

# SAS/SATA Design Verification Test Tools

## U3053A & U3054A BusMod Error Injector & BIST Generator for PRO & Micro Series SAS/SATA Analyzers



- Support for SAS and SATA 1.5 / 3.0 / 6.0 Gbps speeds
- Up to 4 ports on the PRO and 2 ports on the Micro of error injection
- Available as a stand-alone system.
- License by port / speed / protocol for desired configurations

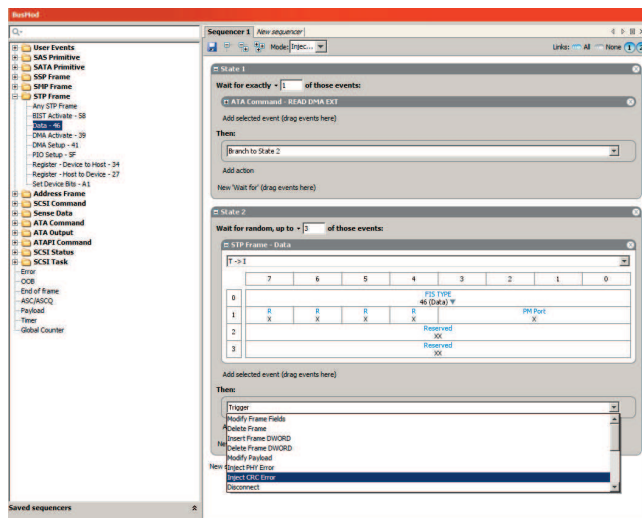
### UNPARALLELED ERROR INJECTION

- Connect / Disconnect link
- CRC, 8b10b encoding, Running Disparity (RD+/-), and Invalid Symbol encoding error generation
- Replace/substitute primitives
- Replace frame values (with or without CRC regeneration)
- Insert/Delete DWORD into/from frame

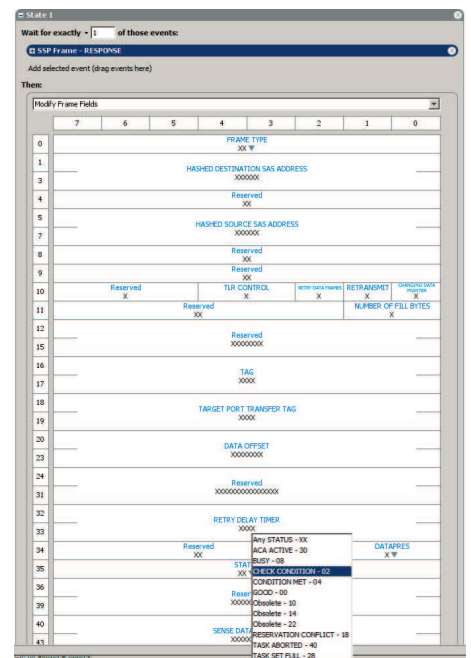
### POWERFUL GUI

- Based on BusXpert software
- Easy definition of frames
- Random or interval error generation
- Logical branching and arguments
- Integrated with analysis software

For today's SAS and SATA developers and integrators, verifying design robustness and error recovery can be a challenging task, especially when it is difficult to duplicate test cases and customer issues. Troubleshooting is further complicated by ever-climbing storage capacities, network architectures, data rates, and protocol complexity. The BusMod Error Injector gives designers the ability to insert a variety of errors into a live data stream to test real-time error handling, system recovery, and duplication of issues seen in the field. Used in conjunction with the BusXpert SAS/SATA analyzers, users can easily verify correct and incorrect responses to issues caused by the error injector. BusMod's error injection provides the ability to create random and defined line errors such as CRC or 8b10b encoding errors, modify or replace frames, frame data and primitives. BusMod also has the capability of generating the SATA Built-In-Self-Test (BIST) frame for testing physical compliance of both hosts and devices. Used with the Frame Error Rate Counter (FERC) capability of the BusXpert analyzers, the BusXpert Micro and Pro systems become versatile SATA compliance test tools.



Sample script generation: Causing a CRC error on a random DATA FIS from the target



Sample script generation: Modifying an SSP Response frame field to Check Condition

# Sample Configurations and Part Numbering

The BusMod Pro and Micro series are available in several different configurations. Below is a sampling of configurations with part numbers:

Part #	Description
U3053A	SerialTek Micro BusMod for SAS/SATA
U3053A-1PJ	BusMod Error Injector, 1 Port
U3053A-003	Linkspeed 1.5Gbps to 3Gbps
U3053A-SAT	Enable SATA protocol support
U3053A-1PB	Software License, BIST Generator, 1 Port
U3054A	SerialTek Pro BusMod for SAS/SATA
U3054A-4PJ	BusMod Error Injector, 4 Port
U3054A-006	Linkspeed 1.5Gbps to 6Gbps
U3054A-SAS	Enable SAS and SATA protocol support

## System Requirements

To get the best performance out of your BusMod Error Injector, we recommend the following systems:

- Minimum configuration: 1.5Ghz Celeron or AMD equivalent processor, 1GB of Memory, Gigabit Ethernet and/or USB, Graphics capable of supporting 1024x768
- Recommended Configuration: 2.8Ghz or greater dual-core processor, 3GB or greater of 1.3Ghz FSB memory, PCIe x4 or ExpressCard slot, Graphics capable of supporting 1920x1200 or greater

BusXpert software is compatible with Windows XP and Windows Vista, Windows 7 32 and 64-bit platforms.

BusXpert is also compatible with Linux: Ubuntu 9.10, Fedora 12, and RedHat/CentOS 5.4.

BusXpert requires minimum of 90MB for installation.

## About SerialTek

SerialTek's experienced team shares a common goal: Design and build the ultimate test tools to eliminate the bottlenecks that keep developers waiting. SerialTek is committed to raising customer expectations with each successive year of innovation.

For additional information or questions regarding SerialTek products, including quotes, product demonstrations, software and technical assistance please contact us at:

[sales@serialtek.com](mailto:sales@serialtek.com)

[support@serialtek.com](mailto:support@serialtek.com)

<http://www.serialtek.com>

Agilent Technologies, Inc. 2010

Printed in USA, March 11, 2010

5990-5233EN

© Copyright 2010 SerialTek LLC. All rights reserved. All trademarks used in this document are the property of their respective owners. SerialTek reserves the right to change product content and product specifications without prior notice. Contact your sales consultant for the latest information.

**SerialTek**

SerialTek, LLC  
1630 Oakland Rd #A117  
San Jose, CA 95131  
Phone 408.436.8080  
Fax 408.436.8098

03/10

### STANDALONE HW

#### SPECIFICATIONS:

##### MICRO

- 12VDC
- 90W Max Power
- 40 Deg C Max Ambient Temperature
- 6" x 9" x 1.75"
- ~ 3 lbs
- CE/FCC Approved

##### PRO

- 100-240VAC 50-60Hz
- 200W Max Power
- 40 Deg C Max Ambient Temperature
- 8.5" x 14" x 3.5"
- ~ 10 lbs
- CE/FCC Approved