

# The Network Industry's First 100G Packet Capture Appliance



**Red  
Helix**

Always evolving. Always there.



## Capture 100% / Replay 100%

### BENEFITS

- ✓ Improve customer experience
- ✓ Prevent loss of business due to network downtime
- ✓ Insure network infrastructure vendors have complete data for troubleshooting
- ✓ Extend the value of existing network tools with automated actions
- ✓ Reduce network operating cost with better team collaboration and efficiency

### HIGHLIGHTS

- ✓ Full line rate capture with no packet loss, with patented stream to disk technology
- ✓ Support for 1G/10G/25G/40G/100G interfaces
- ✓ Capture weeks, even months of network data
- ✓ Replay captured traffic ,even 100Gbps
- ✓ Simple, intuitive yet powerful GUI
- ✓ All-in-one appliance
- ✓ Multi-Language support
- ✓ Web browser based Protocol Analyzer with real-time decode.
- ✓ Wireshark analyzer can be installed as a plugin
- ✓ Strong data indexing provides fast packet retrieval from storage
- ✓ Detect microburst traffic in 100 microsec intervals
- ✓ Multi-TB captured packets playback in micro-second level allowing to replay microburst traffic

**SYNESIS** is a network data recorder that can continuously capture up to **100Gbps**. **SYNESIS**, an all-in-one packet capture system, is easily deployed in data centers, remote site branches, and test labs as a physical appliance. Configuration is minimal so it can be installed and capturing high speed traffic in minutes.

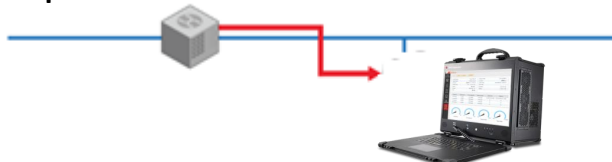
Existing network tools just can't keep up with today's traffic rates caused by increased user demand for bandwidth intensive applications. The result - oversubscription of tools which leads to misdiagnosis. Only **SYNESIS** is able to capture all network packet data completely and at high granularity.



### Now with PacketReplayer®!

Replay single packets or data from extended long-term capture sessions. Perfect application for R&D/QA and Field Support teams!

#### Capture 100% of network traffic in the field..

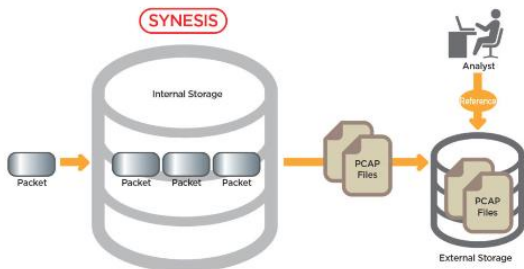


#### Then Replay 100% in the lab!



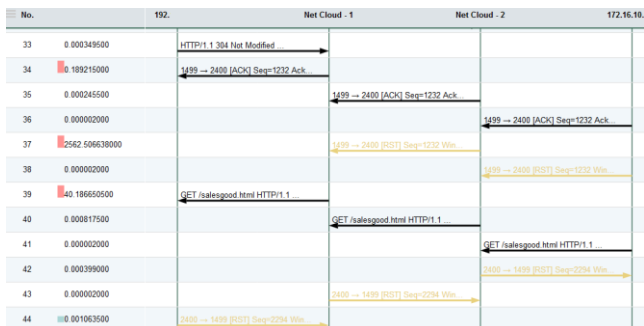
*\*PacketReplayer® availability based on model*

## Packet Capture



SYNESIS is a capture appliance compatible with 10M/100M/1G/10G/40G/100G networks that can capture traffic at wire speed without loss using our patented data processing algorithm. A backup function allows saving to PCAP files automatically while capturing. The storage destination can either be a local or remote file system.

## Smart Analytics (Ladder View)

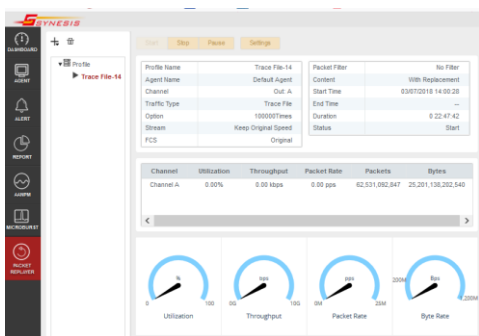


**MFA (Multi Flow Analysis)** provides a visual representation of connections with corresponding ladder diagrams to better understand how transactions propagated.

## Application Performance Monitoring Support

Indexed with KPI (Key Performance Indicator), network status can be ascertained at a trend level basis.

## PacketReplayer®

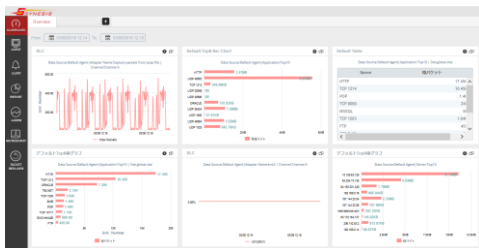


PacketReplayer – Replay real life traffic

Real-life wire-rate traffic capture and replay up to **100Gbps** with micro-second level packet gap granularity. The following headers may be filtered and replaced within each frame in a PCAP file to be generated.

- MAC address
- VLAN ID
- IP address (v4/v6)

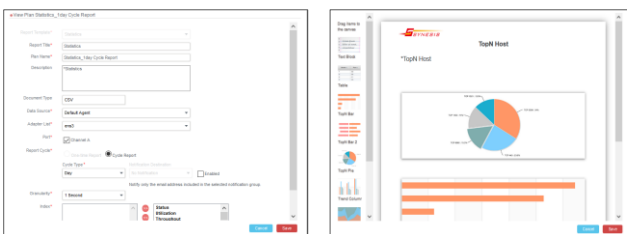
## Customizable Dashboards



Customized and Profiling Dashboard

The Dashboard displays real-time trend information for each selected agent. Each user may customize dedicated dashboards at the widget and page level. Multiple dashboard profiles may be created.











## Intelligent Report Builder











Intelligent report engine with drag and drop ability

Users may drag-and-drop modular pre-defined graphic components to build templates which may then be applied to create daily, weekly, and monthly or ad-hoc reports.

# System Specifications

| Model                          | SYU/SYC-2G-ER   | SYU/SYC-4G-R  | SYU/SYC-8G2-HCR   | SYU/SYC-10G-ER  | SYU/SYC-20G-HPR2  | SYU/SYC-40G-HPR2  | SYU/SYC-80G2-HPR2   | SYU/SYC-100G-HPR2   | SYU/SYC--C-ES   | SYU/SYC--P-ES   |
|--------------------------------|---|---|---|---|---|---|---|---|---|---|
|                                |  |  |  |  |  |  |  |  |  |  |
| Monitoring Port                | 4 x 1GbE  | 4 x 1GbE  | 8 x 1GbE  | 2 x 10GbE/1GbE  | 4 x 10GbE/1GbE  | 4 x 10GbE/1GbE  | 8 x 10GbE/1GbE  | 4 x 10GbE/1GbE, 2x 40G QSFP, 2x 100G QSFP28   | -   | -   |
| Interface                      | 100/1000 BASE-T,1000 BASE-SX/LX   |   |   | 10G BASE-T/SR/LR/ER, 1000BASE-T/SX/LX   |   |   |   | 100G SR4/LR4  | -   | -   |
| Capture Performance            | 2Gbps   | 4Gbps   | 8Gbps   | 10Gbps  | 20Gbps  | 40Gbps  | 80Gbps  | 100Gbps   | -   | -   |
| Local Storage (TB)             | 30.0  | 9.0   | 95.0  | 9.0   | 32.5  | 65.0  | 130.0   | 162.5   | 95.0  | 32.5  |
| Time stamp resolution          | 1ns   | 1ns   | 1ns   | 1ns   | 1ns   | 1ns   | 1ns   | 1ns   | -   | -   |
| RAID                           | 5   | 5   | 6   | 5   | 6   | 6   | 6   | 6   | -   | -   |
| PacketReplayer                 | -   | Y   | -   | -   | Y   | Y   | -   | Y   | -   | -   |
| PTP/1PPS syncro                | Y   | Y   | Y   | Y   | Y   | Y   | Y   | Y   | -   | -   |
| Power (W) 100V-240VAC          | 350   | 350   | 1100  | 350   | 1100  | Control 1100 x 1unit Storage 600 x 1unit  | Control 1100 x 1unit Storage 600 x 3unit  | Control 1100 x 1unit Storage 600 x 4unit  | 600   | 600   |
| Operating temperature/humidity | 10-35°C /50-95°F /8%-85% ( noncondensing )  |   |   |   |   |   |   |   |   |   |
| Weight (Kg)                    | 14.0  | 14.0  | 22.0  | 14.0  | 22.0  | Control unit:22 Storage unit: 24 ( each unit )                                    |   |   | 24.0  | 24.0  |
| Dimensions H x W x D (cm)      | 4.3 x 43.4 x 53.5   | 4.3 x 43.4 x 48.4   | 8.7 x 44.4 x 71.6   | 4.3 x 43.4 x 48.4   | 8.7 x 44.4 x 71.6   | Control unit: 8.7 x 44.4 x 71.6 Storage unit: 8.7 x 48.2 x 54.1                   |   |   | 8.7 x 48.2 x 54.1   | 8.7 x 48.2 x 54.1   |

| Model                          | SYU/SYC-2G-EP2  | SYU/SYC-4G-HPP2   | SYU/SYC-10G-EP  | SYU/SYC-20G-HPP2  | SYU/SYC-40G-HPP2  | SYU/SYC-80G2-HPP2  | SYU/SYC-100G-HPP2   | SYU/SYC-200G-HPP  |  |
|--------------------------------|---|---|---|---|---|--|---|---|--|
|                                |  |  |  |  |  |  |  |  |  |
| Monitoring Port                | 4 x 1GbE  | 4 x 1GbE  | 2 x 10GbE/1GbE  | 4 x 10GbE/1GbE  | 4 x 10GbE/1GbE  | 8 x 10GbE/1GbE   | 4 x 10GbE/1GbE, 2 x 40G QSFP+, 2 x 100G QSFP28  | 4 x 100G QSFP28   |  |
| Interface                      | 100/1000 BASE-T, 1000 BASE-SX/LX  |   | 10G BASE-T/SR/LR/ER, 1000BASE-T/SX/LX   |   |   |  | 100G SR4/LR4  | 100G SR4/LR4  |  |
| Capture Performance            | 2Gbps   | 4Gbps   | 10Gbps  | 20Gbps  | 40Gbps  | 80Gbps   | 100Gbps   | 200Gbps   |  |
| Local Storage (TB)             | 1.5   | 3.9   | 3.9   | 11.0  | 19.0  | 44.5   | 57.5  | 100.0   |  |
| Time stamp resolution          | 1ns   | 1ns   | 1ns   | 1ns   | 1ns   | 1ns  | 1ns   | 1ns   |  |
| RAID                           | -   | -   | -   | -   | -   | -  | -   | -   |  |
| PacketReplayer                 | -   | Y   | -   | Y   | Y   | -  | Y   | Y   |  |
| PTP/1PPS syncro                | Y   | Y   | Y   | Y   | Y   | Y  | Y   | Y   |  |
| Power (W) 100V-240VAC          | 400   | 400   | 400   | 400   | 400   | 680  | 800   | 800   |  |
| Operating temperature/humidity | 10-35°C /50-95°F /8%-85% ( noncondensing )  |   |   |   |   |  |   | 10-30C/50-90F/8%-85%(noncondensing )  |  |
| Weight (Kg)                    | 9.0   | 9.0   | 9.0   | 9.0   | 9.0   | 13.4   | 19.8  | 22.0  |  |
| Dimensions H x W x D (cm)      | 25.4 x 38.1 x 17.8  |   |   |   |   | 32.9 x 40.6 x 17.5   | 33.9 x 43.0 x 25.0  | 42.0 x 43.0 x 25.0  |  |

Unlike the networks of yesterday, today's networks are much more complex and the traffic volume they carry are magnitudes higher in comparison.

Identification of a network issue is a good first step towards resolution. However, it becomes more challenging to get to the root cause – to really find out what is happening on the network.

If your analyzer does not have the ability to capture all packets over an extended period of time, a resolution is highly unlikely.

From “**The Forgotten Requirement of Network Analysis**”



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**TOYO Corporation**



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