XSR240LKR

Fiber Gateway Wi-Fi 7

XGS-PON CPE Solution

Description

Targeted to PON FTTH deployment scenarios, this compact multi-play Fiber Gateway (FGW) features High-Speed Internet, VoIP, and IPTV 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 this device 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, and USB standard interfaces. Four built-in RJ-45 10/100/1000Base-T ports and one built-in RJ-45 1/2.5/5/10GBase-T LAN port connect devices via cable, complementing ultra-fast Wi-Fi access for Internet applications such as video, email, web surfing, file upload/download, and online gaming. Two RJ-11 FXS ports connect 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 and low-consumption device also delivers embedded IoT interfacing complying with Thread, Bluetooth, Zigbee and Matter interfaces.

This device includes a high-performance Wi-Fi technology that supports tri-band concurrent operation, complying with 802.11a/b/g/n/ac/ax/be standards, operating simultaneously on the 2.4GHz, 5GHz, and 6GHz 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.

This FGW is fully interoperable with 3rd party OLTs. The device 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

- 10G PON capability;
- Compact, high-speed, and low-power consumption device for residential customers and SMEs;
- Multi-play services including Data, High-Speed Internet, VoIP and IPTV;
- Powerful tri-band concurrent WLAN interface, Wi-Fi 7 compliant;
- Explores the IoT business opportunities by exposing Bluetooth, Thread, Zigbee and Matter standardized interfaces;
- EasyMesh™ Wi-Fi compliance;
- Home Network Security (HNS);
- Mass remote management through OMCI (G.988), TR-069 and Matter standards, thus offering full remote control without user intervention.

BBF.247 XGS-PON CERTIFIED

BBF.398 GRADE Wi-Fi

VoIP

10GE

IPTV

RDK REFERENCE DESIGN KIT

Wi Fi 7

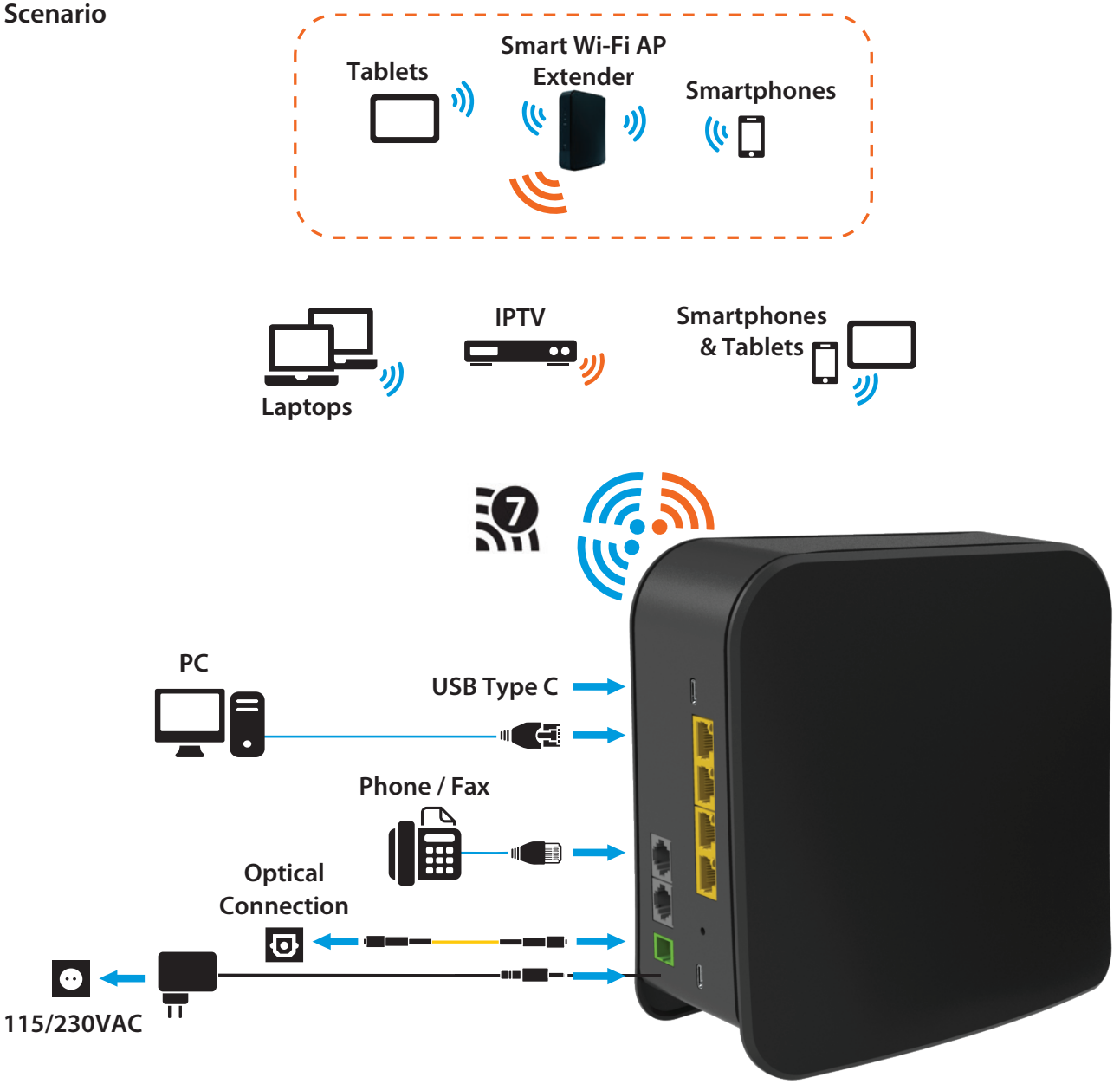
Bluetooth Low Energy

zigbee

THREAD

matter

Scenario



Interfaces

Wi-Fi 2.4GHz 802.11b/g/n/ax/be	2.4GHz @ 3x3
Wi-Fi 5GHz 802.11a/n/ac/ax/be	5GHz @ 4x4
Wi-Fi 6GHz 802.11ax/be	6GHz @ 4x4
Thread	Open source mesh network IP-based protocol
Matter	Open source IP-based connectivity standard
Bluetooth Low Energy	Point-to-point, broadcast and mesh topologies
Zigbee	IoT
USB Type C	1
FXS Ports	2
ETH Ports	2x10/100/1000Base-T 2x10GBase-T

Specifications

WAN Uplink Interfaces	ITU.T G.9807.1 (XGS-PON) and G.988 compliant.
XGS-PON layer per G.9807.x	Compliant with standards: ITU-T G.9807.1 (XGS-PON) / ITU-T G.988 (OMCI); Configurable AES (Downstream); In the downstream direction, FEC is statically configurable as ON for all ONUs; in the upstream direction, the use of FEC is under dynamic control by the OLT; Bitrates: 9.95328 Gbps (Downstream) / 9.95328 Gbps (Upstream); Optics Classes: 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); Internet of Thing (IoT); Home Network Security (HNS).
Wi-Fi 7	Functionalities: - 802.11be compliance; - 802.1x authentication; External RADIUS authentication; - WPA/WPA2/WPA3; - AES and TKIP Encryption; - Wi-Fi multimedia support: WMM and WMM-PS; - Multi Link Operation (MLO); - Additional 320MHz channels at 6GHz band; - Additional 4096QAM modulation; - Multiple SSIDs profiles; - MAC address filtering integrated; - WPS (Pushbutton and PIN entry); - Hotspot 2.0; - Band steering; - Smart Mesh Wi-Fi. Interfaces: - Concurrent Mode 2.4GHz + 5GHz + 6GHz via internal antennas - 2.4GHz: Compliant with IEEE 802.11b/g/n/ax/be with 3x3 MIMO — up to +20dBm EIRP(ETSI) or up to +34dBm EIRP (FCC) - 5GHz: Compliant with IEEE 802.11a/n/ac/ax/be and with 4x4 MIMO — up to +30dBm EIRP (ETSI) or up to +34dBm EIRP (FCC) - 6GHz: Compliant with IEEE 802.11ax/be and with 4x4 MIMO — EIRP[(1)]@6GHz: uup to +23dBm EIRP (ETSI) or up to +27dBm EIRP (FCC) [(1)] Wi-Fi power upper limit value depends on the country - Channel Bandwidth: 20, 40, 80, 80+80, 160, 320 - 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 900 Mbps 802.11ax (5 GHz): up to 4800 Mbps 802.11ax (6 GHz): up to 4800 Mbps 802.11be (2.4 GHz): up to 1375 Mbps 802.11be (5 GHz): up to 5760 Mbps 802.11be (6 GHz): up to 11500 Mbps

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EasyMesh™	Compliant with Wi-Fi Alliance® multiple AP specification.
POTS	RJ-11 FXS port
USB	USB Type C
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 10/100/1000Base-T; Auto-negotiation support; Auto MDI/MDIX support; RJ-45 1/2.5/5/10GBase-T; Auto-negotiation support; Auto MDI/MDIX support.
Energy Efficiency	EU CoC V8, EN 50563, EN 50564, EN 50581
Environment	Temperature Range: +5ºC to +40ºC 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)	184 x 94 x 184mm / 7.3 x 3.7 x 7.3"
Net Weight	1081g / 2.4lb
Power Supply (1)	Primary: 230VAC, 50Hz or 115VAC, 60Hz; Secondary: 12VDC/3.5A ± 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).

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