

ZyXEL AES-100 V2.02(AS.0)b03

Release Notes/Manual Supplement

Date: September 04, 2001

Version:

F/W Version: V2.02(AS.0)b03 | 9/04/2001

Minor Changes:

1. File format of FTP upload F/W (e.g. 104AS0b3.img) changed. So users must upload this F/W by BOOTP/TFTP rather than FTP.

Bugs Fixed:

1. The MAC address of AES-100 shows in Filtering Database with incoming port adsl9 when getting MIBs from AES-100.

ZyXEL AES-100 V2.02(AS.0)b02

Release Notes/Manual Supplement

Date: August 30, 2001

Version:

F/W Version: V2.02(AS.0)b02 | 8/30/2001

Major Changes:

2. Contents of some configuration files (listed below) changed
 - Initbridge
2. CLI commands removed:
 - bridge dot1q
 - bridge tagging

New Features :

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

1. Operation mode selection. There are 2 operation modes in the AES-100, **fast mode** and **normal mode**.
 - Normal mode: The behavior of normal mode is the standard IEEE 802.1D transparent bridging. This is the only one operation mode that AES-100 provided before.
 - Fast mode: The behavior of fast mode is multiplexing/demultiplexing identified by IEEE 802.1Q tag. In this operation mode, the AES-100 will tag packets received from ADSL ports with 802.1Q tags according to the PVID (port VLAN id) assigned to each port. And then transmit packets to Ethernet port. In the other direction, the AES-100 will read the tags in packets received from Ethernet port, then find the destination port by PVID field of the tag. Packets will be transmitted to their destination ports after de-tagging. No MAC address learning and filtering database looking up operations are performed in fast mode, so it is expected to be more efficient.

Bugs Fixed:

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. Operation Mode Configuration Commands Group:

- **sys info** command : Display current operation mode.

Syntax: sys info

- **sys set mode** command : Set operation mode.

Syntax: sys set mode <mode>

<mode> = "fast" or "normal"

2. Fast Mode Configuration Commands Group:

- **bridge mode** command : Set/Display operation mode.

Syntax: bridge mode [<mode>]

<mode> = "fast" or "normal"

- **bridge pvid** command : Set/Display default port VLAN id.

Syntax: bridge pvid [<port> <vid>]

<port> = bridge port number, 0 stands for CPU port

<vid> = IEEE 802.1Q VLAN id, from 1 to 4094

NOTE 1: Set one port's pvid to be "0" will clear the previous setting and block this port (in FAST mode).

NOTE 2: The vids configured to each port can not have duplicate ones.

Management Issues When Configured To Be FAST Mode:

1. The AES-100 can not be managed (e.g. ping, telnet, ftp and SNMP) from CPE side when configured to be "FAST" operation mode.
2. In "FAST" mode, the AES -100 can only be managed from Ethernet port. And the management packets must be tagged with the PVID of port 0 (CPU port) of the managed AES-100.

Installation Issues When Configured To Be FAST Mode:

1. If there need extra devices between the AES-100 and the tag consuming device, it is recommended to use Ethernet Hubs or conventional Ethernet switches (not support IEEE 802.1Q). And the Hubs or switches must have the ability to forward packets of length **1522**.

Default Settings:

1. The default operation mode : normal
2. The default PVIDs :

Port #	Description	PVID
=====		
0	CPU	1
1	Ethernet	N/A
2	ADSL1	2
3	ADSL2	3
4	ADSL3	4
5	ADSL4	5
6	ADSL5	6
7	ADSL6	7
8	ADSL7	8
9	ADSL8	9

ZyXEL AES-100 V2.02(AS.0)b01

Release Notes/Manual Supplement

Date: August 27, 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 10/100 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 document describes the features in the ZyXEL AES-100 product for its V2.02(AS.0)b01 release. The known problem list section describes problems currently under investigation and enhancement during our internal test.

Version:

F/W Version: V2.02(AS.0)b01 | 8/27/2001

Features:

1. 10/100 Mbps auto-sensing Ethernet port.
2. ADSL ports support G.dmt and G.lite.
3. Support IEEE 802.1d transparent bridge.
4. ADSL ports support RFC 1483 Bridge Mode.
5. Support port-based VLAN.
6. Firmware upgrade and configuration backup/restore.
7. Remote manageable.
8. SNMP manageable.

9. Thermal monitoring to notify over-heat.
10. IGMP snooping.
11. IEEE 802.1Q tagging for subscriber identification.

Wish List:

1. SNMP management objects about ADSL lines (RFC 2662) are not support in this version.
2. Static filtering of IEEE 802.1d is not support in this version.
3. IEEE 802.1Q VLAN is not support in this version.

Know Problem List:

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

Major Changes:

3. Contents of some configuration files (listed below) changed
 - initbridge

New Features :

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

2. Tagging/Untagging for packets from/to individual port.

Bugs Fixed:

New CLI Commands to Previous Versions:

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

3. IEEE 802.1Q Tagging Configuration Commands Group:
 - **bridge dot1q** command : Set/Display state of IEEE 802.1Q.
Syntax: dot1q [<state>]
 <state> = "enable" or "disable"
 - **bridge tagging** command : Set/Display tagging control of port(s) for Tx/Rx packets.
Syntax: tagging [<port> <ON/OFF>]

- <port> = bridge port number
<ON/OFF> = "on" or "off"
- **bridge pvid** command : Set/Display default port VLAN id.
Syntax: pvid [<port> <vid>]
<port> = bridge port number, 0 stands for CPU port
<vid> = IEEE 802.1Q VLAN id, from 1 to 4094

SNMP Related Information:

1. OIDs:
 - sysObjectID : 1.3.6.1.4.1.890.1.5.9
 - mtuSystemCurrentStatus : 1.3.6.1.4.1.890.1.5.1.1.1
 - mtuSystemTemperature : 1.3.6.1.4.1.890.1.5.1.1.3
 - mtuTraps : 1.3.6.1.4.1.890.1.5.1.2
2. Enterprise Trap IDs:
 - overheat trap : 3
 - overheatOver trap : 4
3. Support Traps:
 - Cold start.
 - ADSL ports link up/down.
 - Authentication failure.
 - Overheat/overheatOver.

Firmware Upgrade

The AES-100 uses FTP to upgrade firmware in run-time through its built-in FTP server. To upgrade the firmware, first download the **firmware** (the file with “**img**” extension name) from the ZyXEL web site and store it on your computer. You can use any FTP client (for example, [ftp.exe](#) in Windows) to upgrade AES-100 firmware. The upgrade procedure is as follows:

On management station:

```
C:\> ftp <AES-100 IP address>
User : <Enter>
Password: 1234
230 Logged in
ftp> put 201AS0b1.img image
ftp> quit
```

Where

- User name : just press <Enter>
- Password : the management password, 1234 by default
- 201AS0b1.img : the name of firmware file you want to upgrade
- image : the internal firmware name in AES-100

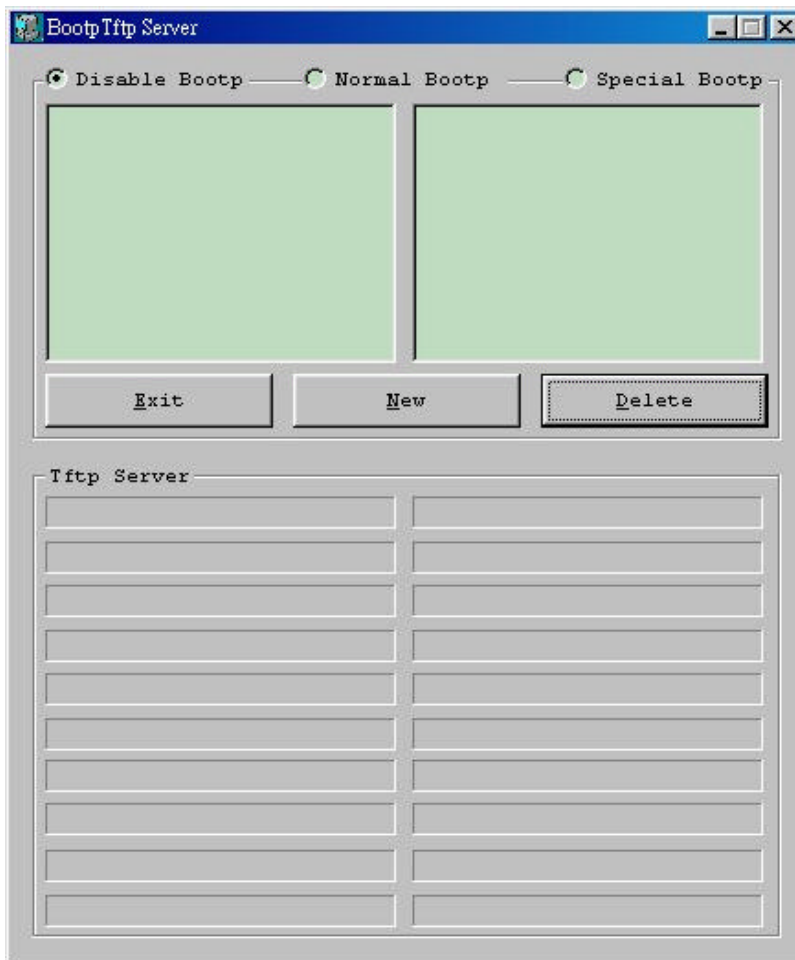
On AES-100:

After management station successfully put firmware and quit the FTP client application, waiting for updating completed and AES-100 will reboot automatically. **Do not power off** AES-100 during updating process is in progress.

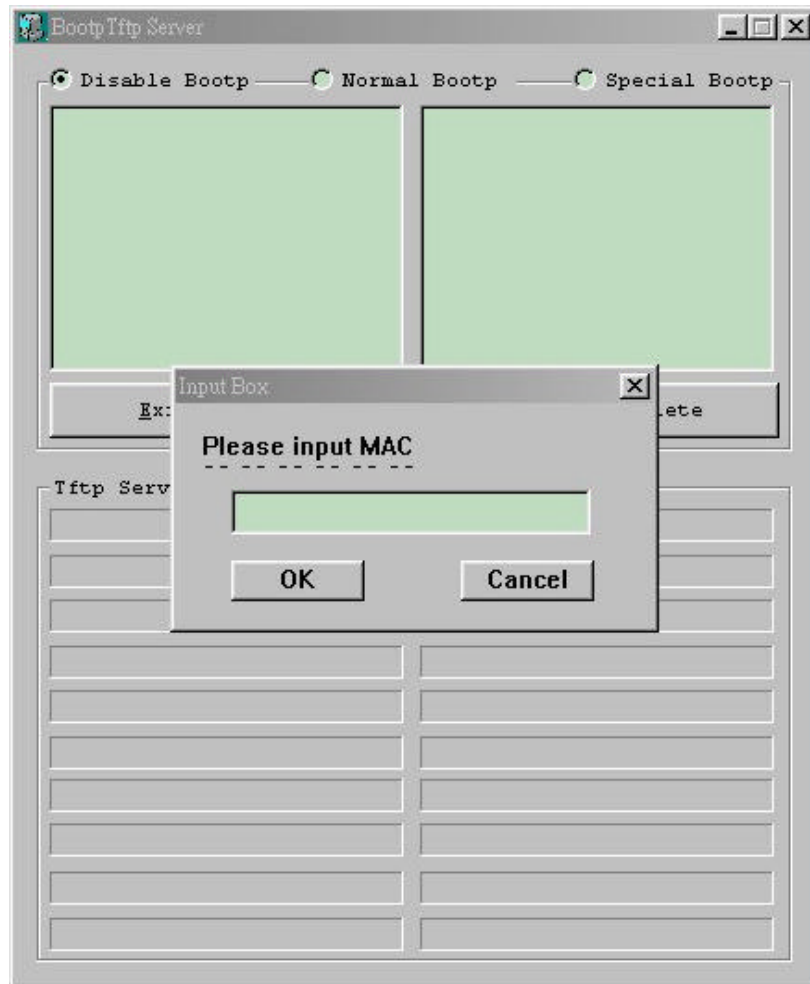
Firmware Recovery

When the firmware in non-volatile memory is damaged, the AES-100 uses BOOTP/TFTP to recover in boot-time through its built-in BOOTP/TFTP client. To recover the firmware, first download the **recovery firmware** (the file with “**bin**” extension name) from the ZyXEL web site and store it on your computer. You can use any BOOTP/TFTP server (for example, BootpTftp.exe) to recover AES-100 firmware. The recovery procedure for server BootpTftp.exe is as follows:

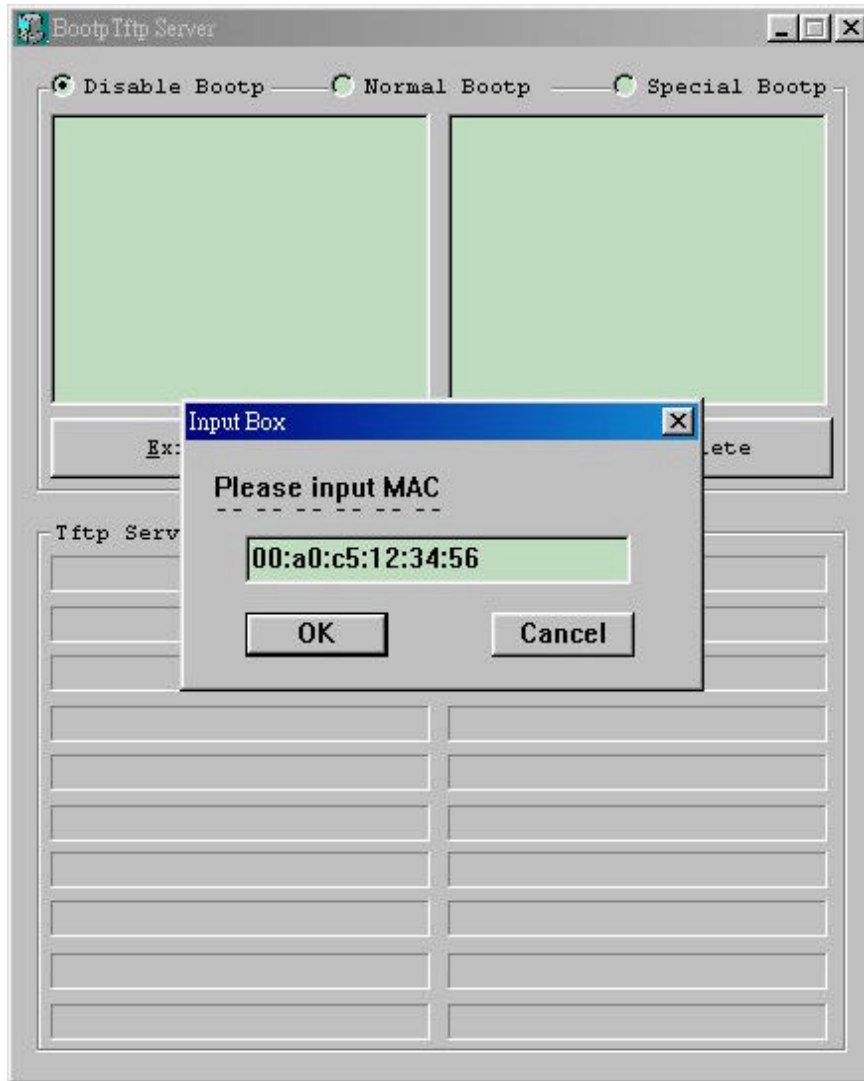
1. Connect your AES-100's LAN port to a PC's LAN port through Ethernet cable.
2. Connect your AES-100's console port to a PC's serial port through RS-232 cable.
3. Run any terminal emulation program, e.g., Windows' built-in HyperTerminal, with the following parameters:
 - VT100 terminal emulation
 -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



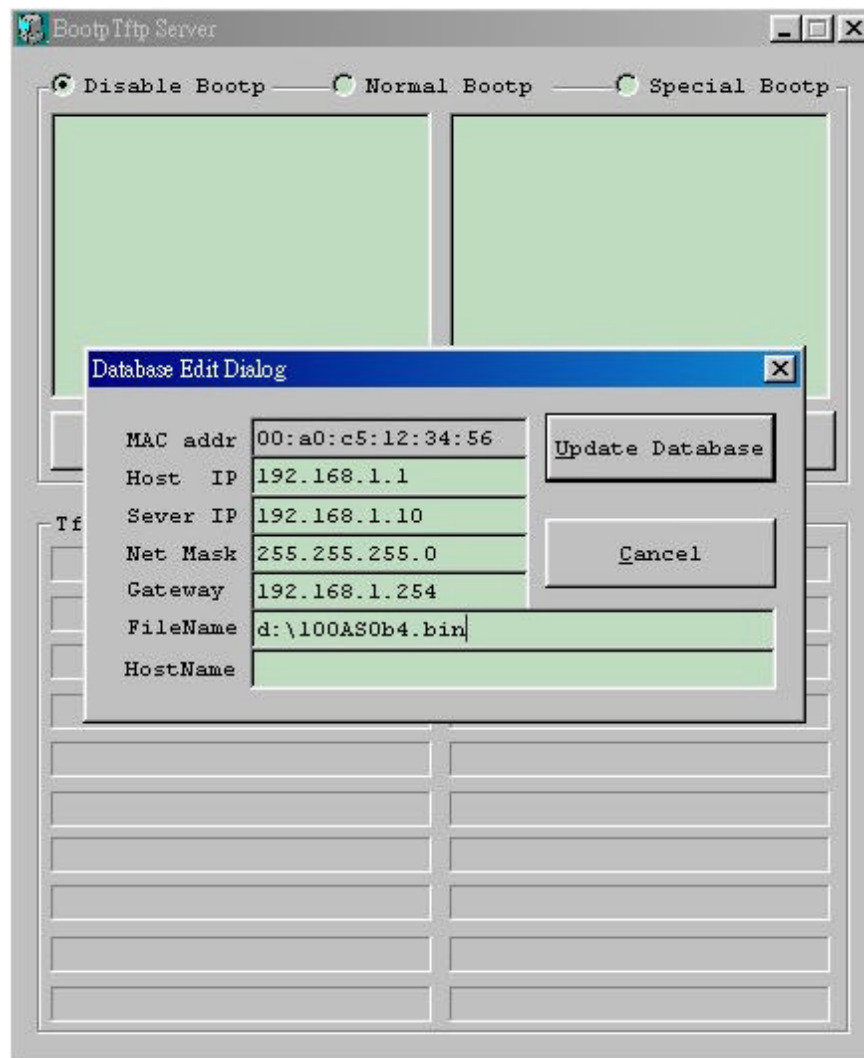
5. Click the “New” button to create a MAC address entry. The “Input Box” will pop up.



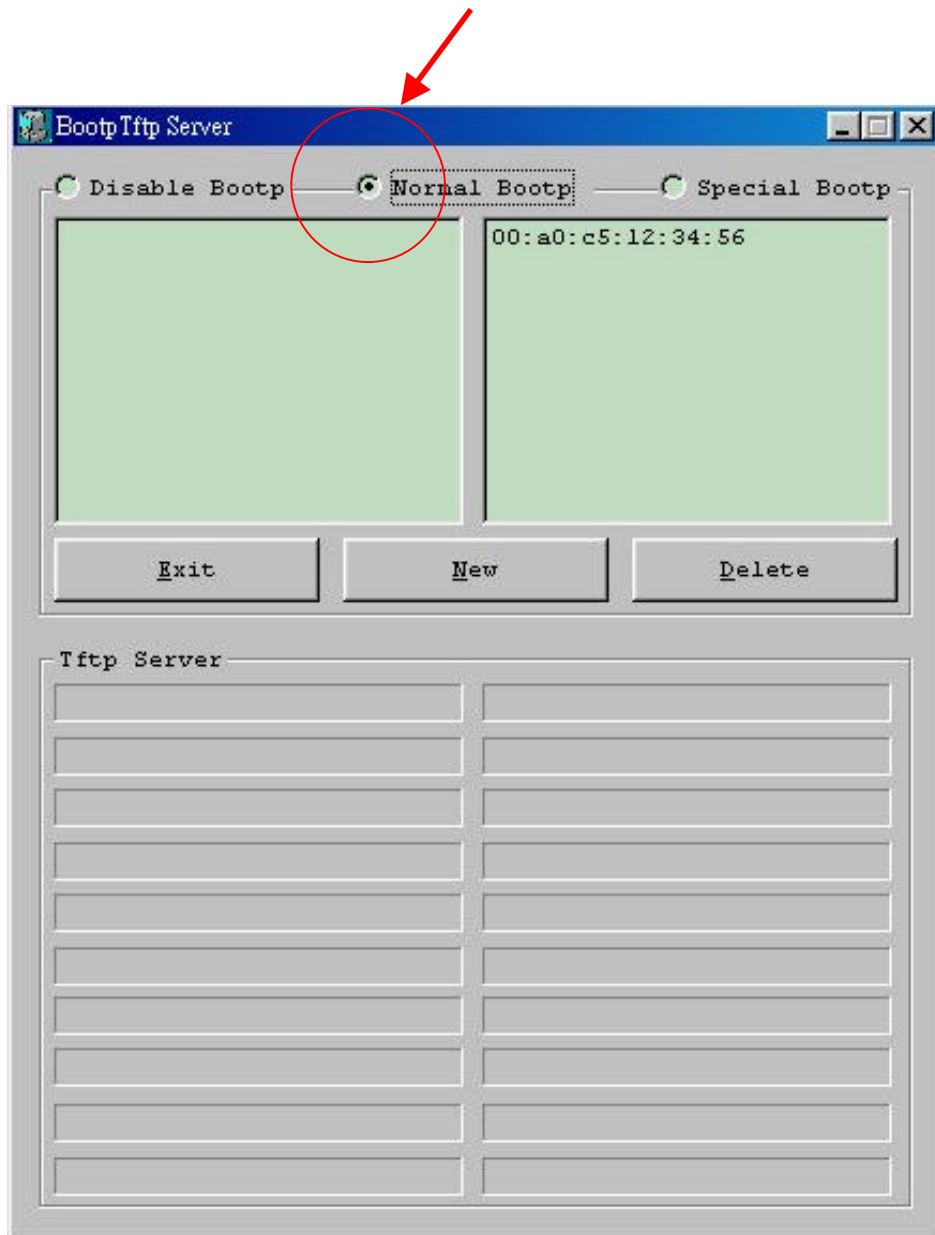
6. Input MAC address of AES-100 and then click "OK". You can find the MAC address of AES - 100 on boot console of AES-100.



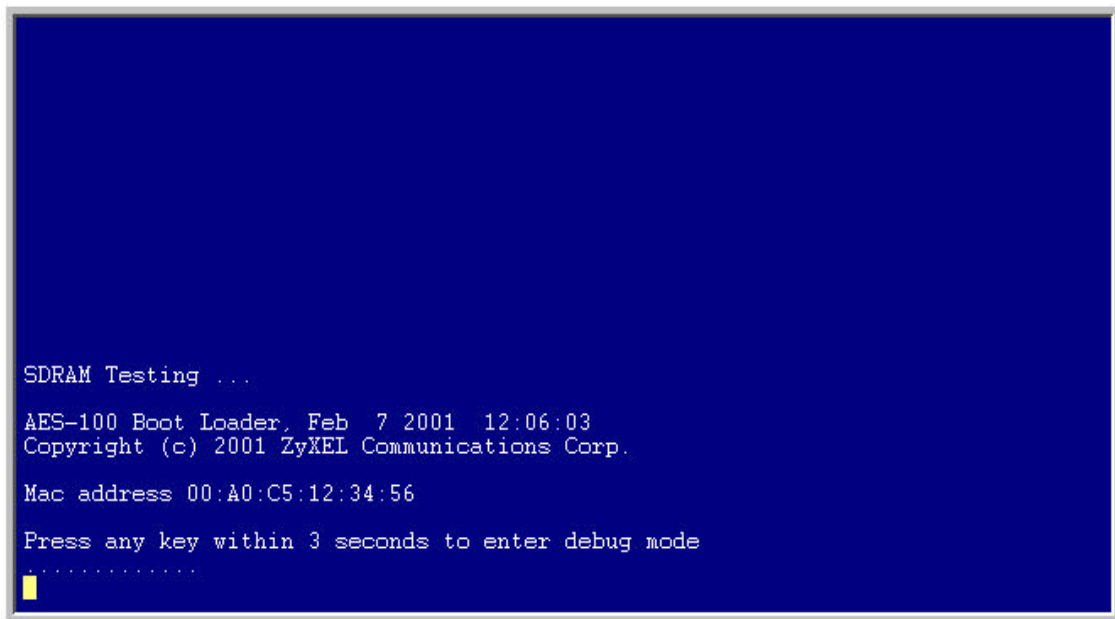
7. Set up host address (the IP address you want to assign to AES-100), server address (the IP address of this PC), net mask, gateway and filename (the new firmware name). And then click "Update Database".



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> **update**
13. Wait for the update to complete and then restart AES-100.

Configuration Backup/Restore

The AES-100 uses FTP to backup/restore configuration through its built-in FTP server. You can use any FTP client (for example, [ftp.exe](#) in Windows) to backup/restore AES-100 configuration. The procedure is as follows:

On management station:

```
C:\> ftp <AES-100 IP address>
User : <Enter>
Password: 1234
230 Logged in
ftp> get initadsl
ftp> put resolve
ftp> quit
```

Where

- User name : just press <Enter>
- Password : the management password, 1234 by default
- **initadsl** : the internal name of ADSL configuration in AES-100
- **resolve** : the internal name of IP configuration in AES-100

On AES-100:

If configuration restore is performed, after management station successfully put configuration and quit the FTP client application, waiting for updating completed and AES-100 will reboot automatically. **Do not power off** AES-100 during updating process is in progress.

Configuration Files of the AES-100 :

The AES-100 uses configuration files to store the user's settings, so they can be applied the next time the AES-100 is booted. The AES-100 has the following eight important configuration files:

initadsl =	The configuration file for ADSL ports.
resolve =	The configuration file for IP parameters.
initbridge =	The configuration file for bridge settings.
password =	The configuration file for the console and Telnet password.
services =	The configuration file for IP services.
initether =	The configuration file for Ethernet port settings.
snmpinit =	The configuration file for SNMP settings.
snmp.dat =	The configuration file for system related information.

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.
