



## Sparrow™ PCI Serial ATDS Board

# The most compact, powerful and reliable serial ATDS interface available today

*Sparrow achieves superior levels of serial ATDS performance in COTS systems*

The Sparrow PCI Serial ATDS board installs in a standard PCI 3.3V, 5V, or Universal signaling slot to provide an interface to a Tactical Digital Information Link (TADIL) A serial channel (MILSTD-188-203-1A, Appendix D2). The Sparrow is easy to program and offers a variety of input and output modes to support all ATDS protocols. In addition to conventional input and output operations, the Sparrow has a built-in passive tap mode that provides interface monitoring and data capturing capability. A software-enabled and embedded time-stamp generator tags input words with 125ns resolution. The time-stamp clock can be synchronized between multiple boards by using a small inter-connect cable, and can be driven by an external clock source.

### Design Features

Reliability and flexibility are designed into the Sparrow. An internal loopback path allows the Sparrow to be tested without disconnecting cables. Field upgrades can be done easily by running a simple utility program to update the onboard Field Programmable Gate Array (FPGA).

- Easy to Program
- Reliable and Flexible
- Multiple Input and Output Modes
- Powerful Feature Set

The interface comes standard with a driver for any one of the supported operating systems, a loopback module, an excellent documentation package, and sample C language code that can be freely used in application software.

### Sparrow PCI ATDS Serial Board Features

#### General Product Features

- Fully MIL-STD-188-203-1A, Appendix D2 compliant
- Transceiver Short Circuit Protection
- DTS or TDS Operation
- Frame Interval of 13.33ms or 22.00ms
- Full Picket Addressing and Sidetone Support
- Data Recirculation (Fault) Testing
- KG-40 Reset Signal
- DTS/TDS Mode LED
- Net Control LED
- User LED
- Interrupt, PIO & DMA operation
- Field Programmable Gate Array (FPGA) technology
- PCI 2.2 compliant
- PCI Master and Slave operation
- Internal loopback test without disconnecting ATDS cables
- Software enabled time-stamp on input words with 125ns resolution
- Passive tap mode
- Fully Software Configurable (no programming switches or jumpers)



*Sparrow PCI Serial ATDS*

## General Product Features

### Time-Out Features

- Time-out values in 10 $\mu$ s or 1ms increments
- Time-out between words and/or total transfer times
- Start timeout at beginning of operation or upon transfer of first word

### Software Support\*

- Choice of driver included with board purchase:  
Windows<sup>®</sup> 2000/XP, Solaris<sup>™</sup>, Linux<sup>®</sup>, VxWorks<sup>®</sup>

\*Contact factory for new OS support

### Options and Accessories

- Cable Assemblies

## Sparrow PCI Serial Board Technical Specs

ATDS Interface	MIL-STD-188-203-1A, Appendix D2
PCI Bus Interface	PCI 2.2 Compliant 32-Bit, 33MHz, Universal Card (3.3V or 5V I/O Signaling)
Input Buffer	64K x 32-Bit FIFO
ATDS I/O Connector	25-pin Micro D (Molex 83614-9012)
Form Factor	Single Wide, Non-Extended PMC (Per IEEE P1386.1, Draft 2.0)
Weight	6.3 oz.
Power Consumption	Average +5V current draw: 0.56A Average -12V current draw: 50mA Average +V/I/O current draw: 5mA Average Power dissipated: 3.43W
Relative Humidity	5% to 90% (non-condensing)
Operating Temperature	0°C to +55°C