Vivio GP1705-2G xPON WiFi5 Home Gateway Unit

Dual-Band 1200Mbps Wi-Fi 5 xPON HGU with 2 GE Ports & 1 USB Port

Model: GP1705-2Gjhbj Prefix: NE-FE-ONU-01340 Category: ONU



Overview

The Vivio GP1705-2G is an advanced xPON Multi-service Broadband Access Home Gateway Unit (HGU) designed for telecom operators' next-generation integrated broadband networks. Delivering autoadaptive dual-mode GPON and EPON compliance, it integrates high-speed dual-band 1200 Mbps Wi-Fi 5 (802.11ac 2x2 MIMO), two Gigabit Ethernet LAN ports, and a versatile USB interface in an ultra-compact desktop footprint. Compliant with ITU-T G.984/G.988, IEEE 802.3ah, and China Telecom CTC technical standards, the GP1705-2G ensures seamless interoperability with mainstream OLTs, carrier-grade QoS, robust VLAN isolation, dynamic bandwidth allocation (DBA), and comprehensive remote management via TR-069 and OMCI/OAM.

Features

- Autoadaptive GPON/EPON uplink compliant with ITU-T G.984/G.988 and IEEE 802.3ah
- GPON transmission rate of 2.5 Gbps downlink / 1.25 Gbps uplink; EPON rate of 1.25 Gbps downlink / 1.25 Gbps uplink
- Extensive optical coverage radius up to 20 km with splitting ratios up to 1:128 (GPON) and 1:64 (EPON)
- Integrated dual-band Wi-Fi 5 (802.11a/b/g/n/ac) delivering aggregate wireless speeds up to 1200 Mbps with 2x2 MIMO and 4 external antennas
- Two 10/100/1000Base-T Gigabit Ethernet (GE TX) RJ-45 LAN interfaces and one USB port
- Carrier-class service carrying security: 4K VLAN, STP, port isolation, ACL, QoS, and Broadcast Storm Control
- Dynamic Bandwidth Allocation (DBA) and accurate SLA rate limiting
- Comprehensive remote and local network management via OMCI, OAM, TR-069, CLI, Web HTTP, SNMP, and TELNET
- Dying-Gasp support and TX/RX optical power alarms for rapid fault diagnostics

Applications

- Fiber-to-the-Home (FTTH) high-speed residential triple-play services
- Small Office / Home Office (SOHO) broadband wireless connectivity

- Operator multi-service GPON/EPON migration with autoadaptive uplink switching
- High-speed residential wireless coverage with dual-band 802.11ac Wi-Fi

Packaging Information

Parameter	Min	Typ	Max	Unit	Notes
Carton QTY		20 pcs/ctn			
Carton Dimensions		30 × 43 × 36 mm			
Carton Weight		9 kg			

Category attributes

Parameter	Specification
Port Type	Ethernet port
ONU Type	With Wi-Fi
LAN Port(s)	2
ONU WiFi Type	WiFi 5
UNI ports	2 GE TX
WIFI	1200Mbps
DC	12V/1A
Optical power (TX power RX sensitive)	TX power: 0.5~5dBm, RX sensitive: <-28dBm
VLAN Interface	4K VLAN, IEEE 802.1Q, Port-based, Tag/Transparent/Aggregation/Trunk/ Translation
Uplink Ports	1 SC/UPC
Product Dimension	140 x 105 x 30 mm
Model	GP1705-2G
Downlink Ports	2 GE TX

Optical & Hardware Interfaces

Parameter	Min	Typ	Max	Unit	Notes
PON Uplink Interface		1 x SC/ UPC (Class B+ compliant)			Autoadaptive GPON / EPON
LAN User Interfaces (UNI)		2 x 10/100 /1000Base -T (RJ45)			Auto-MDI/MDIX, Full/Half Duplex
USB Interface		1 x USB 2.0 Host			Storage/sharing support

Antennas	4 x External Omni-directional			High-gain Wi-Fi antennas

Optical Characteristics

Parameter	Min	Typ	Max	Unit	Notes
Transmitter Optical Output Power (TX Power)	0.5		5.0	dBm	
Receiver Sensitivity (RX Sensitivity)			-28.0	dBm	BER <= 10^-10
Optical Splitting Ratio		1:128 (GPON) / 1:64 (EPON)			Max connection fan-out
Transmission Distance			20	km	Coverage radius
Downstream Data Rate		2.5 (GPON) / 1.25 (EPON)		Gbps	
Upstream Data Rate		1.25 (GPON) / 1.25 (EPON)		Gbps	

Wireless Specifications

Parameter	Min	Typ	Max	Unit	Notes
Wireless Standards		IEEE 802.11a/b/g/n/ac (Wi-Fi 5)			Dual band concurrent
MIMO Configuration		2x2 MIMO			Dual-stream performance
Aggregated Wi-Fi Throughput			1200	Mbps	300 Mbps (2.4 GHz) + 867 Mbps (5 GHz)
SSID Support		Multi-SSID with individual security configurations			Configurable wireless channels
Wireless Security		WEP, WPA-PSK, WPA2-PSK, AES encryption			SSID hiding supported

Layer 2 & Network Protocols

Parameter	Min	Typ	Max	Unit	Notes

VLAN Capabilities	4K VLANs, IEEE 802.1Q, Port-based VLAN, CTC 2.0 VLAN	Tag, Transparent, Trunk, Aggregation, and Translation modes
IP Networking Modes	Routing, Bridging, and Hybrid modes	DHCP Server/Client, PPPoE, DNS, DDNS, NAT/NAPT
Multicast Protocols	IGMP Snooping, MLD Snooping, CTC Dynamic Multicast	Multicast fast-leave and group limitation
Quality of Service (QoS)	IEEE 802.1p CoS, 4 priority queues per port	WR, SP, and FIFO queue scheduling, SLA, and DBA rate limiting
Flow Control	IEEE 802.3x full duplex, backpressure half duplex	Head-of-Line (HoL) blocking prevention
Security & Protection	MAC filtering, MAC address limiting, Port protection, ACL	AES-128 encryption, Broadcast Storm Control

Management & Reliability

Parameter	Min	Typ	Max	Unit	Notes
Management Protocols		TR-069, OMCI (ITU-T G.988), OAM (CTC 2.1/3.0), CLI, Web (HTTP), SNMP, Telnet			BDCOM private OMCI/OAM extension supported

Firmware & Configuration	Software upgrade via TFTP, Web, and OMCI	Syslog (local or server)
Diagnostic Capabilities	Loop detection, Dying-Gasp, TX/RX optical power alarm	Real-time fault reporting

Electrical & Physical Characteristics

Parameter	Min	Typ	Max	Unit	Notes
Power Supply Input	100	100-240	240	V AC	50/60 Hz external power adaptor
Device DC Input		12 V / 1 A		V / A	
Power Consumption			10	W	
Dimensions (W x D x H)		140 x 105 x 30		mm	
Unit Weight		0.3		kg	Empty chassis weight
Operating Temperature	0		45	°C	
Storage Temperature	-40		85	°C	
Operating Humidity	10		85	%	Non-condensing
Storage Humidity	5		95	%	Non-condensing

Interface & Ports Layout



Notes

- Standards compliance: ITU-T G.984/G.988, IEEE 802.3ah, IEEE 802.1Q, ITU-T Y.1291, PRC GB/T33845-2017, YD/T 1475-2006, and China Telecom CTC 2.1/3.0.
- The optical transceiver supports Class B+ optical power budgets with continuous sensitivity monitoring and reporting via OMCI/OAM.
- Certified for CE and FCC compliance.

Ordering information

Part Number / Article Code: NE-FE-ONU-01340 | Model: GP1705-2G
Description: xPON WiFi5 ONU/HGU, 1-Port GPON/EPON (SC/UPC), 2-Port Gigabit RJ45 LAN, dual-band 1200M Wi-Fi 5 (802.11ac 2x2 MIMO), 1 x USB port, 4 external antennas, plastic housing, external AC 100-240V to DC 12V/1A power adapter included.

Branding: viviosystems.com