

IBM INSTALLATION INSTRUCTIONS

8260 Nways(*) Multiprotocol Switching Hub

Installation Instructions

for

Microcode Upgrade Field B/M

on

PacketChannel/ATM Switching Modules

at Version v2.11

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Read This First

Read this carefully

1. Customers that have existing networks with Old Hardware Switching Modules and PacketChannel/ATM Switching Modules and want to upgrade inband have to follow the following steps :
 - Upgrade or Downgrade to DMM V5.00
 - Upgrade all Old Hardware Switching Modules old hardware to Version v2.00
 - Upgrade all PacketChannel/ATM Switching Modules to Version v2.02
 - Upgrade to DMM V5.22
 - Upgrade all Old Hardware Switching Modules old hardware to Version v2.11
 - Upgrade all New Hardware Switching Modules new hardware to Version v2.11
 - Upgrade all PacketChannel/ATM Switching Modules to Version v2.11
 - Upgrade to DMM V5.22
2. If they do not follow this download procedure all bridge port communication will be lost.
3. This is only for customers that currently have Old Hardware Switching Modules installed and PacketChannel/ATM Switching Modules at V1.01 - V1.10.
4. Customers that have the old and the new hardware already at V2.00 or later, the Packet Channel/ATM Switching Modules at V2.02 or later do not need to follow this procedure.
5. Customers that buy the new hardware already at V2.11, the Packet Channel/ATM Switching Modules at V2.11, and have no other Old Hardware Switching Modules and PacketChannel/ATM Switching Modules installed in the hub do not need do not need to follow this procedure.
6. You must upgrade all Old Hardware Switching Modules and New Hardware Switching Modules to software Version v2.11 and PacketChannel/ATM Switching Modules to softwareVersion v2.11 within the same HUB.
7. Old Hardware Switching Modules at Version v2.11 and PacketChannel/ATM Switching Modules at Version v2.11 will not operate in HUB that contains modules at previous version.
8. If all the Switch modules in the HUB are at Version v2.11 or the PacketChannel/ATM Switching Modules are at Version v2.11, the DMM, EC-DMM or Advanced DMM MUST be at level 5.22.
9. All latest 8260 microcode versions are on Internet.

You can find them at this URL:

<http://www.networking.ibm.com/support>
10. Or order the F/FBM for DMMV5.22 P/N 26L0120.
11. Or order the F/FBM for LSMV2.00 P/N 02L2967.
12. Or order the F/FBM for LSMV2.11 P/N 26L0175.

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How to recognize Old hardware and New hardware on Old Hardware Switching Modules

1. All the OLD Hardware will display under the show module command as follow :
 - SWE12-TP for Ethernet 10 Base-T 12 ports
 - SWE24-TP for Ethernet 10 Base-T 24 ports
 - SWE10-F for Ethernet 10 Base-FB/FL 10 ports
 - SWE20-F for Ethernet 10 Base-FB/FL 20 ports
 - SWE12F2-TPF for Ethernet 10 Base-T 12 ports, FDDI
 - SWE10F2-FF for Ethernet 10 Base-FB/FL 10 ports, FDDI
 - SWF4-F for FDDI DUAL 2 port DAS
 - SWE4-FX for FAST ETHERNET 100 base-FX 4 ports
 - SWE4-TX for FAST ETHERNET 100 base-TX 4 ports
2. All the NEW Hardware will display under the show module command with a suffix 'A' as follow :
 - SWE12-TP-A for Ethernet 10 Base-T 12 ports
 - SWE24-TP-A for Ethernet 10 Base-T 24 ports
 - SWE10-F-A for Ethernet 10 Base-FB/FL 10 ports
 - SWE20-F-A for Ethernet 10 Base-FB/FL 20 ports
 - SWE12F2-TPF-A for Ethernet 10 Base-T 12 ports, FDDI
 - SWE10F2-FF-A for Ethernet 10 Base-FB/FL 10 ports, FDDI
 - SWF4-F-A for FDDI DUAL 2 port DAS
 - SWE4-FX-A for FAST ETHERNET 100 base-FX 4 ports
 - SWE4-TX-A for FAST ETHERNET 100 base-TX 4 ports
3. Old and new hardware need to be upgrade at V2.11.

Only one hardware for the PacketChannel/ATM Switching Modules

1. The PacketChannel/ATM Switching Modules need to be upgrade at Version v2.11

Only one NEW Hardware for 2 other switching modules :

1. FC 7016 (Lan Access switching Modules)
2. FC 7524 (Ethernet 24 ports TELCO)
3. These 2 Modules must have the Suffix 'A' and need to be upgrade with the V2.11 code.

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Only one NEW Hardware for 2 other switching modules :

1. FC 7620 (Ethernet 10 Base-T 20 ports)
2. FC 7618 (Ethernet 100 Base-T 18 ports)
3. These 2 Modules must have the Suffix 'A' and need to be upgrade with the V2.11 code.

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Trademarks and Service Marks

The following terms, denoted by an asterisk (*), used in these Installation Instructions, are Trademarks or Service Marks of the IBM Corporation in the United States or other countries:

AIX	IBM
Nways	OS/2

The following terms, denoted by a double asterisk (**), used in these Installation Instructions, are Trademarks of other companies:

ProComm	Data Storm Technologies Corporation
Windows	Microsoft Corporation
Softterm Custom	Softronics, Inc.

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Before Installation

Purpose

The purpose of this document is to provide the instructions to update the software microcode (flash EEPROM) of the 8260 Nways(*) Multiprotocol Switching Hub PacketChannel/ATM Switching Modules, using material provided in the field B/M .

Machines Affected

These Installation Instructions, P2C V2.11, apply to 8260 Nways(*) Multiprotocol Switching Hub

- feature code 7302 (PacketChannel/ATM switching Modules)

Important Note

1. These instructions allow you to upgrade the 8260 Nways(*) Multiprotocol Switching Hub PacketChannel/ATM Switching Modules to the boot code V2.05 and the operational code level V2.11 (specific software binary files for this feature):
 - PacketChannel/ATM Switching Modules: Version v2.11.
2. Make certain all Switching Media Modules and PacketChannel/ATM Switching Modules in 8260 are running the operational code versions Version v2.11.

Requirements

These requirements must be followed only if you DOWNLOAD the code on your Old Hardware Switching Modules.

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Important Notice

Read and follow the instructions in this document before you install an IBM 8260 Old Hardware Switching Modules or download Old Hardware Switching Modules Version v2.11

Warning: Failure to follow these instructions could result in loss of bridge port communication and inability to download code to the DMM.

- Upgrade all DMM modules in the HUB to software V5.00. This code is included in the F/FBM P/N 02L2967.
- Download Old Hardware Switching Modules code Version v2.00 to any Switching Modules currently installed in the HUB (do not install new Switching Modules yet). This code is included in the F/FBM P/N 02L2967.
- Download code Version v2.02 to any PacketChannel/ATM Switching Modules in the HUB. This code is included in the F/FBM P/N 02L2967.
- Upgrade all DMM modules in the HUB to software Version v5.22. This code is included in the F/FBM P/N 26L0120.
- Download Old Hardware Switching Modules code Version v2.11 to any Switching Modules currently installed in the HUB (do not install new Switching Modules yet). This code is included in the F/FBM P/N 26L0175.
- Download New Hardware Switching Modules code Version v2.11 to any Switching Modules currently installed in the HUB (do not install new Switching Modules yet). This code is included in the F/FBM P/N 26L0175.
- Download code Version v2.11 to any PacketChannel/ATM Switching Modules in the HUB.
- Upgrade all DMM modules in the HUB to software Version v5.22.

Refer to the Release Note (P/N 26L0192) for more on this.

For Out-of-Band download method.

Updating software microcode using the download Out-of-Band method requires a Workstation with emulated ASCII terminal and the support of XMODEM protocol for file transfer. The Workstation is connected to the console port of the Management Module either locally, using a null modem, or remotely.

ASCII terminal emulation and XMODEM protocol are offered by many products such as:

- DOS platform
 - FTTERM
 - ProComm Plus for DOS
 - ProComm(**) for DOS

Note: This product is the one IBM provides in its Universal Code Download Kit (UCDK), part number 80G3150. Refer to *Installation Instructions for IBM Universal Code Download Kit*, part number 80G3152.

- Windows(**) Platform
 - ProComm Plus for Windows
 - Windows Terminal function

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- OS/2(*) Platform
 - Softerm Custom(**)
- AIX(*) Platform
 - Asynchronous Terminal Emulation (ATE)

The above list is not exhaustive, and, whatever the product one may use, the emulated ASCII terminal line settings should be set to the factory defaults for the first connection:

- Baud rate: 9600 bps
- Parity: None
- Data bits: 8
- Stop bits: 1

The communication parameters should be setup as follows:

- Terminal emulation: VT100 (preferred)
- Duplex: Full
- Flow Control: None

For Inband download method.

The DMM provides an Inband download feature that allows you to update your DMM or modules operational or boot EPROMs using TFTP (Trivial File Transfer Protocol).

You must check the following prerequisites prior to initialize the download:

- Have a TFTP server on the network to perform inband downloads.
- Connect DMMs to be updated to the same network as the TFTP server.
- Verify IP connectivity from the TFTP server to the DMM.

Important

- If your TFTP server is running in a **DOS** environment:
Check that the current directory of your PC is the one containing the binary file you want to download when you start the server.
- If your TFTP server is running in a **OS/2** environment:
If the TFTP server has been started in foreground session, check that you gave access restricted to the directory where the binary file resides (in opposition with the TFTP server started by INETD super server).
- If your TFTP server is running in an **AIX** environment:
Ensure the binary file may be read by everyone. If a file 'tftpaccess.ctl' exists in /etc, be sure that at least one 'allow' line is provided to allow access to the path where the file resides.
- For more on that, see below the details in the section Inband Download.

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Installation

The installation of the new version of software microcode requires the following tasks to be performed:

- Use the distribution diskettes to create the software files on the hard disk of the workstation (DOS or AIX).
- Upgrade all the modules using one of the download methods available.

Note: When processing the code upgrade from the web, disregard the notion of "diskette" and follow the same instructions.

Distribution Diskette

There is one 3.5 inches 1.44 MB diskette provided with that Field B/M. This diskette contains a **readme** file and these installation installations (not compressed), some boot and operational code files, in compressed format (**xxx.zip**), and three EXEC files (**unzipaix.exe**, **unzipdos.exe** and **unzipos2.exe**) to be used to decompress these compressed code files from the diskette into a temporary directory on the hard disk of your workstation, according to its operating system (AIX, DOS or OS/2), before downloading within the 8260 Nways(*) Multiprotocol Switching Hub blades.

Distribution Diskette

This diskette contains the following files:

- **readme**: Notice file (not compressed), that details the contents of the diskette.
- **Install.Doc**: Installation Instructions (not compressed)
- **unzipaix.exe**: AIX executable, used later to decompress the notice, if any, the software files and the associated command files contained in the diskette(s), on the current directory of an AIX platform that may later be used as a TFTP file server.
- **unzipdos.exe**: DOS executable, used later to decompress the notice, if any, related to an adapter, the software files and the associated command files, contained in the diskette(s), on a directory of your DOS workstation.
- **unzipos2.exe**: OS/2 executable, used later to decompress the notice, if any, related to an adapter, the software files and the associated command files, contained in the diskette(s), on a directory of your OS/2 workstation.
- **p2c_v211.zip**: Compressed file, that will produce, when decompressed in a directory of the workstation, the following files related to the PacketChannel/ATM Switching Modules:
 - **p2c_v205.bt**: Boot Software of all PacketChannel/ATM Switching Modules,
 - **p2cboot.cmd**: Related ProComm DOS command file,
 - **p2c_v211.op**: Operational Software of the PacketChannel/ATM Switching Modules,
 - **p2coper.cmd**: Related ProComm DOS command file.

Creating the Software on a DOS or OS/2 Workstation

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Important Preliminary Step

This is a necessary step if you plan:

- To use the **out-of-band** method for downloading the PacketChannel/ATM Switching Modules software microcode(s) from a **DOS** or **OS/2** platform.
- To use the **in_band** method for downloading the PacketChannel/ATM Switching Modules software microcode(s) from a **DOS** or **OS/2** Workstation acting as a **TFTP** server.

1. Insert the software distribution diskette in the DOS or OS/2 Workstation diskette unit.
2. Run the **unzipdos.exe** or **unzipos2.exe** executable from the diskette (A:), i. e. type, when in DOS:
 - **a:unzipdos a:p2c_v211**or, when in OS/2:
 - **a:unzipos2 a:p2c_v211**
3. The executable will decompress, from the diskette into your current directory, the following software files:
 - **p2c_v205.bt**: Boot Software of all PacketChannel/ATM Switching Modules,
 - **p2cboot.cmd**: Related ProComm DOS command file,
 - **p2c_v211.op**: Operational Software of the PacketChannel/ATM Switching Modules,
 - **p2coper.cmd**: Related ProComm DOS command file.

Creating the Software on an AIX Workstation

Important Preliminary Step

This is a necessary step if you plan:

- To use the **out-of-band** method for downloading the PacketChannel/ATM Switching Modules software microcode(s) from a **AIX** Workstation.
- To use the **in_band** method for downloading the PacketChannel/ATM Switching Modules software microcode(s) from a **AIX** Workstation acting as a **TFTP** server.

1. Insert the software distribution diskette, part number into the RISC System/6000 diskette unit.
2. Copy the **unzipaix.exe** executable and the **p2c_v211.zip** compressed files from the diskette into your current directory.
 - **dosread unzipaix.exe unzip**
(New name assigned is **unzip**)
 - **dosread p2c_v211.zip p2c_v211.zip**
3. Make the just created **unzip** executable:
 - **chmod a+rx unzip**
4. Decompress the just created compressed file(s):
 - **./unzip p2c_v211.zip**

The **unzip** will decompress, within the current directory, the **p2c_v211.zip** compressed file, and will produce following files:

 - **p2c_v205.bt**: Boot Software of all PacketChannel/ATM Switching Modules,
 - **p2cboot.cmd**: Related ProComm DOS command file,
 - **p2c_v211.op**: Operational Software of the PacketChannel/ATM Switching Modules,
 - **p2coper.cmd**: Related ProComm DOS command file.
5. Erase the executable and the compressed file:
 - **rm unzip**
 - **rm p2c_v211.zip**
6. Make sure that the just created notice, command and software files may be read by everyone.
 - Set path to the software file.
 - **chmod a+r p2c_v205.bt**
 - **chmod a+r p2cboot.cmd**
 - **chmod a+r p2c_v211.op**
 - **chmod a+r p2coper.cmd**

Safety

Since this update is to be performed with machine powered on, review the **Safety Notices** delivered with the shipping group.

References

Installation Instructions for IBM Universal Code Download Kit, part number 80G3152.

8260 DMM Commands Guide, form number SA33-0275..

8260 DMM User's Guide, form number SA33-0259...

ProComm Reference Manual.

8260 Old Hardware Switching Modules and New Hardware Switching Modules Release Note, part number P/N 26L0192.

Upgrading the 8260 Nways(*) Multiprotocol Switching Hub Old Hardware Switching Modules

Download Out-of-Band

General Scenario

If you out of band download the v2.11 code on the PacketChannel/ATM Switching Modules you do not need to upgrade or downgrade the DMM to v5.00.

1. Establish the connection between your Workstation and the Management Module. Refer to the appropriate *Installation and Operations Guide* or *User's Guide*.
2. Start the ASCII Terminal Emulator.
3. Start the download out-of-band procedure that pertains to the Management Module the terminal is connected to.
4. When the Management Module is expecting the file to be sent, start the send file procedure.

Scenario for UCDK Users

1. Establish the connection between your DOS station and the Management Module. Refer to the appropriate *Installation and Operations Guide* or *User's Guide*.
2. Start the ProComm software.
3. After the terminal screen is displayed, press the 'Alt-B' keys to specify the diskette unit where the distribution diskette will be mounted or the directory where your previously decompressed software resides (in the 'PATH' input field).
4. Start the download out-of-band procedure that pertains to the Management Module the terminal is connected to, i.e.:

Important Notice

Warning: There is a separate software v2.11 images for the PacketChannel/ATM Switching Modules choose the right file according to your module.

- **p2c_v205.bt**: Boot Software of all PacketChannel/ATM Switching Modules,
- **p2cboot.cmd**: Related ProComm DOS command file,
- **p2c_v211.op**: Operational Software of the PacketChannel/ATM Switching Modules,
- **p2coper.cmd**: Related ProComm DOS command file.

- Download first the BOOT.
- Enter the command **download out_of_band module <slot.subslot> boot** to initiate the download of boot code to the Switching module specified by slot and subslot information.
- When the Management Module is expecting the file to be sent (you may see the 'Please initiate file transfer' prompt message):

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- a. Press the 'Alt-F5' key.
 - b. You must select the proper **cmd** file in order to initiate the download, e. g.
 - c. or the **p2cboot.cmd** file to initiate the download of the Boot Code Version v1.12 on module PacketChannel/ATM Switching Modules specified by slot and subslot information.
 - d. File transfer progress will be indicated on the terminal until completion.
- Now you can download the Operational :
 - Enter the command **download out_of_band module <slot.subslot> operational** to initiate the download of operational code to the Switching module specified by slot and subslot information.
 - When the Management Module is expecting the file to be sent (you may see the 'Please initiate file transfer' prompt message):
 - a. Press the 'Alt-F5' key.
 - b. You must select the proper **cmd** file in order to initiate the download, e. g.
 - or the **p2coper.cmd** file to initiate the download of the Operational Code Version v2.11 on module PacketChannel/ATM Switching Modules specified by slot and subslot information.
 - c. File transfer progress will be indicated on the terminal until completion.

Download Inband

The DMM provides an inband download feature that allows you to update 8260 modules using TFTP (Trivial File Transfer Protocol).

Use the following procedure to perform an inband download:

1. Verify that the TFTP server is able to PING the DMM.
2. Be sure to have running TFTP Daemon on your server.
3. Copy the operational code files on a directory of your TFTP server.
4. Configure the TFTP parameters in the DMM by issuing the following management commands as shown:
 - a. > set tftp file_name <name of the file> (you may need a path)
 - b. > set tftp server_ip_address <ip address of your TFTP server>
 - c. > clear tftp results
 - d. > save tftp

name of file sequence :

p2c_v205.bt for all PacketChannel/ATM Switching Modules

p2c_v211.op for all PacketChannel/ATM Switching Modules

Note: This can be accomplished either by TELNETing to the DMM, or by direct attachment to the DMM front panel serial port via a RS-232 connection.

5. Issue the SHOW TFTP command to verify the TFTP parameters previously set.

> SHOW TFTP

6. Issue the appropriate INBAND DOWNLOAD command as shown below to begin the download:

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download inband device boot to initiate the download of boot code to the Advanced DMM/Controller Module or Advanced DMM/Controller Module

download inband module <slot.subslot> boot to initiate the download of boot code to the module specified by slot and subslot information.

or download inband all 2 SwA02_MOD boot to initiate the download of boot code to all PacketChannel/ATM Switching Modules installed in the HUB.

7. Once the download process begins, do not press any keys or interfere with the process. You will have messages prompted to you.
8. Verify, with SHOW DEVICE command, that the code is now the updated version.
9. Configure the TFTP file_name for the operational in the DMM by issuing the following management commands as shown:

- a. > set tftp file_name <name of the file> (you may need a path)

10. Issue the appropriate INBAND DOWNLOAD command as shown below to begin the download:

download inband module <slot.subslot> operational to initiate the download of operational code to the module specified by slot and subslot information.

or download inband all 2 SwA02_MOD operational to initiate the download of boot code to all PacketChannel/ATM Switching Modules installed in the HUB.

11. Once the download process begins, do not press any keys or interfere with the process. You will have messages prompted to you.
12. Verify, with SHOW DEVICE command, that the code is now the updated version.

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After Installation

Publication Update

Insert the companion Release Note, part number P/N 26L0192, in your publications binder.

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End of Document