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Find the *Abaco Systems / Condor Engineering cPCI-1553C-MM* at our website: ***Click HERE***

1553

Interface for CompactPCI

cPCI-1553

FEATURES

- Simultaneous Bus Controller, 31 Remote Terminals and Bus Monitor
- 1 or 2 independent MIL-STD-1553 dual-redundant channels for 3U and 6U platforms
- Easy-to-use BusTools/1553 Windows-based GUI bus analyzer available
- Advanced, high-level software API libraries
- Multi-function and single-function versions
- Conditional BC branching on real-time message data or status
- Aperiodic message insertion
- Real-time bus playback with RT edit mode
- Flexible I/O triggering
- 1 Mbyte shared RAM per channel
- Supports MIL-STD-1553A and B Notice II
- Error injection/detection
- Variable output voltage optional



The cPCI-1553 provides the highest level of performance and flexibility for the MIL-STD-1553A/B protocol on the CompactPCI bus. The cPCI-1553 is integrated with powerful software that reduces development time. All databus functionality is supported from our advanced API (Application Programming Interface). Standard features include realtime bus playback (with ability to edit out RTs), aperiodic message insertion, error injection/detection, conditional BC branching, 45-bit timetags and "Oneshot" BC operation. Provides host software synchronization to pulses from external timing sources (IRIG, GPS, etc). The Bus Monitor mode provides 100% bus monitoring of fully loaded MIL-STD-1553 buses.

Multi-function Interface

One or two multi-function interfaces are available on a single cPCI board. They can operate simultaneously as a BC, up to 31 RTs and as a BM. It can emulate an entire dual-redundant channel internally, eliminating the need for external hardware to simulate missing nodes.

Single-function Interface

The cPCI-1553 can provide one or two single-function interfaces with all the features and functionality of the multifunction versions, but only one major operational mode is enabled at a time - emulating either a Bus Controller or 31 Remote Terminals or Bus Monitor.

Software

Included with the cPCI-1553 is Condor's flexible, high-level API which supports up to 10 independent 1553 channels. Windows XP, 2000, Me, NT, 98, 95, Linux Kernel (2.4 and 2.6), VxWorks, LabWindows/CVI, Visual Basic and source code support is provided. LabVIEW, LabVIEW Real-Time and Solaris support as well as *BusTools*/1553, Condor's GUI bus analysis, simulation and data logging solution for MIL-STD-1553, are optionally available. Condor's high performance and intuitive software solutions provide complete and simplified access to MIL-STD-1553 functionality for development, integration, test, embedded and maintenance applications.

FANUC | CONDOR ENGINEERING

101 W. Anapamu Street, Santa Barbara, CA 93101
Tel 805.965.8000 • Fax 805.963.9630

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1553 Interface for Compact PCI

cPCI-1553

SPECIFICATIONS

Physical

- 3U CompactPCI card
- 6U CompactPCI card

Environmental

- Operating temperature range: 0°C to +70°C
- Extended temperature range available

Software

- API - Includes high-level API libraries for Windows XP, 2000, Me, NT, 98, 95, Linux Kernel (2.4 and 2.6), LabWindows/CVI, VxWorks and Visual Basic
  - Source code API library included
- GUI - Optional *BusTools*/1553 GUI bus analyzer
- LabVIEW - Support optional
- LabVIEW Real-Time - Support optional
- Solaris - Support optional

On-board Shared RAM

- 1 Mbyte (per dual-redundant channel)

Connections

- Direct or transformer coupling
- Input and output triggers
- Jumper selectable front panel 1553 jacks or J2 backplane I/O

Multi-function Operational Modes

- Simultaneous BC, 31 RTs and BM

Single-function Operational Modes

- BC or 31 RTs or BM

Power (two channels, 50% duty cycle)

- + 5 VDC: 1.7 A

PCI Signal Compatibility

- 5V Signaling

Warranty: 3 year limited hardware warranty

AVAILABLE CONFIGURATIONS

CPCI-1553*-M	MIL-STD-1553 multi-function, single channel CompactPCI interface board
CPCI-1553*-MM	MIL-STD-1553 multi-function, two channel CompactPCI interface board
CPCI-1553*-S	MIL-STD-1553 single-function, single channel CompactPCI interface board
CPCI-1553*-SS	MIL-STD-1553 single-function, two channel CompactPCI interface board

DESCRIPTION

Bus Controller

- Programmable control over:
  - Major and minor frame content and timing
  - Intermessage gap times
  - Response time-out and late response
- Modify messages, data or setup while card is running
- Insert aperiodic messages into a running BC list
- "Oneshot" mode for simplified BC operation
- Conditional message sequencing based on real-time message data or status
- Selectable interrupt generation and status messages
  - Full range of system conditions
  - All detected errors
- Full error detection
  - Invalid word
  - Bit count error
  - High word
  - Low word
  - Inverted sync
  - Manchester
  - Late response
  - Early response
  - No response
  - Incorrect RT address
  - Parity error
- Extensive programmable error injection (on a per word basis)
- Synchronize BC operation to external time source

Remote Terminal

- Multiple RT simulation (up to 31 RTs)
- Programmable error injection (on a per word basis)
- Modify data, status words or setup while card is running
- Programmable message content (linked message buffers)
- Interrupts can be generated on a per message basis upon End of Message and error conditions

Bus Monitor

- Capture 100% fully loaded bus traffic with:
  - Time-tagging
  - Word status
  - RT response time
  - Error status
  - Message status
- Interrupts can be selected by RT/SA/WC
- Extensive filtering and triggering options
  - By individual RT/subaddress
  - Transmit, receive or broadcast mode codes
  - Internal or external triggering
  - Trigger output on user specified data
- Real-time bus playback with RT edit mode
- 45-bit, microsecond resolution timetagging
- Host software synchronization to external timing sources

Optional Software

***BusTools*/1553**	MIL-STD-1553 Bus Analysis, Simulation & Data Logging software for Windows (multi-function boards only)
LV-1553	LabVIEW and LabVIEW Real-Time support for cPCI-1553
SL-1553	Solaris support for cPCI-1553

***=C for 3U or =F for 6U.**
A channel is a dual-redundant A/B pair.
See our on-line Military Products Configuration Guide for available configurations.
http://www.condoreng.com

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