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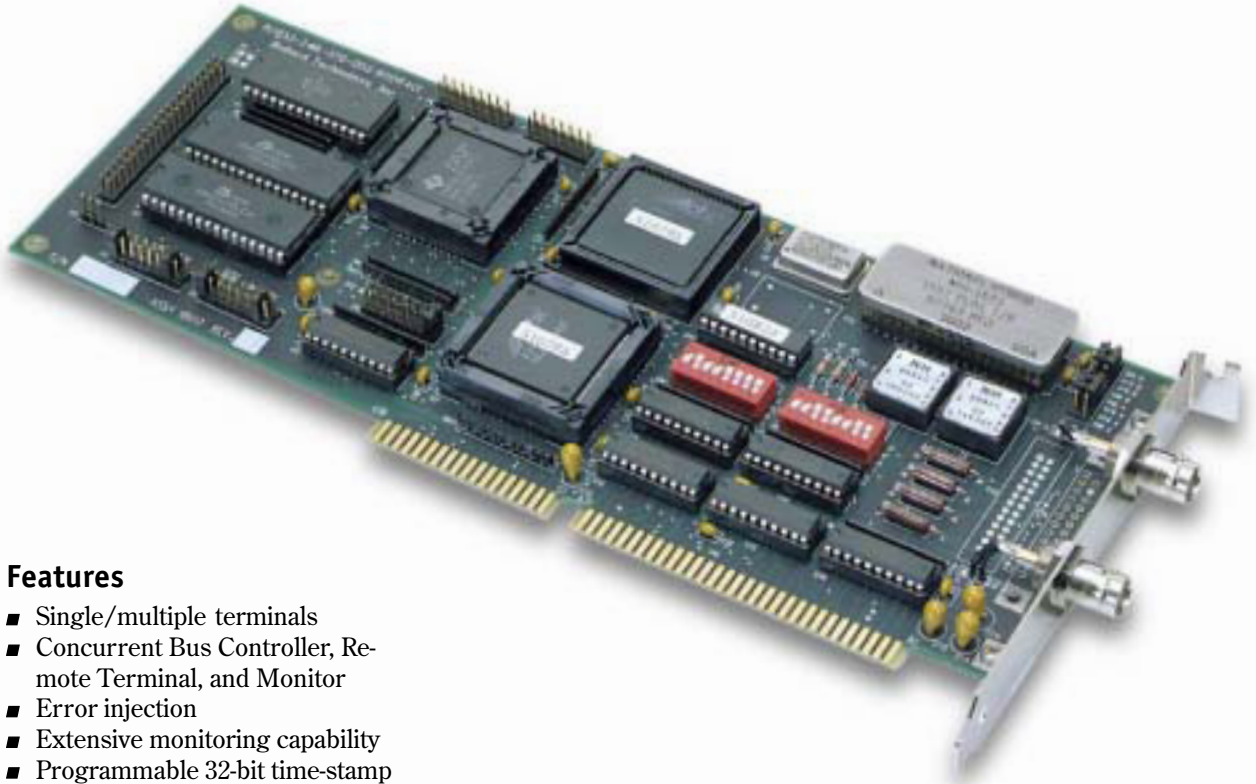
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MIL-STD-1553 Interface for ISA Computers



Features

- Single/multiple terminals
- Concurrent Bus Controller, Remote Terminal, and Monitor
- Error injection
- Extensive monitoring capability
- Programmable 32-bit time-stamp
- API and driver software included
- CoPilot 1553 and CoPilot 1553 Plus Graphical software available
- Backward compatible to prior Ballard PC1553 applications

A Family of Products:

- Choose functionality suited to immediate needs
- Upgrade later as requirements change
- Ongoing release of features and products
- Select from several standard configurations and a variety of options
- Can be customized for special needs
- Exceptional value

Description

The PC1553-3x is a family of dual-redundant MIL-STD-1553 interface boards for ISA (PC/AT compatible) computers. This family of boards provides a range of capabilities from single-terminal emulation to multi-terminal simulation and error injection with concurrent monitor.

Models can be upgraded in the future to meet changing requirements. All are completely software compatible with the popular PC1553-2. The powerful features, upgrade paths, and PC1553-2 compatibility make the PC1553-3 an ideal solution for hardware and system development, testing, and simulation.

Hardware

All models provide BC, RT, and Monitor operation and support all 1553 message types. Advanced models can simultaneously operate as the Bus Controller, Monitor, any number of Remote Terminals, and selectively inject protocol errors.

The powerful DSP core of the PC1553-3 offloads 1553 protocol processing from the host PC. The large, on-board memory and flexible message buffering schemes ensure data integrity. Polling and interrupt generation are simplified through a generous set of user options.

Software

The easiest way to use the PC1553-3 is with Ballard's CoPilot 1553 graphical software (available with board or separately). Using the automation and detection tools in CoPilot, users can create and run BC schedules, simulate RTs, and monitor the bus with just a few clicks of the mouse. Users can view and edit data in engineering units through specialized displays. In addition, CoPilot 1553 Plus provides virtual instruments, strip charts, and moving map displays, as well as scripting routines and software playback.

Alternately, software developers can use the bundled Application Program Interface (API) to quickly develop custom applications. The PC1553-3 can be easily configured

for simple terminal emulation using default memory mapping and buffering options with only a few API calls. Although most users will accomplish their tasks with a small number of driver functions, the comprehensive driver library includes a broad range of tools for specialized needs.

Driver software is included for Windows® 95/98/NT/Me/2000/XP.

Ordering Information

PC1553-3x: MIL-STD-1553 Interface Card (where x is A, B4, B32, or C; see table below). Includes circuit board, software, and manual.

Cy-P13x: CoPilot 1553 System (y is S for CoPilot standard and P for CoPilot Plus). Includes the PC1553-3 card as described above and CoPilot 1553 software.

Technical Specifications: PC1553-3

Modes

- Bus Controller
 - On-board message frame timing
 - Transmission retries
 - Exception processing
- Remote Terminal
 - Illegalize subaddresses/mode codes
 - Interrupt on message or terminal access
- Monitor
 - Snapshot and full sequential
 - Filtering on terminal and/or subaddresses
 - Independent or concurrent with BC/RT

Handles all 1553A/B message types

Notice 2-selectable features

Multi-terminal simulation (B and C models)

Simultaneous BC, Monitor, and up to 31 RTs

Error generation (C model only)

- Types:
- Sync
 - Parity
 - Manchester
 - Bit count
 - Word count
- Inject into specific words or messages

DSP core

Memory

- 256 KB standard
- 1 MB optional
- Access through 4K host window

Interrupts

- 3 on 8-bit bus
- 8 on 16-bit bus
- Software-configurable interrupt log list

Time-tag

- Automatic in all modes
- Adjustable range/resolution
- 32-bit clock counter

Connectors

- Twinax BJ77 standard mates with PL75
- D-sub optional

Other signals

- External Trigger
- Sync Output
- Discrete I/O

Software

- Easy-to-learn API
- Drivers: Windows 95/98/NT/Me/2000/XP
- Customized firmware available
- Optional CoPilot 1553 and CoPilot 1553 Plus software

Accessories available

- Cables
- Couplers
- Adapters

Windows® 95/98/NT/Me/2000/XP are registered trademarks of Microsoft Corporation.

PC1553-3 Product Highlights

Features	Models			
	A	B4	B32	C
Number of simultaneous terminals	1	4	32	32
Monitor	✓	✓	✓	✓
Filtering for terminal addresses	✓	✓	✓	✓
Filtering for subaddresses		✓	✓	✓
Concurrent with terminal simulation				✓
Error Injection				✓
On-board RAM	256K	256K	256K	1MB

Ballard///////
Technology

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