

ITG NPB EXA32100A

DATA SHEET



Product Overview

The EXA32100A is a high-performance advanced network packet broker that aggregates, filters, duplicates, and load balances network traffic to security, monitoring and management tools. The EXA32100A 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 EXA32100A 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 EXA32100A is a powerful feature of this device which enables enhanced network visibility and better network performance.

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 EXA32100A

- Filters and load-balances traffic from 10, 25, 40 or 100 Gbps links to multiple monitoring tools
- 32 x 40/100 Gbps (QSFP/ QSFP28)
- QSFP28 ports support breakout to 4 x 10/25G
- Aggregates multiple 10 Gbps links to 25, 40, or 100 Gbps monitoring tools
- 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

Functions / Benefits

01

Load balancing: hash-based, session aware load balancing on either outer or inner tunnel headers

02

Easy to configure: secure Web GUI / ReST API

03

Ultra high port density: supports up to 32 x 40/100 Gbps or 128 x 25/10 Gbps ports and two dedicated SFP+ / SFP28 ports for 10G or 25Gbps

04

Straight and easy development of filtering strings using MS Excel with download function

05

Up to 115688 simultaneously filtering rules without performance restrictions to see the traffic that is really needed

06

ASCII string filtering inside the payload

07

Tunnel termination and filtering on multiple parameters including inner tunnel (VXLAN, GTP, ERSPAN, CFP, MPLS, etc)

08

SNMPv2c and SNMPv3 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 10G, 25G, and 40G links to monitor highly loaded 100 Gbps links
Jumbo Frame Support	The EXA32100A supports jumbo Ethernet frames with a size of up to 9192 bytes
Support of IPv4 and IPv6	Yes
Ports	32 x QSFP 40 Gbps or QSFP28 100 Gbps with break-out possibility to 10Gbps or 25Gbps 2 x SFP+ 10Gbps or SFP28 25Gbps 1 x 10/100/1000 Base-T (Management) 1 x RS232 Console
Configuration / Communication	Web GUI, REST API
Performance	6,4 Tbps backplane 100 % throughput without any packet loss 2,4 Billion PPS
Aggregation latency	Average < 700 ns for 64-byte frames
MTBF	200.742 hours
Packet Buffer	22 MB
Different Power Versions	Dual 100-240V AC or 36-72V DC available

Technical Data / Specifications

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 6,4 Tbps
- 2,4 Billion PPS
- Non-blocking design
- Boot time from power on to working 180 sec

Technical Data / Specifications

Management

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

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

Technical Data / Specifications

Electrical specifications

- Input Power: 100-240V AC or 36-72V DC
- Maximum Power Consumption: 540W

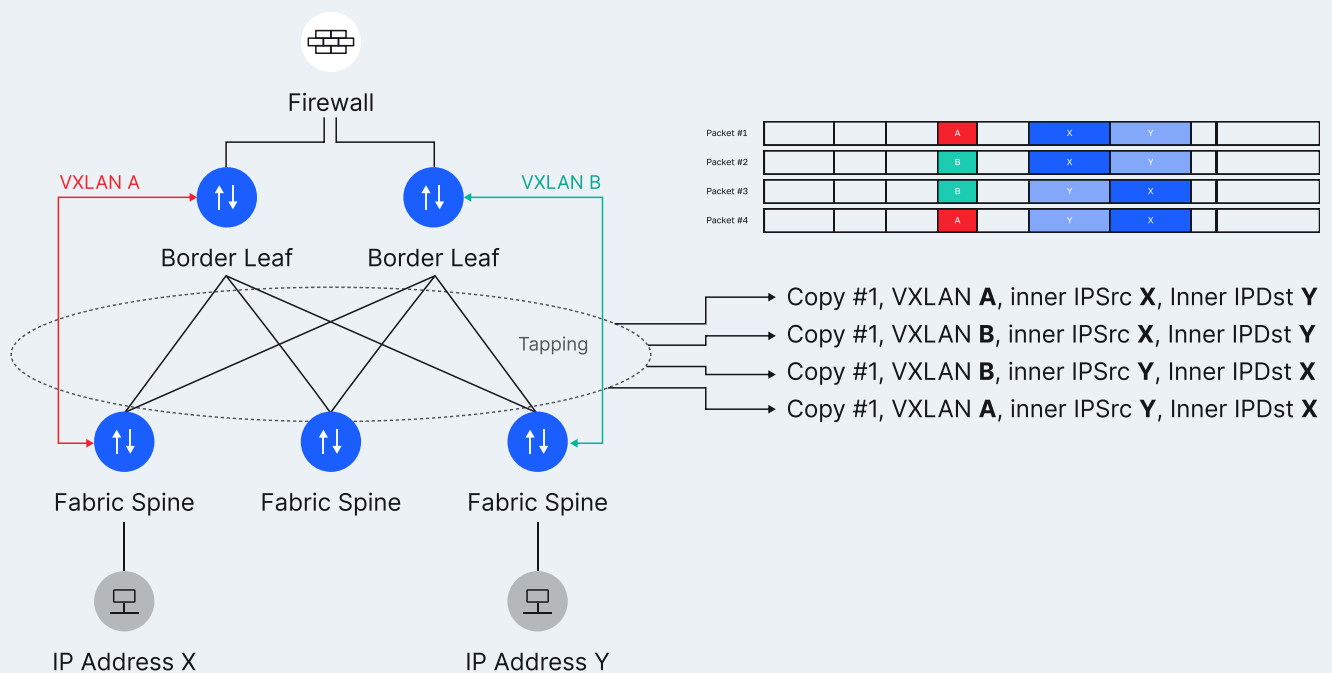
Certifications

- 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)

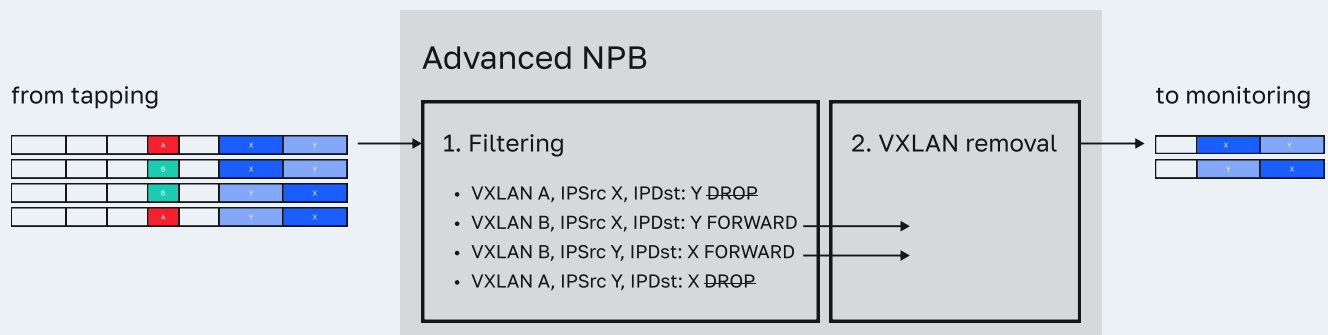
Usually, the duplicate traffic is caused by picking up the same traffic more than once due multiple tapping and/or aggregation devices.



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 EXA32100A offers an easy and straight-forward way to eliminate the duplicates by allowing filtering VXLAN VNI and inner IP simultaneously.

	Outer Ethernet	Outer IP	Outer UDP	VXLAN	Inner MAC	Inner IP Source	Inner IP Destination	Network Broker Probe ACTION
Packet #1				A		X	Y	drop
Packet #2				B		X	Y	forward
Packet #3				B		Y	X	forward
Packet #4				A		Y	X	drop



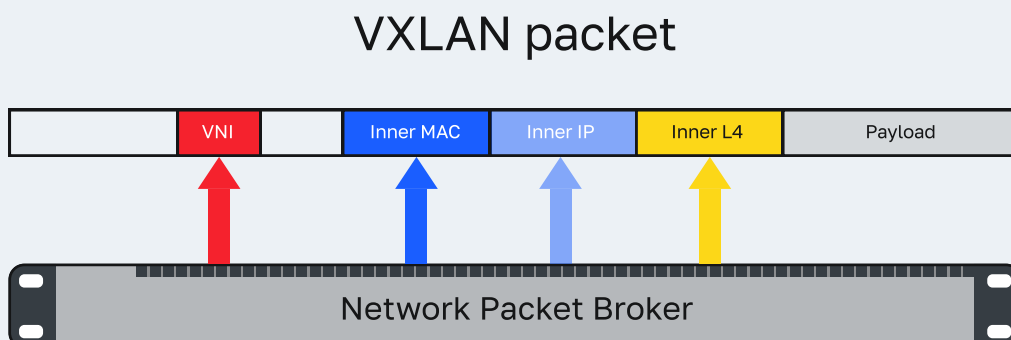
State-of-the-art tunnel functionality

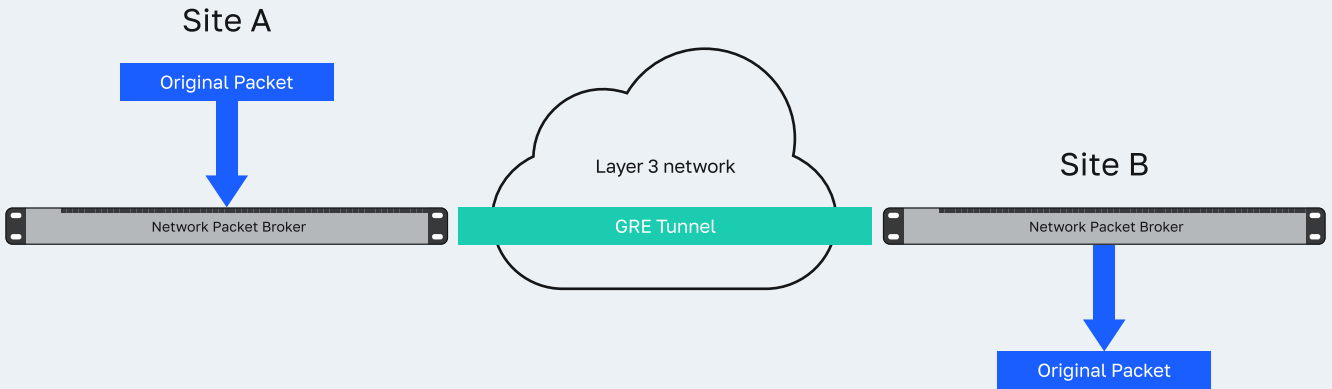
The EXA32100A supports the termination of various tunnels such as:

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

Every port of the EXA32100A supports an independent MAC and IP setup. Thus, the EXA32100A can be used as an active tunnel end-point. Beside tunnel termination it also allows filtering inside tunnels.

This superior functionality makes the EXA32100A perfectly suited for any modern overlay network.





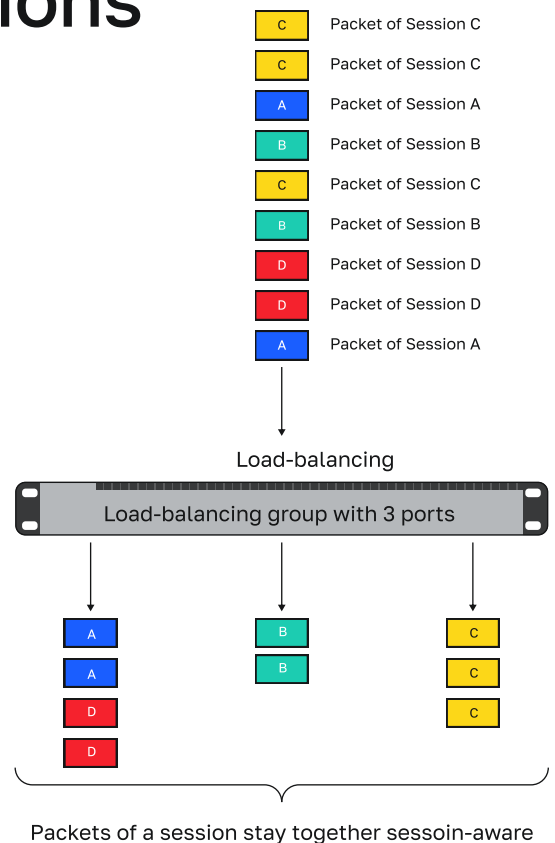
GRE Encapsulation Function

To transport filtered packets from site A to site B over a routed Layer 3 network, the EXA32100A supports a GRE encapsulation function.

Mechanical specifications

GTP user-plane load-balancing

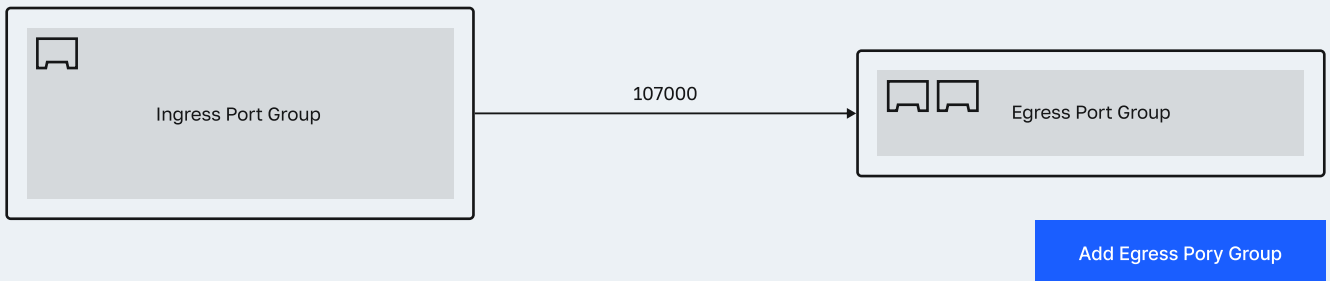
User-data interfaces in mobile networks such as S1-U are usually heavily loaded carrying up to Tbps of data. To make analysis possible these user-data needs to be spread across many analyzers and thus load-balancing is a key criteria. In order to keep the efforts for the analyzing/probing part as low 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.



Web User Interface

The EXA32100A 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 EXA32100A.



Rule Configuration

Wildcard Match Accurate Match MAC String

Add Rule Display/Hide Columns Rule ID Query

Rule ID	Ace Type	IP Version	Source IP	Destination IP	Protocol	Source Port	Destination Port	Tcp Flag	Action	VLAN ID	Tunnel Type	Tunnel ID	Modify S
107000	ip	ipv4	10.0.0.1/24						none				

Ingress Rule

Display/Hide Columns Clear Hitcount Import All Rules Export All Rules Rule ID Query

Delete All Rule JSON Excel

Rule ID	Ingress Port	Ace Type	IP Version	Source IP	Destination IP	Protocol	Source Port	Destination Port	Tcp Flag	Source MAC	Destination MAC	Offset	Filter Value
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Ordering Information

Product Components

- ITG NPB EXA32100A
- AC/DC power supply
- European power cord
- Transceivers not included

Part Number	Part Number Description
SM-EXA32100A	EXA32100A Advanced Network Packet Broker, 32x40/100G, AC power supply
SM-EXA32100A-DC E	EXA32100A Advanced Network Packet Broker, 32x40/100G, DC power supply

Spare parts

Part Number	Part Number Description
PM-AC-E	AC Power supply module for ITG NPB EX32100A/EX48600/OMNIA120/EX48200 series
SM-EXA32100A-DC E	DC Power supply module for ITG NPB EXA32100A/EX48600/OMNIA120/EX48200 series

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