IBM Installation Instruction

IBM 8260 Nways Multiprotocol Switching Hub

Installation Instruction

for

ATM firmware upgrade kit

A-CPSW (FC 5000+MES5001 or FC 5100)

FPGA level C31, C30, B50

Operational Microcode Version v.2.5.2

Boot Microcode Version v.2.5.2

MES 5099

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1.1 Trademarks and Service Marks

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2.0 Installation Instruction

2.1 Before Installation

2.1.1 Purpose

The purpose of this document is to provide instructions for upgrading the 8260 ATM components.

IMPORTANT IMPORTANT IMPORTANT

In case you have ordered a module to be plugged in the 8260 and if your A-CPSW is at micro-code level V2.3.0 or below, you must apply first this MES 5099 to your 8260 before plugging the new blade in your chassis.

2.1.2 Prerequisite

Here follow the different pre-requisite levels:

1. **If you NEVER applied the field B/M 51H5213 EC Number E95664**, here under are the minimum required levels for the ATM components:

Component	Feature Code	Opera-tional FPGA Version	Flash EEPROM Version	Boot EEPROM Version
A-CPSW	5000 5100	9	v2.1.0	v2.1.0
A4-FB100 (MIC)	5004	6	n/a	n/a
A4-FB100 (SC)	5104	6	n/a	n/a
A2-MB155	5002	7	n/a	n/a
A3-MB155	5003	1	n/a	n/a
A12-TP25	5012	1	n/a	n/a
A-CMU1	5102	B3E3/B3F3	n/a	n/a
A-CMU2	5202	B3E3/B3F3	n/a	n/a
A04MB-BRG	5204	B3E3/B3F3	n/a	n/a
A-MSS	5300	B3E3/B3F3	n/a	n/a
A2-WAN	5302	B3E3/B3F3	n/a	n/a

If some are at a lower level you MUST upgrade them to these levels first.

8260 A-CPSW FC 5000 can only be at the above levels, if and only if the MES 5001 Field BM Part Number 51H3882 EC 28188 has been previously applied.

Field B/M 51H4282 EC E28134 will allow to upgrade ATM Media Modules (A4-FB100 MIC,A4-FB100 SC,A2-MB155) to the latest FPGA 8/81 level.

Packages for Media Modules are available on INTERNET at URL
http://www.raleigh.ibm.com/826/826fix.html

2. **If you ALREADY applied the field B/M 51H5213 EC Number E95664**, here under are the minimum required levels for the ATM components:

Component	Feature Code	Opera-tional FPGA Version	Flash EEPROM Version	Boot EEPROM Version
A-CPSW	5000 5100	B40	v.2.4.3	v.2.4.3
A4-FB100 (MIC)	5004	B40	n/a	n/a
A4-FB100 (SC)	5104	B40	n/a	n/a
A2-MB155	5002	B40	n/a	n/a
A3-MB155	5003	C10/C21	n/a	n/a
A12-TP25	5012	C10/C20	n/a	n/a
A-CMU1	5102	B40	n/a	n/a
A-CMU2	5202	B40	n/a	n/a
A04MB-BRG	5204	B40	n/a	n/a
A-MSS	5300	B40	n/a	n/a
A2-WAN	5302	B40	n/a	n/a

2.1.3 Machines Affected

This installation instruction, Part Number N.A., applies to the following 8260 A-CPSW levels:

Component	Feature Code	Flash EEPROM Version	Boot EEPROM Version
A-CPSW	5000 5100	v.2.1.0 v.2.2.0 v.2.2.2 v.2.3.0 v.2.4.0 v.2.4.3 v.2.5.0	v.2.1.0 v.2.2.0 v.2.2.2 v.2.3.0 v.2.4.0 v.2.4.3 v.2.5.0 v.2.5.1

For a A-CPSW module, enter the SHOW DEVICE command at the A-CPSW console to verify the boot EEPROM version and flash EEPROM version. Enter the SHOW MODULE n VERBOSE command to verify the Part Number, EC level and the operational FPGA version of the ATM module in slot n.

2.1.4 General recommendations

WARNING

This MES 5099 implies several steps that you need to follow very carefully.

To ease the migration process and minimize potential connectivity problems after activation of new micro-code, we recommend to have a local console connected to the RS232 port on each A-CPSW. This will allow local reconfiguration of the links when a remote telnet session is impossible.

2.1.5 Requirements

2.1.5.1 Out-of-Band download method

WARNING

The download out-of-band is not supported for this release

2.1.5.2 Inband download method

You need to perform an inband download operation, using either

Classical IP mode

Make sure that your ATM network is configured for IP Over ATM (RFC 1577).

To configure your ATM network for IP over ATM:

1. Connect an ARP server to the ATM network. The ARP server will be used to map IP addresses to ATM addresses.
2. For each A-CPSW module verify that the following parameters are configured:
   - ATM address of the ARP server
   - IP address and IP mask of the A-CPSW
   - IP address of the default gateway
3. Verify the IP connectivity to the ARP server by entering a PING command for each A-CPSW module.
4. Verify the IP connectivity to the TFTP server by entering a PING command for each A-CPSW module.

Ethernet or Token Ring LAN-Emulation mode

Make sure your network is configured in Ethernet or Token Ring LAN-Emulation.

To configure your network in Ethernet or Token Ring LAN-Emulation :

1. you must have an Ethernet or Token Ring LAN-Emulation server configured and ready.

   You may use the local LES of the 8260. Refer to the section "Setting Up LAN Emulation Servers" in the Release Note Part Number N.A..

2. you must configure the Ethernet or Token Ring LAN-Emulation Client on your 8260.

   Refer to the section "Setting up a LAN Emulation Client" in the Release Note Part Number N.A..

3. you must have a TFTP Server somewhere in the IP network (either on the Emulated LAN, either behind an IP Gateway), and the microcode files installed on that TFTP Server.
4. Check that you can ping the TFTP server from the 8260 LEC.

Serial Line IP support (SLIP) mode

Make sure your workstation can act as a TFTP server .

- Set up a A-CPSW Configuration Console in SLIP Mode:

  Refer to the section "Setting Up a Configuration Console in SLIP Mode" in *ATM Control Point and Switch Module : Installation and User's guide (SA33-0326)* for details on this.

- Then configuring the SLIP interface on the TFTP workstation will allow you to perform Inband Download between your workstation and the A-CPSW.
- The SLIP connection will be broken after a reset of the A-CPSW and connection will be operational in normal mode.

2.2 Pre-Installation

2.2.1 Distribution of Diskette images

The updates for the FPGA picocode, the boot microcode and the operational microcode for the A-CPSW are shipped on 1.44MB diskette imagess.

These files should be placed in a directory reachable through TFTP, like /tmp for a UNIX/AIX station.

The present kit contains 10 diskette images :

1. The diskette image, Part Number 10J2408, contains for A-CPSW 8260:
   a. A notice file (README.826)
   b. A-CPSW boot microcode (boot252.bin)
   c. A-CPSW operational microcode (oper252.bin)
   d. A soft copy of this installation instruction (inst8260.doc)
   e. A soft copy of the release note (rel8260.doc)
2. The diskette image, Part Number 10J2409, contains:
   a. A-CPSW FPGA picocode (swpgab50.enc)
   b. 8285 FPGA picocode (85pgac30.enc)
   c. A new MIB version 1.7 (mib1.7)
3. The diskette image, Part Number 10J2410, contains:
   a. HS 100Mbps MIC connector FPGA picocode (100mc50.enc)
   b. HS 100Mbps SC connector FPGA picocode (100sc50.enc)
4. The diskette image, Part Number 10J2411, contains:
   a. HS 155Mbps 2 ports FPGA picocode (1552p50.enc)
   b. HS 155Mbps 3 ports FPGA picocode (1553p31.enc)
5. The diskette image, Part Number 10J2412, contains:
   a. Carrier module FPGA picocode (cmpga50.enc)

   b. 12 port 25 Mbps module FPGA picocode (25pga30.enc)
6. The diskette image, Part Number 10J2413, contains for 8285:
   a. A notice file (README.285)
   b. 8285 boot microcode (boot150.bin)
   c. 8285 operational microcode (oper150.bin)
   d. A soft copy of the installation instruction (inst8285.doc)
   e. A soft copy of the release note (rel8285.doc)
7. The diskette image, Part Number 10J2414, contains:
   a. 12 port 25 Mbps module Back level FPGA picocode (25old1.enc)
   b. 8285 Back level FPGA picocode (8285old3.enc)
8. The diskette image, Part Number 10J2415, contains:
   a. HS 100Mbps MIC connector FPGA picocode (100mold8.enc)
   b. HS 100Mbps SC connector FPGA picocode (100sold8.enc)
9. The diskette image, Part Number 10J2416, contains:
   a. HS 155Mbps 2 ports FPGA picocode (155old81.enc)
   b. HS 155Mbps 3 ports FPGA picocode (155old1.enc)
10. The diskette image, Part Number 10J2417, contains:
   a. Carrier module FPGA picocode (cmoldb3.enc)

2.2.2 References

Release Note, Part number N.A., EC level N.A..

Installation Instruction for IBM Universal Code Download Kit, Part Number 80G3152

ATM Control Point and Switch Module, Installation and User's Guide (SA33-0326-01)

ATM 100 Mbps Module, Installation and User's Guide (SA33-0324)

ATM 155 Mbps Flexible Concentration Module, Installation and User's Guide (SA33-0358-01)

IBM 8285/8260 ATM Command Reference Guide (SA33-0385)

2.2.3 Copying the Distribution Files on your Workstation

Important

This is a necessary step for downloading the A-CPSW software microcodes from a workstation.

Note: The A-CPSW software microcodes and picocode require about 6 Mb of hard disk space.

1. Use the diskette image part number 10J2408 and copy to the directory where you want the microcodes to reside, the following files:

   A-CPSW boot microcode, file name: **boot252.bin**.
   A-CPSW operational microcode, file name: **oper252.bin**.

2. Use the diskette image part number 10J2409 and copy to the directory where you want the picocode to reside, the following file:

   A-CPSW FPGA picocode file name : **swpgab50.enc**.

3. Use the diskette image part number 10J2410 and copy to the directory where you want the picocode to reside, the following files:

   HS 100Mbps MIC connector FPGA picocode file name : **100mc50.enc**.
   HS 100Mbps SC connector FPGA picocode file name : **100sc50.enc**.

4. Use the diskette image part number 10J2411 and copy to the directory where you want the picocode to reside, the following files:

   HS 155Mbps 2 ports FPGA picocode file name : **1552p50.enc**.
   HS 155Mbps 3 ports FPGA picocode file name : **1553p31.enc**.

5. Use the diskette image part number 10J2412 and copy to the directory where you want the picocode to reside, the following file:

   Carrier module FPGA picocode file name : **cmpga50.enc**.
   12 ports 25 Mbps module FPGA picocode file name : **25pga30.enc**.

6. Use the diskette image part number 10J2414 and copy to the directory where you want the picocode to reside, the following file:

   12 ports 25 Mbps module Back level FPGA picocode file name : **25old1.enc**.

7. Use the diskette image part number 10J2415 and copy to the directory where you want the picocode to reside, the following file:

   HS 100Mbps MIC connector FPGA picocode file name: **100mold8.enc**.
   HS 100Mbps SC connector FPGA picocode file name: **100sold8.enc**.

8. Use the diskette image part number 10J2416 and copy to the directory where you want the picocode to reside, the following file:

   HS 155Mbps 2 ports FPGA picocode file name: **155old81.enc**.
   HS 155Mbps 3 ports FPGA picocode file name: **155old1.enc**.

9. Use the diskette image part number 10J2417 and copy to the directory where you want the picocode to reside, the following file:

   Carrier module FPGA picocode file name: **cmoldb3.enc**.

10. On an AIX Workstation make sure that the files can be read by all users :

    Log in as "root"
    Set the path to the microcode files directory
    Enter: chmod a+r boot252.bin
    Enter: chmod a+r oper252.bin
    Enter: chmod a+r swpgab50.enc
    Enter: chmod a+r 100mc50.enc
    Enter: chmod a+r 100sc50.enc
    Enter: chmod a+r 1552p50.enc
    Enter: chmod a+r 1553p31.enc
    Enter: chmod a+r cmpga50.enc
    Enter: chmod a+r 25pga30.enc
    Enter: chmod a+r 25old1.enc
    Enter: chmod a+r 100mold8.enc
    Enter: chmod a+r 100sold8.enc
    Enter: chmod a+r 155old81.enc

Enter: chmod a+r 155old1.enc
Enter: chmod a+r cmoldb3.enc

2.3 Upgrading the 8260

Before upgrade Reminder

Check that all the ATM components of your network are at the PREREQUISITE levels: refer to chapters "Prerequisite" and "Machines Affected" above.

IMPORTANT

The following steps are showing an example of Inband Download in Classical IP mode, using the ARP server as TFTP server .

It is recommended to update **all** 8260 ATM hubs starting with the A-CPSW module that is the furthest from the ARP server in terms of SSI/NNI links hops.

You may log in to the A-CPSW console either **locally** using an ASCII terminal connected to the A-CPSW console port, or **remotely** using a TELNET session.

WARNING WARNING WARNING WARNING WARNING WARNING

It is recommended to keep the previous level of FPGA picocode as backup on each blade for later on , if you need to upgrade a new A-CPSW at backup level.

Due to the incompatibility between previous level of FPGA picocode and new level of A-CPSW operationnal microcode, you have to follow carefully the installation procedure.

Just in case

Since a new migration process exists for the ATM FIRMWARE upgrade kit, you might encounter new MAINTENANCE codes (please refer to the Release Note REL8260 in the appendix B).

2.3.1 Step 0: Saving Configuration before the upgrade

REMINDER

It is recommended to perform the following steps with **NO OPERATIONAL TRAFFIC** flowing in your ATM campus network. Typically, this would be scheduled as part of a maintenance period. You'd better save all your configuration parameters before.

Before you begin the upgrade procedure we recommend to upload the configuration of each 8260 in your network :

1. Setup the TFTP parameters by entering the following commands:
   SET TFTP SERVER_IP_ADDRESS <ip address of the TFTP server>
   SET TFTP FILE_TYPE CONFIGURATION
   SET TFTP FILE_NAME
   Provide the full path of the file when prompted

2. Start the upload inband procedure by entering:
   UPLOAD
   When prompted, type "Y" to confirm.

MIGRATION INSTRUCTIONS

PLEASE, READ WHAT FOLLOWS CAREFULLY :

1. In case you have **two A-CPSW modules (one redundant A-CPSW)** and ATM media modules installed in a 8260 to be upgraded with this ATM Firmware upgrade kit **(ATM A-CPSW at level v.2.5.2)**, follow the **Steps 1 to 12**.
2. In case you have **only 1 A-CPSW (no redundant A-CPSW)** and ATM media blades installed in a 8260 to be upgraded with this ATM Firmware upgrade kit **(ATM A-CPSW at level v.2.5.2)**, follow the **Steps 6 to 12**.
3. In case you **have just a NEW ATM A-CPSW (redundant) at level v.2.3.0 or below** to be upgraded in **a 8260 already upgraded** with this Firmware upgrade kit **(ATM A-CPSW at level v.2.5.2)**, follow the **Step 13 only** .
4. In case you **have just a NEW ATM media blade** to be upgraded in **a 8260 already upgraded** with this Firmware upgrade kit **(ATM A-CPSW at level v.2.5.2)** , follow the **Step 14 only**.
5. In case you **have just a NEW ATM A-CPSW (not redundant) at level v.2.3.0 or below** to be upgraded in **a 8260 already upgraded** with this Firmware upgrade kit **(ATM A-CPSW at level v.2.5.2)**, follow the **Step 15 only** .

2.3.2 Step 1: Make the backup A-CPSW active

If you have a redundant A-CPSW make the backup one active by entering on the active A-CPSW :

```
SET DEVICE ROLE SECONDARY

SAVE ALL

RESET ATM_SUBSYSTEM
```

The hub will reset and the backup A-CPSW will become active.

2.3.3 Step 2: Download Inband the 8260 A-CPSW boot microcode

Upgrade the new active A-CPSW boot microcode as follows:

1. Log in as the **Administrator** on the A-CPSW console

MANDATORY for v.2.3.0 ONLY

If the current level of microcode on the A-CPSW is v.2.3.0, perform the following command:

```
SET DEVICE MIGRATION ALLOWED
SAVE DEVICE
```

MANDATORY for v.2.4.0 or v.2.4.3

If the current level of microcode on the A-CPSW is v.2.4.0 or V.2.4.3, perform the following command:

SET DEVICE MIGRATION NOT_ALLOWED
SAVE DEVICE

2. Upgrade the A-CPSW boot microcode (Boot EEPROM) as follows:

   a. Configure the TFTP parameters by entering the following commands:

      SET TFTP SERVER_IP_ADDRESS <ip address of the TFTP server>
      SET TFTP FILE_TYPE BOOT
      SET TFTP FILE_NAME
      Type the full path name of the boot microcode file (**boot252.bin**) when prompted.

   b. Make sure you can reach the TFTP server by entering:
      PING <ip adress of the TFTP server>
      (Stop ping by entering: Ctrl+C)

   c. Start the download inband procedure by entering:
      DOWNLOAD INBAND
      When prompted, type "Y" to confirm.

   d. Wait for successful termination of the download operation. The message *Download successful* is displayed.

      This may also be checked by displaying the TFTP last transfer result with the command: "SHOW TFTP".

Note

The command "SHOW DEVICE" displays the new BOOT code version which will become active.

It will be displayed as **v.2.5.2**.

In Case of Failure

If the download inband operation fails, retry this step. If the failure recurs, refer to the Trouble-shooting chapter of *ATM Control Point and Switch Module: Installation and User's Guide*.

2.3.4 Step 3: Download Inband the 8260 A-CPSW operational microcode

Upgrade the new active A-CPSW operational microcode (Flash EEPROM) as follows:

1. Configure the TFTP parameters by entering the following commands:

   SET TFTP SERVER_IP_ADDRESS <ip address of the TFTP server>
   SET TFTP FILE_TYPE OPERATIONAL
   SET TFTP FILE_NAME
   Type the full path name of the operational microcode file (**oper252.bin**) when prompted.

2. Make sure you can reach the TFTP server by entering:
   PING <ip adress of the TFTP server>
   (Stop ping by entering: Ctrl+C)
3. Start the download inband procedure by entering:
   DOWNLOAD INBAND
   When prompted, type "Y" to confirm.
4. Wait for successful termination of the download operation. The message *Download successful* is displayed.

   This may also be checked by displaying the TFTP last transfer result through the command: "SHOW TFTP".

Note

The command "SHOW DEVICE" displays the operational code level in backup.

It will appear as **v.2.5.2**.

In Case of Failure

If the download inband operation fails, retry this step. If the failure recurs, refer to the Troubleshooting chapter of *ATM Control Point and Switch Module: Installation and User's Guide*.

2.3.5 Step 4 : Download Inband the 8260 A-CPSW FPGA picocode

1. **Please check first , that FPGA level B50 is not already present in the 8260 A-CPSW (as operational or as backup) :**

   SHOW MODULE n VERBOSE (n=9 or 11 depending on position of active A-CPSW)

   If FPGA level is B50, then go to **Step 5**.
2. Configure the TFTP parameters by entering the following commands:

   SET TFTP SERVER_IP_ADDRESS <ip address of the TFTP server>
   SET TFTP FILE_TYPE FPGA
   SET TFTP FILE_NAME
   Type the full path name of the FPGA file (**swpgab50.enc**) when prompted.
   SET TFTP TARGET_MODULE n (n=9 or 11 depending on position of new active A-CPSW)
   SAVE TFTP
3. Make sure you can reach the TFTP server by entering:
   PING <ip adress of the TFTP server>
   (Stop ping by entering: Ctrl+C)
4. Start the download inband procedure by entering:
   DOWNLOAD INBAND
   When prompted, type "Y" to confirm.
5. Wait for successful termination of the download operation (it may take up to 10 minutes). The message *Download successful* is displayed.

   This may also be checked by displaying the TFTP last transfer result with the command: "SHOW TFTP".

Note

The command **SHOW MODULE n VERBOSE** (n=9 or 11 depending on position of new active A-CPSW) displays the FPGA level in backup.

It will appear as **B50**.

In Case of Failure

If the download inband operation fails, retry this step. If the failure recurs, refer to the Troubleshooting chapter of *ATM Control Point and Switch Module: Installation and User's Guide*.

2.3.6 Step 5 : Activate the new microcodes on the active A-CPSW

1. Activate the new version of A-CPSW microcodes by entering the command:

   CLEAR ERROR_LOG
   SAVE ALL
   SWAP MICROCODE and confirm with Y

   ERROR CASE

   In the case, the FPGA picocode download on the A-CPSW **has failed** or **has not been done**, the A-CPSW will first try to SWAP the microcode , then will find out that no A-CPSWFPGA is compatible with this operational code and finally it will SWAP back the operational code to the original level.

   However, in this process you might lose your configuration. You will need, if this happens, to DOWNLOAD the configuration uploaded in **Step 0**, then perform **Step 4** successfully, before retrying this **Step 5** once more.

2. The telnet session, if any, is broken.
3.

   Case 1

   If the previous microcode level of the active A-CPSW **was NOT v.2.4.0 or v.2.4.3** :

   a. The locally attached terminal displays :

      Terminal console display during migration

      Migration allowed; checking for needed FPGA swaps
      Some SWAP FPGA commands will be executed now...
      Generated command: SWAP FPGA 11 ...
      Migration allowed; checking for needed FPGA swaps
      >> 52 >>

   b. After about 90 seconds the active A-CPSW enters maintenance mode, (showing code >>0052>>) with the Red error LED ON and the backup A-CPSW becomes active.

DO NOT PRESS ENTER ON LOCALLY ATTACHED TERMINAL

no action is needed

4.

Case 2

If the previous microcode level of the active A-CPSW **was v.2.4.0 or v.2.4.3** :

a. Log in as the **Administrator** on the active A-CPSW console

b. Enter MAINTENANCE mode on the active A-CPSW (the backup A-CPSW will become active), by entering the following command:

MAINTAIN

2.3.7 Step 6: Download Inband the new 8260 A-CPSW boot microcode

Upgrade the new active A-CPSW boot microcode as follows:

1. Log in as the **Administrator** on the active A-CPSW console

MANDATORY for v.2.3.0 ONLY

If the current level of microcode on the A-CPSW is v.2.3.0, perform the following command:

SET DEVICE MIGRATION ALLOWED
SAVE DEVICE

MANDATORY for v.2.4.0 or v.2.4.3 ONLY

If the current level of microcode on the A-CPSW is v.2.4.0 or v.2.4.3, perform the following command:

SET DEVICE MIGRATION NOT_ALLOWED
SAVE DEVICE

2. Upgrade the A-CPSW boot microcode (Boot EEPROM) as follows:

a. Configure the TFTP parameters by entering the following commands:

SET TFTP SERVER_IP_ADDRESS <ip address of the TFTP server>
SET TFTP FILE_TYPE BOOT
SET TFTP FILE_NAME
Type the full path name of the boot microcode file (**boot252.bin**) when prompted.

b. Make sure you can reach the TFTP server by entering:
PING <ip adress of the TFTP server>
(Stop ping by entering: Ctrl+C)

c. Start the download inband procedure by entering:
DOWNLOAD INBAND
When prompted, type "Y" to confirm.

d. Wait for successful termination of the download operation. The message *Download successful* is displayed.

This may also be checked by displaying the TFTP last transfer result with the command: "SHOW TFTP".

Note

The command "SHOW DEVICE" displays the new BOOT code version which will become **active AFTER the next A-CPSW reset.**

It will be displayed as **v.2.5.2**.

In Case of Failure

If the download inband operation fails, retry this step. If the failure recurs, refer to the Troubleshooting chapter of *ATM Control Point and Switch Module: Installation and User's Guide*.

2.3.8 Step 7: Download Inband the 8260 A-CPSW operational microcode

Upgrade the new active A-CPSW operational microcode (Flash EEPROM) as follows:

1. Configure the TFTP parameters by entering the following commands:

   SET TFTP SERVER_IP_ADDRESS <ip address of the TFTP server>
   SET TFTP FILE_TYPE OPERATIONAL
   SET TFTP FILE_NAME
   Type the full path name of the operational microcode file (**oper252.bin**) when prompted.

2. Make sure you can reach the TFTP server by entering:
   PING <ip adress of the TFTP server>
   (Stop ping by entering: Ctrl+C)

3. Start the download inband procedure by entering:
   DOWNLOAD INBAND
   When prompted, type "Y" to confirm.

4. Wait for successful termination of the download operation. The message *Download successful* is displayed.

   This may also be checked by displaying the TFTP last transfer result through the command: "SHOW TFTP".

Note

The command "SHOW DEVICE" displays the operational code level in backup.

It will appear as **v.2.5.2**.

In Case of Failure

If the download inband operation fails, retry the procedure. If the failure recurs, refer to the Troubleshooting chapter of *ATM Control Point and Switch Module: Installation and User's Guide*.

2.3.9 Step 8 : Download Inband the 8260 A-CPSW FPGA picocode

1. Configure the TFTP parameters by entering the following commands:

   Please check first , that FPGA level B50 is not already present in the 8260 A-CPSW (as operational or as backup) :

   – SHOW MODULE n VERBOSE (n=9 or 11 depending on position of new active A-CPSW)

   – If FPGA level is B50, then go to **step 9**.

   SET TFTP SERVER_IP_ADDRESS <ip address of the TFTP server>
   SET TFTP FILE_TYPE FPGA
   SET TFTP FILE_NAME
   Type the full path name of the FPGA file (**swpgab50.enc**) when prompted.
   SET TFTP TARGET_MODULE n (n=9 or 11 depending on position of new active A-CPSW)

2. Make sure you can reach the TFTP server by entering:
   PING <ip adress of the TFTP server>
   (Stop ping by entering: Ctrl+C)

3. Start the download inband procedure by entering:
   DOWNLOAD INBAND
   When prompted, type "Y" to confirm.

4. Wait for successful termination of the download operation (it may take up to 10 minutes). The message *Download successful* is displayed.

   This may also be checked by displaying the TFTP last transfer result with the command: "SHOW TFTP".

Note

The command **SHOW MODULE n VERBOSE** (n=9 or 11 depending on position of new active A-CPSW) displays the FPGA level in backup.

It will appear as **B50**.

In Case of Failure

If the download inband operation fails, retry this step. If the failure recurs, refer to the Trouble-shooting chapter of *ATM Control Point and Switch Module: Installation and User's Guide*.

2.3.10 Step 9 : Download Inband the FPGA picocode on media modules

WARNING

You must download the new FPGA picocode on all of the blades of the 8260 before proceeding to **Step 10**.

1. Be sure that the status of **all** ATM media modules plugged in the 8260 is **connected**. This is a prerequisite for performing a download operation on an ATM media module. To verify that a module is

connected, enter the SHOW MODULE ALL command from the A-CPSW console. To connect an isolated ATM media module, enter the SET MODULE n CONNECTED command, where "n" is the number of the slot where the ATM media module is installed.

2. Display the configuration of your **connected** ATM media modules by entering a SHOW MODULE ALL VERBOSE command. This allows you to distinguish the different media modules installed in the Hub.
3. For **each** A4-FB100 module with MIC connectors (FC 5004)
   a. **Please check first, that FPGA level B50 is not already present in the A4-FB100 MIC (as operational or as backup) :**

      SHOW MODULE n VERBOSE (n is the position of the blade)

      If FPGA level is B50, then skip to next blade.

   b. Configure the TFTP parameters by entering the following commands:

      SET TFTP SERVER_IP_ADDRESS <ip address of the TFTP server>
      SET TFTP FILE_TYPE FPGA
      SET TFTP FILE_NAME
      Type the full path name of the FPGA file (**100mc50.enc**) when prompted
      SET TFTP TARGET_MODULE n
      Where "n" is the number of the slot where the A4-FB100 MIC module is installed.

   c. Start the download inband procedure by entering:
      DOWNLOAD INBAND
      When prompted, type "Y" to confirm.

   d. Wait for successful termination of the download operation (this may take up to 10 minutes). The message *Download successful* is displayed.

   Note

   The command **SHOW MODULE n VERBOSE** (where "n" is the number of the slot where the A4-FB100 MIC module is installed) displays the FPGA level in backup.

   It will appear as **B50**.

   In Case of Failure

   If the download inband operation fails, retry the download. If the failure recurs, refer to the Troubleshooting chapter of *ATM Control Point and Switch Module: Installation and User's Guide*.

4. For **each** A4-FB100 with SC connectors (FC 5104):
   a. **Please check first, that FPGA level B50 is not already present in the A4-FB100 SC (as operational or as backup) :**

      SHOW MODULE n VERBOSE (n is the position of the blade)

      If FPGA level is B50, then skip to next blade.

   b. Configure the TFTP parameters by entering the following commands:

      SET TFTP SERVER_IP_ADDRESS <ip address of the TFTP server>
      SET TFTP FILE_TYPE FPGA

SET TFTP FILE_NAME
Type the full path name of the FPGA file (**100sc50.enc**) when prompted
SET TFTP TARGET_MODULE n
Where "n" is the number of the slot where the A4-FB100 SC module is installed.

c. Start the download inband procedure by entering:
DOWNLOAD INBAND
When prompted, type "Y" to confirm.

d. Wait for successful termination of the download operation (this may take up to 10 minutes). The message *Download successful* is displayed.

Note

The command **SHOW MODULE n VERBOSE** (where "n" is the number of the slot where the A4-FB100 SC module is installed) displays the FPGA level in backup.

It will appear as **B50**.

In Case of Failure

If the download inband operation fails, retry the download. If the failure recurs, refer to the Troubleshooting chapter of *ATM Control Point and Switch Module: Installation and User's Guide*.

5. For **each** A2-MB155 (FC 5002):

a. **Please check first , that FPGA level B50 is not already present in the A2-MB155 (as operational or as backup) :**

SHOW MODULE n VERBOSE (n is the position of the blade)

If FPGA level is B50, then skip to next blade.

b. Configure the TFTP parameters by entering the following commands:

SET TFTP SERVER_IP_ADDRESS <ip address of the TFTP server>
SET TFTP FILE_TYPE FPGA
SET TFTP FILE_NAME
Type the full path name of the FPGA file (**1552p50.enc**) when prompted
SET TFTP TARGET_MODULE n
Where "n" is the number of the slot where the A2-MB155 module is installed.

c. Start the download inband procedure by entering:
DOWNLOAD INBAND
When prompted, type "Y" to confirm.

d. Wait for successful termination of the download operation (this may take up to 10 minutes). The message *Download successful* is displayed.

Note

The command **SHOW MODULE n VERBOSE** (where "n" is the number of the slot where the A2-MB155 module is installed) displays the FPGA level in backup.

It will appear as **B50**.

In Case of Failure

If the download inband operation fails, retry the download. If the failure recurs, refer to the Troubleshooting chapter of *ATM Control Point and Switch Module: Installation and User's Guide*.

6. For **each** A3-MB155 (FC 5003):

   a. **Please check first, that FPGA level C31 is not already present in the A3-MB155 (as operational or as backup) :**

      SHOW MODULE n VERBOSE (n is the position of the blade)

      If FPGA level is C31, then skip to next blade.

   b. Configure the TFTP parameters by entering the following commands:

      SET TFTP SERVER_IP_ADDRESS <ip address of the TFTP server>
      SET TFTP FILE_TYPE FPGA
      SET TFTP FILE_NAME
      Type the full path name of the FPGA file (**1553p31.enc**) when prompted
      SET TFTP TARGET_MODULE n
      Where "n" is the number of the slot where the A3-MB155 module is installed.

   c. Start the download inband procedure by entering:
      DOWNLOAD INBAND
      When prompted, type "Y" to confirm.

   d. Wait for successful termination of the download operation (this may take up to 10 minutes). The message *Download successful* is displayed.

Note

The command **SHOW MODULE n VERBOSE** (where "n" is the number of the slot where the A3-MB155 module is installed) displays the FPGA level in backup.

It will appear as **C31**.

In Case of Failure

If the download inband operation fails, retry the download. If the failure recurs, refer to the Troubleshooting chapter of *ATM Control Point and Switch Module: Installation and User's Guide*.

7. For **each** A12-TP25 (FC 5012):

   a. **Please check first, that FPGA level C30 is not already present in the A12-TP25 (as operational or as backup) :**

      SHOW MODULE n VERBOSE (n is the position of the blade)

      If FPGA level is C30, then skip to next blade.

   b. Configure the TFTP parameters by entering the following commands:

      SET TFTP SERVER_IP_ADDRESS <ip address of the TFTP server>
      SET TFTP FILE_TYPE FPGA

SET TFTP FILE_NAME
Type the full path name of the FPGA file (**25pga30.enc**) when prompted
SET TFTP TARGET_MODULE n
Where "n" is the number of the slot where the A12-TP25 module is installed.

c. Start the download inband procedure by entering:
DOWNLOAD INBAND
When prompted, type "Y" to confirm.

d. Wait for successful termination of the download operation (this may take up to 10 minutes). The message *Download successful* is displayed.

Note

The command **SHOW MODULE n VERBOSE** (where "n" is the number of the slot where the A12-TP25 module is installed) displays the FPGA level in backup.

It will appear as **C30**.

In Case of Failure

If the download inband operation fails, retry the download. If the failure recurs, refer to the Troubleshooting chapter of *ATM Control Point and Switch Module: Installation and User's Guide*.

8. For **each** A-CMU1, A-CMU2, A04MB-BRG, A-MSS, A2-WAN (FC 5102, 5202, 5204, 5300 and 5302) :

a. **Please check first, that FPGA level B50 is not already present in the blade (as operational or as backup) :**

SHOW MODULE n VERBOSE (n is the position of the blade)

If FPGA level is B50, then skip to next blade.

b. Configure the TFTP parameters by entering the following commands:

SET TFTP SERVER_IP_ADDRESS <ip address of the TFTP server>
SET TFTP FILE_TYPE FPGA
SET TFTP FILE_NAME
Type the full path name of the FPGA file (**cmpga50.enc**) when prompted
SET TFTP TARGET_MODULE n
Where "n" is the number of the slot where the module is installed.

c. Start the download inband procedure by entering:
DOWNLOAD INBAND
When prompted, type "Y" to confirm.

d. Wait for successful termination of the download operation (this may take up to 10 minutes). The message *Download successful* is displayed.

Note

The command **SHOW MODULE n VERBOSE** (where "n" is the number of the slot where the ATM module is installed) displays the FPGA level in backup.

It will appear as **B50**.

In Case of Failure

If the download inband operation fails, retry the download. If the failure recurs, refer to the Troubleshooting chapter of *ATM Control Point and Switch Module: Installation and User's Guide*.

2.3.11 Step 10: Activate the new A-CPSW microcodes and the new FPGA picocode

1. Check for all the ATM modules if a new level of FPGA C31 , C30, or B50 is present as operational or backup :

   SHOW MODULE n VERBOSE
   Where "n" is the number of the slot where the ATM module is present.

2. Activate the new version of A-CPSW operational microcode by entering the command:

   CLEAR ERROR_LOG
   SAVE ALL
   SWAP MICROCODE and confirm with Y

ERROR CASE

In the case, the FPGA picocode download on the A-CPSW **has failed** or **has not been done**, the A-CPSW will first try to SWAP the microcode , then will find out that no A-CPSW FPGA is compatible with this operational code and finally it will SWAP back the operational code to the original level.

However, in this process you might lose your configuration. You will need, if this happens, to DOWNLOAD the configuration uploaded in **Step 0**, then perform **Step 8** successfully, before retrying this **Step 10** once more.

3. The telnet session, if any, is broken.
4.

Case 1

If the previous microcode level of the active A-CPSW **was NOT v.2.4.0 or v.2.4.3** :

a. The locally attached terminal displays , for example :

Terminal console display during migration

```
Migration allowed; checking for needed FPGA swaps
Some SWAP FPGA commands will be executed now...
Generated command: SWAP FPGA 2 ...Completed
Generated command: SWAP FPGA 3 ...Completed
Generated command: SWAP FPGA 9 ...
Press Enter
```

The A-CPSW module will enter a reset sequence that will activate operational microcode and the FPGA picocode on all the blades.

5.

Case 2

If the previous microcode level of the active A-CPSW **was v.2.4.0 or v.2.4.3** :

a. Login as **Administrator** on the A-CPSW console

b. Perform the FPGA picocode SWAP, by issuing the command:

SWAP FPGA_PICOCODE slot1 ... slot17

WARNING

You must perform the FPGA SWAP for all the ATM Media blades (DO NOT SWAP THE A-CPSW) for which you have downloaded FPGA picocode.

If the FPGA picocode B50, C31 or C30 is already present as OPERATIONAL, then the SWAP for that slot is not needed.

6. In case, **you have a Redundant A-CPSW :**

Login as **Administrator** on the A-CPSW console (if not already logged).

Perform the commands :

– SAVE ALL

– RESET HUB
confirm with Y

Login as **Administrator** on the new active A-CPSW console

Perform the commands :

– SET DEVICE ROLE SECONDARY

– SAVE DEVICE

– RESET ATM_SUBSYSTEM
confirm with Y

2.3.12 Step 11: Check the new levels of codes :

1. Login as **Administrator** on the new A-CPSW console
2. The following table lists the microcode and FPGA versions that must be displayed at completion of the upgrade. Use the following commands

   SHOW DEVICE
   SHOW MODULE n VERBOSE

Component	Feature Code	Operational FPGA Version	Flash EEPROM Version	Boot EEPROM Version
A-CPSW	5100 5000	B50	v.2.5.2	v.2.5.2
A4-FB100 (MIC)	5004	B50	n/a	n/a
A4-FB100 (SC)	5104	B50	n/a	n/a
A2-MB155	5002	B50	n/a	n/a
A3-MB155	5003	C31	n/a	n/a
A-CMU1	5102	B50	n/a	n/a
A-CMU2	5202	B50	n/a	n/a
A12-TP25	5012	C30	n/a	n/a
A04MB-BRG	5204	B50	n/a	n/a
A-MSS	5300	B50	n/a	n/a
A2-WAN	5302	B50	n/a	n/a
A12-TP25/ MB155	8510	C30	n/a	n/a

2.3.13 Step 12: Checking Network and Saving Configuration

After you complete the upgrade procedure for every 8260 ATM hub in your network, verify that your network is operational. To do this:

Check that all links are active, specifically the SSI and NNI links.

Once the links are up and running successfully, we recommend to upload the configuration of each 8260 in your network :

1. Setup the TFTP parameters by entering the following commands:
   - SET TFTP SERVER_IP_ADDRESS <ip address of the TFTP server>
   - SET TFTP FILE_TYPE CONFIGURATION
   - SET TFTP FILE_NAME

Provide the full path name of the file when prompted

2. Start the upload inband procedure by entering:
   UPLOAD
   When prompted, type "Y" to confirm.

MIGRATION COMPLETE

You have successfully completed the ATM FIRMWARE upgrade.

2.4 Upgrading a new A-CPSW or new ATM modules

2.4.1 Step 13: Upgrading a new A-CPSW (redundant)

WARNING.

This step 13 is only valid if the new A-CPSW is **a redundant A-CPSW at level v.2.3.0 or below.** You have two ways to migrate this new card to the ATM firmware kit level. The first one using IP (LAn Emulation or Classical IP) follow **step 13a**, the second one using the **SLIP protocol** follow step **step13b (page 32)** .

1. **Step 13a:**

   In case you have ordered an A-CPSW, it may arrive with a level not compatible with installed modules. To upgrade this A-CPSW perform the following steps:

   a. Plug the A-CPSW in the 8260

   b. Please isolate all ATM modules except those providing the IP connectivity with the **ARP server or LAN Emulation Server and TFTP server** (ARP/LE server and TFTP server could be on the same machine).

   c. The ATM blade(s) **providing the IP connectivity with the ARP/LE server and the TFTP server** must have as **operational or backup** the following levels:

Component	Feature Code	Operational or Backup FPGA Version
A4-FB100 (MIC)	5004	6/8
A4-FB100 (SC)	5104	6/8
A2-MB155	5002	6/7/81
A3-MB155	5003	1
A12-TP25	5012	1
A-CMU1	5102	B3E3/B3F3
A-CMU2	5202	B3E3/B3F3
A04MB-BRG	5204	B3E3/B3F3
A-MSS	5300	B3E3/B3F3
A2-WAN	5302	B3E3/B3F3

WARNING

If it is not the case, please use the diskettes images Part Number 10J2414, 10J2415, 10J2416 and 10J2417 to download the pre-requisite FPGA picocode into the ATM blade(s) providing the IP connectivity with the ARP/LE server and TFTP server.

1) Be sure that the status of **the ATM blades providing the IP connectivity with the ARP/LE server and TFTP server** are plugged in the 8260 and **connected**. This is a prerequisite for performing a download operation on an ATM media module. To verify that a module is **connected**, enter the SHOW MODULE ALL command from the A-CPSW console. To connect an isolated ATM media module, enter the SET MODULE n CONNECTED command, where "n" is the number of the slot where the ATM media module is installed.

2) Display the configuration of your **connected** ATM media modules by entering a SHOW MODULE ALL VERBOSE command. This allows you to display the different media modules installed in the hub.

3) If the ATM Media blade providing the IP connectivity with the ARP/LE server and TFTP server is a **A4-FB100** module with MIC connectors (FC 5004)

   a) **Please check first, that FPGA level 6 or 8 is not already present in the A4-FB100 MIC (as operational or as backup) :**

      SHOW MODULE n VERBOSE (n is the position of the blade)

      If FPGA level is 6 or 8, then skip to next blade.

   b) Configure the TFTP parameters by entering the following commands:

      SET TFTP SERVER_IP_ADDRESS <ip address of the TFTP server>
      SET TFTP FILE_TYPE FPGA
      SET TFTP FILE_NAME

Type the full path name of the FPGA file (**100mold8.enc**) when prompted
SET TFTP TARGET_MODULE n
Where "n" is the number of the slot where the A4-FB100 MIC module is installed.

c) Start the download inband procedure by entering:
DOWNLOAD INBAND
When prompted, type "Y" to confirm.

d) Wait for successful termination of the download operation (it may take up to 10 minutes). The message *Download successful* is displayed.

Note

The command **SHOW MODULE n VERBOSE** (where "n" is the number of the slot where the A4-FB100 MIC module is installed) displays the FPGA level in backup.

It will appear as **8**.

In Case of Failure

If the download inband operation fails, retry the download. If the failure recurs, refer to the Troubleshooting chapter of *ATM Control Point and Switch Module: Installation and User's Guide*.

4) If the ATM Media blade providing the IP connectivity with the ARP/LE server and TFTP server is a **A4-FB100** with SC connectors (FC 5104):

a) **Please check first, that FPGA level 6 or 8 is not already present in the A4-FB100 SC (as operational or as backup) :**

SHOW MODULE n VERBOSE (n is the position of the blade)

If FPGA level is 6 or 8, then skip to next blade.

b) Configure the TFTP parameters by entering the following commands:

SET TFTP SERVER_IP_ADDRESS <ip address of the TFTP server>
SET TFTP FILE_TYPE FPGA
SET TFTP FILE_NAME
Type the full path name of the FPGA file (**100sold8.enc**) when prompted
SET TFTP TARGET_MODULE n
Where "n" is the number of the slot where the A4-FB100 SC module is installed.

c) Start the download inband procedure by entering:
DOWNLOAD INBAND
When prompted, type "Y" to confirm.

d) Wait for successful termination of the download operation (it may take up to 10 minutes). The message *Download successful* is displayed.

Note

The command **SHOW MODULE n VERBOSE** (where "n" is the number of the slot where the A4-FB100 SC module is installed) displays the FPGA level in backup.

It will appear as **8**.

In Case of Failure

If the download inband operation fails, retry the download. If the failure recurs, refer to the Troubleshooting chapter of *ATM Control Point and Switch Module: Installation and User's Guide*.

5) If the ATM Media blade providing the IP connectivity with the ARP/LE server and TFTP server is a **A2-MB155** (FC 5002):

   a) **Please check first , that FPGA level 6,7 or 81 is not already present in the A2-MB155 (as operational or as backup) :**

      SHOW MODULE n VERBOSE (n is the position of the blade)

      If FPGA level is 6,7 or 81, then skip to next blade.

   b) Configure the TFTP parameters by entering the following commands:

      SET TFTP SERVER_IP_ADDRESS <ip address of the TFTP server>
      SET TFTP FILE_TYPE FPGA
      SET TFTP FILE_NAME
      Type the full path name of the FPGA file (**155old81.enc**) when prompted
      SET TFTP TARGET_MODULE n
      Where "n" is the number of the slot where the A2-MB155 module is installed.

   c) Start the download inband procedure by entering:
      DOWNLOAD INBAND
      When prompted, type "Y" to confirm.

   d) Wait for successful termination of the download operation (it may take up to 10 minutes). The message *Download successful* is displayed.

Note

The command **SHOW MODULE n VERBOSE** (where "n" is the number of the slot where the A2-MB155 module is installed) displays the FPGA level in backup.

It will appear as **81**.

In Case of Failure

If the download inband operation fails, retry the download. If the failure recurs, refer to the Troubleshooting chapter of *ATM Control Point and Switch Module: Installation and User's Guide*.

6) If the ATM Media blade providing the IP connectivity with the ARP/LE server and TFTP server is a **A3-MB155** (FC 5003):

   a) **Please check first, that FPGA level 1 is not already present in the A3-MB155 (as operational or as backup) :**

      SHOW MODULE n VERBOSE (n is the position of the blade)

      If FPGA level is 1, then skip to next blade.

   b) Configure the TFTP parameters by entering the following commands:

SET TFTP SERVER_IP_ADDRESS <ip address of the TFTP server>
SET TFTP FILE_TYPE FPGA
SET TFTP FILE_NAME
Type the full path name of the FPGA file (**155old1.enc**) when prompted
SET TFTP TARGET_MODULE n
Where "n" is the number of the slot where the A3-MB155 module is installed.

c) Start the download inband procedure by entering:
DOWNLOAD INBAND
When prompted, type "Y" to confirm.

d) Wait for successful termination of the download operation (it may take up to 10 minutes). The message *Download successful* is displayed.

Note

The command **SHOW MODULE n VERBOSE** (where "n" is the number of the slot where the A3-MB155 module is installed) displays the FPGA level in backup.

It will appear as **1**.

In Case of Failure

If the download inband operation fails, retry the download. If the failure recurs, refer to the Troubleshooting chapter of *ATM Control Point and Switch Module: Installation and User's Guide*.

7) If the ATM Media blade providing the IP connectivity with the ARP/LE server and TFTP server is a **A12-TP25** (FC 5012):

a) **Please check first, that FPGA level 1 is not already present in the A12-TP25 (as operational or as backup) :**

SHOW MODULE n VERBOSE (n is the position of the blade)

If FPGA level is 1, then skip to next blade.

b) Configure the TFTP parameters by entering the following commands:

SET TFTP SERVER_IP_ADDRESS <ip address of the TFTP server>
SET TFTP FILE_TYPE FPGA
SET TFTP FILE_NAME
Type the full path name of the FPGA file (**25old1.enc**) when prompted
SET TFTP TARGET_MODULE n
Where "n" is the number of the slot where the A12-TP25 module is installed.

c) Start the download inband procedure by entering:
DOWNLOAD INBAND
When prompted, type "Y" to confirm.

d) Wait for successful termination of the download operation (it may take up to 10 minutes). The message *Download successful* is displayed.

Note

The command **SHOW MODULE n VERBOSE** (where "n" is the number of the slot where the A12-TP25 module is installed) displays the FPGA level in backup.

It will appear as **1**.

In Case of Failure

If the download inband operation fails, retry the download. If the failure recurs, refer to the Troubleshooting chapter of *ATM Control Point and Switch Module: Installation and User's Guide*.

8) If the ATM Media blade providing the IP connectivity with the ARP/LE server and TFTP server is a **A-CMU1, A-CMU2, A04MB-BRG, A-MSS, A2-WAN** (FC 5102, 5202, 5204, 5300 and 5302) :

a) **Please check first, that FPGA level B3E3 or B3F3 is not already present in the blade (as operational or as backup) :**

SHOW MODULE n VERBOSE (n is the position of the blade)

If FPGA level is B3E3 or B3F3, then skip to next blade.

b) Configure the TFTP parameters by entering the following commands:

SET TFTP SERVER_IP_ADDRESS <ip address of the TFTP server>
SET TFTP FILE_TYPE FPGA
SET TFTP FILE_NAME
Type the full path name of the FPGA file (**cmoldb3.enc**) when prompted
SET TFTP TARGET_MODULE n
Where "n" is the number of the slot where the module is installed.

c) Start the download inband procedure by entering:
DOWNLOAD INBAND
When prompted, type "Y" to confirm.

d) Wait for successful termination of the download operation (it may take up to 10 minutes). The message *Download successful* is displayed.

Note

The command **SHOW MODULE n VERBOSE** (where "n" is the number of the slot where the ATM module is installed) displays the FPGA level in backup.

It will appear as **B3F3**.

In Case of Failure

If the download inband operation fails, retry the download. If the failure recurs, refer to the Troubleshooting chapter of *ATM Control Point and Switch Module: Installation and User's Guide*.

d. Make the new A-CPSW to upgrade active by entering on the console of the active one :

SET DEVICE ROLE SECONDARY
SAVE ALL
RESET ATM_SUBSYSTEM

e. Log in locally as the **Administrator** on the active A-CPSW console

f. You must now SWAP the FPGA picocode of the ATM blade(s) providing the IP connectivity with the ARP/LE server and TFTP server, by issuing the command:

SWAP FPGA_PICOCODE slot_x slot_y
(x and y being the slot number of the ATM blade(s))

g. Verify the IP connectivity between the A-CPSW and the TFTP server using the PING command.

h. Download inband the 8260 A-CPSW boot, operational microcodes and FPGA picocode as described in **Steps 6, 7 and 8 (page 16)**.

i. Activate the new version of A-CPSW microcodes by entering the command:

CLEAR ERROR_LOG
SAVE ALL
SWAP MICROCODE and confirm with Y

j. Log in locally as the **Administrator** on the active A-CPSW console

k. Please connect all ATM modules you have previously isolated for the migration.

l. You can make the original A-CPSW active by entering the commands:

SET DEVICE ROLE SECONDARY

SAVE ALL

RESET ATM_SUBSYSTEM

The hub will reset and the backup A-CPSW will become active.

MIGRATION COMPLETE

You have successfully completed the A-CPSW upgrade.

2. **Step 13b:**

a. Make the new A-CPSW to upgrade active by entering on the console of the active one :

SET DEVICE ROLE SECONDARY
SAVE ALL
RESET ATM_SUBSYSTEM

b. Log in locally as the **Administrator** on the active A-CPSW console

c. Verify the connectivity between the A-CPSW and the SLIP TFTP server using the PING command.

d. Download inband the 8260 A-CPSW boot, operational microcodes and FPGA picocode as described in **Steps 6, 7 and 8 (page 16)**.

e. Activate the new version of A-CPSW microcodes by entering the command:

CLEAR ERROR_LOG
SAVE ALL

SWAP MICROCODE and confirm with Y

f. Log in locally as the **Administrator** on the active A-CPSW console

g. You can make the original A-CPSW active by entering the commands:

SET DEVICE ROLE SECONDARY

SAVE ALL

RESET ATM_SUBSYSTEM

The hub will reset and the backup A-CPSW will become active.

MIGRATION COMPLETE

You have successfully completed the A-CPSW upgrade.

2.4.2 Step 14: Upgrading a new ATM Media module

In case you have ordered a module to be plugged in the 8260, this module may arrive with a non compatible level. To upgrade this module to level B50, C31 or C30 do the following :

1. Perform **Step 9 (page 18)**
2. Activate the FPGA picocode just downloaded by entering the command:

SWAP FPGA_PICOCODE n
Where "n" is the number of the slot where the module is installed

MIGRATION COMPLETE

You have successfully completed the ATM media module upgrade.

2.4.3 Step 15: Upgrading a new A-CPSW (not redundant)

WARNING.

This step 15 is valid if the new A-CPSW is **NOT a redundant A-CPSW, but is at level v.2.3.0 or below.**

In case you have ordered an A-CPSW, it may arrive with a level not compatible with installed modules.

The **only way** to perform the upgrade is via a **SLIP** console **locally**.

To upgrade this A-CPSW perform the following steps:

1. Plug the A-CPSW in the 8260
2. Log in locally as the **Administrator** on the A-CPSW via a **SLIP console**.
3. Download inband the 8260 A-CPSW boot, operational microcodes and FPGA picocode as described in **Steps 6, 7 and 8 (page 16)**.

4. Activate the new version of A-CPSW microcodes by entering the commands:

   CLEAR ERROR_LOG
   SAVE ALL
   SWAP MICROCODE and confirm with Y

   The hub will reset.

MIGRATION COMPLETE

You have successfully completed the A-CPSW upgrade.

2.5 Publication Update

Insert the companion Release Note, Part number N.A., EC level N.A. in your publications binder.

End of Document