPU/uBST and AU are up and running with version 2.0.1, upgrade the SU's to version 2.0.1.
- An SU with version 2.0 can work with older versions of NPU/uBST and AU.
- An SU with version 1.5 can work with version 2.0 at the base station.

The following guidelines exist when downgrading from version 2.0.1:

- For the modular base station, make sure V1.5 exists in AU shadow memory.
- In order to downgrade the modular or micro base station from version 2.0 to version 1.0 or 1.5, first downgrade the firmware, then download a pre saved backup file of version 1.0 or 1.5 and finally restart the BS.
- NPU version 1.0.2 is not compatible with AU version 1.5 or 2.0. The only possible action allowed in this scenario is to switch the AU version to the shadow version.

Detailed guidelines for the upgrade procedure are provided in the Firmware Upgrade procedure document.

Documentation

The information in the release note is complementary to the product documentation provided with the products. The BreezeMAX Base Station and Micro Base Station products are shipped with all documentation types in CD format that contains the System Manual, Product Manual, Release Note, Upgrade Procedure, etc. The System Manual in the Ver.2 release has been divided to 3 separate manuals - Modular Base Station System Manual, Micro Base Station System Manual and PRO CPE Product Manual. Each manual covers all relevant topics associated with the respective equipment, including:

- Product / System description
- System installation
- Commissioning
- Operation and Administration.

The version software and SNMP MIB files and all updated official released documentation (as well as the release note document) are available in the Customer Service web pages. Visit Alvarion WEB site

-> <http://www.alvarion.com> > Customer Support area (International) > Product Support > Log In Window > Product Line: BreezeMAX > Product Series: BreezeMAX 3500/3000 > "Release Note & Software Download" or "Manuals and Technical Notes"

Enclosed please find the "Master Document" list containing the official released documentation.

Master Document List

Document Name	File Name	Document P/N
BreezeMAX™ 3000 Modular Base Station - System Manual	BreezeMAX3000 BST version 2.0 System Manual 060219.pdf	214290
BreezeMAX™ 3000 Micro Base Station - System Manual	BreezeMAX3000 MBST version 2.0 System Manual 060220.pdf	214293
BreezeMAX™ 3000 PRO CPE – Product Manual	BreezeMAX PRO CPE version 2.0 Manual 060219.pdf	214294
Base Station Installation & Maintenance - User Manual	Installation & Maintenance User Manual_051110.pdf	214063
CPE-IDU-1D and CPE-ODU-PRO Quick Installation Guide	PRO CPE Quick Installation Guide_060123.pdf	214349
BreezeMAX™ 3000 - Troubleshooting Guide	BreezeMAX3000 Troubleshooting Guide revision A_060220.pdf	214367
BreezeMAX™ 3000 – Traps and Alarms	BreezeMAX3000 Traps and Alarms revision A_060220.pdf	214365
BreezeMAX™ 3000 – Firmware Upgrade Procedure	BreezeMAX Firmware Upgrade Procedure_Ver_2_060228.pdf	214369
Software Version 2.0.1 Official Release Note	BreezeMAX Version 2.0.1 Release Note_060228	214364

* All official documentation listed above is available in non-Alvarion logo format as well. For more information, please contact your local Sales representative.