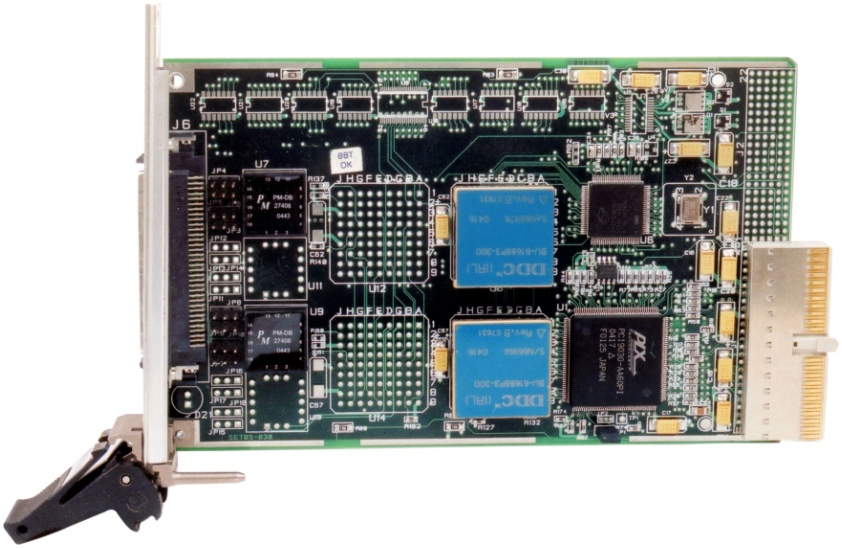
AT-cPCI-1553

MIL-STD-1553B compactPCI Card



- **compactPCI/PXI bus compatible**
- **3U size, single slot**
- **DDC controller based**
- **Programmable as Bus Controller or Remote Terminal or Monitor Terminal**
- **Up to 4 Dual Redundant MIL-STD-1553B channels**
- **31 Remote Terminal Control**
- **Direct or Transformer Coupled**
- **Driver support for Windows XP, Windows 7 and Linux**
- **Rear I/O option available**

OVERVIEW

The AT-cPCI-1553 card provides a flexible, Single function, dual redundant MIL-STD-1553B interface to the CPC/PXI backplanes. It provides the highest level of performance & flexibility for MIL-STD-1553B protocol on the CPC/PXI bus. The card comes integrated with a powerful software that reduces application development time. All data bus functionality is supported by our advanced API (Application Programming Interface).

HARDWARE

The AT-cPCI-1553 single function architecture can emulates as a Bus Controller or 31 Remote Terminal or Monitor Terminal modes. Polling and interrupt generation is also provided. Rear I/O connectivity option via J2 connector can be provided on CPC backplanes. If rear IO connector is used in the card, it has to be used in PXI backplane only. User should take caution.

Transformer and Direct Coupling

The card can be configured to work either in the transformer-coupled mode or in the direct-coupled mode. A jumper is provided on the card to select the mode. It is configured to work in the transformer-coupled mode by default.

SOFTWARE

The AT-CPC-1553 software includes:

> Drivers & APIs
> Bus Monitor

Drivers & APIs

The card comes with a powerful set of library functions to access the entire MIL-STD-1553B functionality. The drivers are designed in a modular fashion consisting of component functions and application functions. The user's test program can be developed with few calls to the driver by using the set of application functions provided. Driver and high-level API libraries for Windows XP, Windows 7 and Linux are available. LabVIEW support is also provided. Sample programs for BC, RT, MT modes are included.

Bus Monitor

The Bus monitor software module enables effective monitoring of dataflow on the 1553 bus. All events taking place on the 1553 bus are dynamically captured. This data can be recorded and replayed enabling offline analysis.

- Record and Replay of data
- Replay with rate selection
- Message identifier
- Message sampling option
- Dynamic data updation
- Busload Analyzer
- Bus Ideal Time Analyzer
- Multi console at a time
- Filtering option up to sub address

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PRODUCT SPECIFICATIONS

MIL-STD-1553B Interface

- Programmable as Bus Controller or Remote Terminal or Monitor Terminal
- Up to 4 Dual Redundant MIL-STD-1553B channels
- 31 Remote Terminal Controls
- Message formats BC-RT, RT-BC, RT-RT, Broadcast, System Control
- Direct or Transformer coupled

Bus Controller

- 64K words of SRAM per channel for DDC controller
- Automatic retries on alternate bus
- Inter Message Gap from 8µs to 65ms
- Frame auto repeat up to 5s
- Programmable response timeout up to130µs

Remote Terminal

- Programmable command illegalization
- Programmable Single Message or double buffering or circular buffering
- BUSY Bit programmable by subaddress
- Alphanumeric message ID
- Output drive 1.2VA

Monitor Terminal

- Word monitor per word basis
- Selective message monitor & time stamping
- Dynamic data update
- Message Periodicity
- Bus error status
- Message identifier

Software Support

- Driver and high-level API libraries for Windows XP, Windows 7 and Linux
- Sample applications provided
- Labview drivers are available - Optionally

Physical

- Standard CompactPCI card size (160mm x 100mm)

Environmental

- Operating temperature: 0° C to +50° C
- Storage temperature: -20° C to +70° C

Power

- +5 VDC
- Maximum Power Consumption <20W

Warranty

- 1 year limited warranty

ORDERING INFORMATION

Hardware Selection

AT-cPCI-1-1-1553- Controller-Channels-DIO

- 1 = With DIO
  0 = Without DIO
- 1 = 1 Dual Redundant 1553B Channel
  2 = 2 Dual Redundant 1553B Channels
  3 = 3 Dual Redundant 1553B Channels
  4 = 4 Dual Redundant 1553B Channels
- 1= DDC
- **Base Product**
  AT-cPCI-1-1-1553 = MIL-STD-1553B compact PCI Card

- Contact sales for support for other Operating Systems
- Contact sales for configuration of front and rear I/O configuration
- Contact sales for environmental options

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