

# **AIX Driver Installation**

## **Addendum to 5515/5525/5575 PCI ATM Adapter Users Guide**

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Interphase Corporation  
13800 Senlac  
Dallas, Texas 75234  
Phone: (214) 654-5000  
Fax: (214) 654-5500

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# AIX Driver Installation

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## Overview

This addendum explains how to install the driver for up to eight PCI ATM adapters in an endstation running AIX™ version 4.1.2 or 4.1.4. During installation of the driver, up to four LECs and one RFC-1577 client can be initialized per adapter.

The driver supports the following features:

- LAN Emulation clients (SVC)
  - Ethernet®
  - Token Ring
- LAN Emulation services (LES, BUS and LECS)
  - Ethernet
  - Token Ring
- IP-ATM (RFC-1577) client (SVC)
- IP-ATM (RFC-1577) server
- PVC option for each client based on RFC-1483

If any *Read Me First* documentation is in your installation kit, review it before installing the driver. It contains any changes and updates to this users guide since the printing date. Also, check for a **readme** file in the **aix** directory on the installation CD-ROM.



**Caution**

**Your ATM switch must be capable of supporting the UNI 3.0/3.1 signalling standard for SVCs. Some switch vendors allow the mixing of the two standards. Some vendors require that all ports be set to either UNI 3.0 or UNI 3.1. Check your switch documentation for the proper settings. The default setting for the PCI ATM adapter is UNI 3.0.**

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## Driver Requirements

The endstation must meet the following minimum requirements:

- IBM® PowerPC™ or compatible system with PCI bus
- AIX operating system version 4.1.2, 4.1.4 or 4.1.5
- System memory:
  - 16 MB minimum
  - up to 24 MB with multiple clients and servers enabled
- CD-ROM drive
- A hard disk with free space consisting of
  - 5MB in the **/root** partition
  - 1MB in the **/usr** partition
- Superuser login
- IP address, broadcast address, and net mask for each client being initialized

## Installing the Driver

The driver can be installed prior to installing the adapter(s). Where feasible, however, it is recommended the adapter(s) be installed first.

To install the driver for AIX, do the following:

1. If an earlier version of the driver exists on the machine, see the section *Removing a Driver* on page 9 and remove it before installing the new driver.
2. Copy the driver files to your machine as follows:
  - a. Create a temporary directory on the hard disk, such as **/tmp/iphase**.
  - b. Insert the installation CD-ROM.
  - c. Copy the contents of the **aix** directory on the CD-ROM to the temporary directory.

This may take a few minutes.

In the steps which follow, the contents of the temporary directory are not changed. If for some reason you need to remove the driver and start again, you do not have to recopy the files from the CD-ROM. The temporary directory can be deleted when installation is complete.

3. Log in as superuser, execute SMIT, and select:  
**Software Installation and Maintenance**  
**Install and Update Software**  
**Install/Update Selectable Software**  
**Install Additional Device Software**
4. Enter the path to the temporary directory and select **Do**.
5. From the Software To Install list box, select:  
**4.1.4.0 devices.ip5515x All@ @devices.ip5515x**.
6. Select **OK**, then select **Do**.

The Are You Sure dialog appears.

7. Select **OK** to install the driver.
8. Select **Done**, then select **Cancel** on the install dialog.
9. Return to the System Management dialog and select:

**Devices**

**Install/Configure Devices Added After IPL**

**OK**

This distributes the files packaged in the **devices.pci\*** file and populates the ODM database.

10. Initialize the LANE and IP-ATM (RFC-1577) clients.

- a. From the System Management dialog, select

**Devices**

**Communications**

**Interphase 5515 ATM Adapter**

**Interphase 5515 ATM Interface**

**Add an Interphase 5515 ATM Interface**

- b. Select the clients you want to initialize.

The formulas for mapping the client numbers to an  $li\langle x \rangle$ , where  $\langle x \rangle$  is the IP interface number, are as follows:

$\langle x \rangle = (\text{adapter number} * 4) + \text{client number for LECs}$

$\langle x \rangle = \text{adapter number} + 32 \text{ for IP-ATM clients}$

Examples:

$li0 = \text{adapter } 0, \text{ LEC } 0$

$li1 = \text{adapter } 0, \text{ LEC } 1$

$li2 = \text{adapter } 0, \text{ LEC } 2$

$li3 = \text{adapter } 0, \text{ LEC } 3$

$li4 = \text{adapter } 1, \text{ LEC } 0$

$li5 = \text{adapter } 1, \text{ LEC } 1$

$li31 = \text{adapter } 7, \text{ LEC } 3$

$li32 = \text{adapter } 0, \text{ IP-ATM client}$

$li39 = \text{adapter } 7, \text{ IP-ATM client}$

- c. Return to the Interphase 5515 ATM Adapter dialog and select **Interphase 5515 ATM Interface Parameters**.
- d. Select a client.
- e. Enter the hostname, IP address, and network mask.
- f. Verify that Interface Status is set to **up**.
- g. Repeat steps **d**, **e**, and **f** for each client.
- h. Exit SMIT when all clients are configured.

Continue the installation with the procedures in the next section.

## Configuring the Adapter

With the driver installed as described in the previous section, do the following:

1. If the adapter(s) are not installed, halt the machine and install the adapters. See Chapter 2, *Hardware Installation*, in the *5515/5525/5575 PCI ATM Users Guide* for instructions.
2. If not done in the previous step, reboot the machine.
3. Configure the adapter(s) to the network with the CellView utility by entering the command:

**cellview**

See Chapter 5, *CellView Utility*, of the *5515/5525/5575 PCI ATM Users Guide* for instructions to enable and configure the LANE clients, the IP-ATM client, and the LAN services.

4. When complete, reboot the machine.

If for some reason the CellView utility will not run on your system, there are command-line utilities (such as **lec**, **les**, and **lecs**) which can modify the software currently running. However, these commands do not change the permanent settings in the **cvconf** file. The effects of these commands are lost when the machine is turned off or restarted. Whatever the case, do not mix the running of command-line and CellView utilities. Use one method consistently or unpredictable results may occur.



Caution

All configuration data is stored in the file */etc/atm/cvconf* for which an on-line man page is available. You are strongly encouraged to use the CellView utility to modify the parameters instead of editing them manually. If the parameters get out of sync, the driver may not work properly.

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## Changing the Frame Type

To change the framing from SONET to the European standard SDH STM-1, do the following:

1. Log in as superuser, execute SMIT, and select:  
**Devices**  
**Communications**  
**Interphase 5515 ATM Adapter**  
**Adapter**  
**Change/Show Characteristics of an Interphase \**  
**ATM Adapter**
2. Select **ia0**.

3. From the Framing Type list box, select the appropriate framing from the list.
4. Select **Do**.
5. Exit SMIT and reboot the machine.

## Removing a Driver

To remove a driver from the endstation, do the following:

1. Log in as superuser, execute SMIT, and select:  
**Devices**  
**Communications**  
**Interphase 5515 ATM Adapter**  
**Interphase 5515 ATM Adapter**  
**Remove an Interphase 5515 ATM Adapter**
2. Select **ia0**, then select **Done**.
3. Return to the System Management dialog and select:  
**Software Installation and Maintenance**  
**Maintain Installed Software**  
**Remove Software Products**
4. From the Software Name list box, select:  
**devices.ip5515x,rte**  
**OK**
5. Select **no** for PREVIEW only, then select **OK**.
6. Select **Done**.
7. Exit SMIT and reboot the machine.



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