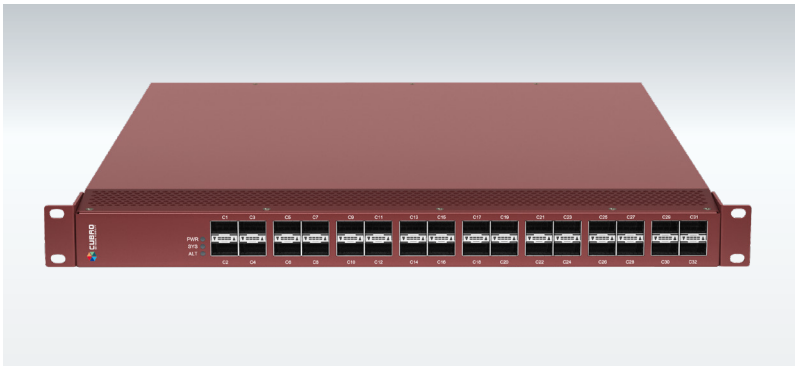
CUBRO
NETWORK VISIBILITY
SIMPLE | SCALABLE | SUSTAINABLE

DATA SHEET

Cubro Sessionmaster EXA32100

PRODUCT OVERVIEW



The Sessionmaster EXA32100 is a high-performance advanced network packet broker that aggregates, filters, duplicates, and load balances network traffic to security, monitoring and management tools based on 4000 possible ACL rules. The Sessionmaster EXA32100 is based on programmable switching fabric. It is built with an advanced Cavium multi-core host controller. This platform allows all filtering features to be implemented at the hardware level for unmatched throughput and performance. This also allows for filtering on the inner headers of network traffic without the need to strip or de-encapsulate the traffic. These features are critical for applications in overlay networks such as identifying and filtering on VXLAN tunnels.

Functions / Benefits:

- Easy to configure: secure Web GUI / CLI / ReST API
- Load balancing: hash-based, session aware load balancing on either outer or inner headers; up to 128 load balancing groups
- Cubro Vitrum Management Suite: The EXA32100 is fully compatible with Cubro Vitrum, a centralized management platform for all Cubro network visibility solutions.
- Filtering on multiple parameters up to Layer 7.

Network Packet Broker (NPB)
At a glance

Definition

A Network Packet Broker (NPB) is a switch-like device purpose-built to receive traffic from a variety of network sources (live link, TAPs, SPANs, mirror ports) and to filter, duplicate, and/or aggregate that traffic to monitoring and security tools.

Advantages of EXA32100

- Filter and load-balance traffic from 10, 25, 40 or 100 Gbps links to multiple monitoring tools
- Aggregates multiple 10 Gbps links to 25, 40, or 100 Gbps monitoring tools
- 32 x 40/100 Gbps (QSFP/QSFP28)
- QSFP28 ports support breakout to 4 x 10/25G
- Up to 4000 parallel rules
- Packet slicing support (64B, 128B, 192B)
- IPv6 support
- No additional port licensing fees or software feature licensing. All features and applications included in the unit price.
- 2-year base warranty period

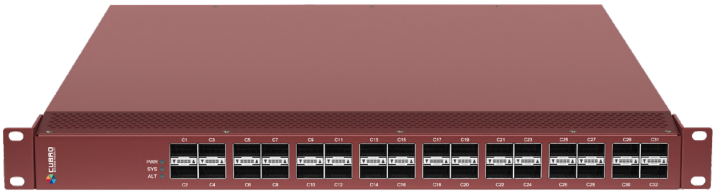
Extended Functions:

The management host controller of the EXA32100 is a cavium multicore processor unit which runs a fully featured Cubro OS. Scripting languages such as Python, Perl, or Bash are available to run 3rd party applications and scripts; extending the functionality of the Sessionmaster. These applications can be developed by Cubro or the customer.

PRODUCT CAPABILITIES / FEATURES

Link/Port Aggregation	Aggregation many to any, and any to many at all link speeds
100G distribution/load balancing	Traffic can be easily distributed across 10G, 25G, and 40G links to monitor highly loaded 100 Gbps links.
Jumbo Frame Support	The Sessiomaster supports jumbo Ethernet frames with a size of up to 16000 bytes.
Support of IPv4 and IPv6	Yes
Ports	32 x QSFP 40 Gbps or QSFP28 100 Gbps 1 x 10/100/1000 Base-T (Management) 1 x RS232 Console
Configuration / Communication	Web GUI, CLI, REST API, SNMPv2
Performance	3,2 Tbps backplane 100 % throughput without any packet loss
Aggregation latency	Average < 700 ns for 64-byte frames
MTBF	201.743 hours
Packet Buffer	24 MB
Different Power Versions	Dual 100-230 V AC or DC power version available

TECHNICAL DATA / SPECIFICATIONS



Operating specifications:

Operating Temperature: 0°C to 40°C
Storage Temperature: -10°C to 70°C
Relative Humidity: 10% min, 95% max (non-condensing)

Mechanical specifications:

Dimension (WxDxH): 490 x 593 x 42,8 mm
Weight: 10,0 kg
Airflow: Front-back

Electrical specifications:

Input Power: 100-240V
Maximum Power Consumption: 220W

Certifications:

Fully RoHS compliant
CE compliant
Safety - UL 60950-1 / CSA C22.2 60950-1-07 / IEC 60950-1 (2005) EN 60950-1 (2006)

INPUTS*

32 x 40 Gbps / 100 Gbps full duplex Ports for any kind of QSFP/QSFP28

* Each port can be input and / or output depending on the application and configuration

*All QSFP/ QSFP 28 ports support breakout cables to 4x10G or 4x25G interfaces

OUTPUTS*

32 x 40 Gbps / 100 Gbps full duplex Ports for any kind of QSFP/QSFP+

* Each port can be input and / or output depending on the application and configuration

*All QSFP/ QSFP 28 ports support breakout cables to 4x10G or 4x25G interfaces

PERFORMANCE

Performance up to 3,2 Tbps
Non-blocking design
Boot time from power on to working 180 sec
Packet delay through processing constant at 700 ns

MANAGEMENT

Management Port: (1) RJ45 10/100/1000 Mbit Configuration

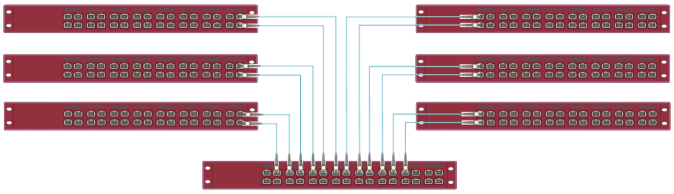
(CLI) Port: (1) RS-232 DB9

USB for software update

APPLICATIONS / SOLUTIONS

Cross connect

100 Gbps port cross connect with central unit

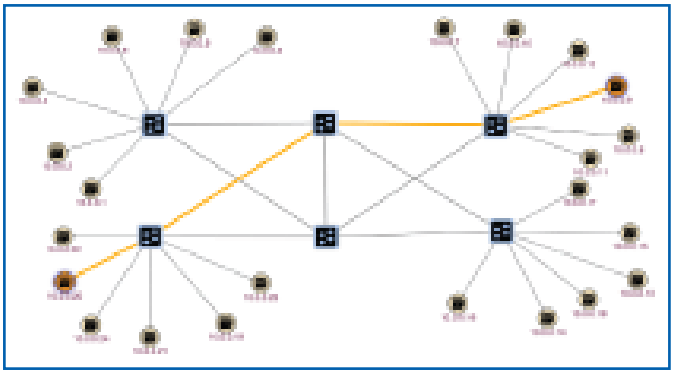


In this application 6 x EXA32100s are connected to a central unit with 186 available 100 Gbps ports (31 available ports per device).

The interconnection between the devices can be done with one link or more depending on the bandwidth required.

The table shows the number of units that can be interconnected and the number of ports available.

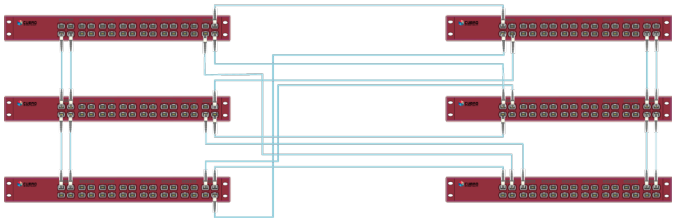
Amount of units	100 Gbps (inteconnect)	200 Gbps (inteconnect)	300 Gbps (inteconnect)	400 Gbps (inteconnect)
6	186 ports	180 ports	174 ports	168 ports
7	217 ports	210 ports	203 ports	196 ports
8	248 ports	240 ports	232 ports	224 ports
9	279 ports	270 ports	261 ports	252 ports
10	310 ports	300 ports	290 ports	XXX



The entire solution is managed by Cubro Vitrum, a server-based network management software. The visualisation of the software platform gives a better overview of the network and its traffic.The batch backup, upgrade and the error notifications allow for easy management of Cubro's devices.

Additionally, it is capable of including third party devices in the visualisations. Kibana and Grafana integration allow the user to create and customize graphical dashboards that show all the necessary information at one glance.

Application 100 Gbps port cross connect full mesh



In this application 6 x EXA32100s are connected to a fully meshed cross connect with 162 available 100 Gbps ports (27 available ports per device). The interconnection between the devices can be done with one link or more depending on the bandwidth that is needed.

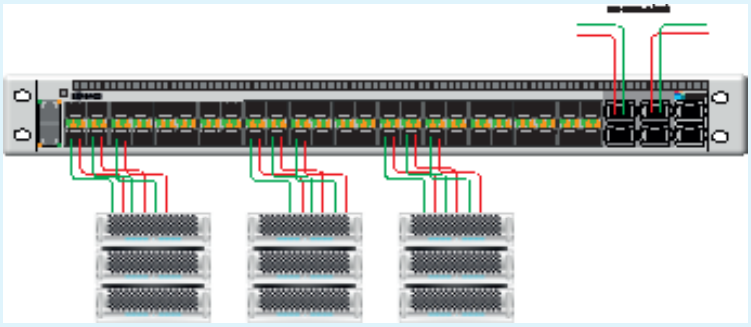
The table shows how many units can be interconnected and how many ports are available.

Amount of units	100 Gbps (inteconnect)	200 Gbps (inteconnect)	300 Gbps (inteconnect)	400 Gbps (inteconnect)
6	162 ports	132 ports	102 ports	72 ports
7	182 ports	140 ports	98 ports	56 ports
8	200 ports	144 ports	88 ports	32 ports
9	192 ports	128 ports	72 ports	XXX

APPLICATIONS / SOLUTIONS

Load balancing

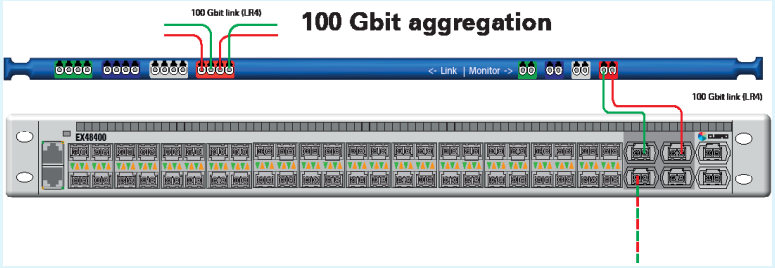
The EXA32100 is connected inline to a 100 Gbit live link. The Sessiomaster EXA32100 can load balance 100 Gbit traffic to several 10, 25, or 40 Gbit ports.



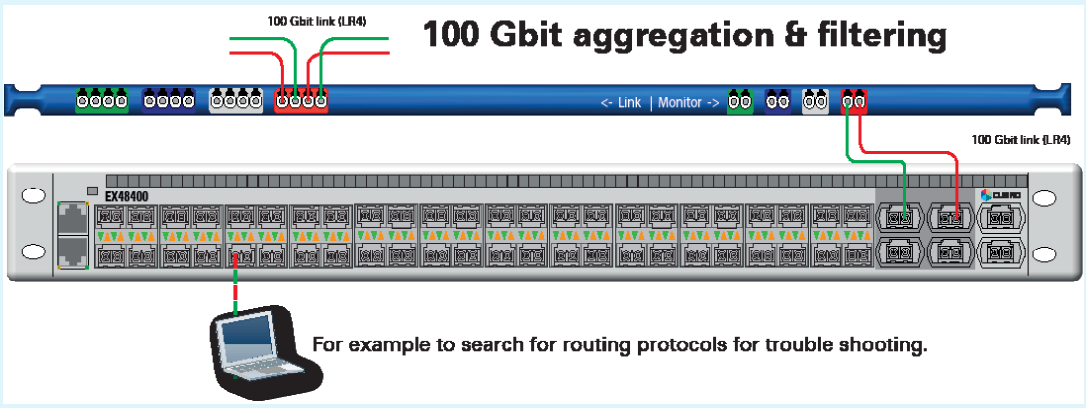
Aggregation

The EXA32100 receives traffic from a 100G live link via the monitor ports of an inline TAP.

The EXA32100 aggregates the Tx and the Rx sides of the duplex link to a single 100 Gbit port for monitoring purposes. By utilizing the filtering abilities of the EXA32100 the user can isolate only the traffic necessary to troubleshoot the network problem.

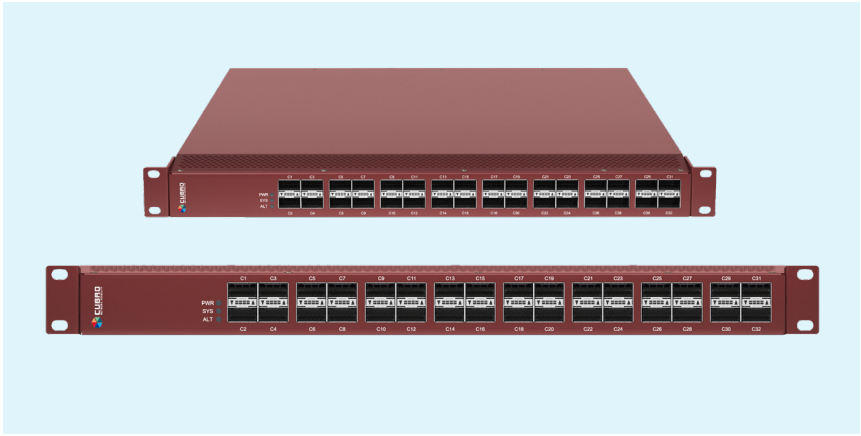


Monitoring and trouble shooting



The Sessionmaster EXA32100 supports 4000 filters that can classify traffic. These filters can be used to redirect a selected part of the traffic to a low bandwidth monitoring tool, such as a 10G packet analyzer to troubleshoot an issue on a 100 Gbit link (such as a routing problem).

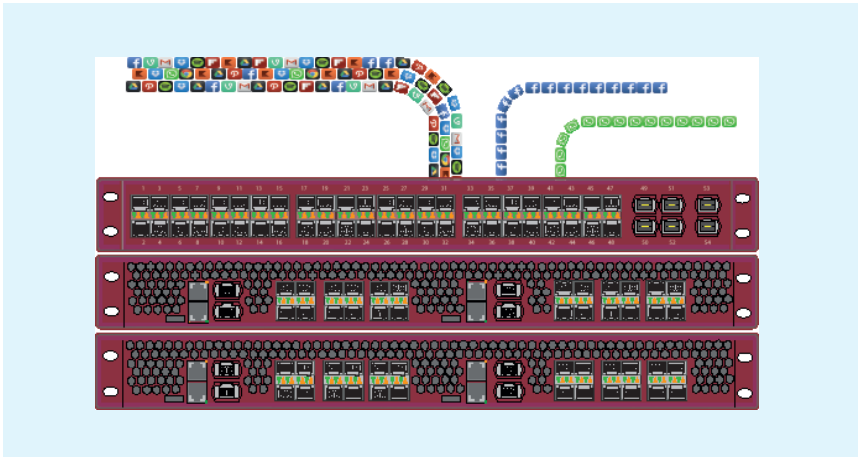
ADVANCED FUNCTION DESCRIPTION



Session meets packet:

Packet based filtering is not always sufficient. Session based filtering cannot be done with ASIC or FPGA-based untis and a normal CPU is not capable of handling Terabits of traffic.

The combination of an EXA32100 with an EXA24160 (Sessionmaster) is an extremely powerful solution for Layer 7 session-aware applications.



Application based filtering:

The combination of EXA32100 and EXA24160 offers a powerful solution for layer 7 session-aware filtering. This means it is possible to filter on applications, keywords, or any wanted Regex. The application shown on the left can support up to multiple 100 Gbps traffic, depending on how many session fabrics are used.

The EXA32100 aggregates, filters, and load balances traffic and then forwards it to the session fabric. The session fabric analyzes the traffic and tags it based on application key before forwarding it back to EXA32100. The traffic is sent to other tools for further inspection. Currently, up to 1000 application keys are available.

GTP Application:

The EXA32100 supports removal of GTP headers as well as filtering on the inner IP address of the GTP tunnel. It is also possible to load balance GTP traffic based on either the outer tunnel headers or, alternatively, the inner headers of the encapsulated traffic.

ORDERING INFORMATION

Product Components:

- Cubro Sessiomaster EXA32100
- AC/DC power supply
- European power cord
- Transceivers not included

Part Number	Description
CUB.SM-EXA32100	Sessiomaster EXA32100, 32x40/100G, AC power supply
CUB.SM-EXA32100-DC	Sessionmaster EXA32100, 32x40/100G, DC power supply

For more information please check our website **www.cubro.com**