A7011A/A7012A
PCI-X
2-Port Gigabit Ethernet Cards
on
HP-UX 11i v 1.0 and 11i v 2.0
Release Notes

Software Versions B.11.11 and B.11.23

Manufacturing Part Number : J6371-90004
E0304

U.S.A.

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Release Notes for PCI-X 2-Port Gigabit Ethernet Cards

What's in this Version

The following information is for the initial release of HP's PCI-X 2-Port Gigabit Ethernet cards for HP-UX 11i v 1.0 (version B.11.11) and HP-UX 11i v 2.0 (version B.11.23). The information here applies to the A7011A (1000Base-SX--fiber-based) card and A7012A (1000Base-T--copper-based). HP-UX 11i v 1.0 is for PA-RISC-based machines. HP-UX 11i v 2.0 is for Itanium2®-based machines.

The Gigabit Ethernet software bundle (**IEther-00**) for HP-UX 11i v 1.0 is on the December 2003 application CD. The Gigabit Ethernet software bundle (**IEther-00**) for HP-UX 11i v 2.0 is on the March 2004 application CD. You can check to see if these drivers are present on your system by running the commands described in "How to Verify that the Correct Driver is in the Kernel" in this document.

For the most up-to-date list of network cards and the systems that they work on, check the Card, Driver, Version matrix on **`http://docs.hp.com`** under "Networking and Communications," or ask your sales representative.

Features

Each A7011A and A7012A PCI-X 2-Port Gigabit Ethernet card has the following features:

- PCI-X operation in 133 MHz, 64-bit-compatible mode. Note: the cards can also operate in PCI mode and so can be put in a PCI slot. This will of course affect performance.
- Supports HP-UX 11i v 1.0 (64 bit) on PA-RISC platforms and HP-UX 11i v 2.0 on Itanium2® platforms.
- Supports the following PA-RISC systems:
  - — Superdome (or Superdome with IO Expansion (IOX) cabinet). Includes new 64-way.
  - — rp8420 (base system or base system and I/O Expansion (IOX) cabinet), rp8400 (base system or base system and I/O Expansion (IOX) cabinet).
  - — rp7420, rp7410.

  - rp4440, rp3440.
- Supports the following Itanium2® systems:
  - Superdome (or Superdome with IO Expansion (IOX) cabinet). Includes new 64-way.
  - rx8620 (base system or base system and I/O Expansion (IOX) cabinet).
  - rx7620.
  - rx5600.
  - rx2600.
- Supports Ignite-UX.
- On the A7011A, the 1000Base-SX port operates only at 1000 Mbit/s and only in full-duplex mode. It autonegotiates flow control but not speed or duplexity.

  Ensure that the 1000 Mbit/s port on the interfacing switch is set for autonegotiation or 1000Mbit/s full-duplex mode.
- On the A7012A, the 1000Base-T port operates at 10 or 100 Mbit/s in either full- or half-duplex modes and at 1000 Mbit/s only in full-duplex mode.

  Ensure that you set both your switch and the gigabit Ethernet port on the card to autonegotiation or set both to the same speed and duplex mode
- The Gigabit Ethernet cards support use of Jumbo Frames. The maximum transmission unit (MTU) for using jumbo frames with the **iether** driver on HP-UX 11i v 1.0 or v 2.0 is in the range of 1501 to 9000 bytes.
- The Gigabit Ethernet LAN software supports TCP/IP, NFS, and DLPI applications. Ethernet and SNAP encapsulations are supported.
- Support interrupt migration.
- Support HP ServiceGuard.
- Support vPars.
- Support virtual LANs (VLANs).
- Support PCI-X/PCI online addition/replacement (OLA/R) on supported systems.
- The 1000Base-SX A7011A has two duplex LC connectors and two LEDs--one LED for each port. Each LED flashes to indicate Activity (data traffic) and is solid to indicate the link is up.
- The 1000Base-T A7012A has two RJ-45 ports. Each port has an activity/link LED and a speed LED that is off for 10 Mbit/s, green for 100 Mbit/s, or yellow for 1000 Mbit/s.

Overview of Software Installation Process

The required operating environment is either HP-UX 11i v 1.0 or v 2.0 depending on whether you are installing to a PA-RISC-based machine (11i v1.0) or to an Itanium2®-based machine (HP-UX 11i v 2.0). To install the Operating Environment, use the Ignite-UX-11-11 Installation Utilities available on the HP-UX 11i v 1.0 (or 2.0) OE or AR media. The operating environment version should show as B.11.11 or B.11.23 when you type: **`uname -a`** at the system prompt.

For instructions on how to install and configure the A7011A and A7012A hardware and software, refer to the *PCI-X 2-Port Gigabit Ethernet Card for HP-UX 11i v 1.0 Installation Guide* available on the web at **http://docs.hp.com** under "Networking and Communications." If the A7011A or A7012A card was factory installed (ordered on product option 0D1) or is the "built-in" or "core" LAN, the LAN driver for this card will already be on your system disk.

If Installing HP-UX 11i v 1.0 from the December 2003 OE or AR Media

The December 2003 HP-UX 11i Operating Environment disk, or Application Software and Support Plus disks contain everything you need for HP-UX 11i v 1.0 (for PA-RISC-based machines).

1. Using the December 2003 HP-UX 11i Operating Environment disk or Support Plus disk, load the HWEnable11i bundle. Load the HWEnable11i bundle before or with the driver bundles mentioned in the next step.
2. Using the December 2003 HP-UX 11i Operating Environment disk or Application Software disk, load the latest required driver:
   - Gigabit Ethernet driver (IEther-00 bundle version B.11.11.04).

If Installing HP-UX 11i v 2.0 from the March 2004 OE or AR Media

The March 2004 HP-UX 11i Operating Environment disk, or Application Software and Support Plus disks contain everything you need for HP-UX 11i v 2.0 (for Itanium2®-based machines).

1. Using the March 2004 HP-UX 11i Operating Environment disk or Support Plus disk, load the HWEnable11i bundle. Load the HWEnable11i bundle before or with the driver bundles mentioned in the next step.
2. Using the March 2004 HP-UX 11i Operating Environment disk or Application Software disk, load the latest required driver:

- Gigabit Ethernet driver (IEther-00 bundle version B.11.23.02).

How to Verify that the Correct Driver is in the Kernel

For instructions on how to install and configure the hardware and software, refer to the *PCI-X 2-Port Gigabit Ethernet Card for HP-UX 11i V 1.0 Installation Guide* available on the web at **http://docs.hp.com** under "Networking and Communications."

The required operating environment is HP-UX 11i v 1.0 or v 2.0. The operating environment version should show as B.11.11 or B.11.23 when you type: **`uname -a`** at the system prompt.

The A7011A and A7012A cards require the **iether** driver from the IEther-00 bundle.

To verify that the driver was loaded in the kernel, execute the following command:

```
what /stand/vmunix | grep iether (for Gigabit Ethernet)
```

You should see a response like:

```
iether Version: 1  Jun 26 2003
iether Revision: B.11.11.09 Jun 26 2003
```

Known Problem

The A7012A card does not interoperate with older switches containing a BCM 5400 PHY with a version earlier than C-5. The problem occurs when interfacing with older switches such as the HP Procurve Module J4115A (note: other switches might still have the BCM 5400 part). Procurve version J4115B fixes the Procurve problem.

List of Related Documentation

The following is a list of documents related to this product. They are available on the web at **http://docs.hp.com** under “Networking and Communications.” The Support Guide is also available on the Instant Information CD if you have an HP support contract.

- *PCI-X 2-Port Gigabit Ethernet Card for HP-UX 11i v 1.0 and 2.0Installation Guide*

  Provides step-by-step instructions on how to install and configure the hardware and software.

- *Ethernet Support Guide*

  Provides information on advanced features and detailed information on troubleshooting the combination Gigabit Ethernet cards.