MGA8410 Product Brief

Ethernet Inline Capture & Protocol Analyzer

Feature Highlights

- 4-Port 10G, 5G, 2.5G, 1G, 100M Ethernet inline packet capture & protocol analyzer
- Latency Monitoring Analyzer: measure 1-way latency of live network application packets
- Realtime custom-filtered statistics
- Live streaming capture mode
- 100% line rate Layer 2 packet capture and Layer 1 (PCS) viewer with advanced triggering & filtering
- 1 nanosecond precision timestamps
- User-customizable Dashboard for statistics and graphical analysis
- Industry's largest capture buffers
- Intuitive browser-based interface with full RESTful API
- Energy Efficient Ethernet (EEE) support (IEEE 802.3az)
- IEEE 802.3br MAC preemption support for TSN applications
- Full transparency with non-retimed pass-through mode
- Automotive Ethernet support (from 100Mb to 10Gb BASE-T1)
- Media conversion between BASE-T1 and BASE-T Ethernet
- Hundreds of protocol decodes

Overview

Aukua Systems MGA8410 Ethernet Protocol Analyzer is a stand-alone system providing validation, debug analysis and visibility capabilities for R&D, Test and Support engineers building and maintaining Ethernet based IT, storage networking and communications systems.

The Aukua Inline Protocol Analyzer delivers true 100% line rate, low latency, inline L1 (PCS layer) bit capture, L2+ packet capture and protocol analysis. Supports data rates from 10Mbps to 10Gbps Ethernet, including 2.5Gbps & 5Gbps Ethernet rates (IEEE 802.3bz) and Automotive Ethernet (IEEE 802.3bp/bw/bv/ch). And with the industry's largest capture buffers as well as nanosecond timestamp accuracy, unmatched visibility into Layer 1 thru Layer 7 bidirectional protocol communications is provided.

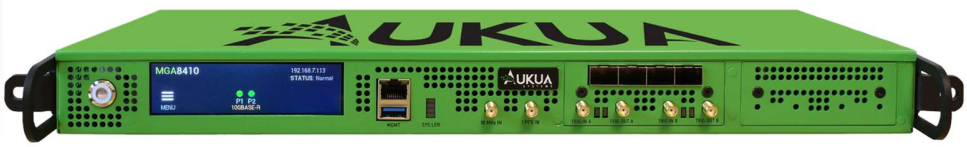
Advanced packet capture features enable users to control when and how packets are captured. Quickly capture hard-to-find issues with user-customizable capture filters and the ability to trigger captures based on specific incoming events or packet content. And ensure that issues are fully captured by controlling how much of the capture buffer is dedicated to pre-trigger and post-trigger packets. Users can further leverage the large buffers by using packet filtering and slicing features.

The capture trace viewer provides complete binary, hex and protocol decode views. Searching and display filters enable users to quickly locate packets of interest even within the largest trace files. Understanding the timing of events is possible with a rich set of timestamp viewing options such as absolute and interpacket arrival time.

Other important features include real-time statistics, alarms, and a full API that enables complete automation, which further enhances productivity and integration with other development and testing tools.

Our intense focus on creating a truly intuitive user experience ensures that the Analyzer is effective every time, even for occasional users. First-time users are productive within the first 10 minutes, even without training or assistance. This is made possible thanks to a single, streamlined user interface that is served up from the Analyzer system without any software installations required. There is also no complex initial chassis configuration or setup required.

First Inline Analyzer to support 10GBASE-T as well as 2.5GbE and 5GbE Ethernet rates. And the ONLY one to support simultaneous Traffic Generation and Inline Capture & Analysis!



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User Control

- HTML browser-based GUI (no install required)
- Automation: RESTful Web Services API supporting a wide variety of automation environments, including Python, C#, Java, Ruby, and most any others
- 2.5GbE RJ45 Management port
- USB 3.0 port

Test Interfaces

- 4 Ports: 10G, 5G, 2.5G, 1G, 100M, 10M
  - 10G/5G/2.5GBASE-T, 1000BASE-T, 100BASE-TX, 10BASE-T
  - 10G/5G/2.5GBASE-R, 5000/2500/1000BASE-X
  - USXGMII (5G-SXGMII & 10G-SXGMII), SGMII
- Automotive Ethernet: 10G/5G/2.5GBASE-T1, 1000BASE-T1, 100BASE-T1, 1000BASE-RH

Capture (L1 bit or L2+ packet)

- 32GB capture buffer (64GB option)
- 1 nanosecond precision timestamp
- Save L2+ packet trace to .pcapng
- L1 (PCS) capture and viewer: include Eth frames + inter-frame gap (IFG) data

Capture Filters

- Layer 2 - Layer 7 protocol filters
- Custom protocol filters
- Packet metadata filters (e.g., packet length)
- Comparison operators: =, ≠, <, >, <=, >=
- Packet slicing feature further leverages capture buffer

Capture Triggers

- Trigger on packet contents, errors and timeout conditions
- Multi-state triggers for uncovering hard-to-find problems
- Control pre and post trigger capture buffer allocation

Clock Reference Input

- Frequency: 10MHz SMA
- Phase: 1PPS SMA
- Time of Day (ToD): NTP

Environmental

- Operating Temperature: 0˚C ~ 40˚C (32˚F ~ 104˚F)
- Operating Humidity: 10% - 90% (non-condensing)
- Input Power: 100-240 VAC, 50-60Hz; 2.6A Max

Use case: transparent inline connection
(traffic passes transparently thru Aukua Analyzer)

External Input / Output Triggers

- Enables control with other external test equipment
- Two 50Ω TTL SMA connectors

Protocol Decodes

- Binary, Hex and protocol decode views
- 100s of protocols including Ethernet MAC, IPv4, IPv6, TCP, UDP, PTP, MPLS, VLAN, iSCSI, FCoE, PFC and many more
- Event timing analysis: absolute, relative, delta timestamps
- Display filters (L2 - L7) and packet searching capabilities

Other Advanced Analyzer Capabilities

- Latency Monitoring (1-way latency of all application packets)
- Streaming Capture for live monitoring (local or remote location)
- Unique support for capturing IEEE 802.3br preemption frames
- Layer 1 PCS viewer (8b10b and 64b66b data)

Impairment Jamming

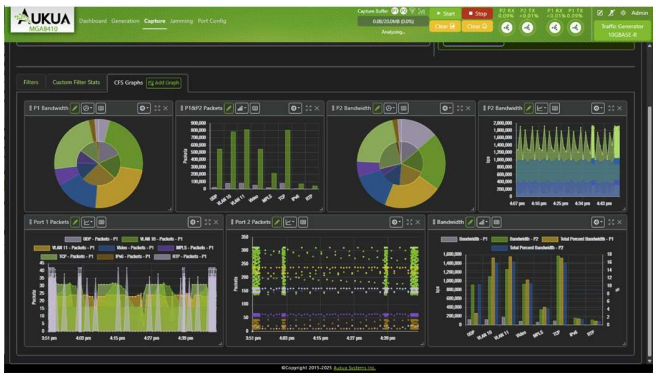
- Link failure / flapping, Packet Loss, Ethernet FCS errors, more ...

System

- Enclosure: 1RU, fits 19" rack system
- Dimensions: 1.7"H(43mm) x 17.2"W(437mm) x 10.63"D(270mm)
- System weight: 10.3lbs / 4.67kg
- Regulatory Compliance: CE, FCC, VCCI, RoHS

Other Features

- Real-time statistics and graphs (bandwidth, alarms, errors, etc.)
- Stats Logging
- Auto negotiation status logging / visibility
- Support for Wireshark or any .pcap capable trace viewer
- Layer 1 pass-through transparency: Pause/PFC, errored frames
- Energy Efficient Ethernet (EEE) support - IEEE 802.3az
- Optional licenses for powerful Traffic Generator and Network Impairment Emulator modes available



Simple yet powerful browser-based user interface means there is no software to install. Users are productive in less than 10 minutes out-of-the-box!

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