Gigabit Adapter Installation on Brisque version 4.0 and Brisque Serve version 4.0

399Z3R414A

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4558302	5283140	5420722	5615282	5818498	6003442	6158345
4743091	5291273	5459505	5625766	5854883	6014471	6159659
4992864	5296935	5473733	5636330	5861904	6016752	6164637
5049901	5313278	5481379	5649220	5861992	6031932	6180325
5079721	5323248	5488906	5650076	5864651	6043865	6181362
5103407	5325217	5497252	5652804	5875288	6060208	6181439
5111308	5331439	5508828	5691823	5894342	6063528	6186068
5113249	5333064	5509561	5691828	5900981	6063546	6189452
5122871	5339176	5517359	5696393	5934196	6072518	6191882
5124547	5343059	5519852	5699174	5942137	6090529	6204874
5132723	5355446	5526143	5699740	5946426	6096461	6208369
5150225	5359451	5532728	5708736	5947028	6098544	6252522
5153769	5359458	5561691	5713287	5958647	6107011	6260482
5155782	5367360	5568595	5739819	5966504	6112663	
5157516	5367388	5576754	5742743	5969872	6115056	
5208818	5384648	5579115	5764381	5973801	6121996	
5208888	5384899	5592309	5771794	5986819	6130702	
5247174	5412491	5594556	5785309	5995475	6134393	

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Introduction

There are two types of Gigabit Ethernet adapters:

- **Gigabit Ethernet SX (optical)**

  For more information refer to *Appendix A, Gigabit Ethernet-SX Adapter Specifications*.

- **10/100/1000 Base-T Ethernet (copper - RJ45)**

  For more information refer to *Appendix B, 10/100/1000 Base-T Ethernet Adapter Specifications*.

On Brisque, the Gigabit adapter (optical or copper) is an optional configuration.

On Brisque Serve, one Gigabit adapter (copper) is part of the basic configuration and a second Gigabit adapter (optical or copper) is optional.

Limitations

E30 and 43P

- The Gigabit Ethernet adapter is not supported on the 43P and E30 platforms (IBM limitation)

F50

- Generally, F50 supports only one Gigabit adapter (IBM recommendation)
- The Brisque F50 platform supports up to two Ethernet adapters: Fast Ethernet 10/100 and Gigabit adapter
- The Brisque Serve F50 platform supports up to four Ethernet adapters: three Fast Ethernet 10/100 and one Gigabit adapter
- Slots # 1,2,3 cannot be used for the Gigabit adapter
- Slot # 4 is the preferable slot for Gigabit adapter installation - after the next cold start installation the adapter is set to ent0 automatically.

44P-170

- Gigabit adapter may be installed in slots # 1,2
- Slots # 3,4,5 are not recommended since they are 33MHz slots
- Slot # 1 is the preferable slot for Gigabit adapter installation

6F1

- Gigabit adapter may be installed in slots # 3,4,5,8,9,10.
- Slots # 7,11,12 are not recommended since they are 33MHz slots
- Slot # 5 is the preferable slot for Gigabit adapter installation - after the next cold start installation the adapter is set to ent0 automatically.
- Second Gigabit adapter can be installed in slot # 9.



for more information about the slot assignment see *Brisque PSP* and *Brisque Serve PSP* documents:
http://techplanet.creo.com/software_solutions/workflow_software/brisque_serve/content/docs/44P-170PSP.doc

http://techplanet.creo.com/software_solutions/workflow_software/brisque_serve/content/docs/6f1PSP.doc

http://techplanet.creo.com/software_solutions/workflow_software/brisque_serve/content/docs/BrisqueServePSP.doc

Gigabit Adapter Installation on Brisque and Brisque Serve

Gigabit Adapter Installation on an Existing Station

Prior to Gigabit adapter installation on the Brisque, write down the following information regarding the default Ethernet adapter:

- Note location and definition of the default Ethernet adapter by typing **netstat -rn | grep default.**
- From **smit tcpip**, copy down parameters for all defined Ethernet adapters (en0, en1, en2 and so on) such as, IP Address, mask, nameserver and default gateway.
- Write down all information found in the **/etc/hosts** file.
- Write down all information found in the **scitex/version/config/riprohosts** file.
- Run **zones** command found in the **/usr/local/es** folder and write down all zones found. The zone marked with an asterisk is the default zone that Helios has picked up.
- Run **netconf** command found in the **/usr/local/es** folder and check what is listed under **Configure Zones**. Note which zones are available and which zones are providing ES services.



Note: If there is only one zone (this is the default configuration), the screen displays `None`.

- Run **cat afpipaccess.xxx** found in the **/usr/local/es/conf** folder and write down what IP address ranges are allowed and/or denied.
- Run **cat atalk.conf** found in the **/usr/local/es/conf** and note which interfaces are enabled for AppleTalk (nif="et0", if="et1").

Gigabit adapter installation on an existing Brisque includes the following steps:

1. Installing a Gigabit adapter
2. Reconfiguring TCP/IP
3. Reconfiguring the network configuration



Note: To configure the Gigabit adapter as en0, see *Appendix C, Configuring the Gigabit Adapter as en0*.

Installing a Gigabit adapter

1. Turn off the system.
2. Insert the Gigabit adapter into one of the recommended slots (see *Limitations* on page 2).
3. Turn on the system.
4. Log on as **root**.
5. Connect the Gigabit adapter to the Network Switch.

Gigabit software

No additional software is required for Brisque version 4.0 and Brisque Serve version 4.0 (AIX 4.3.3).

The enclosed **Gigabit S/W** CD-ROM should be used only with Brisque and Server version3.0 (AIX 4.2.1)

Reconfiguring TCP/IP

To reconfigure TCP/IP you must first disable the TCP/IP configuration of the existing Ethernet adapter and then enable the TCP/IP configuration of the Gigabit adapter.

To disable the TCP/IP configuration of the existing Ethernet adapter:

1. Type **netstat -rn | grep default** and write down the network interface en(x) of the default Ethernet adapter.
2. Type **smit tcpip** and press ENTER.
3. Select **Further Configuration** and press ENTER.
4. Select **Network Interfaces** and press ENTER.
5. Select **Network Interface Selection** and press ENTER.
6. Select **Change / Show Characteristics of a Network Interface** and press ENTER.
7. Select the en(x) Standard Ethernet Network Interface that you located in step 1 and press ENTER.
8. Delete the Internet Address and the Network mask.
9. Change the **Current STATE** to **down** and press ENTER.

   The Command Status window appears and displays the message `running` until the command is completed and `OK` is displayed.
10. Press F10 to exit.

To enable the TCP/IP configuration of the Gigabit adapter:

1. Type **lsparent -C -k ent** to locate the ent(x) network interface that denotes the Gigabit adapter you installed.
2. Type **smit tcpip** and press ENTER.
3. Select **Minimum Configuration & Startup** and press ENTER to list Available Network Interfaces.
4. Select the **en(x) Standard Ethernet Network Interface** that corresponds to the ent(x) you located in step 1 and press ENTER.

5. Type the values of **HOSTNAME**, **Internet ADDRESS**, and **Network MASK** of the Ethernet adapter you disabled above and press ENTER.

   The Command Status window appears and displays the message `running` until the command is completed and `OK` is displayed.

6. Press `F10` to return to the command line.

Reconfiguring the network configuration

1. At the command prompt, type **cd /usr/local/es** and press ENTER.
2. Type **stop-atalk now** and press ENTER.
3. Type **/usr/local/es/netconf** and press ENTER.
4. Select **Configure Adapter** and press ENTER.
5. Select the et network interface of the new Gigabit adapter and activate it by pressing SPACE.



Note: The activated network interface is denoted by a plus (**+)** sign

6. Make sure the rest of the **et** network interfaces are deactivated.



Note: To deactivate a network interface (to remove the plus (+) sign), select it and press SPACE.

7. To select OK, press TAB twice.
8. Press ENTER twice to save and exit.
9. Select **Quit** to return to the command line and press ENTER.
10. Type **shutdown -Fr** and press ENTER to reboot the system.
11. Log on as **root**.
12. **Ping** to other station for testing the communication.



Note: If using static routing, to edit the static routing table, type **riprohost.sh** and press ENTER.

Logistics

The Gigabit Ethernet SX Adapter Kit Part No. **510K1M297-Gigabit Fiber** for Brisque and the Brisque Serve contains the following items:

No.	Description	Part No.
1	Gigabit F.O cable 30m	199O01004
2	Gigabit Ethernet SX adapter	605A00250
3	Gigabit Software for Brisque and Server CD-ROM (in use only for Brisque and Server version 3.0)	510V1N667
4	Gigabit Adapter Installation on Brisque and Server version 3	399Z1N666C
5	Gigabit Adapter Installation on Brisque version 4.0 & Brisque Serve version 4.0	399Z3R414A

The 10/100/1000 Base-T Ethernet Adapter Kit No. **510K1R971-Gigabit Copper** for Brisque and Brisque Serve contains the following items:

No.	Description	Part No.
1	10/100/1000 Base-T Ethernet	605E00273
2	Gigabit Adapter Installation on Brisque version 4.0 & Brisque Serve version 4.0	399Z3R414A

A

Gigabit Ethernet-SX Adapter Specifications

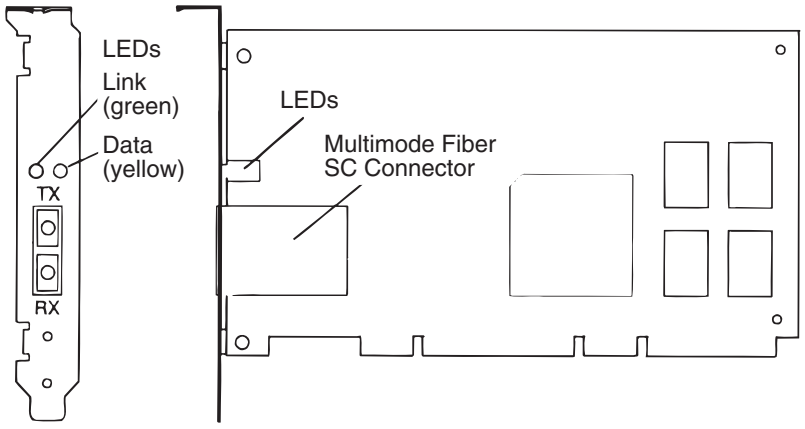
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Gigabit Adapter Overview

The Gigabit Ethernet-SX PCI Adapter is a 32/64-bit high performance expansion adapter card for systems adhering to the Peripheral Component Interconnect (PCI) and IEEE 802.3z standards. The adapter connects the system to an Ethernet LAN at 1000Mbps data rate.

The Gigabit Ethernet-SX PCI Adapter provides the following features:

- 33MHz through 66MHz PCI bus speeds
- 2LED adapter status indicators
- Full-duplex operation
- 1MB on-card FIFO for transmit and receive
- Fiber SC connector for multi-mode fiber cabling
- Surface mount (SMT) and pin-in-hole (PIH) technology



The Gigabit Ethernet-SX PCI Adapter

Understanding the Gigabit Adapter LEDs

The LEDs on the Gigabit Adapter provide information about the card operation status. The LEDs are visible through the card mounting bracket and, when lit, indicate the following conditions:

Light	State	Description
Data (yellow)	Blinking Off	Data detected No data detected
Link (green)	On Off Blinking	Good link No link: could be the result of a bad cable, bad connector or configuration mismatch, or not selected. Port has been disabled by software.

B

10/100/1000 Base-T Ethernet Adapter Specifications

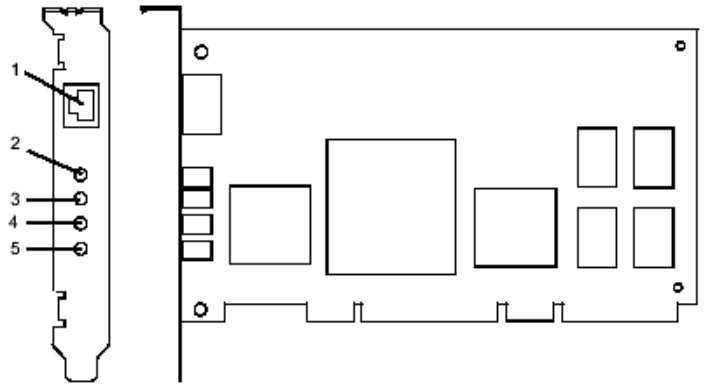
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Overview

The 10/100/1000 Base-T Ethernet PCI Adapter is a 32/64-bit high-performance expansion adapter card for systems adhering to the Peripheral Component Interconnect (PCI) 2.1 and IEEE 802.3ab and 802.3u standards. The adapter connects the system to an Ethernet LAN at a data rate of up to 1000 Mbps over CAT-5 UTP wiring for distances up to 100 meters.

The 10/100/1000 Base-T Ethernet PCI Adapter provides the following features:

- 33MHz through 66MHz PCI bus speeds
- 4 LED adapter status indicators for data and 10, 100 and 1000 Mbps indicators
- Full-duplex operation
- 1MB on-card FIFO for transmit and receive
- RJ-45 UTP Connector for Category-5 Copper Cabling
- Surface mount technology (SMT) and pin-in-hole technology (PIH)



10/100/1000 Base-T Ethernet PCI Adapter

1	RJ-45 Connector
2	Yellow LED (Data)
3	Green LED 1000 Mbps
4	Green LED 100 Mbps
5	Green LED 10 Mbps

Understanding the Gigabit Adapter LEDs

see *Understanding the Gigabit Adapter LEDs* on page 11.

C

Configuring the Gigabit Adapter as en0

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Preliminary steps

Prior to Gigabit adapter installation on the Brisque, you should write down the following information:

- Note location and definition of all defined Ethernet adapters by typing **lsparent -C -k ent**.
- Under **smit tcpip**, copy down parameters for all defined Ethernet (en0, en1, and so on) such as: IP Address, mask, nameserver, domain name and default gateway.
- Write down all information found in the **etc/hosts** file.
- Write down all information found in the **scitex/version/config/riprohosts** file.
- Run **zones** command found in the **/usr/local/es** folder and write down all zones found. The zone marked with an asterisk is the default zone that Helios has picked up.
- Run **netconf** command found in the **/usr/local/es** folder and check what is listed under **Configure Zones**. Note which zones are available and which zones are providing ES services.



Note: If there is only one zone (this is the default configuration), the screen displays `None`.

- Run **cat afpipaccess.xxx** found in the **/usr/local/es/conf** folder and write down what IP address ranges are allowed and/or denied.
- Run **cat atalk.conf** found in the **/usr/local/es** and note which interfaces are enabled for AppleTalk (nif="et0", if="et1").

Editing the existing network services

1. Log off from Brisque Application and log on as **root**.
2. At the command prompt, type **cd /usr/local/es** and press ENTER.
3. Type **stop-atalk now** and press ENTER.
4. Type **cd conf** and press ENTER.
5. Type **vi atalk.conf** and press ENTER.
6. Edit the line:

   ```
   atalkd: nif="et0", nif="et1", if="et2", nif="et3" ...
   ```

   All strings `if=` must be changed to `nif`, for example `if="et2"` should be changed to `nif="et2"`.
7. Type **wq** to save the changes and exit.

Stopping TCP/IP protocol

1. Type **smit tcpip** and press ENTER.
2. Select **Further Configuration** and press ENTER.
3. Select **Stop TCPIP Daemons** and press ENTER.

   The Command Status window appears and displays the message `running` until the command is completed and `OK` is displayed.
4. Press F3.
5. Select **Static Routes** and press ENTER.
6. Select **Flush Routing Table** and press ENTER.
7. Change value of **Flush Routing Table in the Configuration Data Base** to **yes** (the second line on the screen) and press ENTER.

   The Command Status window appears and displays the message `running` until the command is completed and `OK` is displayed.
8. Press F3 three times to go back to the **Further Configuration** menu.
9. Select **Network Interfaces** and press ENTER.
10. Select **Network Interface Selection** and press ENTER.
11. Select **Change / Show Characteristics of a Network Interface** and press ENTER.

12. Select **en(x) Standard Ethernet Network Interface** and press ENTER.
13. Change the **Current STATE** to **down** and press ENTER.

    The Command Status window appears and displays the message `running` until the command is completed and `OK` is displayed.
14. Press F3 twice to go back to the **Network Interface Selection** menu.
15. Repeat steps 9-13 for each Network Interface.
16. Press F10 to exit SMIT.
17. Reboot the system.
18. Remove all obsolete Fast Ethernet adapters from the configuration: **rmdev -l ent(x) -d**, where **x** is the adapter's logical name.
19. If using the 44P-170 platform, type **cfgmgr -L pci1** and press ENTER. If using the F50 or 6F1 platform, go on to step 20.
20. Type **cfgmgr** and press ENTER.
21. Type **smit tcpip** and press ENTER.
22. Select **Minimum Configuration** and configure the Gigabit adapter (en0) by typing the required information in the **Internet ADDRESS** and **Network MASK** boxes.
23. Select **Further Configuration** -> **Network Interfaces** -> **Network Interface Selection** -> **Change/Show Characteristics of a Network Interface** and configure all other adapters (en1, en2 and so on) by typing the required information in the **Internet ADDRESS** and **Network MASK** boxes and by selecting **up** in the **Current STATE** box.