

SwiftWing Sirius NDR

Capture anything.
Capture everything.



Ultra High-Performance
10M to 100G
deep packet capture and
storage solution

Designed to meet today's demand for high speed and high quality ethernet based packet recording on IP networks.

The maximum storage performance is measured up to 200Gbps for the consideration of multiple network streams to be recorded.

Total flexibility on recording configuration with multiple media rates support, multiple capture adapters attachment.

SwiftWing Sirius NDR now supports 10M / 100M / 1G / 10G / 25G / 40G / 100G ethernet.

Rich functionality that compliment user's demand for network record, storage and analysis.

SwiftWing SIRIUS Benefits

Works seamlessly with industry leading network monitoring and analytic solutions.

Captures and stores data in standard PCAP and nanoseconds PCAP format which can be conveniently used by all other network monitoring, analysis tools and applications available in the market today.

Ease-of-use to perform targeted tasks and selections

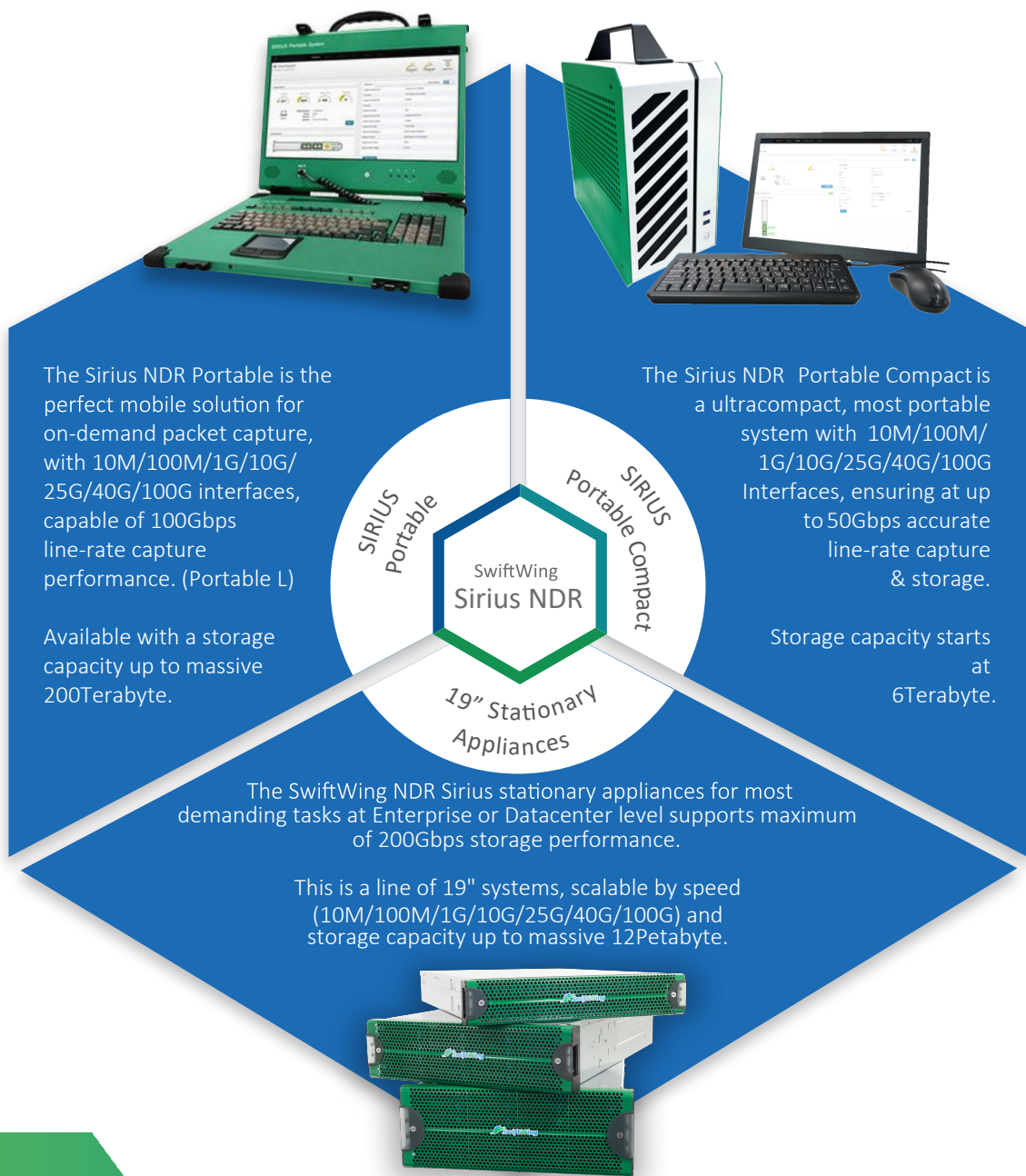
- Intuitive graphical user interface for complete controls and flexible system configurations.
- Robust and flexible hardware filtering function to both the packet header and payload during the capture process with no impact to the capture performance.

Scalable Solutions

- Complete range of products – from rack-mounted to portable systems.
- Customizable storage configurations.



*Data capture performance increases along with the network interface card speed.



Key Features

- ✓ Support long term Real-time Packet Replay. Captured data can be replayed according to the time stamp of the PCAP file.
- ✓ Support 10/100M/1G/10G/25G/40G/100G Ethernet. Maximum of storage performance is over 200Gpbs.
- ✓ Sirius NDR produces list of PCAP files chronologically on system drives. Therefore, the PCAP can be served as data source for analytical tools via hypervisor or built-in Wireshark. (Figure. 1,2,3)
- ✓ One Sirius can capture four different traffic simultaneously. (Maximum of 4 channels) (Figure. 4)
- ✓ Powerful capture configuration that supports packet slicing, file rotation and data protection mechanism.
- ✓ Built-in packet decode display allows viewing of packet data directly on the GUI.
- ✓ Intuitive and easy-to-use interface across all desktops & mobile devices.
- ✓ RESTful API for remote access to stored data, pcap files and statistics. Enables integration with 3rd party appliances and custom.
- ✓ Hardware filter engine allows pass-through of specific network traffic. (Figure. 10)
- ✓ Easy to use and intuitive software filtering allows fast extraction of target packets. (Figure. 11)
- ✓ Real-time and historical packet statistics and graph displays.
- ✓ Support SNMP traps, remote syslog, internal application log for alerts and security logging.
- ✓ Microseconds statistics allow in-depth microburst analysis.
- ✓ Support analysis of captured traffic by application and IPv4 address pair.
- ✓ Support three ways of synchronize time : NTP, PTP and Manual setting.

Multi Channel (1, 2, 4 channels)

Figure. 1Figure. 2

#1 : Capturing
#2 : Analysing

Figure. 4 4 channel capture control



Media Interface


10G-A2 Multirate Media Interface		
Supported Media Modules	SFP/SFP+	
Ports	2	
Supported Rates	10 Mbps : 10 Base-T 100 Mbps : 100 Base-TX 1 Gbps : 1000 BASE-SX/-LX/-T 10 Gbps : 10 Gbase-SR/-LR/-T	

Figure.7 10G-A2 Multirate Media Interface

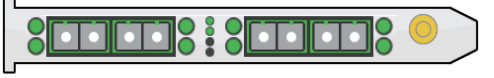
10G-B1 Multirate Media Interface		
Supported Media Modules	SFP/SFP+	
Ports	4	
Supported Rates	10 Mbps : 10 Base-T 100 Mbps : 100 Base-TX 1 Gbps : 1000 BASE-SX/-LX/-T 10 Gbps : 10 Gbase-SR/-LR/-T	

Figure.8 10G-B1 Multi Media Interface


100G-A2/100G-A3 Multirate Media Interface		
Supported Media Modules	QSFP28/QSFP+	
Ports	2 (Up to 8 ports when 10/25G I/F mode is selected)	
Supported Rates	10 Gbps : 10 Gbase-SR/-LR/-T 25 Gbps : 25 Gbase-SR/-LR/-CR (RS-FEC support) 40 Gbps : 40 Gbase-SR4/LR4/-CR4 100 Gbps : 100 Gbase-SR4/-LR4/-PSM4/-CLR4/-CR4/-ER4 (RS-FEC support)	

Figure.9 100G-A2/100G-A3 Multi Media Interface

H/W and S/W Filtering Functions

Copy and paste custom Pre-filter code into the box below:

This is a sample custom template to filter HTTP traffic based on TCP payload.

```
(tcp.payload[0:4]="GET " or tcp.payload[0:4]="POST" or
tcp.payload[0:4]="HEAD" or tcp.payload[0:4]="PUT " or
tcp.payload[0:4]="DELETE" or tcp.payload[0:4]="TRAC" or
tcp.payload[0:4]="OPTI" or tcp.payload[0:4]="CONN" or
tcp.payload[0:4]="PATC") and (input = 0 or input = 1)
```

Figure.10 Hardware filtering

Post Filter Information and Syntax			
General	Aggregation	List	Range
Filter fields	Filter syntax	Combination	
Ethtype	eth.type	eth.type = 0x8100	
VLAN ID	vlan.id / vlan1.id	vlan.id = 32	
Nested VLAN ID	vlan2.id	vlan2.id = 64	
Any address	ip	ip = 168.64.0.0	
Source address	ip.src	ip.src = 168.64.0.0	
Destination address	ip.dst	ip.dst = 168.64.0.0	
Protocol	ip.proto	ip.proto = 17	
Any port	port	port = 80	
Source port	port.src	port.src = 12	
Destination port	port.dst	port.dst = 8080	

Figure. 11 Software filtering

Dynamic Indexing and Post Filter

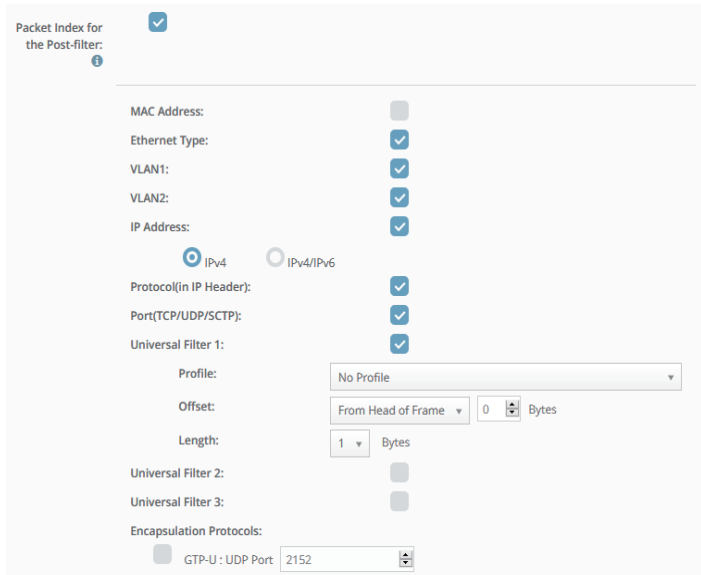


Figure. 9 Post-filter

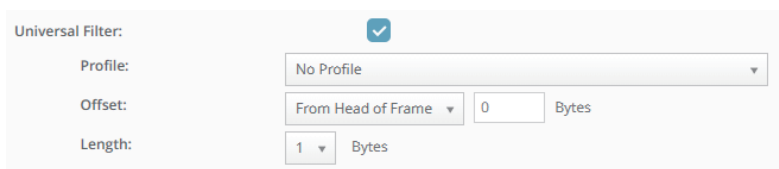


Figure. 10 Universal filter

Post-Filter can be applied with any values at different and multiple positions within the packet's structure. Each search field such as IP address can accept multiple values, ranged values and aggregate with another search field, such as port numbers.

Common OSI layer protocol's header and payload are both searchable with Universal Filter. The "index" enabled post-filter dynamic structure can be defined before starting a capture.

By having Universal Filter with specific target by setting offset and length from a packet, it is an effective way to optimize search and filtering in terms of speed and volume.

Channel-to-Channel Exclusive Control

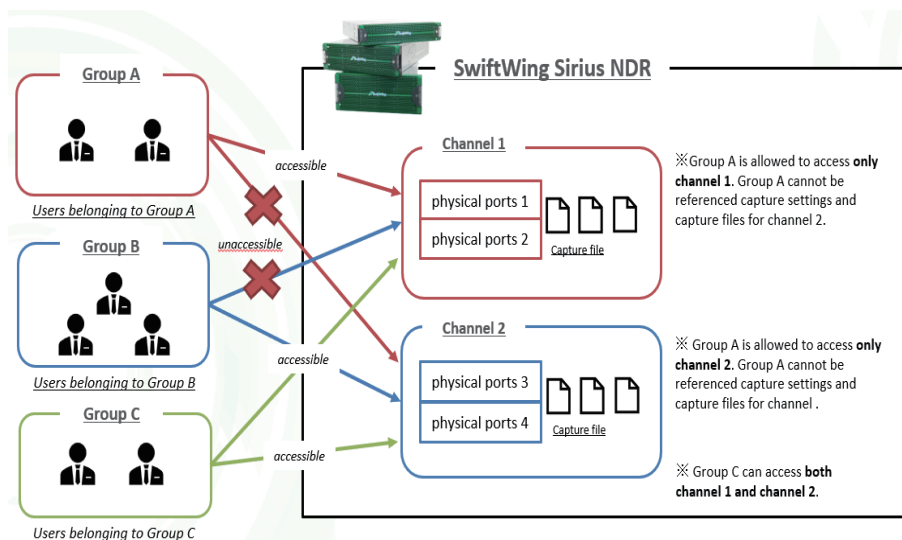


Figure. 11 Channel-to-channel exclusive control function

Permissions to perform key functions such as capture, capture file download, and post-filter can be assigned on a per-channel basis. Each group can manage the resources of the same chassis by physical port, allowing multiple users to use a single chassis as multiple independent capture systems.

As shown in the figure on the right, users belonging to Group A is only allowed to access physical ports 1 and 2 (channel 1), users belonging to Group B is only allowed to access physical ports 3 and 4 (channel 2). At the same time, users belonging to Group C can be configured to allow access to both Channel 1 and Channel 2.

It is also possible to flexibly assign various privileges to each group.

Traffic Analysis

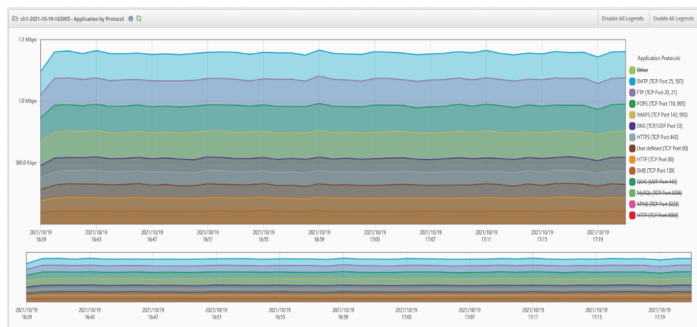


Figure. 12 Application by Protocol

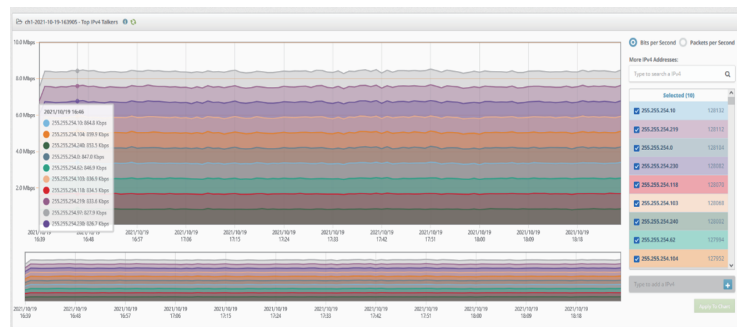

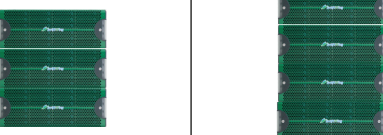



Figure. 13 Top IPv4 Talkers

Traffic analysis analyzes and graphically displays the traffic volume by application and IPv4 address pair traffic volume. By using this, the status of captured traffic can be analyzed by application and IPv4 address pair. It is very useful for understanding the overview of traffic and identifying the cause of bursts.

						
Deployment	Enterprise		Data Center, Server Access Layer Long-Term Retention, Core Server Access Layer		Anywhere - suitable for Field Engineer	
Rackmount	2U	4U	4U + JBOD		Portable L	Portable Compact
Model	NDR-2USS1-200Gi-B24-45T	NDR-4USS1-400Gi-C32-60T	NDR-12UH-400Gi-C-1440T-M3L	NDR-16UH-200Gi-1440T-M4L	NDR-PL1SS1-200Gi-C32-60T	NDR-PC1SN1-200Gi-B8-12T
Media I/F	Media I/F Model: 100G-A2 Support Interface: QSFP28/QSFP+ x 2 10Gbase-SR/-LR/-T 25Gbase-SR/-LR/-CR 40Gbase-SR4/-LR4/-CR4 50Gbase-SR2/-LR2/-CR2 * 100Gbase-SR4/-LR4/-PSM4/ -CLR4/-CR4/-ER4	Media I/F Model: 100G-A2x2 Support Interface: QSFP28/QSFP+ x 4 10Gbase-SR/-LR/-T 25Gbase-SR/-LR/-CR 40Gbase-SR4/-LR4/-CR4 50Gbase-SR2/-LR2/-CR2 * 100Gbase-SR4/-LR4/-PSM4/ -CLR4/-CR4/-ER4	Media I/F Model: 100G-A2x2 Support Interface: QSFP28/QSFP+ x 4 10Gbase-SR/-LR/-T 25Gbase-SR/-LR/-CR 40Gbase-SR4/-LR4/-CR4 50Gbase-SR2/-LR2/-CR2 * 100Gbase-SR4/-LR4/-PSM4/ -CLR4/-CR4/-ER4	Media I/F Model: 100G-A2 Support Interface: QSFP28/QSFP+ x 4 10Gbase-SR/-LR/-T 25Gbase-SR/-LR/-CR 40Gbase-SR4/-LR4/-CR4 50Gbase-SR2/-LR2/-CR2 * 100Gbase-SR4/-LR4/-PSM4/ -CLR4/-CR4/-ER4	Media I/F Model: 100G-A3 Support Interface: QSFP28/QSFP+ x 4 10Gbase-SR/-LR/-T 25Gbase-SR/-LR/-CR 40Gbase-SR4/-LR4/-CR4 50Gbase-SR2/-LR2/-CR2 * 100Gbase-SR4/-LR4/-PSM4/ -CLR4/-CR4/-ER4	Media I/F Model: 100G-A2 Support Interface: QSFP28/QSFP+ x 4 10Gbase-SR/-LR/-T 25Gbase-SR/-LR/-CR 40Gbase-SR4/-LR4/-CR4 50Gbase-SR2/-LR2/-CR2 * 100Gbase-SR4/-LR4/-PSM4/ -CLR4/-CR4/-ER4
Dimension (WxHxD / mm)	490 x 88 x 700	490 x 176 x 700	Main Unit : 490 x 176 x 540 Daughter Unit(x2) : 490 x 176 x 740	Main Unit : 490 x 176 x 540 Daughter Unit(x3) : 490 x 176 x 740	420 x 425 x 250	155 x 266(+49**) x 315 (**)With carrying knob attached
Weight (appr. kg)	28	40	192	272	24	8 (include self powered)
Processor	Intel Multicore Dual CPU		Intel Multicore Dual CPU		Intel Multicore Dual CPU	Intel Multicore Single CPU
Memory	Standard: 128 GB (maximum 4 TB)		Standard: 128 GB (maximum 4 TB)		Standard: 128 GB (maximum 4 TB)	128 GB
Capture Storage (TB)	45(High speed SSD) (maximum 720 TB)	60 (High speed SSD) (maximum 720 TB)	1440 (HDD) (maximum 2160 TB)	2160 (HDD) (maximum 3240 TB)	60 (High speed SSD) (maximum 960 TB)	12 (SSD) (maximum 60 TB)
Storage Performance	80Gbps (25G x 3 line rate configurable) (with RAID5)	110Gbps (25G x 4 line rate configurable) (with RAID5)	100Gbps (25G x 4 line rate configurable) (with RAID5)	130~150Gbps (25G x 4 line rate configurable) (depending on volume configuration) (with RAID5)	110Gbps (25G x 4 line rate configurable) (with RAID5)	50Gbps (25G x 2 line rate configurable) (with RAID5)
Capture Packet Size	64 ~ 10000 Byte		64 ~ 10000 Byte		64 ~ 10000 Byte	
RAID	RAID50 or RAID60, OS Drive RAID1	RAID50 or RAID60, OS Drive RAID1	RAID50 or RAID60 (with Hot spare option), OS Drive RAID1		RAID50 , OS Drive RAID1	RAID 50
Timestamp Accuracy	20ns or less with PPS interface		20ns or less with PPS interface		20ns or less with PPS interface	
Accessories	-		-		carry case with wheels, USB mouse	soft bag, USB mouse, mobile display, mini USB keyboard

We are looking for potential business partners.
Let us know if you are interested!

* 50Gbase coming soon



SwiftWing SIRIUS is ComWorth's flagship brand of products, made in Japan. It was first launched in 2005, designed to meet today and the future demands for high speed and high performance deep packet capture and storage for the monitoring and analysis purposes in the enterprise network.

Founded in 1965, ComWorth is an established solution provider with over 50 years of experience serving customers from various industries such as telecommunications, enterprises, financial institutions, educations, research and development organizations and government agencies. It has offices in Singapore and Germany and the headquarter is in Japan.

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