SABTECH INDUSTRIES
TACTICAL DATA LINK SPECIALISTS

Swift™ PCI NTDS Parallel Type A, B, C and H

A high-performance NTDS interface for PCI bus computers

Versatile and reliable MIL-STD-1397C parallel communications for military systems

The Swift PCI NTDS Parallel board connects computers with PCI bus slots to military computers and peripherals with MIL-STD-1397C Type A, B, C or H interfaces.

- Full Duplex NTDS Channel
- Passive Tap Capability
- On-board High Resolution Time Stamp
- Test Without Disconnecting Cables

Sabtech's Swift is easy to program and offers a variety of input and output modes to support any NTDS protocol. Hardware-independent input and output channels allow the Swift to perform simultaneous input and output (full duplex) operations. NTDS type is software-selectable allowing quick reconfiguration without the use of hardware jumpers or switch settings.

Swift boards can be used for passive tap applications as well as normal NTDS I/O. An on-board time stamp generator tags individual input words with 125 ns resolution. Time stamping is software-selectable and can be used with active or passive communications.

All boards in the Swift family are software-compatible making it easy to mix parallel and serial NTDS boards in the same system as well as allowing transparent migration of applications between PCI, PMC, and cPCI versions of the Swift. Device driver software is available for the most commonly-used operating systems.

Swift PCI NTDS Parallel A/B/C/H

Swift PCI NTDS Parallel A/B/C/H with 120-pin connector

For maintenance and reliability, Swift NTDS Parallel boards use short-circuit protected outputs to prevent failures due to improper cabling or NTDS type mismatch. An internal loop-back path allows the Swift to be tested without disconnecting cables. The Swift can be updated in the field by reconfiguring its Field Programmable Gate Array (FPGA) logic to add features or compensate for non-compliant interfaces. Using FPGA technology reduces component obsolescence, enabling the Swift to be deployed and supported for years to come.

Product Overview

- MIL-STD-1397C type A, B, C, and H compliant
- Full-duplex 8- ,16- or 32-bit NTDS transfers
- Interrupt, PIO & DMA operation
- Independent NTDS input and output channels
- Field Programmable Gate Array (FPGA) technology
- Separate word counters and time-outs for EI/EF words and data words on inputs and outputs
- PCI 2.2 compliant (supports plug and play)
- Short-circuit protected, tri-state drivers
- PCI master and slave operation
- Internal loopback test without disconnecting NTDS cables
- Software-enabled time stamp on input words with 125ns resolution
- Time stamps can be synchronized across multiple interfaces
- Supports receipt of multiple forced EF's
- Software compatible with Swift PMC and Swift cPCI boards

General Product Features

Input Mode Features

- Separate or combined data and command word buffers
- Input command words, stop on data word
- Input data words, stop on command word
- Passive tap mode

Output Mode Features

- Concurrent data and command buffer operation

Time-out Mode Features

- Time-out values in 10µs or 1ms increments
- Time-out between words and/or total transfer times
- Start time-out at beginning of operation or upon transfer of the first word

Software Drivers Available*

- Choice of driver included with board purchase: Windows NT® Windows® 2000/XP, VxWorks®, Solaris™, Linux®, LynxOS®, HP-UX

**Contact factory for new OS support*

Options and Accessories

- Cable Interface Modules (CIM)
- Adapter Modules
- Cable Assemblies
- Tap Accessories

Swift PCI NTDS Parallel Modules Technical Specifications

NTDS Interface	MIL-STD-1397C Type A, B, C, & H
PCI bus Interface	PCI 2.2 Compliant 32-Bit, 33/66 MHz, Universal Card (3.3V or 5V I/O signaling)
Input Buffer	64K x 32-bit FIFO
NTDS I/O Connector	112 Pin Receptacle (Berg 50295-5112E) 120 Pin Receptacle (Molex 52755-1200)
Form Factor	6.875" x 4.2" (Standard PCI Short Card)
Weight	6.3 oz, 7.0 oz with internal connectors
Power Consumption	Average +5V current draw: 0.85A Average +VI/O current draw: 5mA Average Power Dissipated: 4.25W
Relative Humidity	0% to 90% (non-condensing)
Operating Temperature	0°C to +55°C