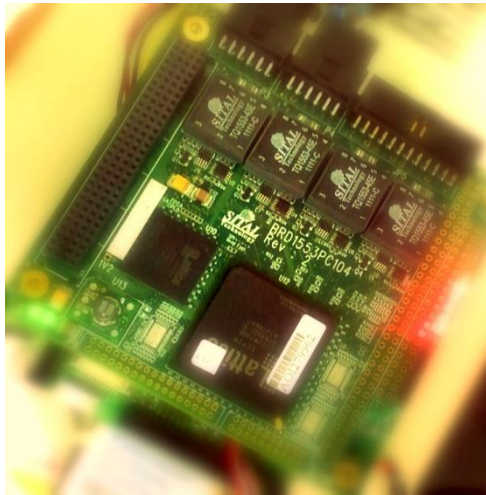


AVIONICS INTERFACE PCI BOARD



PCI Card

Multi-Standard Avionics Interfaces PCI Card including Mil-Std-1553, H009, WB-194, ARINC 429, Avionics and Discrete I/Os, RS-485

Compact, Robust, Reliable, Low-Energy Consumption

Specifications

Compatibility

- MIL-STD-1553B Notice 2
- EBR1553, PP194, H009, ARINC429
- RS-485, DIGITAL I/O, IRIG-B
- DDC® Enhanced MiniACE® software drivers
- PCI Bus Interface
- PC104+ Form Factor

Environmental

- Industrial grade: -40°C to +85°C
- 5% to 90% relative humidity (non-condensing)

Power

- 3.3 VDC, 4W while all channels transmitting simultaneously

Available Configurations

- 2x dual-redundant Mil-Std-1553B channels with 64K word RAM per channel; Mil-Std-1760, PP194, EBR1553, H009, ARINC429, RS485
- Tester configuration for all protocols: 1553, EBR1553, PP194, H009, ARINC429

Software Provided

- PCI Driver for Windows
- API high-level libraries with source code included for Windows and Linux
- GUI (Graphical User Interface) – Luthier™ for 1553 bus simulation and analysis

More products from Sital

- MIL-STD-1553 IP Cores for FPGAs
- Cyber Security IP for MIL-STD-1553
- MIL-STD-1553 Transceiver, Transformers, Couplers
- Mil-Std-1553 SPI Board

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Key Features and Benefits

- Card can be ordered in various configurations and bus interfaces
- 2 x dual-redundant Mil-Std-1553B channels
- Channels can be independently or simultaneously configured for Mil-Std-1553, H009, and PP194 applications (depending on card model)
- All channels are compatible with Mil-Std-1553B Notice 2, Mil-Std-1760, each channel can be configured as BC or RT+MT
- 64K word RAM per channel
- Software-compatible with DDC® Enhanced MiniACE® architecture
- Tester configuration is also available for all protocols supporting concurrent BC, Multi-RT and Monitor, Error injection and enhanced monitoring
- 4 x RS-485/RS-422
- ARINC429 I/Os - 16x RX and 8x TX Channels (depending on card model)
- External Time Tag Clock input and output (through IRIG B)
- 8x avionics discrete I/Os
- 8x digital discrete I/Os
- 32-bit PCI 33/66MHz compatible
- Very fast PCI access, works from PCI clock and supports PCI burst
- Provided with drivers and software API for Windows OS
- Low power consumption and low heat dissipation

BRD1553PCI is a multi-standard board that contains two channels of Mil-Std-1553. It is compatible with Mil-Std-1553B and Mil-Std-1760 and its channels can be configured independently to work as H009 or WB194 in conjunction with 1553 (other protocols also available).

The board includes channels that can be configured as RS-485/RS-422, and ARINC429. It also includes eight avionics I/Os ports and eight digital I/Os.

The 1553 backend interface of the BRD1553PCI is software-compatible with DDC® Enhanced MiniACE® components and architecture and with 64K words of internal RAM per channel, enabling fast and easy integration with existing or new systems.

The board is provided with software drivers for Windows along with high-level API to ease application development.

Sital's Luthier™ program for 1553 bus simulation and analysis is also provided. It includes an advanced GUI (Graphical User Interface) for controlling the board, generating bus traffic and monitoring and emulating a real bus environment.



More information is available at www.sitaltech.com

Email: sales@sitaltech.com

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BRD1553PCI Board - Multi-Standard, Configurable PCI Board

Deliverables:

BRD1553PCI Board

- **PN: BRD1553PCI-STD**
Standard Configuration

- 2 x 1553, 1760 channels
- 8 x digital discrete I/Os
- PCI Bus Interface

- **PN: BRD1553PCI-ALL**

- BRD1553PCI-STD
- 16 x ARINC429 RX
- 8 x ARINC429 TX
- 4 x RS-485
- PCI Bus Interface

- **PN: BRD429PCI**

- 16 x ARINC429 RX
- 8 x ARINC429 TX
- PCI Bus Interface

- **PN: BRD194ADD**

- 2 x 1553, 1760 channels
- 1 x PP194 channel
- PCI Bus Interface

- **PN: BRDH009ADD**

- 1 x H009 channel
- PCI Bus Interface

- **PN: BRD1553PCI-TST**
Tester Configuration

- 2X 1553, 1760 channels
- 1X H009 channel
- 1X PP194 channel

- Other configurations and protocols are available. Please contact Sital

Connections

- Standard PCI connection for PCI slot
- All other signals via locked Header connectors

Warranty

- 1 year limited hardware warranty

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BRD1553PCI Functionality

The BRD1553PCI is based on Sital's proven 1553, H009 and PP194 IP cores, loaded into an FPGA (Field Programmable Gate Array) component, and discrete components transceivers, which can be programmed by Sital, allowing the flexibility to support various configurations and protocols using the exact same hardware.

The board can be used for on-board avionics systems or for lab testing equipment.

Customers can select the appropriate configuration for their specific requirement, for example – all channels are configured as Mil-Std-1553, or another configuration can be single channel of H009, or PP194.

Other configurations and protocols are available upon request.

The board can also serve as a fully-functional 2-channel tester for the various protocols supporting concurrent BC, Multi-RT and enhanced monitoring. In such cases, Sital provides the COMposer™ GUI software for simulation, testing, monitoring and analysis of the avionics bus traffic.

The board also includes:

- ✓ ARINC429 channels, 8 for TX and 16 for RX
- ✓ RS-485/422, 4 differential lines
- ✓ 8 discrete digital I/Os for other applications
- ✓ IRIG-B input and output are supported for external time-tag.

Software Drivers, API

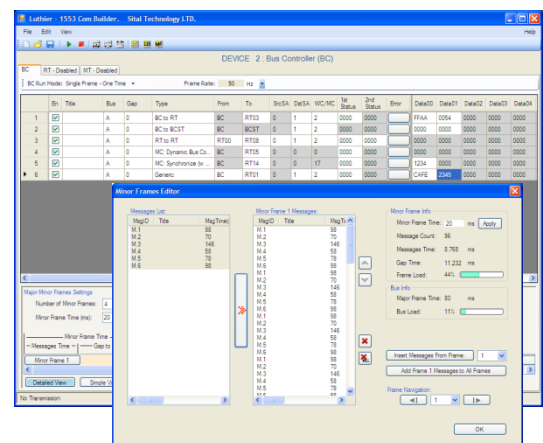
All Sital boards are provided with drivers for Windows and include a high-level API that is provided as source code.

Luthier™

Luthier™ software is a Windows® application that enables testing and verification of basic operation of the board and its 1553 connections. It allows the user to configure the channels as BC, RT or Monitor, define 1553 messages and frames, monitor the traffic on the bus and validate the correct operation of the board.

It enables Sital's users to set-up a working environment for their Mil-Std-1553 application quickly and easily.

Each channel is independently controlled and configured, so customers can create a complete test scenario without the need for any additional test equipment.



About Us

Sital Technology provides world-class products and expertise for communication bus applications in the avionics, aerospace and automotive industries. Sital embeds its vast experience and proficiency in its products which include Mil-Std-1553 and other avionics IP cores, components, boards and testers, as well as CAN bus devices and applications. With its highly-experienced staff of experts, the company's Projects Division undertakes design, integration and turn-key engagements on behalf of the world's leading commercial and military avionics companies, space agencies, and automobile designers and manufacturers. Sital's bus technologies and expertise improve robustness and efficiency as they lower cost, space and resource utilization.

Sital's formidable customer list includes leading military and commercial organizations throughout the world among them: NASA, Boeing, Lockheed-Martin, Honeywell, British Aerospace, Orbital Science, Thales, ECIL(India), Aselsan, Elbit, and IAI.

- Sital may change the specifications and functionality of the board without notice.