GARLAND
TECHNOLOGY

See every bit, byte, and packet®

Product Catalog

Made, tested & supported in the U.S.A.

MADE IN THE U.S.A.

Foundation of Visibility
Starts with seeing every bit, byte, and packet®

Garland Technology's best-in-class Network TAP and purpose-built Packet Broker solutions provide an innovative, industry leading 360° visibility view for modern visibility fabrics.

Garland's unique TAP to Tool™ Architecture puts the focus on the performance and visibility of your security and monitoring tools. Offering modular and open vendor solutions, we provide the scalability and flexibility to deploy what you need, when you need it.

It all starts with the packet. On your journey for complete visibility truth, Garland Technology provides 100% visibility, along with increased performance, and network optimization to add value to your investment, while mitigating risk.

Adaptable
Scalable
Flexible
Highest Quality
Simple Deployment
Value

The Garland Leadership

Chris Bihary, CEO/Co-Founder

Chris Bihary has been in the network performance industry for over 20 years. Bihary has established collaborative partnerships with technology companies to complement product performance through the integration of network test access points.

Jerry Dillard, CTO/Co-Founder

Jerry Dillard leverages two decades in design and engineering to ensure maximum performance within today's network environments. Dillard, as the inventor of the Bypass Network Test Access Point (TAP), has secured his legacy as he continues to provide network solutions for data centers worldwide.

Our Commitment to Quality

Garland Technology's focus will remain centered around reliability while delivering the greatest economical solutions for today's network teams and the most complex and extensive data center environments worldwide.

The "Garland Quality Standard" ensures all network TAPs are stress tested with live network data and validated, with zero failures in the field. Made, tested, and supported in the U.S.A..

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Garland Technology | **Products**

Garland Technology ensures complete 360° network visibility by delivering a full platform of network access products including: Breakout TAPs, Aggregator and Regeneration TAPs, Advanced All-In-1 Filtering TAPs, Inline Edge Security Bypass TAPs, Cloud solutions, as well as purpose built Network Packet Broker devices including Advanced Aggregators and Advanced Features.

Network Test Access Points (TAPs)
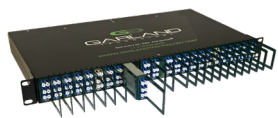
1 **Breakout Network TAPs : Passive Fiber** `Page 4` **and Copper** `Page 12`
Fiber network TAPs range in network speeds of 1G, 10G, 25, 40G and 100G. Fiber Network TAPs are passive. Copper network TAPs in network speeds of 10M/100M or 10M/100M/1000M (1G). Passive Fiber and Copper. Breakout TAPs make a 100% copy of your network's data without affecting traffic for network monitoring.

2 **Aggregator Network TAPs** `Page 15`
Aggregator/Regeneration network TAPs are used to capture 100% full duplex network traffic and are available in copper 10M/100M/1000M (1G) and fiber 1G and 10G, single or multi-mode. Aggregation TAPs support Breakout and Regeneration/ SPAN modes for network monitoring.

3 **XtraTAP**™ **: ALL-IN-1 Network TAPs** `Page 21`
All-in-1 filtering network TAPs, available in 1G. Allows filtering out of packets and traffic that is not needed by the tool to perform its function. Filtering ensures that monitoring ports do not become oversubscribed with unneeded data.

4 **EdgeSafe**™ **: Bypass Network TAPs** `Page 24`
Bypass Network TAPs with failsafe for inline security tools, monitors the appliance's health. Available in 10M/100M/1G/10G/40G, these TAPs support Bypass, Tap 'Breakout', Aggregation and Regeneration/ SPAN modes, allowing you to optimize the life cycle of your appliance.

5 **Garland Prisms Cloud Visibility** `Page 29`
Network Packet Visibility for Private and Public Cloud Environments. Garland Prisms is the most advanced, easiest, and most affordable virtual TAP solution to get cloud packets to monitoring tools and services.

Network Packet Broker Solutions

6 **PacketMAX**™ **: Advanced Aggregators** `Page 30`
Advanced Aggregators are devices designed to increase efficiency and port utilization in network speeds of 1G, 10G, 25G, 40G and 100G. This is achieved by aggregating and pre-filtering traffic prior to sending out to Network Packet Broker's for advanced filtering or taking the place of Network Packet Brokers in applications where only L2-L4 filtering is required.

PacketMAX™ **: Advanced Features** `Page 33`
Advanced Features is a standalone platform to extend the feature set of any product. The system is designed to support large window deduplication, packet slicing and time stamping. Deduplication and packet slicing can significantly reduce the processing overhead from security or monitoring tools.

7 **Hybrid Network Packet Brokers** `Page 34`
Purpose-built Network Packet Brokers, available in 1G and 10G with TAP functionality, the PacketSTAX™ and EdgeLens® provide access to network traffic from multiple links, helping to centralize and improve efficiencies by sharing packets between the monitoring and inline security appliances.

Accessories

8 **Pluggable Transceivers and Cables** `Page 38`
The most efficient network infrastructure is one that allows traffic to flow seamlessly from end to end and allows for 100% visibility, and access where and when you need it.
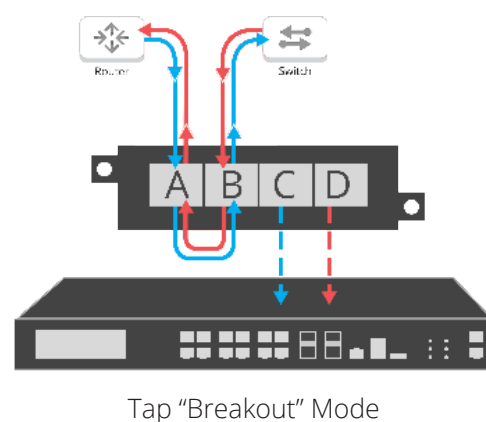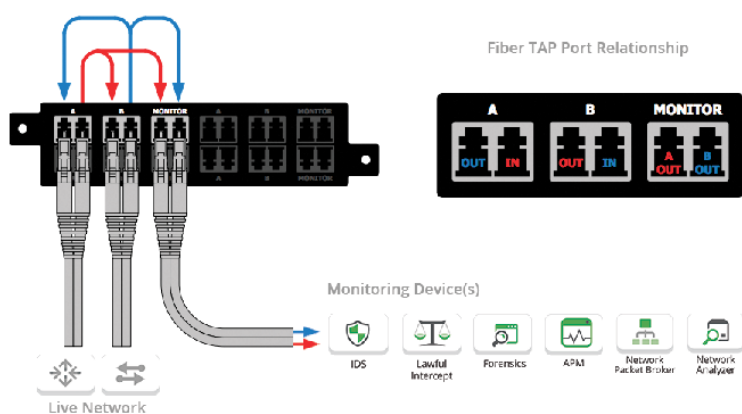
1 Breakout TAPs
Passive Fiber and Copper

Garland Technology's **Passive Fiber Test Access Points (TAPs)** are high-density, non-powered devices that makes a full copy of any network's data without affecting network traffic, providing visibility and the high-performance monitoring solution required to efficiently manage even the most complex network infrastructure.

Garland Technology offers fiber network TAPs in network speeds of 1G, 10G, 25G, 40G and 100G and supports OS1/OS2, OM1/OM2/OM3/OM4/OM5 media.

Garland Technology's **Copper Test Access Points (TAPs)** sets the industry's benchmark with features to include link speed synchronization, link failure propagation, media conversion, fail-safe technology, power over ethernet, and utilization rules and alerts, allowing Garland Technology to provide the visibility required to efficiently manage even the most complex network infrastructure.

Garland Technology offers copper network TAPs in network speeds of 10/100M or 10M/100M/1000M (1G).

NETWORK FLOW

Fiber TAP Port Relationship

Monitoring Device(s)

IDS · Lawful Intercept · Forensics · APM · Network Packet Broker · Network Analyzer

Live Network

Tap "Breakout" Mode

- 100% network visibility
- 100% secure and invisible; no IP address; no MAC address; cannot be hacked
- Passes physical layer errors
- Packet injection and packet slicing available
- Portable, plug & play units or 1U or 2U chassis systems
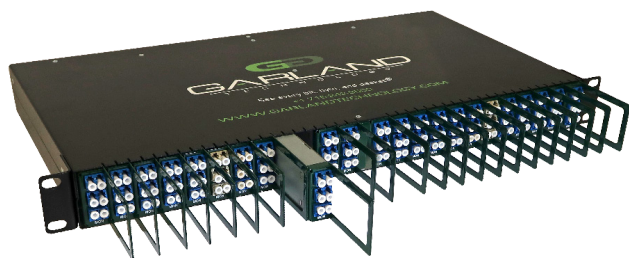
APPLICATIONS

> Network & Application Monitoring
> Network & Application Analysis
> Network & Application Performance

+ Tap "Breakout" Mode is ideal when utilization is very high and packet loss is not an option.

SelectTAP™ : Fiber Modular Chassis

1G/10G/25G/40G/100G

1U Modular Chassis

- Customize TAPs by media and/or speeds
- Change TAP modules on-the-fly or in the future
- Accommodates 16 to 24 modules, depending on configuration (24 LC TAP Modules, 16 MPO/MTP® TAP Modules, 16 BiDi LC TAP Modules)
- Supports Single-mode: OS1 and Multi-mode: OM3/OM4/OM5 media for long range and short range environments*
- Supports Cisco Bi-directional optical technology
- New prism based technology reduces bit errors on OM3/OM4/OM5 applications, providing 100% utilization
- No power source required

Model #	Network Speed	Ports	# of TAPs	Split Ratio*	Wavelengths	Media	Connector/Mode
FMC-1U	Fiber Modular Chassis						
OS2501M	1/10/25/40/100G		1	50/50	1310/1550nm	Fiber-OS1/OS2	Fiber-LC Single-Mode Fiber
OS2701M	1/10/25/40/100G		1	70/30	1310/1550nm	Fiber-OS1/OS2	Fiber-LC Single-Mode Fiber
OS2501-PSM4BM	100G		1	50/50	1310nm	Fiber-OS1/OS2	MTP12 B Style Male Connectors (MPO)
OS2701-PSM4BM	100G		1	70/30	1310nm	Fiber-OS1/OS2	MTP12 B Style Male Connectors (MPO)
OM1501M	1/10G		1	50/50	850/1300nm	Fiber-OM1/OM2	Fiber-LC Multi-Mode Fiber
OM1701M	1/10G		1	70/30	850/1300nm	Fiber-OM1/OM2	Fiber-LC Multi-Mode Fiber
OM4501M	1/10/25G		1	50/50	850nm	Fiber-OM3/OM4	Fiber-LC Multi-Mode Fiber
OM4701M	1/10/25G		1	70/30	850nm	Fiber-OM3/OM4	Fiber-LC Multi-Mode Fiber
OM5501M	1/10/25/40/100G*		1	50/50	850-950nm	Fiber OM5	Fiber-LC-Multi-Mode
OM5701M	1/10/25/40/100G*		1	70/30	850-950nm	Fiber OM5	Fiber-LC-Multi-Mode
OM4501-40GSR4BiDiM	40G		1	50/50	800-950nm	Fiber-OM3/OM4	Fiber-LC Multi-Mode Fiber
OM4701-40GSR4BiDiM	40G		1	70/30	800-950nm	Fiber-OM3/OM4	Fiber-LC Multi-Mode Fiber
OM5501-SRBiDiM	40/100G*		1	50/50	850-950nm	Fiber OM5	Fiber-LC-Multi-Mode
OM5701-SRBiDiM	40/100G*		1	70/30	850-950nm	Fiber OM5	Fiber-LC-Multi-Mode
OS2502-BiDiM	1G/10G		2	50/50	1270~1350nm/ 1450~1530nm/ 1510~1590nm	Fiber-OS2	Fiber-LC Single-Mode
OS2501-BiDiM	1G/10G		1	50/50	1270~1350nm/ 1450~1530nm/ 1510~1590nm	Fiber-OS2	Fiber-LC Single-Mode
OM4501-SR4BM	40/100G		1	50/50	850nm	Fiber-OM3/OM4	MTP-12 Multi-Mode Fiber
OM4701-SR4BM	40/100G		1	70/30	850nm	Fiber-OM3/OM4	MTP-12 Multi-Mode Fiber
OM5501-SR4BM	40/100/400G*		1	50/50	850-950nm	Fiber OM5	MTP12 Multi-Mode Fiber
OM5701-SR4BM	40/100/400G*		1	70/30	850-950nm	Fiber OM5	MTP12 Multi-Mode Fiber
OM4501-100GSR10AM	100G		1	50/50	850nm	Fiber-OM3/OM4	MTP-24 Multi-Mode Fiber
OM4701-100GSR10AM	100G		1	70/30	850nm	Fiber-OM3/OM4	MTP-24 Multi-Mode Fiber
OS23321X3M	1G/10G		1	33.3	1310/1550nm	Fiber-OS2	Fiber LC Single-Mode Fiber
OM43321X3M	1G/10G		1	33.3	850nm	Fiber-OM3/OM4	Fiber LC Multi-Mode Fiber

OS2 Fiber supports OS1 & OS2; OM1 Fiber supports OM1 & OM2; OM5 Fiber supports OM3 & OM4. Supports: 90/10, 80/20, 50/50, 70/30, 60/40 *100G SWDM4

Single-mode Passive Fiber Network TAPs

1G/10G/25G/40G/100G | Portable

- 1U rack mount kit holds up to four (4) modules, each module can have 1, 2, 3, or 4 TAPs
- Single-mode with LC Connectors
- Supports long range and extended range single-mode environments.
- Split ratios available in 50/50; 60/40; 70/30; 80/20 and 90/10
- Portable, Plug & Play easy installation
- No power source required

RMP-1U

Model #	Network Speed	Ports	# of TAPs	Split Ratio*	Wavelengths	Media	Connector/Mode
RMP-1U			1U Rack Mount Kit - Hold up to 4 Modules, each Module can have 1, 2, 3 or 4 TAPs				
OS1501	1/10/25/40/100G		1	50/50	1310/1550nm	Fiber-OS1	Fiber-LC Single-Mode Fiber
OS1701	1/10/25/40/100G		1	70/30	1310/1550nm	Fiber-OS1	
OS2501	1/10/25/40/100G		1	50/50	1310/1550nm	Fiber-OS2	
OS2701	1/10/25/40/100G		1	70/30	1310/1550nm	Fiber-OS2	
OS1502	1/10/25/40/100G		2	50/50	1310/1550nm	Fiber-OS1	
OS1702	1/10/25/40/100G		2	70/30	1310/1550nm	Fiber-OS1	
OS2502	1/10/25/40/100G		2	50/50	1310/1550nm	Fiber-OS2	
OS2702	1/10/25/40/100G		2	70/30	1310/1550nm	Fiber-OS2	
OS1503	1/10/25/40/100G		3	50/50	1310/1550nm	Fiber-OS1	
OS1703	1/10/25/40/100G		3	70/30	1310/1550nm	Fiber-OS1	
OS2503	1/10/25/40/100G		3	50/50	1310/1550nm	Fiber-OS2	
OS2703	1/10/25/40/100G		3	70/30	1310/1550nm	Fiber-OS2	
OS1504	1/10/25/40/100G		4	50/50	1310/1550nm	Fiber-OS1	
OS1704	1/10/25/40/100G		4	70/30	1310/1550nm	Fiber-OS1	
OS2504	1/10/25/40/100G		4	50/50	1310/1550nm	Fiber-OS2	
OS2704	1/10/25/40/100G		4	70/30	1310/1550nm	Fiber-OS2	

Custom split ratios are available in 60/40, 80/20 or 90/10, please inquire.

Multi-mode Passive Fiber Network TAPs

1G/10/25/40/100G | Portable

- 1U rack mount kit holds up to four (4) modules, each module can have 1, 2, 3, or 4 TAPs
- Multi-mode fiber with LC Connectors
- New Prism based technology that reduces bit errors on OM3 + OM4/OM5 applications, providing 100% utilization
- Split ratios available in 50/50; 60/40; 70/30; 80/20 and 90/10
- No power source required

RMP-1U

Model #	Network Speed	Ports	# of TAPs	Split Ratio*	Wavelengths	Media	Connector/Mode
RMP-1U			1U Rack Mount Kit - Hold up to 4 Modules, each Module can have 1, 2, 3 or 4 TAPs				
OM1501	1/10G		1	50/50	850/1300nm	Fiber-OM1	
OM1701	1/10G		1	70/30	850/1300nm	Fiber-OM1	
OM3501	1/10/25G		1	50/50	850/1300nm	Fiber-OM3	
OM4501	1/10/25G		1	50/50	850nm	Fiber-OM3/OM4	
OM4701	1/10/25G		1	70/30	850nm	Fiber-OM3/OM4	
OM5501	1/10/25/40/100G*		1	50/50	850-950nm	Fiber OM5	
OM5701	1/10/25/40/100G*		1	70/30	850-950nm	Fiber OM5	
OM1502	1/10G		2	50/50	850/1300nm	Fiber-OM1	
OM1702	1/10G		2	70/30	850/1300nm	Fiber-OM1	
OM3502	1/10/25G		2	50/50	850/1300nm	Fiber-OM3	
OM4502	1/10/25G		2	50/50	850nm	Fiber-OM3/OM4	
OM4702	1/10/25G		2	70/30	850nm	Fiber-OM3/OM4	
OM5502	1/10/25/40/100G*		2	50/50	850-950nm	Fiber OM5	
OM5702	1/10/25/40/100G*		2	70/30	850-950nm	Fiber OM5	Fiber-LC Multi-Mode Fiber
OM1503	1/10G		3	50/50	850/1300nm	Fiber-OM1	
OM1703	1/10G		3	70/30	850/1300nm	Fiber-OM1	
OM3503	1/10/25G		3	50/50	850/1300nm	Fiber-OM3	
OM4503	1/10/25G		3	50/50	850nm	Fiber-OM3/OM4	
OM4703	1/10/25G		3	70/30	850nm	Fiber-OM3/OM4	
OM5503	1/10/25/40/100G*		3	50/50	850-950nm	Fiber OM5	
OM5703	1/10/25/40/100G*		3	70/30	850-950nm	Fiber OM5	
OM1504	1/10G		4	50/50	850/1300nm	Fiber-OM1	
OM1704	1/10G		4	70/30	850/1300nm	Fiber-OM1	
OM3504	1/10/25G		4	50/50	850/1300nm	Fiber-OM3	
OM4504	1/10/25G		4	50/50	850nm	Fiber-OM3/OM4	
OM4704	1/10/25G		4	70/30	850nm	Fiber-OM3/OM4	
OM5504	1/10/25/40/100G*		4	50/50	850-950nm	Fiber OM5	
OM5704	1/10/25/40/100G*		4	70/30	850-950nm	Fiber OM5	

Custom split ratios are available in 60/40, 80/20 or 90/10, please inquire. *100G SWDM4

Single-mode Passive Fiber HD Network TAP
1G/10G/25G/40G/100G | High Density | 1U Chassis

- 100% secure and invisible; no IP address; no MAC address; can't be hacked
- Single mode passive optical for up to 100Gb Ethernet
- Passes physical layer errors
- 1U chassis holds 28 or 56 TAPs - 56 TAP units are populated front and back
- Plug & Play easy installation, no configuration; no additional

Model #	Network Speed	Chassis	# of TAPs	Split Ratio*	Wavelengths	Media	Connector/Mode
OS15028	1/10/25/40/100G	1U	28	50/50	1310/1550nm	Fiber-OS1	
OS17028	1/10/25/40/100G	1U	28	70/30	1310/1550nm	Fiber-OS1	
OS25028	1/10/25/40/100G	1U	28	50/50	1310/1550nm	Fiber-OS2	
OS27028	1/10/25/40/100G	1U	28	70/30	1310/1550nm	Fiber-OS2	Fiber-LC Single-mode Fiber
OS15056	1/10/25/40/100G	1U	56	50/50	1310/1550nm	Fiber-OS1	
OS17056	1/10/25/40/100G	1U	56	70/30	1310/1550nm	Fiber-OS1	
OS25056	1/10/25/40/100G	1U	56	50/50	1310/1550nm	Fiber-OS2	
OS27056	1/10/25/40/100G	1U	56	70/30	1310/1550nm	Fiber-OS2	

Custom split ratios are available in 60/40, 80/20, 90/10, please inquire. *56 1U Fiber TAPs are populated front and back.

Multi-mode Passive Fiber HD Network TAP
1G/10G/25G/40G/100G | High Density | 1U Chassis

- 100% secure and invisible; no IP address; no MAC address; can't be hacked
- Passes physical layer errors
- Supports Breakout Mode and Jumbo frames
- 1U chassis holds 28 or 56 TAPs - 56 TAP units are populated front & back
- Plug & Play easy installation, no configuration; no additional power

Model #	Network Speed	Chassis	# of TAPs	Split Ratio*	Wavelengths	Media	Connector/Mode
OM15028	1/10G	1U	28	50/50	850/1300nm	Fiber-OM1	
OM17028	1/10G	1U	28	70/30	850/1300nm	Fiber-OM1	
OM35028	1/10G/25G	1U	28	50/50	850/1300nm	Fiber-OM3	
OM45028	1/10G/25G	1U	28	50/50	850nm	Fiber-OM3/OM4	
OM47028	1/10G/25G	1U	28	70/30	850nm	Fiber-OM3/OM4	
OM55028	1/10/25/40/100G*	1U	28	50/50	850-950nm	Fiber OM5	
OM57028	1/10/25/40/100G*	1U	28	70/30	850-950nm	Fiber OM5	
OM15056	1/10G	1U	56	50/50	850/1300nm	Fiber-OM1	Fiber-LC Multi-mode Fiber
OM17056	1/10G	1U	56	70/30	850/1300nm	Fiber-OM1	
OM35056	1/10G/25G	1U	56	50/50	850/1300nm	Fiber-OM3	
OM45056	1/10G/25G	1U	56	50/50	850nm	Fiber-OM3/OM4	
OM47056	1/10G/25G	1U	56	70/30	850nm	Fiber-OM3/OM4	
OM55056	1/10/25/40/100G*	1U	56	50/50	850-950nm	Fiber OM5	
OM57056	1/10/25/40/100G*	1U	56	70/30	850-950nm	Fiber OM5	

Custom split ratios are available in 60/40, 80/20, 90/10, please inquire. 56 1U Fiber TAPs are populated front and back. *100G SWDM4

BiDi Passive Fiber Network TAPs
40G-SR-BiDi | Cisco Bi-directional Optical Technology

1U Chassis with 21 TAPs

- Supports Cisco Bi-directional optical technology
- Unique design provides flexibility to tap multi-mode OM3/OM4/OM5 fiber types
- New Prism based technology that reduces bit errors on OM3 + OM4 applications, providing 100% utilization.
- 1U rack mount kit holds up to four (4) modules, each module can have 1, 2, or 3 portable TAPs - no power source required
- Exclusive high density 1U chassis with 21 TAPs

Model #	Network Speed	Ports	# of TAPs	Split Ratio*	Wavelengths	Media	Connector/Mode
RMP-1U			1U Rack Mount Kit, holds up to 4 Modules, each Module can have 1, 2, 3 or 4 TAPs				
OM4501-40GSR4BiDi	40G		1	50/50	850-950nm	Fiber-OM3/OM4	Fiber-LC-Multi-Mode
OM4502-40GSR4BiDi	40G		2	50/50	850-950nm	Fiber-OM3/OM4	
OM4503-40GSR4BiDi	40G		3	50/50	850-950nm	Fiber-OM3/OM4	
OM5501-SRBiDi	40/100G		1	50/50	850-950nm	Fiber OM5	
OM5502-SRBiDi	40/100G		2	50/50	850-950nm	Fiber OM5	
OM5503-SRBiDi	40/100G		3	50/50	850-950nm	Fiber OM5	
OM45021-40GSR4BiDi	40G		21	50/50	800/950nm	Fiber-OM3/OM4	
OM55021-40GSR4BiDi	40/100G		21	50/50	850-950nm	Fiber OM5	
OM4701-40GSR4BiDi	40G		1	70/30	850-950nm	Fiber-OM3/OM4	
OM4702-40GSR4BiDi	40G		2	70/30	850-950nm	Fiber-OM3/OM4	
OM4703-40GSR4BiDi	40G		3	70/30	850-950nm	Fiber-OM3/OM4	
OM5701-SRBiDi	40/100G		1	70/30	850-950nm	Fiber OM5	
OM5702-SRBiDi	40/100G		2	70/30	850-950nm	Fiber OM5	
OM5703-SRBiDi	40/100G		3	70/30	850-950nm	Fiber OM5	
OM47021-40GSR4BiDi	40G		21	70/30	850-950nm	Fiber-OM3/OM4	
OM57021-SRBiDi	40/100G		21	70/30	850-950nm	Fiber OM5	
OS2502-BiDi	1G/10G		2	50/50	1270~1350nm/ 1450~1530nm/ 1510~1590nm	Fiber-OS2	Fiber-LC Single-Mode
OS2504-BiDi	1G/10G		4	50/50	1270~1350nm/ 1450~1530nm/ 1510~1590nm	Fiber-OS2	
OS2506-BiDi	1G/10G		6	50/50	1270~1350nm/ 1450~1530nm/ 1510~1590nm	Fiber-OS2	

MPO/MTP® Multi-mode Passive Fiber Network TAPs
40G/100G-SR4 or 100G-SR10 | Portable

- Multi-mode fiber in MTP-12 and MTP-24
- 100G-SR4 can be configured with 4 Channels of 25G in each direction
- New Prism based technology that reduces bit errors on OM3 + OM4/OM5 applications, providing 100% utilization.
- MPO/MTP® brand connectors for lowest dB loss
- 1U rack mount kit holds up to four (4) modules, each module can have 1, 2 or 3 portable TAPs
- Portable, Plug & Play easy installation
- No power source required

RMP-1U

Model #	Network Speed	Ports	# of TAPs	Split Ratio*	Wavelengths	Media	Connector/Mode
RMP-1U			1U Rack Mount Kit - Hold up to 4 Modules, each Module can have 1, 2, 3 or 4 TAPs				
OM4501-SR4B	40G/100G		1	50/50	850nm	Fiber-OM3/OM4	MTP-12 Multi-Mode Fiber
OM4701-SR4B	40G/100G		1	70/30	850nm	Fiber-OM3/OM4	
OM5501-SR4B	40/100/400G*		1	50/50	850-950nm	Fiber OM5	
OM5701-SR4B	40/100/400G*		1	70/30	850-950nm	Fiber OM5	
OM4502-SR4B	40G/100G		2	50/50	850nm	Fiber-OM3/OM4	
OM4702-SR4B	40G/100G		2	70/30	850nm	Fiber-OM3/OM4	
OM5502-SR4B	40/100/400G*		2	50/50	850-950nm	Fiber OM5	
OM5702-SR4B	40/100/400G*		2	70/30	850-950nm	Fiber OM5	
OM4503-SR4B	40G/100G		3	50/50	850nm	Fiber-OM3/OM4	
OM4703-SR4B	40G/100G		3	70/30	850nm	Fiber-OM3/OM4	
OM5503-SR4B	40/100/400G*		3	50/50	850-950nm	Fiber OM5	
OM5703-SR4B	40/100/400G*		3	70/30	850-950nm	Fiber OM5	
OM4501-100GSR10A	100G		1	50/50	850nm	Fiber-OM3/OM4	MTP-24 Multi-mode Fiber
OM4702-100GSR10A	100G		2	70/30			
OM4503-100GSR10A	100G		3	50/50			
OM4701-100GSR10A	100G		1	70/30			
OM4502-100GSR10A	100G		2	50/50			
OM4703-100GSR10A	100G		3	70/30			

Split ratios available in 50/50; 60/40; 70/30; 80/20 and 90/10. *100G SWDM4

Passive RegenTAPs

1G/10G | 1x3 Replication | Tap 'Breakout' Mode
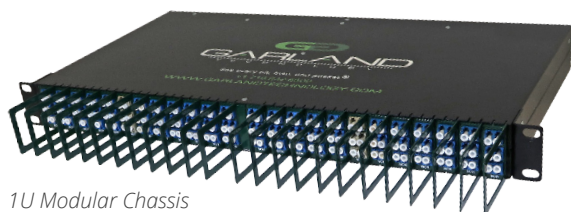
1U Modular Chassis

1U Chassis

- Replicate any network traffic - Splits one single-mode, full duplex input to three (3) outputs
- Portable, Plug & Play
- Easy configuration, no power required
- Supports jumbo frames
- Optional one or two segment configurations per module
- Passes physical errors
- 100% secure and transparent, no IP address, No MAC address; cannot be hacked

Model #	Network Speed	Ports	Network	Monitor	# of TAPs	Split Ratio*	Wavelengths	Media	Connector/Mode
RMP-1U			1U Rack Mount Kit - Hold up to 4 Modules, each Module can have 1, 2, 3 or 4 TAPs						
OS23321X3	1G/ 10Gbps		1 LC	3 LC	1	33.3/ 33.3/ 33.3	1310/1550nm	Fiber - OS2	Fiber LC Single-Mode Fiber
OS23341X3	1G/ 10Gbps		1 LC	3 LC	2	33.3/ 33.3/ 33.3	1310/1550nm	Fiber - OS2	Fiber LC Single-Mode Fiber
OS23361X3	1G/ 10Gbps		1 LC	3 LC	3	33.3/ 33.3/ 33.3	1310/1550nm	Fiber - OS2	Fiber LC Single-Mode Fiber
OS233211X3	1G/ 10Gbps		1 LC	3 LC	21	33.3/ 33.3/ 33.3	1310/1550nm	Fiber - OS2	Fiber LC Single-Mode Fiber
FMC 1U		Fiber Modular Chassis							
OS23321X3M	1G/ 10Gbps		1 LC	3 LC	2	33.3/ 33.3/ 33.3	1310/1550nm	Fiber - OS2	Fiber LC Single-Mode Fiber

Copper Network TAP

10M/100M or 10/100/1000M (1G) | Portable | Failsafe | Tap 'Breakout' Mode

- Failsafe design
- Link failure propagation
- Supports jumbo frame
- Portable, Plug & Play units for on-the-go trouble shooting
- 1U rack mount kit holds up to 4 modules, each module can have 1, 2, 3, or 4 TAPs
- Noiseless operation. No moving parts.
- Easy configure; switches on back
- PoE (Power over Ethernet)

RMP-1U

Model #	Network Speed	Chassis Size	# of TAPs	Passive	Power	Serial Port	Media	Connector/Mode
RMP-1U				1U Rack Mount Kit - Holds up to 4 Portable TAPs				
PT100*	10/100M	Portable	1	Yes	AC	No	Copper	Copper - RJ45
P1GCCB*	10/100/1000M (1G)	Portable	1	Failsafe Design				

*Supports Power over Ethernet (PoE)

Model #	Network Speed	Media		Modes			
		Network	**Monitor**	**Breakout**	**Aggregation**	**Regeneration**	**Bypass**
INT1G10CSA	10/100/1000M	4 Copper - RJ-45	2 SFP	Yes	Yes	Yes	No

Model #	Network Speed	Media		Modes				Packet Injection Support
		Network	**Monitor**	**Breakout**	**Aggregation**	**Regeneration**	**Bypass**	
P1GCCAS	10/100/1000M	2 Copper RJ-45	2 Copper RJ-45	Yes	Yes	Yes	No	No

Model #	Network Speed	Media		Modes				Packet Injection Support	PoE Support
		Network	**Monitor**	**Breakout**	**Aggregation**	**Regeneration/ SPAN**	**Bypass**		
P1GCCBP	100/1000M	2 Copper-RJ45	2 Copper -RJ45	Yes	Yes	Yes	Yes	Yes	No
P1GCCBPPOE+	100/1000M	2 Copper-RJ45	2 Copper -RJ45	Yes	Yes	Yes	Yes	Yes	Yes

Copper Modular Network TAP
10/100M and 10/100/1000M (1G) | 1U / 2U Chassis | Tap 'Breakout' Mode

1U Chassis

- 1U or 2U Data Center Solutions for 1G networks
- Dual AC or DC internal power supplies per Chassis
- Exclusive high density 1U = 4 TAPS | 2 U = 12 TAPS
- Remote management option with CLI or GUI
- Hot swappable
- Link failure propagation (LFP)
- Supports jumbo frames
- Flexible design - accommodates any 1G network scenario
- Scalable design - add modules as needed

2U Chassis

Remote Access

TESTED CERTIFIED GUARANTEED

Chassis options						
Model #	**Chassis/TAPs***	**Power Supplies**	**Voltage**	**Current** (nominal)	**Consumption** (maximum)	**Dimensions** (WxHxD)
M1G1ACE	1U; up to 4 TAPs	Dual Internal AC	100-240VAC	0.75A@115VAC	86.25 Watts	
M1G1DCE	1U; up to 4 TAPs	Dual Internal DC	36-60VDC	1A@48VDC	48 Watts	17.40" x 1.75" x 13.45" (441.96mm x 44.45mm x 341.63mm)
M1G2ACE	2U; up to 12 TAPs	Dual Internal AC	100-240VAC	1A@115VAC	115 Watts	
M1G2DCE	2U; up to 12 TAPs	Dual Internal DC	36-60VDC	2.8A@48VDC	134.4 Watts	
M1GC*	Management card: Ethernet/GUI - and - Serial/CLI for M1GxxxE					

*Blanking plates are used if management card is not required or if not all TAP modules are populated. Management card and additional GT TAP modules can be added to chassis.

Copper Breakout TAP options									
Model #	**Network Speed**	**Media**		**Modes**					**Features**
		Network	**Monitor**	**Breakout**	**Aggregation**	**Regeneration/ SPAN**	**Filtering**	**Bypass**	
M100CCB*	10/100M	2 Copper-RJ45, passive	2 Copper-RJ45	Yes	No	No	No	No	Passive
M1GCCB*	10/100/ 1000M	2 Copper-RJ45							Link Sync with Fail Safe

*Supports Power over Ethernet (PoE)

Military-Grade Industrial Network TAPs
10/100/1000M | Modular Portable Chassis | Tap 'Breakout' Mode

- Supports link speed synchronization & breakout mode
- Connectivity to copper ports
- Supports jumbo frames
- 1U rack mount holds up to two (2) portable TAPs
- Passes physical errors
- Captures full duplex traffic up to 2Gbps without dropping packets
- 100% secure and transparent, no IP address, No MAC address; cannot be hacked

| Model #	Network Speed	Media		Modes			
		Network	Monitor	Breakout	Aggregation	Regeneration	Link Speed Synchronization
M1GP1G-DC	Two slot Chassis - Holds up to 2 Modular TAPs						
	Single external DC power supply unit						
M100CCBm	10/100M	2 Mighty Mouse 10/100Mbps	2 Mighty Mouse 10/100Mbps	Yes	No	No	Yes
M1GCCBm	10/100/1000M	2 Mighty Mouse 10/100/1000Mbps	2 Mighty Mouse 10/100/1000Mbps	Yes	No	No	No

2 Aggregator
Network TAPs

Garland Technology's full line of Aggregator and Regeneration Test Access Points (TAPs) are used to capture full-duplex network traffic where it can be sent to multiple monitoring appliances, providing the visibility required to efficiently manage today's most complex network infrastructures.

· 100% network visibility
· 100% secure and invisible; no IP address; no Mac address; cannot be hacked
· Media Conversion for:
   -Fiber 1G (SX, LX to copper/SFP)
· Copper TAPs in 10M/100M or 10/100/1000M (1G)
· Supports aggregation, tap 'breakout,' regeneration/SPAN, or bypass mode
· Portable, plug & play units, 1U or 2U chassis systems, or 1U modular system

APPLICATIONS

❯ Aggregation mode: Capture 100% full duplex traffic for multiple monitoring appliances or to a single monitoring port

❯ Tap "Breakout" mode: Use for full utilization to capture 100% traffic

❯ Regeneration/SPAN mode: Replicate network traffic to three (3) ports

❯ Tap once: Test and validate in-band security appliances off line then deploy out-of-band (Universal TAPs only)

❯ Tap once and send to multiple monitoring devices

❯ Capture full duplex traffic from both directions

❯ Out-of-band monitoring

Network Flow
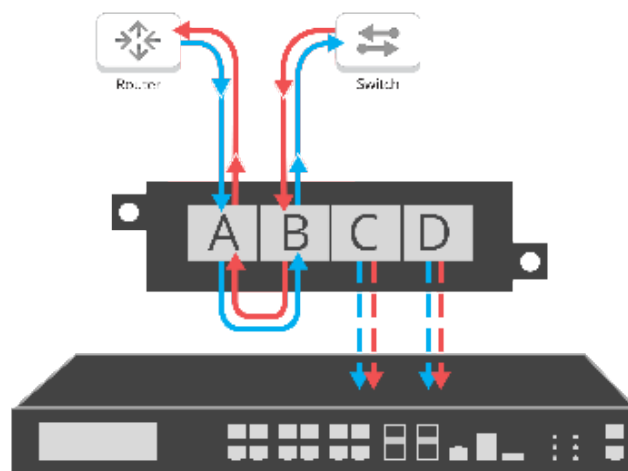
Aggregation Mode

UniversalTAP™ : Copper Aggregator

100M/1G | Portable | Aggregation, Breakout, Regeneration, and Bypass

- Supports: aggregation, regeneration, tap "breakout," bypass
- Plug & Play; easy configuration; switches on back
- Use alone, or fit four (4) portables into a rack mount kit
- Supports link failure propagation (LFP)
- Supports jumbo frames and passes physical errors
- Supports packet injection in aggregation mode
- Power over Ethernet (PoE) optional
- Network Failsafe
- FPGA Design

Model #	Network Speed	Media		Modes				Packet Injection Support	PoE Support
		Network	Monitor	Breakout	Aggregation	Regeneration/ SPAN	Bypass		
RMP-1U				1U Rack Mount Kit - Holds up to 4 Portable TAPs					
P1GCCBP	100/1000M	2 Copper-RJ45	2 Copper-RJ45	Yes	Yes	Yes	Yes	Yes	No
P1GCSBP	100/1000M	2 Copper-RJ45	2 SFP	Yes	Yes	Yes	Yes	Yes	No
P1GCCBPPOE+	100/1000M	2 Copper-RJ45	2 Copper-RJ45	Yes	Yes	Yes	Yes	Yes	Yes
P1GCSBPPOE+	100/1000M	2 Copper-RJ45	2 SFP	Yes	Yes	Yes	Yes	Yes	Yes

UniversalTAP™ : 10G Modular Aggregator

10G | 1U Chassis | Aggregation, Breakout, Regeneration, and Bypass

- Supports: aggregation, regeneration, tap "breakout," bypass
- 10G Media Conversion: to SR, LR and ER
- Monitor four (4) inline appliances with fail over assurance
- Supports jumbo frames, packet injection, link failure propagation
- 1U chassis system supports up to four (4) TAPs
- Configure and manage remotely or locally
- Field programmable TAP modules

Chassis System	
Model #	Description
M10G1ACv2	10G-1U Chassis System: Supports up to 4 modular Bypass TAPs. Dual internal AC power supplies. Voltage: 90 - 264 Volts
M10G1DCv2	10G-1U Chassis System: Supports up to 4 modular Bypass TAPs. Dual internal DC power supplies. Voltage: 36 - 75 Volts

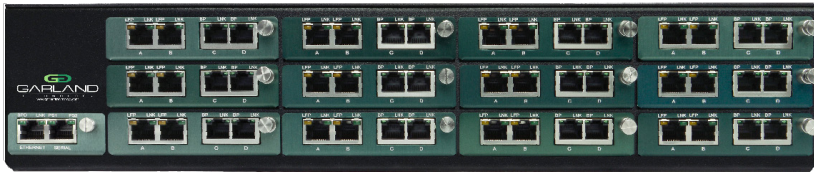| Model #	Network Speed	Bypass TAP Module	Media		Modes			
			Network	Monitor	Breakout	Aggregation	Regeneration	Bypass
M10GMSBPv2	10G	SR Multi-mode Fiber	2 SR Multi-mode, LC-Fiber	2 SFP+ Cages	Yes	Yes	Yes	Yes
M10GSSBPv2	10G	LR Single mode Fiber	2 LR Single mode LC-Fiber	2 SFP+ Cages				
M10GESBPv2	10G	ER Single mode Fiber	2 ER Single mode LC-Fiber	2 SFP+ Cages				

Universal TAP™ : 1G Modular Aggregator

1G | 1U / 2U Chassis | Aggregation, Breakout, Regeneration, and Bypass
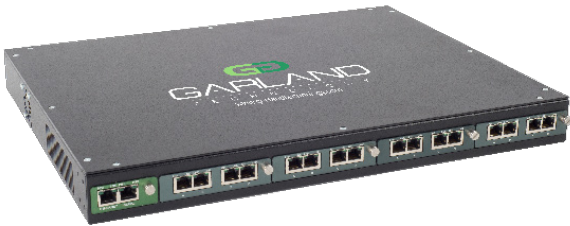
1U Chassis

- 1U or 2U Data Center Solutions for 1G networks
- Exclusive high density 1U = 4 TAPS | 2 U = 12 TAPS
- Remote management option with CLI or GUI
- Hot swappable
- Link failure propagation (LFP)
- Supports jumbo frames
- Network Failsafe
- Scalable design - add modules as needed

2U Chassis

Remote Access

TESTED CERTIFIED GUARANTEED

Chassis options

Model #	Chassis/TAPs*	Power Supplies	Voltage	Current (nominal)	Consumption (maximum)	Dimensions (WxHxD)
M1G1ACE	1U; up to 4 TAPs	Dual Internal AC	100-240VAC	0.75A@115VAC	86.25 Watts	17.40" x 1.75" x 13.45" (441.96mm x 44.45mm x 341.63mm)
M1G1DCE	1U; up to 4 TAPs	Dual Internal DC	36-60VDC	1A@48VDC	48 Watts	
M1G2ACE	2U; up to 12 TAPs	Dual Internal AC	100-240VAC	1A@115VAC	115 Watts	17.40" x 3.47" x 13.45" (441.96mm x 88.14mm x 341.63mm)
M1G2DCE	2U; up to 12 TAPs	Dual Internal DC	36-60VDC	2.8A@48VDC	134.4 Watts	
M1GC*	Management card: Ethernet/GUI - and - Serial/CLI for M1GxxxE					

*Blanking plates are used if management card is not required or if not all TAP modules are populated. Management card and additional GT TAP modules can be added to chassis.

Aggregator TAP options

Model #	Network Speed	Media		Modes					Packet Injection Support	Packet Slicing
		Network	Monitor	Breakout	Aggregation	Regeneration/ SPAN	Filtering	Bypass		
M1GCCBP	100/ 1000M	2 Copper-RJ45	2 Copper -RJ45	Yes	Yes	Yes	No	Yes	Yes	Yes
M1GCSBP	100/ 1000M	2 Copper-RJ45	2 SFP	Yes	Yes	Yes	No	Yes	Yes	Yes
M1GMCA	1G	2 SX Multi-mode, passive LC-Fiber	2 Copper -RJ45	Yes	Yes	Yes	No	No	No	Yes
M1GMSA	1G	2 SX Multi-mode, passive LC-Fiber	2 SFP	Yes	Yes	Yes	No	No	No	Yes
M1GSCA	1G	2 LX Single-mode, passive LC-Fiber	2 Copper -RJ45	Yes	Yes	Yes	No	No	No	Yes
M1GSSA	1G	2 LX Single-mode, passive LC-Fiber	2 SFP	Yes	Yes	Yes	No	No	No	Yes

AggregatorTAP : Fiber

1G | Portable | Aggregation, Regeneration, and Breakout

- Media conversion: SX or LX to copper or SFP
- Supports: aggregation, regeneration/SPAN, tap "breakout" mode
- Plug & Play; easy configuration; switches on back of TAP
- Use alone, or fit four (4) portables into a rack mount kit
- Supports jumbo frames and passes physical errors

RMP-1U

Model #	Network Speed	Media		Modes			
		Network	Monitor	Breakout	Aggregation	Regeneration	Bypass
RMP-1U				1U Rack Mount Kit - Holds up to 4 Portable TAPs			
P1GMCA	1G	2 SX Multi-mode Fiber - LC	2 Copper - RJ-45	Yes	Yes	Yes	No
P1GMSA	1G	2 SX Multi-mode Fiber - LC	2 SFP				
P1GSCA	1G	2 LX Single-mode Fiber-LC	2 Copper - RJ-45				
P1GSSA	1G	2 LX Single-mode Fiber-LC	2 SFP				

AggregatorTAP : 100Base-FX

100BASE-FX | Portable | Aggregation, Regeneration, and Breakout

- Media conversion; 100Base-FX to copper
- Portable, Plug & Play
- Easy configuration; switches on back of TAP
- Supports: aggregation, regeneration/SPAN, tap "breakout" mode
- Supports jumbo frames, passes physical errors
- 1U rack mount holds up to four (4) portable TAPs
- A & B live network ports are passive, zero interruption if network is powered up or down
- 100% secure and transparent, no IP address, No MAC address; cannot be hacked

RMP-1U

Model #	Media		Modes			
	Network	Monitor	Breakout	Aggregation	Regeneration	Bypass
RMP-1U			1U Rack Mount Kit - Holds up to 4 Portable TAPs			
P100FXCA	100Base-FX	2 Copper - RJ-45 100/1000M (1Gbps)	Yes	Yes	Yes	No

AggregatorTAP : Passive
100M | Portable | Aggregation and Power over Ethernet (PoE)

- Passive 100M
- Two (2) 1G Aggregated Monitoring ports
- Aggregation-mode only TAP
- Supports Power over Ethernet (PoE)
- Portable, plug and play design
- Supports jumbo frames and passes physical errors
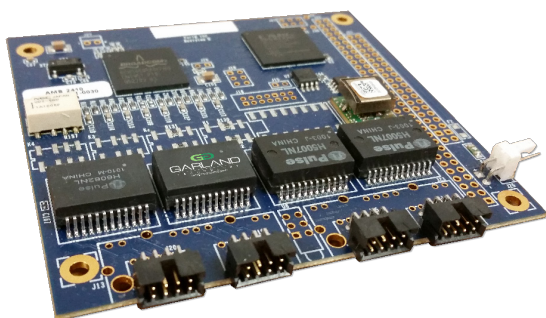- Single external power supply

RMP-1U

Model #	Network Speed	Media		Modes			
		Network	**Monitor**	**Breakout**	**Aggregation**	**Regeneration**	**Bypass**
RMP-1U				1U Rack Mount Kit - Holds up to 4 Portable TAPs			
P100CCA	100M	2 Copper RJ-45	2 Copper 1000M RJ-45	No	Yes	Yes	No

AggregatorTAP : Passive
100M | Stack Design | Aggregation and Power over Ethernet (PoE)

- Passive 100M
- Two (2) 1G Aggregated Monitoring ports
- Aggregation-mode only TAP
- Supports Power over Ethernet (PoE)
- Supports jumbo frames and passes physical errors
- Stack design with board-to-board connectors
- Media: Dual-row, 8 circuits, copper alloy base, gold flashed
- Single external power supply

Model #	Network Speed	Media		Modes			
		Network	**Monitor**	**Breakout**	**Aggregation**	**Regeneration**	**Bypass**
PC104	100M	2-PCB	2-PCB	No	Yes	Yes	No

AggregatorTAP : Copper
10/100/1000M (1G) | Portable | Aggregation, Regeneration, and Breakout

- Passive, listen only for monitoring devices
- No Packet Injection
- Supports Link Speed Synchronization
- Supports: aggregation, regeneration/SPAN, tap "breakout" mode
- Plug & Play; easy configuration; switches on back
- Use alone, or fit four (4) portables into a rack mount kit
- Network Failsafe

RMP-1U

Model #	Network Speed	Media		Modes				Packet Injection Support
		Network	Monitor	Breakout	Aggregation	Regeneration	Bypass	
RMP-1U				1U Rack Mount Kit - Holds up to 4 Portable TAPs				
P1GCCAS	10/100/1000M	2 Copper RJ-45	2 Copper RJ-45	Yes	Yes	Yes	No	No
P1GCSAS	10/100/1000M	2 Copper RJ-45	2 SFP					

AggregatorTAP : Copper High Density
10/100/1000M (1G) | 1U | Aggregation, Regeneration, and Breakout

- 1U High Density Solution: Tap up to four (4) network segments; Aggregate traffic to 1 or 2 monitoring ports; Can fit two (2) INT1G10CSA units in 1U space
- Supports: aggregation, regeneration/SPAN, tap "breakout" mode
- Link speed synchronization
- Link failure propagation (LFP)
- Supports jumbo frames and passes physical errors
- Network Failsafe

RMP-1U

Model #	Network Speed	Media		Modes			
		Network	Monitor	Breakout	Aggregation	Regeneration	Bypass
INT1G10CSA	10/100/1000M	4 Copper - RJ-45	2 SFP	Yes	Yes	Yes	No

③ XtraTAP™ : All-In-1
Filtering Network TAPs

Garland Technology's Filtering Test Access Points (TAPs) ensure that monitoring ports do not become oversubscribed with unneeded data by filtering through the packets and traffic not needed, ultimately providing the visibility required to efficiently manage the most complex network infrastructures.

The modular chassis system features a flexible and scalable design to meet your network needs today and tomorrow.

- Scalable Modular TAPs System:
    - 2U holds up to 12 TAPs - backplane filtering within TAP row
    - 1U holds up to 4 TAPs - backplane filtering between TAPs
- Management Options: Ethernet with GUI - and - Serial with CLI controller
- Dual internal AC or DC power supplies
- TAP modules are hot swappable, fully configurable and interchangeable
- 100% secure and invisible; no IP address, no MAC address; cannot be hacked

APPLICATIONS

❯ Remote Management

❯ High density data center design.

❯ Network efficiency; only filter the packets required.
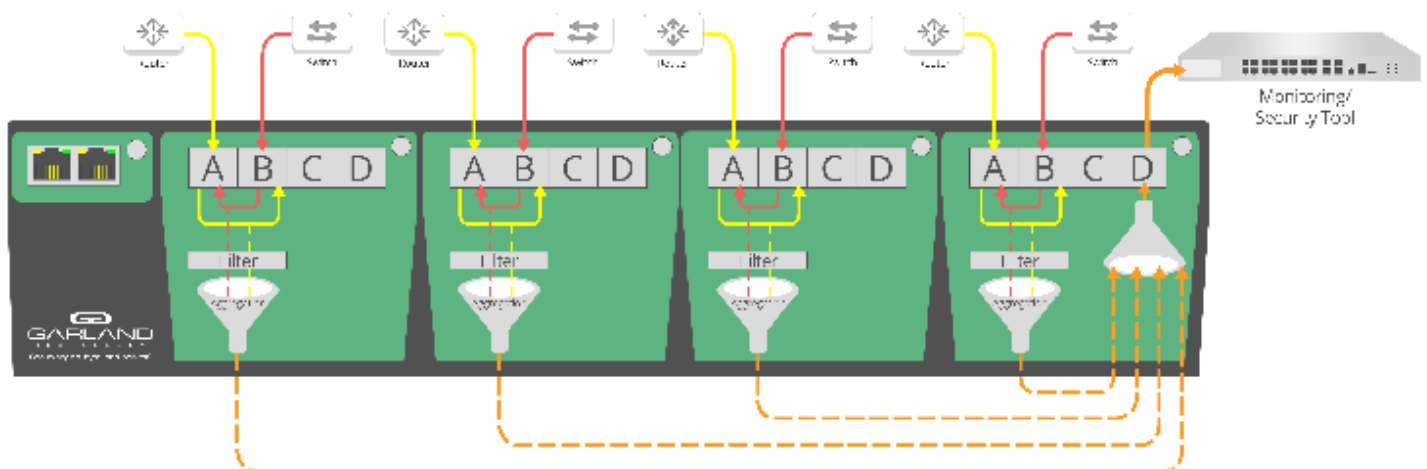
❯ Media Conversion for 1G networks

MEDIA CONVERSION:
Fiber (SX, LX, ZX) to copper (TX) - or copper (TX) to fiber (SX, LX, ZX). Short range fiber (SX) to long range fiber (LX or ZX).

FILTERS:
- Port Mapping of layers 2, 3, and 4.
- Filterings: MAC, VLAN, IP, DSCP, TCP, UDP
- Protocol: HTTP, VoIP, FTP
- VLAN ID

Network Flow

XtraTAP™ : All-In-1
1G | Portable | Filtering, Breakout, Aggregation, and Regeneration

- Easy remote access and management with GUI/CLI card
- Set utilization alerts to avoid oversubscription
- Filter and aggregate to monitoring/analyzer tools
- Supports filtering, tap "breakout," aggregation and regeneration/SPAN modes
- Copper TAPs support Link Speed Synchronization
- 100% secure and invisible; no IP address, no MAC address; cannot be hacked.
- Supports Jumbo frames
- 1U rack mount holds up to four (4) portable TAPs
- Network Failsafe

RMP-1U

Remote Access

Model #	Network Speed	Network	Monitor	Breakout	Aggregation	Regeneration/SPAN	Filtering
RMP-1U		1U Rack Mount Kit - Hold up to 4 Portable TAPs					
P1GCCFE	10/100/1000M (1G)	2 Copper-RJ45	2 Copper-RJ45	Yes	Yes	Yes	Yes
P1GCSFE	10/100/1000M (1G)	2 Copper-RJ45	2 SFP	Yes	Yes	Yes	Yes
P1GMCFE	1G	2 SX Multi-mode	2 Copper-RJ45	Yes	Yes	Yes	Yes
P1GMSFE	1G	2 SX Multi-mode	2 SFP	Yes	Yes	Yes	Yes
P1GSCFE	1G	2 LX Single-mode	2 Copper-RJ45	Yes	Yes	Yes	Yes
P1GSSFE	1G	2 LX Single-mode	2 SFP	Yes	Yes	Yes	Yes

XtraTAP™ : All-In-1 Modular

1G | 1U / 2U Chassis | Filtering, Breakout, Aggregation, and Regeneration
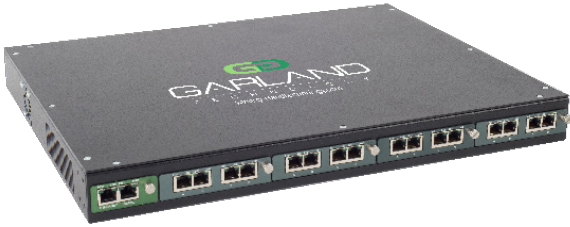
1U Chassis

- 1U or 2U Data Center Solutions for 1G networks
- Exclusive high density 1U = 4 TAPS | 2 U = 12 TAPS
- Remote management option with CLI or GUI
- Supports filtering, tap "breakout," aggregation and regeneration/SPAN modes
- Hot swappable
- Link failure propagation (LFP)
- Supports jumbo frames
- Flexible design - accommodates any 1G network scenario
- Scalable design - add modules as needed
- Network Failsafe

2U Chassis

Remote Access

Chassis options

Model #	Chassis/TAPs*	Power Supplies	Voltage	Current (nominal)	Consumption (maximum)	Dimensions (WxHxD)
M1G1ACE	1U; up to 4 TAPs	Dual Internal AC	100-240VAC	0.75A@115VAC	86.25 Watts	17.40" x 1.75" x 13.45" (441.96mm x 44.45mm x 341.63mm)
M1G1DCE	1U; up to 4 TAPs	Dual Internal DC	36-60VDC	1A@48VDC	48 Watts	
M1G2ACE	2U; up to 12 TAPs	Dual Internal AC	100-240VAC	1A@115VAC	115 Watts	17.40" x 3.47" x 13.45" (441.96mm x 88.14mm x 341.63mm)
M1G2DCE	2U; up to 12 TAPs	Dual Internal DC	36-60VDC	2.8A@48VDC	134.4 Watts	
M1GC*	Management card: Ethernet/GUI - and - Serial/CLI for M1GxxxE					

*Blanking plates are used if management card is not required or if not all TAP modules are populated. Management card and additional GT TAP modules can be added to chassis.

Filtering TAP options

| Model #	Network Speed	Media		Modes					Link Speed Synchronization
		Network	Monitor	Breakout	Aggregation	Regeneration/SPAN	Filtering	Bypass	
M1GCCF	10/100/1000M	2 Copper-RJ45	2 Copper-RJ45	Yes	Yes	Yes	Yes	No	Yes
M1GCSF	10/100/1000M	2 Copper-RJ45	2 SFP	Yes	Yes	Yes	Yes	No	Yes
M1GMCF	1G	2 SX Multi-mode, passive LC-Fiber	2 Copper-RJ45	Yes	Yes	Yes	Yes	No	No
M1GMSF	1G	2 SX Multi-mode, passive LC-Fiber	2 SFP	Yes	Yes	Yes	Yes	No	No
M1GSCF	1G	2 LX Single-mode, passive LC-Fiber	2 Copper-RJ45	Yes	Yes	Yes	Yes	No	No
M1GSSF	1G	2 LX Single-mode, passive LC-Fiber	2 SFP	Yes	Yes	Yes	Yes	No	No

4 EdgeSafe™
Bypass Network TAPs

The First Line of Defense is Complete Network Visibility Truth

Unlike SPAN ports, Bypass TAPs provide complete network visibility, by passing all live wire data to active, inline security tools, while monitoring the device's health. If your security tool goes off-line, the bypass TAP automatically 'switches to bypass mode' keeping your network link up while you resolve the issue. Garland Technology knows security; Jerry Dillard, Garland's CTO, invented the Bypass TAP leading to Garland's EdgeSafe™ Bypass TAPs and EdgeLens® Inline Security Packet Broker with failsafe technology that guarantees 100% network uptime and lets your security tools see every bit, byte, and packet.®

APPLICATIONS

> TAP once and connect one primary and one back up in-band appliance and two out-of-band monitoring appliances

> Take your inline appliance off-line without interrupting data traffic for: updates, maintenance and troubleshooting

> Network security and monitoring of inline appliances

> Media conversion for fiber, SR, LR, and ER

> Monitor four (4) inline appliance with fail over assurance

> Supports breakout, aggregation, regeneration, and bypass modes

> High availability when network downtime is not an option

Network Flow

Bypass Mode
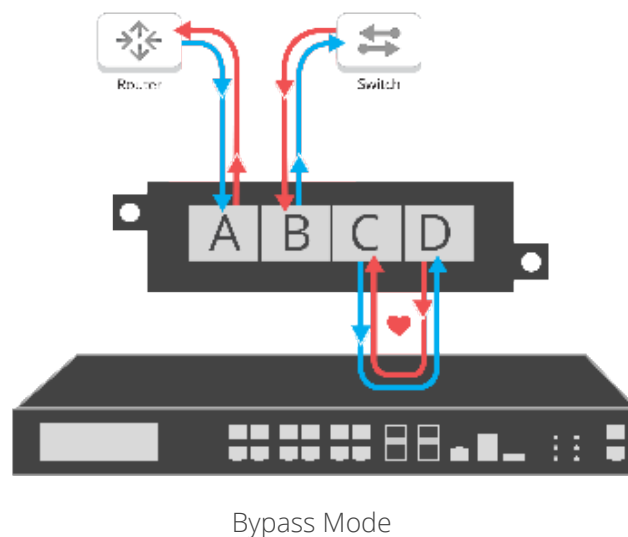
For Inline Security Packet Broker with Bypass functionality, please see Hybrid NPBs for the EdgeLens®

EdgeSafe™ : Bypass Network TAP
1G | Portable | Failsafe | Heartbeat

- Supports bypass, tap "breakout," aggregation, regeneration/ SPAN modes
- Network Failsafe
- Heartbeat packet health check
- Supports: Copper RJ45, SFP, LC - single and multi-mode
- Plug and Play, no configuration or Remote management
- Use alone, or fit four r(4) portables in a 1U rack mount kit
- Bypass TAP Invented by Jerry Dillard, CTO and Co-Founder
- Power over Ethernet (PoE) option

Remote Access

RMP-1U

Model #	Network Speed	Network	Monitor	Packet Injection Support
RMP-1U			1U Rack Mount Kit - Holds up to 4 Portable TAPs	
Remote Management				
P1GCCBPE	100/1000M	2 Copper RJ-45	2 Copper-RJ45	Yes
P1GCSBPE	100/1000M	2 Copper RJ-45	2 SFP	
P1GCCBPPOE+E	100/1000M	2 Copper RJ-45	2 Copper RJ-45	
P1GCSBPPOE+E	100/1000M	2 Copper RJ-45	2 SFP	
P1GMCBPE	1G	2 SX Multi-mode	2 Copper RJ-45	
P1GMSBPE	1G	2 SX Multi-mode	2 SFP	
P1GSCBPE	1G	2 LX Single-mode	2 Copper-RJ45	
P1GSSBPE	1G	2 LX Single-mode	2 SFP	
Manual Programming				
P1GCCBP	100/1000M	2 Copper-RJ45	2 Copper -RJ45	Yes
P1GCSBP	100/1000M	2 Copper-RJ45	2 SFP	
P1GCCBPPOE+	100/1000M	2 Copper-RJ45	2 Copper -RJ45	
P1GCSBPPOE+	100/1000M	2 Copper-RJ45	2 SFP	
P1GMCBP	1G	2 SX Multi-mode, Fiber-LC	2 Copper -RJ45	
P1GMSBP	1G	2 SX Multi-mode, Fiber-LC	2 SFP	
P1GSCBP	1G	2 LX Single-mode, Fiber-LC	2 Copper -RJ45	
P1GSSBP	1G	2 LX Single-mode, Fiber-LC	2 SFP	

EdgeSafe™ : Integrated Bypass Network TAP

1G | 1U Chassis | High Availability Solution | Failsafe | Heartbeat

· 6 Port High Availability (HA) solution; Tap once and connect one primary and one back up inline appliance and two (2) out-of-band monitoring appliances
· Network Failsafe
· Heartbeat packet health check
· Supports: Copper RJ-45 and short and long range fiber (SX, LX, ZX)
· Dual internal power supplies
· High Availability solution in 1U design
· Media conversion: Fiber to Copper

Model #	Network Speed	Media		Modes			
		Network	Monitor	Breakout	Aggregation	Regeneration	Bypass
INT1G8CCBP	1G	2 Copper-RJ45	6 Copper-RJ45	Ports CDEFGH	Ports GH	No	Ports CDEF
INT1G8SCBP	1G	2 LX Single-mode, LC-Fiber	6 Copper-RJ45	Ports CDEFGH			
INT1G8MCBP	1G	2 SX Multi-mode, LC-Fiber	6 Copper-RJ45	Ports CDEFGH			

EdgeSafe™: 1G Bypass Modular Network TAP

1G | 1U / 2U Chassis | Failsafe | Heartbeat
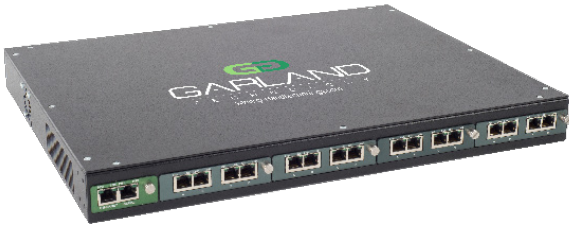
1U Chassis

- Ideal for data centers and media conversion
- 1U holds up to 4 TAPS; 2U holds up to 12 TAPs
- Network Failsafe
- Heartbeat packet health check
- Remote management option with CLI or GUI
- Hot swappable
- Supports: Copper RJ-45 and short and long range fiber (SX, LX, ZX)
- Supports bypass, tap "breakout," aggregation and regeneration/SPAN modes
- Flexible design - accommodates any 1G network scenario
- Scalable design - add modules as needed

2U Chassis

Remote Access

CERTIFIED

Chassis options

Model #	Chassis/TAPs*	Power Supplies	Voltage	Current (nominal)	Consumption (maximum)	Dimensions (WxHxD)
M1G1ACE	1U; up to 4 TAPs	Dual Internal AC	100-240VAC	0.75A@115VAC	86.25 Watts	17.40" x 1.75" x 13.45" (441.96mm x 44.45mm x 341.63mm)
M1G1DCE	1U; up to 4 TAPs	Dual Internal DC	36-60VDC	1A@48VDC	48 Watts	
M1G2ACE	2U; up to 12 TAPs	Dual Internal AC	100-240VAC	1A@115VAC	115 Watts	17.40" x 3.47" x 13.45" (441.96mm x 88.14mm x 341.63mm)
M1G2DCE	2U; up to 12 TAPs	Dual Internal DC	36-60VDC	2.8A@48VDC	134.4 Watts	
M1GC*	Management card: Ethernet/GUI - and - Serial/CLI for M1GxxxE					

*Blanking plates are used if management card is not required or if not all TAP modules are populated. Management card and additional GT TAP modules can be added to chassis.

Bypass TAP options

Model #	Network Speed	Media		Modes					Packet Injection Support	Packet Slicing
		Network	Monitor	Breakout	Aggregation	Regeneration/ SPAN	Filtering	Bypass	(in Aggregation mode)	
M1GCCBP	100/ 1000M	2 Copper-RJ45	2 Copper -RJ45	Yes	Yes	Yes	No	Yes	Yes	Yes
M1GCSBP	100/ 1000M	2 Copper-RJ45	2 SFP							
M1GMCBP	1G	2 SX Multi-mode, passive LC-Fiber	2 Copper -RJ45							
M1GMSBP	1G	2 SX Multi-mode, passive LC-Fiber	2 SFP							
M1GSCBP	1G	2 LX Single-mode, passive LC-Fiber	2 Copper -RJ45							
M1GSSBP	1G	2 LX Single- mode, passive LC-Fiber	2 SFP							

EdgeSafe™ : 10G Bypass Modular Network TAP

10G | 1U Chassis | Failsafe | Heartbeat | Media conversion

- Heartbeat packet health check
- Dual internal power supplies
- TAP modules are field upgradable
- Guarantee network uptime for four (4) inline appliances with fail over and dual internal power supplies.
- Media conversion for fiber: SR, LR and ER

1U Chassis

Model #	Description
M10G1ACv2	10G-1U Chassis System: Supports up to 4 modular Bypass TAPs. Dual internal AC power supplies. Voltage: 85 - 264 Volts, 100 Watt total power consumption with 4 TAPs
M10G1DCv2	10G-1U Chassis System: Supports up to 4 modular Bypass TAPs. Dual internal DC power supplies. Voltage: 36 - 72 Volts; 100 Watt total power consumption with 4 TAPs

Model #	Network Speed	Bypass TAP Module	Media		Modes			
			Network	Monitor	Breakout	Aggregation	Regeneration/ SPAN	Bypass
M10GMSBPv2	10G	SR Multi-mode Fiber	2 SR Multi-mode, LC-Fiber	2 SFP+ Cages	Yes	Yes	Yes	Yes
M10GSSBPv2		LR Single mode Fiber	2 LR Single mode LC-Fiber					
M10GESBPv2		ER Single mode Fiber	2 ER Single mode LC-Fiber					

*Theoretical distance - defined as half a distance as stated by the IEEE 802.3 standard.

EdgeSafe™ : 40G Bypass Modular Network TAP

40G/10G | 1U Chassis | Heartbeat | Media conversion

- Tap any 10G links and convert to SR, LR, or, ER
- Tap both 40G-SR4, and 40G-LR Links
- Heartbeat packet health check
- Supports both local and remote management
- Support for packet injection, jumbo frames, link failure propagation with TACACS, SNMP and Syslog

Model #	Description
M40G1AC	40G/10G-1U Chassis System: Supports up to 3 modular Bypass TAPs. Dual internal AC power supplies.

| Model #	Network Speed	Bypass TAP Module	Media		Modes			
			Network	Monitor	Breakout	Aggregation	Regen	Bypass
M40GMSBP	40G	SR Multi-mode Fiber	2 SR4 Multi-mode, MTP12	2 QSFP+ Cages	Yes	Yes	Yes	Yes
M40GSSBP	40G	LR Single mode Fiber	2 LR4 Single mode LC-Fiber	2 QSFP+ Cages				
M10GMS2BP	10G	SR Multi-mode Fiber	4 SR Multi-mode, LC-Fiber	4 SFP+ Cages				
M10GSS2BP	10G	LR Single mode Fiber	4 LR Single mode LC-Fiber	4 SFP+ Cages				

5 Garland**Prisms**
Cloud Packet Visibility

Network Packet Visibility for Private and Public Cloud Environment

Garland Prisms unlocks both public and private cloud visibility to enable best-of-breed security and visibility for your network. Our revolutionary, born-in-the cloud solution, is 100% out-of-band and passive, works with any cloud, works with any monitoring tool or system, and supports any cloud traffic mirroring (including Amazon VPC traffic mirroring, Azure vtaps). Easy to deploy, use and disruptively affordable, Garland Prisms provides essential traffic visibility needed for security and DevOps monitoring and inspection.

Garland Prisms is the most advanced virtual TAP solution to get cloud packets to monitoring tools and services. Garland Prisms allows organizations to access, process and deliver packet-level traffic from VMs and containers in any cloud. Our next-generation agent technology sends processed packet traffic to your tools and services both in-cloud and off-cloud.

With Garland Prisms, customers activate and run the tools of their choice to gain the critical visibility and control they need. Prisms allows organizations to accelerate their cloud transformations with clarity and confidence.

Cloud Tools

On-Prem Tools
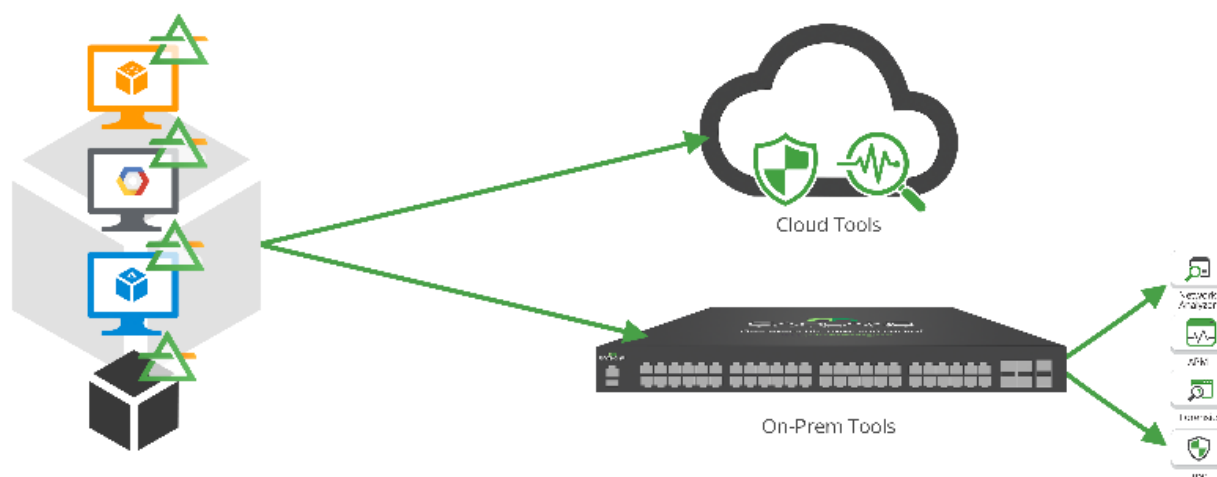
Acquire
Packet traffic is collected from dynamic resources. Acquisition of traffic from the public cloud including windows and Linux VM's, containers and container services, and generic mirrors using newly announced cloud platform taps and nextgen, zero-touch agent sensors to see all your traffic.

Process
Advanced Packet Processing Filters, Prepares & Optimizes Replicated Streams. Garland Prisms processes by aggregating, and filtering traffic using leading-edge, elastic processing services inside your subscription, minimizing impact on resources and exit charges

Distribute
Distribute processed cloud packet traffic to any IP address – in the cloud or off-cloud. Distribution and replication to individual tools or load balanced clusters in-cloud, or to legacy tools on-premises (off-cloud) in private data centers for maximum flexibility and investment protection.

Start Your **Free Trial**
garlandtechnology.com/garland-prisms

6 PacketMAX™
Advanced Aggregator and Advanced Features

Garland Technology's PacketMAX™: Advanced Aggregators are devices designed to increase efficiency and port utilization of Network Packet Brokers. Aggregators improve ROI by reducing the total cost of a network visibility fabric and increasing the efficiency of existing infrastructure.

APPLICATIONS

> Aggregation of multiple TAP/SPAN ports for increased utilization

> Connect to Network Packet Broker or directly to tools

> High density filtering, aggregation and load balancing

> Aggregation solution for large and medium size data centers

> Aggregation for enterprise and service provider networks

Garland Technology's PacketMAX™: Advanced Features are devices designed as a standalone platform to extend the feature set of any product. The system is designed to support large window deduplication, packet slicing and time stamping. Deduplication and packet slicing can significantly reduce the processing overhead from security or monitoring tools.

APPLICATIONS

> Extend the feature set of Garland's Advanced Aggregators or any existing infrastructure

> Reduce the load to security or monitoring tools by removing duplicate packets introduced by SPAN ports

> Reduce the volume of traffic by keeping only important header information

> Add time stamps to any or all packets for increased understanding of latency and distortions within the visibility fabric

> Extending the life of existing security and monitoring tools by reducing traffic volume

PacketMAX™ : 1G Advanced Aggregator

1G/10G | 1U | 52 Port | Filtering, Aggregation, and Load Balancing

FILTER HIGHLIGHTS:
- User defined filters for Layer 2, 3, and 4
- IPv4/IPv6, MAC, L4Port, VLAN, Ethertype, IP protocol
- Supports GRE Tunneling and Termination
- Supports VLAN stripping, QinQ support
- Full line rate filtering
- Packet modification

- Aggregate traffic to a single or multiple tools (1:1, 1:N, N:1, N:N)
- Supports 10M/100M/1G/10G network speeds
- OpenFlow/SDN enabled
- Start and Terminate GRE Tunnels and VXLAN Tunnels
- Up to 52 fully supported ports - no additional per-port license fees
- Supports jumbo frames
- Hot swappable, dual AC power supplies

- 1k filters
- Session/flow aware load balancing
- Configurable hash-based load balancing
- Flow replication and port mirroring
- Data burst buffering
- Management through GUI, and SNMP

Model #	Ports	Network Speed	1G Ports	10G Ports	Power	Watts
AA1G52AC		1/10G	(48) RJ45	(4) SFP+	1+1 redundant AC Power Supplies	65W

PacketMAX™ : 10G Advanced Aggregator

1G/10G/40G | 1U | 54 Port | Filtering, Aggregation, and Load Balancing

FILTER HIGHLIGHTS:
- User defined filters for Layer 2, 3, and 4
- IPv4/IPv6, MAC, L4Port, VLAN, Ethertype, IP protocol
- Supports MPLS stripping, single and stacked
- Supports VLAN stripping, QinQ support
- Full line rate filtering
- Packet modification

- Aggregate traffic to a single or multiple tools (1:1, 1:N, N:1, N:N)
- Supports 1G/10G/40G network speeds
- OpenFlow/SDN enabled
- IPv4/IPv6 and UDF Filter support
- Start and Terminate GRE Tunnels
- Start and Terminate VXLAN Tunnels
- Up to 72 fully supported ports - no additional per-port license fees
- Port splitting functionality

- Supports jumbo frames
- Hot swappable, dual power supplies AC standard, DC available
- 1k filters
- Session/flow aware load balancing
- Configurable hash-based load balancing
- Flow replication and port mirroring
- Data burst buffering
- Management through GUI, and SNMP

Model #	Ports	Network Speed	10G Ports	40G Ports	Power	Watts	SNMP/ Syslog Support
AA10G54AC		1G/10G/ 40G	(48) SFP/SFP+	(6) QSFP+	AC	195	Yes
AA10G54DC		1G/10G/ 40G	(48) SFP/SFP+	(6) QSFP+	DC		

PacketMAX™ : 100G Advanced Aggregator

10G/25G/40G/100G | 1U | 32 Port | Filtering, Aggregation, and Load Balancing

FILTER HIGHLIGHTS:
· User defined filters for Layer 2, 3, and 4
· IPv4/IPv6, MAC, L4Port, VLAN, Ethertype, IP protocol
· Supports MPLS stripping, single and stacked
· Supports VLAN stripping, QinQ support
· Full line rate filtering
· Packet modification

· Aggregate traffic to a single or multiple tools (1:1, 1:N, N:1, N:N)
· Supports 10G/25G/40G/100G network speeds
· OpenFlow/SDN enabled
· IPv4/IPv6 and UDF Filter support
· Start and Terminate GRE Tunnels
· Start and Terminate VXLAN Tunnels
· 32 fully supported ports - no additional per-port license fees
· Port splitting functionality

· Supports jumbo frames
· Hot swappable, dual power supplies AC standard, DC available
· 1k filters
· Session/flow aware load balancing
· Configurable hash-based load balancing
· Flow replication and port mirroring
· Data burst buffering
· Management through GUI, and SNMP

Model #	Ports	Network Speed	40G Port	100G Port	Power	Watts	SNMP /Syslog support
AA100G32AC		10/25/40/100G	(32) QSFP+	(32) QSFP28	AC Power	410	Yes
AA100G32DC		10/25/40/100G	(32) QSFP+	(32) QSFP28	DC Power	410	Yes

PacketMAX™ : 100G 64 Port Advanced Aggregator

10G/25G/40G/100G | 2U | 64 Port | Filtering, Aggregation, and Load Balancing

FILTERS HIGHLIGHTS:
· User defined filters for Layer 2, 3, and 4
· IPv4/IPv6, MAC, L4Port, VLAN, Ethertype, IP protocol
· Supports MPLS stripping, single and stacked
· Supports VLAN stripping, QinQ support
· Full line rate filtering
· Packet modification

· Aggregate traffic to a single or multiple tools (1:1, 1:N, N:1, N:N)
· Supports 10G/25G/40G/100G network speeds
· OpenFlow/SDN enabled
· Start and Terminate GRE Tunnels
· Start and Terminate VXLAN Tunnels
· 64 fully supported ports - no additional per-port license fees
· Port splitting functionality
· Hot swappable, dual power supplies AC standard, DC available

· Supports jumbo frames
· 1k filters
· Session/flow aware load balancing
· Configurable hash-based load balancing
· Flow replication and port mirroring
· Data burst buffering
· Management through GUI, and SNMP

Model #	Ports	Network Speed	40G Port	100G Port	Power	Watts	SNMP /Syslog support
AA100G64AC		10/25/40/100G	(64) QSFP+	(64) QSFP28	AC Power	600	Yes
AA100G64DC		10/25/40/100G	(64) QSFP+	(64) QSFP28	DC Power	600	Yes

PacketMAX™: Advanced Features Dedup

10G | Advanced Feature Node | Deduplication

• FPGA Based design for increased flexibility
• Large window deduplication (4M packet window, 200ms for an average size of 256B)

Applications
• Extend the feature set of Garland's Advanced Aggregators or any existing infrastructure
• Reduce the load to security or monitoring tools by removing duplicate packets introduced by SPAN ports
• Extending the life of existing security and monitoring tools by reducing traffic volume

Model #		Network Speed	Ports	Power	Watts
AF10G4AC		10G	(4) SFP+	1+1 redundant AC power supplies	135W
AF10G4DC		10G	(4) SFP+	1+1 redundant DC power supplies	135W

PacketMAX™: Advanced Features

1G/10G/40G/100G | Advanced Feature Node | Time Stamping | Packet Slicing

• NTP Time Stamping
• Packet Slicing
• GRE Termination
• ERSPAN Termination
• Hash-based round-robin load balancing
• High Density filtering, aggregation, and load balancing
• 4,000 filter rules
• sFlow Support

Advanced Features options

| Model #	Ports	Network Speed	1G Port	1/10G Port	40G Port	100G Port	Power
AF1G40AC		1/10G	(24) RJ-45	(16) SFP+	–	–	AC 55W
AF1G40DC		1/10G	(24) RJ-45	(16) SFP+	–	–	DC 70W
AF10G72AC		10/40/100G	-	(48) SFP+	(2) QSFP+	(4) QSFP28	AC 150W
AF10G72DC		10/40/100G	-	(48) SFP+	(2) QSFP+	(4) QSFP28	DC 190W
AF40G24AC		10/40/100G	-	-	(20) QSFP+	(4) QSFP28	AC 120W
AF40G24DC		10/40/100G	-	-	(20) QSFP+	(4) QSFP28	DC 160W

7 Hybrid Network Packet Brokers
with Network TAP Functionality

Garland Technology's Purpose Built Network Packet Brokers (NPBs), the PacketSTAX™ and EdgeLens®, provide access to network traffic from multiple links, helping to centralize and improve efficiencies by sharing packets between the monitoring and security appliances. NPBs centralize network traffic making the tools function more efficiently by sharing packets between monitoring/security appliances. Additional features include: filtering, aggregating, regenerating, and load balancing.

• Available in 1G/10G network speeds
• Modular 1U, 2U Chassis or 1U Integrated Systems
• Supports all media - copper (TX), short range (SX and SR) and long range (LX, ZX, LR, ER) fiber
• Multi-mode or single-mode
• All features are included
• 100% network visibility
• 100% secure and invisible; no IP address; no MAC address; cannot be hacked

APPLICATIONS

> High density solution
> Packet analysis
> Root cause analysis
> Historical look-back
> Validate policy changes
> Remote management

> Management of inline security tools and out-of-band monitoring tools
> Load balancing for increased bandwidth demands
> Ether Channel (Port Channel Architecture)
> Media conversion
> Network efficiency; only filter the packets required
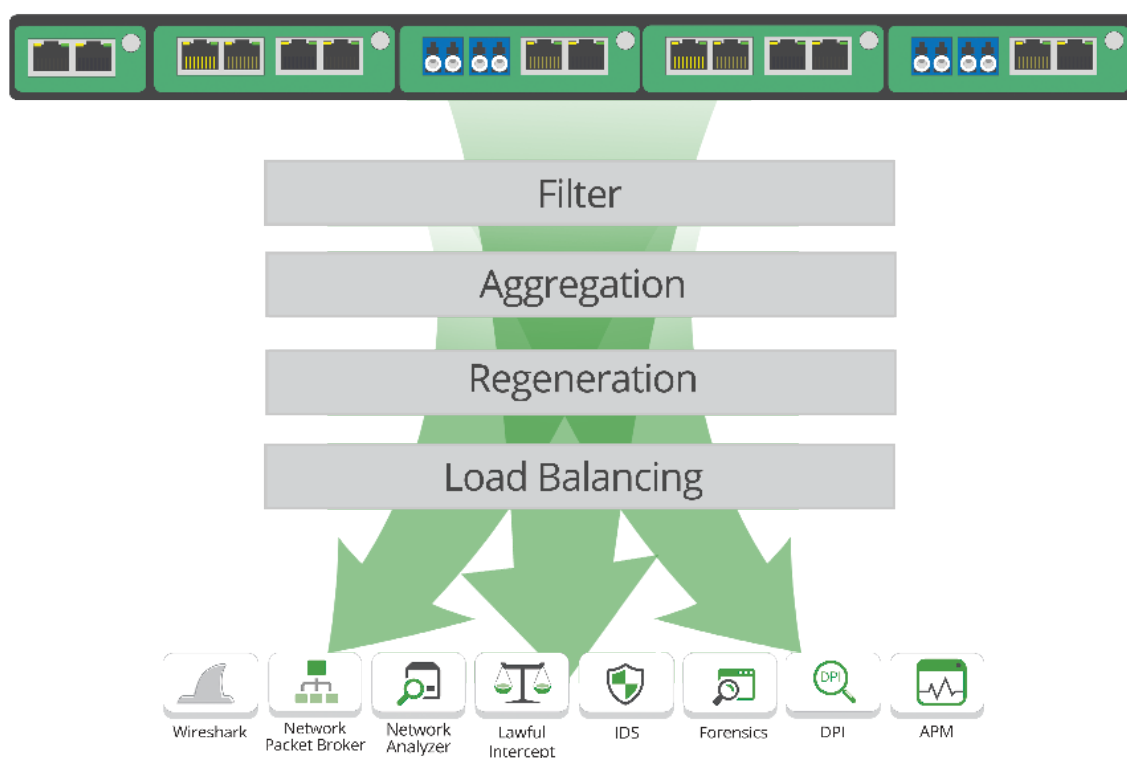
EdgeLens® Inline Security Packet Broker

1G/10G | 1U Chassis | Failsafe | Filtering, Aggregation, and Load Balancing

FILTERS:
• User defined filters for layer 2, 3, and 4
• MAC, IPv4/IPv6, TCP/UDP, MPLS, and Ethertype
• Protocol: HTTP, VoIP, FTP

• VLAN ID
• User Defined Byte (UDB)
• Ingress and egress filtering

• Supports filtering, aggregating, load balancing and regeneration
• Tap a 1G/ 10G link and deliver data to 1G/10G appliances
• Integrated 1U chassis Bypass TAP system
• Dual AC Hot swappable power supplies

• 1 Management port, 1 Console port
• Heartbeat packet health check
• Network failsafe for active inline appliances
• Session aware load balancing
• MPLS header stripping
• VLAN tagging and stripping

Model #	Ports	Network Speed	SFP/SFP+ Ports	Bypass TAPs	Power Consumption	Dual Hot Swappable Power Supplies*
INT10G2SRBP10SFP+		1G/10G	10 SFP/SFP+	(1) 1G-SX/10G-SR TAP 2 fiber ports	115 Watts	AC
INT10G2LRBP10SFP+		1G/10G	10 SFP/SFP+	(1) 1G-SX/10G-LR TAP 2 fiber ports	115 Watts	AC
INT10G8SRBP16SFP+		1G/10G	16 SFP/SFP+	(4) 1G-SX/10G-SR TAP 8 fiber ports	139 Watts	AC
INT10G8LRBP16SFP+		1G/10G	16 SFP/SFP+	(4) 1G-SX/10G-LR TAP 8 fiber ports	139 Watts	AC

Power Supply options	
PS10-HS-DC	Hot Swappable DC -48vdc Power Supplies
PS10-HS-AC	Hot Swappable AC Power Supplies (*Two included with each EdgeLens order)

(2) Two power supplies are required for each chassis

Available Pluggables & Cables:	
Model #	**Description**
SFPTX	SFP 10/100/1000 Copper RJ-45 Connector
SFPSX	SFP 1000Base-SX Multi-Mode Fiber LC Connector
SFPLX	SFP 1000Base-LX Single Mode Fiber LC Connector
SFP+SR	SFP+ Dual Speed 1 Gigabit-SX / 10 Gigabit-SR Multi-Mode Fiber LC Connector
SFP+LR	SFP+ Dual Speed 1 Gigabit-LX / 10 Gigabit-LR Single Mode Fiber LC Connector
SFP+ER	SFP+ 10Gigabit-ER Single-Mode Fiber LC Connector
SFP+SR10	SFP+ 10Gigabit-SR Multi-Mode Fiber LC Connector - only supports 10G
SFP+LR10	SFP+ 10Gigabit-LR Multi-Mode Fiber LC Connector - only supports 10G
TWINAX1M*	Twinax Copper Direct Connect Cable SFP+ 10Gigabit 1 Meter

*Also available in 5 and 10 meters.

PacketSTAX™: Modular Hybrid Packet Broker
1G | 1U / 2U Chassis | Port-to-Port Aggregator with Port Mapping Filtering

2U Chassis

- Supports filtering, tap "breakout," aggregation, regeneration/SPAN and bypass modes
- **Scalable Modular TAPs System**:
  - -2U holds up to 12 TAPs - backplane filtering within TAP row
  - -1U holds up to 4 TAPs - backplane filtering between TAPs and port
- **Management and Non-Management options**:
  - -Management: CLI/GUI/SSH/HTTP/Telnet
  - -Non-management chassis available;
  - (Management card can be added)

- **Port Mapping**: filter allows granular selection of network traffic at layers 2, 3 and 4 of the packet to provide monitoring tools only the traffic they are designed (or intended) to inspect
- **Multi-Tier Filtering Supports**: MAC, VLAN, IP, DSCP, TCP, UDP
- SNMP V2c/V3
- Dual internal AC or DC power supplies
- TAP modules are hot swappable, fully configurable and interchangeable
- Accommodates GT legacy modular TAPs
- Supports jumbo frames and passes physical errors

- Network Failsafe recognizes power outages and automatically closes the relay circuitry in less than 8 milliseconds then reconnects the two network devices connected to Ports A & B
- Packet slicing and packet injection (aggregate mode for copper network port TAPs)
- 100% secure and invisible; no IP address, no MAC address; cannot be hacked

Remote Access

Chassis options						
Model #	Chassis/TAPs*	Power Supplies	Voltage	Current (nominal)	Consumption (maximum)	Dimensions (WxHxD)
M1G1ACE	1U; up to 4 TAPs	Dual Internal AC	100-240VAC	0.75A@115VAC	86.25 Watts	
M1G1DCE	1U; up to 4 TAPs	Dual Internal DC	36-60VDC	1A@48VDC	48 Watts	17.40" x 1.75" x 13.45" (441.96mm x 44.45mm x 341.63mm)
M1G2ACE	2U; up to 12 TAPs	Dual Internal AC	100-240VAC	1A@115VAC	115 Watts	
M1G2DCE	2U; up to 12 TAPs	Dual Internal DC	36-60VDC	2.8A@48VDC	134.4 Watts	
M1GC*	Management card: Ethernet/GUI - and - Serial/CLI for M1GxxxE					

*Blanking plates are used if management card is not required or if not all TAP modules are populated. Management card and additional GT TAP modules can be added to chassis.

Copper Breakout TAP options								
Model #	Network Speed	Media		Modes				Features
		Network	Monitor	Breakout	Aggregation	Regeneration/ SPAN	Filtering	Bypass	
M100CCB*	10/100M	2 Copper-RJ45, passive	2 Copper-RJ45	Yes	No	No	No	No	Passive
M1GCCB*	10/100/ 1000M	2 Copper-RJ45							Link Sync with Fail Safe

*Supports Power over Ethernet (PoE)

PacketSTAX™: Modular Hybrid Packet Broker
1G | 1U/2U Chassis | Port-to-Port Aggregator with Port Mapping Filtering

Bypass TAP options

Model #	Network Speed	Media		Modes					Packet Injection Support	Packet Slicing
		Network	Monitor	Breakout	Aggregation	Regeneration/ SPAN	Filtering	Bypass	(in Aggregation mode)	
M1GCCBP	100/ 1000M	2 Copper-RJ45	2 Copper-RJ45	Yes	Yes	Yes	No	Yes	Yes	Yes
M1GCSBP	100/ 1000M	2 Copper-RJ45	2 SFP							
M1GMCBP	1G	2 SX Multi-mode, passive LC-Fiber	2 Copper-RJ45							
M1GMSBP	1G	2 SX Multi-mode, passive LC-Fiber	2 SFP							
M1GSCBP	1G	2 LX Single-mode, passive LC-Fiber	2 Copper-RJ45							
M1GSSBP	1G	2 LX Single-mode, passive LC-Fiber	2 SFP							

Filtering TAP options

Model #	Network Speed	Media		Modes					Link Speed Synchronization
		Network	Monitor	Breakout	Aggregation	Regeneration/ SPAN	Filtering	Bypass	
M1GCCF	10/100/ 1000M	2 Copper-RJ45	2 Copper-RJ45	Yes	Yes	Yes	Yes	No	Yes
M1GCSF	10/100/ 1000M	2 Copper-RJ45	2 SFP						Yes
M1GMCF	1G	2 SX Multi-mode, passive LC-Fiber	2 Copper-RJ45						No
M1GMSF	1G	2 SX Multi-mode, passive LC-Fiber	2 SFP						No
M1GSCF	1G	2 LX Single-mode, passive LC-Fiber	2 Copper-RJ45						No
M1GSSF	1G	2 LX Single-mode, passive LC-Fiber	2 SFP						No

Aggregator TAP options

Model #	Network Speed	Media		Modes					Packet Injection Support	Packet Slicing
		Network	Monitor	Breakout	Aggregation	Regeneration/ SPAN	Filtering	Bypass		
M1GCCBP	100/ 1000M	2 Copper-RJ45	2 Copper-RJ45	Yes	Yes	Yes	No	Yes	Yes	Yes
M1GCSBP	100/ 1000M	2 Copper-RJ45	2 SFP					Yes	Yes	
M1GMCA	1G	2 SX Multi-mode, passive LC-Fiber	2 Copper-RJ45					No	No	
M1GMSA	1G	2 SX Multi-mode, passive LC-Fiber	2 SFP					No	No	
M1GSCA	1G	2 LX Single-mode, passive LC-Fiber	2 Copper-RJ45					No	No	
M1GSSA	1G	2 LX Single-mode, passive LC-Fiber	2 SFP					No	No	

8 Pluggables and Cables
## Management and Connectivity

Connect your tools and TAPs to your network with quality made pluggables for copper and fiber optic networks. Garland Technology offers SFP and SFP+ pluggables that support 10M/100M/1000M copper and 1G, 10G, and 40G. Custom cable lengths are available in 1' and 1m increments.

Pluggable Transceivers

Pluggable Transceivers		
Model #	**Network Speed**	**Description**
SFPTX	1 Gbps	1000BASE-TX, SFP 10/100/1000 RJ45 copper
SFPSX		1000BASE-SX, SFP Multimode Fiber 850nm
SFPLX		1000BASE-LX, SFP Single-mode Fiber 1310nm - 10km
SFPEX40km		1000BASE-EX, SFP Single-mode Fiber 1310nm - 40km
SFPEX90km		1000BASE-EX, SFP Single-mode Fiber 1550nm - 90km
SFP+T	10 Gbps	10GBASE-T, SFP+ 100M/1G/10G RJ45 copper
SFP+SR		10GBASE-SR, SFP+ Multi-mode Fiber 850nm (1 or 10G)
SFP+LR		10GBASE-LR, SFP+ Single-mode Fiber 1310nm - 10km (1 or 10G)
SFP+ER		10GBASE-ER, SFP+ Single-mode Fiber 1550nm - 40km
SFP+ZR80		10GBASE-ZR, SFP+ Single-mode Fiber 1550nm - 80km
SFP+SR10G		10GBASE-SR, SFP+ Multi-mode Fiber 850nm (only supports 10G)
SFP+LR10G		10GBASE-LR, SFP+ Single-mode Fiber 1310nm - 10km (only supports 10G)
QSFP+40G	40Gbps	40GBASE-SR4, QSFP+ Multi-mode Fiber, MPO/MTP-12 Connector
QSFP+40-LR4		40GBASE-LR4, QSFP+ Single-mode Fiber, LC Connector
QSFP+10GLR		40GBASE-LR Single-mode with MTP/MPO connector for Fan-out Cables
QSFP+40GBiDi		40GBASE-SR BiDi, QSFP+ Multi-mode Fiber with LC Connectors
QSFP+28SR4	100Gbps	100GBASE-SR4, QSFP+28 Multi-mode Fiber, MPO/MTP-12 Connector
QSFP+28LR4		100GBASE-LR4, QSFP+28 Single-mode Fiber, LC Connector

Cables
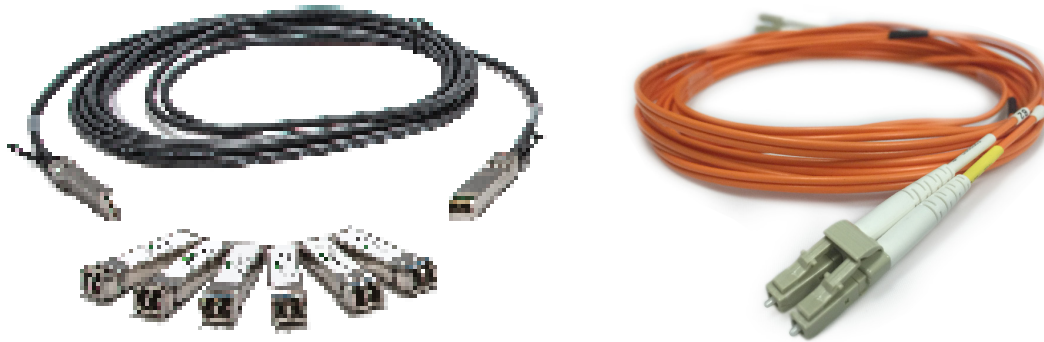
Twinax / Direct Attach Cables:	
Model #	**Description**
TWINAX1M	Twinax Copper Direct Connect Cable SFP+ to SFP+ 10Gigabit, Pre-Cut 1 Meter
TWINAX3M	Twinax Copper Direct Connect Cable SFP+ to SFP+ 10Gigabit, Pre-Cut 3 Meter
TWINAX5M	Twinax Copper Direct Connect Cable SFP+ to SFP+ 10Gigabit, Pre-Cut 5 Meter
TWINAX7M	Twinax Copper Direct Connect Cable SFP+ to SFP+ 10Gigabit, Pre-Cut 7 Meter
TWINAX10M	Twinax Copper Direct Connect Cable SFP+ to SFP+ 10Gigabit, Pre-Cut 10 Meter
TWINAX40G.5M	Direct Attach Copper Cable QSFP+ to QSFP+ 40Gigabit, Pre-Cut Half Meter
TWINAX40G1M	Direct Attach Copper Cable QSFP+ to QSFP+ 40Gigabit, Pre-Cut 1 Meter
TWINAX40G2M	Direct Attach Copper Cable QSFP+ to QSFP+ 40Gigabit, Pre-Cut 2 Meter
TWINAX40G3M	Direct Attach Copper Cable QSFP+ to QSFP+ 40Gigabit, Pre-Cut 3 Meter
TWINAX100G1M	Direct Attach Copper Cable QSFP28 to QSFP28 100Gigabit, Pre-Cut 1 Meter
TWINAX100G3M	Direct Attach Copper Cable QSFP28 to QSFP28 100Gigabit, Pre-Cut 3 Meter
TWINAX100G5M	Direct Attach Copper Cable QSFP28 to QSFP28 100Gigabit, Pre-Cut 5 Meter
Fan-out Cables: QSFP to LC Connections	
MTP12F-LC8MOM4_3	MPO/MTP to 8x 10Gb Multi-mode Fiber connections with LC connectors, 3 Meters (Cable)
MTP12F-LC8MOS2_3	MPO/MTP to 8x 10Gb Single-mode Fiber connections with LC connectors, 3 Meters (Cable)
Breakout Cables: QSFP to 10G SFP+ Connections	
QSFP-4SFP+_1	Direct Attach Copper Cable QSFP+ to 4x 10Gb SFP+, Pre-Cut 1 Meter
QSFP-4SFP+_2	Direct Attach Copper Cable QSFP+ to 4x 10Gb SFP+, Pre-Cut 2 Meter
QSFP-4SFP+_3	Direct Attach Copper Cable QSFP+ to 4x 10Gb SFP+, Pre-Cut 3 Meter
Breakout Cables: 100G QSFP28 to 25G SFP28 Connections	
QSFP28-4SFP28-Cable_1	Direct Attach Copper Cable QSFP28 to 4x 25Gb SFP28, Pre-Cut 1 Meter
QSFP28-4SFP28-Cable_3	Direct Attach Copper Cable QSFP28 to 4x 25Gb SFP28, Pre-Cut 3 Meter

Foundation of
Visibility

Starts with seeing every bit, byte, and packet®

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