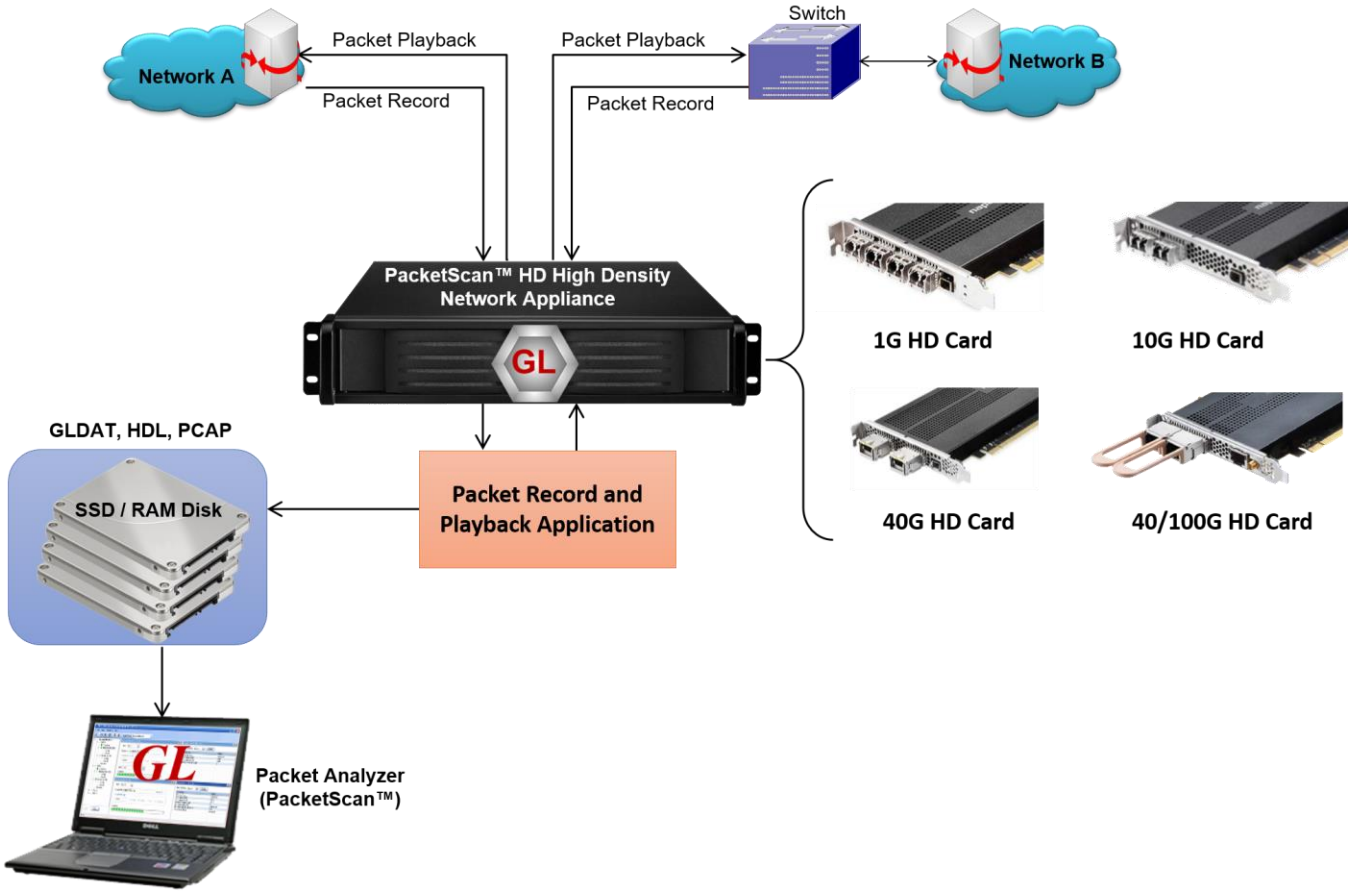
PacketRecorder™ and PlayBack™ for Capture and Replay of Network Traffic

GL Communications Inc.
818 West Diamond Avenue - Third Floor, Gaithersburg, MD 20878
Phone: (301) 670-4784 Fax: (301) 670-9187 Email: info@gl.com
Website: https://www.gl.com

Overview



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Introducing PacketScan™ HD

(4x1 GigE, 2x1/10 GigE, 2x25 GigE, 8x10 GigE, and 2x40/100 GigE)

**Also available as a rack mounted unit

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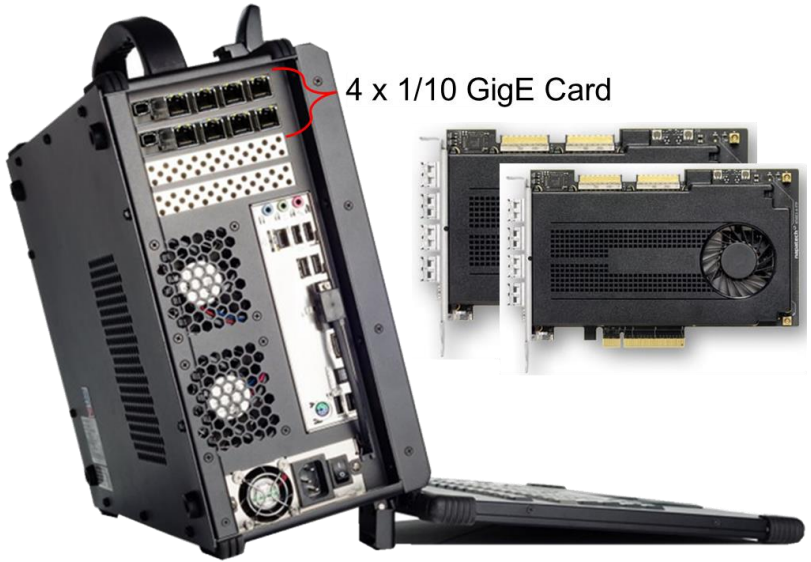
PacketScan™ HD, PacketRecorder™ & PlayBack™ 2 (4 x 1/10 GigE)



PacketScan™ HD - Lunch Box

Lunchbox specs are:

- Intel Xeon Silver 4210
- 64GB RAM
- 500GB SSD for OS
- 4x 3.84TB NVME SSD

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What the software does?

- Record feature includes a powerful Hardware Filter that allows user to filter out unwanted traffic, and continuously capture the traffic of interest up to the limits of the hard disk size and the disk write speed
- The previously recorded traffic is replayed on selected network interface cards and can be analyzed using GL's PacketScan™ and Wireshark® application

Main Features

PacketRecorder™

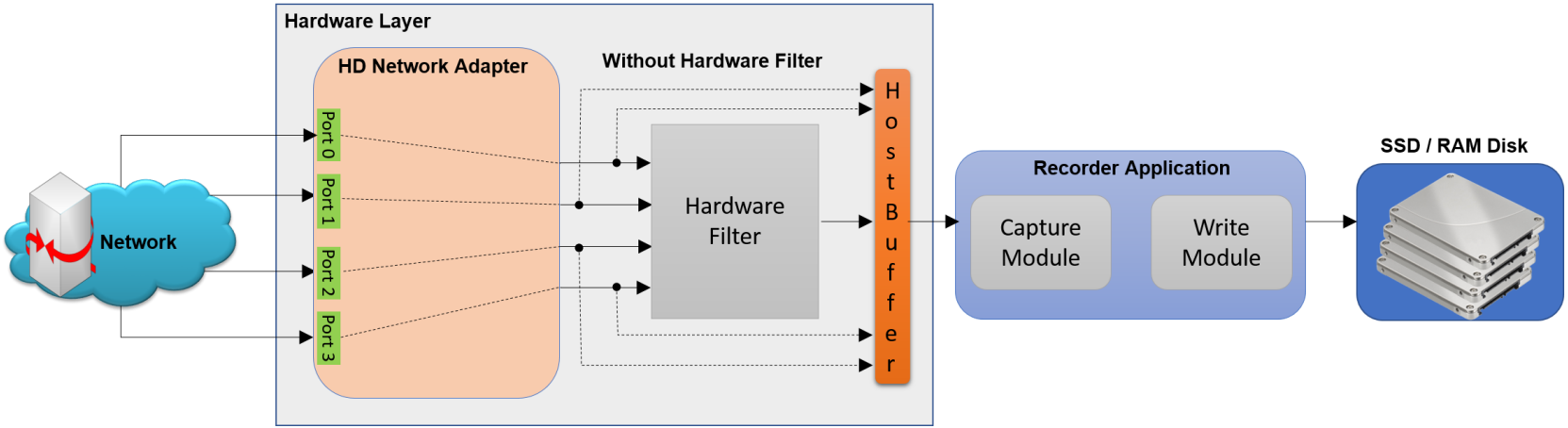
- Captures 100% packet data on high-speed lines (maximum of 5 Gbps data rate)
- Capture packets non-intrusively over Ethernet (Electrical) and Optical ports at Nano-second precision
- Recording can be done on single port or combination of one or more ports. Multiple instances of recorder can run simultaneously
- Flexible options to record traffic continuously based on File size, File count, Frame count and Duration
- Record only traffic-of-interest by applying efficient hardware filters based on MAC, 802.1Q (VLANs), IPv4/IPv6, Tunnel Traffic (Tunnel 1 and Tunnel 2), TCP, UDP, SCTP, SIP, and RTP parameters
- Filtering of inner layer of GTP, GRE, and VXLAN tunnel traffic such as inner IPv4/IPv6 addresses and Transport Protocols (UDP, TCP and SCTP) port numbers
- User can create their own filters using custom filter option which provides flexibility to check the fields and use the logical AND, OR conditions more efficiently
- Option to view the historical graph of overall rate, frames/sec, per-port rate, per-port frames/sec, and Port Down status from the record start time to end time
- Supports both IPv4 and IPv6
- Provides statistics of captured frame count, dropped frame count, recorded frame count capture rate, frame rate, recorded files count, and more

Main Features (Contd.)

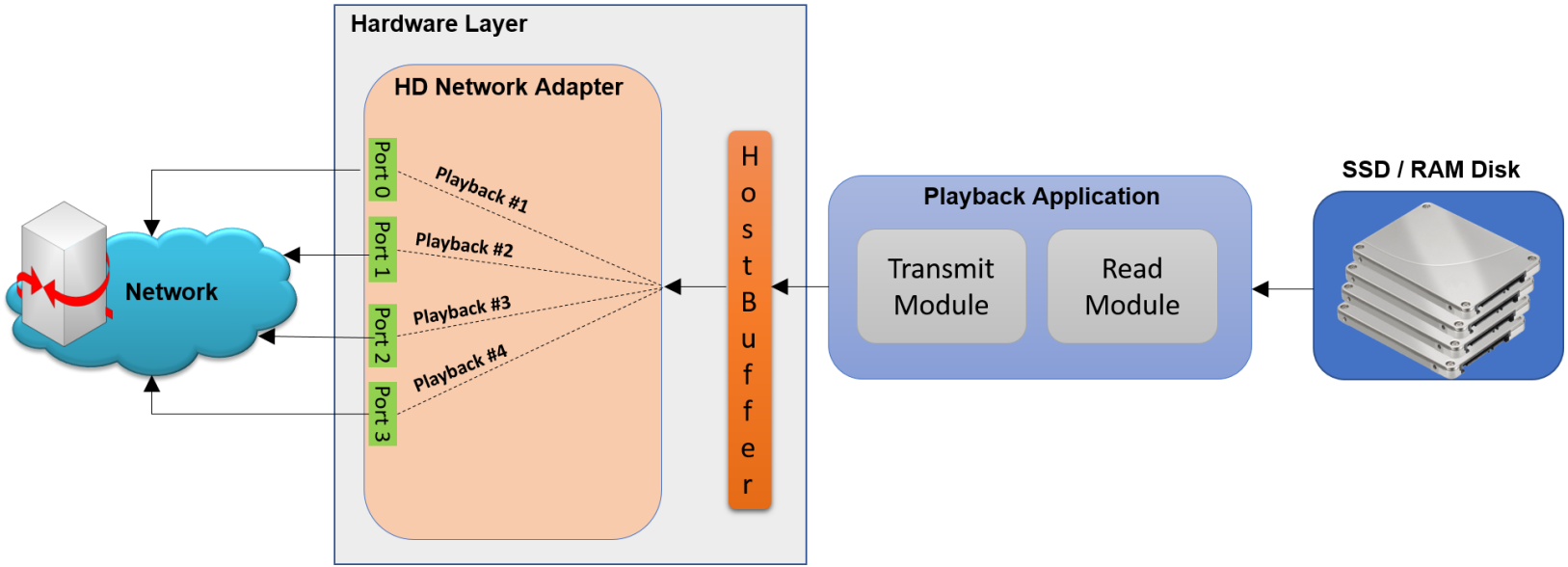
PlayBack™:

- Replay the pre-recorded traffic files at the same rate at which it is captured (maximum of 5 Gbps data rate)
- Provides options to playback single file or multiple sequential files
- Provides statistics of total frames transmitted, under sized frames count, oversized frames count, and different sized frame count etc.

PacketRecorder™ Architecture

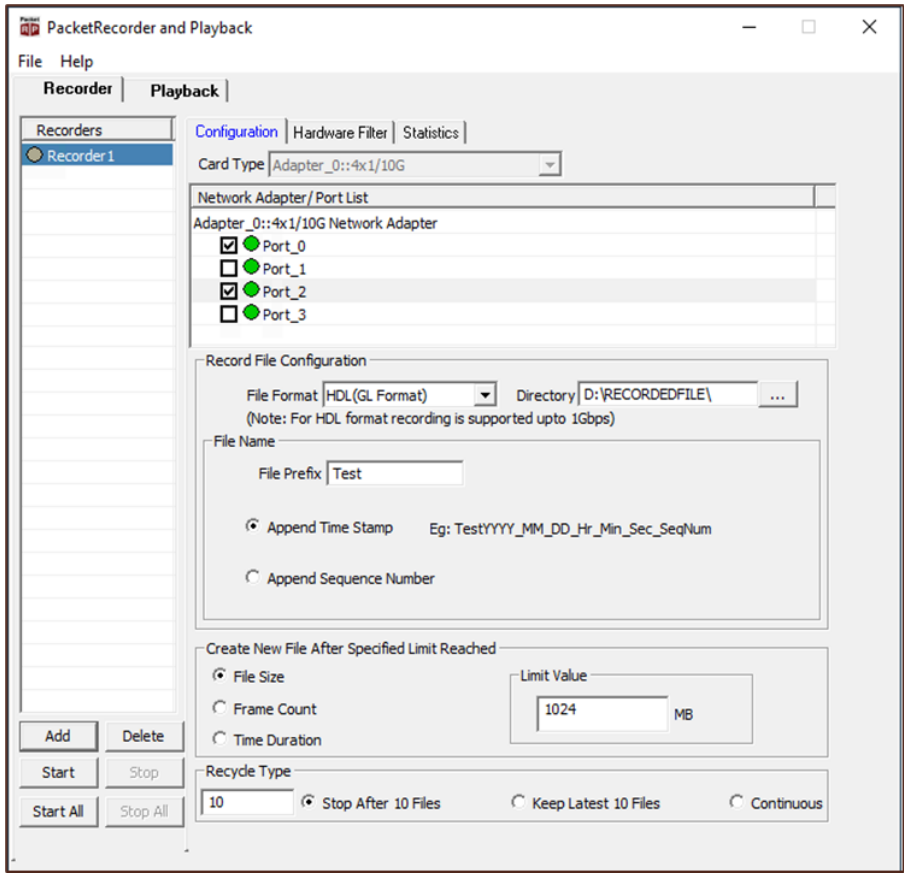


PlayBack™ Architecture



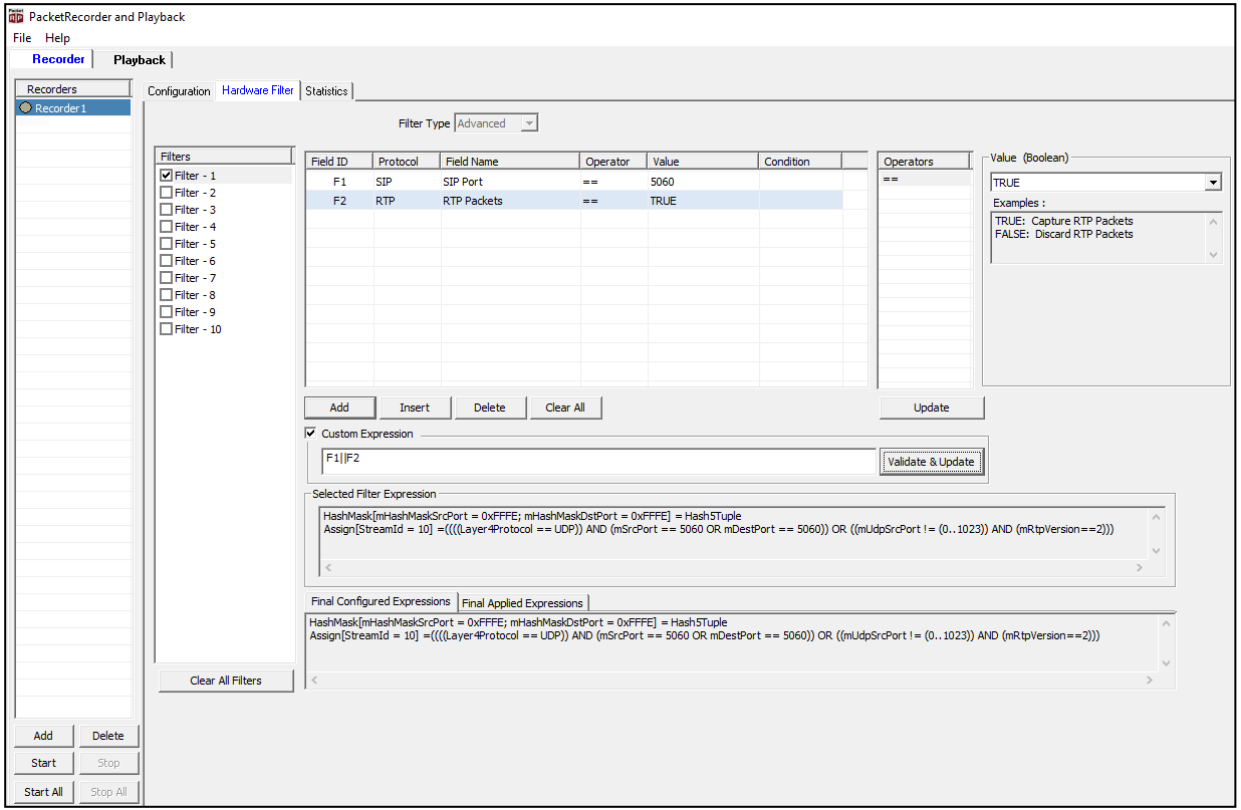
PacketRecorder™ Operations

- In Record mode, high speed real-time traffic can be recorded with precise hardware time stamping
- The Record feature includes a powerful Hardware Filter that allows user to filter out unwanted traffic, and continuously capture the traffic of interest

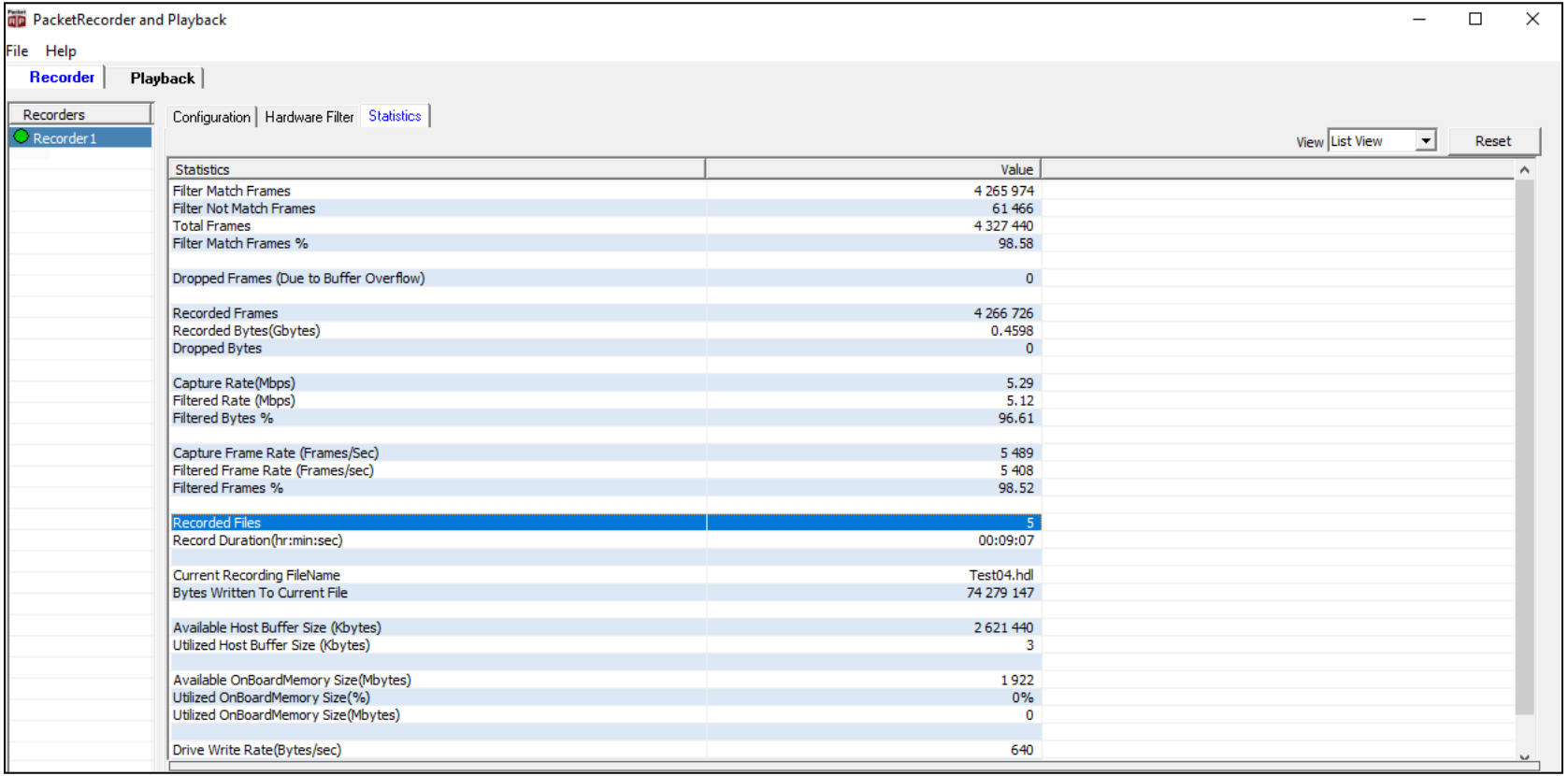


Hardware Filters

- Hardware filters options are useful to capture traffic based on user interest



Recorder Statistics



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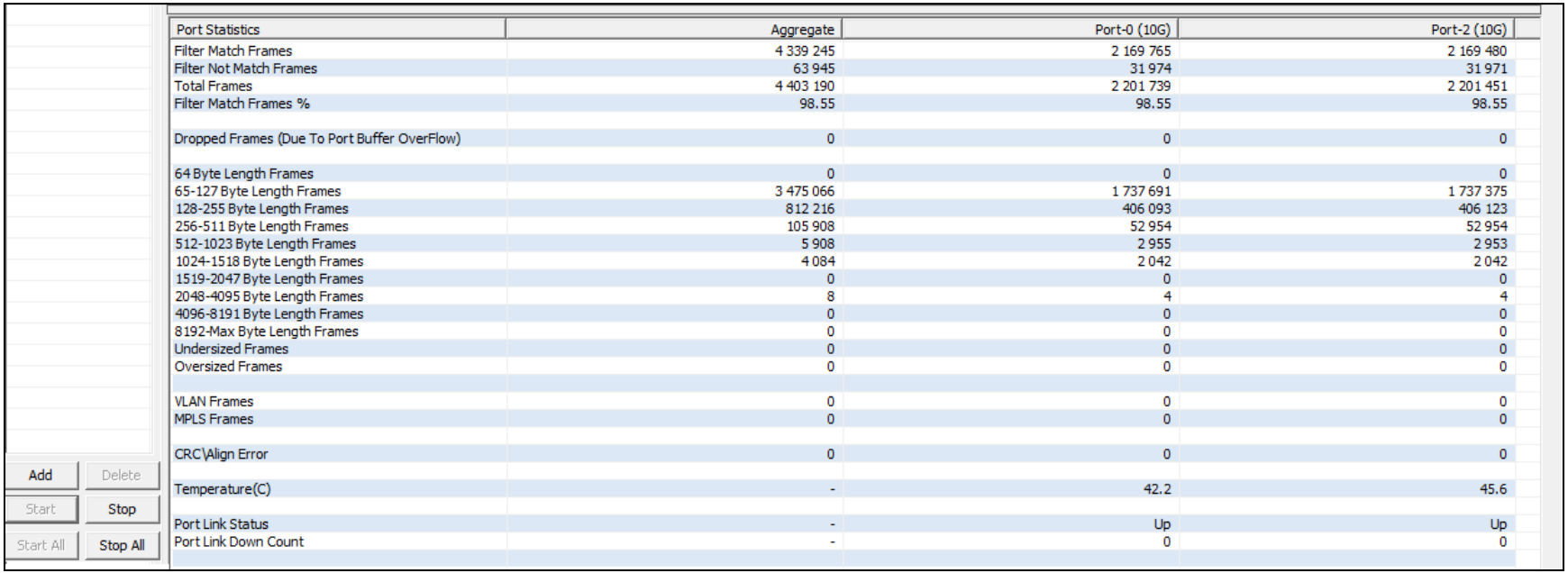
Recorder Statistics (Contd.)



Port Statistics	Aggregate	Port-0 (10G)	Port-2 (10G)
Filter Match Frames	4 339 245	2 169 765	2 169 480
Filter Not Match Frames	63 945	31 974	31 971
Total Frames	4 403 190	2 201 739	2 201 451
Filter Match Frames %	98.55	98.55	98.55
Dropped Frames (Due To Port Buffer OverFlow)	0	0	0
64 Byte Length Frames	0	0	0
65-127 Byte Length Frames	3 475 066	1 737 691	1 737 375
128-255 Byte Length Frames	812 216	406 093	406 123
256-511 Byte Length Frames	105 908	52 954	52 954
512-1023 Byte Length Frames	5 908	2 955	2 953
1024-1518 Byte Length Frames	4 084	2 042	2 042
1519-2047 Byte Length Frames	0	0	0
2048-4095 Byte Length Frames	8	4	4
4096-8191 Byte Length Frames	0	0	0
8192-Max Byte Length Frames	0	0	0
Undersized Frames	0	0	0
Oversized Frames	0	0	0
VLAN Frames	0	0	0
MPLS Frames	0	0	0
CRC\Align Error	0	0	0
Temperature(C)	-	42.2	45.6
Port Link Status	-	Up	Up
Port Link Down Count	-	0	0

Add Delete
Start Stop
Start All Stop All

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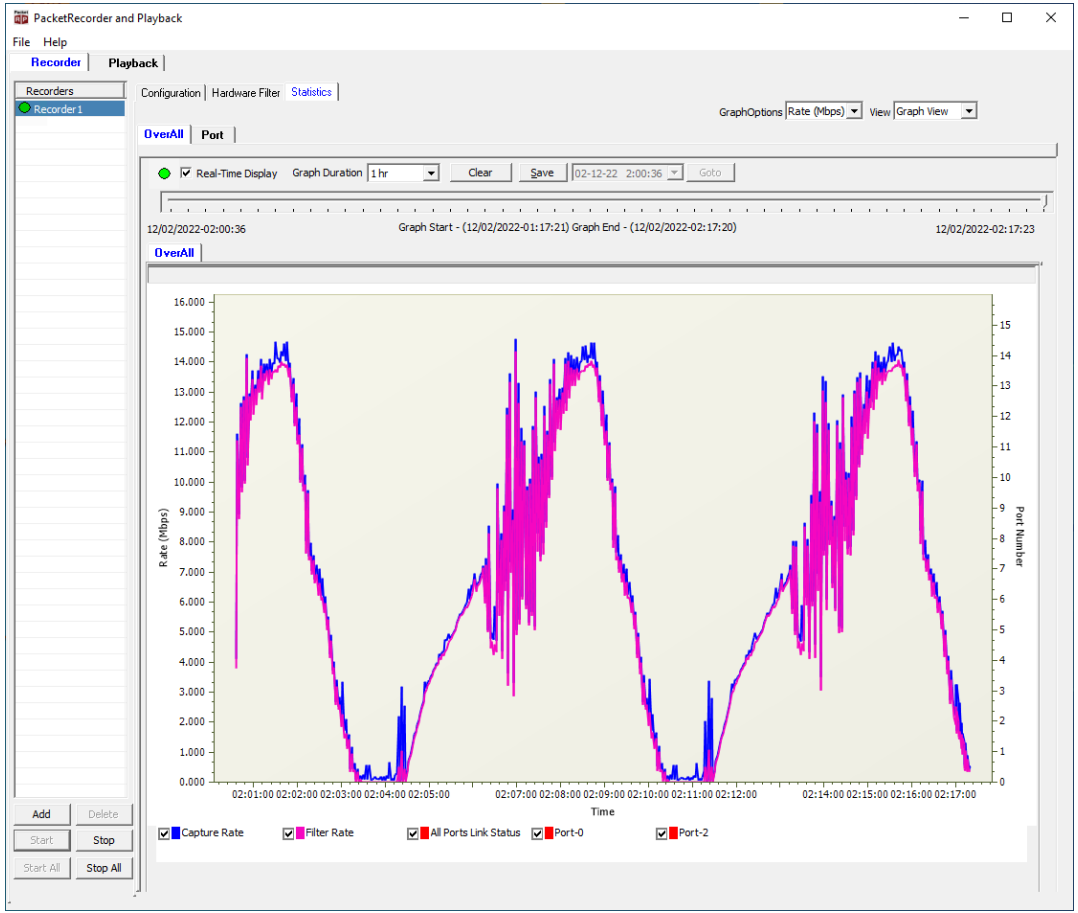
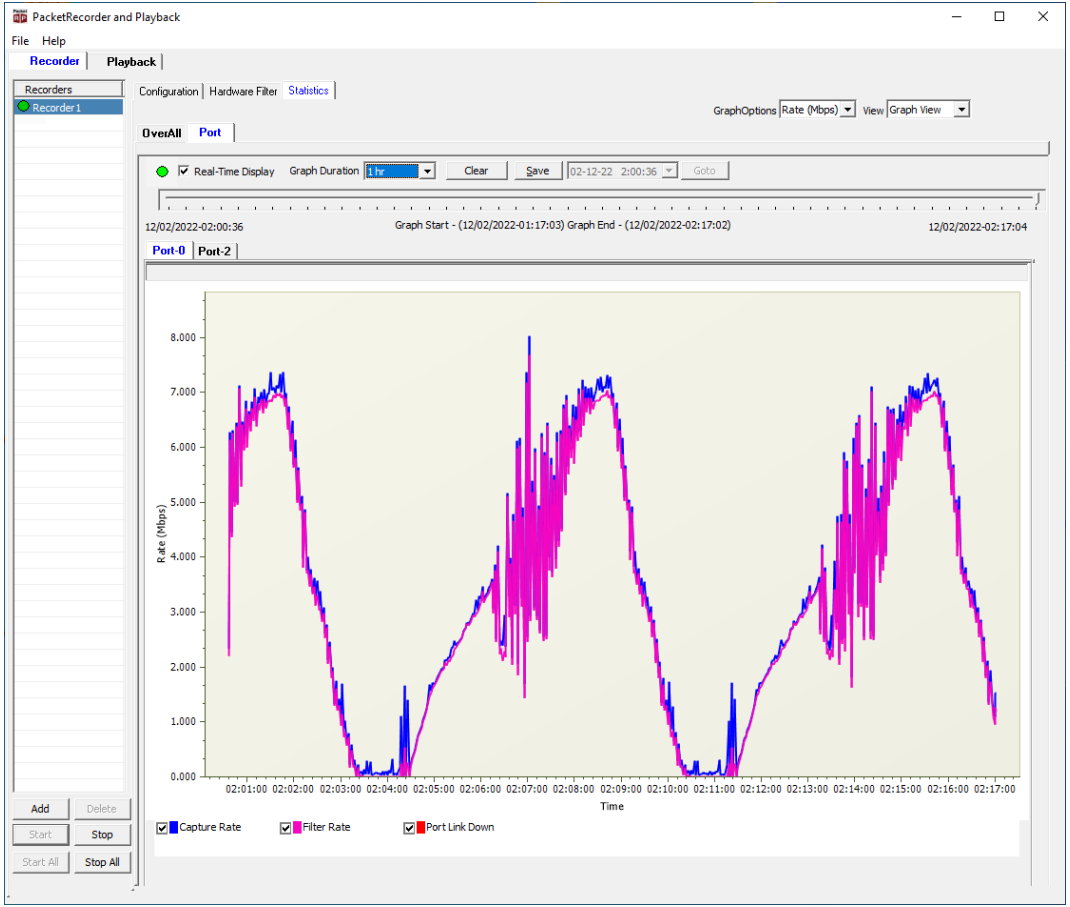
Graphs – Overall View



Graphs – Per Port View



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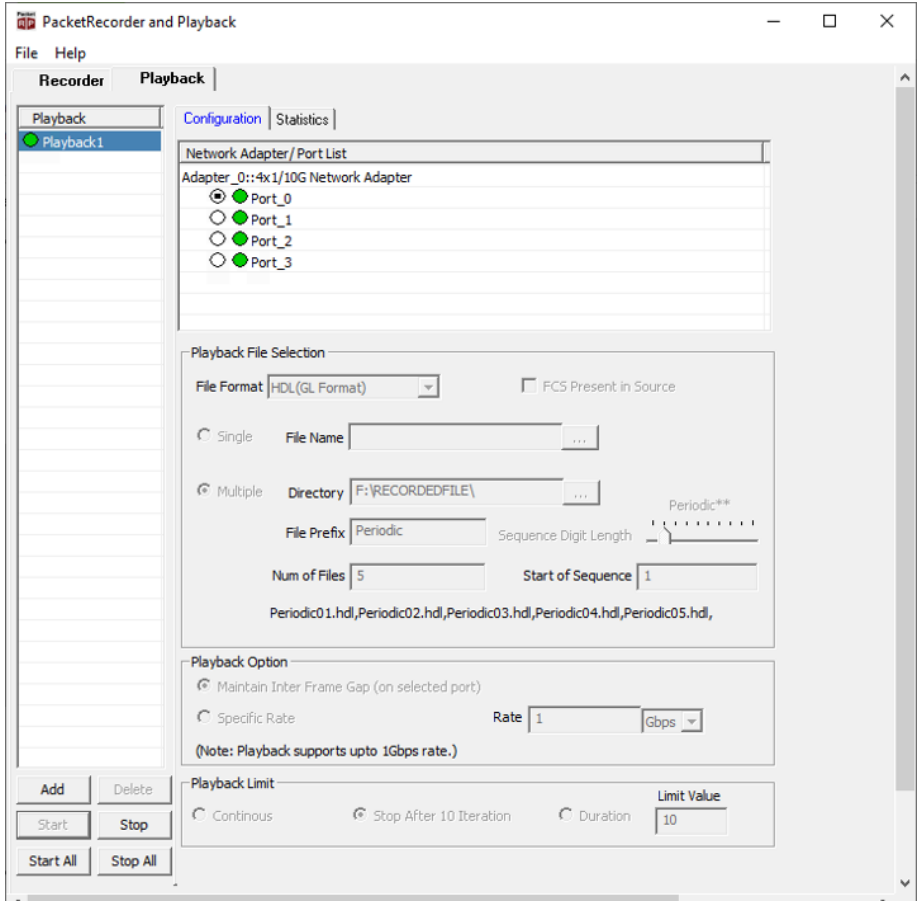
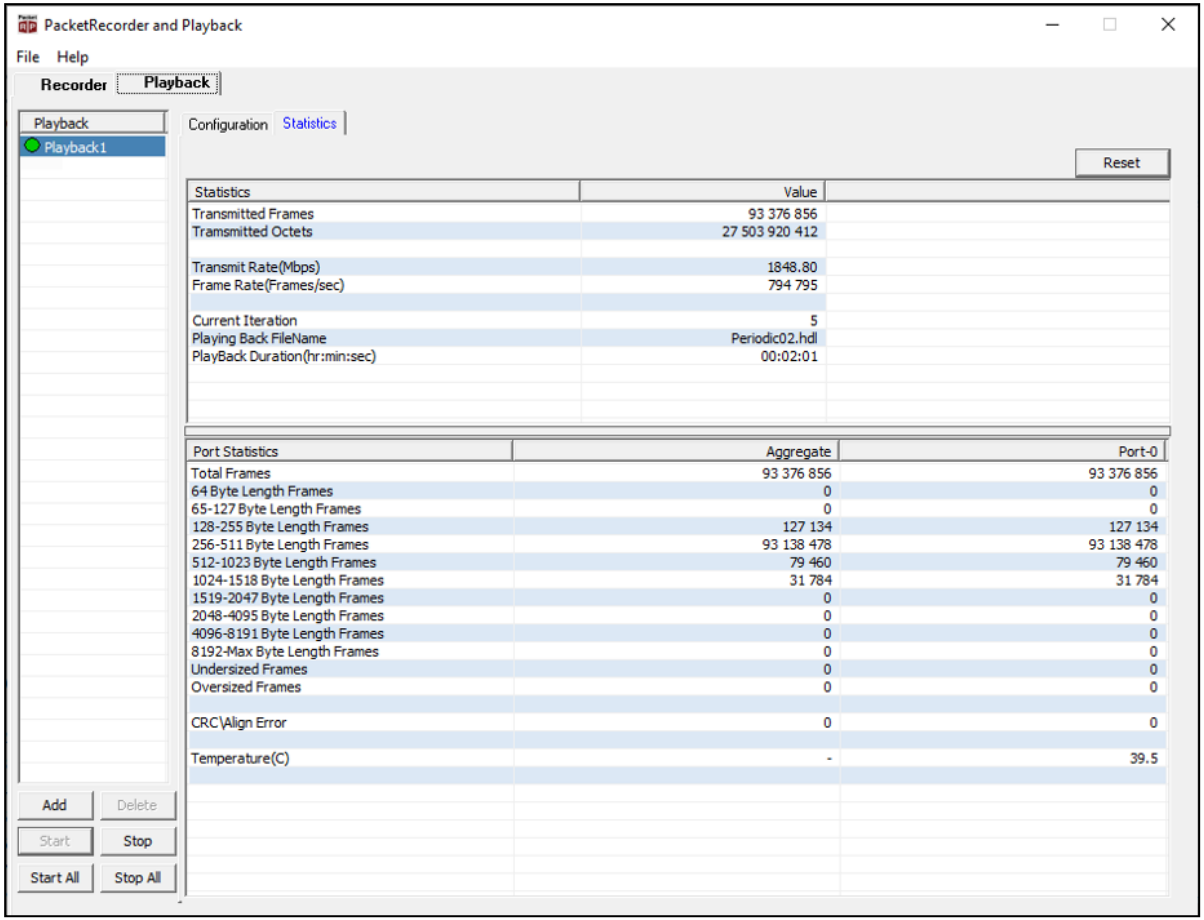
Playback™ (PacketReplay™)

- In Playback™ mode, the configuration window allows to playback single or multiple recorded files on the selected HD NIC interface port

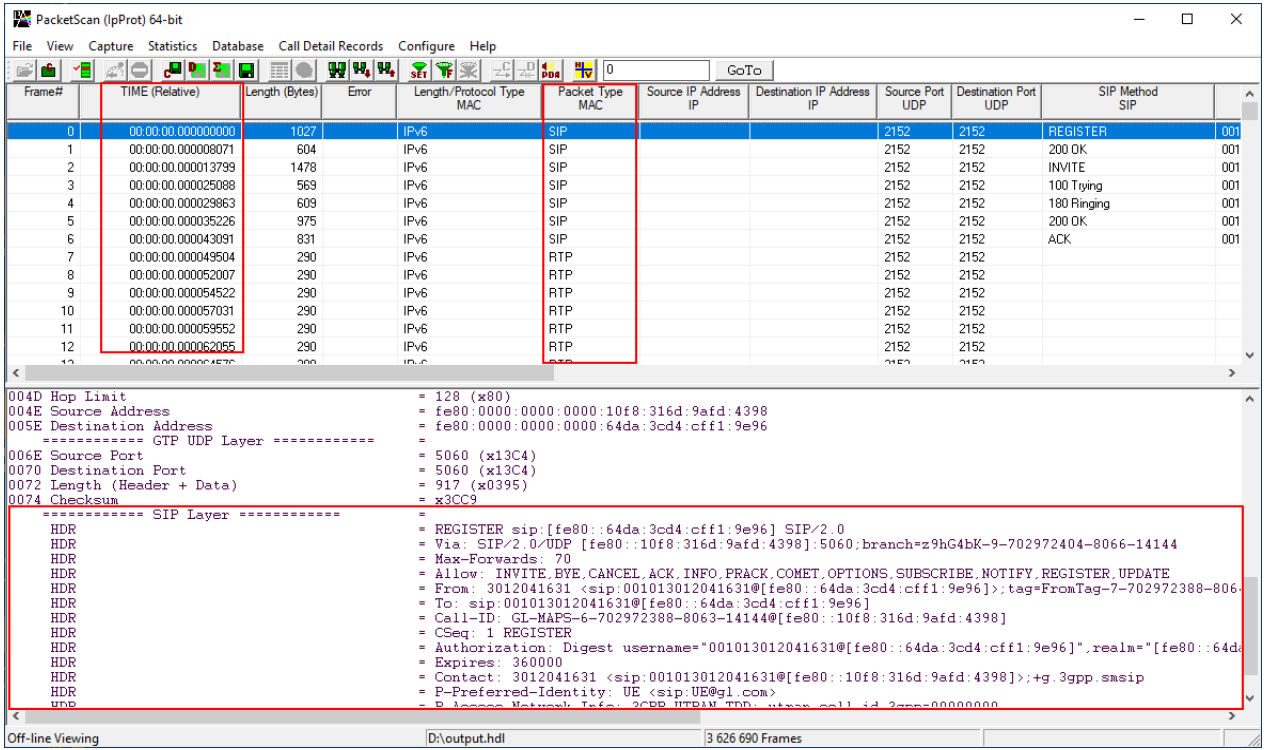


Playback™ Statistics



Analysis of Recorded Traffic using PacketScan™ Application

- User can verify the **Nanosecond** timestamp, **SIP / RTP data** packets, and **SIP Layer** decode information as shown



Thank you