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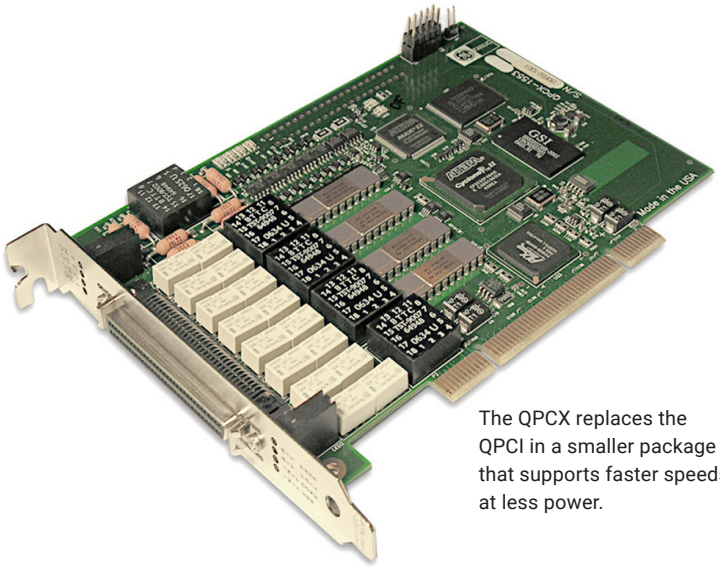
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The QPCX replaces the QPCI in a smaller package that supports faster speeds at less power.

QPCX-1553

High-Density PCI Interface

Abaco Intelligent Platform's QPCX-1553 provides new levels of performance and flexibility for MILSTD1553A/B Notice II for PCI backplane form factors. Now faster, the QPCX also draws less power in a smaller board footprint.

Available in commercial and ruggedized versions with one, two or four dual-redundant channels, the QPCX-1553 includes an abstract API (Application Programming Interface) software that reduces application development time. Standard features include 1 Mbyte of RAM per channel, 64-bit, 25 nanosecond message timetagging, 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 QPCX-1553 Bus Monitor provides unparalleled error detection and 100% monitoring of fully loaded buses.

Multi-function Interfaces

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

Dual-function Interfaces

Dual-function QPCX-1553 interfaces have all the features and functionality of the multifunction versions, with either Bus Monitor and Bus Controller, or Bus monitor and 31 Remote terminals.

Software

Our high-level "abstract" 1553 API is provided in source code, along with integrated support for Windows®, VxWorks® and Linux (contact the factory for supported operating system versions). To access 1553 functionality without software development, BusTools/1553, Abaco's MIL-STD-1553 bus analysis, simulation, data logging, and monitoring application is available.

FEATURES:

- 1, 2 or 4 Independent MIL-STD-1553 Dual Redundant Channels
- PCI Interface 66MHz
- Multi- and Dual-function Configurations
- Test and Simulation Features
  - On-board Test Bus
  - External differential time-tag reset and clock inputs
  - UUT transformer connection
  - Selective Real-time Playback
  - BC & RT error injection/detection
  - Adv. interrupts and triggers
  - Optional BusTools/1553 Analyzer
- 64 bit, 25 ns resolution time-tagging (virtually unlimited time stamping)
- 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
  - IRIG-B Receiver/Generator included
- Architecture
  - BC & RT error injection/detection
  - 1 Mbyte RAM per channel
  - Transformer & direct coupling
  - Avionics-level discretes

abaco SYSTEMS

QPCX-1553 *High-Density PCI Interface*

Specifications

Physical
- PCI card (6" x 3 7/8")

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

Software
- API - High-level libraries with source code included for Windows®, VxWorks® and Linux (contact the factory for supported operating system versions)
- GUI - Optional BusTools/1553 GUI bus analyzer
- LabVEW - Support optional

Connections
- Transformer or direct coupling (software selectable)
- 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

Dual-function Operational Modes
- BM and BC, or BM and 31RTs

Power (4 channels, 50% duty cycle)
- +5 VDC @ 1300 mA
- +3.3 VDC @ 325 mA

PCI Signaling Voltage Compatibility
- Universal (5V or 3.3V)
- 66 MHz
- Board compatible with PCI-X 1.0 and PCI slots

On-board Shared RAM
- 1 Mbyte per dual-redundant channel

Timing
- Independent 64-bit, 25ns message time-tagging per channel
- Time can be programmed via the host or by a 1553 trigger
- All timers can be synchronized to 0 via the host
- Timers can independently use IRIG time
- IRIG-B receiver (AM or DC/TTL) and generator (DC/TTL)

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

Multiple Data Buffers
- 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
  - Late response
  - Bit count error
  - Early response
  - High word
  - No response
  - Low word
  - Incorrect RT address
  - Inverted sync
  - Parity error
  - Manchester
- 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
  - Error status
  - Word status
  - Message status
  - RT response time
- 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
- 64-bit 25 nanosecond resolution time tagging on BC, RT and BM
- Virtually unlimited time stamping
- IRIG/GPS synchronization
- IRIG-B Receiver (AM or DC/TTL)/Generator (DC/TTL)

Ordering information

QPCX-1553-G2-1DAW	MIL-STD-1553 dual-function, single dual-redundant channel, 32-bit FW, fixed voltage PCI interface board with IRIG-BRec/Gen
QPCX-1553-G2-1MW	MIL-STD-1553 multi-function, single dual-redundant channel, 32-bit FW, variable voltage PCI interface board with IRIG-B Rec/Gen.
QPCX-1553-G2-2DAW	MIL-STD-1553 dual-function, two dual-redundant channel, 32-bit FW, fixed voltage PCI interface board with IRIG-B Rec/Gen
QPCX-1553-G2-2MW	MIL-STD-1553 multi-function, two dual-redundant channel, 32-bit FW, variable voltage PCI interface board with IRIG-B Rec/Gen.
QPCX-1553-G2-4DAW	MIL-STD-1553 dual-function, four dual-redundant channel, 32-bit FW, fixed voltage PCI interface board with IRIG-B Rec/Gen
QPCX-1553-G2-4MW	MIL-STD-1553 multi-function, four dual-redundant channel, 32-bit FW, variable voltage PCI interface board with IRIG-B Rec/Gen.

Optional Hardware

-K suffix	Conformal coating
-R suffix	Front I/O, transformer coupled, ruggedized, extended temperature
-NCBL suffix	does not include transition cable

Optional Software

BT-1553	MIL-STD-1553 Bus Analysis & Data Logging software for Windows
LV-1553	Lab/View support for MIL-STD-1553

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We buy equipment

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