

MIL-STD-1553 Bus Tester



TST1553USB

For 1553 Bus Testing

Compact, Robust, Reliable
MIL-STD-IP-Cores

Specifications

Compatibility

- MIL-STD-1553B Notice 2
- USB 2.0, 480Mbps
- 2 x 1553 channels of 1Mbps Data Rate
- 4 x RS-485 channels

Host Requirements

- USB 2.0 interface
- Operating system:
 - Windows 2000 sPac 4,
 - Windows XP sPac 2
 - or higher
- 256 MB of RAM

Power:

- 5 Vdc DC Jack or
- Uses USB's 5Vdc power, up to 0.5 Amp

Software Support:

- Shared Library - DLL
- **MuxSim™ and MuxMonitor™** - Windows GUI for 1553 traffic generation and analysis
- **MCXSim™** for batch control and simulation

Available Configurations

- 2 x 1553 Dual-Redundant channels
 - PP-194 protocol
 - 4 x RS-485 serial channels
- or
- 1 x 1553 Dual-Redundant channel

More 1553 products from Sital:

- MIL-STD-1553 IP Cores for FPGAs.
- MIL-STD-1553 Discrete Components Transceiver
- MIL-STD-1553 Obsolete Replacement Services

Key Features and Benefits

- Two channels Mil-Std-1553B Bus tester
- Suitable for any MIL-STD-1553 BC, RT, MT testing
- USB 2.0 interface to PC, Allows real time tester control
- 4 channels of RS-485 for additional testing capabilities
- 1Mbit (64K Word) Internal memory
- Works on USB power. No need for external power source
- Multiple RT simulation (up to 31 RTs)
- Programmable Status word and Mode Code
- Error injection and detection
- Time tagging for each message
- All active RT tables changeable in real time
- Data and Status words changeable in real time
- Provided with Windows drivers and libraries
- **MuxSim™ & MuxMonitor™** SW for traffic generation and analysis
- RTs' analog connection status reporting



The TST1553USB unit provides full MIL-STD-1553B test, simulation and bus analysis capability in a compact self-contained unit. It connects via a USB 2.0 interface to any host system. The TST1553USB supports concurrent Bus Controller (BC) and up to 31 Remote Terminals (RT) with Bus Monitor (MT). Full error injection capability is available in BC and RT modes, with full error detection in BC, RT and MT modes.

The unit is supplied with C Driver library, together with an optional Windows GUI, providing a user-friendly software tool for all 1553 set-ups, data management and storage.

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



Specifications

Compatibility

- MIL-STD-1553B Notice 2 messages and frames.
- Sital Technology USB/1553 tester.

PC Requirements: CPU

- Intel® Pentium 4 and up.
- AMD®

RAM

- 512 MB minimum.

Disk

- 0.5 GB available for DotNet and MuxView installations.

Operating Systems

- Windows 2000 Service pack 4 and up.
- Windows XP Service pack 2

Ordering Information

- TST1553USB-2-4
2 x 1553 + 4 x RS-485
- TST1553USB-1-0
1 x 1553

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MuxSim™ and MuxMonitor™ - Software for Mil-Std-1553 Test and Analysis

MuxMonitor™ and **MuxSim™** are user-friendly and intuitive software tools for traffic generation, monitoring and analysis of Mil-Std-1553 bus.

Working in conjunction with MultiComBox™, **MuxMonitor™** can monitor messages, frames and errors and analyze the status of each unit and frame on the bus. It provides triggers and filters for monitoring and displaying of recorded data. Recorded frames can also be exported as XML, CSV and other file formats for future use or for interacting with other programs.

Bus	Gap	From	SrcSubAddr	To	DstSubAddr	Findings	TX Status	RX Status	Times Sent	Error Count	Remarks
Bus A	45	BC	0	RT26	0	No Error	0x0000	0x0000	5	0	cremark.1
Bus B	55	RT26	13	RT19	0	No Error	0x0000	0x0000	5	0	cremark.1
Bus A	40	BC	0	RT19	0	No Error	0x0000	0x0000	2	0	cremark.1
Bus A	0	RT22	15	Broadcast	0	No Error	0x0000	0x0000	7	0	cremark.1
Bus A	0	RT24	19	RT26	0	No Error	0x0000	0x0000	4	0	cremark.1
Bus B	0	BC	0	Broadcast	0	No Error	0x0000	0x0000	8	0	cremark.1
Bus A	0	RT27	0	Broadcast	0	No Error	0x0000	0x0000	8	0	cremark.1
Bus A	0	BC	0	Broadcast	0	No Error	0x0000	0x0000	8	1	cremark.1
Bus A	0	BC	0	Broadcast	0	No Error	0x0000	0x0000	8	0	cremark.1
Bus A	0	RT24	3	RT26	0	No Error	0x0000	0x0000	3	0	cremark.1
Bus A	0	BC	0	Broadcast	0	No Error	0x0000	0x0000	6	0	cremark.1
Bus A	0	BC	0	Broadcast	0	No Error	0x0000	0x0000	1	0	cremark.1
Bus A	0	BC	0	Broadcast	0	No Error	0x0000	0x0000	6	0	cremark.1

MuxSim™ can manage and simulate all traffic on the bus. It can handle a large number of Mil-Std-1553 frames, which can be inserted by the user, recorded from the bus or imported from XML files. In order to facilitate the test, **MuxSim™** can simulate 1553 RTs, thus enabling the user to test the full Interconnect Control Document (ICD) without having to physically connect all LRUs. The user can easily select which units are to be simulated and which units are real.

Key Features and Benefits:

- Monitor and record in real-time, all bus activity or selected messages.
- Can record data up to 10 days continuously.
- Trigger recording or search replay files using complex expressions.
- Export and import replay files engineering units or raw data values to XML or CSV format.
- Replay recorded data or segments of recorded data for purposes of analyzing complex patterns of data, time, alarms and errors.
- Display raw data sequentially or selectively in hex, decimal, binary and octal.
- Translate raw data into engineering units by specifying scale or offset or by writing your own DLL based functions.
- Create derived Engineering Units for monitoring and graphing based on expressions.
- Track error messages.
- Graphically display data in graphs, x/y plots, gauges and bar graphs.
- All expressions may be tested on existing engineering units, a rich build in set of functions or user programmed external functions.
- Export data for further analysis to 3rd party tools.

About Sital Technology

Founded in 1993, Sital Technology is a leading provider of IP cores, test units 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, Israeli Aircraft Industries (IAI), Rafael, Elbit, Astronautics, Tadiran, the Israeli Ministry of Defense, Elta, ITL Optronics, BAE Systems, RADA and many others.