

G-TAP M Series



High/Low Density 1/2 RU Chassis



High/Low Density 1 RU Chassis



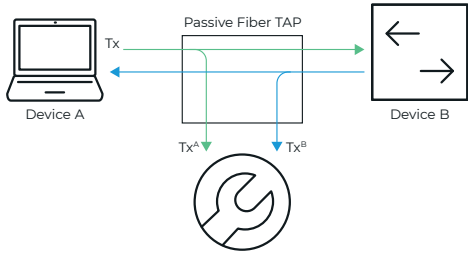
High-Density LC TAP Module



High-Density MPO TAP Module



Breakout Panel



Product Description

The G-TAP M Series is variety of passive fiber optical TAPs, for high density, lower density and unidirectional deployments, that require no power source to operate. By splitting the light optically, the G-TAP M Series enables network operators to passively monitor full duplex fiber optic links, without impacting network traffic.

With the high-density family, up to 18 full duplex links can be tapped in a ½ RU space and up to 36 full duplex links can be tapped in a 1 RU space, allowing for more visibility with less space and lower costs. There is a “LT” family for easier deployment in lower density situations. There is also a “ULT” family (see the G-TAP M Series Unidirectional TAP Family data sheet) specifically designed to provide additional no-return-path isolation to prevent signals that might be maliciously or accidentally transmitted into the monitor port of the TAP from entering or disrupting the network. Also available is a family of breakout panels for where these are needed.

The G-TAP M Series utilizes advanced thin-film technology to minimize insertion loss and maximize consistency across optics types and optical transceiver vendors when deploying within the narrow optical budgets of fiber (especially multimode) networks. High-capacity 10 gigabit networks require a tapping solution with the highest possible density and quality to detect security threats and performance issues throughout the network. No special cabling or patch cords are required, even for 40Gb and 100Gb deployments.

The G-TAP M Series is a modular platform with the choice of a ½ RU or 1 RU rack-mountable chassis that hold up to three (3) or six (6) TAP modules, respectively. Each TAP module supports up to six network links, depending on the model. A range of multimode (MM) and singlemode (SM) as well as 50/50, 60/40 and 70/30 split ratios are available. The modularity not only provides flexibility in choosing link speed, fiber type, split ratio, and density, but also facilitates continued network visibility for performance monitoring and security with future optical network technologies.

The patch panel modules convert a single 40Gb or 100Gb MPO link into four 10Gb or 25Gb LC links (and vice versa) and are a convenient, organized alternative to using breakout cables: simply connect a normal MPO-12 patch cord from the 40Gb QSFP+ or 100Gb transceiver to the patch panel.

TABLE 1: FEATURES AND BENEFITS

Features/Applications	Benefits
Full Fidelity Traffic	Because optical TAPs split the light, 100% of the traffic is replicated for monitoring purposes. Unlike SPAN ports, which may throttle output based on load, TAPs forward everything at full line rate, including errored, malformed and non-standard packets.
No Network Impact	As fully passive devices, optical TAPs do not disrupt network traffic once installed, making for a highly reliable monitoring solution.
Visibility Fabric Integration	TAPs provide the foundation of a traffic visibility platform. GigaTAPs are fully compatible with GigaVUE HC Series and GigaVUE TA Series of visibility nodes, providing full access to sophisticated traffic forwarding with Flow Mapping® and traffic intelligence with GigaSMART®.

TAP Module Types

TABLE 2A: HIGH DENSITY TAP SUMMARY















Part Number	Link Speed	Fiber Type	Wavelength	Connector ¹	Links	Split Ratio	Network Loss ²	Monitor Loss ²
TAP-M251, TAP-M251T 	1/10/25Gb SX/SR	Multimode 50µm	850nm	LC	6	50/50	3.9dB	3.9dB
TAP-M271, TAP-M271T 	1/10/25Gb SX/SR	Multimode 50µm	850nm	LC	6	70/30	2.2dB	6.2dB
TAP-M451 	40/100Gb SR4	Multimode 50µm	850nm	MPO-12	3	50/50	4.3dB ³	4.3dB ³
TAP-M471 	40/100Gb SR4	Multimode 50µm	850nm	MPO-12	3	70/30	2.8dB ³	6.4dB ³
TAP-M471-SR10 	100Gb SR10	Multimode 50µm	850nm	MPO-24	3	70/30	2.8dB ³	6.4dB ³
TAP-M253, TAP-M253T 	1/10/25/40/100G LX/LR, EX/ER, ZX/ZR	Singlemode	1310/1550nm	LC	6	50/50	3.7dB	3.7dB
TAP-M273, TAP-M273T 	1/10/25/40/100G LX/LR, EX/ER, ZX/ZR	Singlemode	1310/1550nm	LC	6	70/30	2.0dB	6.1dB
TAP-M453 	40/100Gb LR4/CWDM4	Singlemode	1270 - 1630nm	LC	6	50/50	3.7dB	3.7dB
TAP-M473 	40/100Gb LR4/CWDM4	Singlemode	1270 - 1630nm	LC	6	70/30	2.0dB	6.1dB
TAP-M453T 	40/100Gb PSM4	Singlemode	1270 - 1630nm	MPO-12	3	50/50	4.3dB	4.3dB
TAP-M473T 	40/100Gb PSM4	Singlemode	1270 - 1630nm	MPO-12	3	70/30	2.8dB	6.7dB
TAP-M506A 	40/100Gb BiDi	Multimode 50µm	840 - 910nm	LC	4	50/50	3.9dB	3.9dB

TABLE 2B: LOWER DENSITY TAP SUMMARY

Part Number	Link Speed	Fiber Type	Wavelength	Connector ¹	Links	Split Ratio	Network Loss ²	Monitor Loss ²
TAP-M251LT	1/10/25Gb SX/SR	Multimode 50µm	850nm	LC	2	50/50	3.9dB	3.9dB
TAP-M252LT	1/10Gb SX/SR	Multimode 62.5µm	850nm	LC	2	50/50	3.9dB	3.9dB
TAP-M261LT	1/10/25Gb SX/SR	Multimode 50µm	850nm	LC	2	60/40	3.2dB	5.2dB
TAP-M262LT	1/10Gb SX/SR	Multimode 62.5µm	850nm	LC	2	60/40	3.2dB	5.2dB
TAP-M271LT	1/10/25Gb SX/SR	Multimode 50µm	850nm	LC	2	70/30	2.2dB	6.2dB
TAP-M272LT	1/10Gb SX/SR	Multimode 62.5µm	850nm	LC	2	70/30	2.2dB	6.2dB
TAP-M253LT	1/10/25/40/100G LX/LR, EX/ER, ZX/ZR	Singlemode	1310/1550nm	LC	2	50/50	3.7dB	3.7dB
TAP-M263LT	1/10/25/40/100G LX/LR, EX/ER, ZX/ZR	Singlemode	1310/1550nm	LC	2	60/40	3.1dB	5.0dB
TAP-M273LT	1/10/25/40/100G LX/LR, EX/ER, ZX/ZR	Singlemode	1310/1550nm	LC	2	70/30	2.0dB	6.1dB

For information about the Unidirectional TAPs, see the G-TAP M Series Unidirectional TAP Family data sheet.

TABLE 2C: BREAKOUT PANEL SUMMARY

Part Number	Link Speed	Fiber Type	Wavelength	Connector ¹	Links	Split Ratio	Network Loss ²	Monitor Loss ²
PNL-M341T 	40/100Gb SR4 to 4x10/25Gb SR	Multimode 50µm	850nm & 1300nm	MPO-12(UPC) to LC(UPC)	3	N/A	40Gb Insertion Loss ≤0.7dB 10Gb Insertion Loss ≤0.3dB	N/A
PNL-M343T 	40/100Gb PLR4 to 4x10/25Gb LR	Singlemode	1270 - 1630nm	MPO-12(UPC) to LC(UPC)	3	N/A	40Gb Insertion Loss ≤0.75dB 10Gb Insertion Loss ≤0.3dB	N/A

¹UPC unless otherwise specified

²Includes connector loss

³Measured using MPO/MTP cabling

Specifications

TABLE 3: PHYSICAL DIMENSIONS AND WEIGHT

Part	Height	Width	Depth	Weight
½ RU TAP M100T Chassis	0.81in (2.19cm)	17.3in (44.0cm)	6.10in (15.5cm)	Empty: 3.3lbs (1.5kg) Full: 8.58lbs (3.9kg)
1 RU TAP M200 Chassis	1.72in (4.38cm)	17.3in (44.0cm)	6.10in (15.5cm)	Empty: 3.8lbs (1.7kg) Full: 14.3lbs (6.5kg)
High Density TAP Modules	0.84in (2.14cm)	5.39in (13.7cm)	8.94in (22.7cm)	1.72lbs (0.78kg) typical
Lower Density TAP Modules	0.84in (2.14cm)	5.39in (13.7cm)	8.94in (22.7cm)	1.63lbs (0.74kg) typical
Breakout Panel Modules	0.84in (2.14cm)	5.39in (13.7cm)	8.94in (22.7cm)	1.67lbs (0.76kg) typical

TABLE 4: ENVIRONMENTAL CHARACTERISTICS

Type	Specification
Storage Temperature	-4°F to 158°F (-20°C to 70°C)
Operating Temperature	32°F to 140°F (0°C to 60°C)
Storage Humidity	10% to 90%, relative, non-condensing
Operating Humidity	10% to 90%, relative, non-condensing
Altitude	Up to 15,000ft (4.6km)

TABLE 5: REGULATORY COMPLIANCE

Regulatory Compliance
The G-TAP M Series complies with ROHS 2 and CE (EU directive 2011/65/EU).
The following products also comply with ROHS (EU) 2015/863: TAP-M100T, TAP-M453T, TAP-M473T, TAP-M251LT, TAP-M252LT, TAP-M253LT, TAP-M261LT, TAP-M262LT, TAP-M263LT, TAP-M271LT, TAP-M272LT, TAP-M273LT

Ordering Information

TABLE 6A: FIBER TAP CHASSIS

Part Number	Description
TAP-M100T	G-TAP M Series ½ RU chassis. Supports up to 3 M Series Tap modules. TAA compliant.
TAP-M200	G-TAP M Series 1 RU chassis. Supports up to 6 M Series Tap modules.

TABLE 6B: HIGH DENSITY FIBER TAP MODULES

Part Number	Description
TAP-M251, TAP-M251T	G-TAP M Series 1/10/25Gb Tap module, 50/50 Multimode, LC, 850 nm, 50/125 micron fiber, taps 6 links, requires TAP-M100T or TAP-M200 chassis. TAA compliant.
TAP-M271, TAP-M271	G-TAP M Series 1/10/25Gb Tap module, 70/30 Multimode, LC, 850 nm, 50/125 micron fiber, taps 6 links, requires TAP-M100T or TAP-M200 chassis. TAA compliant.
TAP-M451	G-TAP M Series 40/100Gb Tap module, 50/50 Multimode, MPO, 850 nm, taps 3 links, requires TAP-M100T or TAP-M200 chassis.
TAP-M471	G-TAP M Series 40/100Gb Tap module, 70/30 Multimode, MPO, 850 nm, taps 3 links, requires TAP-M100T or TAP-M200 chassis.
TAP-M471-SR10	G-TAP M Series 100Gb TAP module, 70/30 Multimode, 850 nm, MPO 12-pair fiber, taps 3 SR10 links, requires TAP-M100T or TAP-M200.
TAP-M253, TAP-M253T	G-TAP M Series 1/10/25/40/100Gb Tap module, 50/50 Singlemode, LC, 1310/1550 nm, taps 6 links, requires TAP-M100T or TAP-M200 chassis. TAA compliant.
TAP-M273, TAP-M273T	G-TAP M Series 1/10/25/40/100Gb TAP module, 70/30 Singlemode, LC, 1310/1550 nm, taps 6 links, requires TAP-M100T or TAP-M200 chassis. TAA compliant.
TAP-M453	G-TAP M Series 1/10/25/40/100Gb Tap module, 50/50 Singlemode, LC, 1270 - 1630nm, taps 6 links, requires TAP-M100T or TAP-M200 chassis.
TAP-M473	G-TAP M Series 1/10/25/40/100Gb Tap Module, 70/30 Singlemode, LC, 1270 - 1630nm, taps 6 links, requires TAP-M100T or TAP-M200 chassis.
TAP-M453T	G-TAP M Series 40/100Gb Tap module, 50/50 Singlemode, MPO PSM4, 1310/1550 nm, taps 3 links, requires TAP-M100T or TAP-M200 chassis. TAA compliant.
TAP-M473T	G-TAP M Series 40/100Gb Tap Module, 70/30 Singlemode, MPO PSM4, 1310/1550 nm, taps 3 links, requires TAP-M100T or TAP-M200 chassis. TAA compliant.
TAP-M506A	G-TAP M Series 40/100Gb BiDi Tap Module, 50/50 Multimode, LC, 50/125 micron fiber, taps 4 BiDi links, requires TAP-M100T or TAP-M200 chassis.

TABLE 6C: LOWER DENSITY FIBER TAP MODULES

Part Number	Description
TAP-M251LT	G-TAP M Series 1/10/25Gb Tap module, 50/50 Multimode, LC, 850 nm, 50/125 micron fiber, taps 2 links, requires TAP-M100T or TAP-M200 chassis. TAA compliant.
TAP-M252LT	G-TAP M Series 1/10/25Gb Tap module, 50/50 Multimode, LC, 850 nm, 62.5/125 micron fiber, taps 2 links, requires TAP-M100T or TAP-M200 chassis. TAA compliant.
TAP-M261LT	G-TAP M Series 1/10/25Gb Tap module, 60/40 Multimode, LC, 850 nm, 50/125 micron fiber, taps 2 links, requires TAP-M100T or TAP-M200 chassis. TAA compliant.
TAP-M262LT	G-TAP M Series 1/10/25Gb Tap module, 60/40 Multimode, LC, 850 nm, 62.5/125 micron fiber, taps 2 links, requires TAP-M100T or TAP-M200 chassis. TAA compliant.
TAP-M271LT	G-TAP M Series 1/10/25Gb Tap module, 70/30 Multimode, LC, 850 nm, 50/125 micron fiber, taps 2 links, requires TAP-M100T or TAP-M200 chassis. TAA compliant.
TAP-M272LT	G-TAP M Series 1/10/25Gb Tap module, 70/30 Multimode, LC, 850 nm, 62.5/125 micron fiber, taps 2 links, requires TAP-M100T or TAP-M200 chassis. TAA compliant.
TAP-M253LT	G-TAP M Series 1/10/25/40/100Gb Tap module, 50/50 Singlemode, LC, 1310/1550 nm, taps 2 links, requires TAP-M100T or TAP-M200 chassis. TAA compliant.
TAP-M263LT	G-TAP M Series 1/10/25/40/100Gb Tap module, 60/40 Singlemode, LC, 1310/1550 nm, taps 2 links, requires TAP-M100T or TAP-M200 chassis. TAA compliant.
TAP-M273LT	G-TAP M Series 1/10/25/40/100Gb TAP module, 70/30 Singlemode, LC, 1310/1550 nm, taps 2 links, requires TAP-M100T or TAP-M200 chassis. TAA compliant.

For information about the Unidirectional TAPs, see the G-TAP M Series Unidirectional TAP Family data sheet.

TABLE 6D: BREAKOUT FIBER TAP MODULES

Part Number	Description
PNL-M341T	G-TAP M Series Breakout panel, 3xMPO to 12xLC duplex Multimode, requires TAP-M100T or TAP-M200 chassis. TAA compliant.
PNL-M343T	G-TAP M Series Breakout Panel, 3xMPO to 12xLC duplex Singlemode, requires TAP-M100T or TAP-M200 chassis. TAA compliant.

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