CUBRO
NETWORK VISIBILITY

EXA48600

DATA SHEET

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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 EXA48600

- Filter and load-balance traffic from 1, 10, 25, 40 or 100 Gbps links to multiple monitoring tools
- Aggregates multiple 1 or 10 Gbps links to 25, 40, or 100 Gbps monitoring tools
- 48 x 1/10G (SFP/SFP+) and 6 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

Product Review

The Sessionmaster EXA48600 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 EXA48600 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 EXA48600 is fully compatible with Cubro Vitrum, a centralized management platform for all Cubro network visibility solutions.
- Filtering on multiple parameters up to Layer 7.

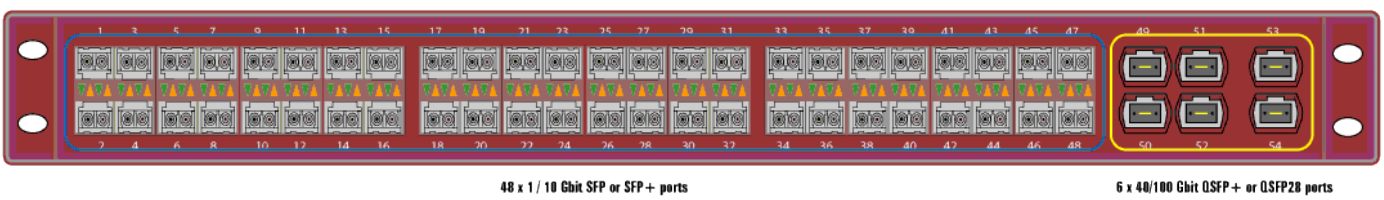
Extended Functions:

The management host controller of the EXA48600 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 1G, 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	48 x 1/10G (SFP/SFP+) and 6 x 40/100G (QSFP/QSFP28) 1 x 10/100/1000 Base-T (Management) 1 x RS232 Console
Configuration / Communication	Web GUI, CLI, REST API, SNMPv2c and SNMPv3
Performance	2,16 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	100-252V AC power supply (DC power modules available)

Technical Data / Specifications



Inputs*

- 48 x 1/10 Gbps full duplex Ports for any kind of SFP/SFP+
- 6 x 40/100 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*

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Performance

- Performance up to 2,16 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

Operating specifications:

Operating Temperature: 0ºC to 45ºC
Storage Temperature: -10ºC to 70ºC
Relative Humidity: 10% min, 95% max (non-condensing)

Mechanical specifications:

Dimension (WxDxH): 443 x 559 x 44 mm
Weight: 11,7 kg
Airflow: Front-back

Electrical specifications:

Input Power: 100-240V, 2A, 47-63 Hz (AC version)
Maximum Power Consumption: 400W

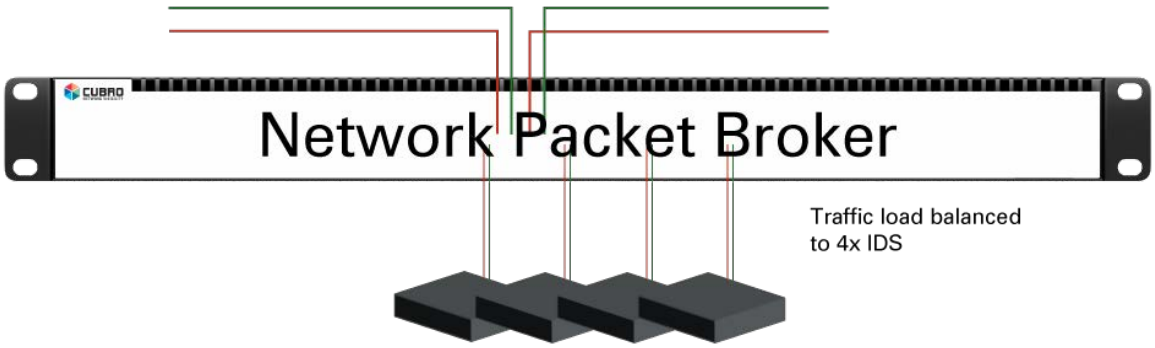
Certifications:

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

Applications / Solutions

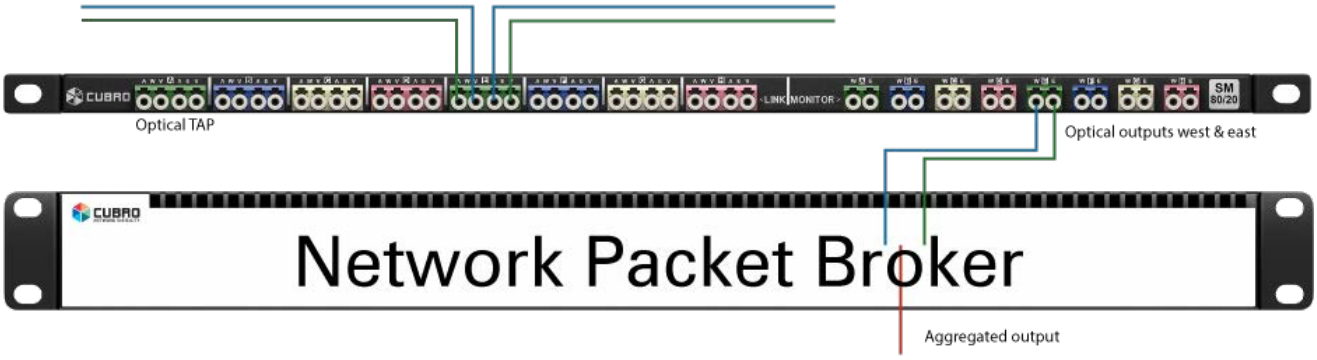
Load balancing

The EXA48600 is connected inline to a 100 Gbit live link. The Sessionmaster EXA48600 can load balance 100 Gbit traffic to several 10 Gbit ports.



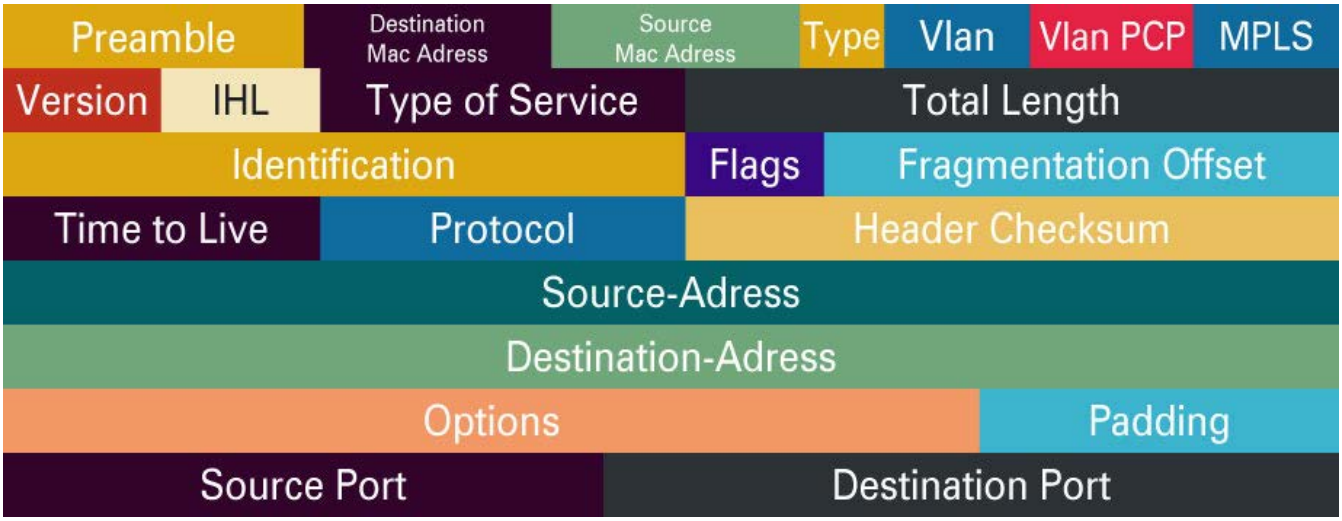
Aggregation

The EXA48600 receives traffic from a 100G live link via the monitor ports of an inline TAP.
he EXA48600 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 EXA48600 the user can isolate only the traffic necessary to troubleshoot the network problem.



Monitoring and trouble shooting

The Sessionmaster EXA48600 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, like a PC with Wireshark to trouble shoot an issue on a 100 Gbit link (such as a routing problem).

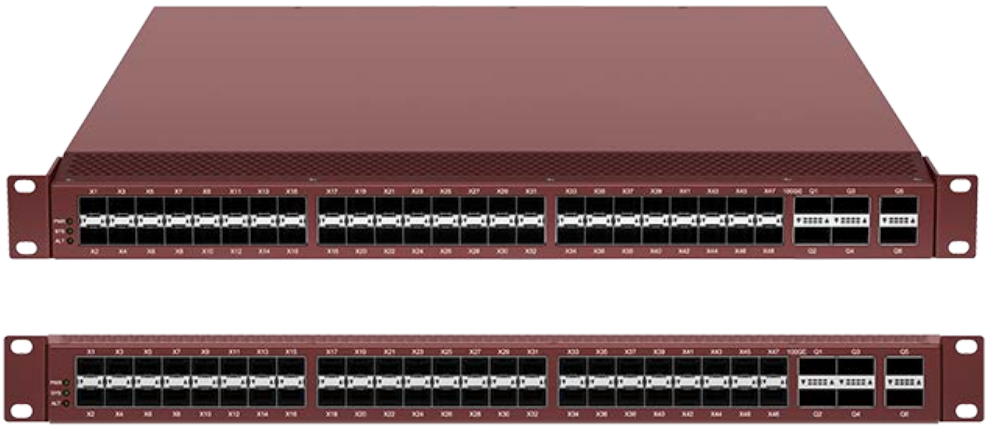


Advanced Function Description

Session meets packet:

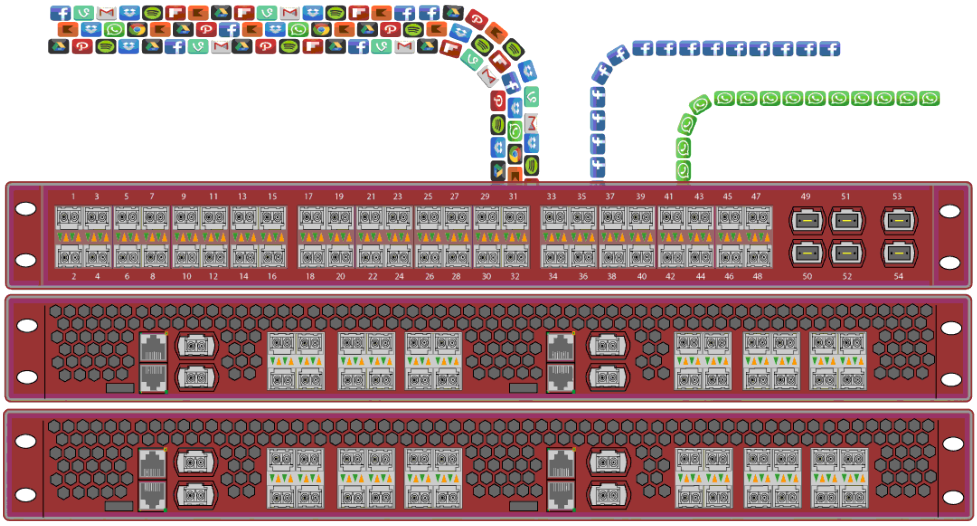
Packet based filtering is not always sufficient. Session based filtering cannot be done with ASIC or FPGA and normal CPU is not capable of handling Terabits of traffic.

The combination of an EXA48600 with an EXA24160 (Sessionmaster) is an extremely powerful solution for Layer 7 Session aware applications.



Application based filtering:

The combination of an EXA48600 and an 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. This shown application can support up to multiple 100 Gbps traffic, depending on how many session fabrics are used.



The EXA48600 aggregates, filters and load balances the traffic and forwards the traffic to the

session fabric. The session fabric analyzes the traffic and tags it based on application key before forwarding it back to the EXA48600. The traffic is sent to other tools for more inspection. Currently, up to 1000 application keys are available.

GTP Application:

The EXA48600 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 Sessionmaster EXA48600
- AC/DC power supply
- European power cord
- Transceivers not included

Part Number	Description
CUB.SM-EXA48600	Sessionmaster EXA48600, 48x10G and 6x100G QSFP28, AC power supply
CUB.SM-EXA48600-DC	Sessionmaster EXA48600, 48x10G and 6x100G QSFP28, DC power supply

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