

100G High-Density Open Visibility Packet Broker

The 4540 is part of the FixedBroker product line, consisting of 1U high density, high performance, packet brokers with Open Visibility Platform enabled functionality. The Open Visibility advanced capabilities enable to turn the NPB into an intelligent cross-connect with Network Intelligent applications such as de-duplication, Netflow/IPFIX generation, TLS decryption, and more.



4540 front and rear view

The 4540 includes up to 28 ports of 40/100Gb plus another 8 ports of 10/25Gb¹. All ports connect to a non-blocking switching fabric, ensuring that all combinations of ports are supported at full line rate, with no over subscription and with full-switching, line rate connectivity from any port to any port.

The 4540 is a fully-featured packet broker that is capable of not only aggregation, but replication, sophisticated filtering, load balancing, tunneling supports, and more.

The 4540 includes Niagara Network's FabricFlow technology which is at the core of the system's exhaustive packet broker functionality, responsible for the mapping of traffic flow relationships between source and destination ports.

Open Visibility Platform™ Enabled

Open Visibility Platform (OVP) technology enables the user to combine advanced network intelligence applications and other 3rd parties virtual machine-based applications² seamlessly integrated with the packer broker functionality.

Advanced network intelligence applications² include such applications as de-duplication, TLS decryption, 4G/5G mobile visibility, and more. Open Visibility Platform is achieved by up to two [Packetron](#) processing² modules (up to 200Gb processing) in the rear of the device so that that critical front panel real-estate is not sacrificed.

¹ 1Gb rate is supported on 10/25G ports

² Packetron hardware and licensing ordered separately- please refer to [Packetron datasheet](#).

Product Highlights

High Density:

- Up to 28 ports of 40/100Gb and additional 8 ports of 10/25Gb

1U Form Factor:

- Reduced footprint, saving power, space and cooling

Switching Fabric

- 3.2Tb Bi-directional


Clustering Capabilities

- Stack any number of units by using any ports to connect between devices

Open Visibility Platform™ Enabled

- Up to 2 rear Packetron™ modules supporting 200G processing
- Network Intelligence applications
- 3rd Party virtual applications

Fabric Flow™

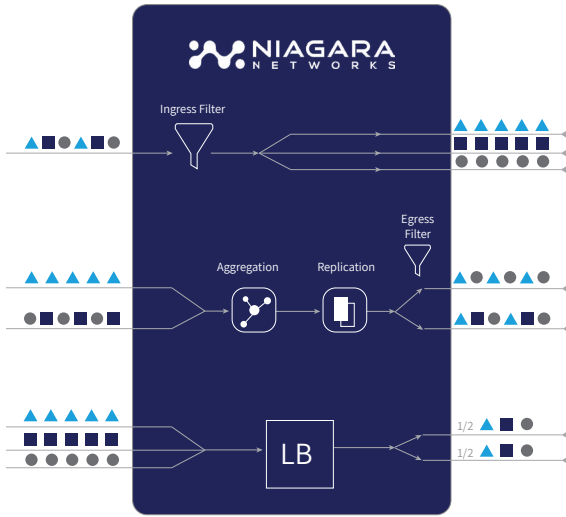
 Mapping traffic flow relationships between source and destination ports:

- Aggregate traffic to single port
- Replicate traffic to multiple ports
- Sophisticated filtering - L2-L4, User Defined Byte (UDB)
- Tunnel handling:
 - GTP filtering
 - GRE termination
 - MPLS filtering and stripping
 - VXLAN filtering and stripping
- VLAN support for filtering, stripping and modifying
- Multiple flexible load balancing regimes
 - Layer 2 to Layer 4 hashing criteria
 - Port utilization based load balancing
 - Session stickiness
- Virtual bypass segments for advanced service chaining
- Ingress / egress filtering and internal traffic loopback for efficient creation of sophisticated multi-level filters
- Filter templates for rapid deployment and filter re-use

Management

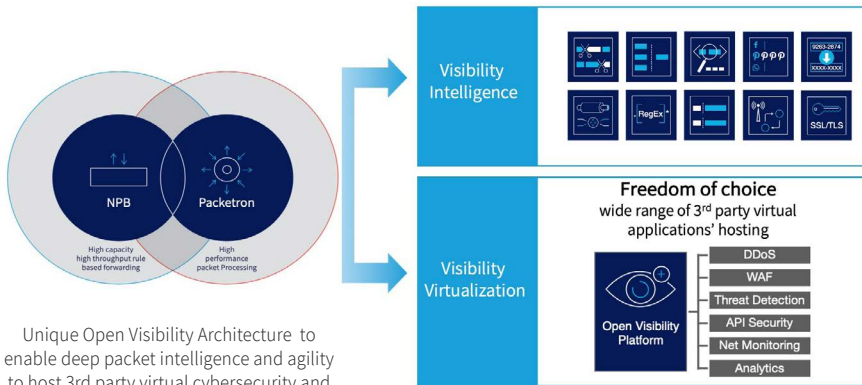
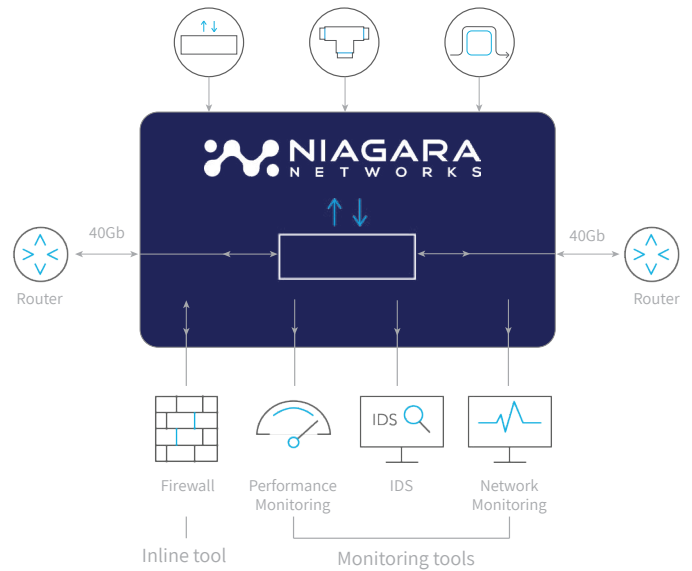
- Robust Command Line Interface (CLI)
- User friendly, Web-based user interface
- REST API for 3rd party integration and support
- Managed by Niagara Visibility Controller
- Support TACACS+, RADIUS, SNMP and NTP

Common Use Cases



FabricFlow™ technology for efficient aggregation, replication, filtering and load balancing of traffic.

Protect network from security attacks by sending traffic to inline tools like a firewall (using virtual segment configuration) and also send a copy to monitoring tools for performance analysis.



Advanced Network Intelligence and 3rd party virtual applications hosting

Integrated Packetron modules offer a wide selection of Network Intelligence applications, including Deduplication, Data masking, Application Filtering, RegEx filtering, NetFlow/IPFIX generation 4G/5G mobile visibility, and more.

Specifications			
Height	1.72 inches (43.70 mm)	Max Power	481.32 Watts (w/o Packetron module) 724.52 Watts (with two Packeron modules)
Length	24.0 inches (609.60 mm)	BTU/hr	1642.33 (w/o Packeron modules) 2472.16 (with two Packeron modules)
Width	17.3 inches (439.42 mm)	Airflow	Front to back
Weight	25.6 lb (11.4 kg)	DC	40-60V DC, 20-15A
Operating Temp	32-104°F (0-40°C)	AC	90-264V AC, 50-60Hz, 8-4A
Operating Humidity	5-95%	Max Current	10A @ 115V AC 5A @ 230V AC 14.38A @ 40V DC

Emissions	Immunity
FCC Part 15B, ICES 003, EN55032	EN55024

Safety	Certifications
UL/CSA 60950-1, EN 60950-1, IEC 60950-1, UL 62368 CB Scheme with all country differences	North America (NRTL) European Union (EU) VCCI (Japan) 2014/35/EU Low Voltage Directive 2014/30/EU EMC Directive 2011/65/EU RoHS Directive 2012/19/EU WEEE Directive

Part Number	Description
4540-MN-16P-AC	4540 main chassis AC, includes two field replaceable power supply units and two field replaceable fan units. Supports 28 ports of 40/100Gb and 8 ports of 10/25Gb ports. OVP Enabled for up to 2 rear Packetron modules (hardware modules and applications sold separately). Includes License for 16 ports of 40/100Gb, 8 ports of 10/25Gb. Transceivers sold and ordered separately.
4540-MN-16P-DC	4540 main chassis DC, includes two field replaceable power supply units and two field replaceable fan units. Supports 28 ports of 40/100Gb and 8 ports of 10/25Gb. OVP Enabled for up to 2 rear Packetron modules (hardware modules and applications sold separately). Includes License for 16 ports of 40/100Gb, 8 ports of 10/25Gb. Transceivers sold and ordered separately.
4540-LC-28P	4540 license upgrade to activate ports 17 through 28 (40/100GbE)
FXD-PKTRN-A-L1	Packetron processor acceleration module. Rear module. Up to 100Gbps processing. Includes Packet Slicing software licensing. 64GB RAM. 1T SSD, for FixedBroker product line.
FXD-PKTRN-A-H1	Packetron processor acceleration module. Rear module. Up to 100Gbps processing. Includes Packet Slicing software licensing. 96GB RAM. 1TB SSD, for FixedBroker product line.

About Niagara Networks

Niagara Networks provides high performance network visibility solutions for seamless administration of security solutions, performance management and network monitoring. Niagara Networks products provide advantages in terms of network operation expenses, downtime, and total cost of ownership. A former division of Interface Masters, Niagara Networks provides all the building blocks for an advanced Visibility Adaptation Layer at all data rates up to 100Gb, including Taps, bypass elements, packet brokers and a unified management layer. Thanks to its integrated in-house capabilities and tailor-made development cycle, Niagara Networks are agile in responding to market trends and in meeting the customized needs of service providers, enterprise, data centers, and government agencies. For more information please visit us at www.niagaranetworks.com

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