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Find the *Abaco Systems / Condor Engineering CONQPMC-2* at our website: ***Click HERE***

1553 High Density CompactPCI Interface

QCP-1553

FEATURES

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

- Multi-function Features
  - Simultaneous Bus Controller, 31 Remote Terminals and Bus Monitor
- Single-function Features
  - Bus Controller or 31 Remote Terminals or Bus Monitor
- 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
  - Dynamic Bus Control
  - Automatic Mode Code and Status Bit responses
  - Programmable response time
  - RT Map Monitoring
- Bus Monitor - BM
  - Full error detection
  - Multiple monitoring methods
  - 45-bit time-tagging
  - Adv. interrupts and triggers
- Architecture
  - BC & RT error injection/ detection
  - DYNAMIC architecture
  - BC & RT link list structures
  - 1 Mbyte RAM per channel
  - Direct & transformer coupling
  - Environmental options
- Software Support
  - Advanced, high-level API
  - Source code included
  - BusTools Analyzer optional



Condor's QCP-1553 provides new levels of performance and flexibility for MIL-STD-1553A/ B Notice II in a CompactPCI form factor. Available in commercial, ruggedized and 3U conductively cooled versions with one, two or four dual-redundant channels, the QCP-1553 includes advanced API (Application Programming Interface) software that reduces application development time. Standard features include selectable transformer or direct coupling, 1 Mbyte of RAM per channel, 45-bit message timetagging, triggers, extensive BC & RT link-list structures, error injection/ detection, avionics level discretes, automatic/ manual RT Status Bit and Mode Code responses, along with advanced BC functionality. An IRIG-B signal Receiver/ Generator is optionally available. With the highest speed encoder/ decoder in the industry, the QCP-1553 Bus Monitor provides unparalleled error detection and 100% monitoring of a fully loaded buses.

Multi-function Interfaces

QCP-1553 multi-function interfaces are easily configured to operate with simultaneous Bus Controller, 31 Remote Terminals and Bus Monitor functionality.

Single-function Interfaces

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

Software

Condor provides our advanced 1553 API in source code, along with support for Windows XP, 2000, Me, NT, 98, 95, Linux, VxWorks and other operating systems. To access 1553 functionality without software development, BusTools/ 1553, Condor's MIL-STD-1553 bus analyzer, LabVIEW and LabVIEW Real-Time support is optionally available.

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1553 High Density CompactPCI Interface

QCP-1553

SPECIFICATIONS

Physical

- 3U Compact PCI card (6U faceplate available)
- Standard configuration has front bezel I/O

Environmental

- Standard operating temperature range: 0°C to +70°C
- Relative humidity: 5 to 90% (non-condensing)
- Optional ruggedized, extended temp and conductively cooled configurations

Software

- API - High-level libraries with source code included for Windows XP, 2000, Me, NT, 98, 95, Linux and VxWorks
- GUI - Optional BusTools/1553 GUI bus analyzer (multi-function boards only)
- Optional LabVIEW and LabVIEW Real-Time support

Connections

- Software-selectable direct or transformer coupling
- I/O triggers; 18 avionics-level discretes
- Front I/O standard P2 rear I/O optional.
- Transition cabling to 1553 cable jacks included on front panel configurations

Multi-function Operational Modes

- Simultaneous BC, 31 RTs and BM

Single-function Operational Modes

- BC or 31 RTs or BM

Power (4 channels at 75% duty cycle)

- 2CH, 87% duty cycle, 1100mA @5VDC
- 4CH, 87% duty cycle, 1700mA @5VDC

On-board Shared RAM

- 1 Mbyte (per dual-redundant channel)

PCI Signal Compatibility

- Universal (5V or 3.3V)
- 66/33 MHz PCI bus operation

Optional Configurations

- 1, 2 or 4 dual-redundant channels
- Variable voltage transceivers
- Optional rear panel I/O
- Optional ruggedized, -40°C to +85°C operating temperature range
- Optional ruggedized, extended temperature, conformal coated, rear I/0, 3U only, VITA compliant conductive cooling (max +71°C rail temp)
- Optional conformal coating
- Optional IRIG-B Receiver (AM or DC/TTL) and Generator (DC/TTL)

Warranty: 3 year limited hardware warranty

SPECIFICATIONS

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 on full range of system conditions or 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 injections (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

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

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