Analysis Without The Limitations

BusXpert Micro Series SAS/SATA Analyzers

UNPARALLELED PERFORMANCE

Upload and display traces using

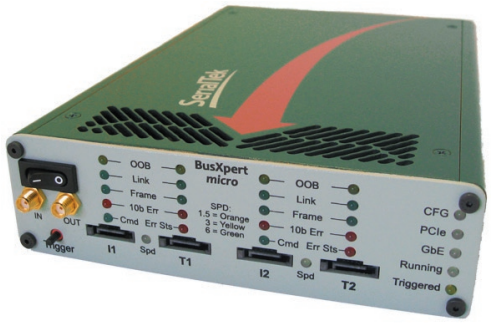
- PCI Express > 550MB/s
- Gigabit Ethernet > 70MB/s
- Pre-Indexed Trace for faster searching and display

ACCURATE CAPTURE

- Native PHY
- Fast Data Re-Lock
- 2ns Timestamp Resolution
- Eye-Opener front end
- Tunable RX/TX signalling

CONVENIENT DESIGN

- 5V / 12V SW controllable external power connector
- Available as Micro and MicroLite
- Configurable SAS/SATA or SATA protocol support
- 1 or 2 port licensing options
- Up to 18GB of trace buffer
- Lightweight (< 3lbs) and Compact (6”x9”x1.75”)
- Cascade up to 2 Micro platforms for capture of 4 ports simultaneously
- 7 unique Status LEDs per port



- Record, upload and display SAS and SATA traffic in seconds with either Gigabit Ethernet or PCI Express
- Native PHY with fast Data Re-Lock, Eye-Opener front-end, Tunable RX/TX signalling, and 2ns timestamp resolution for industry’s most accurate capture
- Lightweight and compact design for ultra-portability
- Available in 1-port or 2-ports with up to 18GB of trace buffer

For today’s SAS and SATA developers and integrators, getting to the root of a problem can be especially difficult when there isn’t an obvious trigger condition. Troubleshooting is further complicated by ever-climbing storage capacities, data rates, and protocol complexity. Integrators and developers need faster and deeper analyzers to keep up. Traditionally, those needing to capture large amounts of traffic have been faced with limited trace buffers, long waits to view the data, slow searches, and slow saving. SerialTek has overcome the old limitations with the BusXpert Series of SAS/SATA Analyzers. The BusXpert uses advanced technologies such as the industry’s first PCI Express x4 uplink to the host (550 MB/s), up to 18GB of buffer, Hardware Accelerated Gigabit Ethernet, pre-indexed and compressed trace data, multiple analysis processors, and instant display of the captured data. The BusXpert also features easy to use triggering, pre/post-filtering, textual search and sequence search, and many different displays of the captured traffic. It’s available in a variety of configurations to fit specific needs for buffer size, port-count, protocols, and budget. The BusXpert breaks free of past analyzer limitations and lets users spend more time on development and debug efforts. SerialTek delivers on it’s promise of “Analysis Without the Limitations”.

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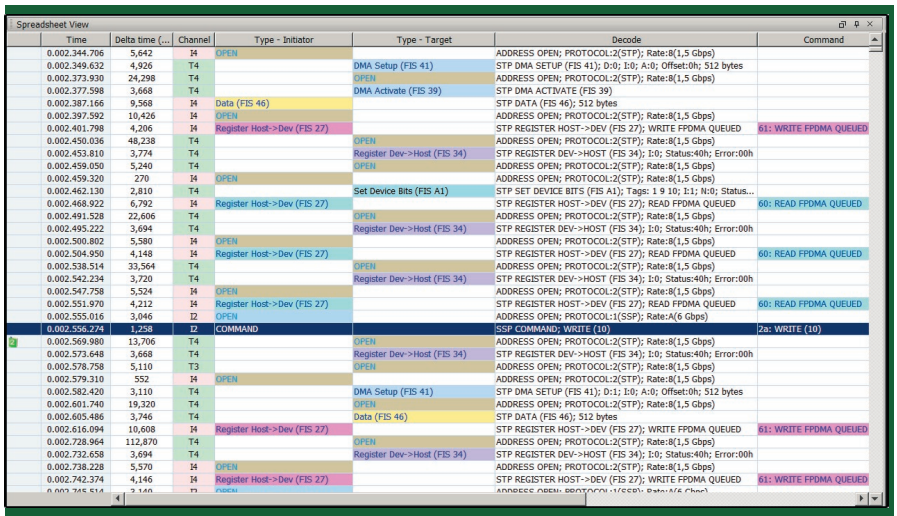
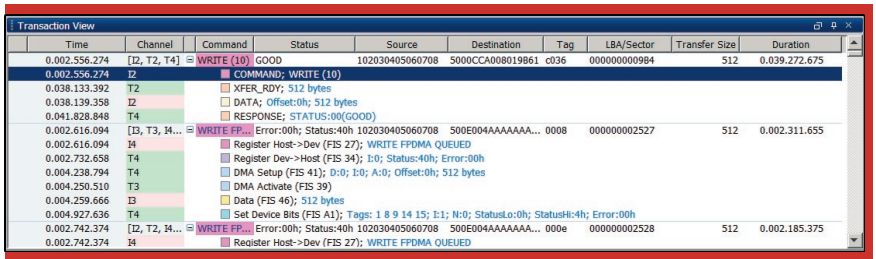
Traffic Display

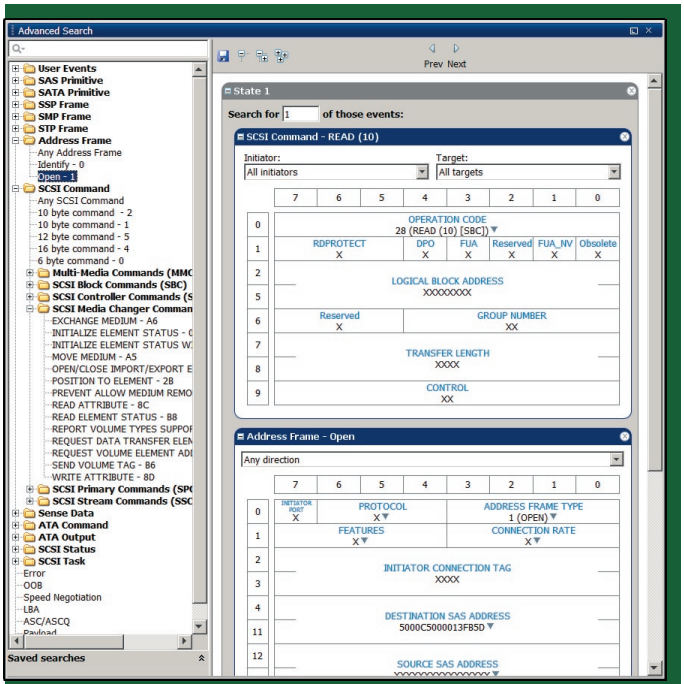
The BusXpert provides a variety of traffic displays, with some optimized for different protocol layers, some optimized for time relationships, some correlate directly with the SAS/SATA specification, and some provide just the user data. All of the views are exportable via CSV and XML. Additionaly, some can be exported to HTML. Bookmarks make it easy to label and discuss specific events in the trace.



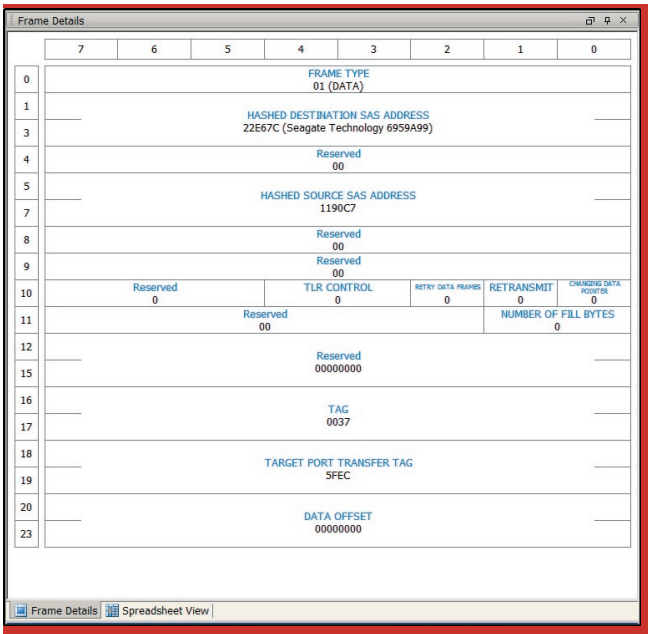
Spreadsheet View provides extensive decoding of frames, primitives, and Out-of-Band events, and sorts them to show the order they occured in. The displayed columns are chosen from an extensive list of fields and events.



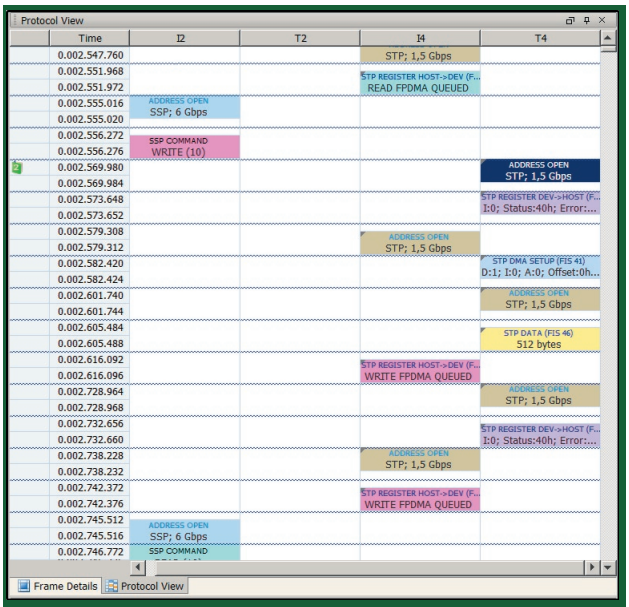
Transaction View shows each command in the order it was initiated. Commands may be expanded to show the frames associated with them, or collapsed so that only a summary of the command is shown.



Advanced Search provides a way to search for sequences of events, either within a frame, or across multiple frames or events. It is identical to the Trigger Sequencer in appearance.



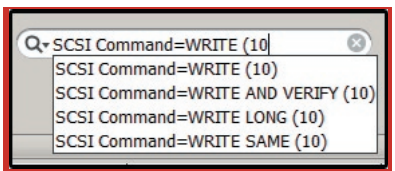
Frame Details shows each frame in the format used by the SAS or SATA specification.



Protocol View shows the precise timing relationship of each D-Word in the trace. Useful for tracking the handshaking between products under test.

Searching for Data

Easily search for specific frames, primitives, addresses or other events with the Quick Search and Advanced Search functions.



Quick Search is a text search that fills in the rest of the search term as the user starts typing.

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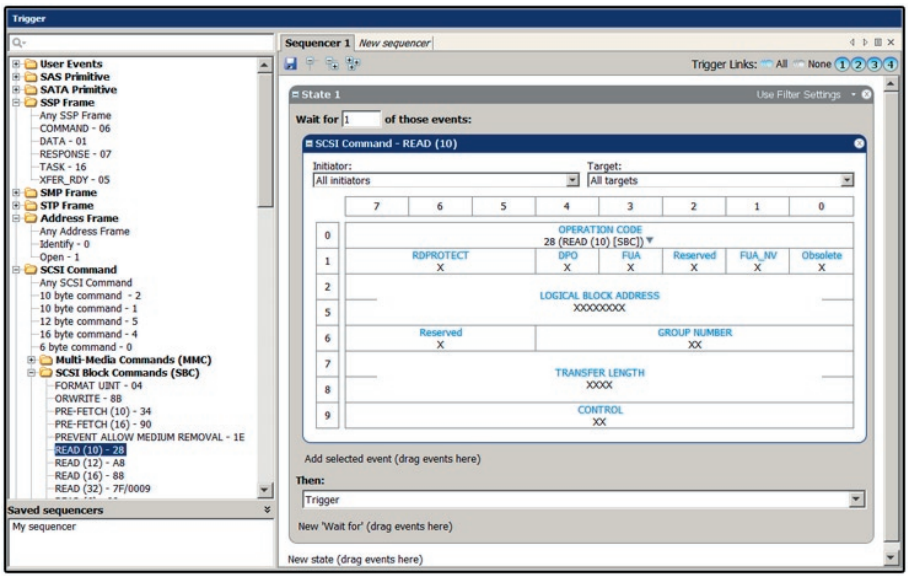


Triggering

BusXpert's triggering interface allows for quick definition of events with frame layouts matching the SAS2 and SATA specifications. Simple and complex triggers can be built with ease. BusXpert Micro's advanced triggering includes:

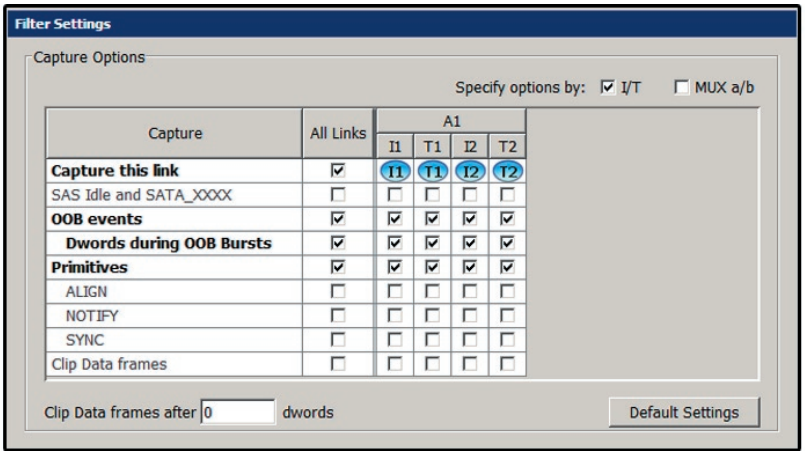
- Up to 8 sequencers
- Up to 16 states per sequencer
- Up to 32 counters and timers
- Multi-level branching
- User defined events
- External Trigger In/Out

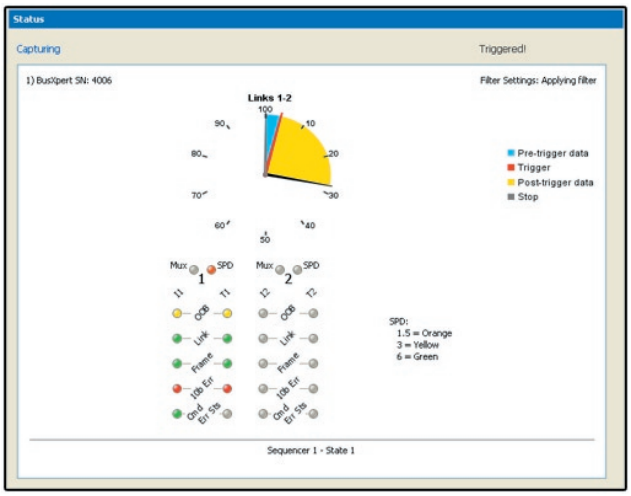
BusXpert MicroLite can trigger on single events only.

Also featured is the ability to copy and paste frames and primitives from an open trace, saving additional time on defining events. Any of the events created can be saved off to the User Events folder for future use.

Pre-Filtering

Filtering out specific primitives, frames, data, and addresses is a snap. Easily specify which patterns to filter out during a capture to maximize buffer space, resulting in more meaningful data.





Line Status

The Status menu shows a visual representation of what is currently occurring on the bus and also a status of the capture. The Spd/OOB/Link/Frame/10b Err/Cmd/ and Err Sts LEDs match the activity on the front of the BusXpert. Status lights such as Frame, Cmd, Link, and OOB are useful in determining what is happening on the bus at any given time, while the error lights such as 10b Err and Err Sts let the user know that signal errors and command errors are occurring.

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ADDITIONAL FEATURES

- XML based decoding
- Easy definition of custom decodes
- Primitive Compression
- Status LEDs for
  - SPD
  - OOB
  - Link
  - Frame
  - 10b Err
  - Command
  - Err Sts
- Java-based application
- Post Filtering / Hiding
- Trace Export to CSV, HTML, XML
- Live SAS Address Table
- API

Sample Configurations and Part Numbering

The BusXpert Micro Series are available in several different configurations. Below is a sampling of configurations with part numbers:

Part #	Description
MA-1x3ST-18GB	BusXpert Micro Analyzer, 1-port, 1.5Gb/s-3.0Gb/s SATA only, 18GB Buffer, Advanced Triggering and Segmented Buffer
MLA-2x6SA-4GB	BusXpert MicroLite Analyzer, 2-port, 6Gb/s SAS/SATA, 4.5GB Buffer, Single trigger term, Single buffer segment
MA-2x6SA-9GB	BusXpert Micro Analyzer, 2-port, 6Gb/s SAS/SATA, 9GB Buffer, Advanced Triggering and Segmented Buffer

System Requirements

To get the best performance out of your BusXpert Analyzer, 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 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 32 and 64-bit platforms.
BusXpert is also compatible with Linux: Ubuntu 9.10, Fedora 12, and RedHat/CentOS 5.4 or later.
BusXpert requires 100MB for installation. Additional disk space is recommended for storing traces.

About SerialTek

SerialTek's experienced team shares a common goal: Design and build the ultimate analyzer platform to eliminate the bottlenecks that keep developers waiting. With the BusXpert, they celebrate their first victory. 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
support@serialtek.com
http://www.serialtek.com

SerialTek, LLC
1570 Oakland Rd
San Jose, CA 95131
Phone 408.436.8080
Fax 408.436.8098

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