



Intellishare SCSI

Key Features

- ▶ Simple dependable way to maximise the value of your SCSI tape investment
- ▶ Switching is dynamic - no physical or electronic switching is required
- ▶ Hardware-only solution - no special software or patched needed
- ▶ Simple plug and play installation
- ▶ Zero overhead: 40MB per second bandwidth-no speed loss
- ▶ Continuous availability to both hosts
- ▶ Host fail-over protection for SCSI RAID and tape libraries
- ▶ Available as a 3rd and/or 4th host attachment for IBM 3590 drives
- ▶ 100% compatible with Windows NT, HP9000, Sun, DEC, Alpha and most other computer systems

Overview

Sometimes it is desirable to share a peripheral between two or more Host computers. However, it is not generally possible to connect the SCSI bus of one Host to that of another via the shared peripheral.

This is particularly the case if the Hosts are of different types (i.e. a Unix computer and an AS400). SCSI switches are used to switch the peripheral between the hosts. The control of the switches (when and how to switch), and switched termination cause this approach to be problematic. PV's SCSI switch allows the peripheral to be connected to both Hosts simultaneously, but access is controlled via the SCSI Reserve/Release mechanism.

The SCSI Reserve/Release command allows a host to reserve the peripheral for its own use. Attempts to access from other hosts are then rejected until the first host Releases the peripheral. This has always been the sharing mechanism of choice by the peripheral manufacturers. However, not all operating system drivers support the SCSI Reserve/Release mechanism, and secondly, it is not possible to connect the SCSI busses of two hosts together.

The Intellishare SCSI overcomes all of these problems. It effectively joins and isolates the host SCSI buses. It allows a peripheral to be shared between two (or more) different Host computers, such that it is available to either at any time.

The Intellishare SCSI is a totally hardware solution. No special software or drivers are required. It can be combined with a SCSI bridge to provide emulation where it is required for connectivity. It is generally mounted in a small, tabletop enclosure, with SCSI connections to the host computers and the peripheral itself. It is also available as a tray mounted PCB, or in a rack mount configuration. The Host accesses the peripheral in the usual way, however, if the peripheral is currently being used by the other host, then this Host receives a benign not available, not ready or busy message.

Technically Speaking

The Intellishare SCSI consists of two Host ports A & B and one peripheral port C. All three ports are Fast-wide differential SCSI interfaces. A SCSI transaction consists of Arbitration, Selection, followed by Command, Data and Status Phases in different combinations and orders, terminated by Bus Free. This activity is transacted between one (only) Initiator (Host) and one (only) Target (Peripheral).

Multi-threaded SCSI activity is in fact a fast succession of different transactions between Hosts and different Targets. Regarding the Switch, only one Host port can have a SCSI transaction with the Target port at a time. From Bus free, the first Host port to begin a successful Arbitration with the target establishes the SCSI connection (or nexus) for that Host. This nexus ends on the next Bus free. The next nexus could be from either port. In this way the Intellishare SCSI allows multi-threaded activity from either port to the peripheral. There is no physical switch, the switching or sharing of the target is Dynamic.

In practice alternate SCSI nexus activity from either port does not occur. When a Host first accesses the peripheral, it will typically SCSI Reserve it. If the Host on the other port attempts to access the peripheral, it will receive a SCSI Reserved signal, until the original Host SCSI Releases the Target. In this way, it is the protocol of the SCSI bus that is switching the Peripheral between the two SCSI Ports. Because, each host is interfaced to the peripheral through the IntelliShare SCSI card, there are no issues about joining different Host SCSI busses together. The busses are effectively joined on the private bus which is a controlled environment.

Specifications:

Supported Drives - IBM 3570, 3590, 3490; Fujitsu 3590; Philips NCTP; DLT; AIT; 8-mm; and various different libraries

Temperature - Operating: 5 to 40°C; Non-Operating: 40 to 70°C

Transfer Rate - 40 MB/sec. (MBps)

Interface - Differential, Fast-Wide SCSI-3, 68-way Micro D F Connectors

Power - 110-240 VAC autosensing, 50-60 cycles

Size - 6.4H x 21.1W x 29.2D cm

Ordering Information:

Product

Intellishare SCSI Peripheral Sharer

Code

SWU9100