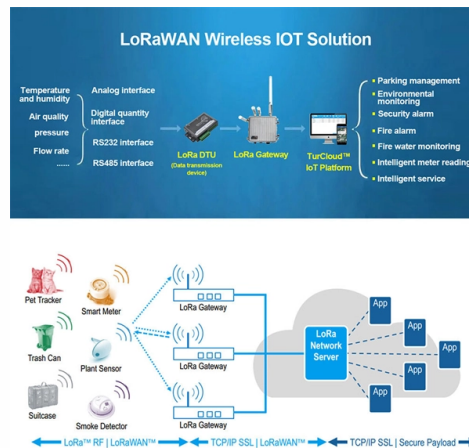


FC Hard Drive Interface Conversion



Overview

Modern bit serial interfaces connect a hard disk drive to a host bus interface adapter (today in a PC typically integrated into the "motherboard") with one data/control cable. Each drive also has an additional power cable, usually direct to the power supply unit. • DECs (SDI) was an early example of a modern bit serial interface.

Key Takeaways

Fibre Channel (FC) hard drives can be converted to SATA or iSCSI using hardware adapters, conversion sleds, or storage array HIC protocol changes. Hardware Conversion to SATA

One common method is using a conversion sled or adapter that allows a standard 2.5" SATA drive to replace a 3.5" Fibre Channel or SCSI drive. These sleds mimic the original FC interface while integrating a SATA drive, maintaining the original form factor, weight, and center of gravity. They also provide electrical isolation, vibration mitigation, and heat dissipation to ensure reliability in legacy systems. This approach avoids redesigning the system and allows the use of modern drives in older FC-based architectures (Mountain Secure Systems) .

Storage Array HIC Conversion to iSCSI

For enterprise storage arrays like NetApp E-Series or EF-Series, Fibre Channel interfaces can be converted to iSCSI at the host interface card (HIC) level. In split mode, some HIC ports operate as iSCSI while others remain FC. Converting to iSCSI only requires applying a feature pack in SANtricity Storage Manager, taking the system offline, and possibly re-cabling or adjusting mirroring relationships. Synchronous mirroring over FC must be removed before conversion, while asynchronous mirroring over iSCSI can remain. This process changes the HIC protocol in the controller firmware and requires careful planning to avoid data inaccessibility during the procedure .

Adapter Options

For direct hardware bridging, SATA-to-FC adapters (interposers) are available, such as the EMC/Dell 250-039-900C, which allow a SATA drive to communicate over a Fibre Channel interface. These adapters are typically used in refurbished or legacy systems to maintain compatibility without replacing the entire storage array .

Considerations

- **Compatibility:** Ensure the adapter or sled supports the specific FC interface type (e.g., 2 Gbps, 4 Gbps, 8 Gbps).
- **Performance:** Conversion may introduce slight latency; SSDs generally perform better than spinning disks in these setups.
- **Firmware:** Storage arrays may require firmware updates or feature packs to recognize converted drives.
- **System Design:** Weight, vibration, and heat management are critical in systems with mechanical constraints, such as aerospace or industrial applications. By using these methods, organizations can extend the life of legacy FC systems, reduce costs, and integrate modern storage technologies without full system redesign.

Article Content

Fibre Channel to SATA Conversion

Mountain Secure Systems offers the most cost-effective, ruggedized solution for converting a Fibre Channel or SCSI interface to

Hard disk drive interface

Modern bit serial interfaces connect a hard disk drive to a host bus interface adapter (today in a PC typically integrated into the "south bridge") with one data/control cable. Each drive also has an additional power cable, usually direct to the power supply unit. • DEC's Standard Disk Interconnect (SDI) was an early example of a modern bit serial interface.

FC to SATA Converter: The Ultimate Guide to Upgrading Your

An FC to SATA converter is a specialized adapter that bridges the gap between Fibre Channel (FC) interfaces and Serial ATA

LSI P19510-03-a Fiber Channel to SATA Converter Interpose Board

Find many great new & used options and get the best deals for LSI P19510-03-a Fiber Channel to SATA Converter Interpose Board

EMC 250-039-900C SATA to Fibre Channel Adapter

EMC / Dell 250-039-900C SATA to Fibre / Fiber Channel Hard Drive Adapter Interposer - Refurbished Serial ATA to Fibre / Fiber

How do I connect a Fibre Channel drive to my desktop PC?

To install a Fibre Channel device without using the appropriate enclosure/backplane, an adapter kit is necessary. This adapter kit will

Fibre Channel Hard Drive Interface

Using optical fiber to connect devices, fibre channel supports full-duplex data transfer rates up to 100 MB per second. Fibre channel

Fibre Channel

Fibre Channel was designed as a serial interface to overcome limitations of the SCSI and HIPPI physical

Fiber Channel to SATA or SAS conversion?

I'm Looking to replace with the spinners with solid state drives. Appear the vast majority of dense SSDs are in the 2.5"

HDD GURU FORUMS • View topic

To install a Fibre Channel device without using the appropriate enclosure/backplane, an adapter kit is necessary. This

Fibre Channel to SATA or IDE... Is it possible?

So I occidentally purchased a fibre channel HDD from Ebay (i had no idea what FC was, i assumed it was SATA or

Fibre Channel

I got an offer on the table for a stack of 300GB FC 10K hard drives for a very decent price - it works out to around \$7 per drive and I

Fibre Channel Disk Setup?

I guess all I'm really asking for here is a total rundown on how to set up either a Fibre Channel or SCSI drive. I've

Types of Hard Disk Drive Interfaces

The document summarizes different types of hard disk drive interfaces, including IDE, SATA, SCSI, Fibre Channel, and SAS. It

QLogic Fibre Channel Adapters

NVMe is an alternative to the Small Computer System Interface (SCSI) standard for connecting and transferring data between a host

Fibre Channel Hard Drive Disks

Flagship Technologies is a great place to buy Fibre Channel Hard Drive Disks (FC HDDs). We have a wide selection of hard drives

Fibre Channel Hard Drives (HDD, SSD & NAS)

Get the best deals on Fibre Channel Hard Drives (HDD, SSD & NAS) and find everything you'll need to improve your home office

Can someone explain Fiber Channel to me? For Storage

With PC's they generally have SATA ports. We connect a hard drive to a SATA port and the drive shows up. SAS works the same

Contact Us

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Technical inquiry: <https://danialonso.es/contact.html>

This document is for preliminary research. Verify specifications against current standards, product documentation and project requirements.

