

ZyXEL AES-100 V1.00(AS.0)c0

Release Notes/Manual Supplement

Date: Feb 23, 2001

Congratulations on your purchase of AES-100 ADSL-Ethernet Switch. AES-100 is an ADSL (Asymmetrical Digital Subscriber Line) to Ethernet switch. It allows you to multiplex traffic from up to 16 ADSL lines to Ethernet network before it is forwarded to the Internet.

ADSL allows the coexistence of broadband data service and conventional voice service over the same telephone line. When deployed together with ZyXEL's ADSL modems, e.g., P642M, and WAN routers, e.g., P1400, the combination forms an integrated solution for providing broadband services to multiple tenant units such as apartments, hotels, offices and campus buildings.

The AES-100 has two slots for the ADSL to Ethernet multiplexer modules. This design provides the flexibility for you to install as few as a single module for the initial deployment and yet still has room to grow as the demand increases.

Each ADSL to Ethernet multiplexer module aggregates traffic from 8 lines to an Ethernet port.

The integrated splitters eliminate the need to use external splitters to separate voice-band and ADSL signals.

This 10 Mbps Ethernet port connects the AES-100 to an Ethernet network. With the Ethernet as the backbone, you can create a network that provides ADSL service to hundreds of subscribers.

This release is based on successful beta tests of 1.00(AS.00)b05 release. There are a lot of new features and new CLI commands in 1.00(AS.00)b05 than previous beta releases.

This document describes the features in the ZyXEL AES-100 product for its 1.00(AS.0)c0 release. The known problem list section describes problems currently under investigation and enhancement during our internal test.

Version:

F/W Version: V1.00(AS.0) | 2/23/2001

Boot Loader: V1.00(AS.0) | 2/23/2001

Features:

1. ADSL ports support G.dmt and G.lite.
2. Support IEEE 802.1d transparent bridge.
3. ADSL ports support RFC 1483 Bridge Mode.
4. Support port-based VLAN.

5. Firmware upgrade and configuration backup/restore.
6. Remote manageable.
7. SNMP manageable.

Wish List:

1. VC-based multiplexing is not support in this version.
2. SNMP management objects about ADSL are not support in this version.
3. CI commands for changing VPI/VCI values of ADSL ports are not support in this version.
4. Static filtering of IEEE 802.1d is not support in this version.
5. Spanning tree protocol is not support in this version.

Know Problem List:

1. When the upstream rate of an ADSL port is over **832** Kbps, the upstream bit error rate may be greater than 10^{-7} .

New Features to Previous Versions:

There are some new features and changes to previous versions in this version. Here lists these features and changes.

1. Telnet password now is independent of SNMP write community string.
2. Password protection and timeout functions in console.
3. All ADSL ports with Enable/Disable port states. The factory default of all ports is disabled. A port must be enabled before data transmission can occur. An enabled but disconnected ADSL port generates more heat than an operating port. To minimize heat generation and to enhance reliability, remember to disable a port when it is not in use.
4. ADSL line condition monitoring.
5. SNMP interface MIBs (RFC 1213) support.
6. ADSL ports link on/down SNMP traps support.

New CI Commands to Previous Versions:

There is some new CI commands in this version. Here lists these commands and the details can be found in AES-100 User' Guide.

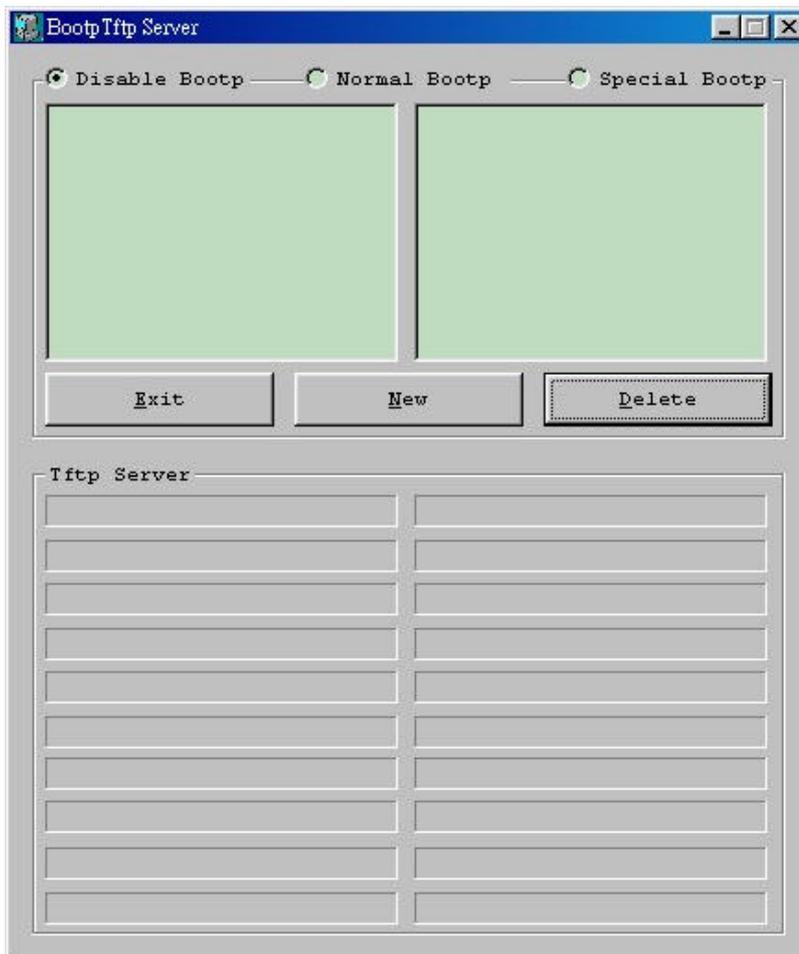
1. System Commands Group:
 - **passwd** command
 - **config print** command
 - **config save** command
 - **exit** command
2. ADSL Configuration Commands Group:
 - **disable port** command

- **disable ports** command
- **enable port** command
- **enable ports** command
- **linedate** command
- **lineinfo** command
- **lineperf** command
- **linerate** command

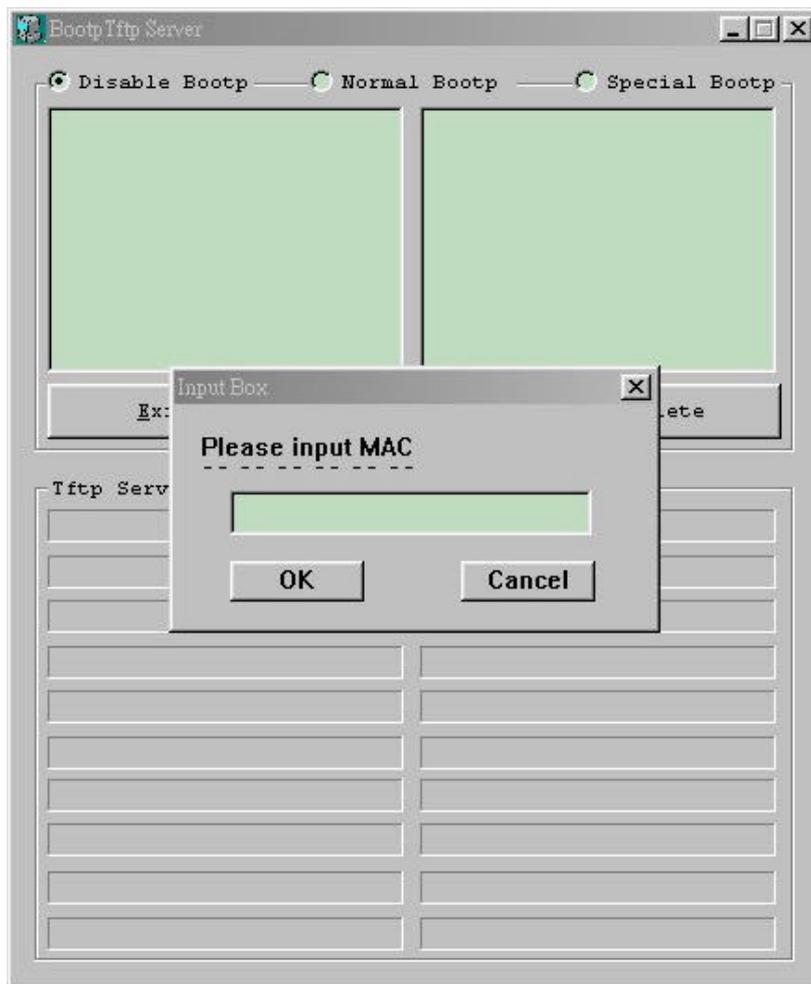
To Update AES-100 Firmware in Boot-time

The AES-100 uses BOOTP/TFTP for firmware update in boot-time through its built-in BOOTP/TFTP client. To update the firmware, first download it from the ZyXEL web site and store it on your computer. You can use any BOOTP/TFTP server (for example, BootpTftp.exe) to update AES-100 firmware. The update procedure for server BootpTftp.exe is as follows:

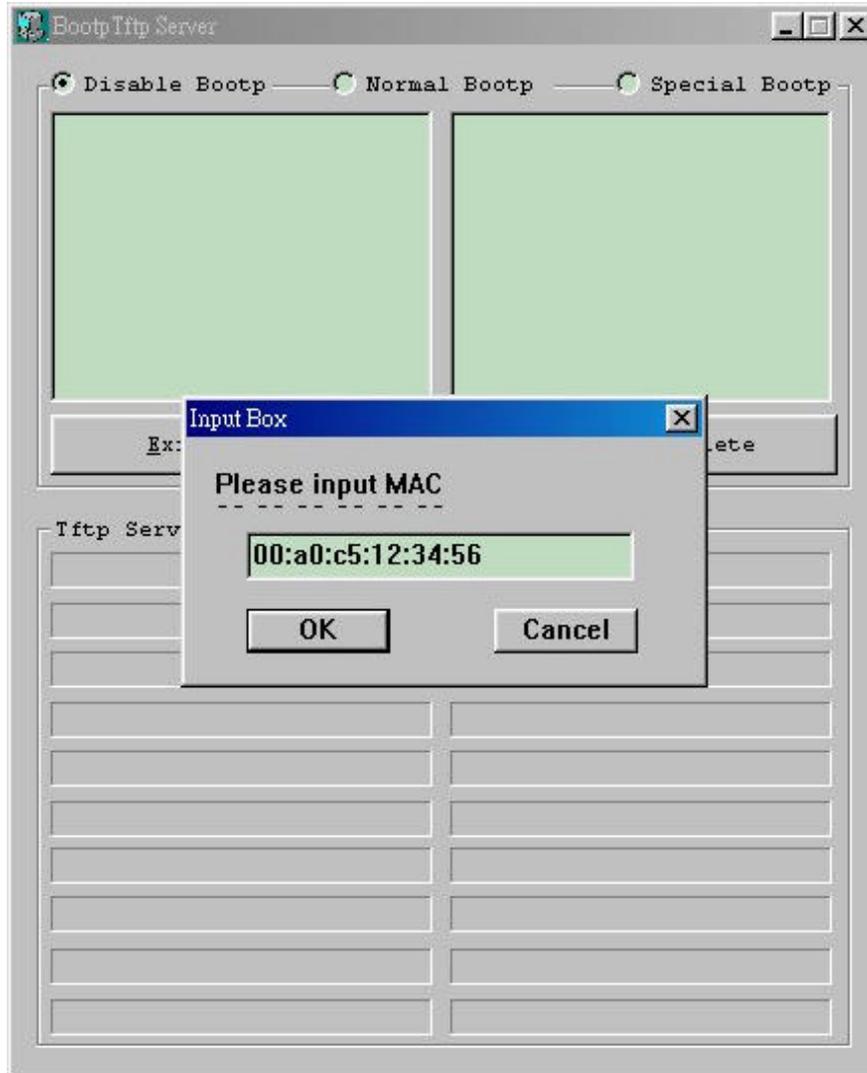
1. Connect your AES-100's LAN port to a PC's LAN port through Ethernet cable.
2. Connect your AES-100's console port to a PC's serial port through RS -232 cable.
3. Run any terminal emulation program, e.g., Windows' built -in HyperTerminal, with the following parameters:
 - VT100 terminal emulation
 - 9600 bps
 - No parity, 8 data bits, 1 stop bit
 - No flow control
4. Run BootpTftp.exe, you will see the following window



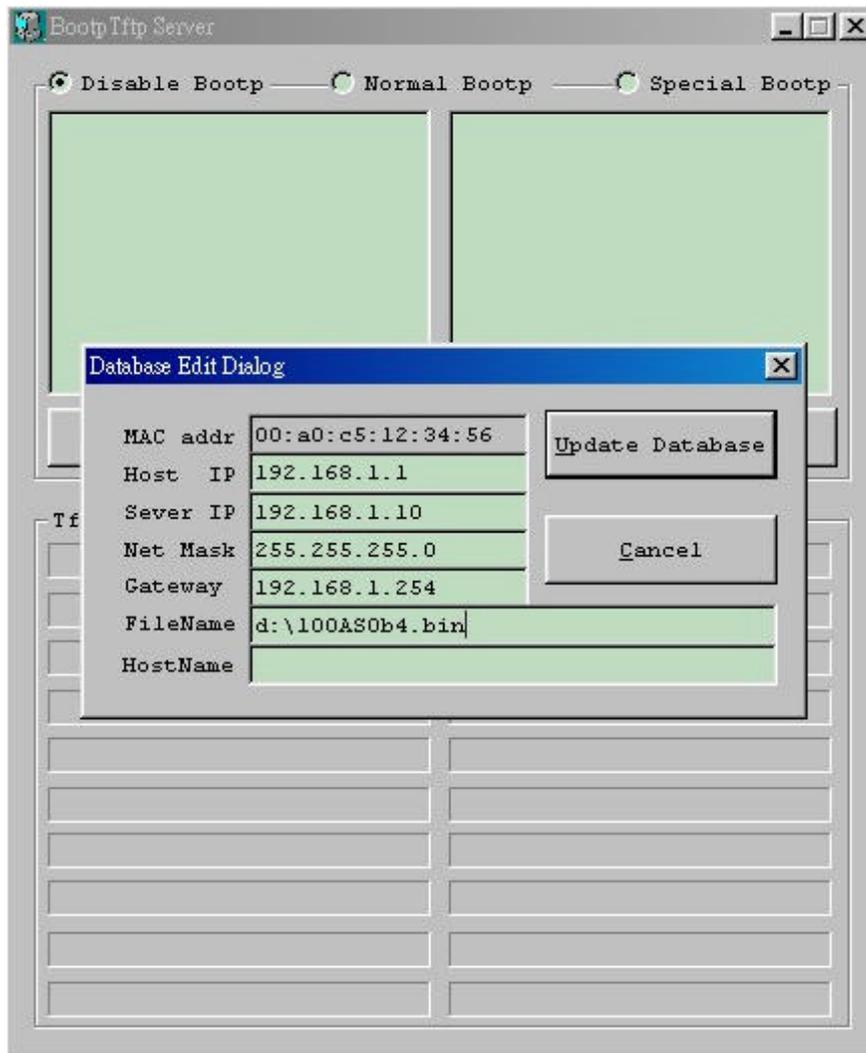
5. Click the "New" button to create a MAC address entry. The "Input Box" will pop up.



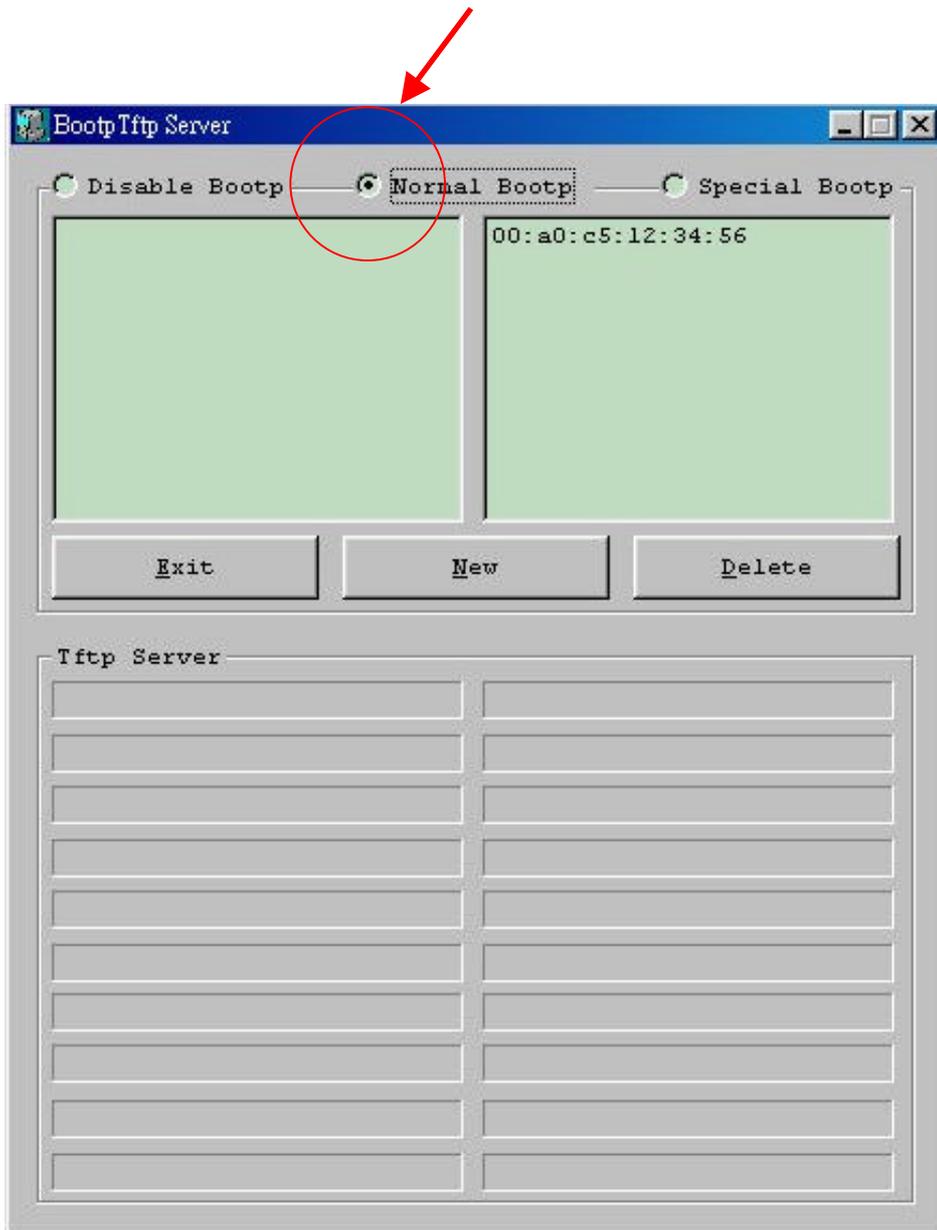
6. Input MAC address of AES-100 and then click "OK". You can find the MAC address of AES - 100 on boot console of AES-100.



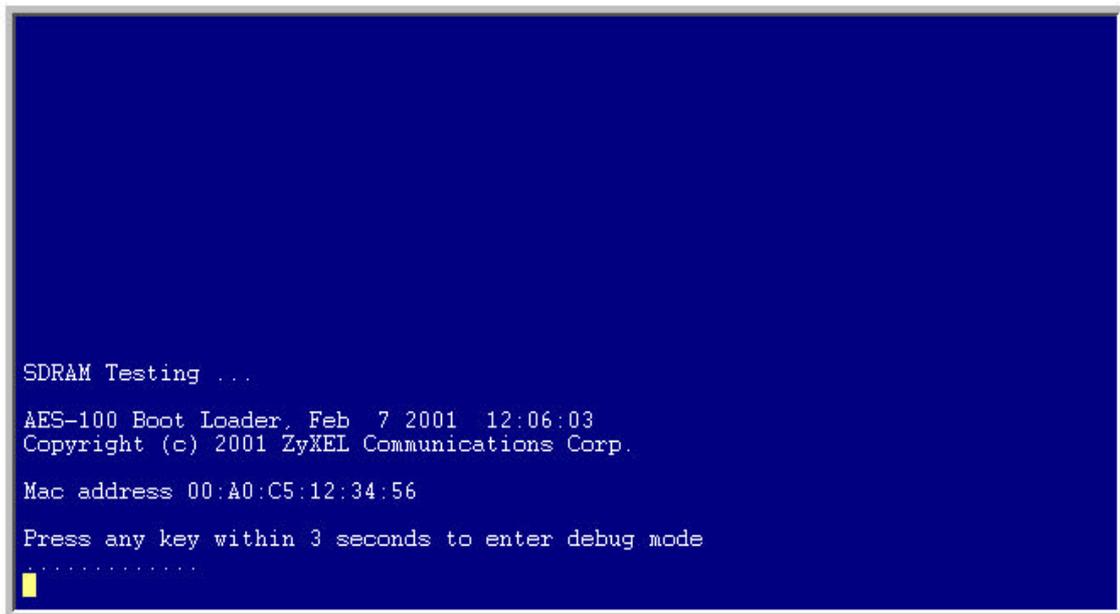
7. Set up host address (the IP address you want to assign to AES-100), server address (the IP address of this PC), net mask, gateway and filename (the new firmware name). And then click "Update Database".



8. Choose "Normal Bootp" to enable normal BOOTP/TFTP function.



9. Power on AES-100 and press any key within 3 seconds. You will see the following in console window:



```
SDRAM Testing ...  
AES-100 Boot Loader, Feb 7 2001 12:06:03  
Copyright (c) 2001 ZyXEL Communications Corp.  
Mac address 00:A0:C5:12:34:56  
Press any key within 3 seconds to enter debug mode  
.....  
█
```

10. Type "**atnb**" and then press Enter key on AES -100 boot console.
11. Wait for firmware upload to complete.
12. Use the following command sequence on AES-100 to write new firmware to flash memory.
 - 192.168.1.1> **flashfs**
 - 192.168.1.1 flashfs> **wipe**
 - 192.168.1.1 flashfs> **update**
13. Wait for the update to complete and then restart AES-100.

To Backup AES-100 Configuration

The AES-100 uses TFTP for configuration backup/restore through its built-in TFTP server. You can use any TFTP client to connect to the AES-100. The procedure on the management station is as follows:

1. Connect to the AES-100 with your favorite TFTP client. The command is generally
tftp <AES-100 IP address>
at the computer command prompt.
2. Set the binary mode.
tftp> binary
3. Transfer/Get the files to/from the AES-100
tftp> put tftplock.key
tftp> get initadsl
tftp> get resolve
tftp> get initbridge
tftp> get snmpinit
tftp> get services

Where

tftplock.key =	The file with the content of SNMP write community string (password).
initadsl =	The configuration file for ADSL ports.
resolve =	The configuration file for IP parameters.
initbridge =	The configuration file for bridge setting.
snmpinit =	The configuration file for SNMP community strings setting.
services =	The configuration file for higher layer services settings.

4. Quit TFTP.
tftp> quit

To Restore AES-100 Configuration

The AES-100 uses TFTP for configuration backup/restore through its built-in TFTP server. You can use any TFTP client to connect to the AES-100. The procedure on the management station is as follows:

1. Connect to the AES-100 with your favorite TFTP client. The command is generally
tftp <AES-100 IP address>
at the computer command prompt.
2. Set the binary mode.
tftp> binary
3. Transfer the files to the AES-100
tftp> put tftplock.key
tftp> put tftpupdt.beg
tftp> put initadsl
tftp> put resolve
tftp> put initbridge
tftp> put snmpinit
tftp> put services
tftp> put tftpupdt.end

Where

tftplock.key =	The file with content of SNMP write community string (password).
tftpupdat.beg =	An empty file (with no content).
initadsl =	The configuration file for ADSL ports.
resolve =	The configuration file for IP parameters.
initbridge =	The configuration file for bridge setting.
snmpinit =	The configuration file for SNMP community strings setting.
services =	The configuration file for higher layer services settings.
tftpupdt.end =	An empty file (with no content).

4. Quit TFTP.
tftp> quit

On the AES-100, wait for the update to complete and then restart AES100.

Forget Your Management Password

The AES-100 requires users input the management password during console or telnet login. To manage the AES-100, the system administrator must remember the management password. If the password is forgotten, please contact ZyXEL.
