4248-6XL

1/10Gb Packet Broker with multi-purpose 40Gb aggregation ports

The 4248-6XL is part of the FixedBroker product line, consisting of 1U high density, high performance, packet brokers

Figure 1: 4248-6XL Front View

The 4248-6XL includes up to 48 ports of 1/10Gb plus another 6 ports of 40Gb. With the unique software licensing feature, units can be offered with as little as 8 ports of 1/10Gb. Users protect their investment and can grow with the system up to its full capacity of 48 ports of 1/10Gb plus 6 ports of 40Gb, without adding other physical devices or performing a fork-lift upgrade in their deployment.

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 4248-6XL is a fully featured packet broker that is capable of not only aggregation, but replication, sophisticated filtering, load balancing, tunneling supports and more.

The 4248-6XL includes Niagara Network's FabricFlow technology which is at the core of the systems exhaustive packet broker functionality, responsible for the mapping of traffic flow relationships between source and destination ports.

Product Highlights

High Density:
- Up to 48 ports of 10Gb plus 6 ports of 40Gb

1U Form Factor:
- Reduced footprint, saving power, space and cooling

Port licensing:
- Only pay for the ports you need, and scale up as you grow – protecting your investment.
- From as little as 8 ports

Switching Fabric
- 1.28Tb Bi-directional

Clustering Capabilities
- Stack any number of units by using any ports to connect between devices. Some clustering capabilities require the Niagara Visibility Controller (NVC)

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

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
- Flexible load balancing regimes
- User defined virtual bypass segments
- User configurable packet heartbeat (ms resolution)
- Ingress and egress filters
- Internal loopback for efficient creation of multilevel filters

Common Use Cases

Ingress Filter

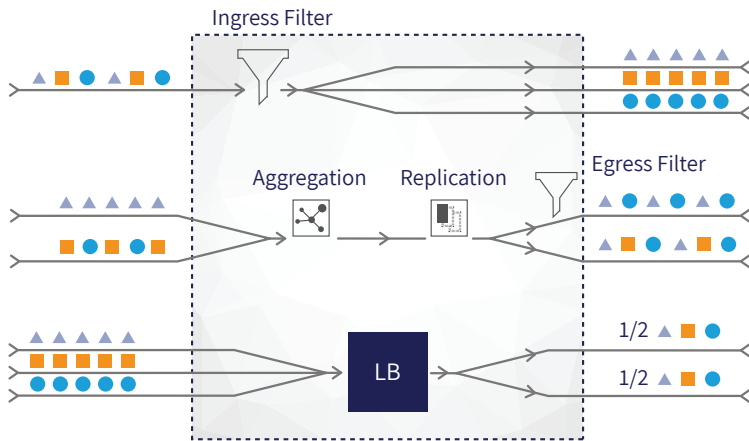Aggregation   Replication   Egress Filter

LB

1/2 ▲ ■ ●
1/2 ▲ ■ ●

Figure 2: Fabric Flow technology for efficient aggregation, Replication, Filtering and load balancing of traffic.

Figure 3: Protect network from security attacks by sending traffic to inline tools like firewall (using virtual segment configuration) and also send copy to monitoring tools for performance analysis.
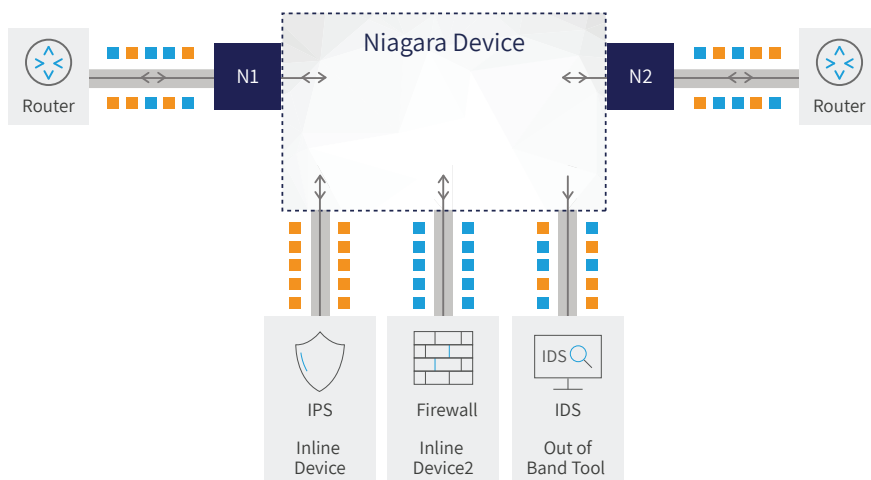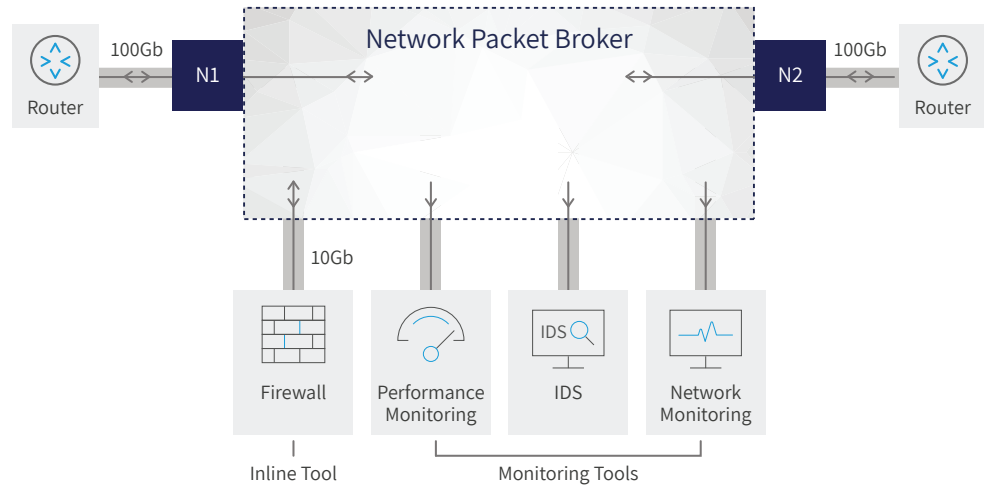

Router   100Gb   N1   Network Packet Broker   N2   100Gb   Router

10Gb

Firewall   Performance Monitoring   IDS   Network Monitoring

Inline Tool   Monitoring Tools

Router   N1   Niagara Device   N2   Router

IPS   Firewall   IDS

Inline Device   Inline Device2   Out of Band Tool

Figure 4: Provides visibility to network service tools by sending the right traffic to right tools.

Specifications

Height	1.75 in (44.45 mm)	Max Power Consumption	337.36W
Length	19.29 in (490.1 mm)	BTU/hr	1151.07
Width	17.25 in (438.15 mm)	Airflow	Front to back
Weight	19.5 lb (8.85 kg)	Altitude	80,000 ft
Operating Temp	32-104°F (0-40°C)	AC	90 V-264 V 9.7 A
Operating Humidity	5-95%	DC	48 V-60 V 19 A -15 A

Emissions / Immunity

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

Safety / Certifications

Safety	Certifications	
UL/CSA 60950-1, EN 60950-1, IEC 60950-1 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
4248-6XL-MN-8P-AC	4248-6XL main chassis AC, includes two field replaceable power supply units and four field replaceable fan units. License for 8 x 10Gb ports. Transceivers sold and ordered separately.
4248-6XL-MN-8P-DC	4248-6XL main chassis DC, includes two field replaceable power supply units and four field replaceable fan units. License for 8 x 10Gb ports. Transceivers sold and ordered separately.
550W-PSU-AC	Field replaceable power supply unit AC - 550W
750W-PSU-DC	Field replaceable power supply unit DC - 750W
NN-FAN-1	Field replaceable fan unit for 1RU products

LICENSING	4248-6XL license options, 8 ports license included in base product
4248-6XL-LC-9-16P	4248-6XL license upgrade from 9 to 16 ports. Transceivers sold separately
4248-6XL-LC-17-24P	4248-6XL license upgrade from 17 to 24 ports. Transceivers sold separately
4248-6XL-LC-25-48P	4248-6XL license upgrade from 25 to 48 ports. Transceivers sold separately
4248-6XL-LC-6P-40	4248-6XL license upgrade for 6 ports of 40Gb. Transceivers sold separately

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N E T W O R K S

About Niagara

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.