

# GPON VoIP Gateway

GPON | 5T5R 11ax/ac + 4T4R 11ax/n | VoIP | TR-069

## GRG-4280us



**GRG-4280us** is the next Wi-Fi 6 generation GPON VoIP Gateway which is designed to meet the end-user requirements for advanced triple-play deployments.

With an embedded GPON port, no external ONT is needed as to provide FTTH service. On the LAN side, it provides four Gigabit Ethernet ports, one FXS port, and one USB 2.0 Host interface.

The two 802.11ax wireless bands: 2.4GHz - 4T4R, (backward compatibility with 802.11g/b/n) and 5GHz - 5T5R, (backward compatibility with 802.11a/ac) are separated in two dedicated Wi-Fi networks, supporting more end-user devices while reducing signal interference. GRG-4280us also offers VoIP functions so as to integrate telephone service and remote management utilities (e.g. TR-069) for network provision and maintenance.

### KEY FEATURES

- GPON port, no external ONT is needed as to provide FTTH service.
- **MU-MIMO:** Supports both up-link and down-link, allowing efficient data transmission for more devices at the same time.
- **VoIP (SIP):** Voice over Internet Protocol provisioning communications services rather than via PSTN.
- **802.11ax (1024 QAM):** Supports high definition offering high throughput capability and compatible with 11a/b/g/n/ac.
- **EasyMesh:** Multi-Access Point specification for creating Wi-Fi meshes from products by different vendors.

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## SPECIFICATIONS

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<b>Hardware</b>	<ul style="list-style-type: none"><li>▪ GPON1 X 1 Bi-directional Optical (1310nm/1490nm)</li><li>▪ RJ-11 X 1 for FXS</li><li>▪ RJ-45 X 4 for GELAN</li><li>▪ USB 2.0 x 1</li><li>▪ Reset button X 1</li><li>▪ WPS button X 1</li><li>▪ Wi-Fi On/Off button X 1</li><li>▪ Internal Antenna X 5</li><li>▪ Power switch X 1</li></ul>
<b>GPON</b>	<ul style="list-style-type: none"><li>▪ SC/APC, 1244Mbps/2488Mbps, 1310nm/1490nm</li><li>▪ GPON ITU-T G.984.1, G.984.2, G.984.3, G.984.4</li><li>▪ Fully ITU-T G.984 compliant framing</li><li>▪ Single / Multiple T-CONTs ▪ Single / Multiple GEM ports</li><li>▪ Flexible mapping between GEM ports and T-CONT</li><li>▪ AES-128 Decryption with key generation and switching</li><li>▪ FEC (Forward Error Correction)</li><li>▪ DBA reporting in status indications in the PLOu, and by piggyback reports in the DBRu (mode 0)</li><li>▪ 802.1p service mapping profile on U/S</li><li>▪ Mapping of GEM port into a T-CONT with priority queues based scheduling</li></ul>
<b>Ethernet</b>	<ul style="list-style-type: none"><li>▪ IEEE 802.3, IEEE 802.3u IEEE 802.3ab</li><li>▪ 10/100 /1000 BASE-T, auto-sense</li><li>▪ Supports MDI/MDX</li></ul>
<b>Wireless</b>	<ul style="list-style-type: none"><li>▪ IEEE 802.11ax, 2.4GHz, 4T4R, 40 MHz Backward compatible with 802.11n/g/b</li><li>▪ IEEE 802.11ax, 5GHz, 5T5R, 80 MHz Backward compatible with 802.11ac/n/a</li></ul> <p>U-NII-1 ( 5150~5250 MHz ) U-NII-2a ( 5250~5350 MHz ) optional U-NII-2c/2e ( 5470~5725 MHz ) optional</p> <ul style="list-style-type: none"><li>▪ Modulation: up to 1024-QAM, rate 3/4 and 5/6</li><li>▪ 160 MHz channel bandwidth</li><li>▪ WPA/WPA-PSK, WPA2/WPA2-PSK with TKIP &amp; AES Security Type</li><li>▪ Multiple SSID</li><li>▪ MAC Address Filtering</li></ul>
<b>USB</b>	<ul style="list-style-type: none"><li>▪ Samba</li><li>▪ DLNA</li><li>▪ 3G support</li></ul>

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<b>Networking Protocols</b>	<ul style="list-style-type: none"><li>▪ PPPoE pass-through, Multiple PPPoE sessions on single WAN interface</li><li>▪ Transparent bridging between all LAN interfaces</li><li>▪ 8021p/8021q VLAN support</li><li>▪ Spanning Tree Algorithm</li><li>▪ IGMP Proxy V1/V2/V3</li><li>▪ Static route, RIP v1/v2, ARP, RARP, SNTP</li><li>▪ DHCP Server/Client</li><li>▪ DNS Proxy/Relay, Dynamic DNS</li><li>▪ UPnP</li><li>▪ IPv6 subset</li><li>▪ Firewall/Filtering</li><li>▪ MAC Filtering</li><li>▪ Port Forwarding (Virtual Server)</li><li>▪ Domain Blocking</li><li>▪ URI/URL Blocking</li><li>▪ Port Scan Detection and Protection</li><li>▪ TCP/IP/Port/interface filtering rules Support both incoming and outgoing filtering</li><li>▪ NAT/NAPT</li><li>▪ DMZ host</li><li>▪ VPN Pass Through (PPTP, L2TP, IPSec)</li><li>▪ ACL (TELNET, FTP, TFTP, HTTP, SNMP, PING)</li><li>▪ TR-069/TR-181/TR-143, SNMP, Telnet, SSH, Web-based management, Configuration backup and restoration</li><li>▪ Software upgrade via HTTP, TFTP server</li><li>▪ Static route, RIP and RIPv2, NAT, DDNS, ARP</li><li>▪ PPTP, L2TP, IPSec</li></ul>
<b>VoIP</b>	<ul style="list-style-type: none"><li>▪ SIP: RFC3261</li><li>▪ Codec : G711, G722, G723, G726, G729ab, Ilbc</li><li>▪ RTP: RFC 1889</li><li>▪ SDP: RFC 2327</li><li>▪ Caller ID: ETSI based</li><li>▪ Echo cancellation: G168</li><li>▪ Silence suppression</li><li>▪ Jitter Buffer: 20ms to 600ms</li><li>▪ Voice Active Detection(VAD)</li><li>▪ Comfort Noise Generator(CNG)</li><li>▪ Fax/T.38</li></ul>
ENVIRONMENT	
<b>Operating Temperature</b>	0°C ~40°C (32°F ~104°F)
<b>Operating Humidity</b>	10%~95% non-condensing
<b>Storage Temperature</b>	-20°C ~70°C (-4°F ~158°F)
<b>Storage Humidity</b>	10%~95% non-condensing



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