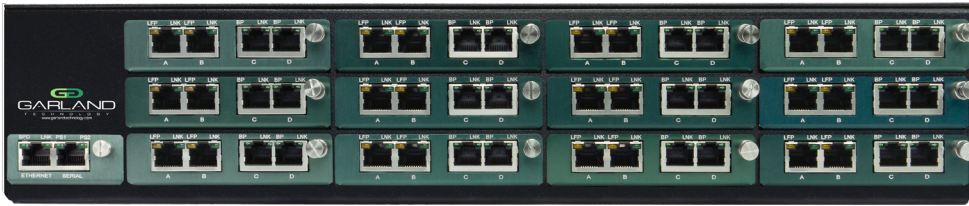
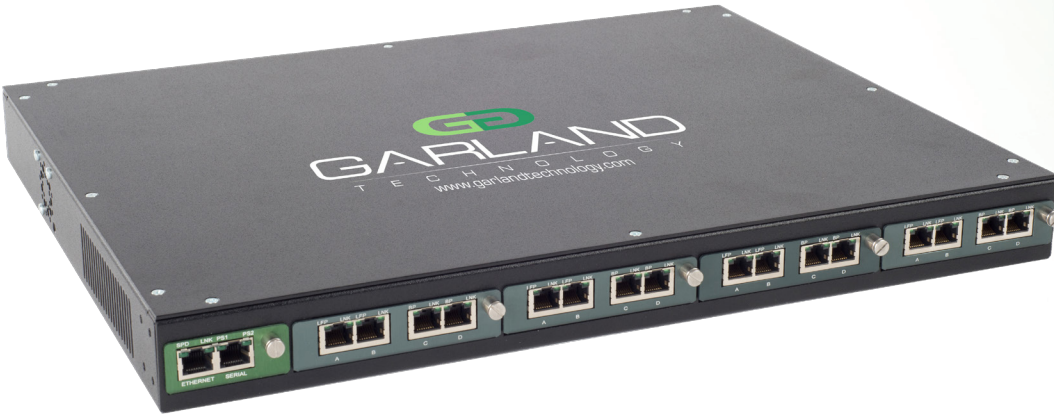


# Copper Modular Network TAP Systems

10/100M and 10/100/1000M (1G) | 1U or 2U Chassis



Network test access points (TAPs) are hardware tools that allow you to access and monitor your network. The modular packet broker chassis system features a flexible and scalable design to meet your network needs today and tomorrow.

Design your own 1G chassis with modular TAPs that support breakout, aggregation, filtering, regeneration/SPAN and bypass modes. This modular system allows you to fully deploy and manage your monitoring and security appliances and guarantee 100% network uptime letting you **see every bit, byte and packet.**®

## Key Features

- **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 Card: Ethernet with GUI - and - Serial with CLI controller
  - Non-management chassis available; (management card can be added at later date)
- **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
- Dual internal AC or DC power supplies
- TAP modules are hot swappable, fully configurable and interchangeable
- Accommodates GT legacy modular TAPs
- 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.
- Supports jumbo frames and passes physical errors.
- 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
- Made, tested and certified in USA

### APPLICATIONS:

- Remote Management
- High density data center design.
- Network efficiency; only filter the packets required.
- Media Conversion for 1G networks

### SOLUTIONS:

#### Aggregation / Regeneration

Port mapping between multiple TAPs and ports for aggregation, regeneration or filtering. Aggregate data to a single link or regenerate the traffic up to 4 links for 1U or up to 12 links for 2U.

Multiple analyzers and security tools see and share the same data, which reduces the number of ports required by the monitoring tools and security devices.

#### Media Conversion

Converting media allows you to use monitoring tools that you already have or use monitoring tools that cost less.

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

### Competitive Edge

- Flexible design - accommodates any 1G network scenario
- Scalable design - add modules as needed
- Remote management with Ethernet GUI (optional)
- Highest density 1G integrated TAP packet broker on the market



### Have Questions?

sales@garlandtechnology.com  
+716.242.8500  
garlandtechnology.com

# Copper Modular Network TAP Systems

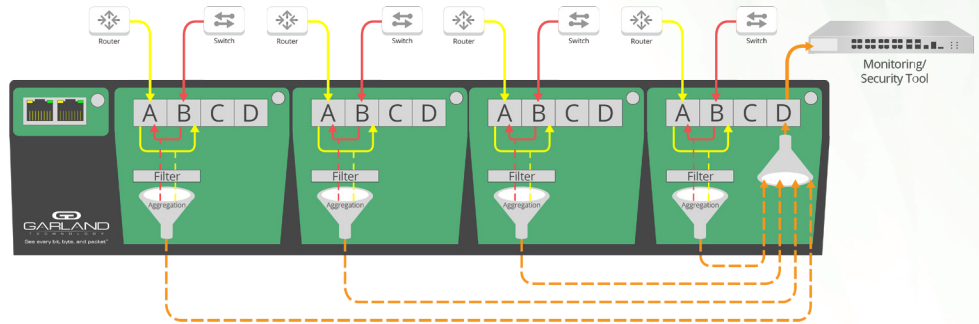
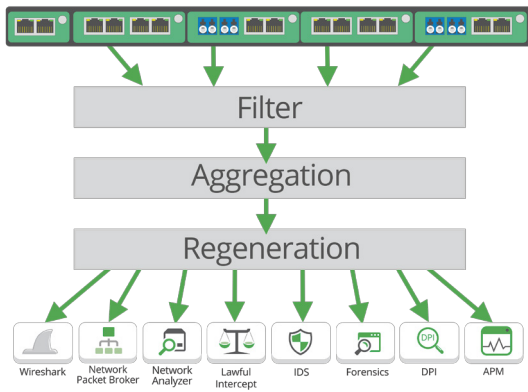
10/100M and 10/100/1000M (1G) | 1U or 2U Chassis

## 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 (Model #: Tray-BG) 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.

## Use Case



## 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

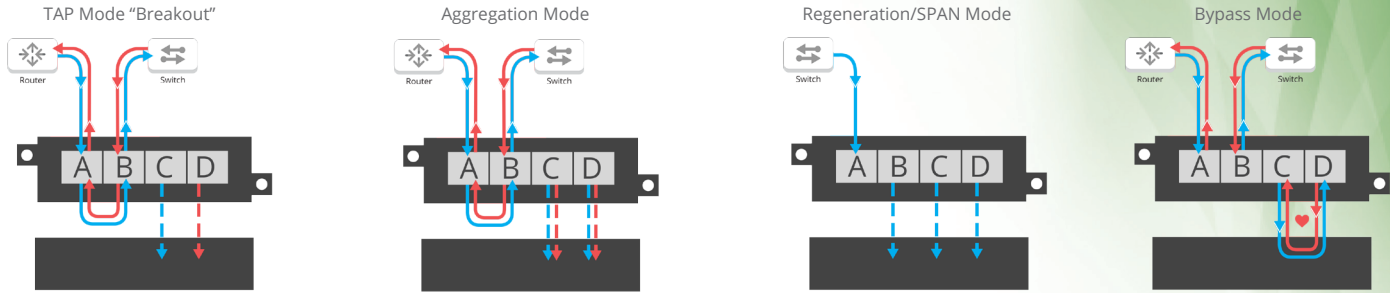


This document is for informational purposes only. The information in this document, believed by Garland Technology to be accurate as of the date of publication, is subject to change without notice. Garland Technology assumes no responsibility for any errors or omissions in this document and shall have no obligation to you as a result of having made this document available to you or based upon the information it contains. ©2017 Garland Technology LLC. All Rights Reserved

# Copper Modular Network TAP Systems

10/100M and 10/100/1000M (1G) | 1U or 2U Chassis

## Network Flow



### 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)

### Aggregation 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

### Bypass 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
M1GMCBP	1G	2 SX Multi-mode, passive LC-Fiber	2 Copper-RJ45	Yes	Yes	Yes	No	Yes	Yes	Yes
M1GMSBP	1G	2 SX Multi-mode, passive LC-Fiber	2 SFP	Yes	Yes	Yes	No	Yes	Yes	Yes
M1GSCBP	1G	2 LX Single-mode, passive LC-Fiber	2 Copper-RJ45	Yes	Yes	Yes	No	Yes	Yes	Yes
M1GSSBP	1G	2 LX Single-mode, passive LC-Fiber	2 SFP	Yes	Yes	Yes	No	Yes	Yes	Yes



This document is for informational purposes only. The information in this document, believed by Garland Technology to be accurate as of the date of publication, is subject to change without notice. Garland Technology assumes no responsibility for any errors or omissions in this document and shall have no obligation to you as a result of having made this document available to you or based upon the information it contains. ©2017 Garland Technology LLC. All Rights Reserved

# Copper Modular Network TAP Systems

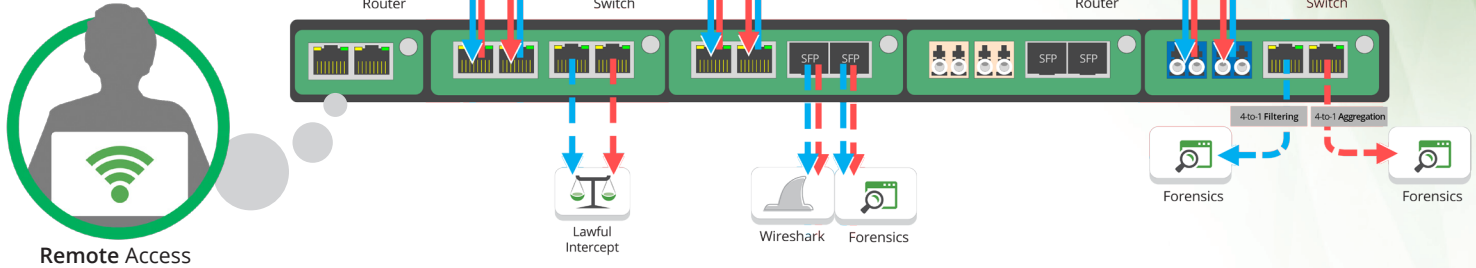
10/100M and 10/100/1000M (1G) | 1U or 2U Chassis

## Design Your Own 1U or 2U Chassis System

### Out of Band Monitoring Solution with 1U - 4 TAP Modules; supports 1Gbps

TAP 1 is in breakout mode delivering 100% packet capture for Lawful Intercept purposes, TAP 2 is aggregating network traffic to Wireshark and Forensic tools, TAP 3 is for future media conversion needs, and TAP 4 supports backplane filtering and aggregation from 4-TAP links to one Forensics tool.

Supports Media Conversion: Fiber (SX, LX, ZX) to Copper (TX), to Fiber (SX, LX, ZX) and fiber short range (SX) to long range (LX or ZX).



### Historical Lookback (before & after) Solution with Filtering, Aggregation and Bypass with 2U - 12 TAP Modules; supports 1Gbps

TAPs in columns 1, 2, 3 are deployed independently for TAP/breakout mode, aggregation and filtering with out-of-band monitoring tools. TAPs in column 4 are providing a before and after view of packets as they pass from router to forensics to active, inline security and back to forensics - before exiting through the switch.

