When customers deploy in-line appliances on mission-critical network segments, they have the option to mitigate the risks of scheduled or unscheduled downtime of an in-line appliance for configuration changes, maintenance or repair scenarios by adding a tap/bypass switch to maintain network continuity.

Palo Alto Networks® has partnered with Garland Technology to provide the ability to install Palo Alto Networks next-generation firewall in-line without compromising network uptime.

Connecting a Palo Alto Networks next-generation firewall into a network using a Garland Technology bypass TAP provides in-line performance while assuring 100 percent network visibility and eliminating point-of-traffic-flow disruption. In normal operation, all network traffic passes unimpeded through the TAP and into the in-line device. Should the in-line device lose power or need to be taken offline for scheduled maintenance, the TAP will "bypass" the device and keep traffic flowing through the network. If the TAP should lose power, it will fail-safe without impacting network traffic. When the Palo Alto Networks next-generation firewall comes back online, the TAP will automatically redirect traffic through the device transparently to the network.

Highlights

- Support the entire lifecycle of your Palo Alto Networks next-generation firewall with Garland’s bypass TAPs
- Evaluate & Optimize: TAP once and configure NGFW off-line and out-of-band
- Validation/In-Line Active: Move into bypass mode (in-band) for active in-line analysis
- Eliminate network interruption for updates, service, or troubleshooting.
- 1G, 10G, 40G Bypass TAP solutions
- Data center bypass TAP solutions for high availability designs
- Policy compliance when newly issued policy changes are made to your Palo Alto Networks NGFW by giving you the ability to query before/after packet capture stores to assure policy compliance
For full redundancy, the Garland Technology Integrated 8 port Bypass TAP allows a primary and secondary Palo Alto Networks next-generation firewall to be connected in-line while still providing full bypass protection for the network. If the primary device goes offline for any reason, the TAP will automatically redirect traffic through the secondary unit until the primary device is back online. Should the TAP lose power, it will fail-safe to ensure network connectivity. In addition, the traffic is available through two additional monitoring ports for additional tools, sniffers, probes or any other monitoring device.

**USE CASE #1**

**Challenge:**
100 percent network uptime while performing updates, maintenance and trouble-shooting

**Solution:**
Installation of a bypass network TAP allows for anytime access to in-line NGFW while ensuring network uptime. Bypass network TAPs offer the flexibility to take your active, in-line NGFW offline while not interrupting live network traffic. Solutions are available in 1G, 10G or 40G and support mixed media including (1G) copper, SFP, SX, LX and 2X or (10G/40G) SFP+, SR, LR and ER.

**USE CASE #2:**

**Challenge:**
1G or 10G High Availability (HA) with active/active and active/passive primary to backup devices

**Solution:**
Installation of a bypass TAP provides fail safe protection for your next-generation firewall. In a high availability scenario, when the primary link goes down, traffic can automatically be forced to the secondary link. The solution also manages multiple in-band active and out-of-band monitoring tools.

**About Garland Technology**
Garland Technology is the leading network TAP manufacturer and provides the physical connection between the network and your Palo Alto NGFW. Garland Technology’s network TAPs guarantees 100% visibility and network access by ensuring every bit, byte, and packet® is fed to your NGFW. With a full product line of network access tools, including network TAPs in bypass, aggregation/regeneration and breakout modes as well as hybrid bypass TAPs with packet broker and filtering capabilities to protect and manage your edge-of-network in-line appliances. Network capabilities support 1G/10G/40G and 100G.

Find out more at [www.garlandtechnology.com](http://www.garlandtechnology.com)

**About Palo Alto Networks**
Palo Alto Networks is the next-generation security company, leading a new era in cybersecurity by safely enabling applications and preventing cyber breaches for tens of thousands of organizations worldwide. Built with an innovative approach and highly differentiated cyberthreat prevention capabilities, Palo Alto Networks game-changing security platform delivers security far superior to legacy or point products, safely enables daily business operations, and protects an organization’s most valuable assets.

Find out more at [www.paloaltonetworks.com](http://www.paloaltonetworks.com)