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Find the *Abaco Systems / Condor Engineering QPCI-1553-2M-W* at our website: *Click HERE*

1553

High-Density PCI Interface

QPCI-1553

FEATURES

1, 2 or 4 Independent MIL-STD-1553 Dual Redundant Channels

- **Multi-function or Single-function Configurations**
- **Test and Simulation Features**
  - On-board Test Bus
  - UUT transformer connection
  - Selective Real-time Playback
  - BC & RT error injection/ detection
  - Adv. interrupts and triggers
  - Optional *BusTools*/1553 Analyzer (optional)
- **Bus Controller - BC**
  - BC->RT, RT->BC, RT->RT
  - Mode Codes, Broadcast and single-shot messaging
  - Programmable time delays
  - Major/Minor frames
  - Real-time conditional branching
  - Two aperiodic messaging methods
- **Remote Terminal - RT**
  - RT data wrapping
  - Multiple RT buffers
  - 1760 startup time
  - Programmable response time
  - RT Map Monitoring
- **Bus Monitor - BM**
  - Full error detection
  - Multiple monitoring methods
  - 45-bit time-tagging
  - IRIG-B Receiver/Generator included
- **Architecture**
  - BC & RT error injection/ detection
  - 1 Mbyte RAM per channel
  - Transformer & direct coupling
  - Avionics-level discretes



Condor's QPCI-1553 provides new levels of performance and flexibility for MILSTD1553A/B Notice II for PCI backplane form factors. Available in commercial and ruggedized versions with one, two or four dual-redundant channels, the QPCI-1553 includes an abstract API (Application Programming Interface) software that reduces application development time. Standard features include 1 Mbyte of RAM per channel, 45-bit message time-tagging, triggers, extensive BC & RT link-list structures, error injection/ detection, automatic/manual RT Status Bit, Mode Code responses, advanced BC functionality, IRIG-B signal Receiver/Generator with GPS synchronization, on-board Test Bus, UUT transformer connection, 1760 startup time with Busy bit set and hardwired RT address lines. With the highest speed encoder/decoder in the industry, the QPCI-1553 Bus Monitor provides unparalleled error detection and 100% monitoring of fully loaded buses.

Multi-function Interfaces

QPCI-1553 multi-function interfaces are easily configured to operate with simultaneous Bus Controller, 31 Remote Terminals and Bus Monitor functionality and comes with variable voltage transceivers.

Single-function Interfaces

Single-function QPCI-1553 interfaces have all the features and functionality of the multi-function versions, but with only one operational mode enabled at a time. Each interface can emulate either a Bus Controller or 31 Remote Terminals or Bus Monitor with fixed voltage transceivers.

Software

Our high-level "abstract" 1553 API is provided in source code, along with integrated support for Windows XP, 2000, Me, NT, 98, 95, Linux, LabWindows/CVI, Visual Basic and other operating systems. To access 1553 functionality without software development, *BusTools*/1553, Condor's MIL-STD-1553 bus analysis, simulation and data logging/monitoring solution is available.

GE FANUC | CONDOR ENGINEERING

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1553

High-Density PCI Interface

QPCI-1553

SPECIFICATIONS

Physical

- PCI card (6.875" x 4.2")

Environmental

- Standard operating temp. range: 0°C to +55°C
- Optional extended temp. range available

Software

- API - Includes high-level API libraries for Windows XP, 2000, Me, NT, 98, 95, Linux, LabWindows/CVI and Visual Basic
- Contact the factory about other OS support
- GUI - Optional *BusTools*/1553 GUI bus analyzer (multi-function boards only)
- LabVEW - Support optional

Connections

- Transformer or direct coupling
- Programmable input and output triggers
- Ten programmable avionics level I/O discretes
- UUT transformer stub connection
- Hardwired RT Address Line option

Multi-function Operational Modes

- Simultaneous BC, 31 RTs and BM
- Variable voltage transceivers

Single-function Operational Modes

- BC or 31 RTs or BM
- Fixed voltage transceivers

Power (4 channels, 50% duty cycle)

- +5 VDC @ 1695 mA
- +3.3 VDC @ 964 mA

PCI Signaling Voltage Compatibility

- Universal (5V or 3.3V)
- Board compatible with PCI-X 1.0 and PCI slots

On-board Shared RAM

- 1 Mbyte per dual-redundant channel

Warranty: 3 year limited hardware warranty
No charge library updates

DESCRIPTION

Bus Controller

- Programmable control over:
  - Major and minor frame content and timing
  - Intermessage gap times
  - Response time-out and late response
  - Multiple BC retry
- 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
- RT Map Monitoring

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
- IRIG/GPS synchronization
- IRIG-B Receiver (AM or DC/TTL)/Generator (DC/TTL)

See our on-line Military Products Configuration Guide for available configurations.
http://www.condoreng.com

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