

*Absolute Analysis Investigator™ Architecture*



# Investigator™

## SAS Solutions

Revolutionary probe architecture overcomes  
SAS cabling limitations

- Only protocol analyzer entirely driven through a configurable protocol database
- 100% data capture at full line rate on duplex networks
- Time-correlate traffic across several protocols including Fibre Channel, Ethernet, iSCSI, and more
- 2 to 32 channel capacity, with up to 2GB memory per channel

For more information, demo & pricing contact

NextGig Systems, Inc.  
805-277-2400  
[NextGigSystems.com](http://NextGigSystems.com)



### Investigator™ SAS Solutions

- ◆ Protocol Analyzer
- ◆ Protocol Editor
- ◆ Network Connections
- ◆ API Library
- ◆ Platforms and Configurations

### SAS Protocol Analyzer

#### Powerful. Efficient. Flexible.

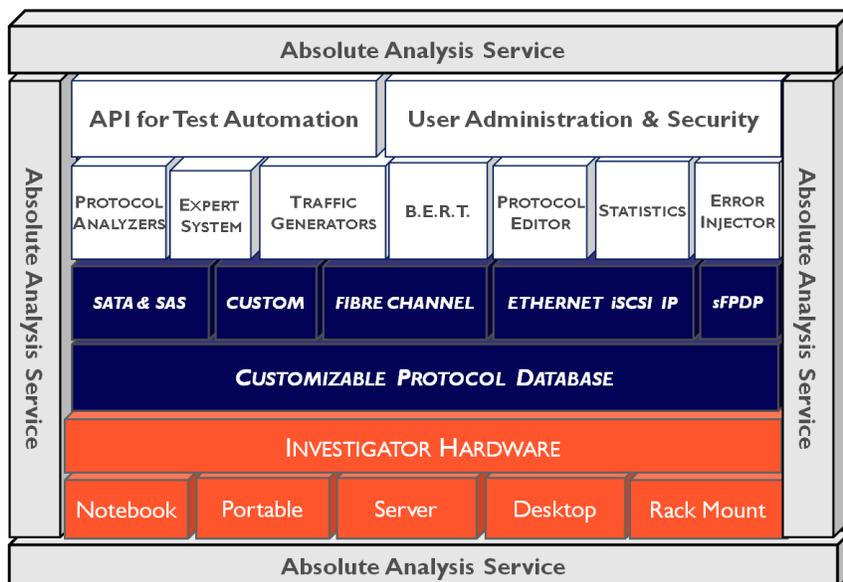
Investigator™ SAS Protocol Analyzer provides the most powerful and granular triggers and filters ever developed. Investigator’s efficient pre-filter memory management permits data capture over lengthy periods of time, while intuitive application software formats capture data in easily understood graphical and tabled display formats.

#### Interface, Analysis and Test Support

Investigator™ SAS Protocol Analyzer supports network interfaces capable of full-line rate, multi-channel and multiple protocol testing. Investigator™ hardware supports analysis, traffic generation, statistics, impairment test, and BERT .

#### Compatible Configuration

All Investigator™ features are fully unified under one architecture, making it easy to expand to meet future needs, whatever they may be. Multi-channel configurations support up to 32 independent ports of testing, with mixed protocol configurations also supported. Protocol analyzers feature time correlated views with cross-card triggering for channel synchronization, with each port able to sustain full-line rate data transfers to all supported protocols and devices.



Developers and engineers choose Absolute Analysis Investigator™ (AAI) solutions for their ease-of-use, flexibility, scalability, and versatility. To meet your test application needs, we offer a complete range of high speed serial test and verification solutions that support multiple protocols as well as the requirements of various network topologies.

### Expand and Customize

State-of-the-art FPGA technology is leveraged to facilitate flexibility and protect capital investments, while providing continued capabilities for development and support. User extendable Trace Buffer memory enables the Investigator™ system to be expanded to meet individual requirements.

### Statistics

A real time statistics module provides bookmarks, search, and tabular or graphical displays of link captures to further enhance Investigator's reputation for unrivalled flexibility, power and ease of use in high-speed data capture, decode and analysis.

### Trace Viewer

Documented trace files can be shared, filtered and studied with ease using our freely distributable Trace Viewer software.

Link status and utilization

Frames transmitted

Bytes transmitted

Frames transmitted by size



## Data Capture

Capture 100% of data at full line rate and in raw 10-bit format, and stop with “buffer full” or “buffer wrap” options. Captured traces can be viewed on any Windows PC using a standalone viewer. The hardware compression algorithm makes efficient use of trace memory resources. Network topology can be displayed through analysis of captured traces.

## Triggering

- Multi-level triggering
- Trigger on multiple consecutive events on, or across, all channels
- Select from a list of predefined trigger events
- Loop backward or forward in a trigger event list
- Re-arm trigger if condition is not met
- Independent channel triggers

## Upper Layer Protocol (ULP) Support

- Supports sequential and direct access devices
- Automatic decodes
- Add new and proprietary protocols using Protocol Editor option

### Test Configuration Library

- Build and save away custom trigger, filter and capture configurations to server

### Alarm Feature

- User definable alarms for link utilization, frames and bytes
- Ability to set high and low limits
- Ability to set alarms on all statistical data

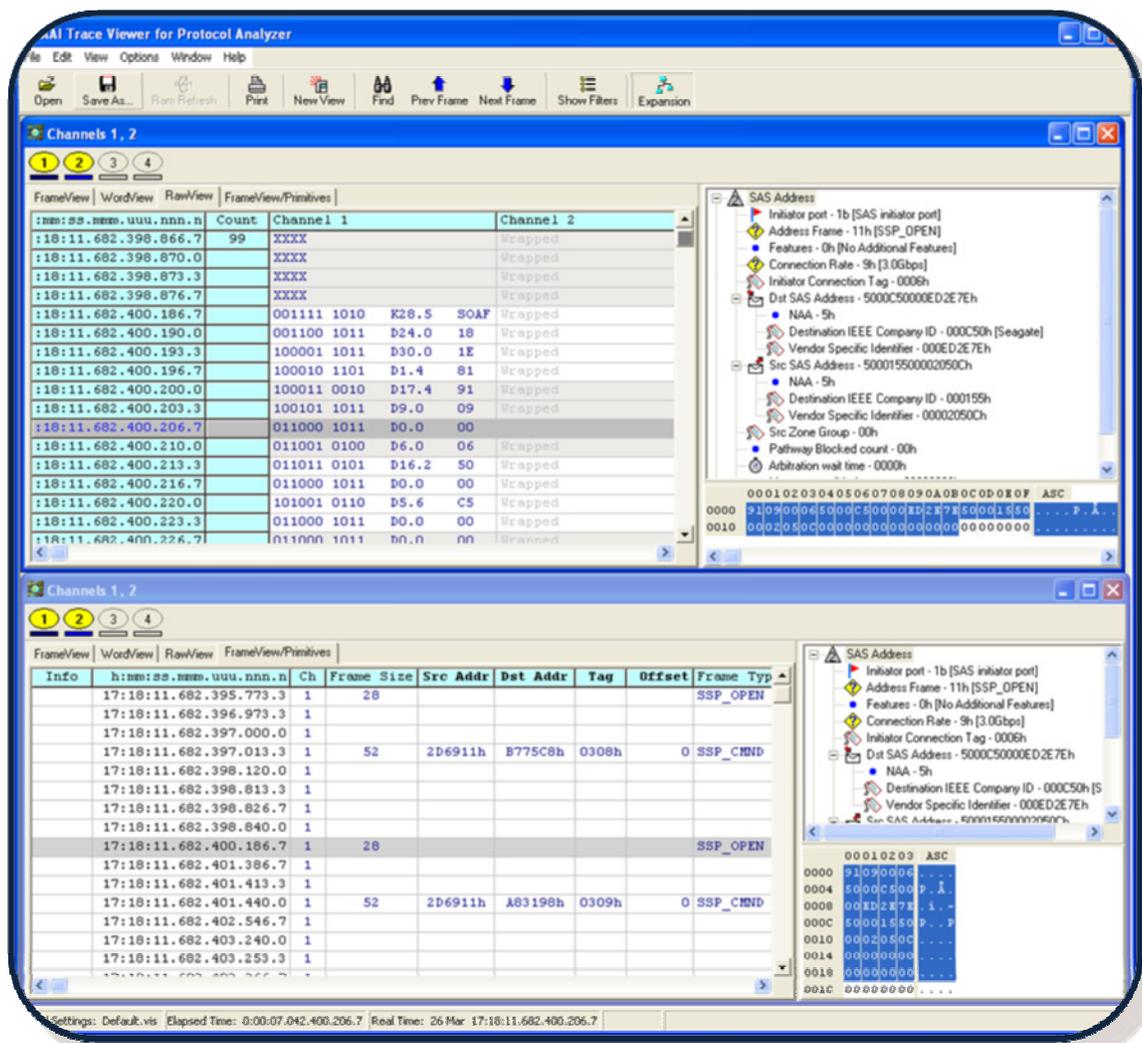
### Data Display Formats

- Raw, 8B/10B, hexadecimal, and frame modes
- Detailed decode of each frame down to individual bit level
- Highly configurable trace display with color coded channel data
- Independent or merged channel views
- Save/print trace segments or entire capture

### Search Facilities

- Find next and previous frames
- Go to and create bookmarks
- Search for source or destination address
- Search for any data within a frame
- Library of predefined search items
- Find trigger events

Filter  
Bookmark  
Disseminate  
Share  
Identify  
Resolve



### Features

- ◆ 1.5Gbps, 3.0Gbps today and 6.0Gbps in development
- ◆ Simple intuitive GUI — capture and display data in just two mouse clicks
- ◆ True 100% line rate traffic capture with concurrent traffic generation
- ◆ Share, filter and study trace files using standalone viewer software (freely distributable)
- ◆ Isolate problems quickly using automatic decodes of standard or proprietary protocol frames
- ◆ Capture only key events using multi-level, multi-channel triggers and filters
- ◆ Real time display of statistical data in customizable tabular and chart formats
- ◆ Time correlated analysis on up to 32 simultaneous ports of any supported protocol
- ◆ 1GB Trace Memory per port
- ◆ Multi-protocol capable hardware



### Applications



**Storage                      Enterprise  
Networking & Storage**

Network Device Test  
and Troubleshooting

NAS/SAN Application  
Performance

**Computer Equipment  
Manufacturers**

OEM

### SAS API Library

The SAS API Library is a 'C' API that provides the user with programmatic control over all the Investigator™ tools. Using the API Library, the user can write custom applications that function over the platform or create code for test automation.

### Platforms and Configurations

Absolute Analysis Investigator™ SAS Protocol Analyzers are available in several platforms ranging from highly portable to high port count rack mounts.

INVESTIGATOR SYSTEMS		dimensions	approx weight	# of blades
notebook		10" x 2.6" x 15.1"	5 lbs	2
mini-DESKTOP		12.6" x 3.7" x 13"	19 lbs	2
small PORTABLE		16.7" x 13.1" x 6.8" ruggedized plastic	23 lbs	2
large PORTABLE		17" x 13.6" x 9.6" ruggedized aluminum	38 lbs	4
19" RACKMOUNTS		1U x 19" x 17.5"	25 lbs	1
		2U x 19" x 20"	35 lbs	2
		4U x 19" x 18"	45 lbs	8

### Training

Absolute Analysis provides comprehensive training courses for products and protocols. Training can be provided at your location or remotely, and can be customized to your requirements.

### Service and Support

Absolute Analysis provides unsurpassed service to all Investigator™ users including remote diagnostics, extended warranties and upgrade paths to current offerings from any Investigator™ system.

#### For More Information

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