DATA SHEET

FortiTap™
Passive Network Monitoring Solutions

FortiTap

FortiTap modules and chassis

Passive Network Monitoring Solutions

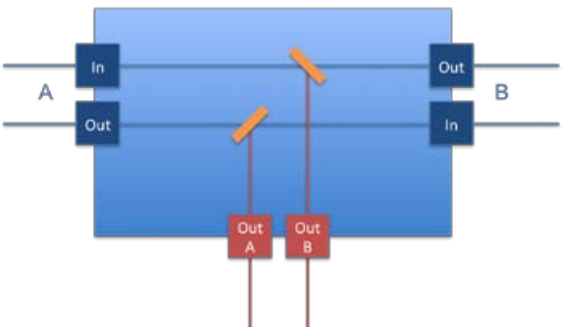
The Fortinet FortiTap family delivers total traffic visibility for network monitoring and security tools. The FortiTap family includes passive optical network tap modules, as well as a rack-mounted chassis within which to consolidate an aggregate set of modules.

FortiTap modules can be deployed on any network link up, supporting 1G/10G, 40G, and 100G link speeds. They are provided in both multimode and single mode fiber varieties, and support 50/50 or 70/30 split ratios. The modules require no power to function, and establish a passive network monitor port on a link, without introducing an active point of failure in the network. The monitoring device connected to the FortiTap module receives a true full-duplex copy of traffic on the monitored link, without the potential distortion created by the active switching components used to create SPAN ports on network devices.

The FortiTap 124A chassis aids in reducing rack space usage and the high-density design lets you install up to 24 FortiTap modules into a single 1RU chassis. FortiTap modules supporting 1G/10G speeds are single-width modules, while the 40G and 100G modules are double-width modules. Both sizes of FortiTap modules can co-exist within a single chassis.

Understanding Passive Optical Network Taps

The figure on the right represents an operational view of a FortiTap module. The module is installed onto a fiber link between two active networking devices. A pair of optical mirrors (one on each individual fiber) is used to transparently reflect a portion of the light signal to the monitoring ports for each side of the link.



FortiTap modules make use of the highest quality optical components, resulting in the best signal reliability.

Product Highlights

- 1 RU chassis supports up to 24 FortiTap modules.
- Single-width modules suppport 1G/10G links.
- Double-width modules support 40G and 100G links.
- FortiTap modules can support singlemode or multimode fiber links.
- Creates effective traffic monitoring solutions when combined with other Fortinet appliances, such as FortiGate and FortiSandbox.

HIGHLIGHTS

Thus an exact copy of the optical signal egressing the Out interface on the A side is provided to the Out-A monitoring port, and the same occurs on the Out-B monitoring port relative to the Out interface on the B side.

As part of the total ingress signal entering the In interfaces on each side is reflected to the monitoring Out ports, passive optical network taps such as FortiTap impart a signal loss between the two active networking components. This signal loss is represented by the split ratio associated with each FortiTap modules. There are two split ratios offered for FortiTap modules: 50/50 and 70/30. A FortiTap module with a 50/50 split ratio imparts a 50% signal loss between active networking components, while one with a 70/30 split ratio only imparts a 30% signal loss between active networking components. It is important to select modules with split ratios appropriate to the placement of the tap, to ensure that sufficient signal strength is available relative to:

- The distance limitations associated with the speed and fiber type the FortiTap module supports
- The distance between active networking components on the link to be intersected by the FortiTap
- The distance between each active networking component, and the network monitor device connected to the monitoring ports on the FortiTap

Using FortiTap in a Solution with Other Fortinet Security Appliances

FortiTap modules can be used to allow FortiGate and FortiSandbox security devices to monitor and inspect network traffic on a link in an one-armed or sniffer mode of operation. The traffic from the two monitoring ports of a FortiTap module can be properly integrated by combining two interfaces on a FortiGate or FortiSandbox appliance into a common logical interface. In this way, these Fortinet security appliances can properly monitor and analyze traffic on the FortiTap link, without imposing any performance impact on the network's operation.

FEATURES

- FortiTap modules make use of the highest quality optical components, resulting in the best signal reliability.
- Exceptional FortiTap modular density; support up to 24 single-width modules (1G/10G), up to 12 double-width modules (40G and 100G), or a combination of both module widths in a single 1RU FortiTap 124A chassis.
- FortiTap modules are available to support singlemode fiber links, with LC connections for 1G/10G and MTP connections for 40G and 100G.
- FortiTap modules are available to support multimode fiber links, with LC connections for 1G/10G, and MTP connections for 40G and 100G.
- Compatible with all protocols and monitoring devices, FortiTap modules pass all full-duplex traffic (including errors) from all layers.
- FortiTap family components (chassis and modules) require no power, and being fully passive they are invulnerable to remote attacks.
- FortiTap modules use color-coded connections to denote active and monitoring ports. The cable support provided on each FortiTap module is also color-coded to indicate the link-speed and fiber type supported by the module.
- Double-wide modules (40G and 100G) supporting MTP connections include a labeled Y-cable used to split the monitor port interface into separate Out-A and Out-B monitor connections.

FortiTap 10G Module

FortiTap 40G Module

FortiTap 100G Module

SPECIFICATIONS

1G/10G MODULE	FTP-15M	FTP-17M	FTP-15S	FTP-17S
Optical Specifications				
Fiber Type and Core Size	Multimode OM3; 50/125 µm	Multimode OM3; 50/125 µm	SMF-28e XB; 9/125 µm	SMF-28e XB; 9/125 µm
Operating Wavelength (nm)	850 ± 40 nm	850 ± 40 nm	1310/1550 ± 40 nm	1310/1550 ± 40 nm
Connector Type	Duplex LC	Duplex LC	Duplex LC	Duplex LC
Split Ratio (%)	50/50	70/30	50/50	70/30
Insertion Loss — Network/Monitor (dB)*	Typical 4.3/4.3, Max. 4.5/4.5	Typical 2.7/6.6, Max. 2.9/6.8	Typical 4.0/4.0, Max. 4.2/4.2	Typical 2.3/6.5, Max. 2.5/6.7
40G MODULE	**FTP-45M**	**FTP-47M**	**FTP-45S**	**FTP-47S**
Optical Specifications				
Fiber Type and Core Size	Multimode OM3; 50/125 µm	Multimode OM3; 50/125 µm	SMF-28e XB; 9/125 µm	SMF-28e XB; 9/125 µm
Operating Wavelength (nm)	850 ± 40 nm	850 ± 40 nm	1264–1338 nm	1264–1338 nm
Connector Type	MPO	MPO	Duplex LC	Duplex LC
Split Ratio (%)	50/50	70/30	50/50	70/30
Insertion Loss — Network/Monitor (dB)*	Typical 4.5/4.5, Max. 4.8/4.8	Typical 2.9/6.8, Max. 3.2/7.1	Typical 4.0/4.0, Max. 4.2/4.2	Typical 2.3/6.5, Max. 2.5/6.7
100G MODULE	**FTP-105M**	**FTP-107M**	**FTP-105S**	**FTP-107S**
Optical Specifications				
Fiber Type and Core Size	Multimode OM3; 50/125 µm	Multimode OM3; 50/125 µm	SMF-28e XB; 9/125 µm	SMF-28e XB; 9/125 µm
Operating Wavelength (nm)	850 ± 40 nm	850 ± 40 nm	1294–1311 nm	1294–1311 nm
Connector Type	MPO	MPO	Duplex LC	Duplex LC
Split Ratio (%)	50/50	70/30	50/50	70/30
Insertion Loss — Network/Monitor (dB)*	Typical 4.5/4.5, Max. 4.8/4.8	Typical 2.9/6.8, Max. 3.2/7.1	Typical 4.0/4.0, Max. 4.2/4.2	Typical 2.3/6.5, Max. 2.5/6.7

	FTP-124A CHASSIS	FTP-15M/17M/15S/17S	FTP-45M/47M/45S/47S	FTP-105M/107M/105S/107S
Dimensions				
Height x Width x Length (inches)**	1.73 x 17.24 x 7.48	1.63 x 0.61 x 6.30	1.63 x 1.30 x 6.30	1.63 x 1.30 x 6.30
Height x Width x Length (mm)**	44 x 438 x 190	42 x 16 x 160	42 x 33 x 160	42 x 33 x 160
Weight	3.53 lbs (1.6 kg)	0.33 lbs (0.15 kg)	0.51 lbs (0.23 kg)	0.55 lbs (0.25 kg)
Handle Length	—	2.48 inches (63 mm)	2.48 inches (63 mm)	2.48 inches (63 mm)
Environment				
Operating Temperature	32–122°F (0–50°C)			
Storage Temperature	-13–185°F (-25–85°C)			
Relative Humidity	5–95% non-condensing			
Certification and Compliance				
	RoHS			

*Includes connector loss
**Excludes module handle and chassis mounting ears

ORDER INFORMATION

Product	SKU	Description
FortiTap 124A Chassis	FTP-124A	1RU 19" Rack mount chassis supporting up to 24 1G/10G FortiTap modules or up to 12 40G and 100G FortiTap modules. Includes 5 spacer blank covers.
FortiTap 15S Module	FTP-15S	FortiTap 1G/10G Module, 50/50 Split, Single-mode fiber.
FortiTap 15M Module	FTP-15M	FortiTap 1G/10G Module, 50/50 Split, Multi-mode fiber.
FortiTap 17S Module	FTP-17S	FortiTap 1G/10G Module, 70/30 Split, Single-mode fiber.
FortiTap 17M Module	FTP-17M	FortiTap 1G/10G Module, 70/30 Split, Multi-mode fiber.
FortiTap 45S Module	FTP-45S	FortiTap 40G Module, 50/50 Split, Single-mode fiber. Includes one FTP-40YS cable.
FortiTap 45M Module	FTP-45M	FortiTap 40G Module, 50/50 Split, Multi-mode fiber. Includes one FTP-40YM cable.
FortiTap 47S Module	FTP-47S	FortiTap 40G Module, 70/30 Split, Single-mode fiber. Includes one FTP-40YS cable.
FortiTap 47M Module	FTP-47M	FortiTap 40G Module, 70/30 Split, Multi-mode fiber. Includes one FTP-40YM cable.
FortiTap 105S Module	FTP-105S	FortiTap 100G Module, 50/50 Split, Single-mode fiber. Includes one FTP-100YS cable.
FortiTap 105M Module	FTP-105M	FortiTap 100G Module, 50/50 Split, Multi-mode fiber. Includes one FTP-100YM cable.
FortiTap 107S Module	FTP-107S	FortiTap 100G Module, 70/30 Split, Single-mode fiber. Includes one FTP-100YS cable.
FortiTap 107M Module	FTP-107M	FortiTap 100G Module, 70/30 Split, Multi-mode fiber. Includes one FTP-100YM cable.
Y-cables		
FortiTap-40YM	FTP-40YM	FortiTap 40G Y-Cable, Multi-mode, 1 Female MPO to 2 Female MPO Connectors, Break-out length: 0.3 meters, Total length: 3 meters.
FortiTap-100YM	FTP-100YM	FortiTap 100G Y-Cable, Multi-mode, 1 Female MPO to 2 Female MPO Connectors, Break-out length: 0.3 meters, Total length: 3 meters.

GLOBAL HEADQUARTERS
Fortinet Inc.
899 Kifer Road
Sunnyvale, CA 94086
United States
Tel: +1.408.235.7700
www.fortinet.com/sales

EMEA SALES OFFICE
120 rue Albert Caquot
06560, Sophia Antipolis,
France
Tel: +33.4.8987.0510

APAC SALES OFFICE
300 Beach Road 20-01
The Concourse
Singapore 199555
Tel: +65.6513.3730

LATIN AMERICA SALES OFFICE
Prol. Paseo de la Reforma 115 Int. 702
Col. Lomas de Santa Fe,
C.P. 01219
Del. Alvaro Obregón
México D.F.
Tel: 011-52-(55) 5524-8480