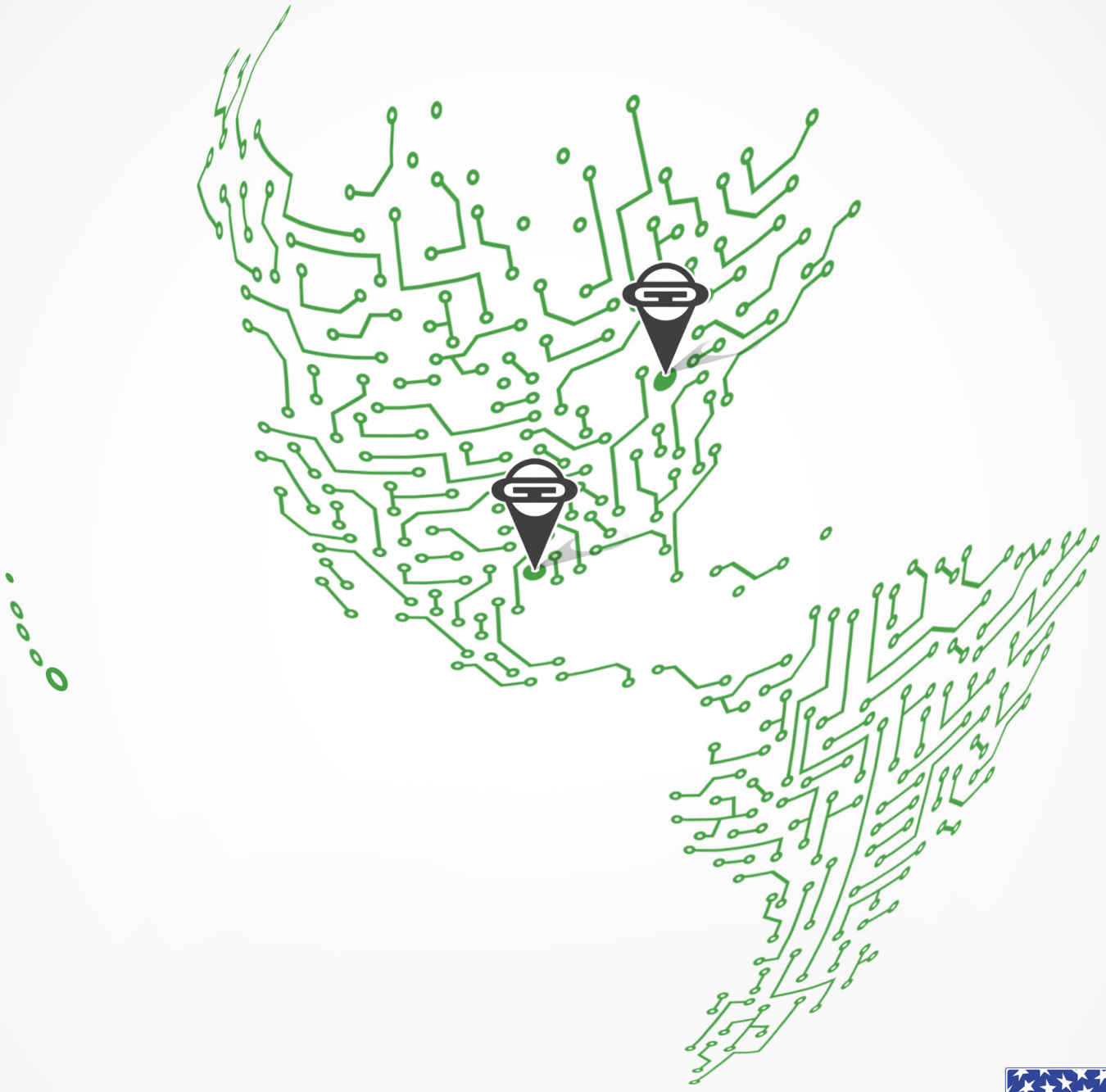
GARLAND TECHNOLOGY

See every bit, byte, and packet®

2017 SDN Network TAP Catalog



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

MADE IN THE U.S.A.

New York + Texas + Germany | GarlandTechnology.com | sales@GarlandTechnology.com | +716.242.8500

Foundation of Visibility

Starts with Seeing Every Bit, Byte and Packet®

Garland Technology network test access points (TAPs) provide 100% network uptime, while providing anytime network access and visibility.

A foundation of visibility starts with network TAPs that feed your monitoring and security tools all the data - every bit, byte and packet® they need to successfully secure and monitor your network.

Protecting your network with a stack of security and monitoring tools is a significant investment, however they are only as good as the data they receive. Dropped packets and over-subscribed ports leave your network blind to cyber threats. A Garland Technology network TAP will ensure your tools receive all the data for optimum functionality while extending the lifecycle of your network tools.

OUR MISSION

Garland Technology is committed to educating all organizations and individuals on the benefits of having a strong foundation of network visibility and access. By providing this education we protect the security of data across your network and beyond.

OUR HISTORY

Garland's network access technology has been empowering data centers and enterprise networks since 2000. In 2011, co-founders Chris Bihary, CEO and Jerry Dillard, CTO decided to combine their engineering and sales knowledge and form Garland Technology to provide best in class service and products to their customers.

Garland Technology has an excellent reputation in the network access community. Our goal to provide a Visibility Foundation that is fostered through the partnerships and alliances we have built over the past 30 years.

THE GARLAND LEADERSHIP

Chris Bihary, CEO/Co-Founder

Chris has been connecting companies and their data for over 20 years. Chris has an obsession for figuring out the simplest solutions for the most difficult network access problems that are utilized in small businesses to enterprise networks and data centers. Chris has dedicated his career to leadership positions in network access and is a proven business leader that is committed to both local community causes as well as industry related issues. As CEO/ Co-Founder of Garland Technology, Chris oversees customer satisfaction, sales, marketing and finance operations.

Jerry Dillard, CTO/Co-Founder

Jerry has focused his network engineering discipline on developing innovative solutions to ensure network uptime and security. Jerry began developing proprietary designs for network TAPs that are deployed in enterprise solutions worldwide. Jerry's tenure as an Electrical Engineer began designing military grade solutions for General Dynamics and Lockheed Martin. Jerry is a pioneer in securing in-line appliances and invented the bypass TAP. In addition, Jerry was a sole proprietor manufacturing network TAPs until Garland Technology was formed in 2011. As CTO/Co-Founder of Garland Technology, Jerry is responsible for logistics, engineering, testing and quality assurance.

Tested and Certified

The Garland Technology quality stamp indicates each product is tested and validated with live data before shipping from our factory. Made, tested & certified in the U.S.A.

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Network TAPS

Network TAPs are a hardware tool that allows you to access and monitor your network. Garland Technology manufacturers a complete line of network TAPs from passive, listen only TAPs for network monitoring - to active, in-line TAPs to feed your security tools as well as hybrid bypass TAPs with packet broker functionality, supporting filtering, aggregating and load balancing. Garland Technology's network TAPs let you see every bit, byte and packet.®

Passive Fiber Network TAPs Page 4

Passive Fiber Network TAPs provide 100% network visibility by making a complete copy of your live network data for access and monitoring. Available in 1G/10G multi-mode or 1G/10G/40G/100G single-mode fiber.

1G/10G Passive Fiber TAPs Page 5

Multi-mode | Breakout Network TAPs

1G/10G/40G/100G Passive Fiber TAPs Page 6

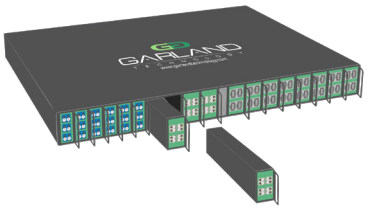
Single-mode | Breakout Network TAPs

Multi-mode 40G-SR-BiDi Passive Fiber TAPs Page 7

BiDirectional | Breakout Network TAPs

Multi-mode 40G-SR4, 100G-SR4 and 100G-SR10 Passive Fiber TAPs Page 8

Multi-Mode | Breakout Network TAPs



High Density 1U Data Center Solution 1G/10G/40G/100G Page 9

Modular Passive Chassis

1U or 2U 1G Modular Chassis System Page 10

10/100M and 10/100/1000M | Copper Modular TAPs

Pluggables and Cables Page 11

Management and Connectivity

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1 Passive Fiber

Network TAPs

Passive network TAPs are a hardware tool that allows you to monitor your network. Garland Technology offers fiber network TAPs in network speeds of 1Gb, 10Gb, 40Gb and 100Gb. Fiber Network TAPs are passive, purpose-built hardware devices that make a 100% copy of your network's data - without affecting network traffic. Passive network TAPs let your monitoring tools to see every bit, byte and packet.®

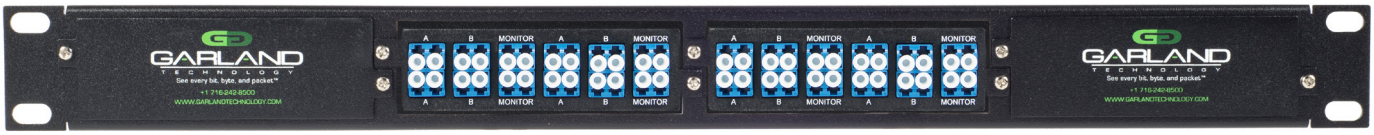
- 100% network visibility
- 100% secure and invisible; no IP address; no Mac address; cannot be hacked
- Fiber TAPs in single-mode for 1Gb, 10Gb, 40Gb and 100Gb; or multi-mode for 1G and 10G
- Passes physical layer errors
- Portable, plug & play units, 1U or 2U chassis systems, or 1U modular system

APPLICATIONS

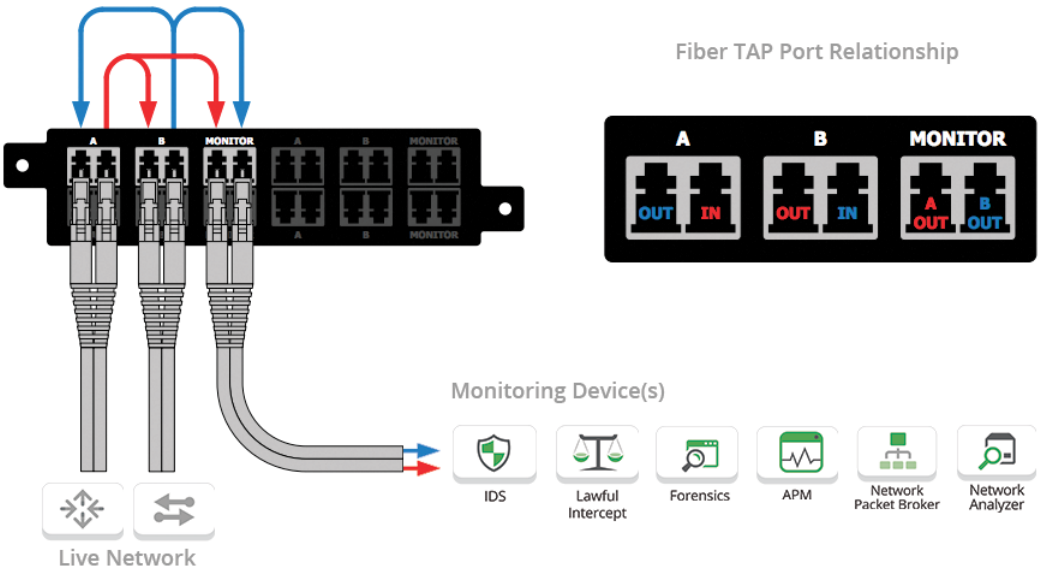
- Network & Application Monitoring
- Network & Application Analysis
- Network & Application Performance

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

RACK MOUNT



NETWORK FLOW



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1G/10G/40G/100G Passive Fiber TAPs

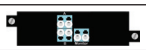
Single-mode | Breakout Network TAPs

OS2704

- 1U rack mount kit holds up to 4 modules, each module can have 1, 2, 3, or 4 TAPs
- 1U chassis holds 28 or 56 TAPs, highest density in industry
- 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
- Tested and Certified

RMP-1U

1U Chassis with 28 or 56 TAPs

Model #	Network Speed	Ports	# of TAPs	Split Ratio*	Wavelengths	Media	Connnector/Mode
RMP-1U		1U Rack Mount Kit - Hold up to 4 Modules, each Module can have 1, 2, 3 or 4 TAPs					
OS1501	Up to 100G		1	50/50	1310/1550nm	Fiber-OS1	Fiber-LC Single-Mode Fiber
OS1701	Up to 100G		1	70/30	1310/1550nm	Fiber-OS1	Fiber-LC Single-Mode Fiber
OS2501	Up to 100G		1	50/50	1310/1550nm	Fiber-OS2	Fiber-LC Single-Mode Fiber
OS2701	Up to 100G		1	70/30	1310/1550nm	Fiber-OS2	Fiber-LC Single-Mode Fiber
OS1502	Up to 100G		2	50/50	1310/1550nm	Fiber-OS1	Fiber-LC Single-Mode Fiber
OS1702	Up to 100G		2	70/30	1310/1550nm	Fiber-OS1	Fiber-LC Single-Mode Fiber
OS2502	Up to 100G		2	50/50	1310/1550nm	Fiber-OS2	Fiber-LC Single-Mode Fiber
OS2702	Up to 100G		2	70/30	1310/1550nm	Fiber-OS2	Fiber-LC Single-Mode Fiber
OS1503	Up to 100G		3	50/50	1310/1550nm	Fiber-OS1	Fiber-LC Single-Mode Fiber
OS1703	Up to 100G		3	70/30	1310/1550nm	Fiber-OS1	Fiber-LC Single-Mode Fiber
OS2503	Up to 100G		3	50/50	1310/1550nm	Fiber-OS2	Fiber-LC Single-Mode Fiber
OS2703	Up to 100G		3	70/30	1310/1550nm	Fiber-OS2	Fiber-LC Single-Mode Fiber
OS1504	Up to 100G		4	50/50	1310/1550nm	Fiber-OS1	Fiber-LC Single-Mode Fiber
OS1704	Up to 100G		4	70/30	1310/1550nm	Fiber-OS1	Fiber-LC Single-Mode Fiber
OS2504	Up to 100G		4	50/50	1310/1550nm	Fiber-OS2	Fiber-LC Single-Mode Fiber
OS2704	Up to 100G		4	70/30	1310/1550nm	Fiber-OS2	Fiber-LC Single-Mode Fiber
OS15028	Up to 100G	Chassis 1U	28	50/50	1310/1550nm	Fiber-OS1	Fiber-LC Single-mode Fiber
OS17028	Up to 100G	Chassis 1U	28	70/30	1310/1550nm	Fiber-OS1	Fiber-LC Single-mode Fiber
OS25028	Up to 100G	Chassis 1U	28	50/50	1310/1550nm	Fiber-OS2	Fiber-LC Single-mode Fiber
OS27028	Up to 100G	Chassis 1U	28	70/30	1310/1550nm	Fiber-OS2	Fiber-LC Single-mode Fiber
OS15056	Up to 100G	Chassis 1U	56	50/50	1310/1550nm	Fiber-OS1	Fiber-LC Single-mode Fiber
OS17056	Up to 100G	Chassis 1U	56	70/30	1310/1550nm	Fiber-OS1	Fiber-LC Single-mode Fiber
OS25056	Up to 100G	Chassis 1U	56	50/50	1310/1550nm	Fiber-OS2	Fiber-LC Single-mode Fiber
OS27056	Up to 100G	Chassis 1U	56	70/30	1310/1550nm	Fiber-OS2	Fiber-LC Single-mode Fiber

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

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1G/10G Passive Fiber TAPs

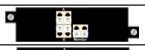
Multi-mode | Breakout Network TAPs

OM4704

- 1U rack mount kit holds up to 4 modules, each module can have 1, 2, 3, or 4 TAPs
- 1U chassis holds 28 or 56 TAPs, highest density in industry
- Multi-mode fiber with LC Connectors
- New Prism based technology that reduces bit errors on OM3 + OM4 applications, providing 100% utilization
- Split ratios available in 50/50; 60/40; 70/30; 80/20 and 90/10
- Portable, Plug & Play easy installation
- No power source required
- Tested and Certified

RMP-1U

1U Chassis with 28 or 56 TAPs

Model #	Network Speed	Ports	# of TAPs	Split Ratio*	Wavelengths	Media	Connnector/Mode
RMP-1U		1U Rack Mount Kit - Hold up to 4 Modules, each Module can have 1, 2, 3 or 4 TAPs					
OM1501	Up to 10G		1	50/50	850/1300nm	Fiber-OM1	Fiber-LC Multi-Mode Fiber
OM1701	Up to 10G		1	70/30	850/1300nm	Fiber-OM1	Fiber-LC Multi-Mode Fiber
OM3501	Up to 10G		1	50/50	850/1300nm	Fiber-OM3	Fiber-LC Multi-Mode Fiber
OM4501	Up to 10G		1	50/50	850nm	Fiber-OM3/OM4	Fiber-LC Multi-Mode Fiber
OM4701	Up to 10G		1	70/30	850nm	Fiber-OM3/OM4	Fiber-LC Multi-Mode Fiber
OM1502	Up to 10G		2	50/50	850/1300nm	Fiber-OM1	Fiber-LC Multi-Mode Fiber
OM1702	Up to 10G		2	70/30	850/1300nm	Fiber-OM1	Fiber-LC Multi-Mode Fiber
OM3502	Up to 10G		2	50/50	850/1300nm	Fiber-OM3	Fiber-LC Multi-Mode Fiber
OM4502	Up to 10G		2	50/50	850nm	Fiber-OM3/OM4	Fiber-LC Multi-Mode Fiber
OM4702	Up to 10G		2	70/30	850nm	Fiber-OM3/OM4	Fiber-LC Multi-Mode Fiber
OM1503	Up to 10G		3	50/50	850/1300nm	Fiber-OM1	Fiber-LC Multi-Mode Fiber
OM1703	Up to 10G		3	70/30	850/1300nm	Fiber-OM1	Fiber-LC Multi-Mode Fiber
OM3503	Up to 10G		3	50/50	850/1300nm	Fiber-OM3	Fiber-LC Multi-Mode Fiber
OM4503	Up to 10G		3	50/50	850nm	Fiber-OM3/OM4	Fiber-LC Multi-Mode Fiber
OM4703	Up to 10G		3	70/30	850nm	Fiber-OM3/OM4	Fiber-LC Multi-Mode Fiber
OM1504	Up to 10G		4	50/50	850/1300nm	Fiber-OM1	Fiber-LC Multi-Mode Fiber
OM1704	Up to 10G		4	70/30	850/1300nm	Fiber-OM1	Fiber-LC Multi-Mode Fiber
OM3504	Up to 10G		4	50/50	850/1300nm	Fiber-OM3	Fiber-LC Multi-Mode Fiber
OM4504	Up to 10G		4	50/50	850nm	Fiber-OM3/OM4	Fiber-LC Multi-Mode Fiber
OM4704	Up to 10G		4	70/30	850nm	Fiber-OM3/OM4	Fiber-LC Multi-Mode Fiber
OM15028	Up to 10G	Chassis 1U	28	50/50	850/1300nm	Fiber-OM1	Fiber-LC Multi-mode Fiber
OM17028	Up to 10G	Chassis 1U	28	70/30	850/1300nm	Fiber-OM1	Fiber-LC Multi-mode Fiber
OM35028	Up to 10G	Chassis 1U	28	50/50	850/1300nm	Fiber-OM3	Fiber-LC Multi-mode Fiber
OM45028	Up to 10G	Chassis 1U	28	50/50	850nm	Fiber-OM3/OM4	Fiber-LC Multi-mode Fiber
OM47028	Up to 10G	Chassis 1U	28	70/30	850nm	Fiber-OM3/OM4	Fiber-LC Multi-mode Fiber
OM15056	Up to 10G	Chassis 1U	56	50/50	850/1300nm	Fiber-OM1	Fiber-LC Multi-mode Fiber
OM17056	Up to 10G	Chassis 1U	56	70/30	850/1300nm	Fiber-OM1	Fiber-LC Multi-mode Fiber
OM35056	Up to 10G	Chassis 1U	56	50/50	850/1300nm	Fiber-OM3	Fiber-LC Multi-mode Fiber
OM45056	Up to 10G	Chassis 1U	56	50/50	850nm	Fiber-OM3/OM4	Fiber-LC Multi-mode Fiber
OM47056	Up to 10G	Chassis 1U	56	70/30	850nm	Fiber-OM4/OM4	Fiber-LC Multi-mode Fiber

*56 1U Fiber TAPs are populated front and back. *Custom split ratios are available in 50/50, 60/40, 70/30, 80/20, 90/10

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Multi-mode 40G-SR-BiDi Passive Fiber TAPs

BiDirectional | Breakout Network TAPs

OM4502

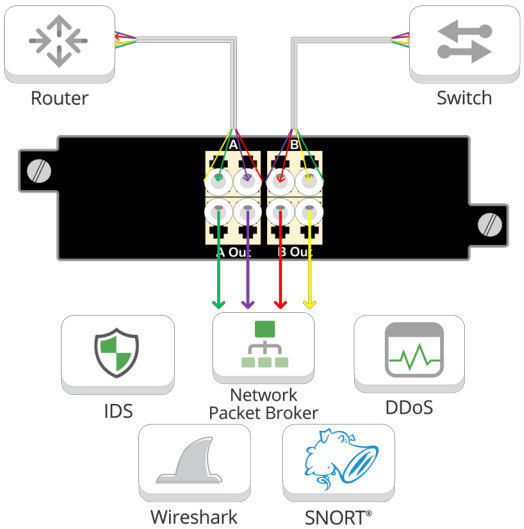
- Supports Cisco BiDirectional optical technology
- Unique design provides flexibility to TAP multi-mode OM3/OM4 fiber types
- 1U rack mount kit holds up to 4 modules, each module can have 1, 2, or 3 portable TAPs - no power source required
- Exclusive high density 1U chassis with 21 TAPs
- New Prism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

RMP-1U

1U Chassis with 21 TAPs

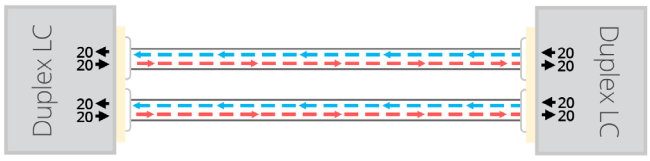
Model #	Network Speed	Ports	# of TAPs	Split Ratio	Wavelengths	Media	Connnector/Mode
RMP-1U		1U Rack Mount Kit - Hold up to 4 Modules, each Module can have 1, 2 or 3 TAPs					
OM4501-40GSR4BiDi	Up to 40G		1	50/50	800-950nm	Fiber-OM3/OM4	Fiber-LC Multi-mode Fiber
OM4502-40GSR4BiDi	Up to 40G		2	50/50	800-950nm	Fiber-OM3/OM4	Fiber-LC Multi-mode Fiber
OM4503-40GSR4BiDi	Up to 40G		3	50/50	800-950nm	Fiber-OM3/OM4	Fiber-LC Multi-mode Fiber
OM45021-40GSR4BiDi	Up to 40G		21	50/50	800-950nm	Fiber-OM3/OM4	Fiber-LC Multi-mode Fiber
OM4701-40GSR4BiDi	Up to 40G		1	70/30	800-950nm	Fiber-OM3/OM4	Fiber-LC Multi-mode Fiber
OM4702-40GSR4BiDi	Up to 40G		2	70/30	800-950nm	Fiber-OM3/OM4	Fiber-LC Multi-mode Fiber
OM4703-40GSR4BiDi	Up to 40G		3	70/30	800-950nm	Fiber-OM3/OM4	Fiber-LC Multi-mode Fiber
OM47021-40GSR4BiDi	Up to 40G		21	70/30	800-950nm	Fiber-OM3/OM4	Fiber-LC Multi-mode Fiber

Network Flow



40G Duplex

(Receive and Transmit on 2 different Wavelengths 832nm-913nm)



The Cisco QSFP 40-Gbps BiDi transceiver has two 20-Gbps channels, each transmitted and received simultaneously on two wavelengths when connected to a duplex MMF. The result is an aggregated 40-Gbps link over a duplex MMF.

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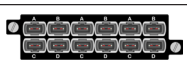
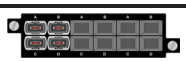
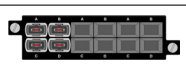
Multi-mode 40G-SR4, 100G-SR4 and 100G-SR10 Passive Fiber TAPs

Multi-Mode | Breakout Network TAPs

OM4501

- 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 applications, providing 100% utilization.
- MTP®brand connectors for lowest dB loss
- 1U rack mount kit holds up to 4 modules, each module can have 1, 2 or 3 portable TAPs
- Portable, Plug & Play easy installation
- No power source required
- Tested and Certified

RMP-1U

Model #	Network Speed	Ports	# of TAPs	Split Ratio*	Wavelengths	Media	Connnector/Mode
RMP-1U		1U Rack Mount Kit - Hold up to 4 Modules, each Module can have 1, 2 or 3 TAPs					
OM4501-40GSR4B	40G		1	50/50	850nm	Fiber-OM3/ OM4	MTP-12 Multi-Mode Fiber
OM4702-40GSR4B	40G		2	70/30	850nm	Fiber-OM3/ OM4	MTP-12 Multi-Mode Fiber
OM4503-40GSR4B	40G		3	50/50	850nm	Fiber-OM3/ OM4	MTP-12 Multi-Mode Fiber
OM4701-40GSR4B	40G		1	70/30	850nm	Fiber-OM3/ OM4	MTP-12 Multi-Mode Fiber
OM4502-40GSR4B	40G		2	50/50	850nm	Fiber-OM3/ OM4	MTP-12 Multi-Mode Fiber
OM4703-40GSR4B	40G		3	70/30	850nm	Fiber-OM3/ OM4	MTP-12 Multi-Mode Fiber
OM4501-100GSR4B	100G		1	50/50	850nm	Fiber-OM3/ OM4	MTP-12 Multi-mode Fiber
OM4702-100GSR4B	100G		2	70/30	850nm	Fiber-OM3/ OM4	MTP-12 Multi-mode Fiber
OM4503-100GSR4B	100G		3	50/50	850nm	Fiber-OM3/ OM4	MTP-12 Multi-mode Fiber
OM4701-100GSR4B	100G		1	70/30	850nm	Fiber-OM3/ OM4	MTP-12 Multi-mode Fiber
OM4502-100GSR4B	100G		2	50/50	850nm	Fiber-OM3/ OM4	MTP-12 Multi-mode Fiber
OM4703-100GSR4B	100G		3	70/30	850nm	Fiber-OM3/ OM4	MTP-12 Multi-mode Fiber
OM4501-100GSR10A	100G		1	50/50	850nm	Fiber-OM3/ OM4	MTP-24 Multi-mode Fiber
OM4702-100GSR10A	100G		2	70/30	850nm	Fiber-OM3/ OM4	MTP-24 Multi-mode Fiber
OM4503-100GSR10A	100G		3	50/50	850nm	Fiber-OM3/ OM4	MTP-24 Multi-mode Fiber
OM4701-100GSR10A	100G		1	70/30	850nm	Fiber-OM3/ OM4	MTP-24 Multi-mode Fiber
OM4502-100GSR10A	100G		2	50/50	850nm	Fiber-OM3/ OM4	MTP-24 Multi-mode Fiber
OM4703-100GSR10A	100G		3	70/30	850nm	Fiber-OM3/ OM4	MTP-24 Multi-mode Fiber

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

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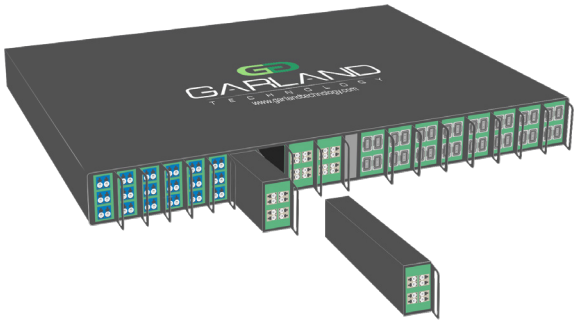
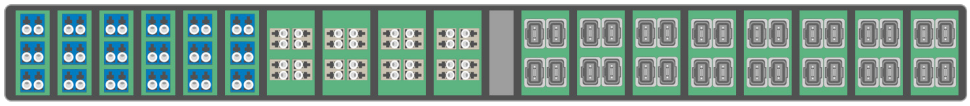
High Density 1U Data Center Solution - 1G/10G/40G/100G

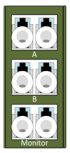
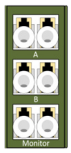
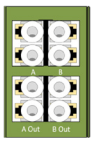
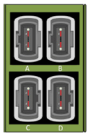
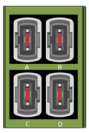
Modular Passive Chassis



- 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 media
- Supports Cisco BiDirectional optical technology
- New prism based technology reduces bit errors on OM3/OM4 applications, providing 100% utilization
- No power source required
- Tested and Certified



Chassis options

Model #	Network Speed	Ports	# of TAPs	Split Ratio	Wavelengths	Media	Connector/Mode
FMC-1U	Fiber Modular Chassis						
OS2501M	Up to 100G		1	50/50	1310/1550nm	Fiber-OS1/OS2	Fiber-LC Single-Mode Fiber
OS2701M	Up to 100G		1	70/30	1310/1550nm	Fiber-OS1/OS2	Fiber-LC Single-Mode Fiber
OM1501M	Up to 10G		1	50/50	850/1300nm	Fiber-OM1/OM2	Fiber-LC Multi-Mode Fiber
OM1701M	Up to 10G		1	70/30	850/1300nm	Fiber-OM1/OM2	Fiber-LC Multi-Mode Fiber
OM4501M	Up to 10G		1	50/50	850nm	Fiber-OM3/OM4	Fiber-LC Multi-Mode Fiber
OM4701M	Up to 10G		1	70/30	850nm	Fiber-OM3/OM4	Fiber-LC Multi-Mode Fiber
OM4501-40SR4BiDiM	Up to 40G		1	50/50	800-950nm	Fiber-OM3/OM4	Fiber-LC Multi-Mode Fiber
OM4701-40SR4BiDiM	Up to 40G		1	70/30	800-950nm	Fiber-OM3/OM4	Fiber-LC Multi-Mode Fiber
OM4501-40GSR4BM	Up to 40G		1	50/50	850nm	Fiber-OM3/OM4	MTP-12 Multi-Mode Fiber
OM4701-40GSR4BM	Up to 40G		1	70/30	850nm	Fiber-OM3/OM4	MTP-12 Multi-Mode Fiber
OM4501-100GSR4BM	Up to 100G		1	50/50	850nm	Fiber-OM3/OM4	MTP-12 Multi-Mode Fiber
OM4701-100GSR4BM	Up to 100G		1	70/30	850nm	Fiber-OM3/OM4	MTP-12 Multi-Mode Fiber
OM4501-100GSR10AM	Up to 100G		1	50/50	850nm	Fiber-OM3/OM4	MTP-24 Multi-Mode Fiber
OM4701-100GSR10AM	Up to 100G		1	70/30	850nm	Fiber-OM3/OM4	MTP-24 Multi-Mode Fiber

OS2 Fiber supports OS1 & OS2; OM1 Fiber supports OM1 & OM2; OM4 Fiber supports OM3 & OM4

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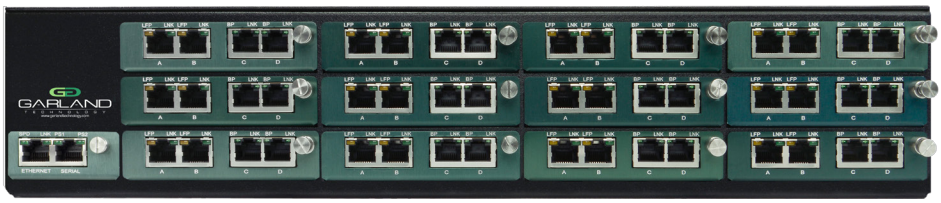
1U or 2U 1G Modular Chassis System

10/100M and 10/100/1000M | Copper Modular TAPs

- 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 propogation (LFP)
- Supports jumbo frames
- Flexible design - accommodates any 1G network scenario
- Scalable design - add modules as needed



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.

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	2 Copper-RJ45	Yes	No	No	No	No	Link Synch with Fail Safe

*Supports Power over Ethernet (PoE)

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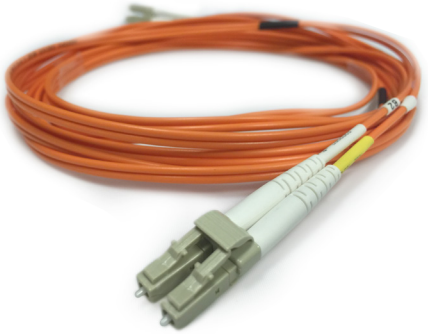
Pluggables and Cables

Management and Connectivity

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



Pluggables: SFP/SFP+/QSFP+		
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
QSFP+40G		QSFP+ 40 Gigabit-SR Multi-Mode Fiber MPO/MTP-12 Connector
QSFP+40G-LR4		QSFP+LR Single-Mode Fiber LC Connector
QSFP+40GBiDi		QSFP+ 40Gigabit-SR-BiDi Multi-Mode Fiber LC Connector
QSFP28-4SFP28-Cable_1		100 Gigabit Ethernet QSFP28 to (4) x 25 Gigabit Ethernet SFP28 Splitter Cable, 1 Meter

Cables:	
Model #	**Description**
TWINAX1M	Twinax Copper Direct Connect Cable SFP+ 10Gigabit 1 Pre-cut Meter
TWINAX5M	Twinax Copper Direct Connect Cable SFP+ 10Gigabit 5 Pre-cut Meter
TWINAX10M	Twinax Copper Direct Connect Cable SFP+ 10Gigabit 10 Pre-cut Meter

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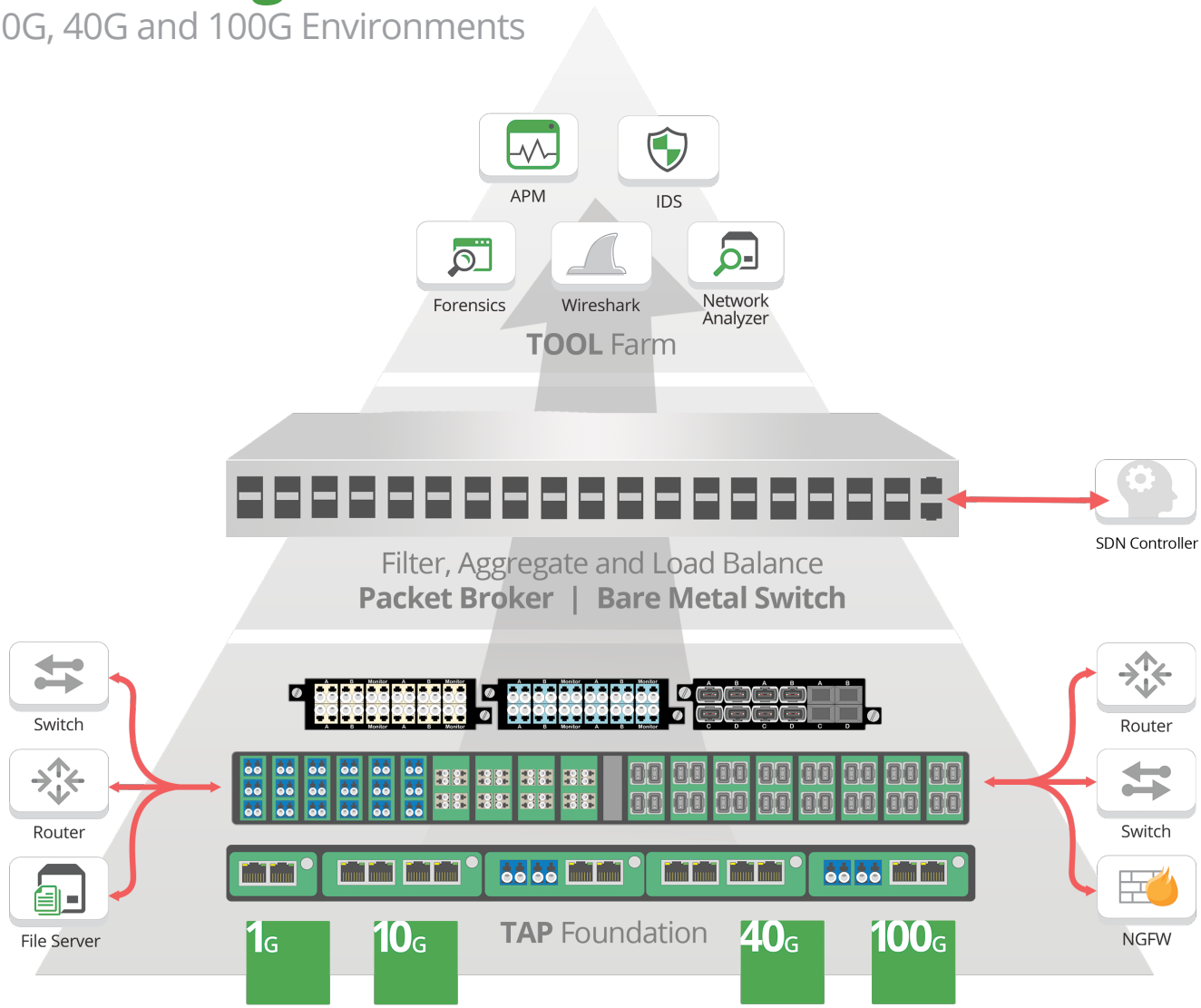
Architecting Data Centers for SDN and NFV

In 10G, 40G and 100G Environments



The Importance of Visibility with SDN

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

Centralized control of traffic flows is be critical for monitoring 40G and 100G networks. 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
- Bandwidth management
- Computer forensic analysis and data capture
- Content filtering
- Data leakage prevention (DLP)
- Lawful interception
- Intrusion detection

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Learn more

About Garland Technology

fuel PALO ALTO NETWORKS USER GROUP

"Garland Technology's contributions to the Fuel community will be invaluable, allowing members to benefit from news and education focused on its products as well as industry-wide trends."
-Blake Wofford, President, Fuel User Group

RAH Infotech ...connecting & securing your world

"Garland Technology is all about connections - connecting your network to your appliance, connecting your data to your IT team, and reconnecting you to your core business."
-Ashok Kumar, MD & CEO, RAH Infotech

"One of our internal goals is to guarantee network uptime and Garland helps us achieve that. In security implementations, we can manage our in-line devices without taking the network down."
-Marty Bognanno, Manager of Infrastructure Security, Constellation Brands

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- Education
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Library & Blog

Resource Center for Network Access and Visibility

Garland Technology partners with industry leaders in network security, access and visibility. These relationships with our technology experts and technology partners are the foundation of our educational mission to share our knowledge of network access and visibility with you, the network professional.

Dive deeper into topic specific White Papers at the Garland Resource Library and our TAP into Technology blog at:

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Foundation of Visibility

Starts with Seeing Every Bit, Byte and Packet®

Garland Technology network TAPs provide 100% network visibility, while providing anytime network access. A foundation of visibility starts with network TAPs that feed your monitoring and security tools all the data - every bit, byte and packet® they need to successfully secure and monitor your network.

Protecting your network with a stack of security and monitoring tools is a significant investment, however they are only as good as the data they receive. Dropped packets and over-subscribed ports leave your network blind to cyber threats. A Garland Technology network TAP will ensure your tools receive all the data for optimum functionality while extending the lifecycle of your network tools.

GARLAND TECHNOLOGY

See every bit, byte, and packet®

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