MILITARY & DEFENSE

NTDS SERIAL D/E PCIe Dual Channel

SPECIAL FEATURES

- Two Full Duplex NTDS Channels
- Passive Tap Capability
- Compatible with PCIe x4, x8 or x16 slots
- Test Without Disconnecting Cables

NTDS SERIAL D/E PCIe Dual Channel

High performance serial NTDS for PCI Express

The PCIe NTDS Serial dual channel card connects computers with PCI Express (PCIe) slots to military computers and peripherals with MIL-STD-1397C Type D or E interfaces. The card is compatible with x4, x8 or x16 PCIe slots, allowing it to be used in the widest range of servers and workstations. NTDS cable connections are backward compatible with IXI's other Serial boards, allowing an easy upgrade without the need to change cabling. Supporting two full NTDS channels on a single card satisfies the need for lowering SWAP and increasing channel density.

IXI's NTDS line of cards are easy to program and offer a variety of input and output modes to support any NTDS protocol. Hardware-independent input and output channels allow the NTDS Interface to perform input and output (full duplex) operations on both channels simultaneously.

PCIe NTDS 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 NTDS Interface 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 PCIe, PCI, PMC, cPCI, and PC/104-Plus versions. Device driver software is available for the most commonly-used operating systems.

For maintenance and reliability, an internal loop-back path allows the NTDS Interface to be tested without disconnecting cables. PCIe NTDS Serial Type E boards fully implement all the System Integrity Features (SIF) specified in MIL-STD- 1397C. The PCIe NTDS 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 PCIe NTDS to be deployed and supported for years to come.

PRODUCT OVERVIEW

- Fully MIL-STD-1397C Type D or E compliant
- Dual Full-duplex NTDS transfers
- Interrupt, PIO & DMA operation
- Independent NTDS sink and source channels
- Field Programmable Gate Array (FPGA) technology
- Separate word counters and time-outs for command words and data words on inputs and outputs
- 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 Command words
- Control frame programmability for MIL-STD_1397B compatibility
- Software compatible with other IXI PCIe, PCI, PMC, cPCI NTDS boards

GENERAL PRODUCT FEATURES

Input Mode Features

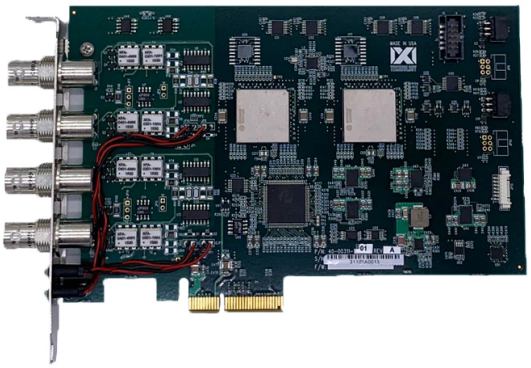
- Separate or combined data and command word buffers
- Input command words, stop on data word
- Input data words, stop on command word
- Passive tap mode

Output Mode Features

- Concurrent data and command buffer operation
- Single word or bust mode (NTDS Type E)

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



Dual Channel PCIe NTDS Serial Type D/E

Software Drivers Available*

- Choice of driver included with board purchase: Windows® and Linux®

*Contact factory for new OS support

OPTIONS AND ACCESSORIES

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

TECHNICAL SPECIFICATIONS

NTDS Interface	MIL-STD-1397C Serial Type D or E
PCIe Bus Interface	PCI Express Base Specification, Revision 2.1
Input Buffer	64K x 32-bit FIFO
NTDS I/O Connectors	Type D: 4 coaxial connectors (Amphenol# 31-10-75) Type E: 4 triaxial connectors (Trompeter# CBBJR79T L)
Form Factor	Standard height, half length PCIe 4.20" X 6.6" (106.65mm X 167.65mm)
Weight	4.8 oz.
Power Consumption	Average 3.3V current draw: 0.55A Average 12V current draw: 0.55A Average Power Dissipated: 8.5W
Temperature	Operating: 0°C to +55°C Storage: -41°C to +71°C
Shock	MIL-STD-810F, method 516.4, procedure VI (bench handling)
Vibration	Random: 20-200Hz/0.01 g^2/Hz Sine Peak: 5-28Hz/1g
Relative Humidity	0% to 95% (non-condensing)
Altitude	Operating: 5000 ft. Storage: 26,250 ft.