



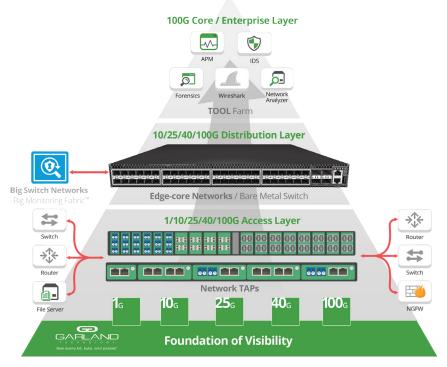
# **End-to-End SDN Visibility Solutions**

Edgecore Networks provides open networking solutions consisting of bare-metal hardware switches and access products with a choice of independent commercial and open source software options for applications such as SDN, Network Analytics, Virtualized Networks, Data Center network fabrics, and open access networks. Cloud data center operators and leading enterprises have been deploying open network solutions for several years and realizing the benefits of:

- Reduced network equipment expenses
- · Automated and accelerated provisioning of network capacity and services
- Greater control over the development of enhanced network services
- Flexibility to work with best-in-class suppliers and reduced operating expenses

These Open Networking benefits are now available for many more networking use cases. Public and private cloud data centers of all sizes are being deployed with network fabric built from open leaf and spine switches. Edge-core Networks offers choices of hardware to meet Open Network deployment, from 1G, 10G, 25G and 40G, to 100G.

Network test access points (TAPs) are the approved and recommended hardware tool that allows you to monitor your network monitoring fabric. Garland Technology's best in class passive fiber, optical network TAPs are purpose-built hardware devices that make a 100% copy of your network's data providing your monitoring tools 100% visibility.



#### The Importance of Visibility with SDN •

Centralized control of traffic flows is critical for monitoring 10G, 25G, 40G and 100G networks. But before implementing SDN, network architects must ensure that they have a solid visibility plane that ensures 100% of packets will be seen by the SDN controller.

To achieve complete transparency with application monitoring tools, network architects must account for solutions and functions such as:

- Network analyzers
- Computer forensic analysis & data capture
- Data leakage prevention (DLP)
- Intrusion detection

- · Bandwidth management
- · Content filtering
- Lawful interception
- Data recording

### Keep In Mind



- 1. SDN decouples the data plane from the control plane
- 2. Visibility is required for both the data plane and the control plane

#### **Have Questions?**



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## Part Number Mapping: SDN Visibility Solutions

| Software Vendor and Release | 100G   |               | 40G                    |                | 10G        |               |               |                |               |                  | 1G                    |            |
|-----------------------------|--|---------------|------------------------|----------------|------------|---------------|---------------|----------------|---------------|------------------|-----------------------|------------|
| EdgeCore P/N#               | AS7716-32X   | AS7712-32X    | AS6812-32X             | AS6712-32X     | AS5912-54X | AS5812-54X    | AS5812-54T    | AS5712-54X     | AS5710-54X    | AS5610-52X       | AS4610-54T            | AS4610-30T |
| ONIE                        | 0  | 0             | 0                      | 0              | 0          | 0             | 0             | 0              | 0             | 0                | 0                     | 0          |
| Cumulus                     |  | CL 3.1 - 3.3  | CL 3.2-3.3             | CL 2.5.3 - 3.3 |            | CL 3.2 - 3.3  | CL 3.2 - 3.3  | CL 2.5.1 - 3.3 |               | CL 2.0.1 - 2.5.X | CL 2.5.4 - 3.3        |            |
| Big Mon Fabric              |  | 5.6.0 - 5.8.2 | 5.8.2                  | 5.5.0 - 5.8.2  |            | 5.8.2         | 5.8.2         | 5.5.0 - 5.8.2  | 5.0.0 - 8.5.2 | 5.0.0 - 8.5.2    |                       |            |
| Big Cloud Fabric            |  |               | 3.6.0 - 4.0.0          | 3.6.0 - 4.0.0  |            | 3.6.0 - 4.0.0 | 3.7.0 - 4.0.0 | 3.6.0 - 4.0.0  | 3.6.0 - 4.0.0 |                  |                       |            |
| ONL                         | 0  | 0             | 0                      | 0              |            | 0             | 0             | 0              | 0             | 0                | 0                     |            |
| PicOS                       |  | 2.7.1         |                        | 2.6.4          |            | 2.8.0         | 2.8.0         | 2.6.0          |               | 2.4 - 2.9        | 2.6.2                 | 2.6.4      |
| IPInfusion                  |  | 0             |                        |                | 0          | 0             |               |                |               |                  |                       |            |
| Pluribus                    | 0  |               |                        | 0              |            |               | 0             | 0              |               |                  |                       |            |
| OpenSwitch                  |  | 0             |                        | 0              |            |               |               | 0              |               |                  |                       |            |
| SnapRoute                   | 0  | 0             | 0                      | 0              |            | 0             | 0             | 0              |               |                  | 0                     |            |
| Garland TAP<br>Solutions    | 100G-SR10 MTP - 24   |               | 40G/100G-SR 4 MTP - 12 |                |            |               |               |                |               |                  | <u>10/100M Copper</u> |            |
|                             |  |               | <u>40G-S</u>           | R-BiDi         |            |               |               |                |               |                  |                       |            |
|                             |  |               |                        |                |            |               | 1             | G/10G Multi-m  | ode Fiber TAP | <u>'S</u>        |                       |            |
|                             | 1G, 10G, 40G, 100G - Modular Fiber Chassis - Accommodates all network speeds |               |                        |                |            |               |               |                |               |                  |                       |            |
|                             | 1G, 10G, 40G, and 100G Single-mode Fiber TAPs                                |               |                        |                |            |               |               |                |               |                  |                       |            |
| Garland<br>Pluggables       | (32) QSFP28  |               | (32) QSFP+             | (32) QSFP+     | (6) QSFP28 | (6) QSFP      | (6) QSFP      | (6) QSFP       | (6) QSFP      | (4) QSFP+        | (2) QSFP+             | (2) QSFP+  |
|                             | (2) QSFP28-4SFP28-Cable_1  |               |                        |                | (48) SFP+  | (48) SFP+     | (48) RJ-45    | (48) SFP+      | (48) SFP+     | (48) SFP+        | (4) SFP+              | (4) SFP+   |
|                             |  |               |                        |                |            |               |               |                |               |                  | (48) RJ-45            | (24) RJ-45 |



Garland Technology Network TAPs & Pluggables



Monitoring Fabric Freedom of Choice



Edge-core Networks Bare Metal Switch



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