CUBRO
NETWORK VISIBILITY

EXA32400

DATA SHEET

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to ensure you have the most up-to-date information.

Advanced Network Packet Broker
At a glance

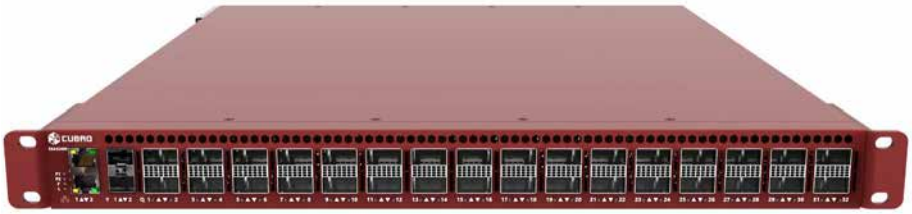
Definition

An Advanced Network Packet Broker 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 EXA32400

- Filters and load-balances traffic from 100 and 400 Gbps links to multiple monitoring tools
- Covered interface rates: 10G, 25G, 40G, 100G, 200G and 400G
- Aggregates multiple 100 Gbps links to 400 Gbps output ports
- 32 x 100/400 Gbps (QSFP28/ QSFP-DD) incl. ZR+ coherent module support
- Supports data burst buffering
- Packet slicing support (any configurable packet size)
- IPv6 support
- Tunnel header stripping
- No additional port licensing fees or software feature licensing. All features and applications included in the unit price.
- 2-year base warranty period

Product Overview



The EXA32400 is a high-performance advanced network packet broker that aggregates, filters, duplicates, and load balances network traffic to security, monitoring and management tools. The EXA32400 is based on programmable switching fabric. It is based on an advanced multi-core, industry leading programmable switch chip architecture. This platform allows all filtering features to be implemented at the hardware level for unmatched throughput and performance. The EXA32400 enables high-performance deep protocol identification and processing, and data message pre-processing at the chip forwarding logic level. The multi-layer filtering capabilities of the EXA32400 is a powerful feature of this device which enables enhanced network visibility and better network performance.

Functions / Benefits:

- Easy to configure: secure Web GUI / ReST API and CLI
- Load balancing: hash-based, session aware load balancing on either outer or inner tunnel headers
- Ultra high port density: supports up to 32 x 400 Gbps or 128 x 100 Gbps ports or 256 x 10 Gbps
- Tunnel termination and filtering on multiple parameters including inner tunnel (VXLAN, GTP, ERSPAN, CFP, MPLS, etc)
- More than 100000 simultaneously filtering rules without performance restrictions to see the traffic that is really needed
- ASCII string filtering inside the payload
- SNMPv2c and SNMPv3 support
- Straight and easy development of filtering strings using MS Excel with download function.
- ZR+ coherent module support

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 100 Gbps ports to monitor 400 Gbps links.
Jumbo Frame Support	The EXA32400 supports jumbo Ethernet frames with a size of up to 9192 bytes.
Support of IPv4 and IPv6	Yes
Ports	32 x 100G/400G via QSFP28/QSFP-DD Break-out to 128 x 100 Gbps or 256 x 10 Gbps 1 x 10/100/1000 Base-T (Management) 1 x RS232 Console
Configuration / Communication	Web GUI, REST API, CLI
Performance	25,6 Tbps backplane 100% throughput without any packet loss 6,0 Billion PPS
Aggregation latency	Average < 700 ns for 64-byte frames
MTBF	200.742 hours
Packet Buffer	30 MB
Different Power Versions	Dual 100-240V AC or 36-72V DC available

Technical Data / Specifications

Inputs*

32 x 100 Gbps / 400 Gbps full duplex Ports for any kind of QSFP28/QSFP-DD
* Each port can be input and / or output depending on the application and configuration
*All QSFP-DD ports support break-out cables to 4x100G, 4x10G or 8x10G interfaces

Outputs*

32 x 100 Gbps / 400 Gbps full duplex Ports for any kind of QSFP28/QSFP-DD
* Each port can be input and / or output depending on the application and configuration
*All QSFP-DD ports support break-out cables to 4x100G, 4x10G or 8x10G interfaces

Performance

- Performance up to 25,6 Tbps
- 6,0 Billion PPS
- Non-blocking design
- Boot time from power on to working 180 sec

Management

- Management Port: (1) RJ45 10/100/1000 Mbit Configuration
- Easy to use Web UI, REST API, CLI

Operating specifications:

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

Mechanical specifications:

Dimension (WxDxH): 442 x 580 x 44 mm
Weight: 11,8 kg
Airflow: Front-back

Electrical specifications:

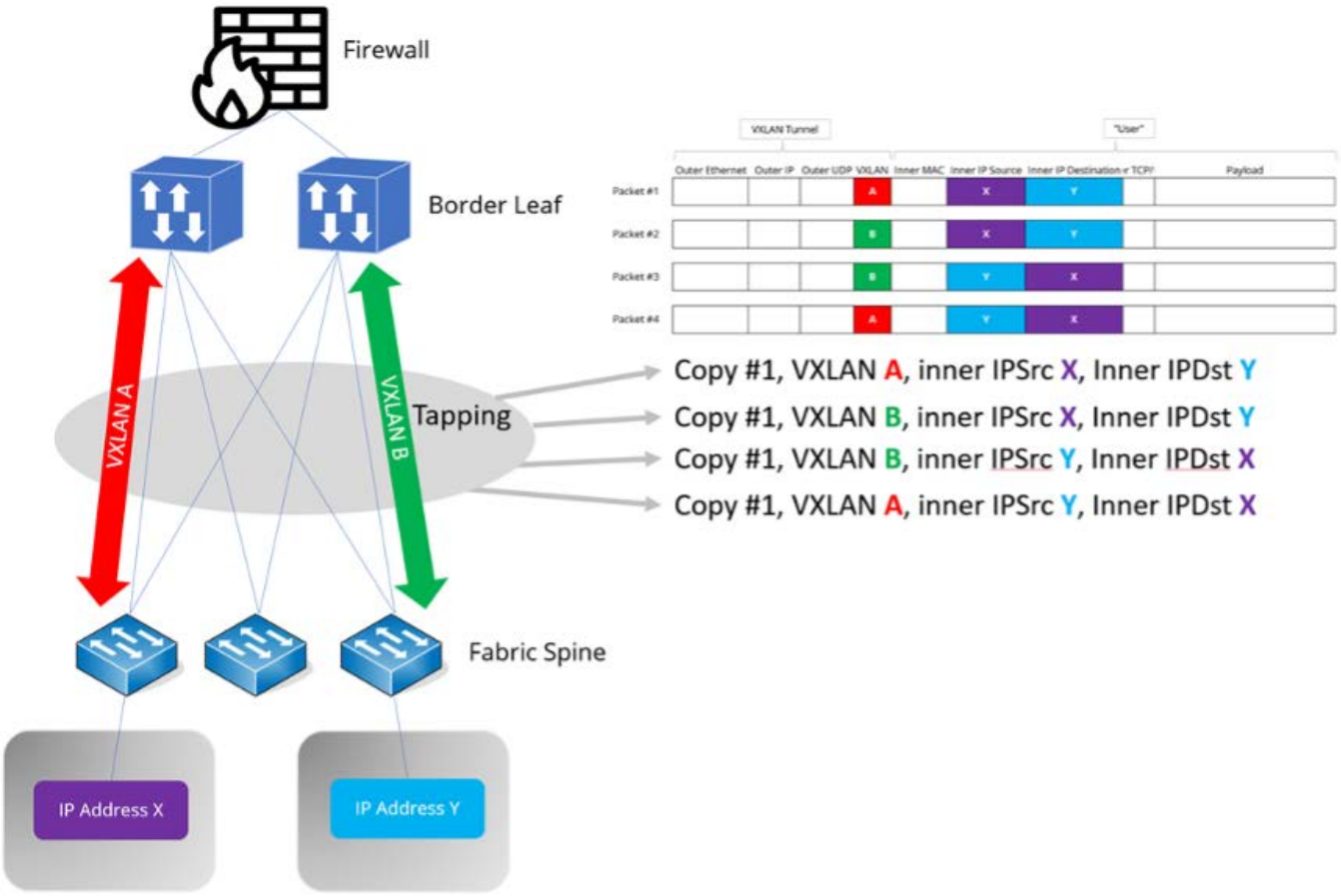
Input Power: 100-240V AC or 36-72V DC
Maximum Power Consumption: 850W

Certifications:

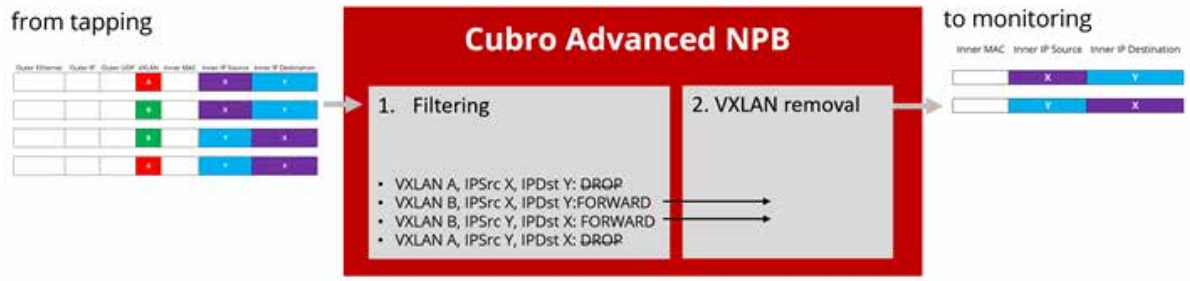
Fully RoHS compliant
CE compliant
Safety - UL 60950-1 / CSA C22.2 60950-1-07 / IEC 62368-1: 2014 EN 62368-1: 2014

Deduplication by filtering in VXLAN overlay networks (VXLAN VNI and IP filtering)

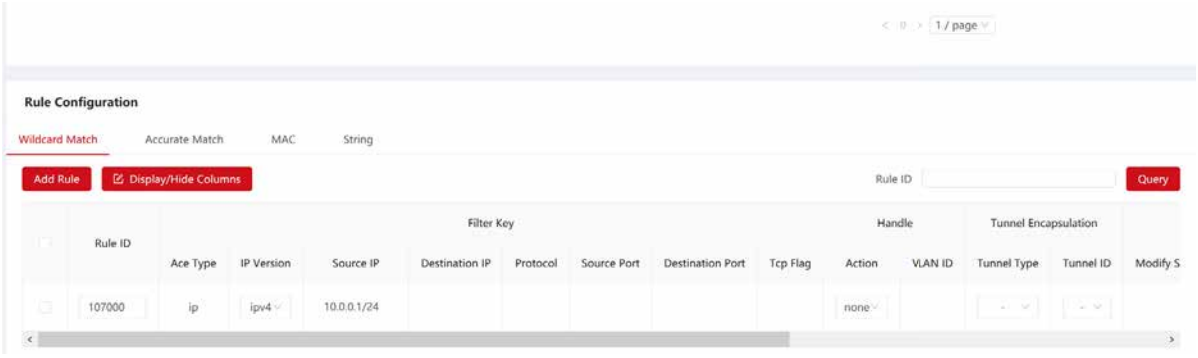
Usually, the duplicate traffic is caused by picking up the same traffic more than once due multiple tapping and/or aggregation devices.



Traffic between IP X and IP Y passes the tapping two times and thus the same packets are visible twice at the tapping output. From user perspective every packet is received twice.
The EXA32400 offers an easy and straight-forward way to eliminate the duplicates by allowing filtering VXLAN VNI and inner IP simultaneously.



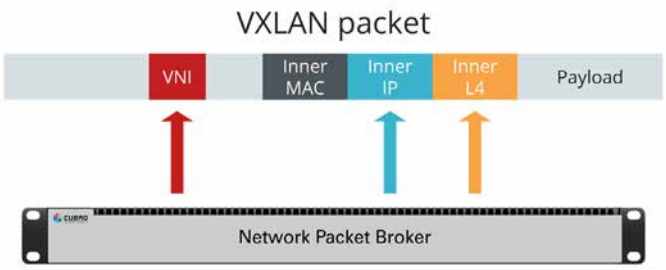
VXLAN VNI and inner IP filtering:



State-of-the-art tunnel functionality

The EXA32400 supports the termination of various tunnels such as:

- ERSPAN II and III
- GRE
- MPLS over UDP and MPLS over GRE
- GTP
- VXLAN
- IPinIP
- CFP

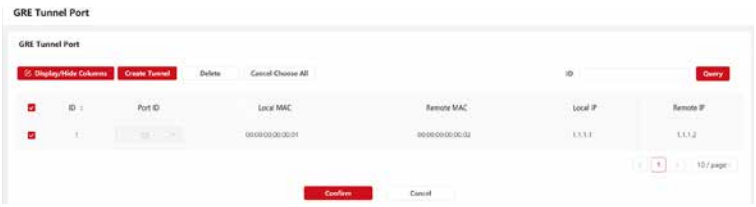


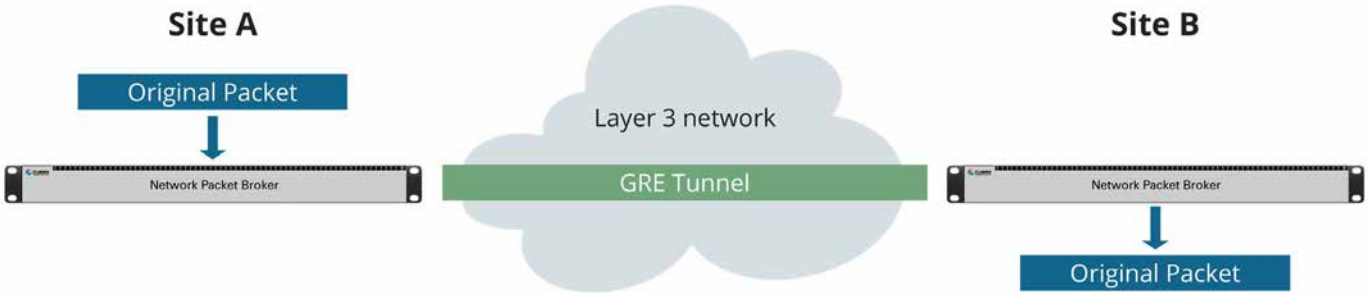
Every port of the EXA32400 supports an independent MAC and IP setup. Thus, the EXA32400 can be used as an active tunnel end-point. Beside tunnel termination it also allows filtering inside tunnels.

This superior functionality makes the EXA32400 perfectly suited for any modern overlay network.

GRE Encapsulation Function

To transport filtered packets from site A to site B over a routed Layer 3 network, the EXA32400 supports a GRE encapsulation function.

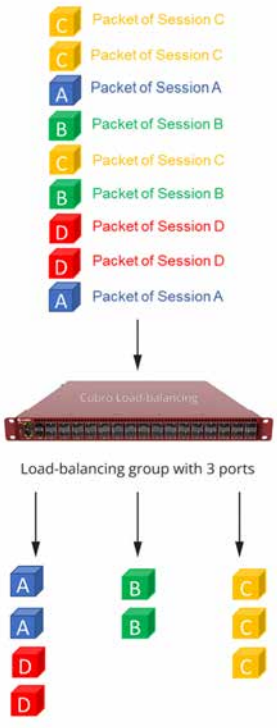




GTP user-plane load-balancing

User-data interfaces in mobile networks such as S1-U are usually heavily loaded carrying up to Tbps of data. To make analysis possible these user-data needs to be spread across many analyzers and thus load-balancing is a key criteria. In order to keep the efforts for the analyzing/probing part as low as possible it is extremely important that user sessions stay together so that every packet of a user session arrives at the same analyzer interface.

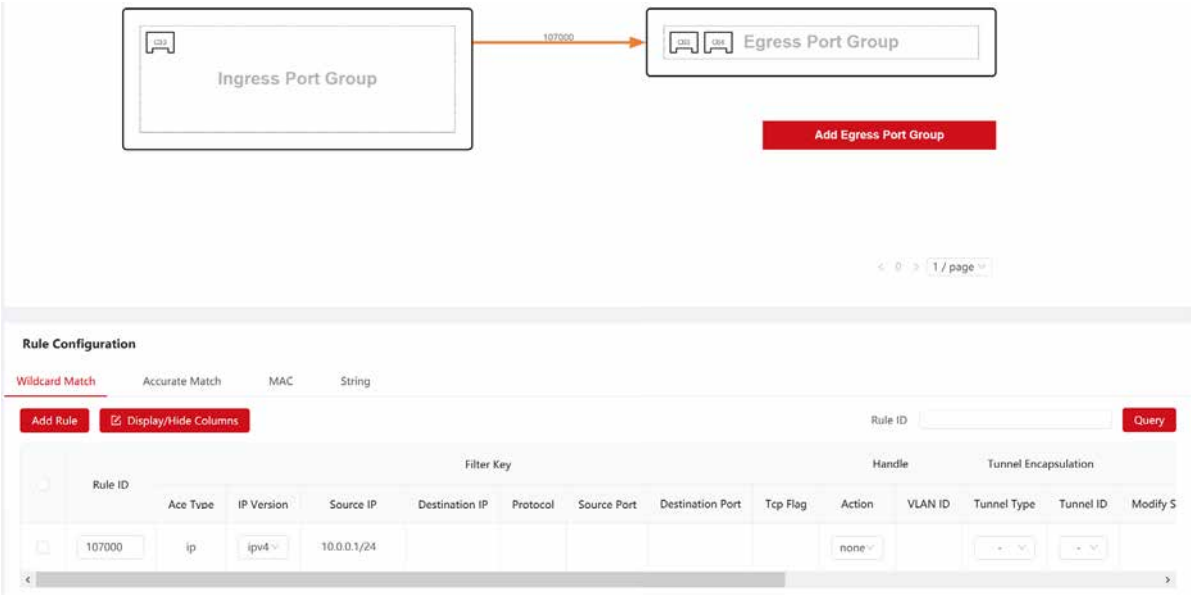
The Cubro EXA32400 distributes the packets based on a hash-key. The best choice for mobile user-data is that this hash-key is based on the inner IP address (=user IP) of the arriving packets. The EXA32400 handles inner IP load-balancing in hardware and supports Tbit/s of processing power.



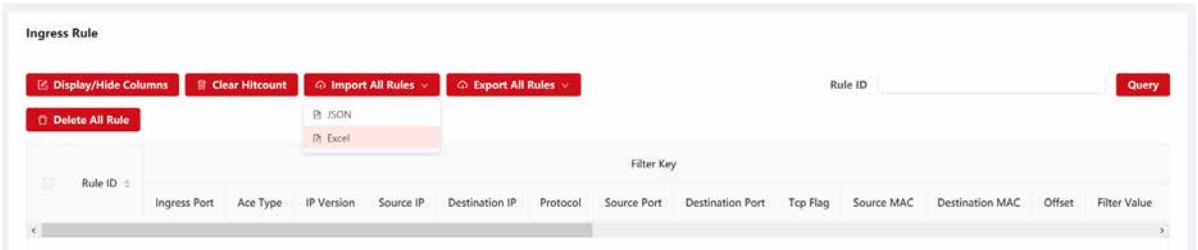
Web User Interface

The EXA32400 features an extremely easy to use graphical way of operation.

The innovative and logical WebUI allows the user to create a backup, setup new users, check port link status/statistics or define a powerful filtering scenario which will help to do the job quickly.



Filters can also be created using Microsoft® Excel and uploaded to the EXA32400.



Break-out Options

The EXA32400 supports various break-out options to cover lower interface rates like 10Gbps or 25Gbps.

Break-out from	Break-out to	Remark
1 x 400G QSFP-DD SR8	2 x 100G via 2 x QSFP28 SR4	Requires multimode break-out cable from MPO16 to 2 x MPO8
1 x 400G QSFP-DD DR4/ XDR4/PLR4	4 x 100G via 4 x QSFP28 FR/DR	Requires singlemode break-out cable/box from MPO8 to 8 x LC
1 x 100G QSFP28 SR4	4 x 25G via 4 x SFP28 SR	Requires multimode break-out cable/box from MPO8 to 4 x LC
1 x 40G QSFP28 SR4	4 x 10G via 4 x SFP+ SR	
1 x 40G QSFP SR4		
1 x 100G QSFP28 PSM4	4 x 25G via 4 x SFP28 LR	Requires singlemode break-out cable/box from MPO8 to 4 x LC
1 x 40G QSFP28 PSM4	4 x 10G via 4 x SFP+ LR	
1 x 40G QSFP PSM4		
1 x 400G QSFP-DD SR8	8 x 10G via 8 x SFP+ SR	Requires multimode break-out cable/box from MPO16 to 16 x LC

LC/MTP Breakout Boxes offer an efficient solution for converting LC connections to high-density MPO connectors, which are commonly used in 40G, 100G, and 400G networks. These breakout boxes serve as a reliable alternative to traditional breakout cables, which can often be prone to damage.

Available in both Single Mode and Multi-Mode (50/125 μ) versions, our breakout boxes come in two different port densities. All models are rigorously tested to support data rates of up to 400 Gbps, ensuring optimal performance for high-speed networking applications.

Support of QSFP/SFP+ Adapter

For easy coverage of 10Gbps or 25Gbps interface speeds, the EXA32400 supports also QSFP/ SFP+ Adapter.

This feature enables the use of standard 10 Gbps (SFP+) or 25 Gbps (SFP28) transceivers within the EXA32400. In addition to optical transceivers, the system also supports 10G Base-T copper connections, providing versatile options for high-speed networking.

Ordering Information

Product Components:

- Cubro EXA32400
- AC/DC power supply
- European power cord
- Transceivers not included

Part Number	Description
CUB.SM-EXA32400	EXA32400 Advanced Network Packet Broker, 32x40/100G, AC power supply
CUB.SM-EXA32400-DC	EXA32400 Advanced Network Packet Broker, 32x40/100G, DC power supply

Spare parts:

Part Number	Description
CUB.PM-AC-E	AC Power supply module for CUBRO EXA32400
CUB.PM-DC-E	DC Power supply module for CUBRO EXA32400

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