Host Bus Adapters and Connections
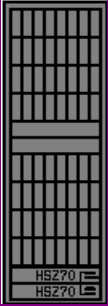
Host Bus Adapters and Connections

↗ HBA Models

↗ HBA Installation and Setup
  ↓ Physical installation
  ↓ Cabling and connections
  ↓ Configuring the adapter
  ↓ General Setup Instructions
  ↓ OS specific Instructions

Fibre Channel Adapters - Models

↗ **Windows NT (4.0, 2000, 2003)**
  ↓ 1 Gb
    ▫ KGPSA-CB (Emulex LP8000)
  ↓ 2 Gb
    ▫ FCA2101 (Emulex LP952)
    ▫ FCA2355 (Emulex LP9002DC)
    ▫ FCA2404 (Emulex LP982) (2003)
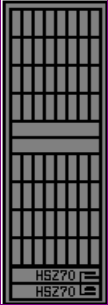   ▫ FCA2214 (QLogic 2340)
    ▫ FCA2214DC (QLogic 2342)

↗ **OpenVMS and Tru64**
  ↓ 1 Gb
    ▫ KGPSA-CA (Emulex LP8000)
  ↓ 2 Gb
    ▫ FCA2354 (Emulex LP9002)
    ▫ FCA2384 (Emulex LP98002L)

Fibre Channel Adapters – Models (cont)

↗ Netware
- ↓ 120186-B21   (1 Gb)
  - ▫ hp PCI
- ↓ FCA2210   (2 Gb)
  - ▫ QLogic PCI-X

↗ Sun Solaris
- ↓ FCA2257s   (1 Gb)
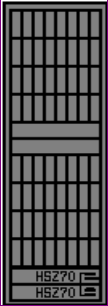 - ▫ QLogic Sbus
- ↓ FCA2257c   (1 Gb)
  - ▫ QLogic cPCI
- ↓ FCA2257p   (2 Gb)
  - ▫ QLogic PCI

Fibre Channel Adapters – Models (cont)

- ↗ IBM AIX
  - ↓ 197819-B21
    - ▫ Cambex PCI Adapter for RS/6000 - Fabric

- ↗ HP-UX
  - ↓ A6685A (PCI bus)   (1 Gb)
  - ↓ A6795A (PCI bus)   (2 Gb)

- ↗ Linux (RedHat, SuSE)
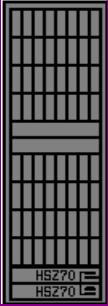 - ↓ 167433-001
    - ▫ Qlogic PCI
  - ↓ FCA2214   (2 Gb)
    - ▫ Qlogic PCI-X
  - ↓ FCA2214DC   (2 Gb)
    - ▫ Qlogic PCI-X DC

Platform Solution Kits (8.7)

- ↗ Windows NT
  - ↓ 279811-B21
- ↗ Tru64
  - ↓ 279803-B21
- ↗ OpenVMS
  - ↓ 279807-B21
- ↗ Netware
  - ↓ 279815-B21

- ↗ Linux
  - ↓ 279831-B21
- ↗ IBM AIX
  - ↓ 279827-B21
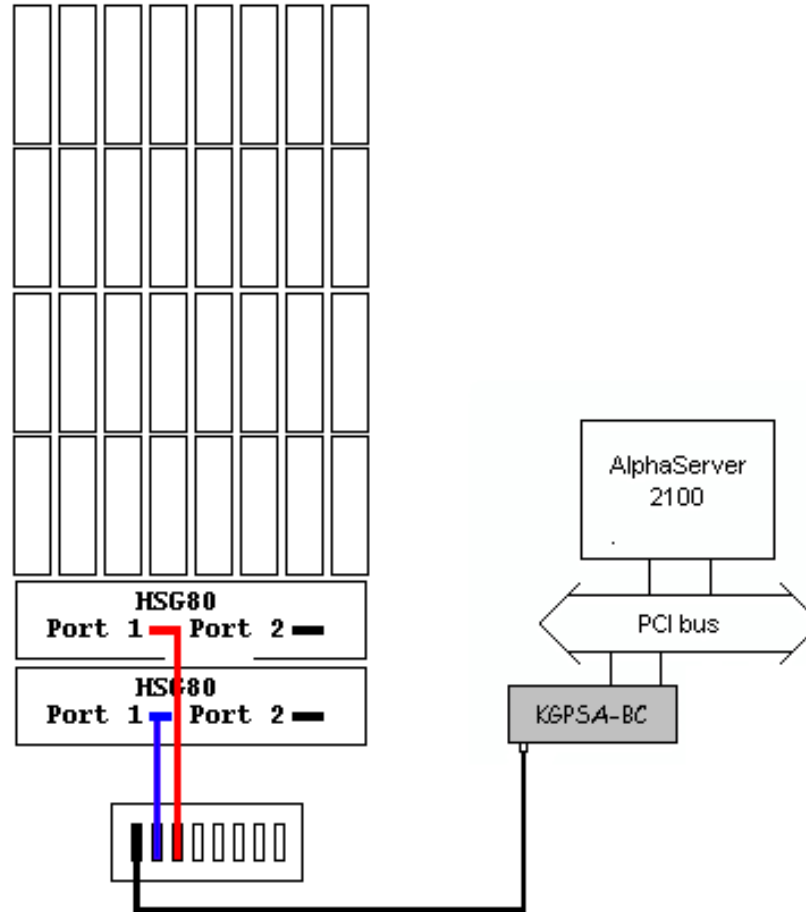- ↗ HP-UX
  - ↓ 279823-B21
- ↗ Sun Solaris
  - ↓ 279819-B21

Host Bus Adapter -Physical Installation

↗ Shut down the O.S.

↗ Power system off

↗ Record the 64 bit World Wide ID IEEE address
  ↓ located on a sticker on the back of the adapter
  ↓ may need later to identify connection in multihost environment

↗ Install adapter into available PCI slot

↗ Run cables to hub/switch (don't crimp!!)

↗ Configure storage

↗ Boot O.S.

Fibre Channel Cabling

↗Basic Fibre Channel Connections

Fibre Channel Switches/Hubs

↗Fibre Channel Hubs

7 port hub

12 port hub

↗Fibre channel 16 port optical switch

Host Bus Adapter – General Setup

↗ Install HBA driver

    ↓ Adapter driver and installation procedures included on Platform Solution Kit CD.

    ↓ Review the procedures – they may change with new releases.

↗ Name hosts or connections and present storage to the hosts.

↗ Rescan SCSI bus (or reboot) to connect to newly visible storage volume.

Host Bus Adapter – W2K setup

- ↗ Check most recent Installation manual for changes.
- ↗ W2K Plug and Play may install a default driver.
- ↗ Insert Windows Solution Platform Kit for appropriate storage array.
- ↗ CD should autoplay. If not, look in autorun.inf and run "demo.exe".
- ↗ Select "Update driver" from menu screen to update driver.
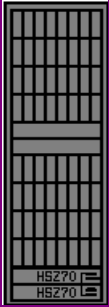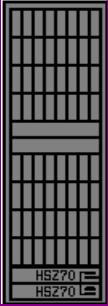- ↗ Rebooting is optional here…

Installing Array Device Driver

↗ Select the Fibre Channel Software Setup option from the menu that appears after the driver upgrade is completed.

↗ Choose the setup that matches your system configuration from the four options that are presented.

↗ The Fibre Channel Software performs as follows:
  ↓ Automatically installs the correct SCSI filter Driver.
  ↓ Automatically sets registry for proper operational use of the FCA Fibre Channel host adapter with the Storage Array.
  ↓ Enables "Extended Configuration" settings to be specified in a Fibre Channel Switch (FC-SW) topology and Fibre Channel Arbitrated Loop (FC-AL) topology.
  ↓ Copies the appropriate driver to the%systemroot%\system32\drivers folder.

Host Bus Adapter – OpenVMS

➚ Install the FC HBA and boot the OS

➚ HSG80 controllers normally should be in Multi-bus mode and must be set to SCSI-3 mode. Also define an identifier for the CCL
- ↓ Set multibus copy = this (other restarts)
- ↓ Set this scsi_version = SCSI-3
- ↓ Set this identifier=n   (must be unique in fabric)
- ↓ Restart this; restart other

➚ OpenVMS uses unique identifier (LUN ID alias) to assign unit a device name.
- ↓ Set unit identifier = NN (from HSG CLI)
- ↓ Set d3 identifier = 3 (becomes 1DGA3)

Host Bus Adapter – OpenVMS (cont)

➚ FC implemented on Alpha only
  ↓ 7.2 requires TIMA VMS72_HW01
  ↓ 7.2-1 requires VMS721_FIBRECHAN_V0300
  ↓ 7.2-2 requires VMS722_FIBRE_SCSI-V0200
  ↓ 7.3 requires VMS73_FIBRE_SCSI-V0300
  ↓ No FC-AL support

➚ OpenVMS FC Drivers:
  ↓ SYS$PGADRIVER – FC SCSI Port Driver
  ↓ SYS$FGEDRIVER – Emulex HBA Driver
  ↓ SYS$DKDRIVER - SCSI Class Driver for HSG LUN's
  ↓ SYS$GKDRIVER - Generic SCSI Class driver for CCL