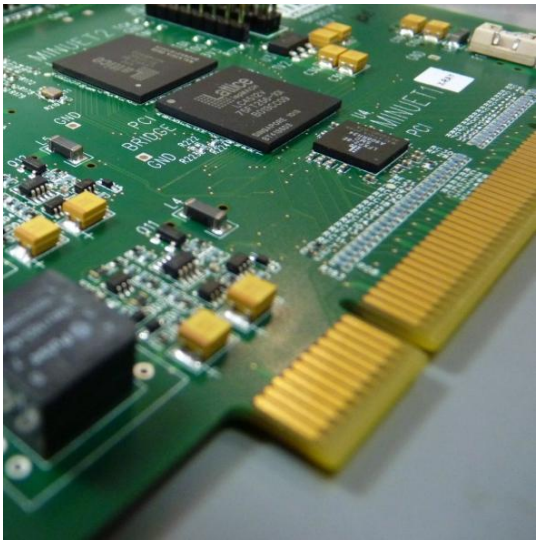
MIL-STD-1553 Development PCI Board



P-Orchestra

Two x 1553 channel PCI board for Mil-Std-1553 application development

Compact, Robust, Reliable
MIL-STD-Products

Specifications

Compatibility
- MIL-STD-1553B Notice 2
- DDC® Enhanced MiniACE® software drivers
- Half-size PCI

Environmental
- Industrial grade: -40^{0}C to +85^{0}C
- 5 to 90% relative humidity (non-condensing)

Power:
- 3.3 VDC, 3W while all channels transmitting at same time

Available Configurations
- 2 x Dual Redundant Mil-Std-1553B channels with 8K word RAM per channel 1 and 16K words per channel 2.

Software Provided
- PCI Driver for Windows and Linux
- API - High-level libraries with source code included. Operating systems supported: Windows and Linux
- GUI (Graphical User Interface) – Luthier™ for 1553 bus simulation and analysis

More 1553 products from Sital
- *MIL-STD-1553 IP Cores for FPGAs*
- *MIL-STD-1553 Discrete Components Transceiver*
- *Mil-Std-1553 Testers*
- *2 channel 1553, PCI board*
- *"Luthier" – 1553 Com Builder for evaluating and testing IP cores and components*

Sital Technology Ltd.
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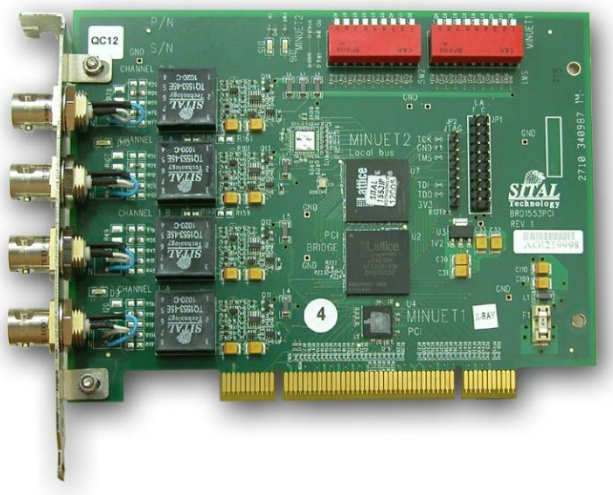
Tel.: +972-9-7633300

Key Features and Benefits

- MIL-STD-1553B Notice 2 compliant terminals
- Software-compatible with DDC® Enhanced MiniACE® architecture
- Suitable for Mil-Std-1553 application development
- Two independent Mil-Std-1553 dual-redundant channels
- 8K or 16K Word RAM per channel
- 33/66MHz PCI Bus interface
- Provided with drivers, software API for Windows and Linux, and Windows GUI for easy operation
- Low power consumption
- Bootable RT option required for MIL-STD-1760
- Simultaneous RT/MT Mode
- Very low cost



P-Orchestra™ is a two-channel Mil-Std-1553B board that includes Bus Controller (BC), Remote Terminal (RT) and Monitor (MT) in each channel

P-Orchestra™ channels are software-compatible with DDC® Enhanced MiniACE® components and architecture, with 8K and 16K word of internal RAM

P-Orchestra™ is provided with software drivers for Windows, Linux and QNX, along with high-level API to ease application development

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

More information available at **www.sitaltech.com**
Email: **info@sitaltech.com**

P-Orchestra™ -
2 channel Mil-Std-1553 PCI Board

Deliverables

P-Orchestra™ Boards

- **PN: BRD1553PCI**
  - 2 x 1553 channels
  - BC, RT, MT functionality
  - 33/66 MHz PCI interface
  - 8K and 16K word RAM
  - 4 x Triax panel connectors

- Special configuraions can be created for customers. Please contact Sital.

Connections

- PCI Edge connector
- 4 x BJ770 Triax connectors

Software

- Software **Drivers and API** for Windows and Linux. Consult Sital for other OS
- *Luthier* Com Builder software for 1553 scenario definition and test

Warranty and Support

- 3 years limited hardware warranty
- 1 year technical support including free software upgrades

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P-Orchestra™ Functionality

The module is designed as a general purpose PCI bus based module with 2 Mil-Std-1553 communication channels.

Its main purpose is to demonstrate Sital's Minuet™ components, IP cores and transceivers.

The board consists of 2 Minuet™ components

- MNT1553PCI-8 – an 8x8mm component with 8K words RAM, with PCI interface, connected directly to the PCI bus
- MNT1553LB-16 – a 17x17mm component with 16K words RAM, connected to local bus, which is produced by a PCI bridge

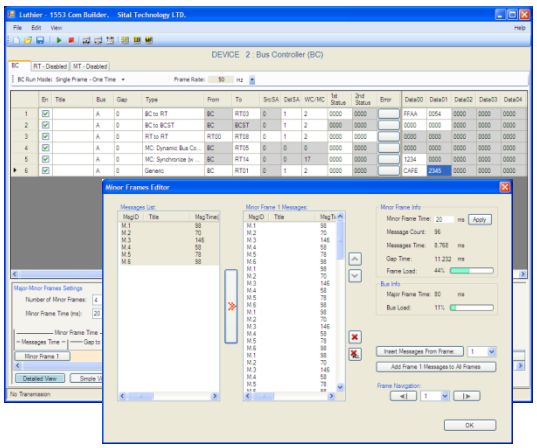
Jumpers and test points are available to control parameters like RT address, 1760 compatibility and RT-Only mode

Sital discrete components transceivers are implemented on the board to enable users evaluate and use them rapidly and successfully

LED Indications for channel activity are also available

Software Drivers, API

All Sital boards are provided with drivers for Windows and Linux 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 enables 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.

This easy-to-operate program also provides information about energy reflections on the 1553 bus that are caused by bad connections or lack of terminations.

Flexible Configuration

P-Orchestra™ boards are based on FPGA, and Sital's proven 1553 IP cores and transceivers. This combination provides flexibility in configuration, modes of operation and features. Users can request different configurations such as combination of single and dual-redundancy channels, data transfer from one channel to another (1553 repeater functionality), and even support for other protocols such as H009 and PP194.

Please contact Sital for details.

About Sital Technology

Founded in 1993, Sital Technology is a leading provider of IP cores and products for Mil-Std-1553.

SITAL Technology's key quality resource is its creative, talented and professional staff. Our engineers are veterans of the Israeli Air Force, who served in the technical units of the F-16 avionics systems. They gained knowledge and experience with the MIL-STD-1553 standard from the bottom up, both as design engineers for MIL-STD-1553 components and as technicians working on the aircrafts.

Among our many customers you can find NASA, ESA, Thales, Orbital Science Corp., Elbit, Rafael, Israeli Aerospace Industries (IAI), Astronautics, Israeli Ministry of Defense, Elta, Honeywell, BAE Systems and many others.