**nVoy 1-100Gb Packet Broker**

**Key Features**

- Traffic aggregation, traffic replication, load balancing, virtual wire, mirror and tap
- 48, 10Gb/25Gb ports
- 6, 40Gb/100Gb ports
- Powerful user interface for web-based configuration and status information
- Full quintuple flow-level routing and filtering
- Extract and map any group of flows and/or up to 2000 individual flows—on a source destination and application basis
- Extensible protocol support allowing additions via software update
- Extract statistics from the broker using SNMP/TRAP, SYSLOG, EMAIL, or JSON API based polling

**The nVoy Packet Broker enables SecOps teams to build next-generation network security or visibility solutions.**

The Packet Broker makes it easy to aggregate, replicate, tag, strip, filter, and load-balance traffic from a tap into your collection of network sensors. Providing flexible and scalable flow routing to flow-monitoring and/or security and forensic tools allows engineers to focus on potential traffic of interest at the application level, from a source, to a destination – or any combination thereof. It is fully backed by a customer support team that specializes in network sensor technologies.

**Benefits**

- No proprietary command line interface (CLI) to learn. Instead draw lines between boxes using a web interface built into the appliance (see figure below). There is also a JSON API for configuring the broker under program control.
- Deploy on your 1 or 10 Gb network knowing that your investment already supports 25, 40, and 100 Gb to leverage later when you need it with 3.6 Tbps of line rate processing.
- Or, if your network is already faster than 10 Gb, use the Packet Broker’s filtering and load balancing to process packets from 25-100 Gb network taps into a cluster of 10 Gb servers.
Flow Operation Domain

The Packet Broker’s data path is graphically configured using a Virtual Flow Domain paradigm. The Packet Broker supports up to 10,240 Virtual Flow Domains, each isolated from the others. Virtual Flow Domains can have their own data path, filter configuration, and load-balancing rules. Once activated, the configuration is mapped and pushed into hardware.

The Packet Broker works with a wide variety of protocols including: TRILL, MPLS, VPWS, Q-in-Q, MAC-in-MAC, IPv4, IPv6, GRE, ECMP, TCP, UDP, IGMPv1, IGMPv2, IGMPv3, and VEPA+.

Typical Flow Domains Supported by Flow Domain Designer Software

- **Dynamically connect ports together without processing.** This emulates a matrix switch which is often found inside network testing labs or used for broadcast video.
- **Replicate a single packet stream and then filter each copy differently.** This configuration can share a network tap with multiple security appliances.
- **Aggregate multiple switch uplinks to pass through a single firewall-like appliance.**
- **A slightly more complex example that includes packet slicing and load balancing into a compute cluster.** Many IDS implementations at 10+ Gb require load balancing.
- **Split some of the traffic for processing using an external appliance, and merge the results back.**
- **Monitor three separate ports and consolidate the packets to send over a single port to a different location for analysis.**
- **It isn’t just a broker. You can set up specific ports as an L2 or L3 aware switch. Line rate with jumbo frame support.**

Features

- 48x 10G/25G SFP+/SFP28 and 6x 40Gb/100Gb QSFP+/QSFP28 ports
- Fabric Visibility Appliance
**Rear Panel Features**

- **AC power supply**
  - AC power connection for use with the supplied power cords

- **Fan and PSU LEDs**
  - Normal: green PSU1, green PSU2
  - PSU not supplied: OFF
  - Fan is fault: fan Amber
  - Normal: green STAT

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- **10G/25G SFP+/SFP28 ports**
  - Provide 10G/25G SFP+ connectivity

- **40G/100G QSFP+/SFP28 ports**
  - Provide 40G/100G QSFP+ connectivity

- **40G/100G QSFP+/QSFP28 Status Lights**
  - 40G/100G Ethernet 49 to 54 ports status as below:
    - A Valid 100Gbps link is established: steady green
    - Transmit or receive packets at 100Gbps: blinking green
    - A Valid 40Gbps link is established: steady orange
    - Transmit or receive packets at 40Gbps: blinking orange
    - No blink: off

- **10G/25G SFP+/SFP28 status lights**
  - 10G/25G Ethernet 1 to 48 ports status as below:
    - Steady green: 25Gbps link established
    - Blinking green: transmit/receive at 25Gbps
    - Steady orange: 10Gbps link established
    - Blinking orange: transmit/receive at 10Gbps
    - Off: no link

- **Console port**
  - For connection to command line interface

- **Management port**
  - For use with USB device

- **USB**
  - For use with USB device

- **FlowDirector 640+**

- **Hot swappable fans**
## External Interfaces Specification

<table>
<thead>
<tr>
<th>Function</th>
<th>Compliance</th>
<th>Type</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bi-mode 10Gb/25Gb Traffic Ports</td>
<td>IEEE 802.3 by Optical fiber, twinax, backplane 25 Gigabit Ethernet IEEE 802.3ae 10 Gigabit Ethernet IEEE 802.3aq 10GBASE-LRM</td>
<td>25G SFP28 Fiber Optics 25G SFP28 passive DAC 10G SFP+ Fiber Optics 10G SFP+ Passive DAC Cable</td>
<td>48</td>
</tr>
<tr>
<td>40Gb/100Gb Traffic Ports</td>
<td>SFF-8436, SFF-8635 QSFP+ 40Gb port; QSFP28 100Gb Ports</td>
<td>QSFP+/QSFP28+ Fiber Optics or QSFP+/QSFP28 DAC Cable</td>
<td>6</td>
</tr>
<tr>
<td>40Gb/100Gb Traffic Ports Breakout Capabilities</td>
<td>Each 40Gb/100G Traffic Port can be split into 4 ports to support 10Gb/25Gb Operation. IEEE 802.3ae 10 Gigabit Ethernet IEEE 802.3aq 10GBASE-LRM SFP+ MSA, Revision 4.1 Direct-attach Copper Support up to 10 meters</td>
<td>40G QSFP+ to 4x SFP+ splitter cable 100G QSFP28 to 4x SFP28 splitter cable</td>
<td>6 QSFP+/QSFP28 to 24 SFP+/SFP28</td>
</tr>
<tr>
<td>10Gb/25Gb Traffic Ports Gang Capabilities</td>
<td>Each 4 adjacent 10Gb/25Gb Ports can be ganged into 1 QSFP+/QSFP28 Port with QSFP+/QSFP28 to SFP+/SFP28 Cable</td>
<td>QSFP+/QSFP28 Fiber Optics or QSFP+/QSFP28 DAC Cable</td>
<td>48 SFP+/SFP28 to 12 QSFP+/QSFP28</td>
</tr>
</tbody>
</table>

### LED for the System
- Power Module 1 Status LED Power Module 2 Status LED FAN Status LED STAT Status LED
- Green/Amber Green/Amber Green/Amber Green/Amber
- 1 1 1 1

### LED for SFP+ Traffic Ports
- Combo LED for Link and Activity
- Green LED
- 1 Per Port

### LED for QSFP+ Traffic Ports
- Combo LED for Link and Activity
- Blue LED
- 1 Per Port

### 10/100/1000 Mbps Management Port
- 10/100/1000BASE-T Category 5, Category 5e, Category 6 UTP
- Copper RJ-45. There is no path between the management port and the switch ASIC dataplane.
- 1

### Visible LED for RJ-45 Management Port
- LED for Link LED for Activity
- Green/Orange LED Green LED
- 2

### Console Port
- 115200 Baud 8 Bit Data No Parity 1 Stop Bit
- Mini USB Type B
- 1

### USB Port
- USB 2.0 High Speed 480Mpbs Port
- USB Type A
- 1

### Air Flow and Fans
- PWM Controlled Long Endurance Fan
- Front to Back Air Flow
- 4

### Redundant Power Supply
- Dual 750W High Efficiency 90-230V AC 50-60Hz Class I
- 1+1 Redundant Power Supply
- 2

### Rack Mount Kit
- 19 Inch Rack Mountable
- 1

There are no locks on transceivers. ARIA Cybersecurity Solutions provides a list of transceivers it has tested. Use of other transceivers may require signal integrity testing and an update to our database of signal preemphasis levels. This work will require a service charge.
ABOUT ARIA CYBERSECURITY SOLUTIONS

ARIA Cybersecurity Solutions recognizes that better, stronger, more effective cybersecurity starts with a smarter approach. Our solutions provide new ways to monitor all internal network traffic, while capturing and feeding the right data to existing security tools to improve threat detection and surgically disrupt intrusions. Customers in a range of industries rely on our solutions each and every day to accelerate incident response, automate breach detection, and protect their most critical assets and applications. With a proven track record supporting the Department of Defense and many intelligence agencies in their war on terror, and an award-winning portfolio of security solutions, ARIA Cybersecurity Solutions is committed to leading the way in cybersecurity success.

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