

OTAU-9150 remote optical switch

REMOTE 1XN MEMS-TYPE OPTICAL SWITCH UNIT

- Compact and high port-density local or remote optical switch for OTDR-based remote fiber test and monitoring applications.



KEY FEATURES

- Reliable 1 X N MEMs remote optical switch
- Available in 4, 16, 32, 64, 96 and 144 ports
- Small footprint and high port density, up to 144 ports in ½ U
- Optical transceiver module SFP communication port
- Lifetime of over 2.5 billion cycles
- Very low power consumption

APPLICATIONS

- PON/FTTx for remote OLT (R-OLT) testing and monitoring surveillance
- Mobile fronthaul applications
- Live monitoring application using an OTAU-9150 with integrated filters
- Telecommunication equipment in cabinets (EN 300 019 - Environmental condition Class 3.3)

RELATED PRODUCTS



OTDR-based remote test unit
RTU-2



OTDR-based remote test unit
OTH-7000



Test access module (TAM) kit

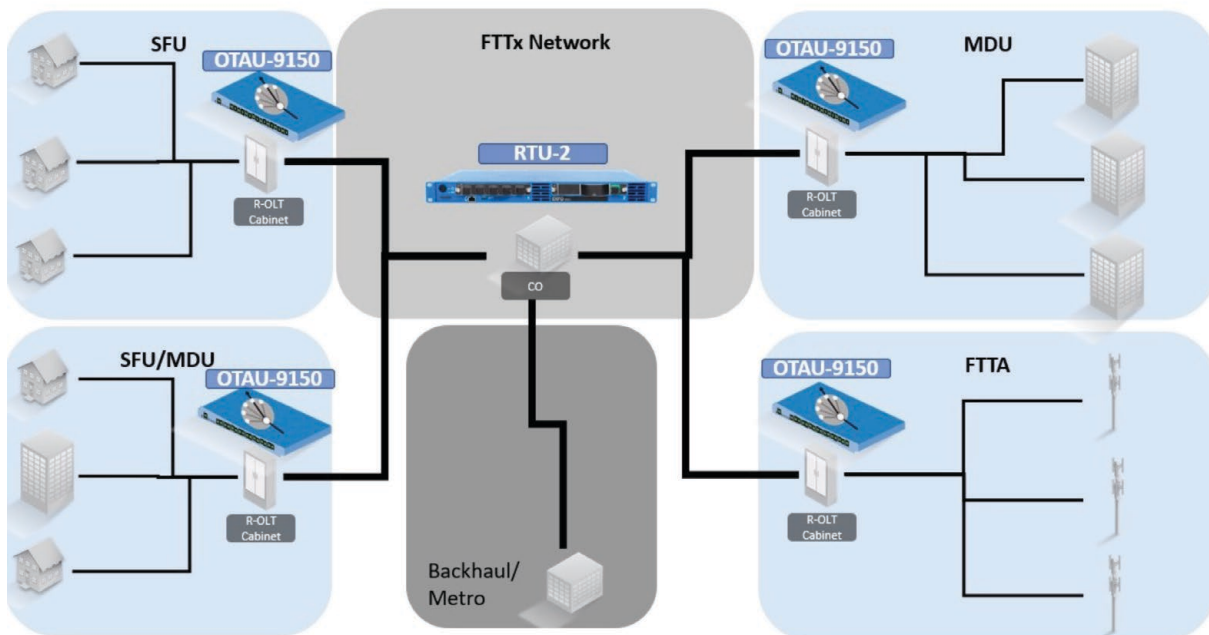
GENERAL NETWORK APPLICATION

Broaden the reach of the OTDR test head by using the OTAU-9150 switch either locally or in any remote locations within the network. It improves alarm workflow and reduces mean time to repair (MTTR) in core, metro, access and/or FTTx/PON networks within the EXFO FMS solution. The OTAU features low insertion loss for such a high port count. Also, an OTAU model is equipped with an internal WDM which monitors live fiber networks while reducing the insertion loss on networks where the dB budgetary loss is critical.

REMOTE SWITCH FOR REMOTE-OLT PONs

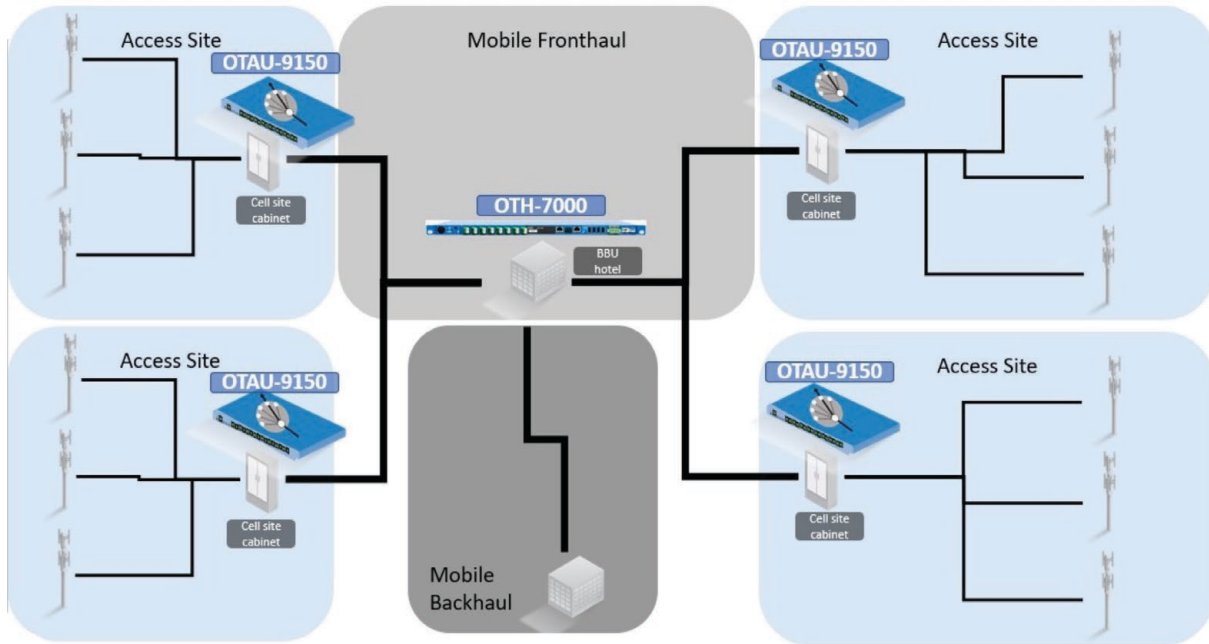
The OTAU-9150 remote optical test access unit is made for street cabinets. It has a small footprint (up to 144 ports in a 1/2 U rackmount space). It is compact enough to fit in any remote cabinet with all the connectivity on the front panel (e.g., connectors, power supply, communication port).

Adding the OTAU remote switch in the R-OLT PON monitoring architecture reduces fiber build and fiber monitoring costs by widening the reach of the OTDR test heads when using multiple remote switches in R-OLT cabinets.



MOBILE NETWORKS APPLICATION

Multiple fronthaul links can be monitored by the OTDR test head from a centralized location (BBU or mobile backhaul). The OTAU-9150 switch can have up to 144 ports and is stackable to support applications ranging from small cells to large BBU deployments. Given the increased number of RRHs within a network, the distances over which they may be spread from the BBU and the fact that each technician takes responsibility for increasing numbers of RRHs, it is more critical than ever to maintain full visibility of the fronthaul network from a centralized location.



SPECIFICATIONS



- 1 Power button
- 2 Power LED
- 3 System status LED
- 4 Optical input port
- 5 Optical output ports (4, 16, 32, 64, 96, 144)
- 6 Ethernet ports
- 7 SFP port (SFP not included)
- 8 USB 2.0 port
- 9 -48VDC dual feed input
- 10 Ground hug
- 11 Removable rackmount brackets

OPTICAL SPECIFICATIONS

Parameter	Minimum	Typical	Maximum
Crosstalk (dB) ^a		-50	
Back reflection (dB) ^a		-45	
Switching time (ms) ^b		300	
Durability (cycles)		2.5 billion	
Fiber type	9/125 μm singlemode fiber		
Model without internal WDM			
Insertion loss at 1550 and 1650 nm (dB) ^c	1		
Connector type	Input	LC-APC	
	Output	LC-APC	
	4 and 16 port model	MPO-APC (16 fibers populated onto a standard MPO 24-fiber ferrule)	
	32 and 64 port model	MPO-APC (24 fibers populated onto a standard MPO 24-fiber ferrule)	
	96 and 144 port model		
Model with internal WDM			
Insertion loss ^d – at 1550 nm – Line to COM (dB)	1		
Insertion loss ^d – at 1650 nm – C to COM (dB)	2		
Pass Band (nm)	1260		1614
Reflect Band (nm)	1619		1670
Connector type	Input (OTDR)	LC-APC	
	Input (Line)	MPO-APC (16 fibers populated onto a standard MPO 24-fiber ferrule)	
	Output (COM) - 32 port model	MPO-APC (16 fibers populated onto a standard MPO 24-fiber ferrule)	

ELECTRICAL SPECIFICATIONS

Latching type	Non-latching
Dual feed power supply	-48VDC 2A (ordering option: external AC-DC adapter for AC operation)
Operating power consumption	~1 W






a. Measured at 1650 nm.

b. Excluding network latency.

c. Measured at 23 °C ± 5 °C, not including input and output connectors for LC/APC models. For MPO models, 1.5 dB (typical).

d. Measured at 23 °C ± 5 °C, not including input and output of MPO connectors.

GENERAL SPECIFICATIONS	
Chassis size	½ U, rackmount chassis (19")
Size (H x W x D)	22 mm (½ U) x 440 mm x 220 mm (7/8 in x 17 5/16 in x 8 11/16)
Weight	1.4 kg (3.1 lb)
Temperature	Operating ^a –10 °C to 55 °C (14 °F to 131 °F) Storage ^b –40 °C to 70 °C (–40 °F to 158 °F)
Optical connector location	Front panel
Wired network interfaces	2x 10/100/1000 Base-T Ethernet IP-V4 and V6 (network and management interfaces) 1x SFP (network interface)
Accessories included	• Instruction manual (hard copy) • ½ U rackmount brackets (19" or ETSI) (kit of 2)

REGULATORY	
Certification marks	    
EMC/EMI	ETSI/EN 300 386
Electrical safety	IEC/EN 61010-1, USA/UL 61010-1, CSA/UL 61010-1
NEBS	GR-1089, GR-63, Verizon VZ.NEBS.TE.NPI.2004.015, Verizon VZ.TPR.9305, ATIS-0600319.2014 section 10.1
ETSI	IEC 300019, IEC 60068, IEC 300753, IEC 300386 EN 300 019 (Environmental condition Class 3.3 for telecommunication equipment in cabinets for temperatures up to 55 °C)

a. With less than 80% relative humidity, non-condensing.

b. With less than 95% relative humidity, non-condensing.

ORDERING INFORMATION

OTAU-9150-XX-XX-XX

Port count

- 1-04-B-104 = 4 ports - LC/APC connector
- 1-16-B-104 = 16 ports - LC/APC connector
- 1-32-B-MPO16 = 32 ports - MPO connector
- 1-32 B-WDM-MPO16 = 32 ports - MPO connector, with internal WDMs
- 1-64-B-MPO16 = 64 ports - MPO connector
- 1-96-B-MPO24 = 96 ports - MPO connector
- 1-144-B-MPO24 = 144 ports - MPO connector

Rackmount option

- RK19-HALFU = ½ U rackmount kit (19-inch rack)
- RKET-HALFU = ½ U rackmount kit (ETSI)

Power

- AC = External 100-240 VAC converter with power cord
- DC = Internal DC 48V power supply

Example: OTAU-9150-1-32-B-MPO16-DC-RK19-HALFU

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