Absolute Analysis Investigator™ Architecture

Investigator™

FCoE Solutions

1Gbps to 10Gbps

- Protocol Analyzer
- Traffic Generator
- Impairment Tester
- Bit Error Rate Tester (BERT)
- Network Communications
- API Library
- Platforms & Configurations

For more information, demo & pricing contact

NextGig Systems, Inc.
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NEXTGIG SYSTEMS

ABSOLUTE ANALYSIS
The Developer's Choice for Protocol Test

Investigator™ FCoE Solutions – 1Gbps to 10Gbps

Protocol Analyzer

Powerful. Efficient. Flexible.

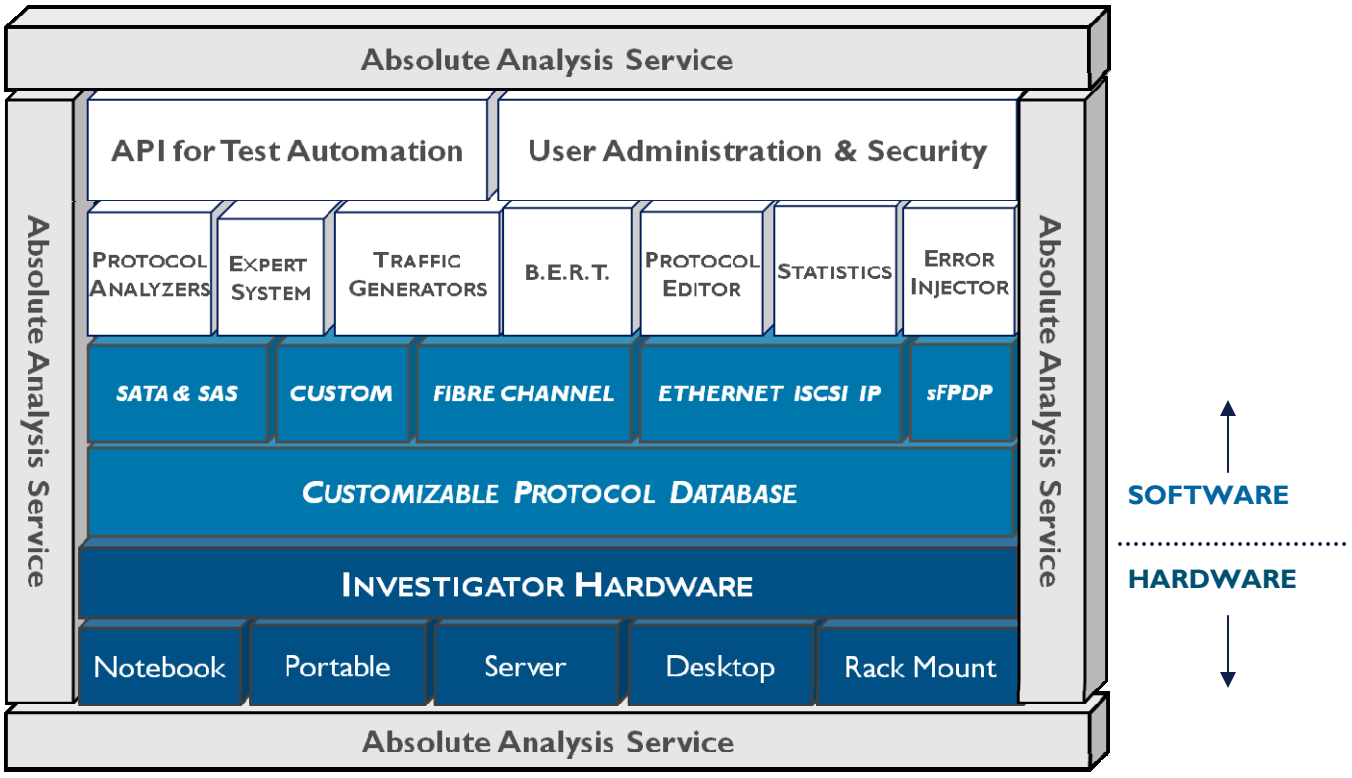
Investigator™ FCoE Protocol Analyzers provide the most powerful and granular triggers and filters ever developed. Investigator's efficient pre-filter memory management permits data capture over lengthy periods of time, while intuitive application software formats and displays data in easily understood graphs and tables.

Interface, Analysis and Test Support

Investigator™ FCoE Protocol Analyzers support network interfaces capable of full-line rate, multi-channel and multiple protocol testing. Investigator™ hardware supports analysis, traffic generation and statistics for optical interface connections.

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 16 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 10Gbps Ethernet 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.

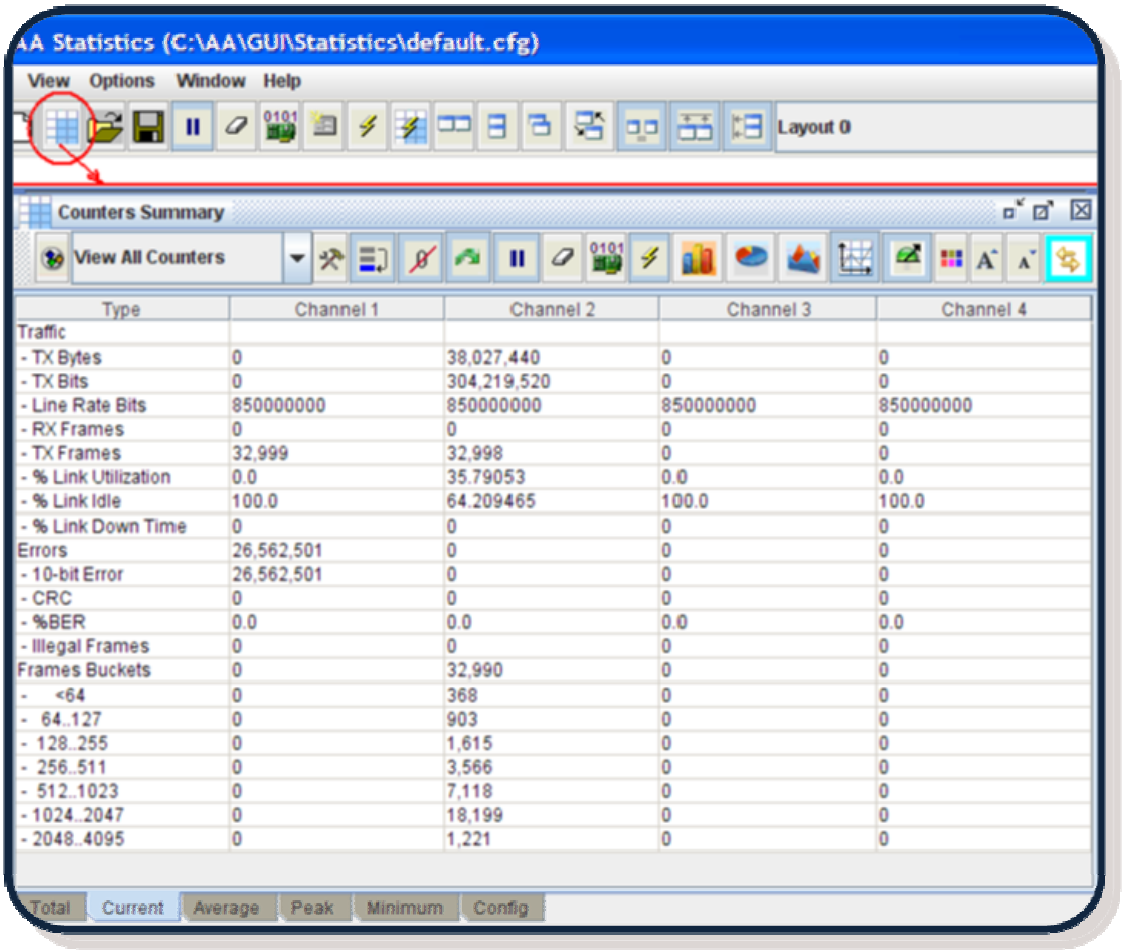
Statistics

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.

Fast and powerful with up to 528 MB/s transfer rate for trace uploads



Type	Channel 1	Channel 2	Channel 3	Channel 4
Traffic				
- TX Bytes	0	38,027,440	0	0
- TX Bits	0	304,219,520	0	0
- Line Rate Bits	850000000	850000000	850000000	850000000
- RX Frames	0	0	0	0
- TX Frames	32,999	32,998	0	0
- % Link Utilization	0.0	35.79053	0.0	0.0
- % Link Idle	100.0	64.209465	100.0	100.0
- % Link Down Time	0	0	0	0
Errors	26,562,501	0	0	0
- 10-bit Error	26,562,501	0	0	0
- CRC	0	0	0	0
- %BER	0.0	0.0	0.0	0.0
- Illegal Frames	0	0	0	0
Frames Buckets	0	32,990	0	0
- <64	0	368	0	0
- 64..127	0	903	0	0
- 128..255	0	1,615	0	0
- 256..511	0	3,566	0	0
- 512..1023	0	7,118	0	0
- 1024..2047	0	18,199	0	0
- 2048..4095	0	1,221	0	0

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 canbe 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.

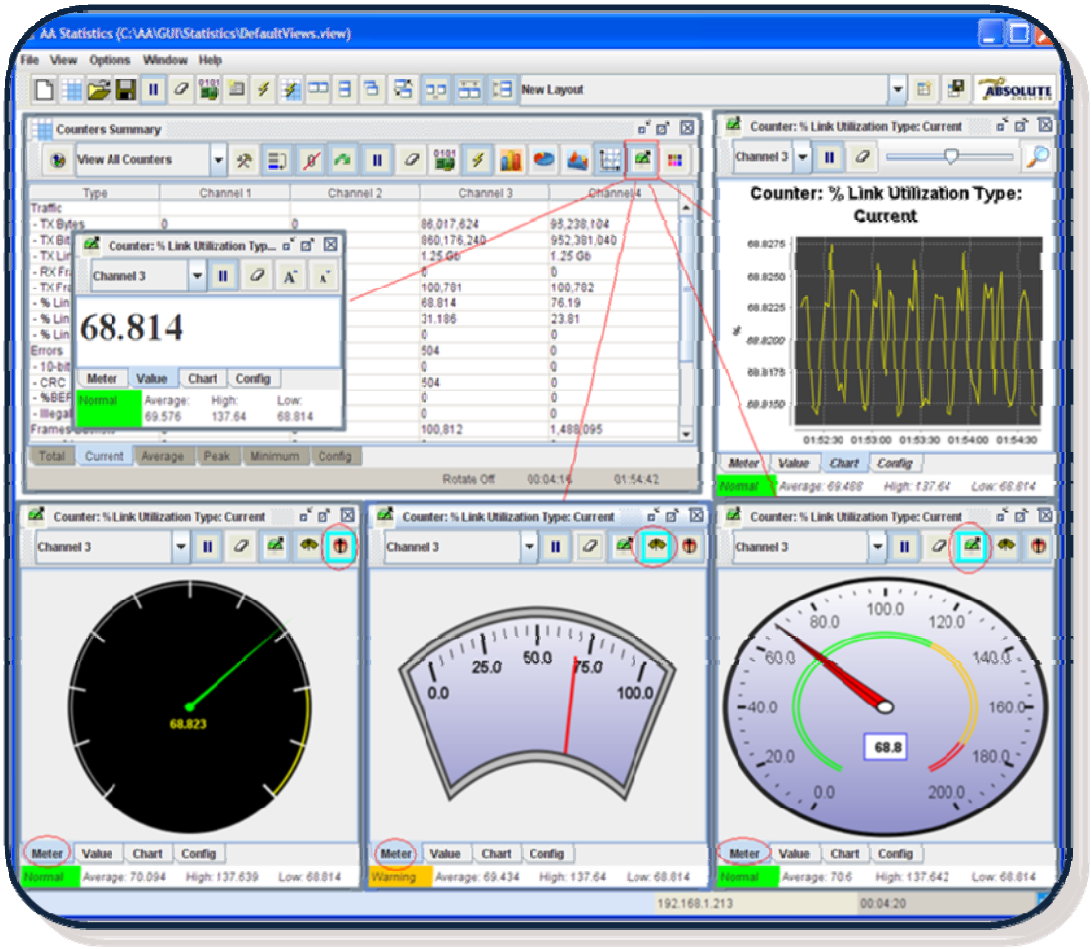
Triggering

- Multi-level triggering
- Trigger on multiple consecutive events on, or across, all channels
- Select from a list of predefined trigger events
- State machine “loop sequence” triggering
- Re-arm trigger if condition is not met
- Independent channel triggers

Upper Layer Protocol (ULP) Support

- Supports sequential and direct access devices
- Automatic decodes for iSCSI, IP, TCP, and UDP and many other upper layer protocols
- Add new and proprietary protocols using Protocol Editor option

Actual Statistics of Total Population (Not Sampling)



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

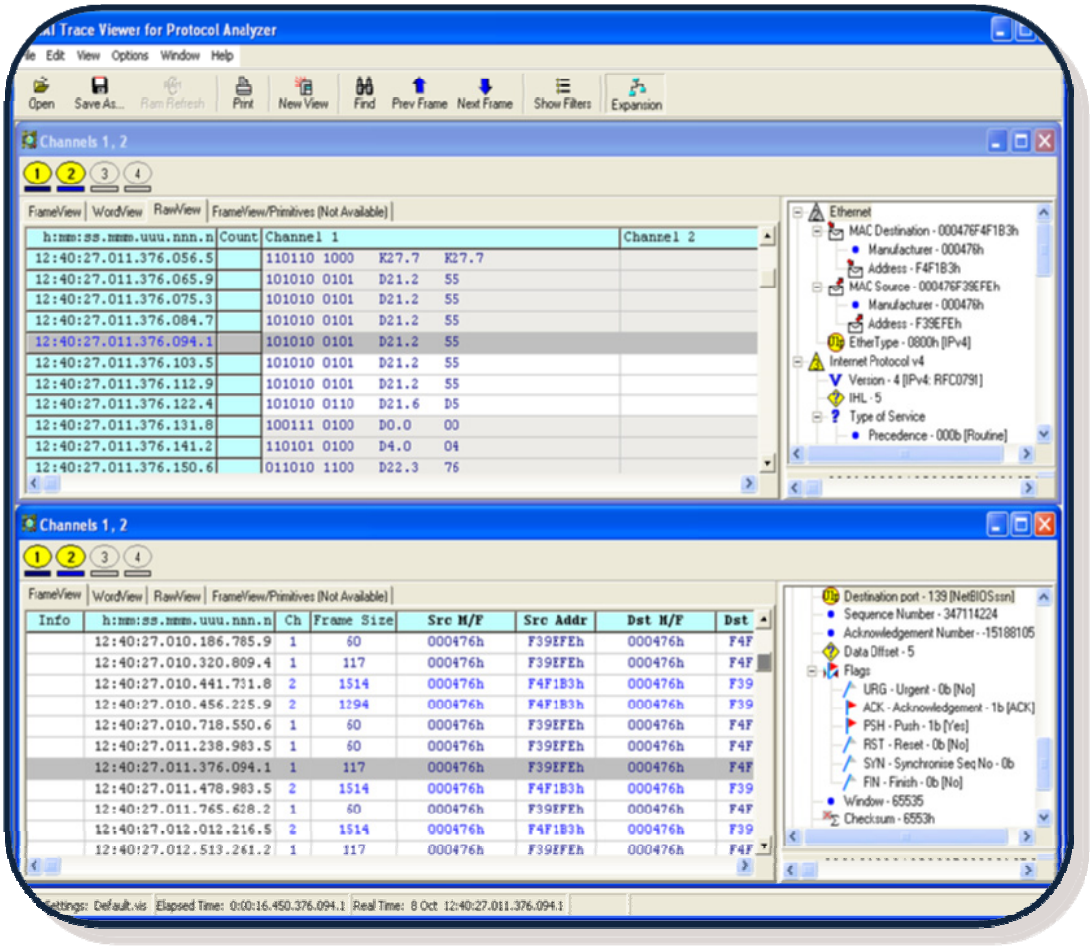
Search Facilities

- 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

Bookmark

Disseminate

Identify



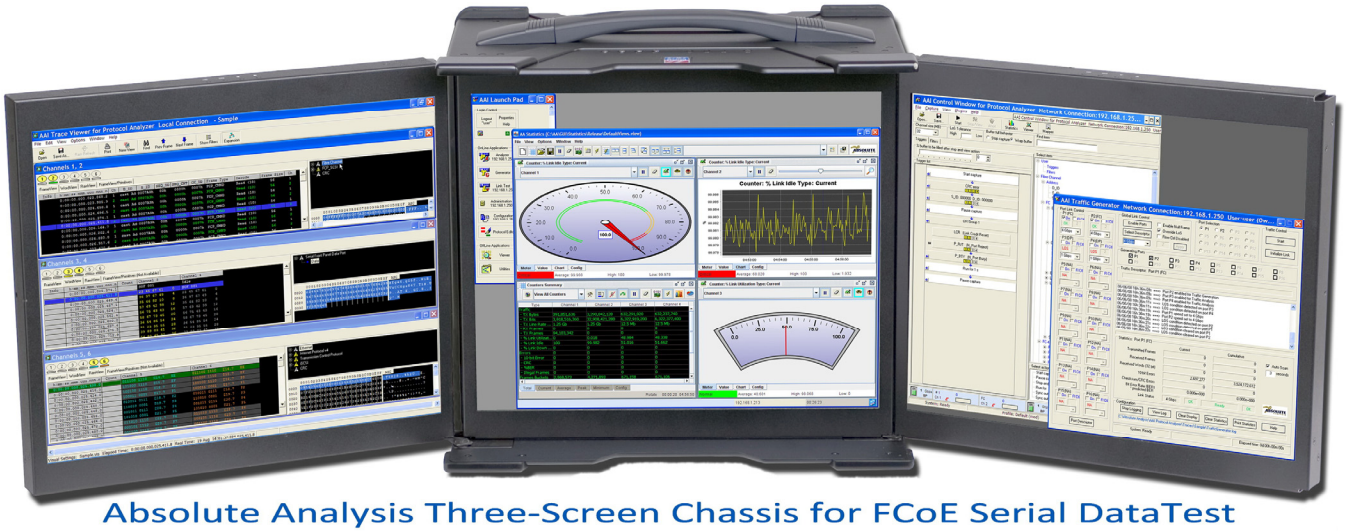
Protocol Editor

The 10Gbps Ethernet and FCoE Protocol Editors from Absolute Analysis are a point-to-point network allowing two devices to communicate together using a user-defined protocol. The Absolute Analysis Investigator™ Protocol Database Editor allows the Protocol Analyzer's standard database to be expanded to support protocols that you define.

Once part of the database, the protocol that you've defined can be used as a filter or can trigger scenarios, in addition to being fully decoded in the trace viewer. Other features, such as post-capture filtering, are fully available as if the protocol was part of the standard Investigator™ Protocol Analyzer database.

Traffic Generator

Absolute Analysis Investigator™ Ethernet and FCoE Traffic Generators allow you to generate 10Gbps Ethernet or FCoE traffic into a Device Under Test (DUT) with complete control over the timing and content of the data. Valid and invalid traffic streams can be defined to test device error recovery. The traffic generator's ability to maintain full-line rate traffic, even across multiple links, allows device performance to be measured and operation under stress to be characterized.



Absolute Analysis Three-Screen Chassis for FCoE Serial DataTest

Network Connections

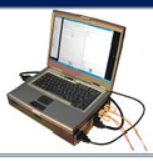
The Ethernet and FCoE physical layers have multiple physical layer options. The Investigator™ platform supports Small Form Factor Pluggable+ modules (SFP+) to allow the user to easily switch between various optical and copper physical layers. Passive optical taps are also available where the circumstances dictate that the insertion of the test tool cannot disrupt the network traffic. (Protocol Analysis only.)

API Library

The Ethernet and FCoE API Libraries are a 'C" API that provide you with programmatic control over all of the Investigator™ tools. Using the API Library, you can write custom applications that function over the platform or create code for test automation.

Platforms and Configurations

Absolute Analysis Investigator™ 10Gbps Ethernet and FCoE 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"x13.1"x6.8" 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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