



ISCOM HT803G-U GPON home terminal

▼ Introduction

The ISCOM HT803G-U is a GPON uplink home gateway. It provides one GE interfaces, four 10/100/1000 Mbit/s Ethernet interfaces, two FXS voice interfaces, one CATV interface, one USB interface, and one WiFi interface. It is applicable to Fiber To The Home (FTTH) scenario, with appearance as below.



▼ Features

- Elegant appearance, low power consumption, and good heat dissipation
- Integrated with interoperability feature, cost efficiency, meeting key customers' specified requirements, and providing tri-network integration
- Controllable remote device, supporting full-frequency FCAPS, including supervision, monitoring, and maintenance
- High price-performance ratio, widely applicable to FTTH networking, providing broadband for emerging services (such as online games, IPTV, VoIP, HDTV, and VoD)
- Passing carriers' internetworking test and batch test, with guarantee for internetworking with OLTs of other vendors



▼ Specifications

| Hardware features | |
|--------------------------|---|
| Dimensions | 228 mm (Length) × 176 mm (Width) × 41 mm (Height) |
| Weight | < 0.7 kg |
| Voltage | 12 VDC |
| Power consumption | ≤ 13.34 W |
| Working environment | Temperature: 0–40 °C Humidity: 5%–95% (non-condensing) |
| Storage environment | Storage environment: -20 to 65 °C Storage humidity: 10%–90% (non-condensing) |
| Dustproof level | IP40 |
| Software features | |
| Data features | <p>The optical network unit provides four 10/100/1000 Base-T Ethernet data interfaces, and supports the following features:</p> <ul style="list-style-type: none"> • Ethernet auto-negotiation and MDI/MDIX auto-detection • IEEE 802.11 b/g/n WLAN interface • Embedded with a Layer 2 switch • Embedded with a Layer 3 router and home gateway • Advanced data functions, such as processing VLAN Tags, traffic classification, and packet filtering • USB 2.0 memory |
| Video | <p>The ISCOM HT803G-U supports 2 video services: video stacking and data delivering (through unicast and multicast).</p> <ul style="list-style-type: none"> • Support video coverage. A specific wavelength is used to transmit video broadcast signals to users. A single-fiber three-wavelength GPON optical transceiver outputs the analog RF signals with the output level as 18 dBmV. By default, the passband of the analog video interface is between 54 and 870 MHz. For some special applications, the ONT can provide an additional remote out-of-band control function for basic services and advanced services. • When transmitting data-based video contents through multicast, the ISCOM HT803G-U supports specific multicast GEM interface in downlink. The video contents can be received and processed by all ONTs and ONUs through a uniform channel, which greatly improves bandwidth utilization. • The ISCOM HT803G-U supports IGMP Snooping and provides further application optimization. When IGMP Snooping is enabled, the ISCOM HT803G-U can purposely choose to send multicast data streams upon detection of a member joining and leaving the multicast group. |



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| Voice service | <ul style="list-style-type: none"> • Support 3 REN for each line, 55 V RMS balanced ringing, DTMF dialup. • Provide multiple voice coding schemes. • Support echo cancellation, VAD, and CNG. • Support static or dynamic jitter buffer. • Support various classified services: CID, call waiting, call forward, and call transfer. • Support SIP (RFC3261) and H.248 (MEGACO v2) voice protocols. • Support common structure and easy replacement. If VoIP access is enabled, the ONT, through Ethernet interface, supports connecting to the addition box of the external network or home router with voice message function. |
| OAM | <ul style="list-style-type: none"> • ITU-T G.988 standard OMCI management interface • Various services, including Ethernet, WLAN, VoIP, and RF • RF over OMCI service. • Alarm and AVC report, and monitoring performance • Mirror-downloading, activating, and restarting software remotely through OMCI • 2 software mirroring inventories, and checking software integrity and automatical rollback. |
| Interface indexes | |
| GPON interface | <ul style="list-style-type: none"> • Fully compatible with ITU-T G.984 • Single-T-CONT mode and multi-T-CONT mode • Flexible mapping between the GEM interface and T-CONT interface • Activation through automatical discovery of serial number and password • AES-128 decryption, generating and switching keys • FEC • Mapping from the GEM interface to the T-CONT interface on which queues with priorities are to be scheduled • Multicast GEM interface for IPTV |
| GE interface | <ul style="list-style-type: none"> • 10/100/1000Base-T RJ-45 Ethernet interface • Auto-negotiation or manual configuration of the Ethernet interface • MDI/MDIX auto-detection |
| Ethernet bridge | <ul style="list-style-type: none"> • Line speed forwarding • Hardware-based priority queues supports CoS in both the uplink and downlink. • IEEE 802.1q virtual switching • IEEE 802.1d bridge |



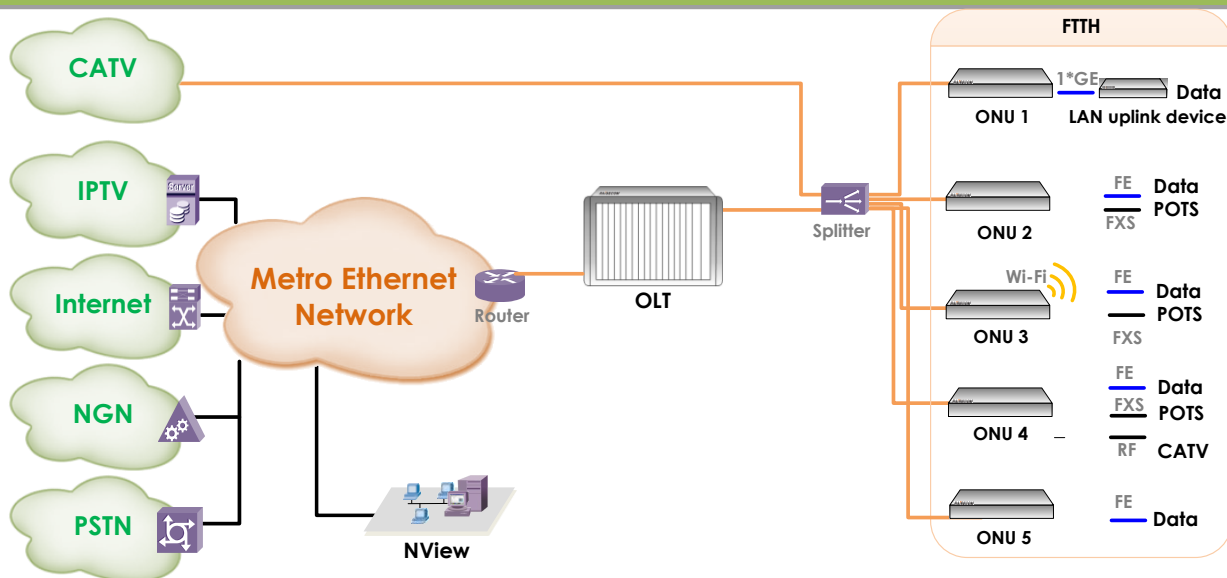
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| | <ul style="list-style-type: none"> ● Up to 1024 MAC addresses and 8×4 VLAN groups ● Up to 128 multicast groups ● Adding/Removing VLAN tag to/from packets of the Ethernet interface ● VLAN stacking (QinQ) and VLAN mapping ● Mapping from IP ToS/DSCP to IEEE 802.1p ● CoS based on UNI, VLAN-ID, 802.1p bit, and ToS/DSCP ● IEEE 802.1p marking and remarking ● IGMP v2/v3 Snooping ● Storm control over broadcast/multicast packets ● MAC address limit |
| POTS interface | <ul style="list-style-type: none"> ● RJ-11 interface ● 3-REN ● Balanced ringing, 55 V RMS ● DTMF dialup ● Multiple coding schemes <ul style="list-style-type: none"> – G.711 (μ-law and A-law) – G.729 (A and B) – G.723.1 ● Echo cancellation ● VAD and CNG ● SIP (RFC3261) ● SDP (RFC2327) ● RTP (RFC3550/3551) ● RFC2833 DTMP coding or SIP INFO method ● Multiple classified services, CID, call waiting, call forwarding, call transfer, call switching, three-way calling, classified ringing ● Supporting G.711 faxes, modem, and TTY devices ● T.38 fax ● Configurable dialup plan ● Configurable rings for different countries ● DHCP Client and static IP address ● Metal loop test |
| WLAN interface | <ul style="list-style-type: none"> ● IEEE802.11b/g/n ● 2.4 GHz ● MIMO: 2×2 ● Multiple SSIDs ● 64-bit and 128-bit WEP ● WPA and WPA-PSK |



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| | <ul style="list-style-type: none"> • WPS for WiFi switching |
| IP route and firewall | <ul style="list-style-type: none"> • Multiple WAN interfaces • WAN • PPPoE • DHCP • DHCP Client • DNS relay • NAT • NAPT • Interface forwarding, static route, ALGs, UPnP, firewall, DMZ, DDNS, NTP, and IGMP Proxy • Integrity of ACL and firewall for detecting stateful packets • VPN traverse of PPTP, L2TP and IPSec |
| CATV interface | <ul style="list-style-type: none"> • Optical connector form: green SC/APC • Range of CATV Rx wavelength: 1540–1560 nm • Range of Rx optical power: -8 to 2 dBm • RF output impedance is 75 Ω, British F connector, supporting downlink transmission only instead of uplink back haul • RF output level is 76–83 dBuV. • The CSO typical value is 65 dB, the CTB typical value is 62 dB, and the CNR is over 46 dB. |



▼ Typical applications



Networking description

- Use the ONU directly in the user's home.
- Use the high-capacity and high-density ISCOM6800 to access huge services.
- The ODN design adopts thin coverage, with a high cost in the early phase.
- Actual installation rate is the key to profit.
- Provide large-granularity bandwidth for users and support various emerging services.
- The ONU supports offline configurations, plug and play, thus able to speeding up service activation.
- Adopt various means for locating faults (broken fiber, power failure, and loop)
- Guarantee user experiences, improve renewal rate, and increase customer profit.

Ordering information

| Model | Version | Description |
|----------------|---------|---|
| ISCOM HT803G-U | Z.00 | 1 GPON interface, four 10/100/1000 Mbit/s Ethernet electrical interface, 2 FXS voice interfaces, 1 CATV interface, 1 USB interface, and 1 WLAN interface, 12 V/1.5 A external power adaptor |



ISCOM HT803G-W GPON home terminal

▼ Introduction

The ISCOM HT803G-W is a Home Gateway Unit (HGU) gateway with GPON uplink and embedded AP. It provides 4 GE interfaces, 2 POTS interfaces, 1 WiFi interface, and 1 USB interface. It is applicable to Fiber To The Home (FTTH) scenario, supporting desktop installation, wall-mount installation, and web page management. The logo of Raisecom is displayed on the product shell. The appearance of the product is as below.



▼ Features

- Elegant appearance, low power consumption, and good heat dissipation
- High price-performance ratio, widely used in the FTTH networking. The ISCOM HT803G-W is a multi-function product combining GPON ONU, WLAN AP, IAD, LAN switch, route, etc. which can provide customers with data and audio/video interoperability access service. Combining with the OLT, it can build a FTTH or FTTP fiber access network featuring high bandwidth, low-cost, and various carrier services.
- Passing carriers' internetworking test and batch test, with guarantee for internetworking with OLTs of other vendors



▼ Specifications

| Hardware features | |
|--------------------------|---|
| Dimensions | 195 mm (Length) × 188 mm (Width) × 33 mm (Height) |
| Weight | < 0.42 kg |
| Voltage | 12 VDC/VAC |
| Power consumption | ≤ 13.9 W |
| Working environment | Temperature: 0–40 °C Humidity: 5%–95% (non-condensing) |
| Storage environment | Storage environment: -20 to 65 °C Storage humidity: 10%–90% (non-condensing) |
| Dustproof level | IP40 |
| Software features | |
| Data features | <p>It provides four 10/100/1000Base-T Ethernet interfaces, and supports the following features:</p> <ul style="list-style-type: none"> ● Ethernet auto-negotiation and MDI/MDIX auto-detection ● Embedded with a Layer 2 switch ● Embedded with a Layer 3 router and local gateway ● Advanced data functions, such as processing VLAN Tags, traffic classification, and packet filtering ● IEEE 802.11b/g/n WLAN interface ● USB 2.0 memory |
| Voice service | <p>The HT803G-W with 2 POTS interfaces in the local gateway provides carrier-grade voice service. Its main functions are as follows:</p> <ul style="list-style-type: none"> ● Support 3 REN for each line, 55 V RMS balanced ringing, DTMF dialup. ● Provide multiple voice coding schemes. ● Support echo cancellation, VAD, and CNG. ● Support static or dynamic jitter buffer. ● Support various classified services: CID, call waiting, call forward, and call transfer. ● Support SIP (RFC3261) and H.248 (MEGACO v2) voice protocols. ● Support common structure and easy replacement. The ONT, through Ethernet interface, supports connecting to the IAD box of the external network or home router with voice message function if VoIP access is enabled. |
| Voice service | <p>The ISCOM HT803G-W supports data-based video transmission (through unicast and multicast).</p> <ul style="list-style-type: none"> ● When transmitting data-based video contents through multicast, the ISCOM HT803G-W supports the specific multicast GEM interface in |



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| | <p>downlink. The video contents can be received and processed by all ONTs and ONUs through a uniform channel, which greatly improves bandwidth utilization.</p> <ul style="list-style-type: none"> • The ISCOM HT803G-W supports IGMP Snooping and provides further application optimization. When IGMP Snooping is enabled, the ISCOM HT803G-W can choose to send multicast data streams upon detection of a member joining and leaving the multicast group. |
| OAM | <ul style="list-style-type: none"> • OMCI management interface (embedded operation channel) which meet ITU-T G.984.4 and G.983.2 standard • Compatible with TR-069 • Various services, including Ethernet, WLAN, VoIP, and RF by subset of TR-098 • Alarm and AVC report, and monitoring performance • Mirror-downloading, activating, and restarting software remotely through OMCI • 2 software mirroring inventories, checking software integrity, and automatical rollback |
| Interface indexes | |
| GPON interface | <ul style="list-style-type: none"> • Fully compatible with ITU-T G.984 • Single-T-CONT mode and multi-T-CONT mode • Flexible mapping between the GEM interface and T-CONT interface • Priority queue and scheduling in the uplink • Activation through automatical discovery of serial number and password • AES-128 decryption, generating and switching keys • FEC • 802.1p mapping on U/S. • Mapping from the GEM interface to the T-CONT interface on which queues with priorities are to be scheduled • Multicast GEM interface for IPTV |
| FE interface | <ul style="list-style-type: none"> • 10/100/1000Base-T RJ45 Ethernet interface • Auto-negotiation or manual configuration of the Ethernet interface • MDI/MDIX auto-detection |
| Ethernet bridge | <ul style="list-style-type: none"> • Line speed forwarding • Supporting CoS in both the uplink and downlink by hardware-based priority queues • IEEE 802.1q virtual switching • IEEE 802.1d bridge • Up to 256 MAC addresses and 8×4 VLAN groups • Up to 128 multicast groups • Adding/Removing VLAN Tag to/from packets of the Ethernet |



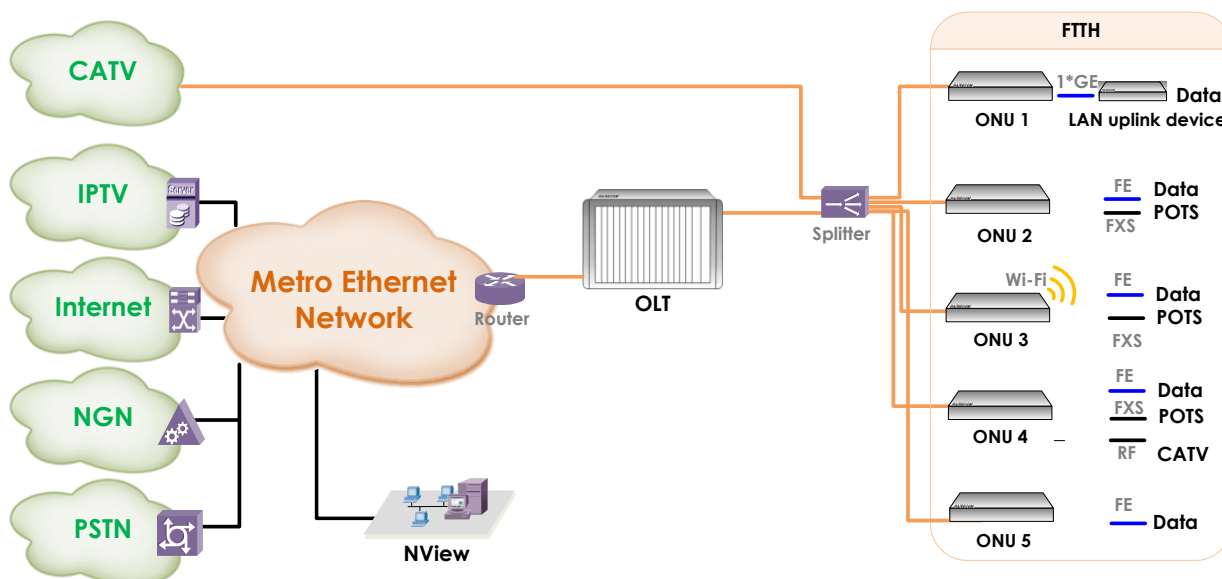
| | |
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| | <p>interface</p> <ul style="list-style-type: none"> • VLAN stacking (QinQ) and VLAN mapping • Mapping from IP ToS/DSCP to IEEE 802.1p • CoS based on UNI, VLAN-ID, 802.1p bit, and ToS/DSCP • IEEE 802.1p marking and remarking • IGMP v2/v3 Snooping • Storm control over broadcast/multicast packets • MAC address limit |
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| WLAN interface | <ul style="list-style-type: none"> • IEEE 802.11b/g/n • 2.4 GHz • MIMO: 2x2 • Multiple SSIDs • 64-bit and 128-bit WEP • WPA and WPA-PSK • WPS for WiFi switching |
| IP route and firewall | <ul style="list-style-type: none"> • Multiple WAN interfaces • WAN |



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| | <ul style="list-style-type: none">• PPPoE• DHCP• DHCP Client• DNS relay• NAT• NAT• Interface forwarding, static route, ALGs, UPnP, firewall, DMZ, DDNS, NTP, and IGMP Proxy• VPN traverse of PPTP, L2TP and IPSec |
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