# AX2500S/AX2200S/AX1250S/AX1240S
# Software
# Update Guide

**AlaxalA**

■ Preface

This manual describes how to update software from an older version to a newer version. Read this manual carefully before updating the software.

Unless otherwise specified, the descriptions of this manual apply equally to all models in the AX2500S, AX2200S, AX1250S, and AX1240S series. However, any part that is particular to one or more specific models is indicated by the following marks.

**[AX2500S]**

    This indicates that the part only applies to AX2500S.

**[AX2200S]**

    This indicates that the part only applies to AX2200S.

**[AX1250S]**

    This indicates that the part only applies to AX1250S.

**[AX1240S]**

    This indicates that the part only applies to AX1240S.

For example, a combination of **[AX1250S]** and **[AX1240S]** accompanying a description indicates that it applies only to AX1250S and AX1240S or describes a function that is only supported by those models.

■ Trademarks

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■ Edition history

September 2012 (Edition 9) AX1240S-SOFT-001_R8

■ Conventions: The terms "Switch" and "switch"

The term Switch (upper-case "S") is an abbreviation for any or all of the following models:
- AX2500S series switch
- AX2200S series switch
- AX1250S series switch
- AX1240S series switch

The term switch (lower-case "s") might refer to a Switch, another type of switch from the current vendor, or a switch from another vendor. The context decides the meaning.

■ Copyright

■ Note

Information in this document is subject to change without notice.

■ History of Amendments

**[For Edition 9] Summary of amendments**

| # | Location and title | Changes |
|---|---|---|
| 1 | 3. Procedures for updating software between earlier versions | • The procedure for updating the software between earlier versions was changed. [AX1240S] [2.4 or later] |

In addition to the above changes, minor editorial corrections were made.

**[For Edition 8] Summary of amendments**

| # | Location and title | Changes |
|---|---|---|
| 1 | Front cover<br>2.1 Introduction | • A description of AX2200S series switches was added. |
| 2 | 1.3 Notes on updating the software | • Notes on updating the software between versions earlier than version 2.4 were changed. [AX1240S] [2.4 or later] |
| 3 | 3. Procedures for updating earlier versions | • The procedure for updating the software between versions earlier than version 2.4 was changed. [AX1240S] [2.4 or later] |

In addition to the above changes, minor editorial corrections were made.

**[For Edition 7] Summary of amendments**

| # | Location and title | Changes |
|---|---|---|
| 1 | 1.1 Update overview | • (1) Updating the software from a remote operation terminal IPv6 networks are now supported. [AX2500S] [3.3 or later] |
| 2 | 1.3 Notes on updating the software | • (2) Notes on copying files from an SD card A description was changed. |

In addition to the above changes, minor editorial corrections were made.

**[For Edition 6] Summary of amendments**

| # | Location and title | Changes |
|---|---|---|
| 1 | 1.3 Notes on updating the software | • Notes on updating the software between versions earlier than version 2.3.A were added. [AX1240S] [2.3.A or later] |
| 2 | 3. Procedures for updating earlier versions | • The procedure for updating the software between versions earlier than version 2.3.A was added. [AX1240S] [2.3.A or later] |

In addition to the above changes, minor editorial corrections were made.

**[For Edition 5] Summary of amendments**

| # | Location and title | Changes |
|---|---|---|
| 1 | 1.3 Notes on updating the software | • Notes on downgrading were added.<br>• Notes on downgrading from version 3.1.A or later to any versions earlier than 3.1.A were added. [AX2500S] [3.1.A or later] |

In addition to the above changes, minor editorial corrections were made.


## [For Edition 4] Summary of amendments

| # | Location and title | Changes |
|---|---|---|
| 1 | 2.1 Introduction | • A description of Table 2-1 has been changed. |

In addition to the above changes, minor editorial corrections were made.


## [For Edition 3] Summary of amendments

| # | Location and title | Changes |
|---|---|---|
| 1 | Front cover<br>2.1 Introduction | • A description of AX2500S series switches was added. |

In addition to the above changes, minor editorial corrections were made.


## [For Edition 2] Summary of amendments

| # | Location and title | Changes |
|---|---|---|
| 1 | Front cover<br>2.1 Introduction | • A description of AX1250S series switches was added. |

In addition to the above changes, minor editorial corrections were made.

■ Contents

# 1. Overview

## 1.1. Update overview

Software can be updated from a remote operation terminal or from an SD memory card (hereafter, an *SD card*).

After the update, configuration information and user information, such as login accounts and passwords, are inherited.

**(1) Updating software from a remote operation terminal**

From a remote operation terminal, such as a PC, transfer the update file to the Switch (see (1) below and *2.2*), and then execute the update command (ppupdate) (see (2) below and *2.4*).

**[AX2500S]**



PC

IPv4/IPv6 network

Switch

(1) Transfer the update file via FTP.

(2) After logging in, execute the update command (ppupdate).

**[AX2200S] [AX1250S] [AX1240S]**



PC

IPv4 network

Switch

(1) Transfer the update file via FTP.

(2) After logging in, execute the update command (ppupdate).
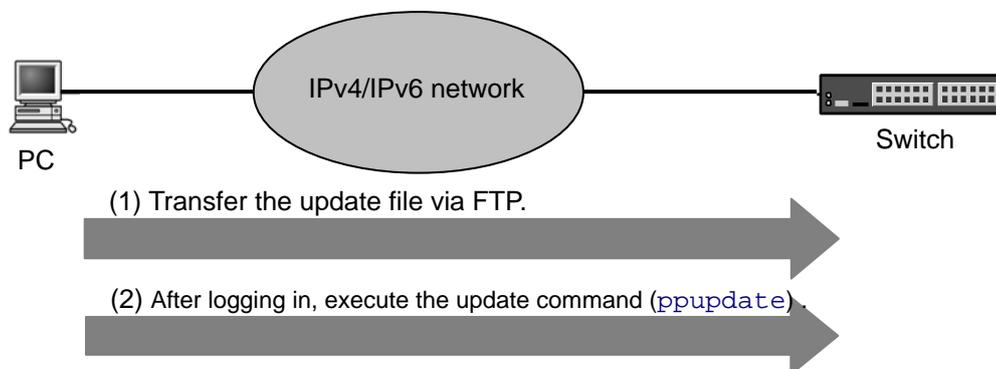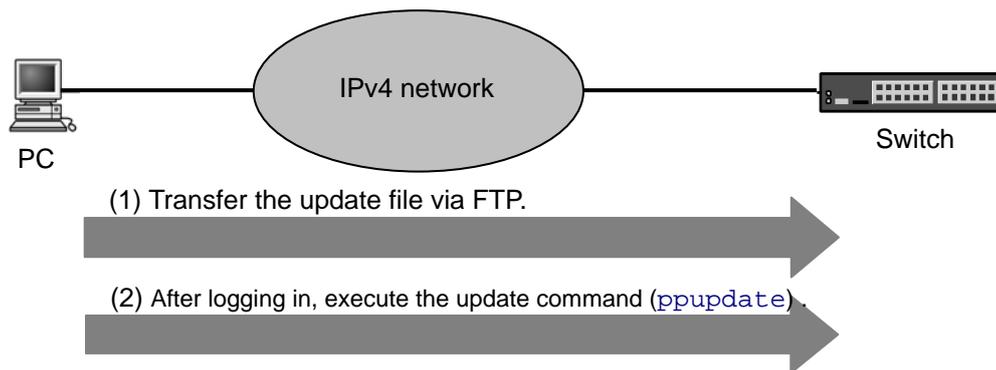
**(2) Updating software from an SD card**

After inserting the SD card containing the update file into the Switch (see (1) below), copy the update file from the card to the Switch (see (2) below and *2.3*), and then execute the update command (ppupdate) command (see (3) below and *2.4*).



Serial cable

Console terminal

Switch

(1) Insert the SD card.

SD card containing the update file

(2) Copy the file from the SD card to the Switch.

(3) After logging in, execute the update command (ppupdate).

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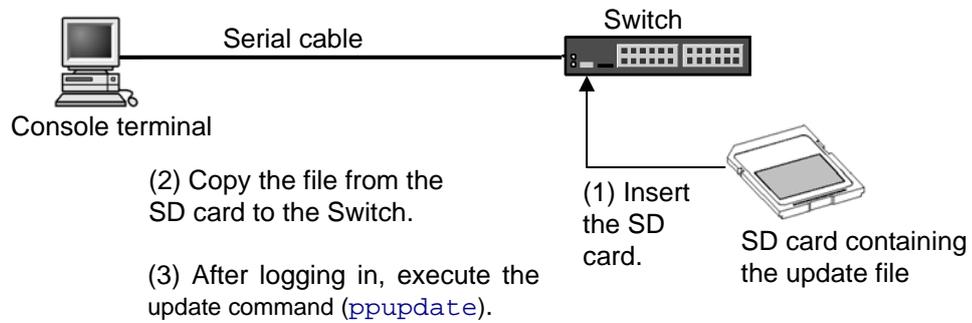
## 1.2. **Preparing to update**

The conditions explained in Table 1-1 must be met before transferring the update file to the Switch and executing the `ppupdate` command. Make sure these conditions are met before updating the software.

Table 1-1 Required conditions before update

| # | Update operation | Condition | Procedure |
|---|---|---|---|
| 1 | Update from a remote operation terminal | The Switch that will be updated must be accessible over an IP network# from a remote operation terminal, such as PC. #: [AX2500S]: IPv4 or IPv6 [AX2200S] [AX1250S] [AX1240S]: IPv4 | Connect a remote operation terminal to the network so that IP communication between the terminal and the Switch is possible. |
| 2 | | FTP client software must be running on the remote operation terminal, and files must be able to be written to the Switch by the `put` statement. | Obtain FTP client software and install it on the remote operation terminal. In Windows, the FTP software provided with the OS can be used. |
| 3 | | The Switch must be configured in the configuration information to communicate with remote operation terminals via FTP. | Define `ftp-server` in the configuration information. If an access list definition exists in `line vty` mode, the Switch must be set to allow access from remote operation terminals. |
| 4 | | A user ID and password for the Switch must be set. | Set a password for the user ID. |
| 5 | | Login to the Switch that will be updated must be possible from a remote operation terminal or a console. | For login from a remote operation terminal via Telnet, the Switch must be set to support the Telnet functionality. (Use the `line vty` command to make this in the configuration.) |
| 6 | Update from an SD card | Login to the Switch must be possible from a console terminal. | ・Use a cross serial cable to connect a console terminal and the Switch. ・Provide a terminal emulator software program on the console terminal. |
| 7 | Common | Available capacity on the RAMDISK must be sufficient to receive the transferred update file. Use the `show ramdisk-file` command to check the file size. | If the update file cannot be transferred because RAMDISK capacity is insufficient, see *1.4 If the RAMDISK capacity is insufficient*. |
| 8 | | The user must have administrator-level permissions (`enable`). | To execute the `ppupdate` command, use `enable` command to become an administrator. |

## 1.3.   Notes on updating the software

### (1) Notes on transferring files

- A file must be transferred via FTP in binary mode. Otherwise, execution of the `ppupdate` command fails.

- Transfer the file named `k.img` to the Switch. If the file already exists, overwrite it. If the file is transferred to the wrong location or with an incorrect name, delete the file, and then transfer the file correctly.

### (2) Notes on copying a file from an SD card

- Use an SD card from ALAXALA.

- Use a PC to store the update file on the SD card in advance.

- Execute the `copy` command to copy the `k.img` file to a RAMDISK, and then remove the SD card before executing the `ppupdate` command.

### (3) Notes on executing the ppupdate command

- The `ppupdate` command cannot be executed in configuration command mode.

- Back up the configuration information before updating the software.

- Do not turn the power off while updating the software. If the power is turned off, the Switch might not start.

- After editing the configuration online, if the file has not been saved, use the `save` configuration command to save the file to the embedded flash memory before updating the software. If you do not execute the `save` command, when the Switch is restarted, the Switch returns to the state existing before the configuration information was changed.

- The configuration stored in the embedded flash memory will also be used in the new version. In case of downgrading, if there is any configuration item not supported by the downgraded version, those configuration items are deleted and the Switch runs without them.

### [AX2500S]

- Keep the following point in mind when downgrading software of Ver.3.1.A or later on a switch to software earlier than Ver.3.1.A:

  Any login user ID of 9 characters or longer, or any password[#] of 17 characters or longer saved in the Switch will be reset to the default (login user ID: `operator`, password[#]: none) when you downgrade the application. In such a case, login as operator and reconfigure the login user ID and password[#]. (#: Denotes a login password or Switch administrator's password.)

### [AX1240S]

- An attempt to update the software between earlier versions might fail after the following message is collected: `Can't update software. [Hardware rev.x]`

  In this case, update the software by following the procedure described in *3. Procedures for updating software between earlier versions* below.

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## 1.4. If the RAMDISK capacity is insufficient

1.    Reduce the number of user files saved in the RAMDISK area.

## 2. Updating Software

### 2.1. Introduction

Use one of the files listed in Table 2-1 to update the software. First, use the procedure described in *2.2* or *2.3* to transfer the file to the Switch, and then use the procedure described in *2.4* to update the software.

Table 2-1 Files used to update software

| # | Model | OS | File name[#1] |
|---|-------|-----|-----------|
| 1 | AX2530S | OS-L2B, OS-L2A | `AX2530L2`*xxyy-zzz*`.bin` |
| 2 | AX2230S | OS-LT4 | `AX2230L2`*xxyy-zzz*`.bin` |
| 3 | AX1250S | OS-LT3 | `AX1250L2`*xxyy-zzz*`.bin` |
| 4 | AX1240S | OS-LT2 | `AX1240L2`*xxyy-zzz*`.bin` |

#1: *xxyy-zzz* represents the version and the build number.

Example: If the version is 2.0 and the build number is 99, the file name is `0200-99`.
If the version is 2.0.C and the build number is 199, the file name is `0200C-199`.

### 2.2. Transferring the files from a remote operation terminal

See the procedure for transferring files described in *3. Appendix* to transfer the update file to the Switch. This operation must be performed in binary mode.

### 2.3. Copying the files from an SD card

To copy the file from the SD card to the Switch (the Switch in the following procedure is an AX1240S switch):

(1) Insert the SD card containing the update file for the update into the Switch.

(2) Log in to the Switch, using your login user ID (for example, `operator)`.

(3) Enter the login password. (The **Password** text box is not displayed if a password has not been set.)

(4) Execute the `show mc-file` command to make sure the update file is on the SD card.

(5) Execute the `copy mc AX1240L2xxyy-zzz. bin ramdisk k.img` command to copy the update file, named `k.img`, from the SD card to the Switch.

(6) Use the `show ramdisk-file` command to make sure the size of the file copied to the Switch is the same as the file size on the SD card.

(7) After the file has been copied, remove the SD card from the Switch.

```
login: operator                                                      (2)
Password:                                                            (3)

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>
> show mc-file                                                       (4)

Date 20XX/02/28 16:33:48 UTC
    File Date              Size Name
    20XX/02/28 16:33   6,139,044 AX1240L2xxyy-zzz.bin  ← (Check the file name
                                                          and the size.)
>
> copy mc AX1240L2xxyy-zzz.bin ramdisk k.img                         (5)
>
> show ramdisk-file                                                  (6)

Date 20XX/02/28 16:35:59 UTC
    File Date              Size Name
    20XX/02/28 16:34   6,139,044 k.img        ← (Check the file size.)

>
```

## 2.4. Update procedure

The update procedure updates an older version of the software to a newer version. After the update, the Switch automatically restarts. Note that communication is disconnected temporarily when the Switch restarts. In addition, the update file must be transferred to the Switch (see *2.2*) or copied from the SD card (see *2.3*) to the Switch before the update can start.

To update the software (the Switch in the following procedure is an AX1240S switch):

(1) Log in to the Switch, using the login user ID (for example, operator).

(2) Enter the login password. (The **Password** text box is not displayed if a password has not been set.)

(3) Enter the enable command. The command prompt changes to #. (If a device administrator password has been set, you must enter it.)

(4) Execute the show ramdisk-file command.

(5) Make sure the size of the transferred file is the same as the size of the original file on the terminal.

(6) Execute the ppupdate ramdisk k.img command to update the software. (If an SD card is used, make sure you remove it from the Switch before you execute the command.)

(7) When the update finishes, the Switch restarts automatically. After the restart, log in to the Switch again.

(8) Execute the show version command to make sure the correct version of the software is running.

The procedure is complete.

```
login: operator                                                    (1)
Password:                                                          (2)

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> enable
#                                        ← (Make sure that # is displayed.) (3)
# show ramdisk-file                                               (4)

Date 20XX/02/28 16:35:59 UTC
   File Date             Size Name
   20XX/02/28 16:34   6,139,044 k.img     ← (Check the file size.)      (5)
#
# ppupdate ramdisk k.img                                          (6)

Software update start
**********************************************************
** UPDATE IS STARTED.                              **
**********************************************************

old version is 2.0  (Build:zzz)              ← (Old version)
new version is x.y  (Build:zzz)              ← (New version)

Automatic reboot process will be run after installation process.
Do you wish to continue? (y/n) y

main     : [*************************************]100%

boot     : [******]100%

Update done.
**************************************************************
** UPDATE IS FINISHED SUCCESSFULLY.                    **
**************************************************************

Please wait a few minutes. The reload command is executing.


Boot Initialize.......done.
System Initialize....done.

login: operator                              ← (Login after restarting.) (7)
Password:                                                         (2)

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> show version                                                    (8)

Date 20XX/02/28 16:38:28 UTC
Model: AX1240S-24T2C
S/W: OS-LT2 Ver. x.y (Build:zzz)                    ← (Check the version.)
H/W: AX-1240-24T2C [sssssssssssssssssssss:0]

>
```

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# 3. Procedures for updating software between earlier versions

## 3.1. Procedures for when an update fails [AX1240S]

The normal procedure to update the software between earlier versions might fail, as shown in the figure below. If this occurs, the following message is displayed when the `ppupdate` command is executed: `Can't update software. [ Hardware rev.x]`.

In this case, update the software to the latest version, and then downgrade the software to the earlier version.
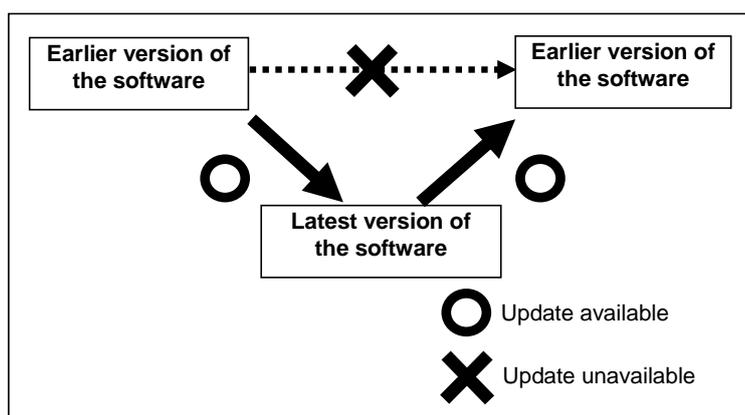


(1) Preparation

Prepare the following files:

(A) The latest version update file

(B) The earlier version update file

(2) Procedures

To update the software, perform the following procedure:

(1) Transfer file (A) to the Switch by following the procedure described in 2.2 or 2.3, and then update the software by following the procedure described in 2.4.

(2) After the Switch is restarted, transfer file (B) to the Switch by following the procedure described in 2.2 or 2.3, and then update the software by following the procedure described in 2.4.

# 4. Appendix

To transfer a file (the Switch in the following procedure is an AX1240S switch):

(1) Open the command prompt window on your PC.

(2) Move to the directory containing the update file.

(3) Use the `copy` command to change the file name to `k.img`.

(4) Use the `dir` command to check the file name and the file size.

(5) Execute the `ftp` command to connect to the Switch.

(6)  When asked to enter a user ID, enter your login user ID for the Switch.

(7)  When asked to enter a password, enter your password.

(8)  Enter <u>bin</u> to transfer the software in binary mode.

(9)  Transfer the software (file name, `k.img`) to the Switch.

(10) Enter <u>bye</u>.

```
C:¥WINDOWS> cd c:¥soft     (When the software to be updated is located in the c:¥soft directory)(2)
C:¥soft>copy AX1240L2xxyy-zzz.bin k.img        ← (Change the file name to k.img.)(3)
C:¥soft>dir
20XX/02/28 16:34   6,139,044 k.img              ← (Check the file name and the file size.)  (4)


C:¥soft> ftp 192.168.1.1              ← (When the IP address of the Switch is 192.168.1.1)(5)
User (192.168.1.1:(none)): operator      ← (Specify the login user ID for the Switch.) (6)
Password:*******                          ← (Specify the password.)                 (7)
ftp> bin                                                                            (8)
ftp> put k.img                           ← (Transfer the k.img file to the Switch.)   (9)
ftp> bye                                                                            (10)
```