

# MILITARY & DEFENSE

NTDS SERIAL D/E PMC



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A high-performance serial NTDS module for PMC slots

### SPECIAL FEATURES

- Industry Standard PMC Module
- Passive Tap Capability
- Full Duplex NTDS Channel
- Test Without Disconnecting Cables

The PMC NTDS Serial card connects computers with PCI Mezzanine Card (PMC) slots to military computers and peripherals with MIL-STD-1397C Type D or E interfaces. The PMC is a daughter card that installs in an industry standard PMC slot on a host CPU or PMC carrier, providing full-featured NTDS I/O capabilities in a small form factor.

IXI's PMC NTDS 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 PMC NTDS to perform simultaneous input and output (full duplex) operations.

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

For maintenance and reliability, PMC NTDS Serial boards have an internal loopback path that allows it to be tested without disconnecting cables. The PMC NTDS can be updated in the field by reconfiguring its Field Programmable Gate Array (FPGA) Logic to add or compensate for non-compliant interfaces. Using FPGA technology reduces component obsolescence, enabling the PMC NTDS to be deployed and supported for years to come.

### PRODUCT OVERVIEW

- MIL-STD-1397C type D or E compliant
- Full-duplex 32-bit 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 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
- Software enabled SIF (for NTDS type E)
- Control frame programmability for MIL-STD-1397B compatibility
- Software compatible with Serial PCI, cPCI, PCIe, and PC/104-Plus 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
- Single word or burst mode (NTDS type E)
- Passive tap mode

### Output Mode Features

- Concurrent data and command buffer operation
- Single word or burst mode (NTDS type E)

### Time-out Mode Features

- Time-out values in 10 $\mu$ s 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® 2000/XP,  
\* VxWorks®, Solaris™, Linux®, LynxOS®, HP-UX  
Contact factory for new OS support



PMC NTDS Serial Type D

## OPTIONS AND ACCESSORIES

- Cable Assemblies
- Tap Accessories

### TECHNICAL SPECIFICATIONS

NTDS Interface	MIL-STD-1397C Type D or E
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	Type D: 2 coaxial connectors (Amphenol # 31-10-75) Type E: 2 triaxial connectors (Trompeter # BJ157)
Form Factor	IEEE 1386 Single Size CMC (149mm x 74mm)
Weight	3.3oz
Power Consumption	Average +5V current draw: 0.58A Average +VI/O current draw: 5mA Average Power Dissipated: 2.89W
Relative Humidity	0% to 90% (non-condensing)
Operating Temperature	0°C to +65°C