

- **1x GPON interface - open interoperability with OLTs**
- **Dual-band Wi-Fi 6 with external antennas**
- **4x Ethernet RJ45 interfaces**
- **1x VOIP RJ11 interface**
- **1x USB 3.0 interface**
- **1x CATV, C/N ≥ 43 dB, C/CTB ≥ 55 dB, C/CSO ≥ 55 dB, MER ≥ 32 dB, BER $\leq 1 \times 10^{-6}$ (Mira GH3141x only)**
- **Low voltage (12 V) power connector**



Overview

Technetix' Mira GH31x1x GPON ONU is the ideal Home Gateway Unit (HGU) with Wi-Fi®6 for delivering multiple services via gigabit fiber to residential and small business customers. The GPON HGU can be easily deployed and configured via the intuitive GUI. With Wi-Fi 6 supporting 2.4G and 5G wireless connectivity and external antennas for improved in building Wi-Fi coverage, the Mira GH31x1x GPON ONU provides users with standard Wi-Fi configuration options, as well as routing, VOIP, gigabit Ethernet, and clientside CATV (Mira GH3141x only) interface functions.

Product function

Parameter	Mira GH31x1x	Units	Notes
GPON	ITU-T G.984.1-4		
	ITU-T G.988/TR255/TR156		
	15 TCONTs/256GEM ports		
	8 Egress queues per TCONT at least		
	VLAN/priority/VEIP gem mapping mode		
	SN/LOID/SN+password authentication		
	Performance monitoring: eth/Gem port		
	Dying gasp		
Layer 3 features	PPPoE/Static IP/DHCP NAT/NAPT		
	Port forwarding ALG, UPnP, DDNS		
	IPv4/IPv6 dual-stack, DS-Lite static, and default routes		
	Multiple services on one WAN port		
	RIPv2 with passive mode		
Layer 2 features	MAC learning (SVL)/aging		
	Support max. frame length to 1518 bytes		
	VLAN tagging for untagged packets		
	Support VLAN 1-4094		
	VLAN transparent/translation		
QoS	Support 8 queues with strict priority		
	Ethernet port rate limitation		
	802.1 priority		
	SP/WRP (Mira GH3121x only)		
	Service flow classification		
Multicast	IGMP v2 (RFC 2236) and IGMP v3 (RFC 3376)		
	IGMP snooping and IGMP proxy		
	MLD v1/v2		
Management	OMCI/WEB UI/TR069		
	Telnet/SSH management with CLI commands		
	Dual-system software backup and rollback		

GPON ONU Wi-Fi 6 device and performance specifications

Hardware

Parameter	Mira GH31x1x	Units	Notes
Flash	256 MB NAND		
Memory	512 MB DDR4		
LED	POWER + PON/LOS + Internet + LAN + VOIP + Wi-Fi + WPS + USB + CATV (Mira GH3141x only)		
Port	4x RJ45 (GE)		
	1x RJ11 (VOIP)		
	1x Reset button + 1x LED button + 1x Wi-Fi button + 1x WPS button		
	1x SC/UPC (or SC/APC)		
	1x Power		
	1x USB 3.0		
	1x CATV (Mira GH3141x only)		
Dimensions (H x W x D)	1.3"H*7.5"W*5.3"D (3.3H*19.0W*13.5D cm)	in/cm	
Power consumption	Maximum	12	W
	Standby mode	6	W
	Active mode	6	W

Interface

Parameter	Mira GH31x1x	Units	Notes
Ethernet port	Ethernet port-based VLAN tags and tag removal		
	VLAN transparent and mark		
	MAC address learning 10/100/1000 Mbps		
	Auto negotiation		
VoIP port	Call waiting, in-conditional call forward call forward if busy, call forward if no reply and three-party calls		
	G711A/G711U/G729/G722		
	SDP protocol (RFC 2327 and RFC 4566)		
	T.30/T.38/G.711 fax mode		
USB	DTMF		
	USB 3.0		

Wi-Fi 6 (AX3000)

Parameter	Mira GH31x1x	Units	Notes
Wi-Fi protocol	2.4 GHz supports 802.11b/g/n/ax		
	5 GHz supports 802.11a/n/ac/ax		
Transmit power	2.4G 100 mW, 5G/200 mW		
Antenna gain	5	dBi	
Antenna	Dual-antenna MIMO (2x2) (2.4G and 5G)		

Wi-Fi 6 (AX3000)

Parameter	Mira GH31x1x	Units	Notes
WLAN penetrate	One reinforced concrete wall or two ordinary brick walls (non-reinforced concrete)		
WLAN access capability	64/SSID		
Channel	2.4 GHz (channel 1-13)	GHz	
	5 GHz (channel 36-161)	GHz	
WPS	WLAN terminal devices with WPS pushbutton function establish connection within 2 minutes		
WLAN security function	WPA-PSK, WPA2-PSK, WPA3, WPA-PSK/WPA2-PSK AES, AES+TKIP		
Air speed	574 Mbps (2.4 GHz), 2402 Mbps (5 GHz)	Mbps	
Multicast	WMM (Wi-Fi multimedia)		

CATV (Mira GH3141x only)

Parameter	Mira GH3141x	Units	Notes
Remote control CATV	ON/OFF		
Optical AGC	-10 to +2 dBm	dBm	
Output level	76	dBuV	
RF bandwidth	47-1000	MHz	
In-band flatness	±1.25	dB	
Output return loss	≥12	dB	
CATV system parameters	C/N ≥43 dB, C/CTB ≥55 dB, C/CSO ≥55 dB, MER ≥32 dB, BER ≤1x10E-6		

Mechanical and environmental specifications

Parameter	Mira GH31x1x	Units	Notes
Power supply	12 V/1.5 A		
Operating temperature	0°C to +45°C (+32°F to +113°F)	°C/°F	
Storage temperature	-20°C to +70°C (-4°F to +158°F)	°C/°F	
Operating humidity	5-95% (non-condensing)	%	

Order information

Model code	Description
Mira GH3121U	GPON HGU with 4x GE LAN, Wi-Fi 6, FXs, UK power adapter
Mira GH3121N	GPON HGU with 4x GE LAN, Wi-Fi 6, FXs, North American power adapter
Mira GH3121E	GPON HGU with 4x GE LAN, Wi-Fi 6, FXs, European power adapter
Mira GH3141U	GPON HGU with 4x GE LAN, Wi-Fi 6, FXs, CATV, UK power adapter
Mira GH3141N	GPON HGU with 4x GE LAN, Wi-Fi 6, FXs, CATV, North American power adapter
Mira GH3141E	GPON HGU with 4x GE LAN, Wi-Fi 6, FXs, CATV, European power adapter

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