

1 — G-241W-A unit data sheet

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1.1 G-241W-A part numbers and identification

Table 1-1 provides part numbers and identification information for G-241W-A indoor ONTs.

Table 1-1 G-241W-A indoor ONT part numbers and identification

Mnemonic	Ordering kit part number	Provisioning part number	Description	CLEI	CPR	ECI/ Bar code
G-241W-A	3FE 56867 AA customer-specific	3FE 56977 AA	Package D 2 POTS ports, 4 Gig-E 10/100/1000 Base-T interfaces, 1 RF video connector, and 1 Wi-Fi radio on/off switch. Includes ac/dc power cord with European (EU) variant plug.	—	—	—
	3FE 56867 BA	3FE 56977 BA	Package D 2 POTS ports, 4 Gig-E 10/100/1000 Base-T interfaces, 1 RF video connector, and 1 Wi-Fi radio on/off switch. Includes ac/dc power cord with European (EU) variant plug.	—	—	—
	3FE 56867 BB customer-specific		Package D 2 POTS ports, 4 Gig-E 10/100/1000 Base-T interfaces, 1 RF video connector, and 1 Wi-Fi radio on/off switch. Includes ac/dc power cord with European (EU) variant plug.	—	—	—
	3FE 56867 CA		Package D 2 POTS ports, 4 Gig-E 10/100/1000 Base-T interfaces, 1 RF video connector, and 1 Wi-Fi radio on/off switch. Includes ac/dc power cord with United Kingdom (UK) variant plug.	—	—	—
	3FE 56867 DA		Package D 2 POTS ports, 4 Gig-E 10/100/1000 Base-T interfaces, 1 RF video connector, and 1 Wi-Fi radio on/off switch. Includes ac/dc power cord with United States (US) variant plug.	—	—	—
	3FE 56867 DB		Package D 2 POTS ports, 4 Gig-E 10/100/1000 Base-T interfaces, 1 RF video connector, and 1 Wi-Fi radio on/off switch. Includes ac/dc power cord with United States (US) variant plug. Also includes POTS LED and Molex port	—	—	—

The G-241W-A ONT uses a fiber storage tray that can be ordered separately. The part number for the fiber tray is 3FE 71441 AA.

Table 1-2 lists ONT to UPS or power adapter support mapping, including the specifications and standards tested to.

Table 1-2 ONT to UPS or power adapter compatibility support

Power/UPS model	Power UPS and cabling part number information	Customer category or country compliance tested for	Notes
G-241W-A GPON indoor ONTs			
CyberPower CSN27U12V3 Grounded	(1) 12 V/27 W UPS part number: 3MV00213AA (DC power cord included) (2) AC power cord, 1AB38334xxxx: 0007 — Australia, New Zealand 0008 — Europe 0009 — United Kingdom, Ireland 0010 — ANSI	Common European Union countries ANSI municipality United States and Canada	Battery not included. Compliant battery models: - BB Battery BP7.2-12 - GS Battery PE 12V7.2 (ANSI GS Battery ALU part number 1AF17581AC)

1.2 G-241W-A general description

G-241W-A indoor ONTs provide the subscriber interface for the network by terminating the PON interface and converting it to user interfaces that directly connect to subscriber devices. The ONT is compatible with all existing subscriber equipment, including analog phones with both tone and rotary dial capabilities, cordless phones, modems, fax machines, and caller ID boxes (Type I, Type II, and Type III).

G-241W-A indoor ONTs provide the following functions:

- four configurable 10/100/1000BASE-T Ethernet interfaces using RJ-45 ports
- two POTS interfaces using RJ-11 ports
- single mode fiber (SC/APC connector)
- one coaxial RF video connector
- two USB ports
- detachable 3dB/5dB antenna
- IEEE 802.11 b/g/n Wi-Fi interface to enable wireless access
- adjustable Wi-Fi power
- fully G.984 series GPON standard compliant
- G984.5 standard compliant
- compliance with FCC part 15 Class B, CE
- VPN pass-through for PPTP, L2TP, and IPsec
- mapping VLAN to each Ethernet port
- Layer 2 bridging
- NAT/NAPT/port forwarding/DMZ
- IGMP v2/v3
- IPv4 and IPv6
- QoS: CoS or DSCP
- RSSI support
- manual addition of DDNS server

TR-069 support for reading optical parameters

The ONT supports the reading of optical parameters via TR-069:

- laser bias current
- voltage
- temperature
- received signal levels
- lower thresholds

These are the same optical parameters supported in the GUI. For more information, see the chapter [“Configure a G-241W-A indoor ONT”](#).

1.3 G-241W-A software and installation feature support

For information on installing or replacing a G-241W-A, see:

- [Install a G-241W-A indoor ONT](#)
- [Replace a G-241W-A indoor ONT](#)

For information on the following topics, see the *7368 ISAM ONT Product Overview Guide*:

- ONT and MDU general descriptions of features and functions
- Ethernet interface specifications
- POTS interface specifications
- RF video interface specifications for video overlay
- RSSI specifications
- Wi-Fi specifications
- ONT optical budget
- SLID entry via Ethernet port
- Web-based ONT configuration

1.4 G-241W-A interfaces and interface capacity

Table 1-3 describes the supported interfaces and interface capacity for G-241W-A indoor ONTs.

Table 1-3 G-241W-A indoor ONT interface connection capacity

ONT type and model	Maximum capacity										
	POTS	10/100 BASE-T	10/100/1000 BASE-T	RF video (CATV)	MoCA	VDSL2	E1/T1	Local craft	GPON SC/APC	HPNA	USB
G-241W-A ⁽¹⁾	2	—	4	1	—	—	—	—	1	—	2

Note

(1) G-241W-A ONTs provide Wi-Fi service without a physical connection.

G-241W-A connections and components

G-241W-A indoor ONTs are intended for indoor deployment and can be installed vertically, horizontally, or attached to a wall.

Other features of these indoor ONTs include

- an ON/OFF power switch for manual shut down
- a reset button
- an external multi-directional antennae
- Wi-Fi service that is enabled and disabled by Web GUI or TR-064/TR-069
- a Wi-Fi Protected Setup button

Figure 1-1 shows the physical connections for G-241W-A indoor ONTs.

Figure 1-1 G-241W-A indoor ONT physical connections

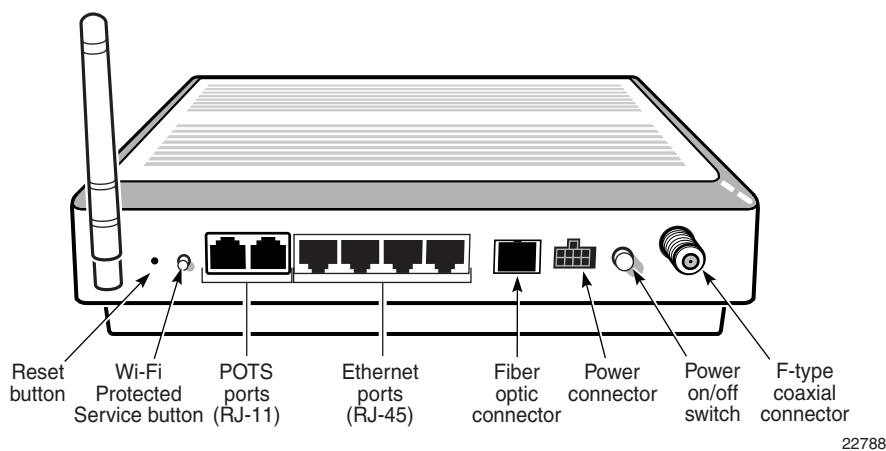


Figure 1-2 shows the location of the USB ports on the G-241W-A indoor ONTs.

Figure 1-2 G-241W-A indoor ONT physical connections (USB host ports)

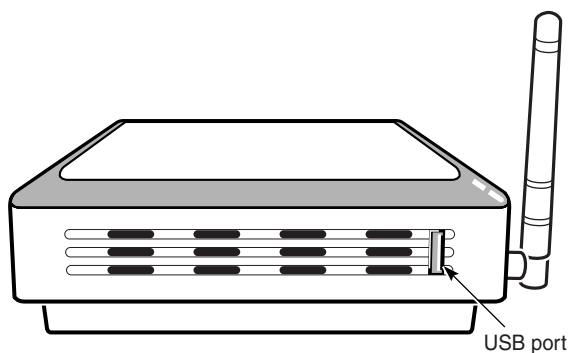


Table 1-4 describes the physical connections for G-241W-A indoor ONTs.

Table 1-4 G-241W-A indoor ONT physical connections

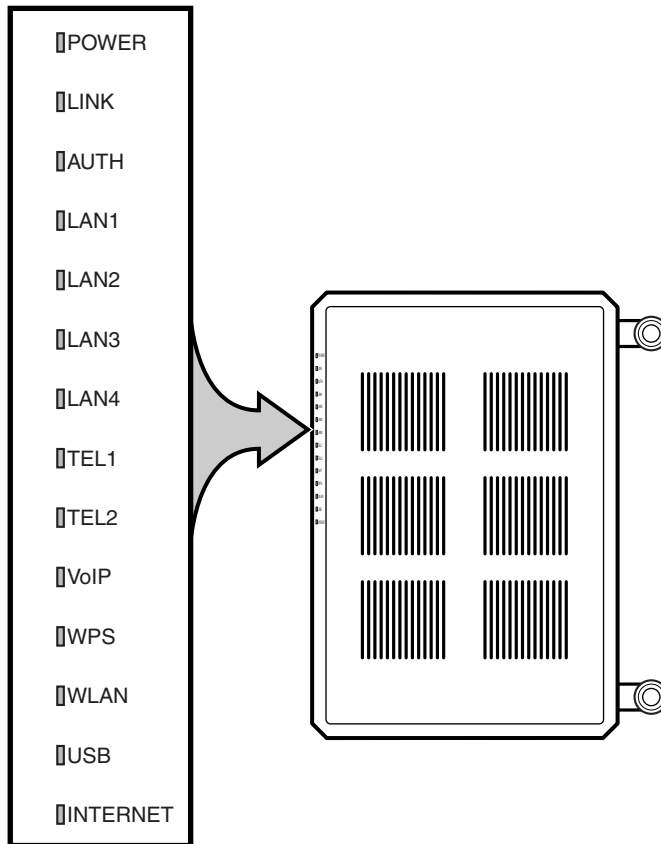
Connection ⁽¹⁾	Description
Ethernet ports	This connection is provided through Ethernet RJ-45 cables. Up to four 10/100/1000 Base-T Ethernet interfaces are supported. The Ethernet ports can support both data and in-band video services on all four interfaces.
POTS	This connection is provided through RJ-11 ports. Up to two POTS connections are supported. The POTS ports support voice services.
WPS button	The Wi-Fi Protected Setup switch is labeled WPS. This button enables and disables the WPS mode.
RF video coaxial	This connection is provided through a F-Type coaxial connector.
Power	This connection is provided through the power connector. A power cable fitted with a Molex connector is used to make the connection.
Fiber optic	This connection is provided through a GPON SC/APC fiber optic connector.
USB ports	This connection is provided by two USB host ports, compliant to USB 2.0. Cables with A-type connectors are used to connect to the USB ports.

Note

- ⁽¹⁾ The primary path for the earth ground for these ONTs is provided by the 12V Return signal in the power connector.

1.5 G-241W-A LEDs

Figure 1-3 shows the G-241W-A indoor ONT LEDs.

Figure 1-3 G-241W-A indoor ONT LEDs

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Table 1-5 provides LED descriptions for G-241W-A indoor ONTs.

Table 1-5 G-241W-A indoor ONT LEDs

Indicator	LED color and behavior	LED behavior description
Power	Green solid Red solid Off	Power on Light failed on startup (for example corrupt flash), or self test failed on startup, or self test failed during regular operation or when executed over OMCI The LED is red by default until the software is running properly and turns it green Power off
Link	Green solid Off	GPON link between ONT and OLT is operating normally GPON link is down or no link connected
Auth	Green solid Green flashing Off	ONT is authorized In process of ranging or synchronizing on OMCI ONT is not authorized

(1 of 2)

Indicator	LED color and behavior	LED behavior description
LAN 1 to 4	Green solid Green flashing Off	Ethernet is linked LAN activity is present (in either direction) ONT power off or Ethernet not connected
TEL 1 to 2	Green solid Green flashing Off	Off hook Call in or talking On hook
VOIP	Green solid Off	VOIP service is OK VOIP service is not OK
WPS	Green solid Green flashing Off	Wireless LAN link is up Wireless LAN link activity Wireless LAN link down or no link connected
WLAN	Green solid Green flashing Off	Wireless enabled Traffic on wireless interface Wireless is down or no link connected
USB	Green solid Green flashing Off	At least one USB device is connected Traffic activity on at least on USB device No USB device connected
INTERNET	Green solid Green flashing Off	HSI WAN is connected: a) the device has an IP address assigned from IPCP, DHCP, or static, and no traffic has been detected; b) the session is dropped due to idle timeout but the PON link is still present. PPPoE or DHCP connection in progress HSI WAN is not connected: a) there is no physical interface connection; b) the device is in bridged mode without an assigned IP address; c) the session has been dropped for reasons other than idle timeout.
VIDEO	Green Red	-6 to 0 dBm Less than -6 dBm

(2 of 2)

1.6 G-241W-A detailed specifications

Table 1-6 lists the physical specifications for G-241W-A indoor ONTs.

Table 1-6 G-241W-A indoor ONT physical specifications

Description	Specification	With fiber tray
Length	8.9 in. (22.5 cm)	8.9 in. (22.5 cm)
Width	6.5 in. (16.6 cm)	6.5 in. (16.6 cm)
Height	1.65 in. (4.2 cm)	2.0 in. (5.2 cm)
Weight including [within ± 0.5 lb (0.23 kg)]	1.12 lb (510 g)	1.3 lb (590 g)

Table 1-7 lists the power consumption specifications for G-241W-A indoor ONTs.

Table 1-7 G-241W-A indoor ONT power consumption specifications

Mnemonic	Maximum power (Not to exceed)	Condition	Minimum power	Condition
G-241W-A	18 W	2 POTS off-hook, 4 Gig-E, 1 RF video, Wi-Fi operational	6 W	2 POTS on-hook, other interfaces/services not provisioned

Table 1-8 lists the environmental specifications for G-241W-A indoor ONTs.

Table 1-8 G-241W-A indoor ONT environmental specifications

Mounting method	Temperature range and humidity	Altitude
Desk or wall mounted	Operating: 32°F to 113°F (0°C to 45°C) ambient temperature 10% to 90% relative humidity, non-condensing	Contact your Alcatel-Lucent technical support representative for more information
	Storage: 68°F to 149°F (20°C to 65°C)	

1.7 G-241W-A GEM ports and T-CONTs

Table 1-9 lists the maximum number of supported T-CONTs and GEM ports.

Table 1-9 G-241W-A indoor ONT capacity for GEM ports and T-CONTs

ONT or MDU	Maximum	Notes
GEM ports per indoor or outdoor ONT	128	128 are present: 127 are available, 1 is reserved for OMCI
T-CONTs per indoor or outdoor ONT	8	—

1.8 G-241W-A performance monitoring statistics

The following section identifies the supported performance monitoring statistics for G-241W-A ONTs. A check mark indicates the statistic is supported on that ONT. An empty cell indicates the statistic is not supported. A cell without a check mark indicates that the counter is not applicable to that type of ONT. The following tables are categorized by supported alarm types:

- Table 1-10 provides statistics for ONTENET type counters
- Table 1-11 provides statistics for ONTL2UNI type counters

- Table 1-12 provides statistics for PONONTTC, PONONTMCTC, PONONTTCHSI, PONONTTCES, PONONTTCFLOW, and PONONTTCVOIP type counters
- Table 1-13 provides statistics for PONONTTC aggregate type counters



Note — If you have trouble accessing G-241W-A ONTs performance monitoring statistics using TL1, please contact your Alcatel-Lucent support representative for more information about how to access and retrieve performance monitoring type counters.

Table 1-10 G-241W-A ONT ONTENET performance monitoring statistics

ONT	ONTENET statistics													
	FCSE	EC	LC	RBO	SCF	MCF	DT	IMTE	CSE	AE	IMRE	FTL	TBO	SQE
G-241W-A ⁽¹⁾	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Note

- ⁽¹⁾ A 5 second polling window limitation exists on the ONT, therefore the margin of error for each 15-min window is 5 seconds

Table 1-11 G-241W-A ONT ONTL2UNI performance monitoring statistics

ONT	ONTL2UNI statistics										
	FRAMES	BYTES	MCFRAMES	DSDRPFRRMS	USDRPFRRMS	USFRAMES	DSFRAMES	USBYTES	DSBYTES	USMCFRAMES	DSMCFRAMES
G-241W-A ⁽¹⁾						✓	✓	✓	✓	✓	✓

Note

- ⁽¹⁾ A 5 second polling window limitation exists on the ONT, therefore the margin of error for each 15-min window is 5 seconds

Table 1-12 G-241W-A ONT PONONTTC, PONONTMCTC, PONONTTCHSI, PONONTTCES, PONONTTCFLOW, PONONTTCVOIP performance monitoring statistics

ONT	PONONTTC, PONONTMCTC, PONONTTCHSI, PONONTTCES, PONONTTCFLOW, PONONTTCVOIP statistics					
	TXBLOCKS	TXFRAGS	RXBLOCKS	RXFRAGS	LOSTFRAGS	BADGEMHDRS
G-241W-A ⁽¹⁾ ⁽²⁾ ⁽³⁾	✓	✓	✓	✓	✓	✓

Notes

- (1) A 5 second polling window limitation exists on the ONT, therefore the margin of error for each 15-min window is 5 seconds
- (2) TC layer OAM performance monitoring is not supported on the OLT R04.00.10 therefore LOSTFRAGS and TXFRAG counters are not supported on indoor ONTs.
- (3) The LOSTFRAGS statistic is supported in the downstream direction only.

Table 1-13 G-241W-A ONT PONONTTC aggregate performance monitoring statistics

ONT	PONONTTC (aggregate) statistics					
	TXBLOCKS	TXFRAGS	RXBLOCKS	RXFRAGS	LOSTFRAGS ⁽¹⁾	BADGEMHDRS
G-241W-A ⁽²⁾	✓	✓	✓	✓	✓	✓

Notes

- (1) The lost GEM fragment counter supports downstream direction only. Upstream direction is not supported.
- (2) A 5 second polling window limitation exists on the ONT, therefore the margin of error for each 15-min window is 5 seconds

1.9 G-241W-A functional blocks

Table 1-14 describes the supported interfaces for G-241W-A indoor ONTs.

Table 1-14 G-241W-A indoor ONT interfaces

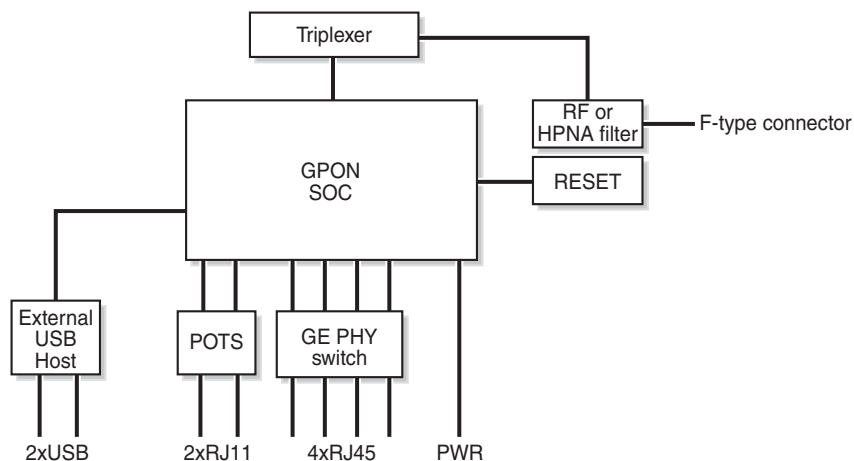
ONT category description	Interface capacity							
	POTS ports	Ethernet ports	VDSL2	MoCA	RF Video	HPNA	Wi-Fi	USB
Single-residence Wi-Fi ONTs with Gig-E ONTs, POTS, with RF video	2	4	—	—	1	—	1	1

G-241W-A indoor ONTs are single-residence ONTs that support Wireless (Wi-Fi) service. Wi-Fi service on these ONTs are compliant with the IEEE 802.11 standard and enabled or disabled using a radio on/off switch.

In addition to the Wi-Fi service, these ONTs transmit Ethernet packets to four RJ-45 Ethernet ports, and voice traffic to two RJ-11 POTS ports. These ONTs have two USB ports also.

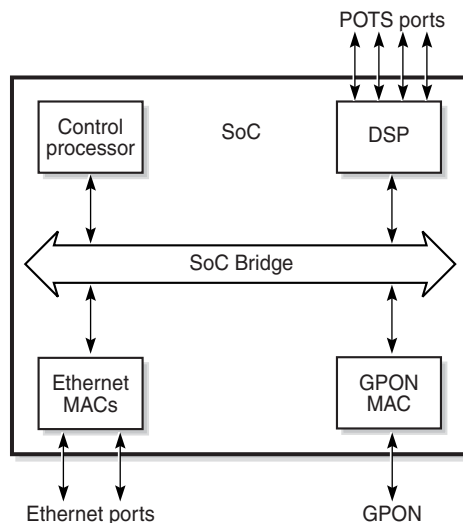
The ONTs also support RF video traffic on one F-type coaxial connector. The ONTs feature fiber optic and power connectors.

Figure 1-4 shows functional blocks for G-241W-A indoor ONTs.

Figure 1-4 Single-residence Wi-Fi ONT with Gigabit Ethernet and POTS and with RF video

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ONT SoC technology serves as the main hardware block for these ONTs; see Figure 1-5.

Figure 1-5 G-241W-A ONT hardware block

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ONT SoC technology consists of five key elements:

- **GPON MAC**
The Gigabit Passive Optical Network Media Access Control (GPON MAC) element on the SoC terminates the GPON interface using an optical diplexer. This interface supports GPON as described in G.984.3 (GPON TC Layer) ITU specification.
- **Ethernet MAC**
The SoC provides up to four GE MACs.
- **DSP interface**
The Digital Signal Processor (DSP) provides voice processing for 2 POTS lines with the 3-way calling. The DSP has a dedicated 64 kbyte instruction cache and shares a 32 kbyte data cache with the Control Processor.
- **Control Processor**
The Control Processor features an integral memory management unit that supports a dedicated 64 kbyte instruction cache and shares a single 32 kbyte data cache with the DSP. The Control Processor and DSP also include a single channel Data Management Application (DMA) controller with a 4 kbyte read ahead low-latency Dynamic Random Access Memory (DRAM) access port. The processors typically run at 400 MHz.
- **Switch matrix**
The Switch matrix provides an integrated data channel between the four GE MACs, the GPON MAC, the DSP, the control processor, and the other integrated elements such as flash memory, DRAM, and the local bus controller.

These ONTs can also interact with additional hardware components to support functionality not provided by the SoC technology.

1.10 G-241W-A standards compliance

G-241W-A indoor ONTs are compliant with the following standards:

- 802.11b support for maximum transmit power (EIRP) equal to or greater than 200 mW (23.01 dBm)
- 802.11g support for maximum transmit power (EIRP) equal to or greater than 100 mW (20 dBm)
- 802.11n support for wireless LAN interface
- G.711a/u, G-729 CODEC
- G.984 support GPON interface (framing)
- G.984.2 support for Amd1, class B+
- G984.5 support for optical and other transport network infrastructures
- Wi-Fi: WEP/WPA/WPA2, WPA-PSK/WPA2-PSK

1.11 G-241W-A special considerations

G-241W-A are package D ONTs.

G-241W-A indoor ONT considerations and limitations

Table 1-15 lists the considerations and limitations for Package D G-241W-A ONTs.

Table 1-15 G-241W-A ONT considerations and limitations

Considerations and limitations
The ONT pads packets to 104 as SoC limitation
Due to a Layer 3 packet processing limitation, the ONT can handle up to 220Mb/s (@ up to 72 bytes for Ethernet Frame sizes. Rates that exceed 220Mb/s with Ethernet frame sizes of less than 72 bytes will result in dropped frames at the ONT.
The uplink port of the SoC chipset is limited to 1 Gb/s
Some parameters are system level, not line level; for example, enable_caller_id, digitmap.
Most parameters can be configured in either OMCIv2 or XML. The OMCIv2 configuration values generally take precedence over the XML ones. Specifically, when voice parameters are configured using OMCIv2, attempting to overwrite the configuration using XML will have no effect. The release timer, rls-timer, needs to be configured in OMCIv2, because when it is not, the default OLT value will be applied, not the XML value.

Upgrade considerations and limitations

Existing ONTs that use 7342 ISAM FTTU releases older than R04.06.xx and R04.07.xx must be upgraded to use R04.00.10 software while assigned to a PON ID value smaller than 64. For this purpose, if split ratios larger than 1:64 are being deployed, you may choose to set aside the first PON ID as a staging point.

G-241W-A indoor ONTs support voice, video, and data services. These ONTs, which feature Wi-Fi technology, can also function as a residential gateway with layer 2 and layer 3 processing capabilities.

G-241W-A ONT supported modes

The G-241W-A ONT supports one of two modes at any given time. The supported modes are

- ONT
- Residential gateway

For more information, see [G-241W-A ONT supported features](#) in the [Configure a G-241W-A indoor ONT](#) chapter.

2 — *Install a G-241W-A indoor ONT*

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2.6 Procedure	2-4

2.1 Purpose

This chapter provides the steps to install a G-241W-A indoor ONT.

2.2 General

The steps listed in this chapter describe mounting and cabling for G-241W-A indoor ONTs.

2.3 Prerequisites

You need the following items before beginning the installation:

- all required cables

2.4 Recommended tools

You need the following tools for the installation:

- #2 Phillips screwdriver
- 1/4 in. (6 mm) flat blade screwdriver
- wire strippers
- fiber optic splicing tools
- RJ-45 cable plug crimp tool
- voltmeter or multimeter
- optical power meter
- drill and drill bits
- cable ties
- paper clip

2.5 Safety information

Read the following safety information before installing the unit.



Danger 1 — Hazardous electrical voltages and currents can cause serious physical harm or death. Always use insulated tools and follow proper safety precautions when connecting or disconnecting power circuits.

Danger 2 — Make sure all sources of power are turned off and have no live voltages present on feed lines or terminals. Use a voltmeter to measure for voltage before proceeding.

Danger 3 — Always contact the local utility company before connecting the enclosure to the utilities.



Warning — This equipment is ESD sensitive. Proper ESD protections should be used when removing the fiber access cover of the indoor ONT.



Caution — Keep indoor ONTs out of direct sunlight. Prolonged exposure to direct sunlight can damage the unit.



Note 1 — Observe the local and national laws and regulations that may be applicable to this installation.

Note 2 — Observe the following:

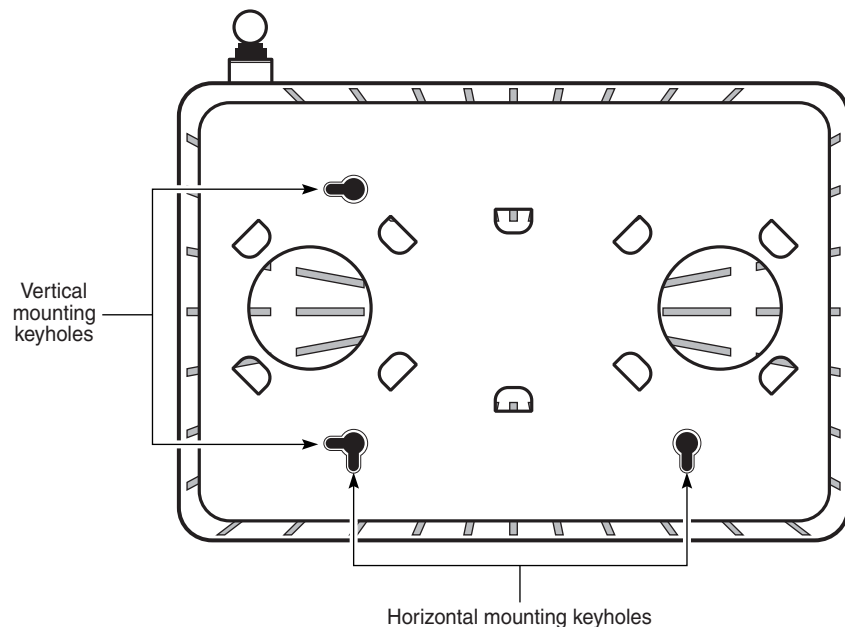
- The indoor ONT should be installed in accordance with the applicable requirements of the NEC or CEC. Local authorities and practices take precedent when there is conflict between the local standard and the NEC or CEC.
- The indoor ONT must be installed by qualified service personnel.
- Indoor ONTs must be installed with cables that are suitably rated and listed for indoor use.
- See the detailed specifications in the [G-241W-A unit data sheet](#) for the temperature ranges for these ONTs.

2.6 Procedure

Use this procedure to install a G-241W-A indoor ONT.

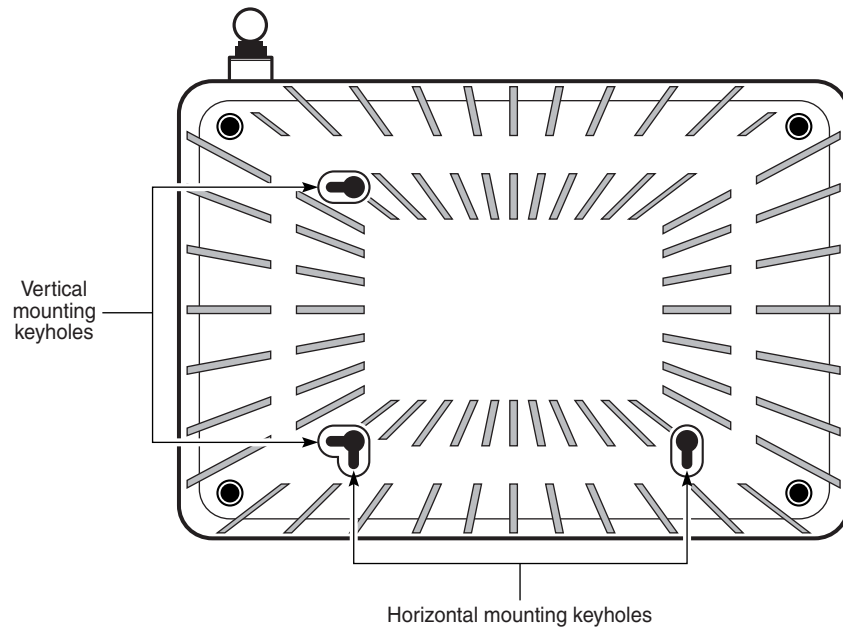
- 1** Place the indoor ONT unit:
 - a** On the flat surface, such as a desk.
 - i** Wrap the excess optic cable inside the fiber storage tray.
 - ii** Attach the fiber storage tray to the ONT.
 - iii** Place the ONT on the flat surface, horizontally resting on its four feet.
 - b** On a wall.
 - i** Determine whether to mount the G-241W-A indoor ONT in either the vertical or horizontal position. If possible, mount the ONT on a wall stud.
 - ii** Mark the wall with the location of the mounting holes shown in Figures 2-1 and 2-2. These holes should be the same distance apart as the distance between the centers of the keyholes on the ONT. Use the one of the two available fiber storage trays as a wall mounting template to indicate the location of the mounting holes on the wall.

Figure 2-1 Wall mounting keyholes of the G-241W-A indoor ONT with fiber storage tray attached



22441

Figure 2-2 Wall mounting keyholes of the G-241W-A indoor ONT without fiber storage tray attached



22443

- iii Attach the fiber storage tray to the wall by drilling the holes in the wall where the tray will be mounted and then drive the mounting screws into the holes.

Do not drive the mounting screws into the wall completely. Leave approximately 1/8 in. (6 mm) between the screw head and the wall surface.

- iv Wrap the optic cable around the spools in the fiber storage tray.
- v Attach the fiber storage tray to the wall by placing the screw heads of the mounting screws into the wall mounting holes, either vertical or horizontal, on the tray.
- vi Slide the ONT enclosure over the fiber storage tray at a forty-five degree angle and seat the ONT securely on the tray.

Aligning features molded into the fiber storage tray and ONT enclosure interlock allowing the ONT to seat on the tray.

- 2 Review the connection locations as shown in Figures 2-3 and 2-4.

Figure 2-3 G-241W-A indoor ONT connections

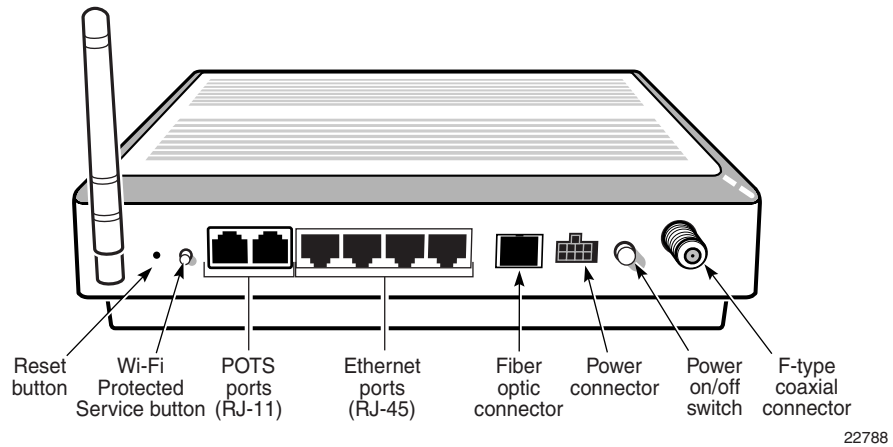
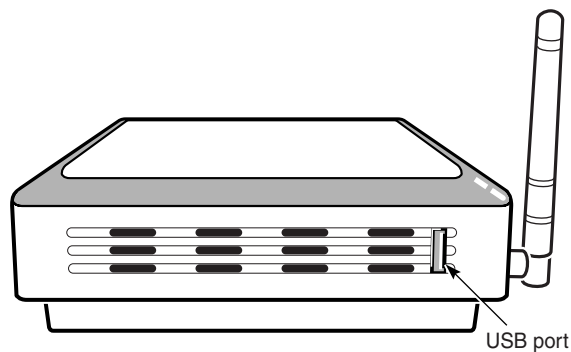


Figure 2-4 G-241W-A indoor ONT connections (USB host port)



- 3 Connect the Ethernet cables directly to the RJ-45 ports. See Figure 2-3 for the location of the RJ-45 ports.
- 4 Connect the POTS cables directly to the RJ-11 ports. See Figure 2-3 for the location of the RJ-11 ports.
- 5 If used, connect the coaxial cable to the F-type connector. See Figure 2-3 for the location of the F-type connector.



Danger — A shock hazard exists when working with the coaxial cable for the RF video connection. Wear protective gloves and take all necessary precautions to ensure personal safety.

**Note 1** — Observe the following:

- To comply with FCC standards, use either RG-6 or RG-59 coaxial cable. Also, proper attenuation must be inserted at the coaxial output to guarantee that at the end of any coaxial drop, every video signal is below 15.5 dBmV and audio signals are below 2.55 dBmV (per channel).
- You may need to install the 75-ohm coaxial F connector on the video cable.

Note 2 — Observe the following when connecting the F-type coaxial connector to the coaxial connector on the ONT:

- Fully tighten the F-type connector on the cable by hand before using a wrench to complete tightening (up to a maximum of an additional 1/8 turn). If using a torque wrench (as is recommended) to tighten the connector, the torque setting should be between a minimum of 20 in-lbs and a maximum of 40 in-lbs. The connector should be tight enough when the task is complete that it can not be unscrewed by hand.

- 6 Connect the SC/APC fiber optic cable directly to the ONT. See Figure 2-3 for location of the fiber optic connector.



Danger — Fiber cables transmit invisible laser light. To avoid eye damage or blindness, never look directly into fibers, connectors, or adapters.



Warning — Be careful to maintain a bend radius of no less than 1.5 in. (3.8 cm) when connecting the fiber optic cable. Too small of a bend radius in the cable can result in damage to the optic fiber.



Note — Fiber cable preparation varies depending on the type and size of the inside or outside plant fiber cable being spliced to the SC/APC fiber optic pigtail cable.

- 7 Install the power supply according to manufacturer specifications.
- 8 Connect the power cable with an 8-pin Molex connector to the power supply.
- 9 Connect the power cable with an 8-pin Molex connector to the ONT unit; see Figure 2-5 for the Molex pin alignment.



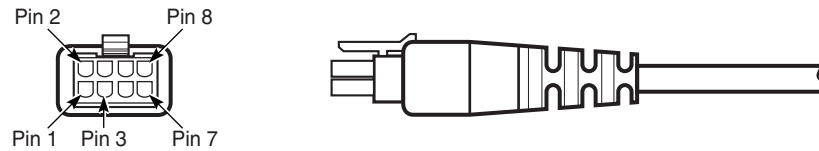
Warning — To avoid the possibility of damage to the pins on the power cable connector, carefully align the pins on the connector on the cable with the pin holes in the power connector on the ONT before making the connection.



Note — Observe the following:

- Only Pins 1, 2, and 7 in the Molex connector pin arrangement shown in Figure 2-5 are used with G-241W-A indoor ONTs.

Figure 2-5 Molex 8-pin connector



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- 10** Power up the ONT unit by using the on/off power switch; see Figure 2-3 for the location of the power switch.
- 11** If used, enable the Wi-Fi service, as described in [Configure a G-241W-A indoor ONT](#).
- 12** Verify the ONT LEDs, voltage status, and optical signal levels; see the *7368 Hardware and Cabling Installation Guide*.
- 13** Activate and test the services; see the *7368 Hardware and Cabling Installation Guide*.
- 14** If used, configure the SLID; see the *7368 ISAM ONT Configuration, Management, and Troubleshooting Guide* for more information.
- 15** If necessary, reset the ONT.
 - i** Access the Rest button. See Figure 2-3 for the location of the Reset button.
 - ii** Insert the end of a straightened paper clip or other narrow object into the hole in the Reset button to reset the ONT.
- 16** STOP. This procedure is complete.

3 — *Replace a G-241W-A indoor ONT*

3.1 Purpose	3-2
3.2 General	3-2
3.3 Prerequisites	3-2
3.4 Recommended tools	3-2
3.5 Safety information	3-3
3.6 Procedure	3-4

3.1 Purpose

This chapter provides the steps to replace a G-241W-A indoor ONT.

3.2 General

The steps listed in this chapter describe mounting and cabling for G-241W-A indoor ONTs.

3.3 Prerequisites

You need the following items before beginning the installation:

- all required cables

3.4 Recommended tools

You need the following tools for replacing the ONT:

- #2 Phillips screwdriver
- 1/4 in. (6 mm) flat blade screwdriver
- wire strippers
- fiber optic splicing tools
- RJ-45 cable plug crimp tool
- voltmeter or multimeter
- optical power meter
- drill and drill bits

3.5 Safety information

Read the following safety information before replacing the unit.



Danger 1 — Hazardous electrical voltages and currents can cause serious physical harm or death. Always use insulated tools and follow proper safety precautions when connecting or disconnecting power circuits.

Danger 2 — Make sure all sources of power are turned off and have no live voltages present on feed lines or terminals. Use a voltmeter to measure for voltage before proceeding.

Danger 3 — Always contact the local utility company before connecting the enclosure to the utilities.



Warning — This equipment is ESD sensitive. Proper ESD protections should be used when removing the fiber access cover of the indoor ONT.



Caution — Keep indoor ONTs out of direct sunlight. Prolonged exposure to direct sunlight can damage the unit.



Note 1 — Observe the local and national laws and regulations that may be applicable to this installation.

Note 2 — Observe the following:

- The indoor ONT should be installed in accordance with the applicable requirements of the NEC or CEC. Local authorities and practices take precedent when there is conflict between the local standard and the NEC or CEC.
- The indoor ONT must be installed by qualified service personnel.
- Indoor ONTs must be installed with cables that are suitably rated and listed for indoor use.
- See the detailed specifications in the [G-241W-A unit data sheet](#) for the ONT temperature ranges for these ONTs.

3.6 Procedure

Use this procedure to replace a G-241W-A indoor ONT.

- 1 Deactivate the ONT services at the P-OLT.

If you are using the SLID feature, this step is not required. The ONT and the services can remain in service (IS).

- i Use the RTRV-ONT command to verify the ONT status and the associated services. Record the serial number or the SLID of the ONT displayed in the command output.

Example:

```
RTRV-ONT: :ONT-1-1-1-1-1;
```

- ii If the ONT is in service, place the ONT in OOS state.

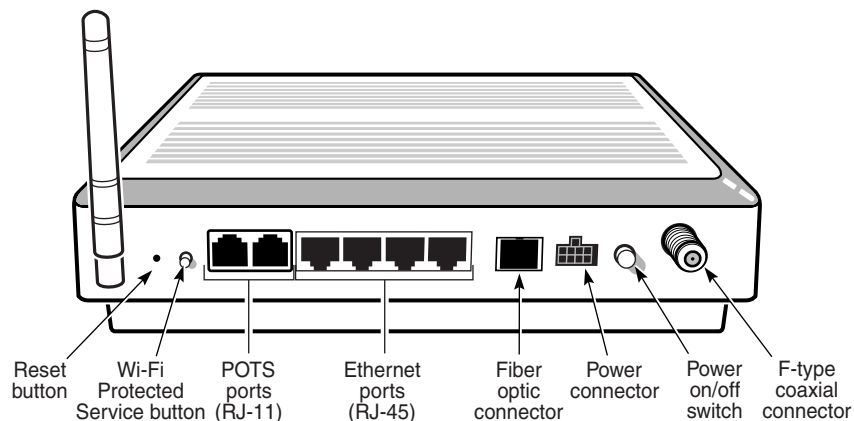
Example:

```
ED-ONT: :ONT-1-1-1-1-1;
```

- 2 If used, disable the Wi-Fi service, as described in [Configure a G-241W-A indoor ONT](#).
- 3 Power down the unit by using the on/off power switch; see Figure 3-1 for the location of the power button.
- 4 Disconnect the POTS, Ethernet and power and coaxial cables, as well as fiber optic cables from the ONT; see Figure 3-1 for the connector locations on G-241W-A indoor ONTs.

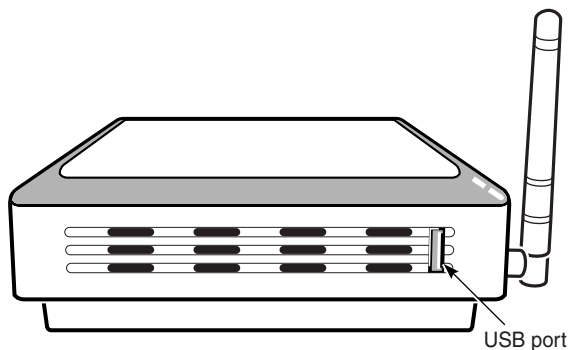
Attach the fiber dust cover to the end of the SC/APC connector.

Figure 3-1 G-241W-A ONT connections



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See Figure 3-2 for the location of the USB ports on the G-241W-A.

Figure 3-2 G-241W-A indoor ONT connections (USB host port)

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- 5 Replace the ONT with a new unit:
 - a On a flat surface, such as a desk, substitute a replacement ONT for the old ONT.
 - b On a wall.
 - i Slide the old ONT off of the mounting screws until the ONT is free of the wall.
 - ii Slide the wall mount holes on the ONT enclosure or fiber storage tray of the new ONT over the mounting screws until it is securely seated.
- 6 Connect the Ethernet cables directly to the RJ-45 ports; see Figure 3-1 for the location of the RJ-45 ports.
- 7 Connect the POTS cables directly to the RJ-11 ports; see Figure 3-1 for the location of the RJ-11 ports.
- 8 If used, connect the coaxial cable to the F-type connector. See Figure 3-1 for location of the F-type connector.



Danger — A shock hazard exists when working with the coaxial cable for the RF video connection. Wear protective gloves and take all necessary precautions to ensure personal safety.



Note 1 — Observe the following:

- To comply with FCC standards, use either RG-6 or RG-59 coaxial cable. Also, proper attenuation must be inserted at the coaxial output to guarantee that at the end of any coaxial drop, every video signal is below 15.5 dBmV and audio signals are below 2.55 dBmV (per channel).
- You may need to install the 75-ohm coaxial F connector on the video cable.

Note 2 — Observe the following when connecting the F-type coaxial connector to the coaxial connector on the ONT:

- Fully tighten the F-type connector on the cable by hand before using a wrench to complete tightening (up to a maximum of an additional 1/8 turn). If using a torque wrench (as is recommended) to tighten the connector, the torque setting should be between a minimum of 20 in-lbs and a maximum of 40 in-lbs. The connector should be tight enough when the task is complete that it can not be unscrewed by hand.
- 9 If required, have approved service personnel who are trained to work with optic fiber clean the fiber optic connection. See the *7368 ISAM ONT Configuration, Management, and Troubleshooting Guide* for more information about fiber optic handling, inspection, and cleaning.



Danger — Fiber optic cables transmit invisible laser light. To avoid eye damage or blindness, never look directly into fibers, connectors, or adapters.

- 10 Connect the SC/APC fiber optic cable directly to the SC/APC adapter; see Figure 3-1 for the location of the SC/APC adapter.



Danger — Fiber cables transmit invisible laser light. To avoid eye damage or blindness, never look directly into fibers, connectors, or adapters.



Warning — Be careful to maintain a bend radius of no less than 1.5 in. (3.8 cm) when connecting the fiber optic cable. Too small of a bend radius in the cable can result in damage to the optic fiber.



Note — Fiber cable preparation varies depending on the type and size of the inside or outside plant fiber cable being spliced to the SC/APC fiber optic pigtail cable.

- 11 Install the power supply according to manufacturer specifications.
- 12 Connect the power cable with an 8-pin Molex connector to the power supply.

- 13** Connect the power cable with an 8-pin Molex connector to the ONT unit; see Figure 3-3 for the Molex pin alignment.



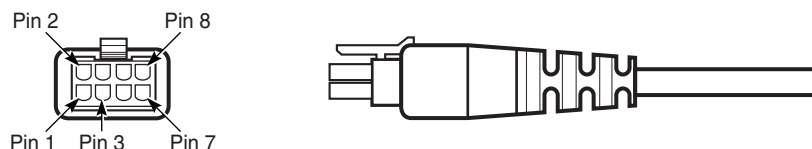
Warning — To avoid the possibility of damage to the pins on the power cable connector, carefully align the pins on the connector on the cable with the pin holes in the power connector on the ONT before making the connection.



Note — Observe the following:

- Only Pins 1, 2, and 7 in the Molex connector arrangement shown in Figure 3-3 are used with the G-241W-A indoor ONT.

Figure 3-3 Molex 8-pin connector



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- 14** Power up the unit by using the on/off power switch; see Figure 3-1 for the location of the power switch.
- 15** If used, enable the Wi-Fi service, as described in [Configure a G-241W-A indoor ONT](#)
- 16** If used, configure the SLID; see the *7368 ISAM ONT Configuration, Management, and Troubleshooting Guide* for more information.



Note — A new SLID or the old SLID may be used with the replacement ONT. If a new SLID is used, the new SLID must also be programmed at the P-OLT using TL1 or a network manager. If the old SLID is used, no changes need to be made at the P-OLT; see the operations and maintenance documentation for the OLT for more details.

- 17** Verify the ONT LEDs, voltage status, and optical signal levels; see the *7368 Hardware and Cabling Installation Guide*.
- 18** Activate and test the services; see the *7368 Hardware and Cabling Installation Guide*.
- 19** If necessary, reset the ONT.
- Access the Rest button. See Figure 3-1 for the location of the Reset button.
 - Insert the end of a straightened paper clip or other narrow object into the hole in the Reset button to reset the ONT.
- 20** STOP. This procedure is complete.

4 — *Configure a G-241W-A indoor ONT*

- 4.1 General 4-2**
- 4.2 HGU mode GUI configuration 4-2**
- 4.3 SFU mode GUI configuration 4-42**
- 4.4 Operator ID 4-47**

4.1 General

Please refer to the configuration information provided with your OLT for the software configuration procedure for a G-241W-A ONT.

For HTTP configuration procedures, please refer to the *7368 ISAM ONT Configuration, Management, and Troubleshooting Guide*.

4.2 HGU mode GUI configuration

Use the procedures below to use the web-based GUI for the G-241W-A in HGU mode. This mode is preset at delivery.

A home gateway unit (HGU) is a home networking device, used as a gateway to connect devices in the home through fiber to the Internet. An HGU provides a variety of features for the home network including routing and firewall capability. By using the HGU, users can connect all smart equipment in their home, including personal computers, set-top boxes, mobile phones, and other consumer electronics devices, to the Internet.

Login

Use the procedure below to log in to the web-based GUI for the G-241W-A.

Procedure 4-1 Login to web-based GUI

- 1 Open a web browser and enter the IP address of the ONT in the address bar.

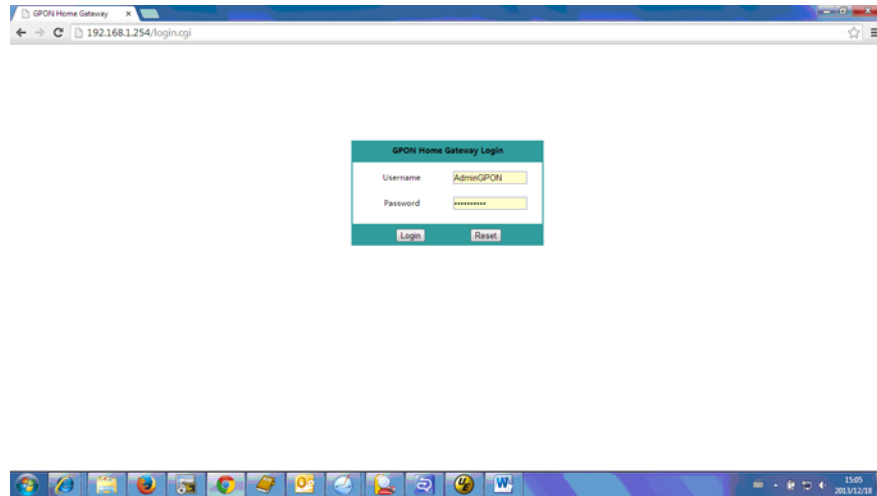
The login window appears.

The default gateway IP address is `http://192.168.1.254`. You can connect to this IP address using your web browser after connecting your PC to one of Ethernet ports of the ONT. The static IP address of your PC must be in the same subnet as the ONT.

- 2 Enter your username and password in the Log in window, as shown in Figure 4-1.

The default username and password are printed on the ONT. The default user name is `userAdmin`. The default superuser name is `adminGPON`. Contact Alcatel-Lucent for the superuser password.

Figure 4-1 Web login window



Caution — If you reset the router to recover the default username and password, all other router configuration settings will also be restored to their factory default values.



Note — If you forget the current username and password, press the reset button for 5 s and the default values for the username and password will be recovered at startup.

- 3 Click Login.
- 4 STOP. This procedure is complete.

Device and connection status

G-241W-A ONTs support the retrieval of a variety of device and connection information, including:

- device information
- LAN status
- WAN status
- WAN status IPv6
- Home networking information
- Optics module status
- Voice information

Procedure 4-2 Device information retrieval

- 1 Select Status > Device Information from the top-level menu in the GPON Home Gateway window, as shown in Figure 4-2.

Figure 4-2 Device Information window

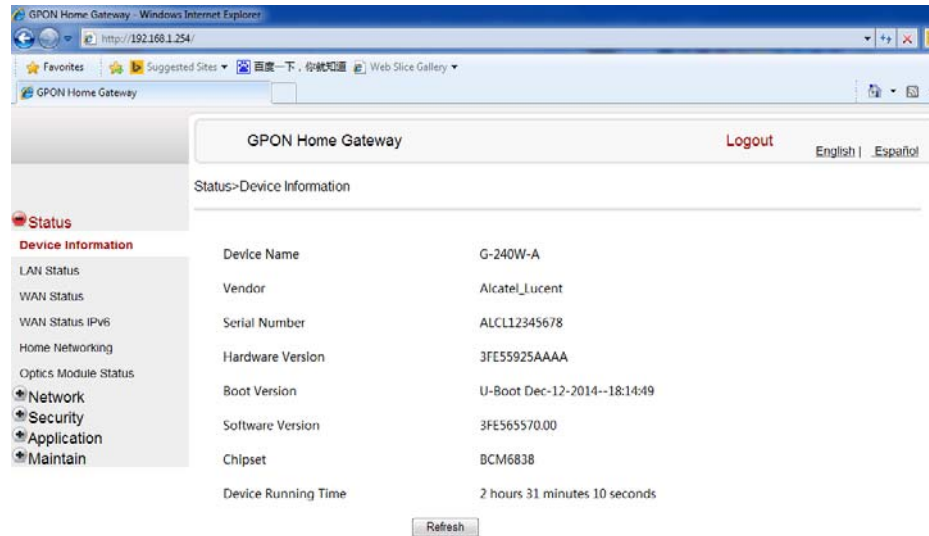


Table 4-1 describes the fields in the Device Information window.

Table 4-1 Device Information parameters

Field	Description
Device Name	Name on the ONT
Vendor	Name of the vendor
Serial Number	Serial number of the ONT
Hardware version	Hardware version of the ONT
Boot version	Boot version of the ONT
Software version	Software version of the ONT
Chipset	Chipset of the ONT
Device Running Time	Amount of time the device has run since last reset in hours, minutes, and seconds

- 2 Click Refresh to update the displayed information.
- 3 STOP. This procedure is complete.

Procedure 4-3 LAN status retrieval

- 1 Select Status > LAN Status from the top-level menu in the GPON Home Gateway window, as shown in Figure 4-3.

Figure 4-3 LAN status window

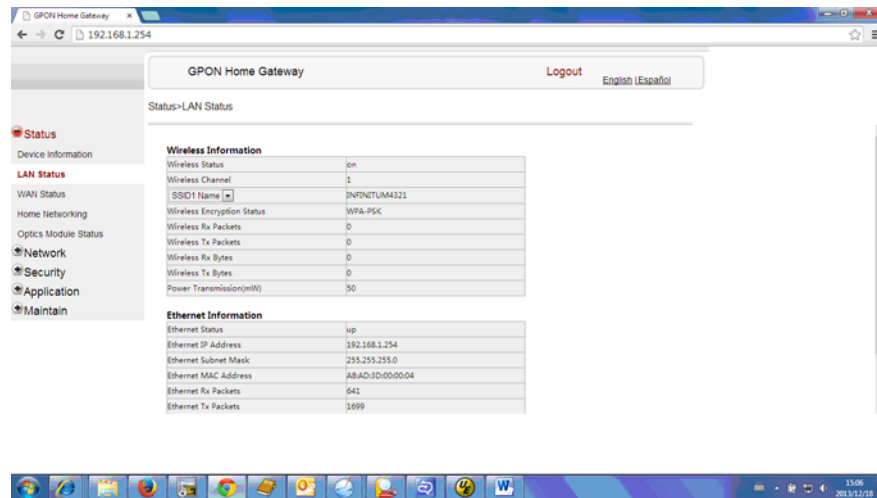


Table 4-2 describes the fields in the LAN status window.

Table 4-2 LAN status parameters

Field	Description
Wireless Information	
Wireless Status	Indicates whether the wireless is on or off
Wireless Channel	Wireless channel number
SSID Name	Name of each SSID
Wireless Encryption Status	Encryption type used on the wireless connection
Wireless Rx Packets	Number of packets received on the wireless connection
Wireless Tx Packets	Number of packets transmitted on the wireless connection
Wireless Rx Bytes	Number of bytes received on the wireless connection
Wireless Tx Bytes	Number of bytes transmitted on the wireless connection
Power Transmission (mW)	Power of the wireless transmission, in mW
Ethernet Information	
Ethernet Status	Indicates whether the Ethernet connection is on or off
Ethernet IP Address	IP address of the Ethernet connection

(1 of 2)

Field	Description
Ethernet Subnet Mask	Subnet Mask of the Ethernet connection
Ethernet MAC Address	MAC address of the Ethernet connection
Ethernet Rx Packets	Number of packets received on the Ethernet connection
Ethernet Tx Packets	Number of packets transmitted on the Ethernet connection
Ethernet Rx Bytes	Number of bytes received on the Ethernet connection
Ethernet Tx Bytes	Number of bytes transmitted on the Ethernet connection

(2 of 2)

- 2 Click Refresh to update the displayed information.
- 3 STOP. This procedure is complete.

Procedure 4-4 WAN status retrieval

- 1 Select Status > WAN Status from the top-level menu in the GPON Home Gateway window, as shown in Figure 4-4.

Figure 4-4 WAN status window

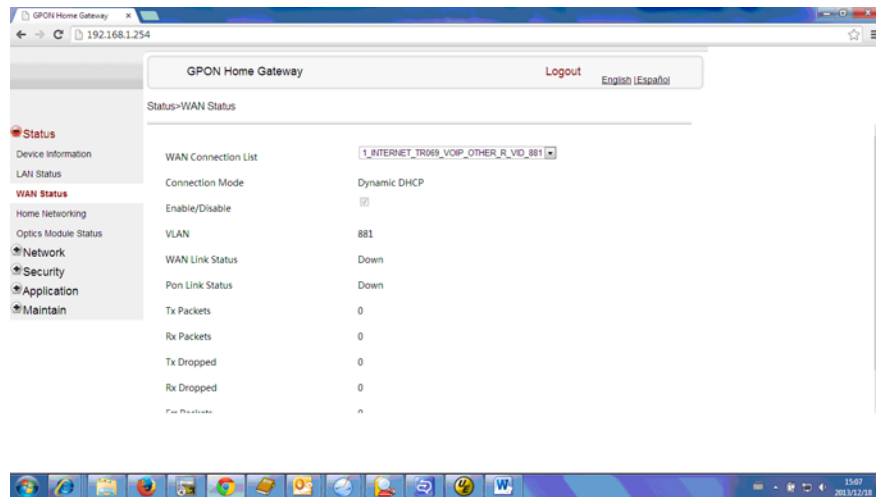


Table 4-3 describes the fields in the WAN status window.

Table 4-3 WAN status parameters

Field	Description
WAN connection list	Drop-down menu listing all WAN connections. The connection shown is the connection for which WAN status will be shown.
Connection Mode	Connection mode of the WAN connection
Enable/Disable	Select this checkbox to enable the WAN connection
VLAN	VLAN ID
WAN Link Status	Whether the WAN link is up or down
Pon Link Status	Whether the PON link is up or down
Tx Packets	Number of packets transmitted on the WAN connection
Rx Packets	Number of packets received on the WAN connection
Tx Dropped	Number of packets dropped on the transmit WAN connection
Rx Dropped	Number of packets dropped on the receive WAN connection
Err Packets	Number of errored packets on the WAN connection

- 2 Click Refresh to update the displayed information.
- 3 STOP. This procedure is complete.

Procedure 4-5 WAN status IPv6 retrieval

- 1 Select Status > WAN Status IPv6 from the top-level menu in the GPON Home Gateway window, as shown in Figure 4-5.

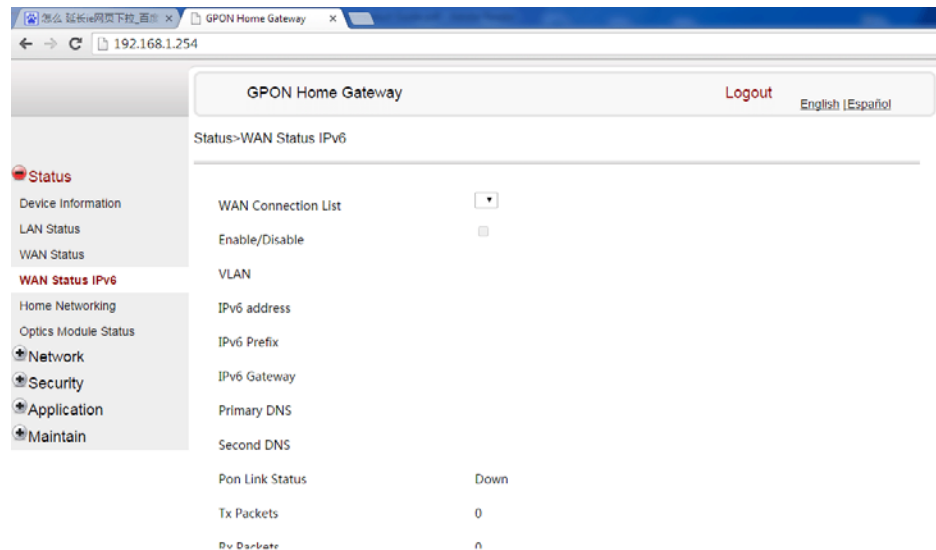
Figure 4-5 WAN status IPv6 window

Table 4-4 describes the fields in the WAN status IPv6 window.

Table 4-4 WAN status IPv6 parameters

Field	Description
WAN connection list	Drop-down menu listing all WAN connections. The connection shown is the connection for which WAN status will be shown.
Enable/Disable	Select this checkbox to enable the WAN connection
VLAN	VLAN ID
IPv6 Address	IPv6 Address that identifies the device and its location
IPv6 Prefix	IPv6 prefix
IPv6 Gateway	IPv6 gateway address
Primary DNS	Primary Domain Name Server
Second DNS	Secondary Domain Name Server
Pon Link Status	Whether the PON link is up or down
Tx Packets	Number of packets transmitted on the WAN connection
Rx Packets	Number of packets received on the WAN connection
Tx Dropped	Number of packets dropped on the transmit WAN connection
Rx Dropped	Number of packets dropped on the receive WAN connection
Err Packets	Number of errored packets on the WAN connection

- 2** Click Refresh to update the displayed information.
 - 3** STOP. This procedure is complete.
-

Procedure 4-6 Home networking information retrieval

- 1 Select Status > Home Networking from the top-level menu in the GPON Home Gateway window, as shown in Figure 4-6.

Figure 4-6 Home networking information window

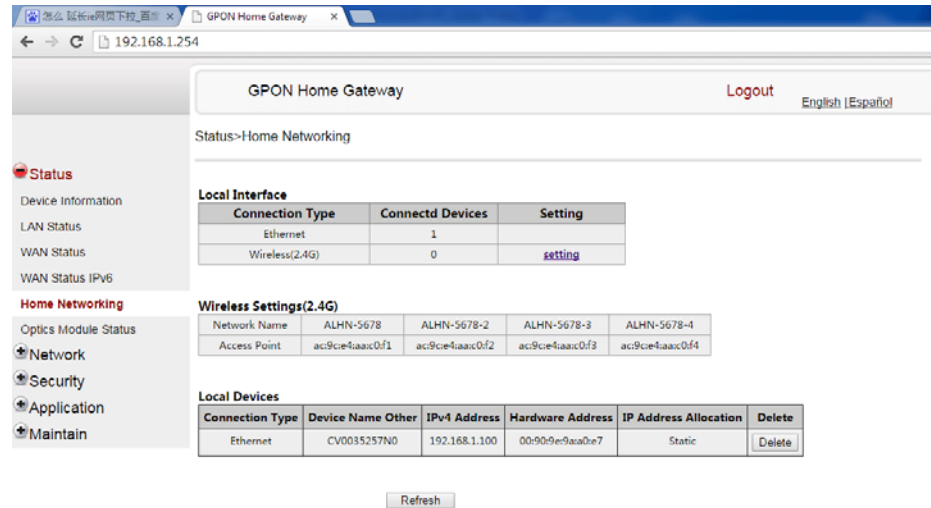


Table 4-5 describes the fields in the Home networking window.

Table 4-5 Home networking parameters

Field	Description
Local Interface	
Ethernet	Table displays the number of Ethernet connections and their settings
Wireless (2.4G)	Table displays the number of wireless connections and their settings
Wireless Settings (2.4G)	
Network Name	Name of the wireless network
Access Point	Hexadecimal address of the wireless access point
Local Devices	
Table entry	Each entry indicates the connection type, device name, IPv4 address, hardware address, and IP address allocation of each connected local device.

- 2 Click Delete to delete a particular local device connection.
- 3 Click Refresh to update the displayed information.
- 4 STOP. This procedure is complete.

Procedure 4-7 Optics module status retrieval

- 1 Select Status > Optics Module Status from the top-level menu in the GPON Home Gateway window, as shown in Figure 4-7.

Figure 4-7 Optics module status window

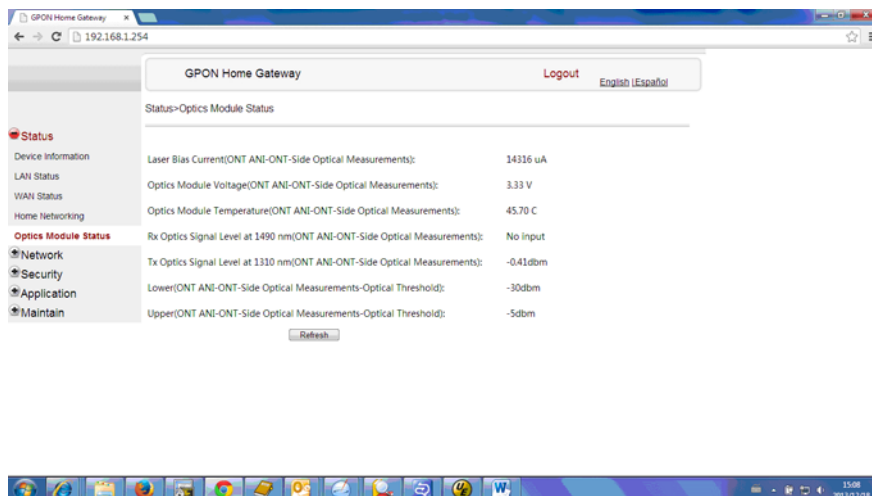


Table 4-6 describes the fields in the Optics module status window.

Table 4-6 Optics module status parameters

Field	Description
Laser Bias Current (ONT ANI-ONT-Side Optical Measurements)	Laser bias current, measured in uA
Optics Module Voltage (ONT ANI-ONT-Side Optical Measurements)	Optics module voltage, measured in V
Optics Module Temperature (ONT ANI-ONT-Side Optical Measurements)	Optics module temperature, measured in C
Rx Optics Signal Level at 1490 nm (ONT ANI-ONT-Side Optical Measurements)	Received optics signal level at 1490 nm, measured in dBm
Tx Optics Signal Level at 1310 nm (ONT ANI-ONT-Side Optical Measurements)	Transmitted optics signal level at 1310 nm, measured in dBm
Lower (ONT ANI-ONT-Side Optical Measurements-Optical Threshold)	Lower optical threshold, measured in dBm
Upper (ONT ANI-ONT-Side Optical Measurements-Optical Threshold)	Lower optical threshold, measured in dBm

- 2 Click Refresh to update the displayed information.
- 3 STOP. This procedure is complete.

Procedure 4-8 Voice information retrieval

- 1 Select Status > Voice Information from the top-level menu in the GPON Home Gateway window, as shown in Figure 4-8.

Figure 4-8 Voice Information window

Table 4-7 describes the fields in the Voice Information window.

Table 4-7 Voice Information parameters

Field	Description
POTS 1 Registration Status	Status of POTS port 1: registered or unregistered
POTS 2 Registration Status	Status of POTS port 2: registered or unregistered
POTS 1 Line State	State of POTS line 1: IDLE, Off Hook, or On Hook
POTS 2 Line State	State of POTS line 2: IDLE, Off Hook, or On Hook
Softswitch ⁽¹⁾	Proxy IP address; blank if the line is not registered
Telephone line 1 phone number ⁽¹⁾	Phone number configured for telephone line 1
Telephone line 2 phone number ⁽¹⁾	Phone number configured for telephone line 2

Notes

- ⁽¹⁾ This field is only visible at the adminGPON level; it is not visible at the userAdmin level.

- 2 Click Refresh to update the displayed information.
- 3 STOP. This procedure is complete.

Network configuration

G-241W-A ONTs support network configuration, including:

- LAN
- LAN IPv6
- WAN
- WiFi
- Routing
- DNS
- TR-069

Procedure 4-9 LAN networking configuration

- 1 Select Network > LAN from the top-level menu in the GPON Home Gateway window, as shown in Figure 4-9.

Figure 4-9 LAN network window

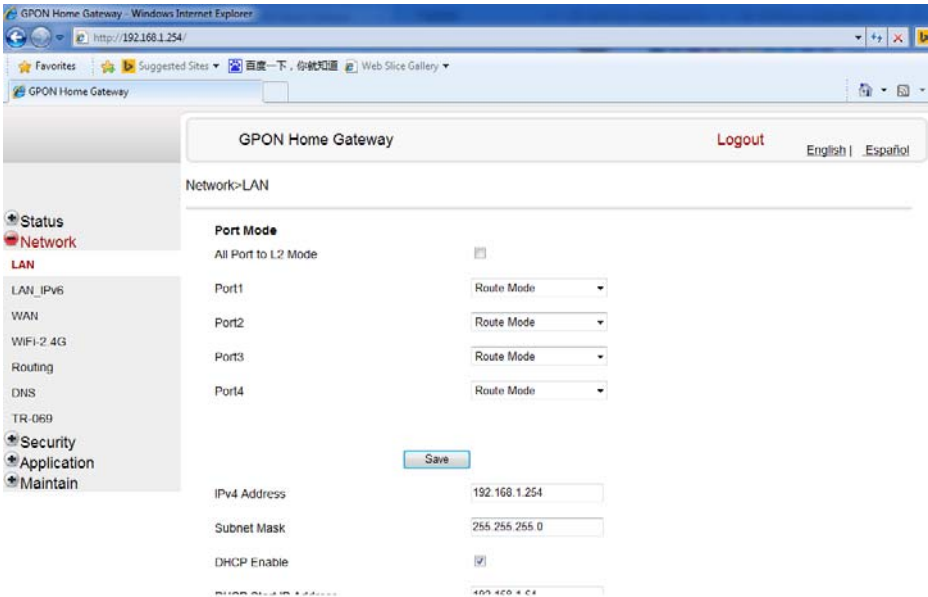


Table 4-8 describes the fields in the LAN network window.

Table 4-8 LAN network parameters

Field	Description
Port Mode: All Port to L2 Mode	Select this checkbox to set all ports to L2 mode
Port Mode Port 1 - 4	Drop-down port mode for each port: Route mode or bridge mode
IPv4 Address	IP Address of the ONT

(1 of 2)

Field	Description
Subnet Mask	Subnet mask of the ONT
DHCP enable	Select this checkbox to enable DHCP
DHCP Start IP Address	Starting DHCP IP address
DHCP End IP Address	Ending DHCP IP address
DHCP Lease Time	DHCP lease time (in min)
Bind MAC Address	MAC address to associate to the LAN
Bind IP Address	IP address to associate to the bound MAC address

(2 of 2)

- 2** Select the mode for each port.
 - 3** Click Save.
 - 4** Enter the DHCP configuration information.
 - 5** Click Save.
 - 6** Bind a MAC address to the LAN by entering the MAC and IP addresses and then clicking Add. Repeat for all MAC addresses to be bound.
 - 7** STOP. This procedure is complete.
-

Procedure 4-10 LAN IPv6 networking configuration

- 1 Select Network > LAN_IPv6 from the top-level menu in the GPON Home Gateway window, as shown in Figure 4-10.

Figure 4-10 LAN IPv6 network window

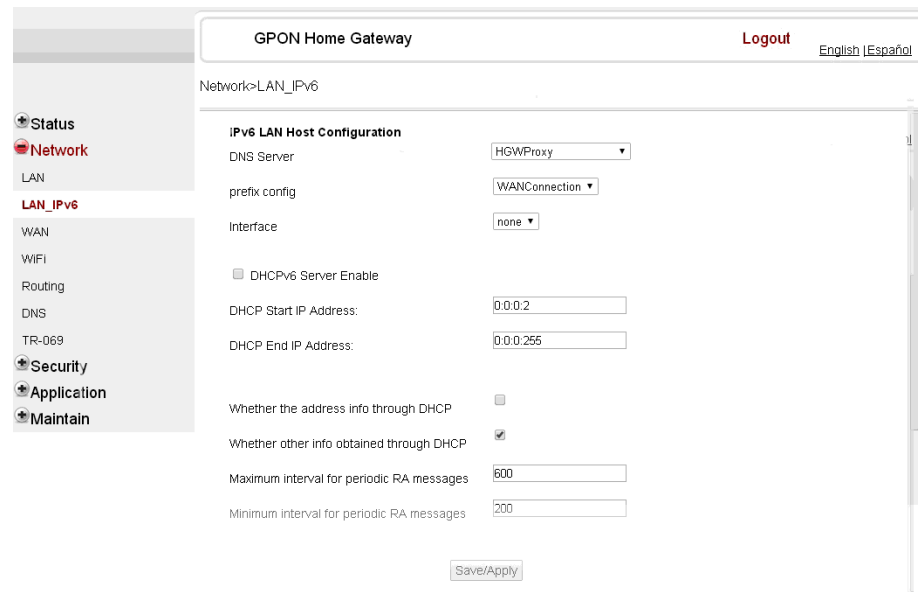


Table 4-9 describes the fields in the LAN IPv6 network window.

Table 4-9 LAN IPv6 network parameters

Field	Description
DNS Server	Choose a DNS server from the drop-down menu.
prefix config	Choose a prefix config option from the drop-down menu, either WANConnection (prefix will be obtained from the WAN) or Static (enables you to enter the prefix).
prefix	This field appears if you selected the “Static” option for the “prefix config” field. Type a connection.
Interface	This field appears if you selected the Wan Connection option for the “prefix config” field. Choose a WAN connection interface from the drop-down menu.
DHCPv6 Server Enable	Select this checkbox to enable DHCP IPv6 server.
DHCP Start IP Address	Enter the starting DHCP IP address.
DHCP End IP Address	Enter the ending DHCP IP address.
Whether the address info through DCHP	Select this checkbox to enable address information retrieval through DHCP.

(1 of 2)

Field	Description
Whether other info obtained through DHCP	Select this checkbox to enable retrieval of other information through DHCP.
Maximum interval for periodic RA messages	Enter the maximum interval (in seconds) for periodic Router Advertisement messages. The interval range is from 4 to 1800.
Minimum interval for periodic RA messages	Enter the minimum interval (in seconds) for periodic Router Advertisement messages. The interval range is from 4 to 1800.

(2 of 2)

- 2 Choose a DNS server, prefix config, and interface.
- 3 Select or enter the DHCP configuration information.
- 4 Enter the maximum and minimum intervals for RA messages.
- 5 Click Save/Apply.
- 6 STOP. This procedure is complete.

Procedure 4-11 WAN networking configuration

- 1 Select Network > WAN from the top-level menu in the GPON Home Gateway window, as shown in Figure 4-11.

Figure 4-11 WAN network window

Table 4-10 describes the fields in the WAN network window.

Table 4-10 WAN network parameters

Field	Description
WAN Connection List	Choose a WAN connection from the drop-down menu to set the connection parameters
Connection Type	Select a connection type: IPoE or PPPoE
IP Mode	Choose an IP mode from the drop-down menu: IPv4 or IPv6
Enable/Disable	Select this checkbox to enable the WAN connection
NAT	Select this checkbox to enable NAT
Service	Select the checkboxes to enable service types for this connection
Enable VLAN	Select this checkbox to enable VLAN
VLAN ID	Enter the VLAN ID
VLAN PRI	Enter the VLAN PRI
WAN IP Mode	Choose an IP mode from the drop-down menu
Connection Trigger	Choose a connection type from the drop-down menu
Username	Enter the username
Password	Enter the password
Keep Alive Time	Enter the Keep Alive Time (from 5 to 60 seconds)

- 2** Configure a specific WAN connection.
 - 3** Click Save.
 - 4** STOP. This procedure is complete.
-

Procedure 4-12 WiFi networking configuration

- 1 Select Network > WiFi from the top-level menu in the GPON Home Gateway window, as shown in Figure 4-12.

Figure 4-12 WiFi network window

Table 4-11 describes the fields in the WiFi network window.

Table 4-11 WiFi network parameters

Field	Description
Enable	Select this checkbox to enable WiFi
Mode	Choose a wi-fi mode from the drop-down menu: • auto (b/g/n) • b • g • n • b/g
Bandwidth	Choose a channel from the drop-down menu or choose Auto to have the channel automatically assigned
Channel	Choose a bandwidth option from the drop-down menu
Transmitting Power	Choose the percentage transmitting power from the drop-down menu
SSID Select	Choose the SSID from the drop-down menu
SSID Name	Enter the SSID name
Enable SSID	Enable or disable SSID from this drop-down menu
SSID Broadcast	Enable or disable SSID broadcast from this drop-down menu
Port Mode	Choose a port mode from the drop-down menu: • Route • Bridge

(1 of 2)

Field	Description
Encrypt Mode	Choose an encryption mode from the drop-down menu: • OPEN • WEP • WPA/WPA2 Personal • WPA/WPA2 Enterprise
WPA Version	Choose a WPA version from the drop-down menu: • WPA1 • WPA2 • WPA1/WPA2
WPA Encryption Mode	Choose a WPA encryption mode from the drop-down menu: • TKIP • AES • TKIP/AES
WPA Key	Enter the WPA key
Enable WPS	Enable or disable WPS from this drop-down menu
WPS Mode	Choose a WPS mode from the drop-down menu: • PBC • PIN
PIN Code Number	Enter the WPS PIN

(2 of 2)

- 2 Configure the WiFi connection.
 - 3 If you have enabled and configured WPS, click WPS connect.
 - 4 Click Save.
 - 5 STOP. This procedure is complete.
-

Procedure 4-13 Routing configuration

- 1 Select Network > Routing from the top-level menu in the GPON Home Gateway window, as shown in Figure 4-13.

Figure 4-13 Routing network window

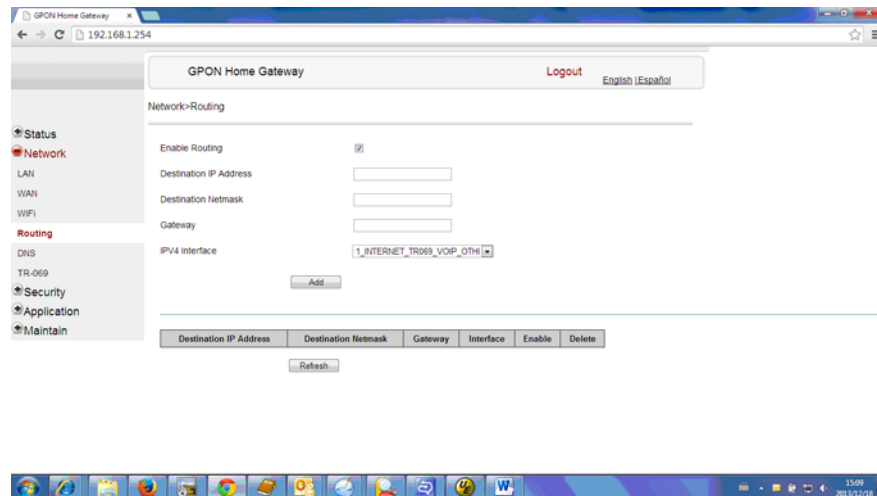


Table 4-12 describes the fields in the Routing network window.

Table 4-12 Routing network parameters

Field	Description
Enable Routing	Select this checkbox to enable routing
Destination IP Address	Enter the destination IP address
Destination Netmask	Enter the destination network mask
Gateway	Enter the gateway address
IPv4 Interface	Choose a WAN connection previously created in the WAN network window from the drop-down menu

- 2 Enter the routing information.
- 3 Click Add.
- 4 STOP. This procedure is complete.

Procedure 4-14 DNS configuration

- 1 Select Network > DNS from the top-level menu in the GPON Home Gateway window, as shown in Figure 4-14.

Figure 4-14 DNS network window

GPON Home Gateway

Logout

English (Español)

Network>DNS

Domain Name

IPv4 Address

Add

Origin Domain

New Domain

Add

Domain Name	New Domain	IPv4 Address	Delete
gpon-infinitum.alu.com		192.168.1.254	Delete

Origin Domain	New Domain	Delete
dsldvice.lan	dsldvice.lan	Delete

Refresh

Table 4-13 describes the fields in the DNS network window.

Table 4-13 DNS network parameters

Field	Description
Domain Name	Domain name
IPv4 Address	Domain IP address
Origin Domain	Origin domain name
New Domain	New domain name

- 2 Enter the domain name and IP address and click Add.
- 3 If required, associate an origin domain with a new domain, click Add.
- 4 STOP. This procedure is complete.

Procedure 4-15 TR-069 configuration

- 1 Select Network > TR-069 from the top-level menu in the GPON Home Gateway window, as shown in Figure 4-15.

Figure 4-15 TR-069 network window

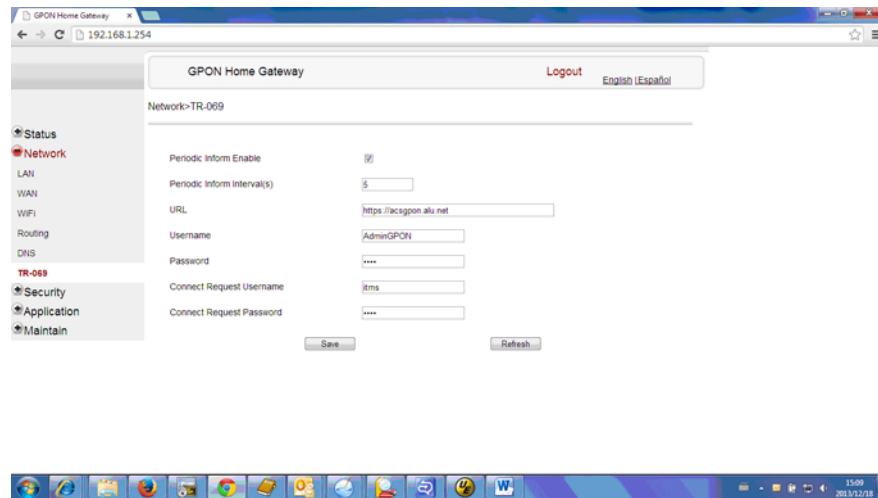


Table 4-14 describes the fields in the TR-069 network window.

Table 4-14 TR-069 network parameters

Field	Description
Periodic Inform Enable	Select this checkbox to enable periodic inform updates
Periodic Inform Interval(s)	Time between periodic inform updates, in seconds
URL	URL of the auto-configuration server
Username	Username used to log in to the ONT
Password	Password used to log in to the ONT
Connect Request Username	Username used to log in to the auto-configuration server
Connect Request Password	Password used to log in to the auto-configuration server

- 2 Configure TR-069 by entering the required information.
- 3 Click Save.
- 4 STOP. This procedure is complete.

Security configuration

G-241W-A ONTs support security configuration, including:

- firewall
- MAC filter
- IP filter
- URL filter
- DMZ and ALG

Procedure 4-16 Firewall configuration

- 1 Select Security > Firewall from the top-level menu in the GPON Home Gateway window, as shown in Figure 4-16.

Figure 4-16 Firewall window

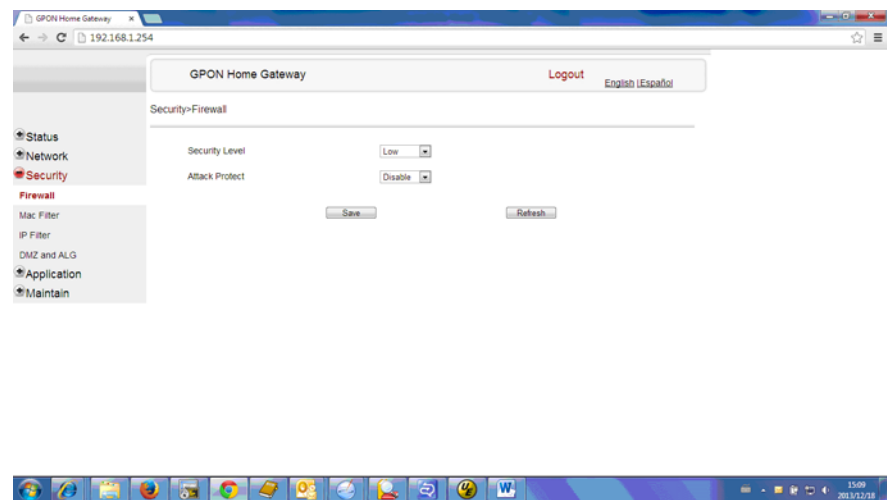


Table 4-15 describes the fields in the firewall window.

Table 4-15 Firewall parameters

Field	Description
Security level	Choose the security level from the drop-down menu
Attack Protect	Enable or disable attack protect from the drop-down menu

- 2 Configure the firewall.
- 3 Click Save.
- 4 STOP. This procedure is complete.

Procedure 4-17 MAC filter configuration

- 1 Select Security > Mac Filter from the top-level menu in the GPON Home Gateway window, as shown in Figure 4-17.

Figure 4-17 MAC filter window

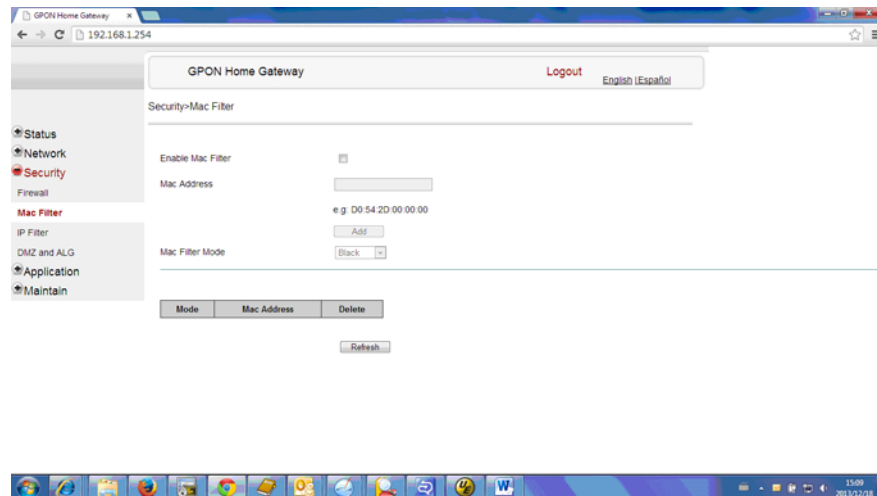


Table 4-16 describes the fields in the MAC filter window.

Table 4-16 MAC filter parameters

Field	Description
Enable MAC filter	Select this checkbox to enable the MAC filter
Mac Address	MAC address
Mac Filter Mode	Choose the MAC filter mode from this drop-down menu

- 2 Configure a MAC filter.
- 3 Click Add.
- 4 STOP. This procedure is complete.

Procedure 4-18 IP filter configuration

- 1 Select Security > IP filter from the top-level menu in the GPON Home Gateway window, as shown in Figure 4-18.

Figure 4-18 IP filter window

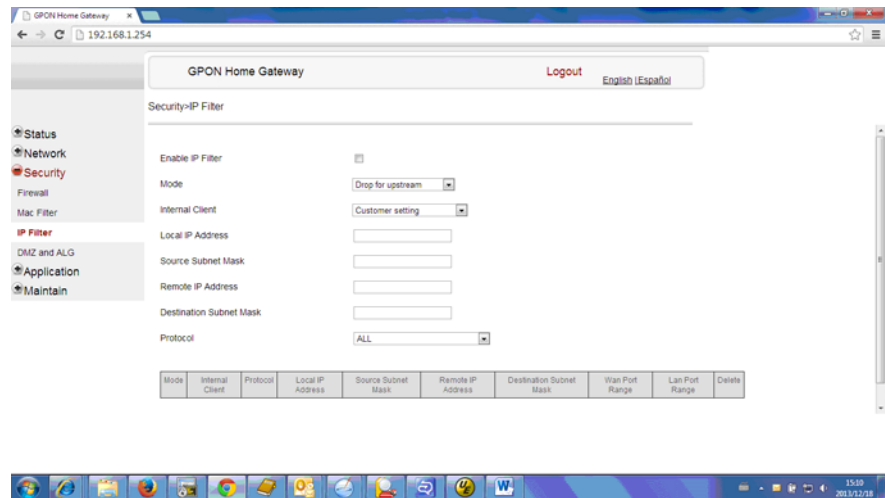


Table 4-17 describes the fields in the IP filter window.

Table 4-17 IP filter parameters

Field	Description
Enable IP Filter	Select this checkbox to enable an IP filter
Mode	Choose an IP filter mode from the drop-down menu: - Drop for upstream - Drop for downstream
Internal Client	Choose an internal client from the drop-down menu: - Customer setting - uses the IP address input below - IP - uses the connecting devices' IP to the ONT
Local IP Address	Local IP address
Source Subnet Mask	Source subnet mask
Remote IP Address	Remote IP address
Destination Subnet Mask	Destination subnet mask
Protocol	Choose an application protocol or all from the drop-down menu

- 2 Configure the IP filter.

- 3 Click Add.
- 4 STOP. This procedure is complete.

Procedure 4-19 URL filter configuration

- 1 Select Security > URL Filter from the top-level menu in the GPON Home Gateway window, as shown in Figure 4-19.

Figure 4-19 URL Filter window

Table 4-18 describes the fields in the URL Filter window.

Table 4-18 URL Filter parameters

Field	Description
Enable URL filter	Select the checkbox to enable the URL filter
URL filter type	Select the checkbox for Exclude URL or Include URL
URL Address	Type the URL address
Port Number	Type the port number; the default is 80

- 2 Configure the URL Filter.
- 3 Click Add Filter.
- 4 STOP. This procedure is complete.

Procedure 4-20 DMZ and ALG configuration

- 1 Select Security > DMZ and ALG from the top-level menu in the GPON Home Gateway window, as shown in Figure 4-20.

Figure 4-20 DMZ and ALG window

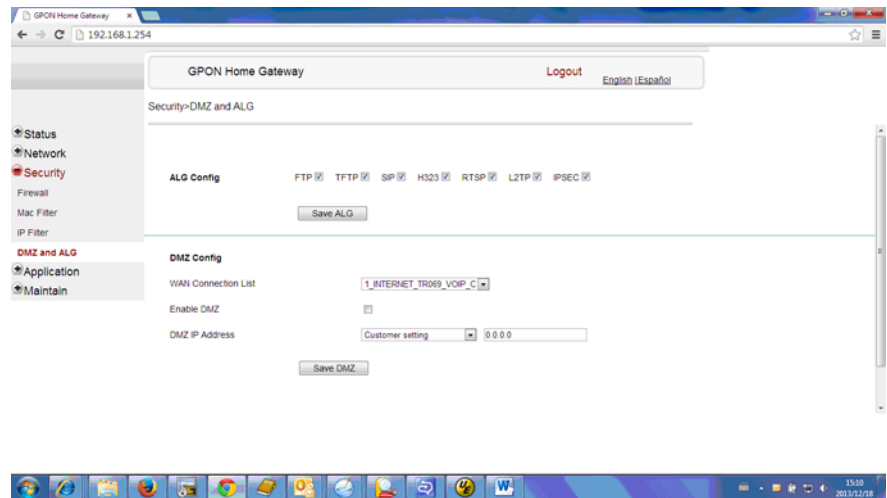


Table 4-19 describes the fields in the DMZ and ALG window.

Table 4-19 DMZ and ALG parameters

Field	Description
ALG Config	Select the checkboxes to enable the protocols to be supported by the ALG
DMZ Config	
WAN Connection List	Choose a WAN connection from the drop-down menu
Enable DMZ	Select this checkbox to enable DMZ on the chosen WAN connection
DMZ IP Address	Choose Customer Setting and enter the DMZ IP address or choose the IP address of a connected device from the drop-down menu

- 2 Configure ALG.
- 3 Click Save ALG.
- 4 Configure DMZ.
- 5 Click Save DMZ.
- 6 STOP. This procedure is complete.

Application configuration

G-241W-A ONTs support application configuration, including:

- port forwarding
- DDNS
- NTP
- USB storage
- UPnP and DLNA

Procedure 4-21 Port forwarding configuration

- 1 Select Application > Port forwarding from the top-level menu in the GPON Home Gateway window, as shown in Figure 4-21.

Figure 4-21 Port forwarding window

Table 4-20 describes the fields in the port forwarding window.

Table 4-20 Port forwarding parameters

Field	Description
APPName	Choose an application name from the drop-down menu
WAN Port	WAN port range
LAN Port	LAN port range
Internal Client	Choose a connected device from the drop-down menu and enter the associated IP address
Protocol	Choose the port forwarding protocol from the drop-down menu: • TCP • UDP • TCP/UDP
Enable Mapping	Select this checkbox to enable mapping

(1 of 2)

Field	Description
WAN Connection List	Choose a WAN connection from the drop-down menu

(2 of 2)

- 2 Configure port forwarding.
- 3 Click Add.
- 4 STOP. This procedure is complete.

Procedure 4-22 DDNS configuration

- 1 Select Application > DDNS from the top-level menu in the GPON Home Gateway window, as shown in Figure 4-22.

Figure 4-22 DDNS window

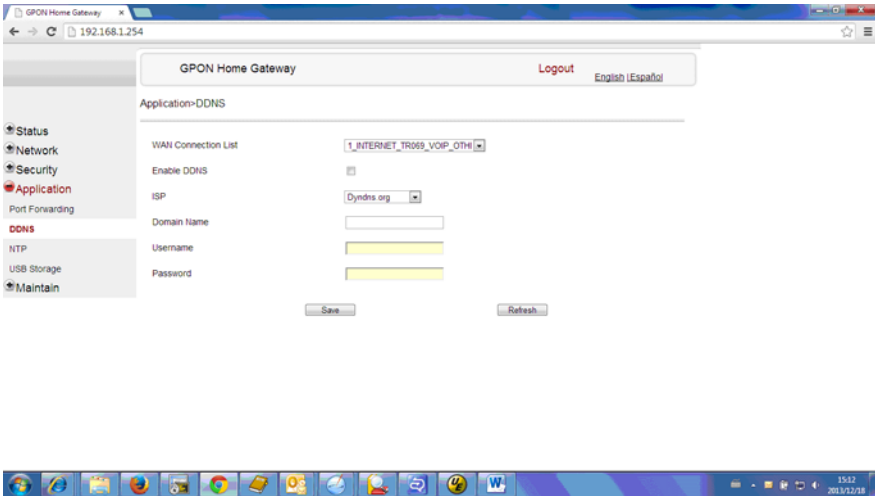


Table 4-21 describes the fields in the DDNS window.

Table 4-21 DDNS parameters

Field	Description
WAN Connection List	Choose a WAN connection from the drop-down menu
Enable DDNS	Select this checkbox to enable DDNS on the chosen WAN connection
ISP	Choose an ISP from the drop-down menu.
Domain Name	Domain name
Username	Username

(1 of 2)

Field	Description
Password	Password

(2 of 2)

- 2 Configure DDNS.
- 3 Click Save.
- 4 STOP. This procedure is complete.

Procedure 4-23 NTP configuration

- 1 Select Application > NTP from the top-level menu in the GPON Home Gateway window, as shown in Figure 4-23.

Figure 4-23 NTP window

Table 4-22 describes the fields in the NTP window.

Table 4-22 NTP parameters

Field	Description
Enable NTP Service	Select this checkbox to enable NTP service
Current Time	Enter the current local date and time
First Time Server	Choose a time server from the drop-down menu or choose Customer setting and enter the address of the time server.
Second Time Server	Choose a time server from the drop-down menu or choose Customer setting and enter the address of the time server.
Interval Time	Interval at which to get the time from the time server, in seconds
Time Zone	Choose the local time zone from the drop-down menu

- 2 Configure NTP.
- 3 Click Save.
- 4 STOP. This procedure is complete.

Procedure 4-24 USB storage configuration

- 1 Select Application > USB storage from the top-level menu in the GPON Home Gateway window, as shown in Figure 4-24.

Figure 4-24 USB storage window

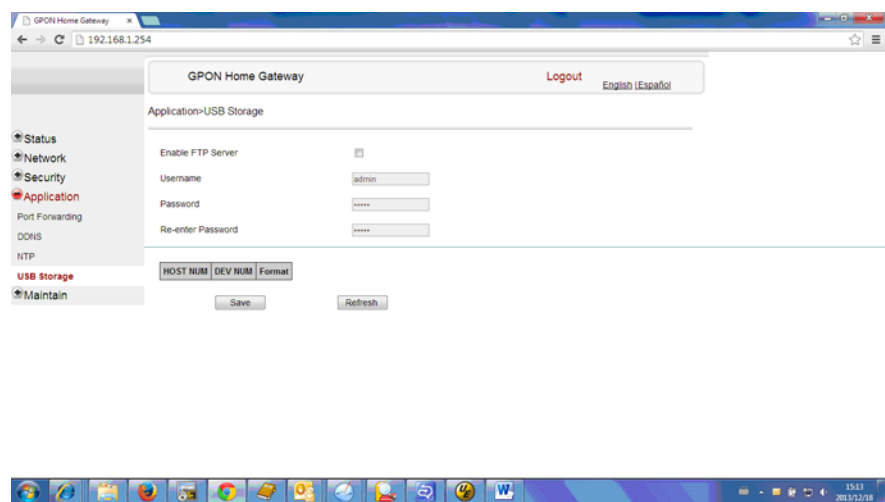


Table 4-23 describes the fields in the USB storage window.

Table 4-23 USB storage parameters

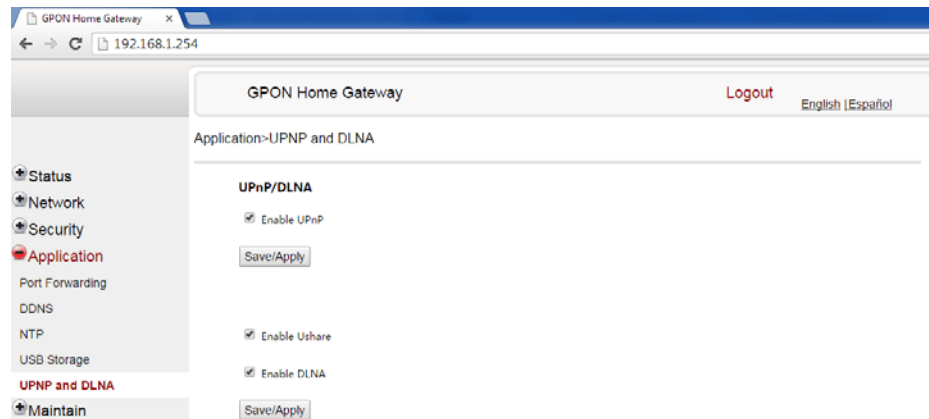
Field	Description
Enable FTP server	Select this checkbox to enable using an FTP server for data storage
Username	Username for FTP server
Password	Password for FTP server
Re-enter Password	Password for FTP server

- 2 Configure USB storage.
- 3 Click Save.
- 4 STOP. This procedure is complete.

Procedure 4-25 UPnP and DLNA configuration

- 1 Select Application > UPnP and DLNA from the top-level menu in the GPON Home Gateway window, as shown in Figure 4-25.

Figure 4-25 UPnP and DLNA window



- 2 Select the Enable UPnP checkbox to enable UPnP.
- 3 Click Save/Apply.
- 4 Select the Enable Ushare checkbox to enable Ushare (the UPnP/DLNA media server).
- 5 Select the Enable DLNA checkbox to enable DLNA.
- 6 Click Save/Apply.
- 7 STOP. This procedure is complete.

Maintenance

G-241W-A ONTs support maintenance tasks, including:

- password change
- LOID configuration
- SLID configuration
- device management
- backup and restore
- firmware upgrade
- device reboot
- restore factory defaults
- diagnose
- log

Procedure 4-26 Password configuration

- 1 Select Maintain > Password from the top-level menu in the GPON Home Gateway window, as shown in Figure 4-26.

Figure 4-26 Password window

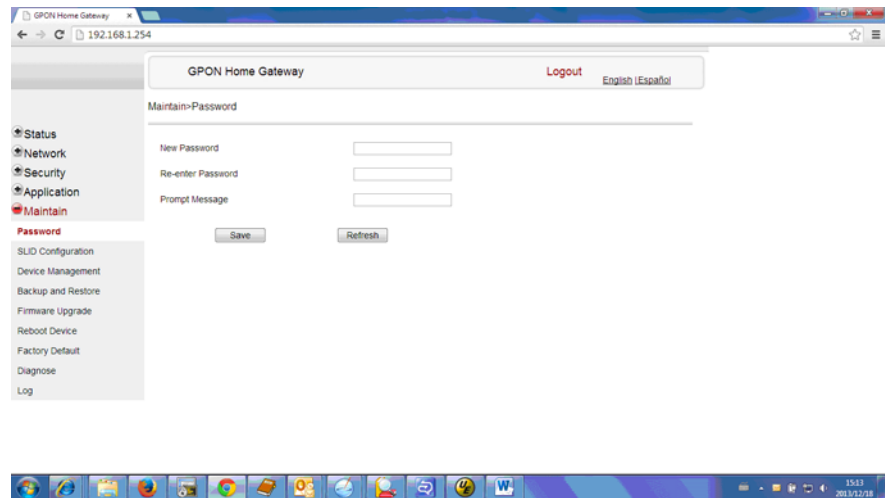


Table 4-24 describes the fields in the password window.

Table 4-24 Password parameters

Field	Description
New Password	New password
Re-enter password	Password must match password entered above
Prompt message	Password prompt message

- 2 Configure the new password.
- 3 Click Save.
- 4 STOP. This procedure is complete.

Procedure 4-27 LOID configuration

- 1 Select Maintain > LOID Config from the top-level menu in the GPON Home Gateway window, as shown in Figure 4-27.

Figure 4-27 LOID Config window

Table 4-25 describes the fields in the LOID configuration window.

Table 4-25 LOID configuration parameters

Field	Description
LOID	Type the LOID; the maximum number of characters is 24 If the password is null, this field may be left blank
Password	Type the password; the maximum number of characters is 12

- 2 Configure the LOID.
- 3 Click Save/Apply.
- 4 STOP. This procedure is complete.

Procedure 4-28 SLID configuration

- 1 Select Maintain > SLID Configuration from the top-level menu in the GPON Home Gateway window, as shown in Figure 4-28.

Figure 4-28 SLID configuration window

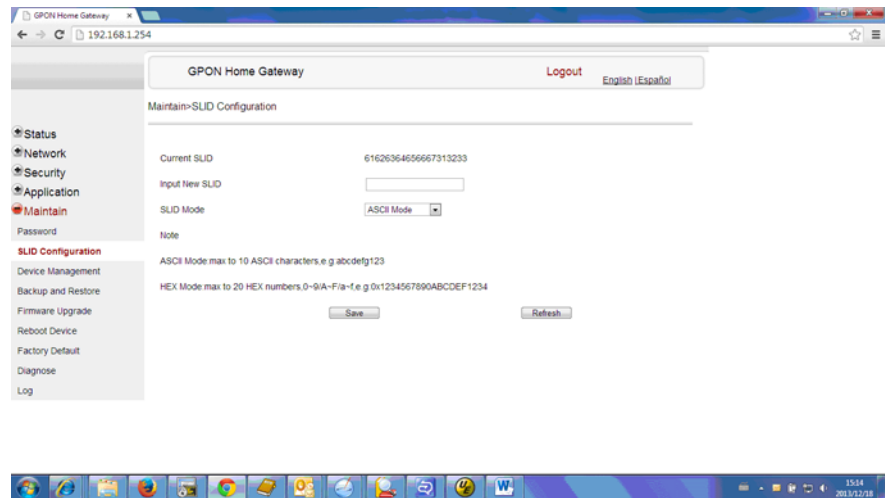


Table 4-26 describes the fields in the SLID configuration window.

Table 4-26 SLID configuration parameters

Field	Description
Current SLID	Displays current SLID
Input new SLID	Enter new SLID
SLID Mode	Choose a SLID mode from the drop-down menu.

- 2 Configure the new SLID.
- 3 Click Save.
- 4 STOP. This procedure is complete.

Procedure 4-29 Device management

- 1 Select Maintain > Device Management from the top-level menu in the GPON Home Gateway window, as shown in Figure 4-29.

Figure 4-29 Device management window

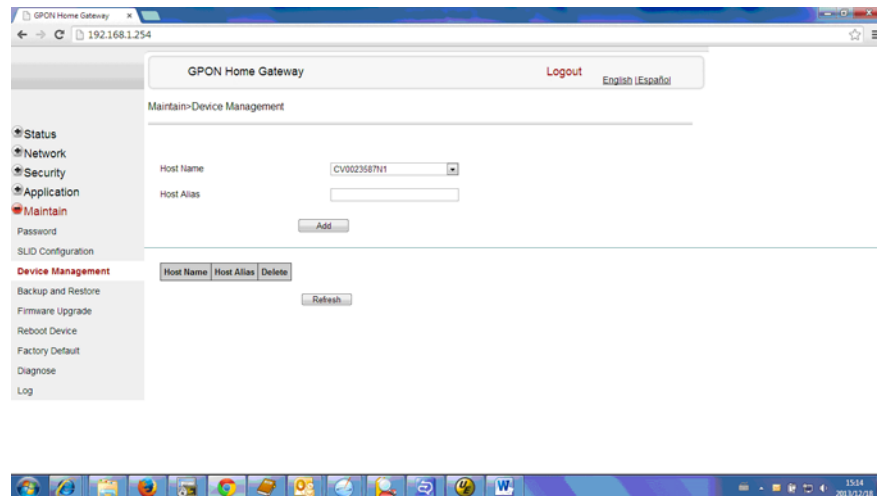


Table 4-27 describes the fields in the Device management window.

Table 4-27 Device management parameters

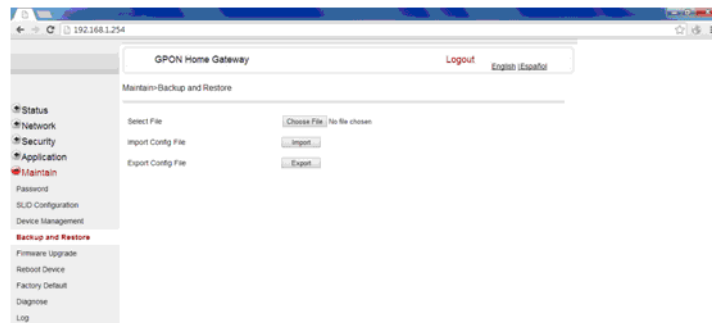
Field	Description
Host name	Choose a host from the drop-down menu
Alias	Enter an alias for the chosen host

- 2 Configure an alias for a specific host.
- 3 Click Add.
- 4 STOP. This procedure is complete.

Procedure 4-30 Backup and restore

- 1 Select Maintain > Backup and Restore from the top-level menu in the GPON Home Gateway window, as shown in Figure 4-30.

Figure 4-30 Backup and Restore window

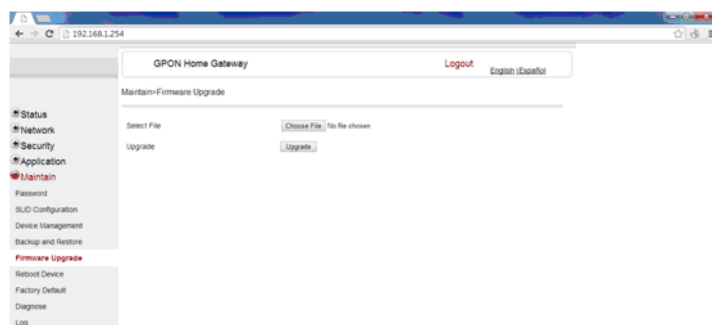


- 2 Click Select File and choose the backup file.
 - 3 Click Import Config File to restore the ONT to the saved backup or click Export Config File to export the current ONT configuration to the backup file.
 - 4 STOP. This procedure is complete.
-

Procedure 4-31 Upgrade firmware

- 1 Select Maintain > Firmware Upgrade from the top-level menu in the GPON Home Gateway window, as shown in Figure 4-31.

Figure 4-31 Firmware upgrade window



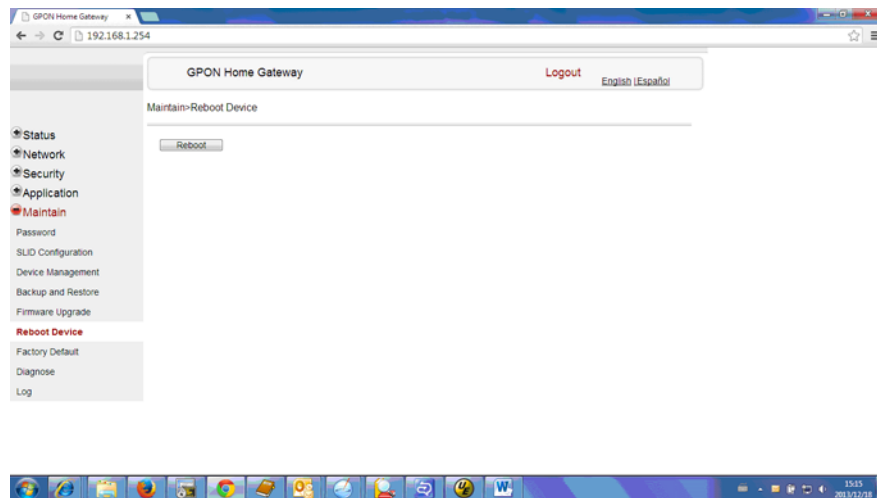
- 2 Click Select File and choose the firmware file.

- 3 Click Upgrade to upgrade the firmware.
 - 4 STOP. This procedure is complete.
-

Procedure 4-32 Reboot ONT

- 1 Select Maintain > Reboot Device from the top-level menu in the GPON Home Gateway window, as shown in Figure 4-32.

Figure 4-32 Reboot window

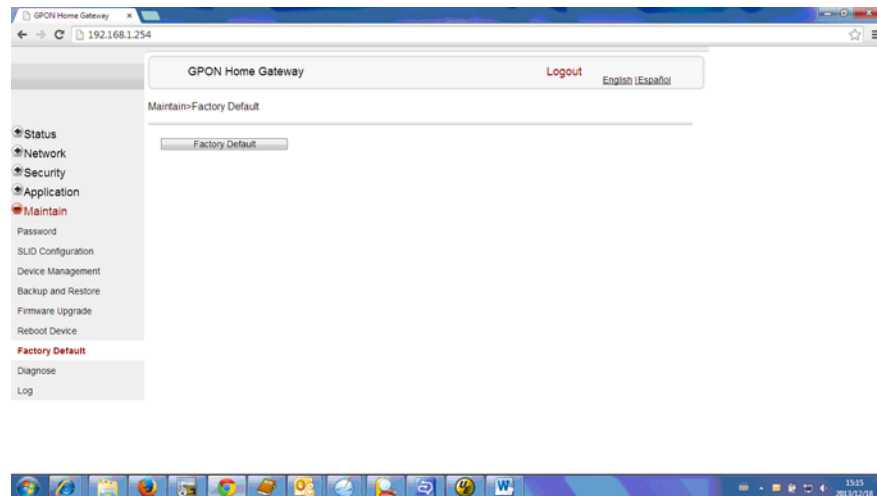


- 2 Click Reboot to reboot the ONT.
 - 3 STOP. This procedure is complete.
-

Procedure 4-33 Restore factory defaults

- 1 Select Maintain > Factory Default from the top-level menu in the GPON Home Gateway window, as shown in Figure 4-33.

Figure 4-33 Factory default window

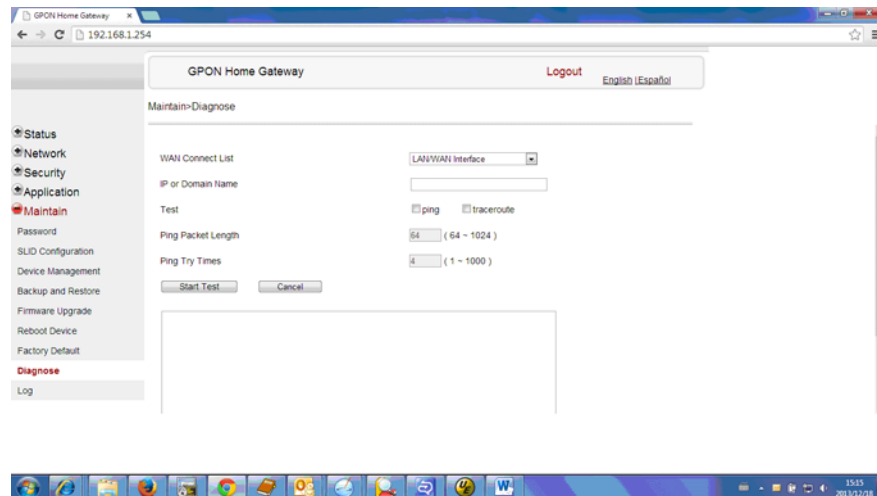


- 2 Click Factory Default to reset the ONT to its factory default settings.
 - 3 STOP. This procedure is complete.
-

Procedure 4-34 Diagnose connections

- 1 Select Maintain > Diagnose from the top-level menu in the GPON Home Gateway window, as shown in Figure 4-34.

Figure 4-34 Diagnose window

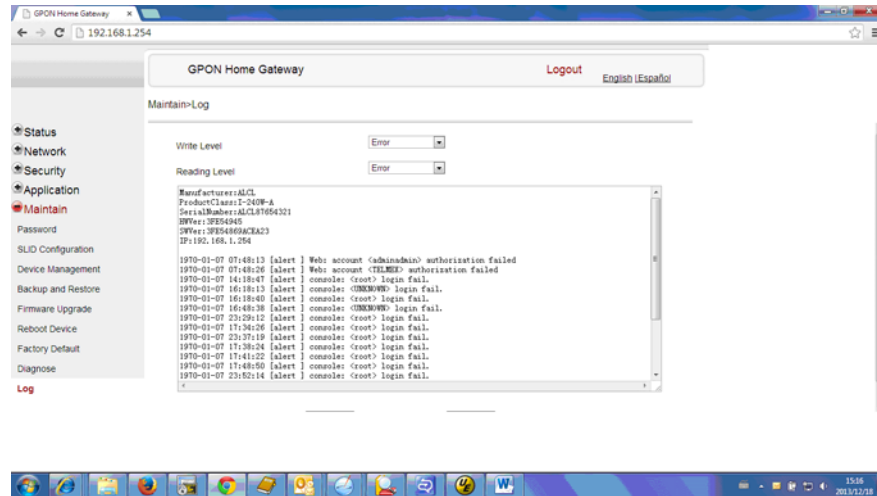


- 2 Choose a WAN connection to diagnose from the drop-down menu.
- 3 Enter the IP address or domain name.
- 4 Select the test type by selecting either ping or traceroute.
- 5 Enter a ping packet length (64-1024).
- 6 Enter the number of ping attempts to perform (1 - 1000).
- 7 Click Start Test. Results will be displayed at the bottom of the window.
- 8 STOP. This procedure is complete.

Procedure 4-35 View log files

- 1 Select Maintain > Log from the top-level menu in the GPON Home Gateway window, as shown in Figure 4-35.

Figure 4-35 Log window



- 2 Choose a write level from the drop-down menu to determine which types of events are recorded in the log file:
 - Emergency
 - Alert
 - Critical
 - Error
 - Warning
 - Notice
 - Informational
 - Debug
- 3 Choose a reading level from the drop-down menu to determine which types of events to display from the log file:
 - Emergency
 - Alert
 - Critical
 - Error
 - Warning
 - Notice
 - Informational
 - Debug

- 4 The log file is displayed at the bottom of the window.
- 5 STOP. This procedure is complete.

RG troubleshooting counters

The Troubleshooting Counters feature enables service providers and end users to monitor the performance of their broadband connection.

Tests are run to retrieve upstream and downstream throughput, latency, and DNS response time. The Troubleshooting Counters window also displays upstream and downstream packet loss and Internet status.

Procedure 4-36 Retrieve Residential Gateway (RG) troubleshooting counters

- 1 Select RG Troubleshooting Counters from the left menu in the GPON Home Gateway window.

The RG Troubleshooting Counters window appears; see Figure 4-36.

Figure 4-36 RG Troubleshooting Counters window

Table 4-28 describes the fields in the RG Troubleshooting Counters window.

Table 4-28 RG Troubleshooting Counters parameters

Field	Description
WAN Connection List	Select a WAN connection from the list
US Throughput	Click US Speed Test to specify the time for the upstream test The default is weekly, performed at idle to a public server
DS Throughput	Click DS Speed Test to specify the time for the downstream test The default is weekly, performed at idle to a public server

(1 of 2)

Field	Description
US Packet Loss	The number of upstream packages lost
DS Packet Loss	The number of downstream packages lost
Internet Status	Whether the broadband connections is active (UP) or not (DOWN)
Latency	Click Latency Test to specify the time for the test The default is weekly, performed at idle to a public server
DNS Response Time	Click DNS Response Test to specify the time for the test The default is weekly, performed at idle to a public server

(2 of 2)

- 2 Configure the test times if desired.
 - 3 Click Refresh to update the data.
 - 4 STOP. This procedure is complete.
-

4.3 SFU mode GUI configuration

Use the procedures below to use the web-based GUI for the G-241W-A in SFU mode. This mode is preset at delivery.

SFU customer premise devices are designed for single indoor residential applications. These ONTs address the demand for bandwidth intensive services, such as high definition television (HDTV), video-on-demand (VOD) and online games. The ONT can be configured to seamlessly deliver voice-over-IP and high speed Internet access via a single fiber optic connection to the home.

Login

Use the procedure below to log in to the web-based GUI for the G-241W-A.

Procedure 4-37 Login to web-based GUI

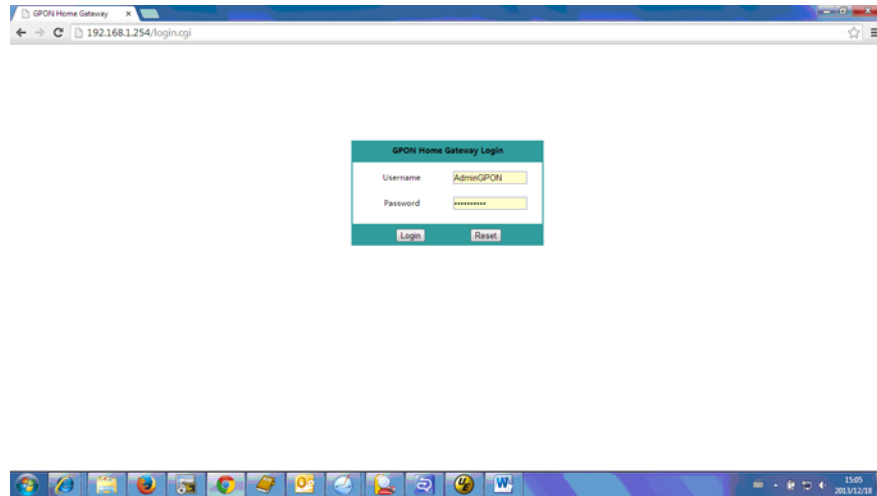
- 1 Open a web browser and enter the IP address of the ONT in the address bar.

The login window appears.

The default gateway IP address is `http://192.168.1.254`. You can connect to this IP address using your web browser after connecting your PC to one of Ethernet ports of the ONT. The static IP address of your PC must be in the same subnet as the ONT.

- 2 Enter your username and password in the Log in window, as shown in Figure 4-37.

The default username and password are printed on the ONT. The default superuser username is `adminGPON`. Contact Alcatel-Lucent for the superuser password.

Figure 4-37 Web login window

Caution — If you reset the router to recover the default username and password, all other router configuration settings will also be restored to their factory default values.



Note — If you forget the current username and password, press the reset button for 5 s and the default values for the username and password will be recovered at startup.

- 3 Click Login.
- 4 STOP. This procedure is complete.

Device and connection status

G-241W-A ONTs support the retrieval of a variety of device information.

Procedure 4-38 Device information retrieval

- 1 Select Status > Device Information from the top-level menu in the GPON Home Gateway window, as shown in Figure 4-38.

Figure 4-38 Device Information window

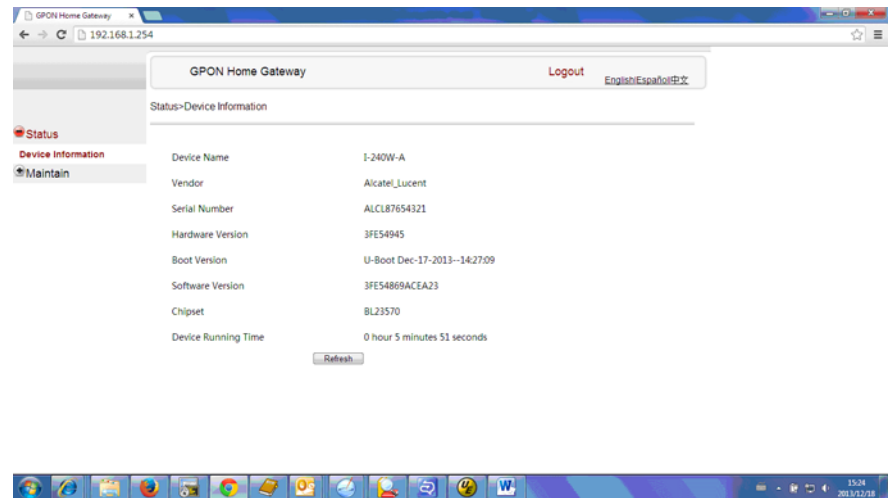


Table 4-29 describes the fields in the Device Information window.

Table 4-29 Device Information parameters

Field	Description
Device Name	Name on the ONT
Vendor	Name of the vendor
Serial Number	Serial number of the ONT
Hardware version	Hardware version of the ONT
Boot version	Boot version of the ONT
Software version	Software version of the ONT
Chipset	Chipset of the ONT
Device Running Time	Amount of time the device has run since last reset in hours, minutes, and seconds

- 2 Click Refresh to update the displayed information.
- 3 STOP. This procedure is complete.

Maintenance

G-241W-A ONTs support maintenance tasks, including:

- password change
- LOID configuration
- SLID configuration

Procedure 4-39 Password configuration

- 1 Select Maintain > Password from the top-level menu in the GPON Home Gateway window, as shown in Figure 4-39.

Figure 4-39 Password window

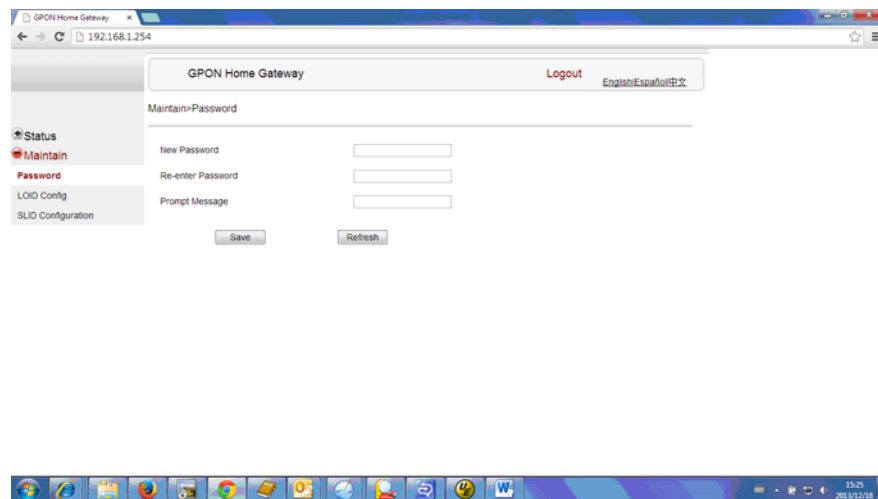


Table 4-30 describes the fields in the password window.

Table 4-30 Password parameters

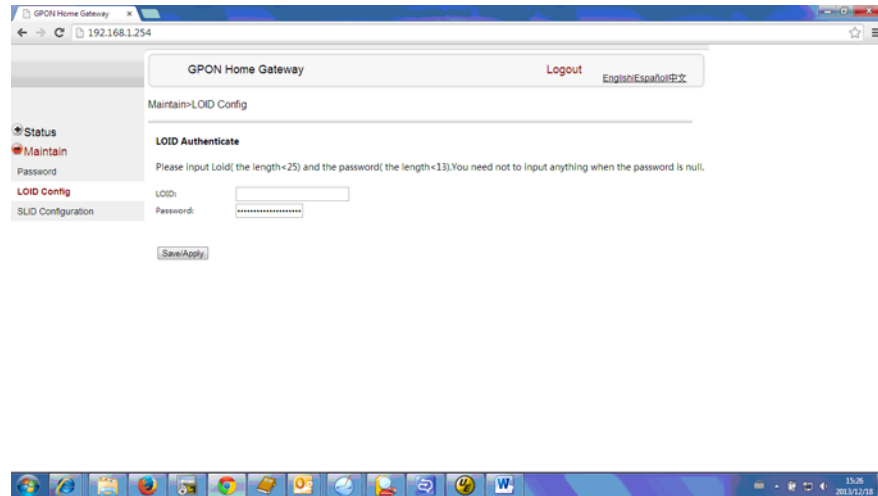
Field	Description
New Password	New password
Re-enter password	Password must match password entered above
Prompt message	Password prompt message

- 2 Configure the new password.
- 3 Click Save.
- 4 STOP. This procedure is complete.

Procedure 4-40 LOID configuration

- 1 Select Maintain > LOID Config from the top-level menu in the GPON Home Gateway window, as shown in Figure 4-40.

Figure 4-40 LOID configuration window



- 2 Enter the LOID.
 - 3 Enter the password, if applicable.
 - 4 Click Save/Apply.
 - 5 STOP. This procedure is complete.
-

Procedure 4-41 SLID configuration

- 1 Select Maintain > SLID Configuration from the top-level menu in the GPON Home Gateway window, as shown in Figure 4-41.

Figure 4-41 SLID configuration window

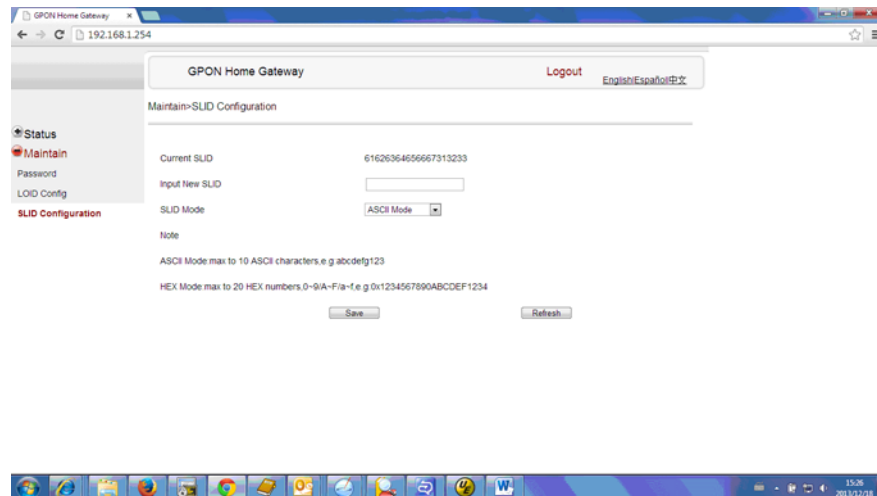


Table 4-31 describes the fields in the SLID configuration window.

Table 4-31 SLID configuration parameters

Field	Description
Current SLID	Displays current SLID
Input new SLID	Enter new SLID
SLID Mode	Choose a SLID mode from the drop-down menu.

- 2 Configure the new SLID.
- 3 Click Save.
- 4 STOP. This procedure is complete.

4.4 Operator ID

Use the procedure below to modify the operator ID for the G-241W-A.

Procedure 4-42 Modifying the operator ID

- 1 Register the ONT with the OLT.
 - 2 Check the original OPID.
 - 3 Update the OntConfig.xml file by adding-the following content:

```
<OperatorObject version="1.0">  
  
<OperatorID="XXXX">  
  
</OperatorObject>
```

where: xxxx is the correct operator ID, for example ALCL for HGU mode, or XXXX for SFU mode.
 - 4 Use a TFTP client tool to transfer the OntConfig.xml file to the OLT's ONT directory and change the filename to the software version number, for example, 3FE123456789.xml.
 - 5 Use a TL1 command to configure ONUSWCRTL:

```
ENT-ONTSWCRTL::1:::HWVER=hwver,VARNT=,PLNSWSVER=UNPLANNED,  
PLNSWSVERCONF=UNPLANNED,DLSWVER=swver;
```

where:
hwver is the EQPTVERNUM, for example EQPTVERNUM=3FE54945ABAA.
swver is the software version number used as the filename in step 2, for example 3FE123456789.xml.
 - 6 Download the .xml file to update the operator ID:

```
ED-ONT::ONT-1/1/3/1/19:::DLSW=AUTO;
```
 - 7 Restart the ONT, then connect to the LAN and access the web-based GUI to check the operator ID default setting.
 - 8 Use a TL1 command to disable further downloads:

```
ED-ONT::ONT-1/1/3/1/19:::DLSW=DISABLED;
```
 - 9 STOP. This procedure is complete.
-

Federal Communication Commission Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

IMPORTANT NOTE:

FCC Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance **20cm** between the radiator & your body.