



Wi-Fi 6

XGS-PON Fiber Gateway

10G CPE Solution

Description

Targeted to PON FTTH deployment scenarios, this compact multi-play XGS-PON Fiber Gateway equipment family features High-Speed Internet (HSI), VoIP, and TV (IPTV and RF Overlay) services, being the right choice for Operators and Service Providers that want to deliver multiple and advanced services to residential customers and SMEs.

The architecture of these devices is based on the ITU G.9807.1 recommendation and supports full in-house multi-play services enabling Data, Voice, and Video services through Ethernet, Wi-Fi, FXS, USB, and RF Overlay standard interfaces. Built-in RJ-45 10/100/1000Base-T ports allow connecting devices via cable. A LAN GE/10GE Base-X/T port (model dependent) enables ultrafast Wi-Fi access connection for Internet applications such as video, email, web surfing, file upload/download, and online gaming. One RJ-11 FXS port connects voice or fax devices featuring the SIP protocol. A valuable set of built-in LEDs provides fast and pertinent information to the user or the installer. This ultimate, low-consumption device provides built-in routing features that avoid needing an external third-party gateway.

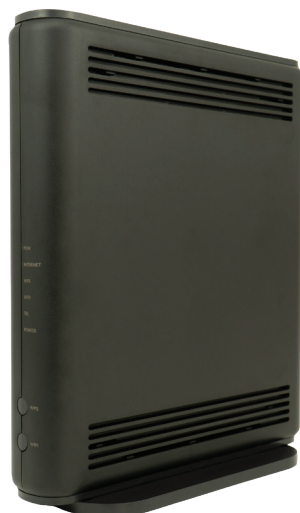
This equipment includes a high-performance Wi-Fi technology that supports dual-band concurrent operation, complying with 802.11a/b/g/n/ac standards, operating simultaneously on the 2.4GHz and 5GHz frequency bands. Advanced MU-MIMO and Dynamic Frequency Selection (DFS) techniques allow an increase

in the air interface throughput and range by mitigating multi-user interference and the utilization of frequency bands allocated to weather radars.

These FGWs are fully interoperable with 3rd party OLTs. The devices can be remotely managed and configured, allowing operators to optimize OPEX and scale-up deployments by featuring auto-provisioning mechanisms (e.g., TR-069, OMCI, and DHCP).

Business Benefits

- Compact, high-speed, and low-power consumption devices for residential customers and SMEs;
- Multi-play services, including Data, High-Speed Internet (HSI), VoIP, and TV (IPTV and RF Overlay);
- Evolution of the broadband access paradigm up to 10Gbps/10Gbps (downstream/upstream) data rates;
- Powerful and enhanced WLAN interface based on MU-MIMO OFDMA 4x4 dual concurrent Wi-Fi antennas complying with 802.11a/b/g/n/ac/ax standards over 2.4GHz and 5GHz wireless frequency bands;
- Mass remote management through OMCI (G.988) and TR-069 standards, thus offering full remote control without user intervention.



XSR150DX

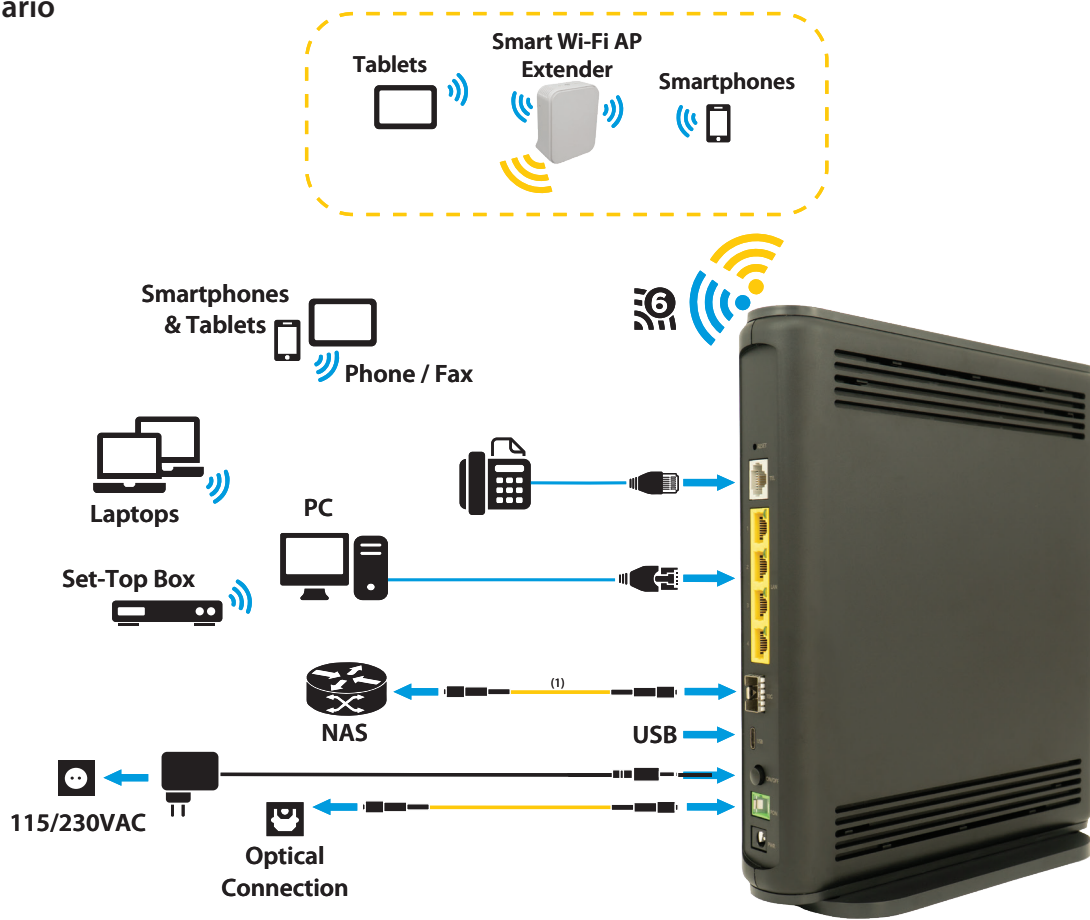


XSR151DK

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XGS-PON Fiber Gateway

Scenario



Interfaces			Models	
			XSR150DX	XSR151DK
PON	Type	XGS-PON		
	Class	N1, N2, E1, DD20		
	Tx/Rx Type		Fixed	
	Wavelength (nm)	DS	1575 - 1580	
		UP	1260 - 1280	
	Bitrate (Gbps)	DS	9.95328	
		UP	9.95328	
FXS Ports			1x	
LAN Ports	10/100/1000Base-T		4x	
	1 / 2.5 / 5 / 10G	Base-X (SFP/SFP+)	1x	-
		Base-T (RJ45)	-	1x
RF Overlay (CATV)	47MHz - 870MHz	F Connector; 75 Ω (nominal)	-	1x
Wi-Fi 6	2.4GHz 802.11 b/g/n/ax	MIMO 4x4	√	
		Power* (EIRP)	up to +20dBm (ETSI) or up to +34dBm (FCC)	
	5GHz 802.11 a/n/ac/ax	MIMO 4x4	√	
		Power* (EIRP)	up to +30dBm (ETSI) or up to +34dBm (FCC)	
USB			1x	

*Wi-Fi power upper limit value depends on the country

Specifications

WAN Uplink Interfaces	ITU.T G.9807.1 (XGS-PON) and G.988 compliant.					
10G PON layer	ITU-T G.987.x (XG-PON); ITU-T G.9807.1 (XGS-PON); ITU-T G.988; Configurable AES (Downstream) and FEC (Downstream and Upstream); Bitrates: Downstream - 9.95328 Gbps, / Upstream - 2.48832 Gbit/s(XG-PON) 9.95328 Gbps (XGS-PON); Optics Classes(XG-PON XGS-PON): E1, N2, N2a N1, N2, E1, DD20.					
L2/L3 layer	VLAN-ID to GEM port-ID mapping (per TR-156i3): - 1:1, N:1 VLAN; - Transparent VLAN; Classification: DSCP/TOS, 802.1p TCI, VLAN-ID, MAC address; Traffic Management: up to 8 queues per T-CONT in priority-controlled mode or up to 16 queues per T-CONT in rate-controlled scheduling mode; 802.1q VLAN processing: Q-in-Q, tagging, removing tag, replacing tag or transparent forwarding; IPv4; IPv6; Routing: Network Access Translation (NAT) and Network Access Port Translation (NAPT); Firewall; VPN; DHCP Client and Server; PPPoE Client; Quality of Service (QoS) prioritization using 802.1p.					
IPTV	IGMP v2/v3, and MLD (IPv6) snooping and proxy; IGMP processing per VLAN ID to support group of channels; Interactive services (Video On Demand); IPTV streams forwarding simultaneous :128.					
VoIP	Call control: SIPv1/v2; T.38 Fax relay; Fax/Data bypass; Echo canceller; Echo canceller length; Jitter buffer; Caller ID generation; G.711 PCMU; G.711 PCMA; G.723.1; G.726; G.729; VAD and CNG; Caller ID and call waiting; RTP/RTCP packet encapsulation; RFC 2833 Support; In-band signaling detection and generation (DTMF, call progress tones); Automatic Tone generation (dial, busy, ring back, stutter, distinctive ring); 3-Way conferencing.					
Services	Content sharing: - UPnP Media Server; - DLNA DMS; - Metadata Support; OSGI (Open Service Gateway Interface).					
Wi-Fi 6	Functionalities: - 802.11ax compliance; - 802.1x authentication; External RADIUS authentication; - WPA/WPA2; 64/128 Bits WEP; - AES and TKIP Encryption; - Wi-Fi multimedia support: WMM and WMM-PS; - Multiple SSIDs profiles; - MAC address filtering integrated; - WPS (Pushbutton and PIN entry); - Hotspot 2.0; - Band steering. Interfaces: - Concurrent Mode 2.4GHz + 5GHz via internal antennas <table><tr><td>- 2.4GHz: Compliant with IEEE 802.11b/g/n/ax with 4x4 MIMO</td><td>up to +20dBm EIRP (ETSI) or up to 34dBm EIRP (FCC)</td></tr><tr><td>- 5GHz: Compliant with IEEE 802.11a/n/ac/ax and with 4x4 MIMO</td><td>up to +30dBm EIRP (ETSI) or up to 34dBm EIRP (FCC)</td></tr></table> - Channel Bandwidth: 20, 40, 80, 80+80, 160 - Support of zero wait Dynamic Frequency Selection (DFS): 4x4 with weather radar detection - Multi-User MIMO for better performance per user Data rates: 802.11a : 6, 9, 12, 18, 24, 36, 48, 54 Mbps 802.11b : 1, 2, 5.5, 11 Mbps 802.11g : 6, 9, 12, 18, 24, 36, 48, 54 Mbps 802.11n : up to 600 Mbps 802.11ac : up to 3400 Mbps 802.11ax (2.4 GHz): up to 1200 Mbps 802.11ax (5 GHz): up to 4800 Mbps		- 2.4GHz: Compliant with IEEE 802.11b/g/n/ax with 4x4 MIMO	up to +20dBm EIRP (ETSI) or up to 34dBm EIRP (FCC)	- 5GHz: Compliant with IEEE 802.11a/n/ac/ax and with 4x4 MIMO	up to +30dBm EIRP (ETSI) or up to 34dBm EIRP (FCC)
- 2.4GHz: Compliant with IEEE 802.11b/g/n/ax with 4x4 MIMO	up to +20dBm EIRP (ETSI) or up to 34dBm EIRP (FCC)					
- 5GHz: Compliant with IEEE 802.11a/n/ac/ax and with 4x4 MIMO	up to +30dBm EIRP (ETSI) or up to 34dBm EIRP (FCC)					

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RF Overlay	1 port on an F Type Connector; 75 ohms impedance (nominal); Optical wavelength: 1550nm; Optical power: -8dBm < Pin < +2dBm; Analog bandwidth: minimum 47 MHz and maximum 870MHz (maximum can be extended up to 1002MHz on different variants).
POTS	RJ-11/RJ-45 FXS port
USB	USB 3.1
Management	Web-based with GUI; Remote management through OMCI, PLOAM, OAM and Connected Home: TR-069/098/104/111/140/142/143/181 Secure software download upgrade via OMCI or TR-069; Embedded Telnet server for remote management; SNMP V3; Zero-touch configuration; CLI.
LAN Ethernet interfaces	RJ-45 GE/2.5GE Base-T; RJ-45 GE/2.5GE/10GE Base-T or SFP/SFP+ GE/2.5GE/10GE Base-X/T (model dependent); Auto-negotiation support; Auto MDI/MDIX support.
Energy Efficiency	CoCV8
Environment	Temperature Range: +5°C to +40°C Relative Humidity: 5% to 95%
EMC	ETSI EN 301489-1 and EN 301489-17
Safety	IEC/EN 60950-1/62368-1
Radio	ETSI EN 300328 and EN 301893
Equipment Size (HxWxD)	245.8 x 44.8 (80.6 including base) x 210.0mm / 9.7 x 1.8 (3.2 including base) x 8.3"
Net Weight	800g / 1.76lb
Power Supply ⁽¹⁾	Primary: 230VAC, 50Hz or 115VAC, 60Hz; Secondary: 12VDC/4A ± 15%

(1) An LPS power source is used to power the ONT equipment:

- The ONT must be powered by an External CB approved Limited Power Source (LPS).

