

**IEther-00 (iether)
Gigabit Ethernet Driver
for HP-UX 11i v1 and v2
of May 2005
Release Notes**

For iether Driver Versions B.11.11.09 and B.11.23.0505

HP 9000 and HP Integrity Systems



**Manufacturing Part Number : J6371-90008
E0505**

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IEther-00 (iether) Gigabit Ethernet Driver for HP-UX 11i v1 and v2 of May 2005 Release Notes

What's in this Version

The following information is for the **IEther-00 (iether)** gigabit Ethernet driver for HP-UX 11i v1 and v2 of May 2005. The **iether** driver supports gigabit Ethernet cards such as:

- AB290A PCI-X 2-Port U320 SCSI and 2-Port Gigabit Ethernet Combination Card. This product began shipping in April 2005.
- AB545A PCI-X 4-Port Gigabit Ethernet Card. This product began shipping in March 2005.
- A7012A PCI-X 2-Port GigE Base-T.
- A7011A PCI-X 2-Port GigE Base-SX.
- AB352-60001 core PCI-X 2-Port GigE Base-T for the rx4640 server.

You can check to see if this driver is present on your system by running the commands described in “How to Verify that the Correct Driver is in the Kernel” in this document.

The gigabit Ethernet cards listed in the first part of this section are supported on the May 2005 release of HP-UX 11i v1 or v2 on:

- Most HP-UX HP 9000 (PA-RISC-based) servers.
- HP Integrity (Itanium®/Itanium®2-based) servers and workstations.

The HP-UX 11i v2 release of May 2005 is *not* for PA-RISC-based workstations.

For the most up-to-date list of network cards and the systems that they work on, check the HP-UX Ethernet Driver Support Matrix, Edition 2 on <http://docs.hp.com> under “Networking and Communications,” or ask your sales representative.

The HP-UX 11i v1 and v2 release of May 2005 provides the following new **iether** gigabit Ethernet driver features:

- *Ability to turn on or off the receive and send sides of the card's **Checksum Offload (CKO)**.* See details in the following section of this document.
- *Support of 1000FD mode of switches* (Table 1, row 2). Gigabit Ethernet cards in autonegotiation mode will now support 1000FD manual/fixed mode on the link partner (such as a switch). All supported configurations are shown in (Table 1) including those where the gigabit Ethernet card and the link partner also have the same settings.

What's in this Version

Set the ports on the card and on your switch according to the following table. The newest supported configuration is shown in the second row.

Table 1 HP-UX 1000Base-T Supported Configurations

HP-UX 1000Base-T Port	Link Partner	Resulting Speed
AUTO	AUTO	Highest Common Speed (HP-UX supports 10/100/1000)
AUTO	1000 FD ^a fixed/manual	1000 Mbit/s FD
100 HD	100 HD	100 Mbit/s HD
100 FD	100 FD	100 Mbit/s FD
10 HD	10 HD (for example, a 10Base-T Hub)	10 Mbit/s HD
10 FD	10 FD	10 Mbit/s FD

a. Configuration supported as of May 2005.

Checksum Offload Changes for the iether Gigabit Ethernet Driver

Beginning with the HP-UX 11i v1 and v2 OE release of May 2005, the **iether** gigabit Ethernet networking driver allows you to turn the CKO feature of the gigabit Ethernet interface ON or OFF. With this and subsequent versions of the **iether** driver:

- The default for *receive* side CKO is OFF (disabled). Prior to the May 2005 release, the receive side CKO was ON (enabled). This setting can be restored as explained in the examples that follow.
- The default for the *send* side is CKO ON (enabled) -- the same setting as on prior releases.

Example settings for iether driver:

Recommended: To set the CKO options permanently (so they're saved across reboots), edit the following values in the `/etc/rc.config.d/hpietherconf` file:

`HP_IETHER_SEND_CKO` and
`HP_IETHER_RECV_CKO` and set them to **ON** or **OFF**

To determine the current CKO settings, enter the following command:

`lanadmin -x cko ppa`

Optional: If desired, you can also use the `lanadmin -X` command to temporarily set these values; but if you use the `lanadmin` command, your settings will not be saved across a reboot. The exact `lanadmin` commands are as follows (note that the -X is capitalized in these commands):

`lanadmin -X send_cko_on ppa`
`lanadmin -X recv_cko_on ppa`

Please refer to the `lanadmin` man page for details of these CKO options.

Fixes in this Version

The following fixes are included in the May 2005 HP-UX 11i v1 and 11i v2:

- In the unlikely event that a hardware error occurred on a gigabit Ethernet controller, the checksum computation that was offloaded to the controller might not catch and discard incorrect data in a received frame.

Overview of Software Installation Process

The installation media for the May 2005 release of HP-UX 11i v1 or v2 consists of two DVDs -- one with the Operating Environment (OE) and the other with applications. If you load the latest OE, you will get the latest gigabit Ethernet drivers including the **iether** driver described in this document. The **iether** driver resides in a software set or “bundle” named **IEther-00**.

Install the HP-UX 11i v1 or v2 OE according to the instructions in the *Installation and Update Guide HP-UX 11i* . The operating environment version should show as either B.11.11 or B.11.23 when you type: `uname -a` at the system prompt.

For instructions on how to install and configure your network card’s hardware and software, refer to the applicable card installation guide. Installation guides for cards that use the **iether** driver are listed in the “List of Related Documentation” on page 6. They are available on the web at <http://docs.hp.com> under “Networking and Communications” and then under “1000Base-T and 1000Base-SX (Gigabit Ethernet).”

If the network card was factory installed (ordered on product option 0D1) or is the “core” LAN, the LAN driver for this card will already be on your system disk.

How to Verify that the Correct Driver is in the Kernel

The operating environment is either HP-UX 11i v1 or HP-UX 11i v2. The operating environment version should show as either B.11.11 or B.11.23 when you type: `uname -a` at the system prompt.

For the May 2005 release of HP-UX 11i v1 or v2, gigabit Ethernet cards such as the A7011A and AB545A cards and the gigabit Ethernet ports on the AB290A 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 HP-UX 11i v2, you should see a response like:

```
iether_ilan Version: 1 May 10 2005  
iether Revision: B.11.23.05 May 10 2005
```

List of Related Documentation

The following documents related to this product are available on the web at <http://docs.hp.com>. These documents should also be available on the Instant Information DVD if you have an HP support contract.

Networking documents are at <http://docs.hp.com> --> "Networking and Communications:"

- Card installation guides that provide step-by-step instructions on how to install and configure the hardware and software:
 - *AB290A PCI-X 2-Port U320 SCSI and 2-Port Gigabit Ethernet Combination Card Installation Guide*
 - *AB545A PCI-X 4-Port Gigabit Ethernet Card Installation Guide*
 - *A7011A/A7012A PCI-X 2-Port Gigabit Ethernet Card Installation Guide*
- *Ethernet Support Guide*

Provides information on advanced features and detailed information on troubleshooting the gigabit Ethernet cards or the Ethernet ports in combination SCSI/gigabit Ethernet cards.
- Support matrixes that identify which driver and card work on what systems and with what versions
 - *HP-UX Ethernet Driver Support Matrix, Edition 2 (for Releases of Sept 2004 and Later)*
 - *HP AB290A Combination 2-Port U320 SCSI and 2-Port Gigabit Ethernet Combination Card Support Matrix*

HP-UX OE documents are at <http://docs.hp.com> --> "HP-UX 11i v1 (or v2) Operating Environments:"

- *Installation and Update Guide HP-UX 11i Version 2*
- *HP-UX 11i Version 1 Installation and Update Guide*