



Z H O N E®

For software version 1.2.2.107

April 24, 2008

EtherXtend Release Notes

This document provides information for the EtherXtend 1.2.2.107 release and includes the following information:

- Summary
- New Features
- Problems Fixed
- Known issues or limitations
- Upgrade procedure
- Contacting Global Service and Support

Summary

The EtherXtend 30x4 is a family of SHDSL EFM Network Extenders. These devices support IEEE 802.3ah loop bonding to create a WAN uplink connection up to 22 Mbps. Each EtherXtend device provides 4 local Ethernet ports for connection to customer equipment.

Typical applications include leased line replacement, transparent LAN services, Branch-to-Headquarters connectivity, and Internet Access.

New Features

DHCP Client for Management IP Address Assignment (default enabled)

- ◇ New EtherXtend 30x4 units shipped from the factory with R1.2.2.107 and later SW will not have the static IP Address (192.168.2.1) provisioned for management access. Instead, DHCP Client mode will be enabled on VLAN 7, to enable automatic IP Address assignment when connected to the MALC. If a static IP Address is desired, the console connection can be used to provision a static IP Address. To do this, set your terminal emulator for 9600 N 8 1 mode and log in to

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the unit using the default ID (admin) and password (zhone). At the CLI prompt, enter the following command to configure static IP address 192.168.2.1 on the default data path (VLAN1, untagged):

```
/config if interface brvlan1 ip 192.168.2.1 mask 255.255.255.0 broadcast 192.168.2.255
/config admin-tools save running-config
```

SNMP MIB2 Support

MIB-2 RFC1213
SNMP V1 and V2c Support

SNMP Alarms and Traps

Standard traps:
Cold Start
Link Up
Link down
Authentication failure

Enterprise traps:
zhnSysMonAlarmSetEvent OID = 1.3.6.1.4.1.5504.2.5.1.0.1
zhnSysMonAlarmClearEvent OID = 1.3.6.1.4.1.5504.2.5.1.0.2
zhnSysMonTestStartEvent OID = 1.3.6.1.4.1.5504.2.5.1.0.3
zhnSysMonTestStopEvent OID = 1.3.6.1.4.1.5504.2.5.1.0.4
zhnSysMonReadyEvent OID = 1.3.6.1.4.1.5504.2.5.1.0.7

PING utility

From the BusyBox shell, a “ping-like” utility (zhnping) can be invoked for diagnostic purposes. After entering the shell, execute the following for additional information on the usage and command syntax for the zhnping:

```
EtherXtend login: admin
Password:
EtherXtend> shell
BusyBox v1.00 (2007.10.18-20:25+0000) Built-in shell (ash)
Enter 'help' for a list of built-in commands.
~$ zhnping
Try zhnping --help' for more information.
QUICK START:
simple ICMP ping: zhnping -l <host>
simple TCP ping: zhnping <host>
simple Port Scan: zhnping --scan 1-30,70-90 -S <host>

~ $ zhnping -l 10.112.3.254
HPING 10.112.3.254 (brvlan1 10.112.3.254): icmp mode set, 28
headers + 0 data bytes
len=28 ip=10.112.3.254 ttl=255 id=65445 icmp_seq=0 rtt=0.8 ms
len=28 ip=10.112.3.254 ttl=255 id=61655 icmp_seq=1 rtt=0.9 ms

--- 10.112.3.254 hping statistic ---
2 packets tramitted, 2 packets received, 0% packet loss
round-trip min/avg/max = 0.8/0.8/0.9 ms
~ $ exit
```

VLAN Priority and Rate Limiting

By default a first level of priority queuing is enforced on the physical LAN ports. Weighted round robin queuing is used to ensure the queues have access to at least some of the uplink bandwidth. The eight IEEE 802.1p priorities are mapped to the four queues according to the rules defined in Clause 7.7.3 and table 7-2 of the IEEE 802.1D standard. The queue mapping is defined as follows:

802.1p priority value	Internal Priority Queue
7	Critical
6	Critical
5	High
4	High
3	Medium
2	Low
1	Low
0	Medium

The weights are distributed as follows.

Queue1 (critical) = 50%

Queue2 (high) = 25%

Queue3 (medium) = 15%

Queue4 (low) = 10%

On a single service round, Queue1 can send 50% of the bandwidth, Queue2 can send 25%, etc. If there is only traffic on Queue1, it will take two rounds for it to reach 100% of the bandwidth. Likewise if there is only traffic on Queue2, it will take 4 rounds for it to reach 100% of the bandwidth, etc.

VLANs can be configured for rate limiting. Rate limited VLANs can be configured for a second level of priority queuing. The second level of queuing is strict priority queuing where a queue is serviced until it is empty.

Using the CLI to configure VLAN 1 rate limited 1000kbps queuing enabled:

```
EtherXtend> /config vlan vlanconfig rate-limit vlanid 1 enable rate 1000 queuing enable
```

Firmware Bank Switching

The EtherXtend has two banks of firmware. After upgrading to 1.2.2.107 the version of running firmware and the alternate bank will be visible from the CLI and WEB. Note for the alternate bank to be displayed it must have 1.2.2.107 or later firmware.

To display the firmware on the EtherXtend from the CLI use the following command:

```
EtherXtend> /show system general-info
```

```
Firmware version           - 1.2.2.107
Alt Bank Firmware version  - 1.2.2.107
Serial number              - HGGKW
Host name                  - EtherXtend
Domain name                - EtherXtendDomain
Primary DNS                - 0.0.0.0
Secondary DNS              - 0.0.0.0
Date                       - 01-06-2007
Time                       - 02:12:34
Uptime                     - 5 days, 2:13
```

You can switch the active firmware bank. The command will force the unit to load the version of firmware that resides in the other “alternate” firmware bank.

WARNING: This command will cause the unit to reboot.

```
system> /config admin-tools restore previous-bank
```

Note: Saved changes made to the configuration are associated with the firmware that is running. If firmware banks are switched the last saved configuration that was running with that version of firmware will be restored.

Problems Fixed

- ◇ Significant improvements in SHDSL physical layer robustness have been incorporated into R1.2.2.107 to prevent excessive noise conditions from creating an extended service outage.
- ◇ MAC address of the renamed eth0 interface are now used for management traffic

Known Issues

- ◇ Upload backup file using SCP (Secure Copy) does not work
- ◇ EtherXtend CPE ifOperStatus always up even when a LAN connection is down
- ◇ Link up/down traps not sent for EFM links going up or down
- ◇ Authentication trap will be sent when option is disabled
- ◇ Configure Interface Ethernet modify command does not refresh web page when using MicroSoft IE to modify Eth1. You get a pop up of “Make changes to the page and then click apply”. The pop up does not close and the Configure Interfaces Ethernet web page is not updated until you re-enter the page
- ◇ CLI command “help-config admin-tools” describes restore as config only and does not mention previous bank of software
- ◇ A reset is required after Traps are enabled to fully activate them
- ◇ CLI show syslog command does not always work.

Features not supported in this release

- ◇ VLAN Secure Forwarding mode is not supported but there is a CLI command for it.

Upgrade Procedure

This section explains how to upgrade the software for the EtherXtend CPE

Upgrading EtherXtend software

The EtherXtend CPE provides a built-in mechanism for upgrading its software image without losing customer configurations and settings. To upgrade the software image, use a software image file pre-downloaded to your PC's disk drive.



Note: Mozilla Firefox is the recommended internet browser for web access to the EtherXtend product. It is strongly recommended that Firefox is used. If using Internet Explorer then see the note referring to **Clearing Web Browser Cache** at the end of this section.

The following is an example of upgrading an EtherXtend CPE, which is running firmware version 1.2.2.103 to firmware version 1.2.2.107. A PC is connected directly to the EtherXtend CPE's LAN port.

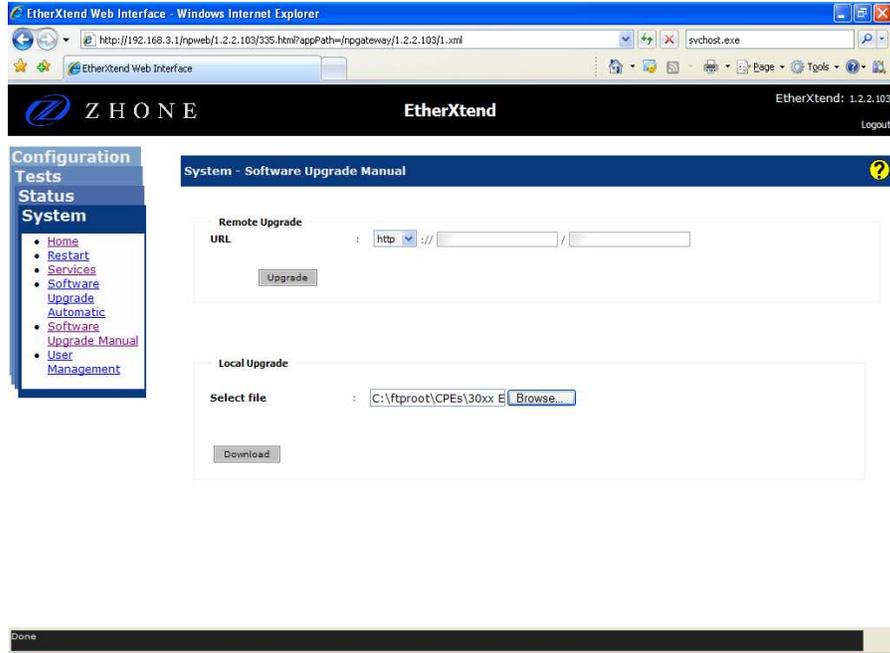
To upgrade the EtherXtend CPE's software image using a locally available *.img* file:

- 1 Viewing the current firmware revision (here you can see firmware version 1.2.2.103):

- 2 In the **System Software Upgrade Manual** section enter the path of the software image file, or press the **Browse** button to browse for the file on the PC, then click **Download**.

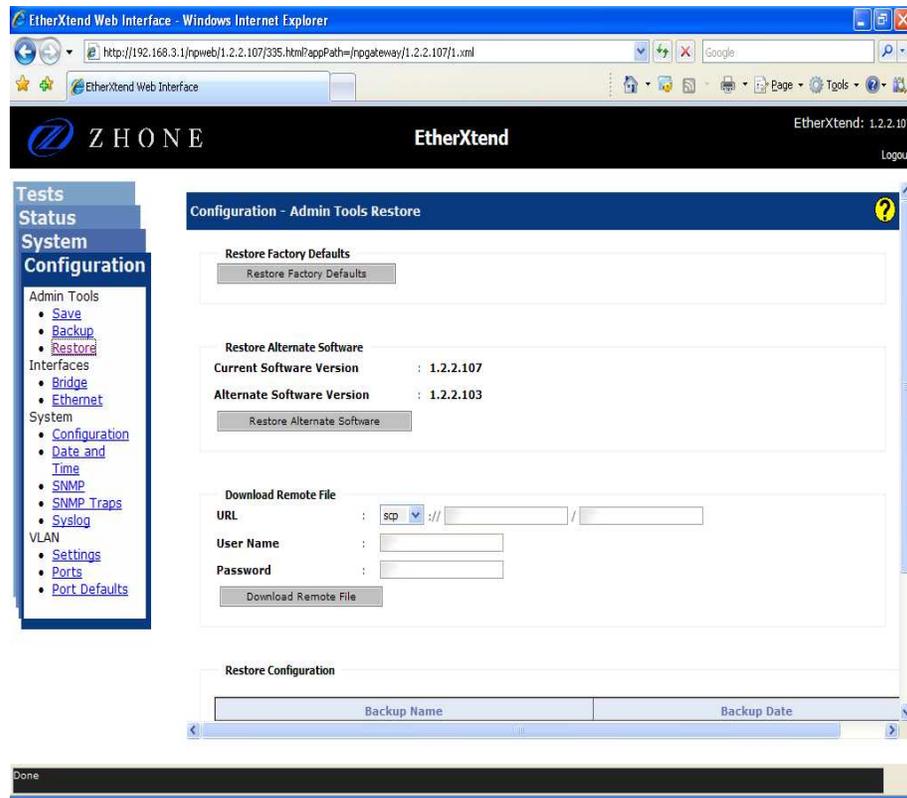


Note: Only files with an *.img* extension can be used for upgrading the firmware of an EtherXtend unit



The file will start loading from the PC to the EtherXtend CPE. The word “Loading” will appear on the bottom of the web page. When loading is completed you will be prompted to again log into the EtherXtend CPE.

- 3 Verify from the Configuration Restore screen that the new code was loaded into the Current Software bank. To install this new release into both banks repeat step 2 above.



Note: After loading new firmware you may have to clear your web browser's cache. See **Clearing Web Browser Cache** below.

Clearing Web Browser Cache

There are two options for avoiding stale web pages after an upgrade. You can configure your web browser to load the new page for every page visit, or you can clear the web browser's cache. The following procedure is for Internet Explorer. If you are using another web browser there should be similar settings available.

Load New Page For Every Visit

1. From your web browser select Tools and then Internet Options.
2. From the General tab on the Browsing history section click Settings. Then select the "Every time I visit the web page" radio button

Clear Cache

1. From the web browser select Tools and then Internet Options.
2. In the Browsing history section click **Delete**. Then in the Temporary Internet Files section click **Delete files**

Contacting Global Service and Support

Contact Global Service and Support (GSS) if you have any questions about this or other Zhone products. Before contacting GSS, make sure you have the following information:

- Model number for the Zhone product you are using
- System configuration
- Software version running on the system

- Description of the issue

Technical Support

If you require assistance with the installation or operation of your product, or if you want to return a product for repair under warranty, contact GSS. The contact information is as follows:

E-mail	support@zhone.com
Telephone (North America)	877-ZHONE20
Telephone (International)	510-777-7133
Internet	www.zhone.com/support

If you purchased the product from an authorized dealer, distributor, Value Added Reseller (VAR), or other third part, contact that supplier for technical assistance and warranty support.

Service Requirements

If the product malfunctions, all repairs must be performed by the manufacturer or a Zhone-authorized agent. It is the responsibility of users requiring service to report the need for service to GSS.