

Multi I/O USB Bus Tester and Loader

MultiComBox 3.0™

Multi-Protocol Avionics USB 3.0 tester

Mil-Std-1553B/1760

EBR-1553

PP194

H009

ARINC429 Tx/Rx

RS-485/422

Compact, Robust, Reliable



MultiComBox Specifications

Supported Protocols

- MIL-STD-1553B/1760 Notice 2
- ARINC429
- Supports H009, PP194 bus protocols
- RS-485 channels

Host Requirements

- USB 3.0 host interface
- X86 32/64 bit CPU
- OS: Windows / Linux

Power

- Uses USB's 5Vdc power up to 0.5 Amp

Operating Temperature

- -40 to +85 deg C

Software Support

- API Shared Library
- **COMposer™** - Windows GUI for simulation and monitoring of bus traffic
- Device Drivers:
 - Windows 32/64 bits
 - Linux
- Native Labview Integration Examples

Available Configurations

- 2 x 1553 Dual-Redundant channels
- PP194 / H009 protocols
- EBR-1553 (10Mbps 1553)
- 4 x RS-485 high-speed serial channels
- 2x 1553 + 4x ARINC 429

Key Features and Benefits

- 2 redundant (A+B) channels Mil-Std-1553B Bus tester
- 2 ARINC 429 Tx channels
- 2 ARINC 429 Rx channels
- 1553 Bus Simulation for BC, RT, multiRT
- Synchronous Monitoring of entire bus traffic
- USB 3.0 interface to PC, Allows real time tester control
- Up to four differential channels of RS-485
- 1Mbit (64K Word) Internal memory
- USB bus powered
- Multiple 1553 RT simulation (up to 31 RTs)
- Programmable Status word and Mode Code
- Error injection and detection
- Time tagging for each message
- Engineering Units Support
- Provided with Windows/Linux drivers, GUI and libraries
- **COMposer™** SW for traffic generation and analysis
- Supports also EBR-1553, H009 (F15) and PP194 protocols
- Available for high-speed RS-485, supporting 4.5Mbps, 9 bits
- The fastest 1553 Data Loader



The TST1553USB unit provides full MIL-STD-1553B test, simulation and bus analysis (monitor) capability in a compact, self-contained unit. It connects via an USB 2.0 interface to any host system. The MultiComBox unit 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 Windows/Linux device drivers and API as well as a Windows GUI, providing a user-friendly software tool for all 1553 frame and messages set-ups, data management and storage.

COMposer Specifications

Compatibility

- MIL-STD-1553B Notice 2 messages and frames
- H009, PP194
- ARINC 429
- EBR1553
- RS-485, up to 4.5Mbps, 8 or 9 bits with Parity

PC Requirements

CPU

- Intel® Pentium 4 and up
- AMD®

RAM

Minimal Virtual Memory of 8065MB.

Operating Systems

- Windows XP
 - Windows 7
 - Windows 8/8.1
 - Windows 10
- * .Net 4.0 is needed

Ordering Information

- TST1553USB-2-4
2 x 1553 & 4 x RS-485
- TST485USB-4
4 x RS-485
- TST194ADD
PP194 Protocol Support
- TSTH009ADD
H009 Protocol Support
- TSTEBRADD
EBR-1553 Protocol Support

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COMposer™ -

Software for Mil-Std-1553 and ARINC429 Test and Analysis

COMposer™ is a user-friendly, intuitive software application for traffic generation, monitoring and analysis of Mil-Std-1553 and ARINC 429.

Working in conjunction with MultiComBox™, the **COMposer™** 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.

COMposer™ can manage and simulate all traffic on the bus. It can handle a large number of Mil-Std-1553 frames and ARINC429 channels, which can be composed and edited by the user, recorded from the bus or imported from XML files. In order to facilitate the test, **COMposer™** can simulate multiple 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:

- Easily Create messages and frames
- Simulate Bus Controller and up to 31 Remote Terminals
- Programmable error injection: Parity, Bi Phase, Sync and Zero Crossing
- Define the amount and rate of the frames to be transmitted
- Monitor and record in real-time, all bus activity or selected messages
- Support for Engineering Units
- Trigger recording or search replay files using complex expressions
- Export recorded files 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
- Track error messages
- Use text scripts for running pre-defined tests
- Create your own user application using Sital's DLL API functions

About Sital

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, Raytheon, General Motors, British Aerospace, Orbital Science, Thales, ECIL(India), Aselsan, Elbit, Rafael and IAI.

