4CH WDM ComboMux-GXVO

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Variants

XGS-PON RF Video And OTDR

Details

4CH WDM GPON XGS-PON RF Video And OTDR Plug-in LGX Box 215*150*20MM

FW-2G-LGX02-GXVO

In the era of digital transformation, the demand for high-speed, reliable, and flexible communication networks has never been higher. Passive Optical Networks (PON) have become a cornerstone of modern communication infrastructure, supporting a wide range of applications from home broadband to enterprise networks and beyond. To meet the growing bandwidth needs and ensure future-proof network deployments, the integration of 4CH WDM (Five-Channel Wavelength Division Multiplexing) with GPON, XGS-PON, RF Video, and OTDR technologies offers a comprehensive solution that maximizes fiber utilization and enhances service delivery capabilities.

GPON (Gigabit-Capable Passive Optical Network)

Features: GPON supports downstream rates of up to 2.5Gbps and upstream rates of up to 1.25Gbps, with split ratios ranging from 1:16 to 1:128. It uses WDM technology to simultaneously transmit video, data, and voice over the same fiber.

Application Scenarios: Ideal for home broadband access, GPON is widely deployed in residential areas to provide reliable internet services. It is also used in enterprise networks and smart city applications, offering a cost-effective solution for high-speed data transmission.

XGS-PON (10G Symmetric PON)

Features: XGS-PON supports symmetrical 10Gbps uplink and downlink rates, with split ratios ranging from 1:16 to 1:256. It uses Time and Wavelength Division Multiplexing (TWDM) technology to coexist with GPON on the same fiber.

Application Scenarios: XGS-PON is designed for applications requiring high-bandwidth symmetrical transmission, such as enterprise networks, data center interconnection, and 5G fronthaul. It is particularly useful in scenarios where both high-speed data and low-latency services are critical.

RF Video

Features: RF Video technology allows the transmission of analog video signals over fiber, enabling the delivery of high-quality video content. It is often used in conjunction with PON technologies to provide integrated video services.

Application Scenarios: RF Video is commonly used in cable TV networks, video-on-demand services, and other applications where high-quality video delivery is essential. It can be seamlessly integrated with PON networks to offer a comprehensive solution for both data and video services.

OTDR (Optical Time Domain Reflectometer)

Features: OTDR is a tool used for fiber optic network fault diagnosis and maintenance, capable of detecting breaks, losses, and reflection points in the fiber.

Application Scenarios: It is widely used in the installation, maintenance, and troubleshooting of fiber optic networks, ensuring the reliability and performance of the network.

Advantages

- Bandwidth Increase: By adding wavelength channels, the transmission bandwidth of the fiber is significantly increased.
- Cost-Effective: It increases network capacity without adding extra fibers, reducing deployment costs.
- Flexibility: It supports the coexistence of multiple PON technologies, such as GPON, XGS-PON, , RF Video, OTDR

Specifications

Parameter		Specification	Unit
Bandpass	GPON	1290-1330/1480-1550	nm

XGS-PON	1260-1280/1575-1580	nm	
RF-Video	1540-1560	nm	
OTDR	1625-1675	nm	
Insertion Loss	COM - GPON	<0.9	dB
	COM - XGS-PON	<1.1	dB
	COM - RF Video	<1.3	dB
	COM - OTDR	<1.5	dB
Wavelength Isolations	COM - GPON	>30	dB
	COM - XGS-PON	>30	dB
	COM - RF Video	>30	dB
	COM - OTDR	>30	dB
Unifomit		<0.8	dB
Return Loss		>55	dB
Directivity		>55	dB
PDL (Polarizarion Dependant Loss)		<0.3	dB
(Polarization Mode Dispersion)		<0.2	PS
Optical Power Handing		<300	mW
Operating Temperature		-40 to +85	?
Operating Relative Humidity		5 to 90	% RH

Storage Temperature	-40 to +85	?
Operating Relative Humidity	5 to 90	% RH
Net Weight	LGX Box: 0.5KG 2slot 1U Rack: 2.5KG	KG
Dimensions	LGX Box: 215*150*20mm 1U Rack : 440*160*44mm	mm

Insertion Loss includes WDL, TDL and PDL WITH two sets of mated connectors at both ends.