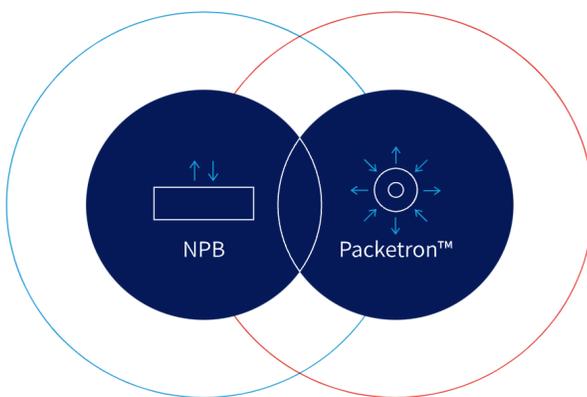


## Your path to an Intelligent Visibility Layer

Niagara Networks has recognized that the increase in data speed and the increase in sophistication required from network tools and applications is creating an expanding gap in the effective processing of the network tool's performance. To meet this challenge the network visibility layer and the security visibility layer need to provide network intelligence. Niagara's Network Intelligence will efficiently offload processing tasks from the network appliances to the visibility layer and introduce new speciality capabilities in decryption and threat detection not commonly associated with the visibility layer.

Niagara's Network Intelligence is fulfilled by the Packetron. The Packetron - a packet acceleration module - is designed to meet these challenges. The Packetron's packet processor module can be optionally offered in the next generation FixedBroker packet broker series: 4540, 4248-6C and 4220.



NPB<-->Packetron combo.  
Combining Packet broker functionality with  
Application layer agility.

### NPB Packetron combo power multiplier

Combining the Packetron with the NPB provides a power multiplier, achieving a more powerful solution than each one of the solutions independently.

Packetron offers a wide selection of Network Intelligence applications and Open Visibility Platform (OVP) applications.

OVP enables the user to load and run best-of-breed 3rd party partner applications on the Packetron. The user can select which applications will be loaded on each Packetron hardware module to meet their deployment needs.

The NPB  Packetron combo also reduces opex and total cost of ownership. Without the Packetron the user would potentially need to deploy multiple boxes with additional wiring and maintenance complexity, and increased vulnerability. Moreover the Packetron facilitates pay-as-you-grow deployment scenarios and investment protection. Dedicated software applications with advanced capabilities in cyber security or monitoring, performance and troubleshooting can be dynamically added as you need them.

With Packetron, Niagara Networks continues its excellence in expanding the envelope of the network visibility layer. With the Packetron, NetSecOps can truly get the right traffic to the right tool. With the power of the Packetron network visibility layer will be able to handle TLS decryption, Deduplication, advanced header stripping support to filter: ERSPAN, FabricPath, GENEVE, GRE, NVGRE, VXLAN, VLAN, VN Tag, PPPoE, GTP, MPLS, MPLS (GRE), MPLS (IP), MPLS (L2), MPLS (UDP) and many more packet intelligence rules to streamline NetSecOps operations.

### The Packetron Difference

#### Enable Ultra Packet Intelligence for NetSecOps

- Wide range of network intelligence applications
- Enhanced packet manipulation for complete visibility up to L7

#### Scalable Performance

- Packet acceleration in a single bay module
- Up to 2 rear Packetron modules in the 4540, 4248-6C and 4220 platforms - supporting 200G processing per Packetron

#### De-coupled software architecture

- Upload new software to the Packetron without impacting the host NPB software

#### Open Visibility Platform

- Supports 'open garden' application architecture
- 3rd party partners can deploy and offer their applications

#### Intuitive Configuration

- Apply Packetron applications on any selected flow in a hassle-free intuitive user interface
- Packetron applications are seamlessly integrated with Niagara's intent based FabricFlow™ technology

Applications running on the Packetron automatically and seamlessly benefit from aggregation, replication, filter, load balance, inline bypass and other traffic manipulation capabilities of a fully featured NPB. By connecting the Packetron hardware module to the non-blocking switching core, traffic from any port and to any port can benefit from Packetron applications.



The Packetron module occupies a single rear bay in the next-generation fixed packet brokers series. Up to two rear Packetron modules can be hosted in the 4540, 4248-6C, 4220 and any other future-proof compatible models, enabling 200 Gbps of processing capacity per Packetron.

A Network Packet Broker is powered by a switching fabric that is able to deliver great processing and forwarding capabilities on packets, up to Layer 4. The Packetron module is directly connected to the host packet broker switching fabric. The Packetron is able to handle sophisticated application layer and L7 level processing on packets, sessions and flows.

The Packetron has a nominal processing capacity of 200Gbps in the next generation FixedBroker packet broker series. Actual performance may vary based on the application and or number of applications that are run simultaneously on a single Packetron module. As a modular, field replaceable module, users can add Packetron modules to satisfy their processing and application needs.

## Niagara's Packetron Architecture Advantages

### Profiles

Users can define multiple profiles of application configurations. These profiles can then be selectively applied as part of the FabricFlow™ on to different traffic flows, or different profiles can be applied, based on deployment needs, to the same traffic flow.

### Passthrough

Passthrough mode is a unique user configurable option where the Niagara Packetron Architecture is able to dynamically detect levels of congestion and forward packets through the Packetron rather than process the packet and potentially have it dropped because of resource constraints. This may be especially important where the user's priority is to minimize the risk of dropping packets at a tradeoff of certain application processing.

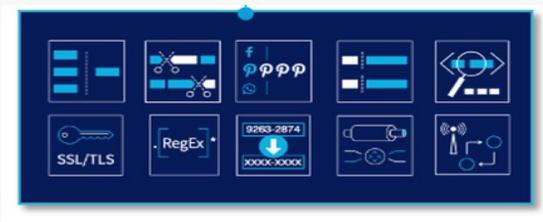
### Optimal Core Efficiency

When running multiple packet processing functions and applications on a Packetron, the number of cores allocated for data traffic processing needs to be optimized.

The Niagara Packetron Architecture is able to dynamically load balance incoming traffic so that traffic throughput processing will be maximized and optimized. This is done 'behind the scene' without burdening the user with cumbersome manual configurations and compromised performance. Moreover, in specific applications significant performance improvement can be achieved by parallel processing and reassignment of cores. For those applications we offer dedicated 'stand-alone' modes that are user selectable based on their deployment needs.

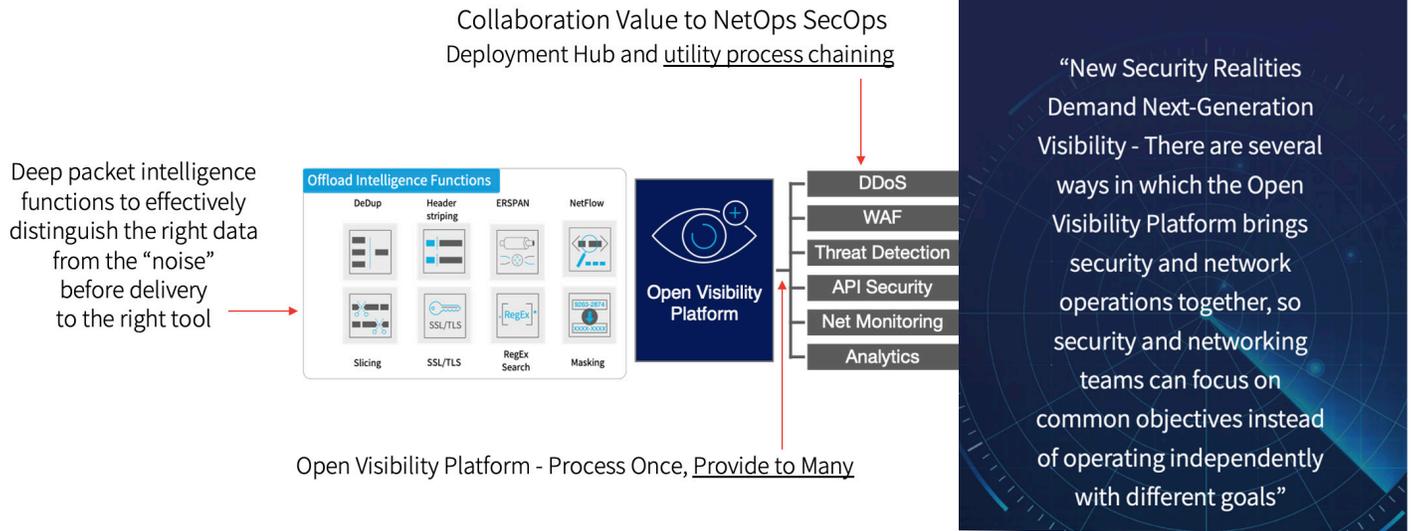
### Deployment Hub

Use the Packetron as a deployment hub for multiple Network Intelligence (NI) utility processing applications. Network Intelligence Applications will be applied at a user defined logical sequence on the data traffic. Applying Network Intelligence applications in sequence on the data traffic is intuitive and does not require additional complex manual configurations.



## Open Visibility Platform- the Power of Agile Visibility

Niagara's Open Visibility Platform (OVP) is the flexible deployment hub for cutting edge applications giving you the freedom to choose and spin-up the best solution for your SecOps and NetOps needs. Integrated intelligent switching fabric capabilities empowered by visibility intelligence ensure that the solution will get the right traffic in the right way, without further encumbering the operations of deploying a new solution.



## Address the NetOps and SecOps challenge

The ability to deploy a security or a networking solution in the network has been a long, complicated process – one of the least agile. Niagara's Open Visibility Platform brings security and network operations together, so security and networking teams can focus on common objectives instead of operating independently with different goals. The platform removes restrictions of deploying new network technologies and can host any virtualized solution, old or new. It can also accommodate proprietary solutions and ad-hoc solutions used temporarily for testing purposes. Open Visibility Platform brings a higher level of agility to security and offers the optimal choice built on the principles of digital transformation to deliver the following benefits to visibility layer.

### Open Visibility Platform Benefits To Visibility Layer

#### Freedom to choose

Not tied to closed garden offerings of a particular vendor.

#### Deployment Hub

Enables agility and flexibility by providing a deployment hub to easily host and serve multiple security and networking solutions. The deployment hub is a high performance/high-reliability appliance that meets stringent demands for core networking reliability, scalability and performance required by networking teams.

#### Getting the Right Traffic the Right Way

Intelligently deliver traffic and configure policies and rules to establish traffic flows to and from solutions. Determine the logical sequence of traffic being sent to the hosted applications as needed. Policies, actions and traffic steering can be triggered to address host application failure and failover conditions.

#### Deep Traffic Intelligence and Processing

Powerful combination of traffic intelligence and core traffic. Processing utility functions, such as deduplication and decryption performed within OVP secure and low latency domain - carrying out these tasks centrally on a visibility platform can boost performance of individual security apps or devices.

#### Security Tool Chaining

The platform enables intelligent tool chaining, which is important for establishing the order of security operations. Security Tool Chaining is crucial for logical sequencing and management of network security. For example, a web or application firewall should be in a path before an intrusion detection system (IDS) or an intrusion prevention systems (IPS), and each must be treated differently. In addition, network requirements can be upheld to ensure performance and availability and prevent solutions from impairing the network. This way, IT can stay one step ahead of potential problems or blind spots as the environment changes.

Part Number	Packetron Processor - Acceleration Module*
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.
FXD-PKTRN-I-M1	Packetron processor acceleration module. Dual wide, rear module Up to 200G processing. Includes Packet Slicing software license. 32 Core processor, 256GB RAM. 2TB SSD, for 4248-6C, 4550 and 4220 product line.
FXD-PKTRN-I-H1	Packetron processor acceleration module. Dual wide, rear module Up to 200G processing. Includes Packet Slicing software license. 64 Core processor, 512GB RAM. 2TB SSD, for 4248-6C, 4540 and 4220 product line.

Part Number	Network Intelligence Applications**
PKTRN-LC-DDUP	Removes duplicate packets. License required per each Packetron hardware module. Packetron processor acceleration hardware sold separately.
PKTRN-LC-NETFL	Generates NetFlow report to Collectors. License required per each Packetron hardware module. Packetron processor acceleration hardware sold separately.
PKTRN-LC-PSL	Packet Slicing, removes user defined payload part of a packet. License required per each Packetron hardware module. Packetron processor acceleration hardware sold separately.
PKTRN-LC-FSL	Flow Slicing, forwards a user defined amount of packets after which subsequent packets of the same flow are discarded.. License required per each Packetron hardware module. Packetron processor acceleration hardware sold separately.
PKTRN-LC-APPFLT	Application Filtering. Enables advanced applications traffic filtering. Filtered applications can be applied for monitoring and inline deployments. Subscription license per Packetron module. Includes a 3-year subscription. Packetron processor acceleration hardware sold separately.
PKTRN-LC-APPFLT-SP	1-year subscription for Application Filtering. Requires PKTRN-LC-APPFLT license. Includes updates for one year.
PKTRN-LC-DMASK	Data masking of specified byte(s) length in the packet. Multiple masks supported. License per Packetron module. Packetron processor acceleration hardware sold separately.
PKTRN-LC-OOB	TLS decryption tap deployment. License per Packetron module. Packetron processor acceleration hardware sold separately.
PKTRN-LC-PINL	Inline decryption deployment. Passive inline - supports sending decrypted traffic to out-of-band appliance. License includes tap decryption and passive inline decryption. License per Packetron module. Packetron processor acceleration hardware sold separately.

Notes: \* License per Packetron module \*\* Packetron processor acceleration module sold separately

Part Number	Network Intelligence Applications**
PKTRN-LC-AINL	Inline decryption deployment. Active inline - supports sending decrypted traffic to an in-line appliance. License includes tap decryption, passive inline decryption and active inline decryption. License per Packetron module. Packetron processor acceleration hardware is sold separately.
PKTRN-LC-RGX-EXP	Regex Patterns application. Expansion for filtering and data masking capabilities. The user can define any pattern through a regular expression and perform advanced packet filtering, advanced masking and advanced session filtering. License required per each Packetron hardware module. Packetron processor acceleration hardware is sold separately.
PKTRN-LC-HDR-STP	Advanced header stripping support to filter: ERSPAN, FabricPath, GENEVE, GRE, NVGRE, VXLAN, VLAN, VN Tag, PPPoE, GTP, MPLS, MPLS (GRE), MPLS (IP), MPLS (L2), MPLS (UDP). License required per each Packetron hardware module. Packetron processor acceleration hardware is sold separately.
PKTRN-LC-MS4GTP	Mobile Subscriber-aware Visibility (3G/4G). Correlated filtering and load balancing. Uncorrelated load balancing. License per Packetron module. Packetron processor acceleration module is sold separately.
PKTRN-LC-OVP	Open Visibility Platform license add-on. Enables the Packetron to host any 3rd party virtualized image based on VMware ESXi. VMware license not included. License required per each Packetron hardware module. Packetron processor acceleration hardware is sold separately.

## 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](http://www.niagaranetworks.com)

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