



Alcatel-Lucent 7368

INTELLIGENT SERVICES ACCESS MANAGER ONT
G-240W-A PRODUCT GUIDE

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This document was originally written in English. If there is any conflict or inconsistency between the English version and any other version of a document, the English version shall prevail.

Preface

This preface provides general information about the documentation set for optical network terminals (ONTs).

Scope

This documentation set provides information about safety, features and functionality, ordering, hardware installation and maintenance, and software installation procedures for the current release.

Audience

This documentation set is intended for planners, administrators, operators, and maintenance personnel involved in installing, upgrading, or maintaining the ONTs.

Required knowledge

The reader must be familiar with general telecommunications principles.

Acronyms and initialisms

The expansions and optional descriptions of most acronyms and initialisms appear in the glossary.

Assistance and ordering phone numbers

Alcatel-Lucent provides global technical support through regional call centers. Phone numbers for the regional call centers are available at the following URL: <http://www.alcatel-lucent.com/myaccess>.

For ordering information, contact your Alcatel-Lucent sales representative.

Alcatel-Lucent quality processes

Alcatel-Lucent's ONT manufacturing, testing, and inspecting practices are in compliance with GR-1252-CORE and TL 9000 requirements. These requirements are documented in the Operations Quality Plan 8BD-00023-4204-QRZZA, the Alcatel North American Quality Manual 8BD-00001-0000-QRZZA, and the Wireline Network Quality Manual 8AB-83179-0001-QRAAA.

The quality plans and practices adequately ensure that technical requirements and customer end-point requirements are met. The customer or its representatives may be allowed to perform on-site quality surveillance audits, as agreed upon during contract negotiations.

Safety information

For safety information, see the appropriate safety guidelines chapter.

Documents

Documents are available using ALED or OLCS.

Procedure 1 To download a ZIP file package of the customer documentation

- 1 Navigate to <http://www.alcatel-lucent.com/myaccess> and enter your user name and password. If you are a new user and require access to this service, please contact your Alcatel-Lucent sales representative.
 - 2 From the Technical Content for drop-down menu, choose the product.
 - 3 Click on Downloads: Electronic Delivery.
 - 4 Choose Documentation from the drop-down menu and click Next.
 - 5 Select the image from the drop-down menu and click Next.
 - 6 Follow the on-screen directions to download the file.
-

Procedure 2 To access individual documents

Individual PDFs of customer documents are also accessible through the Alcatel-Lucent Customer Support website.

- 1 Navigate to <http://www.alcatel-lucent.com/myaccess> and enter your user name and password. If you are a new user and require access to this service, please contact your Alcatel-Lucent sales representative.
 - 2 From the Technical Content for drop-down menu, choose the product.
 - 3 Click on Manuals and Guides to display a list of customer documents by title and part number. You can filter this list using the Release drop-down menu.
 - 4 Click on the PDF to open or save the file.
-

Special information

The following are examples of how special information is presented in this document.



Danger — Danger indicates that the described activity or situation may result in serious personal injury or death; for example, high voltage or electric shock hazards.



Warning — Warning indicates that the described activity or situation may, or will, cause equipment damage or serious performance problems.



Caution — Caution indicates that the described activity or situation may, or will, cause service interruption.



Note — A note provides information that is, or may be, of special interest.

Procedures with options or substeps

When there are options in a procedure, they are identified by letters. When there are required substeps in a procedure, they are identified by roman numerals.

Procedure 3 Example of options in a procedure

At step 1, you can choose option a or b. At step 2, you must do what the step indicates.

- 1 This step offers two options. You must choose one of the following:
 - a This is one option.
 - b This is another option.
 - 2 You must perform this step.
-

Procedure 4 Example of required substeps in a procedure

At step 1, you must perform a series of substeps within a step. At step 2, you must do what the step indicates.

- 1 This step has a series of substeps that you must perform to complete the step. You must perform the following substeps:
 - i This is the first substep.
 - ii This is the second substep.
 - iii This is the third substep.
 - 2 You must perform this step.
-

Multiple PDF document search

You can use Adobe Reader Release 6.0 and later to search multiple PDF files for a common term. Adobe Reader displays the results in a single display panel. The results are grouped by PDF file, and you can expand the entry for each file.



Note — The PDF files in which you search must be in the same folder.

Procedure 5 To search multiple PDF files for a common term

- 1 Open Adobe Acrobat Reader.
- 2 Choose Edit→Search from the Acrobat Reader main menu. The Search PDF panel appears.
- 3 Enter the search criteria.

- 4 Click on the All PDF Documents In radio button.
- 5 Select the folder in which to search using the drop-down menu.
- 6 Click on the Search button.

Acrobat Reader displays the search results. You can expand the entries for each document by clicking on the + symbol.

ETSI ONT safety guidelines

This chapter provides information about the mandatory regulations that govern the installation and operation of the optical network terminals (ONTs).

Safety instructions

This section describes the safety instructions that are provided in the ONT customer documentation and on the equipment.

Safety instruction boxes

The safety instruction boxes are provided in the ONT customer documentation. Observe the instructions to meet safety requirements.

The following is an example of the Danger box.



Danger — Possibility of personal injury.

The Danger box indicates that the described activity or situation may pose a threat to personal safety. It calls attention to a situation or procedure which, if not correctly performed or adhered to, may result in death or serious physical harm.

Do not proceed beyond a Danger box until the indicated conditions are fully understood and met.

The following is an example of the Warning box.



Warning 1 — Possibility of equipment damage.

Warning 2 — Possibility of data loss.

The Warning box indicates that the described activity or situation may, or will, cause equipment damage, loss of data, or serious performance problems. It identifies a possible equipment-damaging situation or provides essential information to avoid the degradation of system operations or data.

Do not proceed beyond a warning until the indicated conditions are fully understood and met.

The following is an example of the Caution box.



Caution 1 — Possibility of service interruption.

Caution 2 — Service interruption.

The Caution box indicates that the described activity or situation may, or will, cause service interruption.

Do not proceed beyond a caution until the indicated conditions are fully understood and met.

The following is an example of the Note box.



Note — Information of special interest.

The Note box provides information that assists the personnel working with ONTs. It does not provide safety-related instructions.

Safety-related labels

The ONT equipment is labeled with the specific safety instructions and compliance information that is related to a variant of the ONT. Observe the instructions on the safety labels.



Table 1 provides sample safety labels on the ONT equipment.

Table 1 Safety labels

| Description | Label text |
|----------------------|---|
| ESD warning | Caution: This assembly contains an electrostatic sensitive device. |
| Laser classification | Class 1 laser product |
| PSE marking | These power supplies are Japan PSE certified and compliant with Japan VCCI emissions standards. |

Figure 1 shows the PSE certification.

Figure 1 PSE certification

| | |
|--|--|
|  Warning | This is a Class B product based on the standard of the Voluntary Control Council for Interference from Information Technology Equipment (VCCI). If this is used near a radio or television receiver in a domestic environment, it may cause radio interference. Install and use the equipment according to the instruction manual. |
|  警告 | VCCI準拠クラスB機器（日本） この機器は、Information Technology EquipmentのVoluntary Control Council for Interference（VCCI）の規格に準拠したクラスB製品です。この機器をラジオやテレビ受信機の近くで使用した場合、混信が発生する恐れがあります。本機器の設置および使用に際しては、取扱説明書に従ってください。 |

19841

Safety standards compliance

This section describes the ONT compliance with the European safety standards.

EMC, EMI, and ESD compliance

The ONT equipment complies with the following EMC, EMI, and ESD requirements:

- EN 300-386 V1.5.1: Electromagnetic Compatibility and Radio Spectrum Matters (ERM): Telecommunications Network Equipment; Electromagnetic Compatibility (EMC) requirements; Electrostatic Discharge (ESD) requirements
- EN 55022 (2006): Class B, Information Technology Equipment, Radio Disturbance Characteristics, limits and methods of measurement
- EN 55024 (2010): Information Technology Equipment, Immunity Characteristics, limits and methods of measurement
- European Council Directive 2004/108/EC
- EN 300-386 V1.4.1: 2008
- EN 55022:2006 Class B (ONTs)

Equipment safety standard compliance

The ONT equipment complies with the requirements of EN 60950-1, Safety of Information Technology Equipment for use in a restricted location (per R-269).

Environmental standard compliance

The ONT equipment complies with the EN 300 019 European environmental standards.

Laser product standard compliance

For most ONTs, the ONT equipment complies with EN 60825-1 and IEC 60825-2 for laser products. If there is an exception to this compliance regulation, you can find this information in the standards compliance section of the unit data sheet in this Product Guide.

Resistibility requirements compliance

The ONT equipment complies with the requirements of ITU Recommendation K.21 for resistibility of telecommunication equipment installed in customer premises to over voltage and overcurrents.

Acoustic noise emission standard compliance

The ONT equipment complies with EN 300 753 acoustic noise emission limit and test methods.

Electrical safety guidelines

This section provides the electrical safety guidelines for the ONT equipment.



Note 1 – The ONTs comply with the U.S. National Electrical Code. However, local electrical authorities have jurisdiction when there are differences between the local and U.S. standards.

Note 2 – The ONTs comply with BS EN 61140.

Power supplies

The use of any non-Alcatel-Lucent approved power supplies or power adapters is not supported or endorsed by Alcatel-Lucent. Such use will void any warranty or support contract with Alcatel-Lucent. Such use greatly increases the danger of damage to equipment or property.

Cabling

The following are the guidelines regarding cables used for the ONT equipment:

- All cables must be approved by the relevant national electrical code.
- The cables for outdoor installation of ONTs must be suitable for outdoor use.
- POTS wiring run outside the subscriber premises must comply with the requirements of local electrical codes. In some markets, the maximum allowed length of the outside run is 140 feet (43 m). If the outside run is longer, NEC requires primary protection at both the exit and entry points for the wire.

Protective earth

Earthing and bonding of the ONTs must comply with the requirements of local electrical codes.

ESD safety guidelines

The ONT equipment is sensitive to ESD. Operations personnel must observe the following ESD instructions when they handle the ONT equipment.



Caution — This equipment is ESD sensitive. Proper ESD protections should be used when you enter the TELCO Access portion of the ONT.

During installation and maintenance, service personnel must wear wrist straps to prevent damage caused by ESD.

Laser safety guidelines

Observe the following instructions when you perform installation, operations, and maintenance tasks on the ONT equipment.

Only qualified service personnel who are extremely familiar with laser radiation hazards should install or remove the fiber optic cables and units in this system.



Danger — There may be invisible laser radiation at the fiber optic cable when the cable is removed from the connector. Avoid direct exposure to the laser beam.

Observe the following danger for laser hazard. Eyes can be damaged when they are exposed to a laser beam. Take necessary precautions before you plug in the optical modules.



Danger — Possibility of equipment damage. Risk of eye damage by laser radiation.

Laser classification

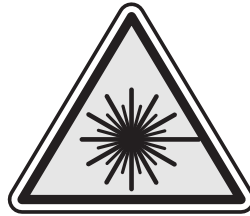
The ONT is classified as a Class 1 laser product based on its transmit optical output.

Laser warning labels

The following figures show the labels related to laser product, classification and warning.

Figure 2 shows a laser product label.

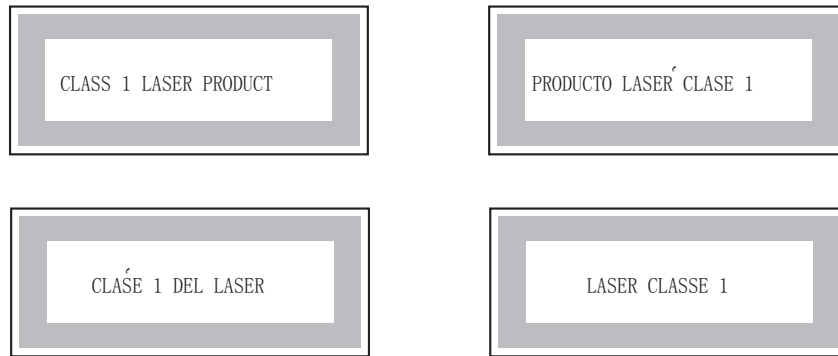
Figure 2 Laser product label



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Figure 3 shows a laser classification label. Laser classification labels may be provided in other languages.

Figure 3 Laser classification label



18992

With the fiber connector exposed, remove the dust plug, clean the fiber ends and terminate the SC quipped fiber.



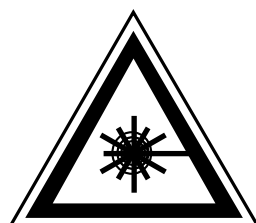
Danger!. Exposure to invisible LASER radiation may cause serious retinal damager or even blindness. Verify the optical source is disabled through the use if an optical power meter before handling optical fibers.

Danger!. L'exposition à un rayonnement laser invisible peut causer tout dommage matériel rétinienne grave ou même la cécité. Vérifiez la source optique est désactivée par l'utilisation d'un compteur de puissance optique avant de manipuler des fibres optique.

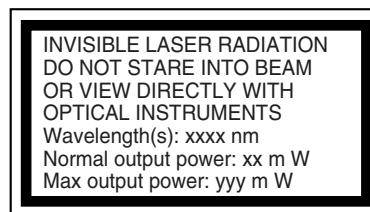
Figure 4 shows a laser warning label and an explanatory label for laser products. Labels and warning may be provided in other languages. The explanatory label provides the following information:

- a warning that calls attention to the invisible laser radiation
- an instruction against staring into the beam or viewing directly with optical instruments
- wavelength
- normal output power
- maximum output power

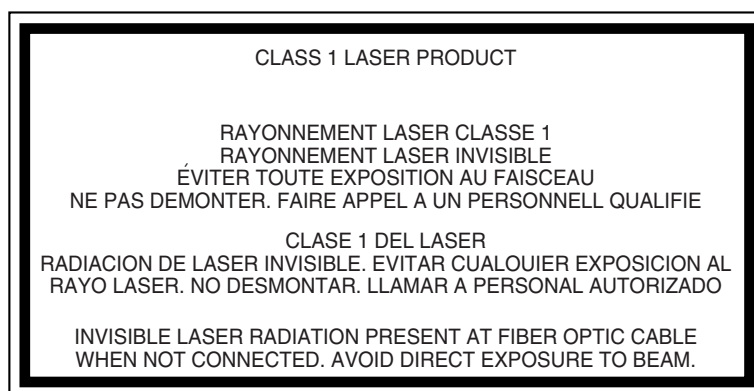
Figure 4 Laser warning labels



Laser Warning Label



Laser Warning Label



Laser Warning Label

18993

Transmit optical output

The maximum transmit optical output of an ONT is +5 dBm.

Normal laser operation

In normal operation, fiber cable laser radiation is always off until it receives signal from the line terminal card.

Eyes can be damaged when they exposed to a laser beam. Operating personnel must observe the instructions on the laser explanatory label before plugging in the optical module.



Danger — Risk of eye damage by laser radiation.

Location class

Use cable supports and guides to protect the receptacles from strain.

Environmental requirements

See the ONT technical specification documentation for more information about temperature ranges.

During operation in the supported temperature range, condensation inside the ONT caused by humidity is not an issue. To avoid condensation caused by rapid changes in temperature and humidity, Alcatel-Lucent recommends:

- The door of the ONT not be opened until temperature inside and outside the enclosure has stabilized.
- If the door of the ONT must be opened after a rapid change in temperature or humidity, use a dry cloth to wipe down the metal interior to prevent the risk of condensation.
- When high humidity is present, installation of a cover or tent over the ONT helps prevent condensation when the door is opened.

ETSI environmental and CRoHS guidelines

This chapter provides information about the ETSI environmental China Restriction of Hazardous Substances (CRoHS) regulations that govern the installation and operation of the optical line termination (OLT) and optical network termination (ONT) systems. This chapter also includes environmental operation parameters of general interest.

Environmental labels

This section describes the environmental instructions that are provided with the customer documentation, equipment, and location where the equipment resides.

Overview

CRoHS is applicable to Electronic Information Products (EIP) manufactured or sold and imported in the territory of the mainland of the People's Republic of China. EIP refers to products and their accessories manufactured by using electronic information technology, including electronic communications products and such subcomponents as batteries and cables.

Environmental related labels

Environmental labels are located on appropriate equipment. The following are sample labels.

Products below Maximum Concentration Value (MCV) label

Figure 1 shows the label that indicates a product is below the maximum concentration value, as defined by standard SJ/T11363-2006 (Requirements for Concentration Limits for Certain Hazardous Substances in Electronic Information Products). Products with this label are recyclable. The label may be found in this documentation or on the product.

Figure 1 Products below MCV value label



18986

Products containing hazardous substances above Maximum Concentration Value (MCV) label

Figure 2 shows the label that indicates a product is above the maximum concentration value, as defined by standard SJ/T11363-2006 (Requirements for Concentration Limits for Certain Hazardous Substances in Electronic Information Products). The number contained inside the label indicates the Environment-Friendly User Period (EFUP) value. The label may be found in this documentation or on the product.

Figure 2 Products above MCV value label



18985

Together with major international telecommunications equipment companies, Alcatel-Lucent has determined it is appropriate to use an EFUP of 50 years for network infrastructure equipment and an EFUP of 20 years for handsets and accessories. These values are based on manufacturers' extensive practical experience of the design, manufacturing, maintenance, usage conditions, operating environments, and physical condition of infrastructure and handsets after years of service. The values reflect minimum values and refer to products operated according to the intended use conditions. See “[Hazardous Substances Table \(HST\)](#)” for more information.

Hazardous Substances Table (HST)

This section describes the compliance of the OLT and ONT equipment to the CRoHS standard when the product and subassemblies contain hazardous substances beyond the MCV value. This information is found in this user documentation where part numbers for the product and subassemblies are listed. It may be referenced in other OLT and ONT documentation.

In accordance with the People's Republic of China Electronic Industry Standard Marking for the Control of Pollution Caused by Electronic Information Products (SJ/T11364-2006), customers may access the Alcatel-Lucent Hazardous Substance Table, in Chinese, from the following location:

- <http://www.alcatel-sbell.com.cn/wwwroot/images/upload/private/1/media/ChinaRoHS.pdf>

Other environmental requirements

Observe the following environmental requirements when handling the P-OLT or ONT equipment.

ONT environmental requirements

See the ONT technical specification documentation for more information about temperature ranges.

Storage

According to ETS 300-019-1-1 - Class 1.1, storage of OLT equipment must be in Class 1.1, weather-protected, temperature-controlled locations.

Transportation

According to EN 300-019-1-2 - Class 2.3, transportation of the OLT equipment must be in packed, public transportation with no rain on packing allowed.

Stationary use

According to EN 300-019-1-3 - Class 3.1/3.2/3.E, stationary use of OLT equipment must be in a temperature-controlled location, with no rain allowed, and with no condensation allowed.

Thermal limitations

When the OLT is installed in the CO or CEV, install air filters on the P-OLT. The thermal limitations for OLT operation in a CO or CEV are:

- operating temperature: 5°C to 40°C (41°F to 104°F)
- short-term temperature: -5°C to 50°C (23°F to 122°F)
- operating relative humidity: 5% to 85%
- short-term relative humidity: 5% to 95%, but not to exceed 0.024 kg of water/kg

Material content compliance

European Union (EU) Directive 2002/95/EC, “Restriction of the use of certain Hazardous Substances” (RoHS), restricts the use of lead, mercury, cadmium, hexavalent chromium, and certain flame retardants in electrical and electronic equipment. This Directive applies to electrical and electronic products placed on the EU market after 1 July 2006, with various exemptions, including an exemption for lead solder in network infrastructure equipment. Alcatel-Lucent products shipped to the EU after 1 July 2006 comply with the EU RoHS Directive.

Alcatel-Lucent has implemented a material/substance content management process. The process is described in: Alcatel-Lucent process for ensuring RoHS Compliance (1AA002660031ASZZA). This ensures compliance with the European Union Directive 2011/65/EU on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS2). With the process equipment is assessed in accordance with the Harmonised Standard EN50581:2012 (CENELEC) on Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances.

End-of-life collection and treatment

Electronic products bearing or referencing the symbol shown in Figure 3, when put on the market within the European Union (EU), shall be collected and treated at the end of their useful life, in compliance with applicable EU and local legislation. They shall not be disposed of as part of unsorted municipal waste. Due to materials that may be contained in the product, such as heavy metals or batteries, the environment and human health may be negatively impacted as a result of inappropriate disposal.



Note — In the European Union, a solid bar under the symbol for a crossed-out wheeled bin indicates that the product was put on the market after 13 August 2005.

Figure 3 Recycling/take back/disposal of product symbol



At the end of their life, the OLT and ONT products are subject to the applicable local legislations that implement the European Directive 2012/19EU on waste electrical and electronic equipment (WEEE).

There can be different requirements for collection and treatment in different member states of the European Union.

In compliance with legal requirements and contractual agreements, where applicable, Alcatel-Lucent will offer to provide for the collection and treatment of Alcatel-Lucent products bearing the logo shown in Figure 3 at the end of their useful life, or products displaced by Alcatel-Lucent equipment offers. For information regarding take-back of equipment by Alcatel-Lucent, or for more information regarding the requirements for recycling/disposal of product, contact your Alcatel-Lucent account manager or Alcatel-Lucent take back support at takeback@alcatel-lucent.com.

ANSI ONT safety guidelines

This chapter provides information about the mandatory regulations that govern the installation and operation of the optical network terminals or units (ONTs or ONUs) in the North American or ANSI market.

Safety instructions

This section describes the safety instructions that are provided in the ONT customer documentation and on the equipment.

Safety instruction boxes in customer documentation

The safety instruction boxes are provided in the ONT customer documentation. Observe the instructions to meet safety requirements.

The following is an example of the Danger box.



Danger — Possibility of personal injury.

The Danger box indicates that the described activity or situation may pose a threat to personal safety. It calls attention to a situation or procedure which, if not correctly performed or adhered to, may result in death or serious physical harm.

Do not proceed beyond a Danger box until the indicated conditions are fully understood and met.

The following is an example of the Warning box.



Warning 1 — Possibility of equipment damage.

Warning 2 — Possibility of data loss.

The Warning box indicates that the described activity or situation may, or will, cause equipment damage, loss of data, or serious performance problems. It identifies a possible equipment-damaging situation or provides essential information to avoid the degradation of system operations or data.

Do not proceed beyond a warning until the indicated conditions are fully understood and met.

The following is an example of the Caution box.



Caution 1 — Possibility of service interruption.

Caution 2 — Service interruption.

The Caution box indicates that the described activity or situation may, or will, cause service interruption.

Do not proceed beyond a caution until the indicated conditions are fully understood and met.

The following is an example of the Note box.



Note — Information of special interest.

The Note box provides information that assists the personnel working with ONTs. It does not provide safety-related instructions.

Safety-related labels

The ONT equipment is labeled with specific safety compliance information and instructions that are related to a variant of the ONT. Observe the instructions on the safety labels.

Table 1 provides examples of the text in the various ONT safety labels.

Table 1 Safety labels

| Description | Label text |
|----------------|---|
| UL compliance | Communication service equipment US listed. Type 3R enclosure - Rainproof. |
| TUV compliance | Type 3R enclosure - Rainproof. |
| ESD warning | Caution: This assembly contains electrostatic sensitive device. |

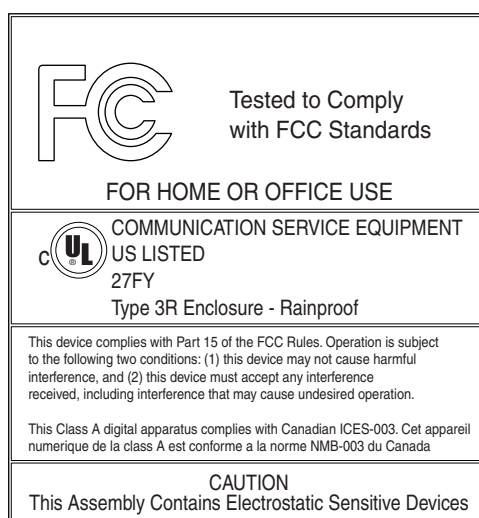
(1 of 2)

| Description | Label text |
|--|---|
| Laser classification | Class 1 laser product |
| Laser product compliance | This laser product conforms to all applicable standards of 21 CFR 1040.10 at date of manufacture. |
| FCC standards compliance | Tested to comply with FCC standards for home or office use. |
| CDRH compliance | Complies with 21 CFR 1040.10 and 1040.11 except for deviations pursuant to Laser Notice No. 50, dated June 24, 2007 |
| Operation conditions | 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. |
| Canadian standard compliance (modular ONT) | This Class A digital apparatus complies with Canadian ICES-003. |
| Canadian standard compliance (outdoor ONT) | This Class B digital apparatus complies with Canadian ICES-003. |
| CE marking | There are various CE symbols for CE compliance. |

(2 of 2)

Figure 1 shows a sample safety label on the ONT equipment.

Figure 1 Sample safety label on the ONT equipment



18533

Safety standards compliance

This section describes the ONT compliance with North American safety standards.



Warning — Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

EMC, EMI, and ESD standards compliance

The ONT equipment complies with the following requirements:

- Federal Communications Commission (FCC) CFR 47, Part 15, Subpart B, Class A requirements for OLT equipment
- GR-1089-CORE requirements, including:
 - Section 3 Electromagnetic Interference, Emissions Radiated and Conducted
 - Section 3 Immunity, Radiated and Conducted
 - Section 2 ESD Discharge Immunity: System Level Electrostatic Discharge and EFT Immunity: Electrically Fast Transients

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 or more 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 needed.
- Consult the dealer or an experienced radio/TV technician for help.

Equipment safety standard compliance

The ONT equipment complies with the requirements of UL60950-1, Outdoor ONTs to “Communication Service Equipment” (CSE) and Indoor ONTs to Information Technology Equipment (ITE).

Environmental standards compliance

The ONT equipment complies with the following standards:

- GR-63-CORE (NEBS): requirements related to operating, storage, humidity, altitude, earthquake, office vibration, transportation and handling, fire resistance and spread, airborne contaminants, illumination, and acoustic noise
- GR-487-CORE: requirements related to rain, chemical, sand, and dust
- GR-487 R3-82: requirements related to condensation
- GR-3108: Requirements for Network Equipment in the Outside Plant (OSP)
- TP76200: Common Systems Equipment Interconnections Standards

Laser product standards compliance

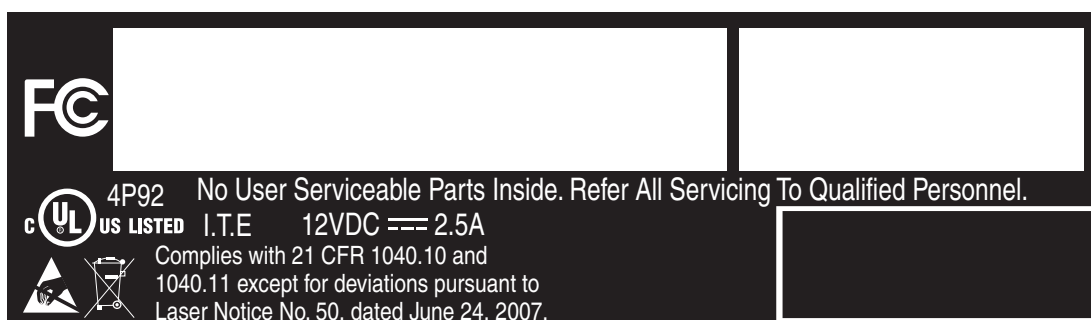
The ONT equipment complies with 21 CFR 1040.10 and CFR 1040.11, except for deviations pursuant to Laser Notice No. 50, dated June 24, 2007” or to 21 CFR 1040.10 U.S. Center for Devices and Radiological Health (CDRH) of the Food and Drug Administration (FDA) Laser Notice 42 for ONTs containing Class 1 Laser modules certified by original manufactures.

Per CDRH 21 CFR 10.40.10 (h) (1) (iv) distributors of Class 1 laser products, such as ALU ONTs shall leave the following Laser Safety cautions with the end user.

- a) “Class 1 Laser Product”
- b) “Caution – Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.”

Figure 2 shows a laser product label.

Figure 2 Sample laser product label showing CDRH 21 CFR compliance



22813

Resistibility requirements compliance

The ONT equipment complies with the requirements of ITU Recommendation K.21 for resistibility of telecommunication equipment installed in customer premises to overvoltage and overcurrents.

Laser safety guidelines

Only qualified service personnel who are extremely familiar with laser radiation hazards should install or remove the fiber optic cables and units in this system.

Observe the following warnings when you perform installation, operations, and maintenance tasks on the ONT equipment.



Danger — There may be invisible laser radiation at the fiber optic cable when the cable is removed from the connector. Avoid direct exposure to beam.

Observe the following danger for a laser hazard. Eyes can be damaged when they are exposed to a laser beam. Take necessary precautions before you plug in the optical modules.



Danger — Possibility of equipment damage. Risk of eye damage by laser radiation.

Per CDRH 21 CFR 10.40.10 (h) (1) (iv) distributors of Class 1 laser products, such as ALU ONTs shall leave the following Laser Safety cautions with the end user.

a) “Class 1 Laser Product”

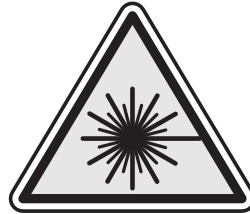
b) “Caution – Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.”

Laser warning labels

The following figures show sample labels related to laser product, classification and warning.

Figure 3 shows a laser product label.

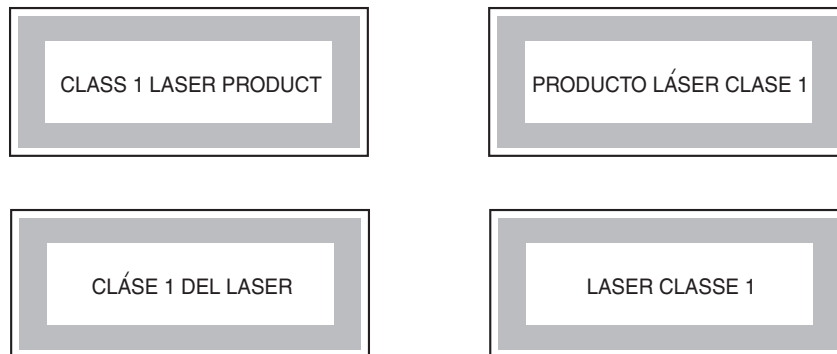
Figure 3 Laser product label



18455

Figure 4 shows a laser classification label. Laser classification labels may be provided in other languages.

Figure 4 Laser classification label



18992

Figure 5 shows a laser warning label and an explanatory label for laser products. Explanatory labels may be provided in other languages. The explanatory label provides the following information:

- a warning that calls attention to the invisible laser radiation
- an instruction against staring into the beam or viewing directly with optical instruments
- wavelength
- normal output power
- maximum output power

Figure 5 Laser warning labels



18993


Laser classification

The ONT is classified as a Class 1 laser product based on its transmit optical output.

For Class 1 laser products, lasers are safe under reasonably foreseeable conditions of operation, including the use of optical instruments for intrabeam viewing.

Figure 6 shows a sample laser product safety label on the ONT equipment.

Figure 6 Sample laser product safety label on the ONT equipment

| | |
|--|------|
| CLASS 1 LASER PRODUCT | |
| THIS LASER PRODUCT CONFORMS TO ALL APPLICABLE STANDARDS OF 21 CFR 1040.10 AT DATE OF MANUFACTURE. | |
| MANUFACTURED: | |
| MONTH | YEAR |
| Alcatel-Lucent  | |

18532

Transmit optical output

The maximum transmit optical output of an ONT is +5 dBm.

Normal laser operation

In normal operation, fiber cable laser radiation is always off until it receives signal from the line terminal card.

Operating personnel must observe the instructions on the laser explanatory label before plugging in the optical module.



Danger — Risk of eye damage by laser radiation.

Location class

Use cable supports and guides to protect the receptacles from strain.

Electrical safety guidelines

This section provides the electrical safety guidelines for the ONT equipment.



Note — The ONTs comply with the U.S. National Electrical Code. However, local electrical authorities have jurisdiction when there are differences between the local and U.S. standards.

Power supplies

The use of any non-Alcatel-Lucent approved power supplies or power adapters is not supported or endorsed by Alcatel-Lucent. Such use will void any warranty or support contract with Alcatel-Lucent. Such use greatly increases the danger of damage to equipment or property.

Cabling

The following are the guidelines regarding cables used for the ONT equipment:

- Use only cables approved by the relevant national electrical code.
- Use cables suitable for outdoor use for outdoor installation of ONTs.
- The ONTs have been evaluated for use with external POTS wiring without primary protection that may not exceed 140 ft (43 m) in reach. However, the power cable must not exceed 100 ft (31 m).

Protective earth

Earthing and bonding of the ONTs must comply with the requirements of NEC article 250 or local electrical codes.

ESD safety guidelines

The ONT equipment is sensitive to ESD. Operations personnel must observe the following ESD instructions when they handle the ONT equipment.



Caution — This equipment is ESD sensitive. Proper ESD protections should be used when entering the TELCO Access portion of the ONT.

During installation and maintenance, service personnel must wear wrist straps to prevent damage caused by ESD.

Alcatel-Lucent recommends that you prepare the site before you install the ONT equipment. In addition, you must control relative humidity, use static dissipating material for furniture or flooring, and restrict the use of air conditioning.

Environmental requirements

See the ONT technical specification documentation for temperature ranges for ONTs.

During operation in the supported temperature range, condensation inside the ONT caused by humidity is not an issue. To avoid condensation caused by rapid changes in temperature and humidity, Alcatel-Lucent recommends:

- The door of the ONT not be opened until temperature inside and outside the enclosure has stabilized.
- If the door of the ONT must be opened after a rapid change in temperature or humidity, use a dry cloth to wipe down the metal interior to prevent the risk of condensation.
- When high humidity is present, installation of a cover or tent over the ONT helps prevent condensation when the door is opened.

Contents

| | |
|--|---------------|
| Preface | iii |
| Scope | iii |
| Audience | iii |
| Required knowledge | iii |
| Acronyms and initialisms | iii |
| Assistance and ordering phone numbers | iv |
| Alcatel-Lucent quality processes | iv |
| Safety information | iv |
| Documents | iv |
| Procedure 1 To download a ZIP file package of the customer documentation..... | iv |
| Procedure 2 To access individual documents | v |
| Special information..... | v |
| Procedures with options or substeps..... | v |
| Procedure 3 Example of options in a procedure..... | vi |
| Procedure 4 Example of required substeps in a procedure | vi |
| Multiple PDF document search..... | vi |
| Procedure 5 To search multiple PDF files for a common term | vi |
| ETSI ONT safety guidelines | ix |
| Safety instructions..... | ix |
| Safety instruction boxes | ix |
| Safety-related labels | x |
| Safety standards compliance..... | xi |
| EMC, EMI, and ESD compliance..... | xi |
| Equipment safety standard compliance | xi |
| Environmental standard compliance | xi |
| Laser product standard compliance | xi |

| | |
|---|------|
| Resistibility requirements compliance | xii |
| Acoustic noise emission standard compliance | xii |
| Electrical safety guidelines..... | xii |
| Power supplies..... | xii |
| Cabling..... | xii |
| Protective earth | xii |
| ESD safety guidelines..... | xiii |
| Laser safety guidelines..... | xiii |
| Laser classification..... | xiii |
| Transmit optical output..... | xv |
| Normal laser operation..... | xv |
| Location class | xv |
| Environmental requirements..... | xvi |

ETSI environmental and CRoHS guidelines xvii

| | |
|--|------|
| Environmental labels | xvii |
| Overview | xvii |
| Environmental related labels..... | xvii |
| Hazardous Substances Table (HST)..... | xix |
| Other environmental requirements | xix |
| ONT environmental requirements | xx |
| Storage..... | xx |
| Transportation | xx |
| Stationary use | xx |
| Thermal limitations | xx |
| Material content compliance | xx |
| End-of-life collection and treatment | xxi |

ANSI ONT safety guidelines xxiii

| | |
|--|--------|
| Safety instructions..... | xxiii |
| Safety instruction boxes in customer documentation | xxiii |
| Safety-related labels | xxiv |
| Safety standards compliance..... | xxv |
| EMC, EMI, and ESD standards compliance | xxvi |
| Equipment safety standard compliance | xxvi |
| Environmental standards compliance | xxvi |
| Laser product standards compliance..... | xxvii |
| Resistibility requirements compliance..... | xxvii |
| Laser safety guidelines..... | xxvii |
| Laser warning labels | xxviii |
| Laser classification..... | xxix |
| Transmit optical output..... | xxx |
| Normal laser operation..... | xxx |
| Location class | xxx |

| | |
|--|----------------|
| Electrical safety guidelines..... | xxx |
| Power supplies..... | xxx |
| Cabling..... | xxx |
| Protective earth..... | xxx |
| ESD safety guidelines..... | xxx |
| Environmental requirements..... | xxx |
| 1 — G-240W-A unit data sheet | 1-1 |
| 1.1 G-240W-A part numbers and identification | 1-2 |
| 1.2 G-240W-A general description | 1-3 |
| TR-069 support for reading optical parameters | 1-5 |
| TR-104 parameter extension support for voice service | 1-5 |
| Mobile offload support | 1-5 |
| 1.3 G-240W-A software and installation feature support..... | 1-5 |
| 1.4 G-240W-A interfaces and interface capacity | 1-6 |
| G-240W-A connections and components..... | 1-6 |
| 1.5 G-240W-A LEDs | 1-8 |
| 1.6 G-240W-A detailed specifications | 1-10 |
| 1.7 G-240W-A GEM ports and T-CONTs | 1-11 |
| 1.8 G-240W-A performance monitoring statistics..... | 1-11 |
| 1.9 G-240W-A functional blocks | 1-13 |
| 1.10 G-240W-A standards compliance | 1-15 |
| Energy-related products standby and off modes compliance | 1-15 |
| 1.11 G-240W-A special considerations | 1-16 |
| Wi-Fi service | 1-16 |
| G-240W-A ONT considerations and limitations | 1-16 |
| 2 — Install a G-240W-A indoor ONT | 2-1 |
| 2.1 Purpose | 2-2 |
| 2.2 General | 2-2 |
| 2.3 Prerequisites..... | 2-2 |
| 2.4 Recommended tools | 2-2 |
| 2.5 Safety information | 2-3 |
| 2.6 Procedure | 2-4 |
| 3 — Replace a G-240W-A indoor ONT | 3-1 |
| 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 |
| 4 — Configure a G-240W-A indoor ONT | 4-1 |
| 4.1 General | 4-2 |
| 4.2 HGU mode GUI configuration..... | 4-2 |
| Login | 4-2 |
| Procedure 4-1 Login to web-based GUI | 4-2 |

| | | |
|-----|--|------|
| | Device and connection status | 4-3 |
| | Procedure 4-2 Device information retrieval | 4-4 |
| | Procedure 4-3 LAN status retrieval | 4-5 |
| | Procedure 4-4 WAN status retrieval | 4-6 |
| | Procedure 4-5 WAN status IPv6 retrieval | 4-8 |
| | Procedure 4-6 Home networking information retrieval | 4-9 |
| | Procedure 4-7 Optics module status retrieval | 4-10 |
| | Procedure 4-8 Voice information retrieval | 4-11 |
| | Network configuration | 4-12 |
| | Procedure 4-9 LAN networking configuration | 4-12 |
| | Procedure 4-10 LAN IPv6 networking configuration | 4-14 |
| | Procedure 4-11 WAN networking configuration | 4-15 |
| | Procedure 4-12 WiFi networking configuration | 4-17 |
| | Procedure 4-13 Routing configuration | 4-19 |
| | Procedure 4-14 DNS configuration | 4-20 |
| | Procedure 4-15 TR-069 configuration | 4-21 |
| | Security configuration | 4-22 |
| | Procedure 4-16 Firewall configuration | 4-22 |
| | Procedure 4-17 MAC filter configuration | 4-23 |
| | Procedure 4-18 IP filter configuration | 4-24 |
| | Procedure 4-19 URL filter configuration | 4-25 |
| | Procedure 4-20 DMZ and ALG configuration | 4-26 |
| | Application configuration | 4-27 |
| | Procedure 4-21 Port forwarding configuration | 4-27 |
| | Procedure 4-22 DDNS configuration | 4-28 |
| | Procedure 4-23 NTP configuration | 4-29 |
| | Procedure 4-24 USB storage configuration | 4-30 |
| | Procedure 4-25 UPnP and DLNA configuration | 4-31 |
| | Maintenance | 4-31 |
| | Procedure 4-26 Password configuration | 4-32 |
| | Procedure 4-27 LOID configuration | 4-33 |
| | Procedure 4-28 SLID configuration | 4-34 |
| | Procedure 4-29 Device management | 4-35 |
| | Procedure 4-30 Backup and restore | 4-36 |
| | Procedure 4-31 Upgrade firmware | 4-36 |
| | Procedure 4-32 Reboot ONT | 4-37 |
| | Procedure 4-33 Restore factory defaults | 4-38 |
| | Procedure 4-34 Diagnose connections | 4-39 |
| | Procedure 4-35 View log files | 4-40 |
| | RG troubleshooting counters | 4-41 |
| | Procedure 4-36 Retrieve Residential Gateway (RG) troubleshooting counters | 4-41 |
| 4.3 | SFU mode GUI configuration | 4-42 |
| | Login | 4-42 |
| | Procedure 4-37 Login to web-based GUI | 4-42 |
| | Device and connection status | 4-43 |
| | Procedure 4-38 Device information retrieval | 4-44 |
| | Maintenance | 4-45 |
| | Procedure 4-39 Password configuration | 4-45 |
| | Procedure 4-40 LOID configuration | 4-46 |
| | Procedure 4-41 SLID configuration | 4-47 |

| | | |
|------------|---|------------|
| 4.4 | Operator ID..... | 4-47 |
| | Procedure 4-42 Modifying the operator ID | 4-48 |
| 5 — | ONT configuration file over OMCI | 5-1 |
| 5.1 | Purpose | 5-2 |
| 5.2 | Supported configuration file types | 5-2 |
| | Filename conventions | 5-4 |
| 5.3 | ONT configuration file over OMCI..... | 5-4 |
| | Procedure 5-1 Configuring an ONT using a configuration file via OMCI | 5-5 |

List of figures

| | |
|--|--------|
| Figure 1 PSE certification | xi |
| Figure 2 Laser product label | xiv |
| Figure 3 Laser classification label | xiv |
| Figure 4 Laser warning labels | xv |
| Figure 1 Products below MCV value label | xviii |
| Figure 2 Products above MCV value label | xix |
| Figure 3 Recycling/take back/disposal of product symbol | xxi |
| Figure 1 Sample safety label on the ONT equipment | xxv |
| Figure 2 Sample laser product label showing CDRH 21 CFR compliance | xxvii |
| Figure 3 Laser product label | xxviii |
| Figure 4 Laser classification label | xxviii |
| Figure 5 Laser warning labels | xxix |
| Figure 6 Sample laser product safety label on the ONT equipment | xxx |
| Figure 1-1 G-240W-A indoor ONT physical connections (back view) | 1-7 |
| Figure 1-2 G-240W-A indoor ONT physical connections (side view) | 1-7 |
| Figure 1-3 G-240W-A indoor ONT LEDs | 1-9 |
| Figure 1-4 Single-residence Wi-Fi ONT with Gigabit Ethernet and POTS and without RF video | 1-14 |
| Figure 1-5 G-240W-A ONT hardware block | 1-14 |
| Figure 2-1 Wall mounting keyholes on G-240W-A indoor ONTs | 2-4 |
| Figure 2-2 G-240W-A indoor ONT connections (back view) | 2-5 |
| Figure 2-3 G-240W-A indoor ONT connections (side view) | 2-5 |
| Figure 3-1 G-240W-A indoor ONT connections (side view) | 3-4 |
| Figure 3-2 G-240W-A indoor ONT connections (back view) | 3-5 |
| Figure 4-1 Web login window | 4-3 |
| Figure 4-2 Device Information window | 4-4 |
| Figure 4-3 LAN status window | 4-5 |
| Figure 4-4 WAN status window | 4-6 |
| Figure 4-5 WAN status IPv6 window | 4-8 |
| Figure 4-6 Home networking information window | 4-9 |
| Figure 4-7 Optics module status window | 4-10 |
| Figure 4-8 Voice Information window | 4-11 |
| Figure 4-9 LAN network window | 4-12 |
| Figure 4-10 LAN IPv6 network window | 4-14 |
| Figure 4-11 WAN network window | 4-15 |
| Figure 4-12 WiFi network window | 4-17 |
| Figure 4-13 Routing network window | 4-19 |
| Figure 4-14 DNS network window | 4-20 |
| Figure 4-15 TR-069 network window | 4-21 |
| Figure 4-16 Firewall window | 4-22 |
| Figure 4-17 MAC filter window | 4-23 |
| Figure 4-18 IP filter window | 4-24 |
| Figure 4-19 URL Filter window | 4-25 |
| Figure 4-20 DMZ and ALG window | 4-26 |
| Figure 4-21 Port forwarding window | 4-27 |
| Figure 4-22 DDNS window | 4-28 |
| Figure 4-23 NTP window | 4-29 |
| Figure 4-24 USB storage window | 4-30 |
| Figure 4-25 UPnP and DLNA window | 4-31 |

| | |
|--|------|
| Figure 4-26 Password window | 4-32 |
| Figure 4-27 LOID Config window | 4-33 |
| Figure 4-28 SLID configuration window | 4-34 |
| Figure 4-29 Device management window | 4-35 |
| Figure 4-30 Backup and Restore window | 4-36 |
| Figure 4-31 Firmware upgrade window | 4-36 |
| Figure 4-32 Reboot window | 4-37 |
| Figure 4-33 Factory default window | 4-38 |
| Figure 4-34 Diagnose window | 4-39 |
| Figure 4-35 Log window | 4-40 |
| Figure 4-36 RG Troubleshooting Counters window | 4-41 |
| Figure 4-37 Web login window | 4-43 |
| Figure 4-38 Device Information window | 4-44 |
| Figure 4-39 Password window | 4-45 |
| Figure 4-40 LOID configuration window | 4-46 |
| Figure 4-41 SLID configuration window | 4-47 |

List of tables

| | |
|---|------|
| Table 1 Safety labels | x |
| Table 1 Safety labels | xxiv |
| Table 1-1 Identification of G-240W-A indoor ONTs | 1-2 |
| Table 1-2 G-240W-A indoor ONT interface connection capacity | 1-6 |
| Table 1-3 G-240W-A indoor ONT physical connections | 1-7 |
| Table 1-4 G-240W-A indoor ONT LEDs | 1-9 |
| Table 1-5 G-240W-A indoor ONT physical specifications | 1-10 |
| Table 1-6 G-240W-A indoor ONT power consumption specifications | 1-11 |
| Table 1-7 G-240W-A indoor ONT environmental specifications | 1-11 |
| Table 1-8 G-240W-A indoor ONT capacity for GEM ports and T-CONTs | 1-11 |
| Table 1-9 Package P ONTs ONTENET performance monitoring statistics | 1-12 |
| Table 1-10 Package P ONTs ONTL2UNI performance monitoring statistics | 1-12 |
| Table 1-11 Package P ONTs PONONTTC, PONONTMCTC, PONONTTCHSI, PONONTTCES, PONONTTCFLOW, PONONTTCVOIP performance monitoring statistics | 1-13 |
| Table 1-12 Package P ONTs PONONTTC aggregate performance monitoring statistics | 1-13 |
| Table 1-13 G-240W-A ONT considerations and limitations | 1-17 |
| Table 4-1 Device Information parameters | 4-4 |
| Table 4-2 LAN status parameters | 4-5 |
| Table 4-3 WAN status parameters | 4-7 |
| Table 4-4 WAN status IPv6 parameters | 4-8 |
| Table 4-5 Home networking parameters | 4-9 |
| Table 4-6 Optics module status parameters | 4-10 |
| Table 4-7 Voice Information parameters | 4-11 |
| Table 4-8 LAN network parameters | 4-13 |
| Table 4-9 LAN IPv6 network parameters | 4-14 |
| Table 4-10 WAN network parameters | 4-16 |
| Table 4-11 WiFi network parameters | 4-17 |
| Table 4-12 Routing network parameters | 4-19 |

| | |
|--|------|
| Table 4-13 DNS network parameters..... | 4-20 |
| Table 4-14 TR-069 network parameters..... | 4-21 |
| Table 4-15 Firewall parameters | 4-22 |
| Table 4-16 MAC filter parameters | 4-23 |
| Table 4-17 IP filter parameters..... | 4-24 |
| Table 4-18 URL Filter parameters | 4-25 |
| Table 4-19 DMZ and ALG parameters | 4-26 |
| Table 4-20 Port forwarding parameters..... | 4-27 |
| Table 4-21 DDNS parameters..... | 4-28 |
| Table 4-22 NTP parameters | 4-29 |
| Table 4-23 USB storage parameters..... | 4-30 |
| Table 4-24 Password parameters..... | 4-32 |
| Table 4-25 LOID configuration parameters | 4-33 |
| Table 4-26 SLID configuration parameters | 4-34 |
| Table 4-27 Device management parameters | 4-35 |
| Table 4-28 RG Troubleshooting Counters parameters..... | 4-41 |
| Table 4-29 Device Information parameters..... | 4-44 |
| Table 4-30 Password parameters..... | 4-45 |
| Table 4-31 SLID configuration parameters | 4-47 |
| Table 5-1 Supported configuration files..... | 5-3 |

1 — G-240W-A unit data sheet

- 1.1 G-240W-A part numbers and identification 1-2
- 1.2 G-240W-A general description 1-3
- 1.3 G-240W-A software and installation feature support 1-5
- 1.4 G-240W-A interfaces and interface capacity 1-6
- 1.5 G-240W-A LEDs 1-8
- 1.6 G-240W-A detailed specifications 1-10
- 1.7 G-240W-A GEM ports and T-CONTs 1-11
- 1.8 G-240W-A performance monitoring statistics 1-11
- 1.9 G-240W-A functional blocks 1-13
- 1.10 G-240W-A standards compliance 1-15
- 1.11 G-240W-A special considerations 1-16

1.1 G-240W-A part numbers and identification

Table 1-1 provides part numbers and identification information for the G-240W-A indoor ONT.

Table 1-1 Identification of G-240W-A indoor ONTs

| Mnemonic | Ordering kit part number | Provisioning part number | Description | CLEI | CPR | ECI/Bar code |
|----------|-----------------------------------|--------------------------|---|------|-----|--------------|
| G-240W-A | 3FE 55925 AA | 3FE 56525 AAAA | Package P 2 POTS ports, 4 10/100/1000 Base-T Ethernet interfaces, and 1 100 mW Wi-Fi radio with on/off switch. This ONT also has 2 USB ports. Includes 2-pin wall-mounted European (EU) AC/DC adapter. | — | — | — |
| | 3FE 55925 AB Customer-specific | | Package P 2 POTS ports, 4 10/100/1000 Base-T Ethernet interfaces, and 1 100 mW Wi-Fi radio with on/off switch. This ONT also has 2 USB ports. Includes 2-pin wall-mounted European (EU) AC/DC adapter. Also includes 5dBi indoor multi-direction WiFi antenna and 1.8m Ethernet cable. ⁽¹⁾ | — | — | — |
| | 3FE 55925 AC | | Package P 2 POTS ports, 4 10/100/1000 Base-T Ethernet interfaces, and 1 100 mW Wi-Fi radio with on/off switch. This ONT also has 2 USB ports. Includes 2-pin wall-mounted European (EU) AC/DC adapter. Also includes 5dBi indoor multi-direction WiFi antenna and 1.8m Ethernet cable. ⁽¹⁾ | — | — | — |
| | 3FE 55925 CA | | Package P 2 POTS ports, 4 10/100/1000 Base-T Ethernet interfaces, and 1 100 mW Wi-Fi radio with on/off switch. This ONT also has 2 USB ports. Includes 3-pin wall-mounted British (UK) AC/DC adapter. | — | — | — |
| | 3FE 55925 DA | | Package P 2 POTS ports, 4 10/100/1000 Base-T Ethernet interfaces, and 1 100 mW Wi-Fi radio with on/off switch. This ONT also has 2 USB ports. Includes 3-pin wall-mounted US AC/DC adapter. | — | — | — |

(1 of 2)

| Mnemonic | Ordering kit part number | Provisioning part number | Description | CLEI | CPR | ECI/Bar code |
|----------|--------------------------------|--------------------------|---|------|-----|--------------|
| G-240W-A | 3FE 45150 AA customer-specific | 3FE 56525 BAAB | Package P 2 POTS ports, 4 10/100/1000 Base-T Ethernet interfaces, and 1 100 mW Wi-Fi radio with on/off switch. This ONT also has 2 USB ports. Includes 2-pin wall-mounted European (EU) AC/DC adapter. Also includes 5dBi indoor multi-direction WiFi antenna and one 2m RJ-45 Ethernet cable. ⁽¹⁾ | — | — | — |
| | 3FE 45150 AC | 3FE 56525 AAAB | Package P 2 POTS ports, 4 10/100/1000 Base-T Ethernet interfaces, and 1 100 mW Wi-Fi radio with on/off switch. This ONT also has 2 USB ports. Includes 2-pin wall-mounted European (EU) AC/DC adapter. Also includes 5dBi indoor multi-direction detachable WiFi antenna and one 2m RJ-45 Ethernet cable. ⁽¹⁾ | — | — | — |
| | 3FE 45150 BA | | Package P 2 POTS ports, 4 10/100/1000 Base-T Ethernet interfaces, and 1 100 mW Wi-Fi radio with on/off switch. This ONT also has 2 USB ports. Includes 2-pin wall-mounted US AC/DC adapter. Also includes 5dBi indoor multi-direction detachable WiFi antenna, one 2m RJ-45 Ethernet cable, and one 3m optical fiber cable. | — | — | — |

(2 of 2)

Note

⁽¹⁾ The transmit power is adjustable. See Procedure 4-11 in [Network configuration](#) for more information.

For the G-240W-A indoor ONT power supply information, contact your Alcatel-Lucent technical support representative.

1.2 G-240W-A general description

G-240W-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-240W-A indoor ONTs provide the following functions:

- Single fiber GPON interface with 1.244Gbit/s upstream and 2.488Gbit/s downstream data rates
- Advanced data features such as VLAN tag manipulation, classification, and filtering.
- Traffic classification and QoS capability
- Analog Telephone Adapter (ATA) function integrated based on SIP (RFC3261) and H.248, with various CLASS services supported, including Caller ID, Call Waiting, Call Forwarding, and Call Transfer
- 5 REN per line
- Multiple voice Codec
- Amplitude modulated tone support
- MDI/MDIX auto-negotiation
- Line Rate L2 traffic
- Internal Switch
- UPnP IGD1.0 support
- Bridged mode or routed mode per LAN port
- Internal DHCP server, with configurable DHCP pool and gateway
- WPS on wireless authorization support
- ONT security has been enhanced; SSH-Telnet-FTP and http server are disabled from the WAN side
- 2.4 GHz wireless interface
- 802.11n, compliant with 802.11b/g
- MIMO
- 64/128 WEP encryption
- WPA, WPA-PSK/TKIP
- WPA2, WPA2-PSK/AES
- 4 SSID
- WLAN on/off push button
- WPS/PBC button
- IP router and firewall
- Ethernet-based Point-to-Point (PPPoE)
- Network Address Translation (NAT)
- Network Address Port Translation (NAPT)
- ALG and UpnP port forwarding
- DMZ
- IP/MAC filter
- Multi-level firewall
- DNS server
- DHCP client/server
- PPPoE client
- support for up to 11 simultaneous wireless connections
- support for AIS with DOWN MEP

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 Table 4-6 in the chapter [“Configure a G-240W-A indoor ONT”](#).

TR-104 parameter extension support for voice service

A proprietary attribute has been added to the TR-104 Voice Service object structure to enable the ACS to configure the name of the embedded GSIP XML file to be selected.

The TR-104 Voice Service Object is:

InternetGatewayDevice.Services.VoiceService.{i}.Capabilities.SIP.

The proprietary attribute is: X_ALU-COM_XML_File_Name_Path.

Mobile offload support

As part of the E2E solution supported by the ISAM 7750 service router, the G-240W-A ONT offers Mobile Offload support using a combination of EAP-SIM and ITU-T 802.11.

EAP-SIM is an authentication method that uses the user credentials on the SIM card and EAP to authenticate the user with the Wi-Fi network, removing the need for user input (username and password).

A dedicated public mobile offload SSID in the ONT enables mobile subscribers to connect to the Internet. Encryption is supported by 802.11, providing seamless Wi-Fi authentication for SIM-based user equipment.

The ONT acts as the RADIUS client and sends the encapsulated EAP messages to the AAA server via the WLAN Gateway, which acts as the RADIUS proxy server. The interaction between the ONT and the AAA server provides subscriber management for authenticated mobile users without adding authentication load to the 3G network.

1.3 G-240W-A software and installation feature support

For information on installing or replacing the G-240W-A see:

- [Install a G-240W-A indoor ONT](#)
- [Replace a G-240W-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
- RSSI specifications
- Wi-Fi specifications
- ONT optical budget
- SLID entry via Ethernet port
- ONT management using an ONT interface

1.4 G-240W-A interfaces and interface capacity

Table 1-2 describes the supported interfaces and interface capacity for G-240W-A indoor ONTs.

Table 1-2 G-240W-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 |
| G-240W-A ⁽¹⁾ | 2 | — | 4 | — | — | — | — | — | 1 |

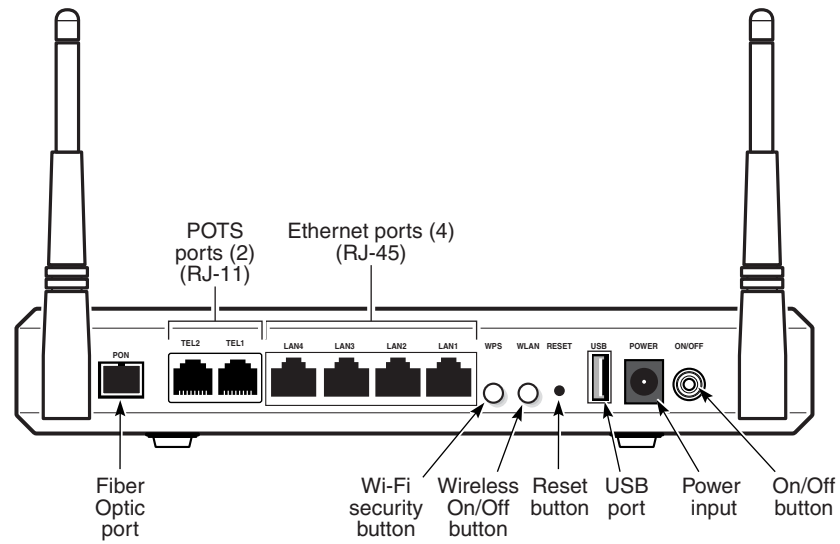
Note

⁽¹⁾ The G-240W-A ONTs provide Wi-Fi service that is enabled and disabled using a Wi-Fi on/off switch.

G-240W-A connections and components

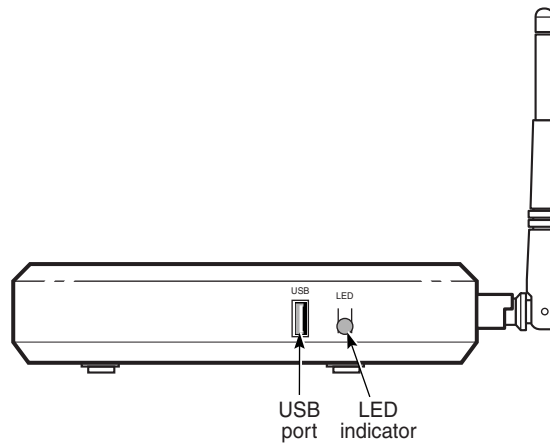
Figure 1-1 and 1-2 show the physical connections for G-240W-A indoor ONTs,

Figure 1-1 G-240W-A indoor ONT physical connections (back view)



24434

Figure 1-2 G-240W-A indoor ONT physical connections (side view)



24435

Table 1-3 describes the physical connections for G-240W-A indoor ONTs.

Table 1-3 G-240W-A indoor ONT physical connections

| Connection ⁽¹⁾ | Description |
|----------------------------------|---|
| PON (Fiber optic port) | This connection is provided through an SC/APC fiber optic connector. |
| TEL1, TEL2 (RJ-11 POTS ports) | This connection is provided through RJ-11 ports. Up to two POTS connections are supported. The POTS ports support voice services. |

(1 of 2)

| Connection ⁽¹⁾ | Description |
|-------------------------------------|---|
| LAN1-LAN4 (RJ-45 Ethernet ports) | This connection is provided through Ethernet RJ-45 connectors. 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. |
| WPS (Wi-Fi security button) | The Wi-Fi Protected Setup (WPS) button enables and disables WLAN data encryption. |
| WLAN (Wireless On/Off button) | Wi-Fi service is compliant with IEEE 802.11 standards and is enabled and disabled using a Wireless button. |
| Reset | Pressing the Reset button for less than 10 seconds reboots the ONT; pressing the Reset button for 10 seconds resets the ONT to the factory defaults, except for the LOID and SLID. |
| USB (USB port) | This connection is provided through one of two USB ports, one on the back of the ONT, and one on the side. |
| Power (Power input) | This connection is provided through the power connector. A power cable fitted with a barrel connector is used to make the connection. |
| ON/OFF | This button turns the ONT on or off. |
| USB (USB port) | This connection is provided through one of two USB ports, one on the back of the ONT, and one on the side. |
| LED (LED indicator button) | This buttons turns all LEDs on or off. |

(2 of 2)

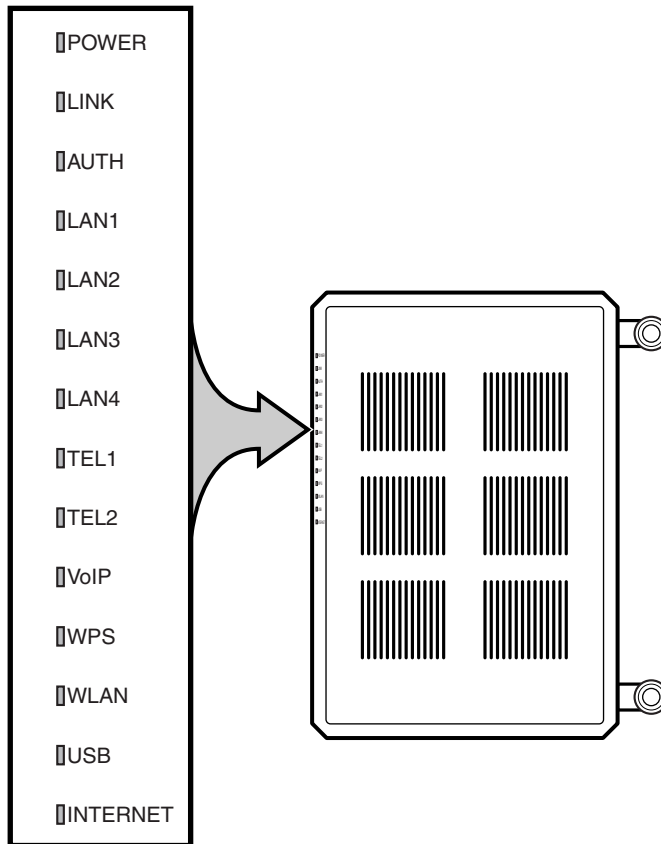
Note

⁽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-240W-A LEDs

Figure 1-3 shows the G-240W-A indoor ONT LEDs.

Figure 1-3 G-240W-A indoor ONT LEDs



24510

Table 1-4 provides LED descriptions for G-240W-A indoor ONTs.

Table 1-4 G-240W-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 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 |
| 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 |

(1 of 2)

| Indicator | LED color and behavior | LED behavior description |
|------------|--|--|
| 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. |

(2 of 2)

1.6 G-240W-A detailed specifications

Table 1-5 lists the physical specifications for G-240W-A indoor ONTs.

Table 1-5 G-240W-A indoor ONT physical specifications

| Description | Specification |
|--|-------------------|
| Length | 8.2 in. (208 mm) |
| Width | 5.6 in. (142 mm) |
| Height | 1.3 in. (33 mm) |
| Weight [within ± 0.5 lb (0.23 kg)] | 0.72 lb (0.33 kg) |

Table 1-6 lists the power consumption specifications for G-240W-A indoor ONT.

Table 1-6 G-240W-A indoor ONT power consumption specifications

| Mnemonic | Maximum power (Not to exceed) | Condition | Minimum power | Condition |
|---------------------------------|----------------------------------|---|---------------|---|
| G-240W-A (3FE 56525 AAAA) | 18 W | 2 POTS off-hook, 4 10/100/1000 Base-T Ethernet, Wi-Fi operational | 5.9 W | 2 POTS on-hook, other interfaces/services not provisioned |

Table 1-7 lists the environmental specifications for G-240W-A indoor ONT.

Table 1-7 G-240W-A indoor ONT environmental specifications

| Mounting method | Temperature range and humidity | Altitude |
|----------------------------|---|--|
| On 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: Contact your Alcatel-Lucent support representative for more information | |

1.7 G-240W-A GEM ports and T-CONTs

Table 1-8 lists the maximum number of supported T-CONTs and GEM ports. See the appropriate release Customer Release Notes for the most accurate list of supported devices.

Table 1-8 G-240W-A indoor ONT capacity for GEM ports and T-CONTs

| ONT or MDU | Maximum | Notes |
|--|---------|---|
| Package P ONTs | | |
| GEM ports per indoor or outdoor ONT | 124 | 124 are present; 122 are available, and 2 are reserved for multicast and debugging |
| T-CONTs per indoor or outdoor ONT | 32 | 32 are present; 31 are available, and 1 is reserved for OMCI |

1.8 G-240W-A performance monitoring statistics

The following section identifies the supported performance monitoring statistics for G-240W-A ONTs. A check mark indicates the statistic is supported on that ONT. An empty cell indicates the statistic is not supported. The following tables are categorized by supported alarm types:

- Table 1-9 provides statistics for ONTENET type counters
- Table 1-10 provides statistics for ONTL2UNI type counters

- Table 1-11 provides statistics for PONONTTC, PONONTMCTC, PONONTTCHSI, PONONTTCES, PONONTTCFLOW, and PONONTTCVOIP type counters
- Table 1-12 provides statistics for PONONTTC aggregate type counters



Note — If you have trouble accessing G-240W-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 1-9 Package P ONTs ONTENET performance monitoring statistics

| ONT | ONTENET statistics | | | | | | | | | | | | | |
|-------------------------|--------------------|----|----|-----|-----|-----|----|------|-----|----|------|-----|-----|-----|
| | FCSE | EC | LC | RBO | SCF | MCF | DT | IMTE | CSE | AE | IMRE | FTL | TBO | SQE |
| G-240W-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 1-10 Package P ONTs ONTL2UNI performance monitoring statistics

| ONT | ONTL2UNI statistics | | | | | | | | | | |
|-------------------------|---------------------|-------|----------|------------|------------|----------|----------|---------|---------|------------|------------|
| | FRAMES | BYTES | MCFRAMES | DSDRPFDRMS | USDRPFDRMS | USFRAMES | DSFRAMES | USBYTES | DSBYTES | USMCFRAMES | DSMCFRAMES |
| G-240W-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 Package P ONTs PONONTTC, PONONTMCTC, PONONTTCHSI, PONONTTCES, PONONTTCFLOW, PONONTTCVOIP performance monitoring statistics

| ONT | PONONTTC, PONONTMCTC, PONONTTCHSI, PONONTTCES, PONONTTCFLOW, PONONTTCVOIP statistics | | | | | |
|-------------------------|--|---------|----------|---------|-----------|------------|
| | TXBLOCKS | TXFRAGS | RXBLOCKS | RXFRAGS | LOSTFRAGS | BADGEMHDRS |
| G-240W-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 Package P ONTs PONONTTC aggregate performance monitoring statistics

| ONT | PONONTTC (aggregate) statistics | | | | | |
|-------------------------|---------------------------------|---------|----------|---------|-----------|------------|
| | TXBLOCKS | TXFRAGS | RXBLOCKS | RXFRAGS | LOSTFRAGS | BADGEMHDRS |
| G-240W-A ⁽¹⁾ | ✓ | ✓ | ✓ | ✓ | ✓ | |

Note

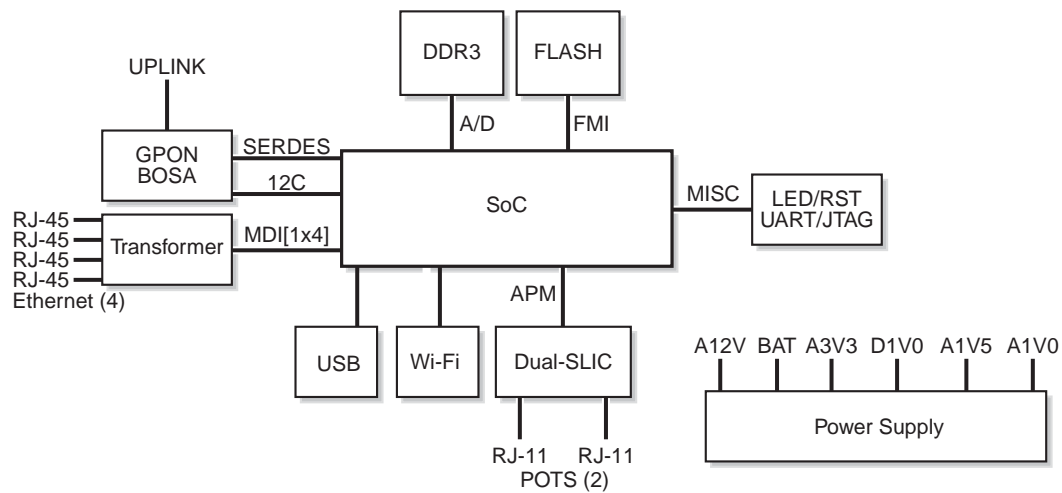
- ⁽¹⁾ A 5 second polling window limitation exists on the ONT, therefore the margin of error for each 15-min window is 5 seconds

1.9 G-240W-A functional blocks

G-240W-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 WLAN button. 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 also feature fiber optic, USB, and power connectors.

Figure 1-4 shows the functional blocks for G-240W-A indoor ONT.

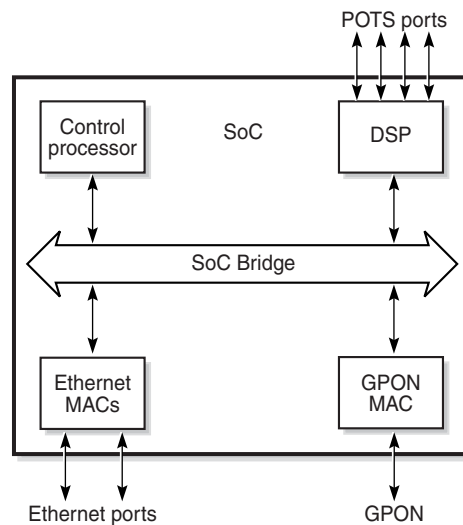
Figure 1-4 Single-residence Wi-Fi ONT with Gigabit Ethernet and POTS and without RF video



24409

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

Figure 1-5 G-240W-A ONT hardware block



19421

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 3-way calling. The DSP has a dedicated 64 kbyte instruction cache and shares a 32 kbyte data cache with the Control Processor. It provides up to 4 network processor cores, each at 800MHz.
- 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 600 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-240W-A standards compliance

G-240W-A indoor ONTs are compliant with the following standards:

- 802.1p marking and VLAN based pbit is supported
- G.711 support for FAX and modem connection
- G.984 support GPON interface (framing)
- G.984.2 support for Amd1, class B+
- G.984.3 support for activation and password functions
- G.984.3 support for AES with operator enable/disable on per port-ID level
- G.984.3 support for FEC in both upstream and downstream directions
- G.984.3 support for multicast using a single GEM Port-ID for all video traffic
- G984.4 and G.983.2 support for OMCI v1 and v2 interface for ONT management and provisioning

Energy-related products standby and off modes compliance

Hereby, Alcatel-Lucent declares that the G-240W-A ONTs are in compliance with the essential requirements and other relevant provisions of Directive 2009/125/EC together with Commission Regulation (EC) No 1275/2008 and Commission Regulation (EC) No 801/2013.

The G-240W-A ONTS qualify as equipment with high network availability (HiNA) functionality. Since the main purpose of G-240W-A ONTs is to provide network functionality with HiNA 7 days /24 hours, the modes Off/Standby, Power Management, and Networked Standby are inappropriate.

For information about the type and number of network ports, see “[G-240W-A interfaces and interface capacity](#)” in this chapter.

For information about power consumption, see “[G-240W-A detailed specifications](#)” in this chapter.

1.11 G-240W-A special considerations

G-240W-A is a package P ONT.

Wi-Fi service

G-240W-A indoor ONTs feature Wi-Fi service as well as voice and data services. Wi-Fi is a wireless networking technology that uses radio waves to provide wireless HSI and network connections. This ONT complies with the IEEE 802.11 standards, which the Wi-Fi Alliance defines as the basis for Wi-Fi technology.

Wi-Fi physical features

G-240W-A indoor ONTs have the following physical features that assist in providing Wi-Fi service:

- WLAN button for enabling and disabling Wi-Fi service
- two external multi-directional antennae
- Wi-Fi Protected Setup (WPS) push button for adding WPS-enabled wireless devices

Wi-Fi standards and certifications

The Wi-Fi service on G-240W-A indoor ONTs supports the following IEEE standards and Wi-Fi Alliance certifications:

- compliant with IEEE 802.11 standards
- certified for IEEE 802.11b/g/n standards
- WPA support including WPA-PSK
- certified for WPA2-Personal and WPA2-Enterprise

Wi-Fi GUI features

G-240W-A indoor ONTs have HTML-based Wi-Fi configuration GUIs.

G-240W-A ONT considerations and limitations

Table [1-13](#) lists the considerations and limitations for Package P G-240W-A ONTs.

Table 1-13 G-240W-A ONT considerations and limitations

| Considerations and limitations |
|--|
| Call History Data collection (ONTCALLHST) is supported, except for the following parameters: RTP packets (discarded), far-end RTCP and RTCP-XR participation, RTCP average and peak round trip delay, MOS, average jitter, number of jitter-buffer over-runs and under runs. |
| Some voice features are configurable on a per ONT basis, including Call Waiting, Call Hold, 3-Way Calling, and Call Transfer. |
| <p>The following voice features / GSIP parameters are configurable on a per-Client/ per-ONT basis (not per-Subscriber):</p> <ul style="list-style-type: none">• Enable Caller ID and Enable Caller Name ID• Digitmap and the associated Interdigit and Critical timers and Enter key parameters• Warmline timer is enabled per subscriber, but the warmline timer value is configured per ONT and must have a lower value than the Permanent time• Miscellaneous timers: Permanent, Timed-release, Reanswer, Error-tone, and CW-alert timers• Features / functions: Message waiting mode, WMWI refresh interval, DTMF volume level• Service Codes for the following features: CCW, Call Hold and Warmline |

2 — Install a G-240W-A indoor ONT

| | |
|------------------------|-----|
| 2.1 Purpose | 2-2 |
| 2.2 General | 2-2 |
| 2.3 Prerequisites | 2-2 |
| 2.4 Recommended tools | 2-2 |
| 2.5 Safety information | 2-3 |
| 2.6 Procedure | 2-4 |

2.1 Purpose

This chapter provides the steps to install a G-240W-A indoor ONT.

2.2 General

The steps listed in this chapter describe mounting and cabling for G-240W-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
- 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-240W-A unit data sheet](#) for the temperature ranges for these ONTs.

2.6 Procedure

Use this procedure to install a G-240W-A indoor ONT.

- 1 Place the indoor ONT unit:
 - a On the flat surface, such as a desk; go to step 3.

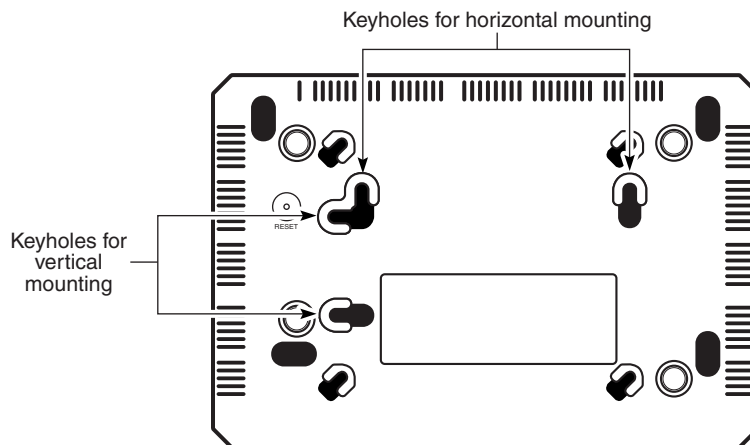


Note — The G-240W-A cannot be stacked with another ONT or with other equipment. The ONT mounting requirements are:

- allow a minimum 100 mm clearance above the top cover
- allow a minimum 50 mm clearance from the side vents
- do not place any heat source directly above the top cover or below the bottom cover

- b On a wall, go to step 2.
- 2 Mount the G-240W-A indoor ONT on a wall.
 - i The G-240W-A indoor ONT can be mounted in either a horizontal or vertical position, as shown in Figure 2-1. If possible, mount the ONT on a wall stud.

Figure 2-1 Wall mounting keyholes on G-240W-A indoor ONTs



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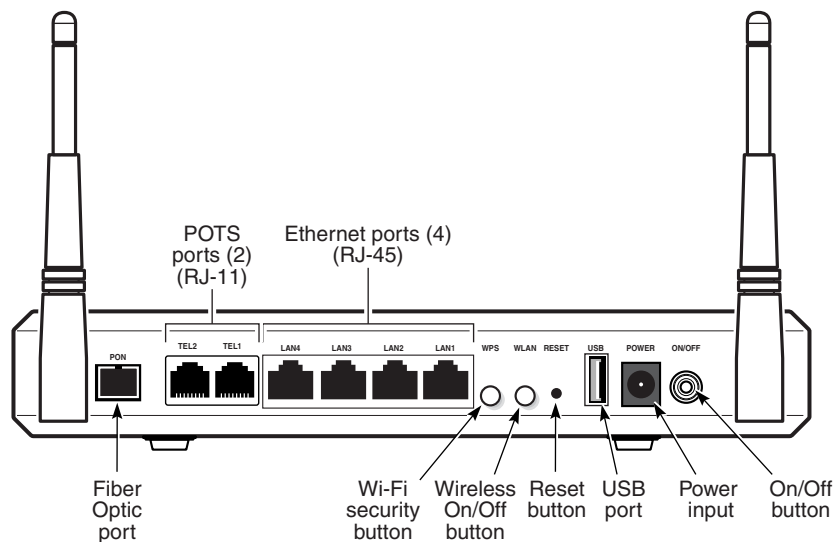
- ii Mark the wall with the location of the mounting holes. These holes should be the same distance apart as the distance between the centers of the keyholes on the ONT.
 - iii Drill the two holes in the wall where the ONT will be mounted and then drive the mounting screws into the holes.

The recommended length of mounting screw is 1.15 in. (3.8 cm).

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

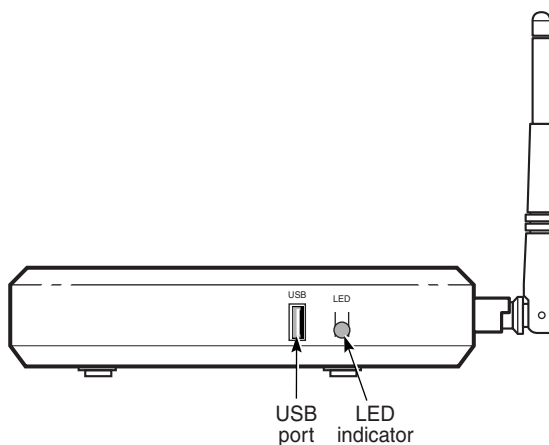
- iv Slide the wall mount keyholes on the ONT enclosure or fiber storage tray down over the mounting screws until the ONT is securely seated.
- 3 Review the connection locations as shown in Figures 2-2 and 2-3.

Figure 2-2 G-240W-A indoor ONT connections (back view)



24434

Figure 2-3 G-240W-A indoor ONT connections (side view)



24435

- 4 Connect the Ethernet cables to the RJ-45 ports; see Figure 2-2 for the location of the RJ-45 ports.
- 5 Route the POTS cables directly to the RJ-11 ports as per local practices.

The POTS port to the left is labeled 1 for Line 1 while the port on the right is labeled 2 for Line 2, as shown in Figure 2-2.

- 6 Connect the fiber optic cable with SC/APC adapter into the SC/APC connector; see Figure 2-2 for the location of the SC/APC 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.



Note — Observe the following:

- Units must be powered by a Listed or CE approved and marked limited power source power supply with a minimum output rate of 12 V dc, 1.25 A.

- 8 Connect the power cable to the power connector.
- 9 Power up the ONT unit by using the power switch.
- 10 If used, enable the Wi-Fi service.
 - i Locate the WLAN button on the ONT; see Figure 2-3 for location of the WLAN button.
 - ii Press the WLAN button to change the status of the Wi-Fi service.
- 11 Verify the ONT LEDs, voltage status, and optical signal levels; see the *7368 Hardware and Cabling Installation Guide*.
- 12 Activate and test the services; see the *7368 Hardware and Cabling Installation Guide*.
- 13 If used, configure the SLID; see the *7368 ISAM ONT Configuration, Management, and Troubleshooting Guide*.
- 14 If necessary, reset the ONT.
 - i Locate the Reset button on a G-240W-A indoor ONT as shown in Figure 2-3.
 - ii Insert the end of a straightened paper clip or other narrow object into the hole in the Reset button to reset the ONT.
- 15 STOP. This procedure is complete.

3 — Replace a G-240W-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 G-240W-A indoor ONTs.

3.2 General

The steps listed in this chapter describe mounting and cabling for G-240W-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-240W-A unit data sheet](#) for the ONT temperature ranges for these ONTs.

3.6 Procedure

Use this procedure to replace a G-240W-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;
```

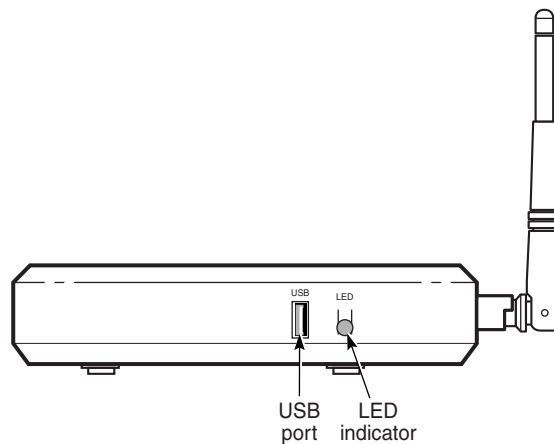
- ii If the ONT is in service, place the ONT in OOS state.

Example:

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

- 2 If used, disable the Wi-Fi service by pressing the WLAN button; see Figure 3-1 for the location of the WLAN button.

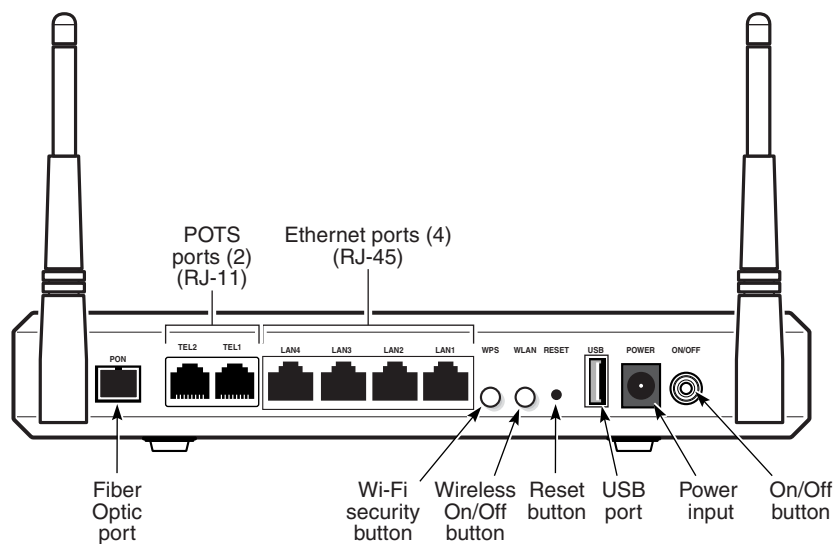
Figure 3-1 G-240W-A indoor ONT connections (side view)



24435

- 3 Power down the unit by using the on/off power switch.
- 4 Disconnect the POTS, Ethernet, and power cables from the ONT; see Figures 3-1 and 3-2 for the connector locations on the G-240W-A indoor ONT.

Figure 3-2 G-240W-A indoor ONT connections (back view)



24434

- 5 Disconnect the fiber optic cables.



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

- i Unplug the fiber optic cable with SC/APC connector from the ONT; see Figure 3-2 for the location of the fiber optic port.
 - ii Attach a fiber dust cover to the end of the SC/APC connector.
- 6 Replace the ONT with a new unit:
 - a On a flat surface, such as a desk, substitute the new ONT for the old ONT on a flat surface, horizontally resting on its four feet.
 - 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 over the mounting screws until it is securely seated.
- 7 Connect the Ethernet cables directly to the RJ-45 ports; see Figure 3-2 for the location of the RJ-45 ports.
- 8 Connect the POTS cables directly to the RJ-11 ports as per local practices; see Figure 3-2 for the location of the RJ-11 ports.

The RJ-11 port to the left is labeled 1 for Line 1 while the port on the right is labeled 2 for Line 2.

- 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 fiber optic cable with SC/APC adapter into the SC/APC connector. Figure 3-2 shows the location of the SC/APC 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.

- 11 Install the power supply according to manufacturer specifications.



Note — Observe the following:

- Units must be powered by a Listed or CE approved and marked limited power source power supply with a minimum output rate of 12 V dc, 1.25 A.

- 12 Connect the power cable to the power connector.
- 13 Power up the unit by using the power switch.
- 14 If used, enable the Wi-Fi service by pressing the WLAN button; see Figure 3-1 for the location of the WLAN button.
- 15 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.

- 16 Verify the ONT LEDs, voltage status, and optical signal levels; see the *7368 Hardware and Cabling Installation Guide*.

- 17 Activate and test the services; see the *7368 Hardware and Cabling Installation Guide*.
- 18 If necessary, reset the ONT.
 - i Locate the Reset button on a G-240W-A indoor ONT as shown in Figure 3-1.
 - ii Insert the end of a straightened paper clip or other narrow object into the hole in the Reset button to reset the ONT.
- 19 STOP. This procedure is complete.

4 — Configure a G-240W-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-240W-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 utilize the web-based GUI for the G-240W-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 login to the web-based GUI for the G-240W-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.

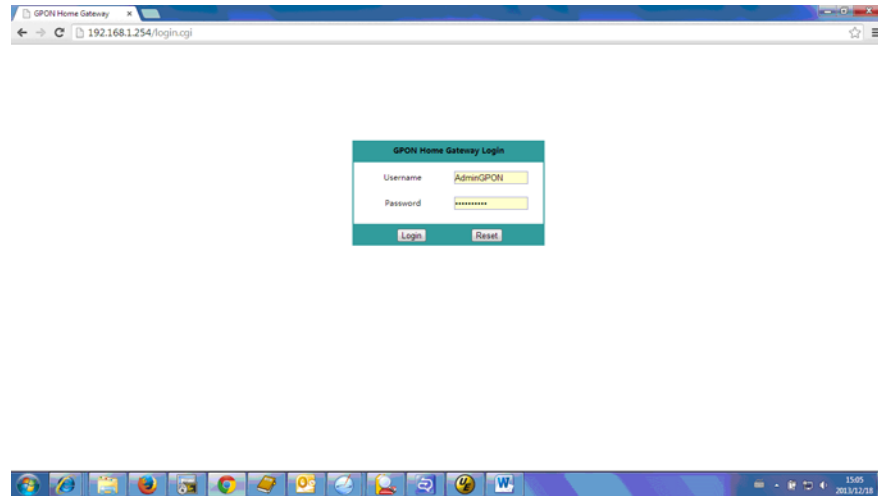
The login window appears.

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 — Pressing the Reset button for less than 10 seconds reboots the ONT; pressing the Reset button for 10 seconds resets the ONT to the factory defaults, except for the LOID and SLID.



Note — If you forget the current username and password, press the reset button for 10 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-240W-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

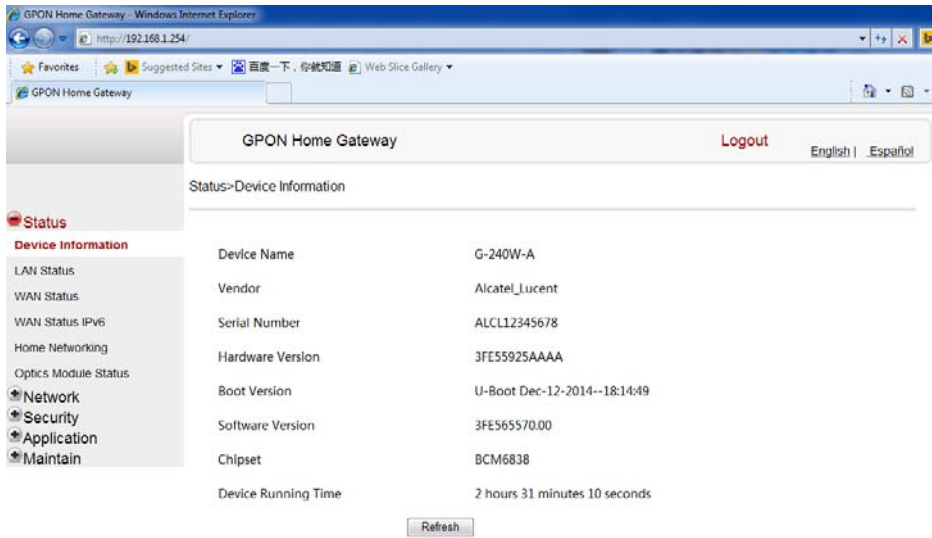


Table 4-1 describes the fields in the Device Information window.

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

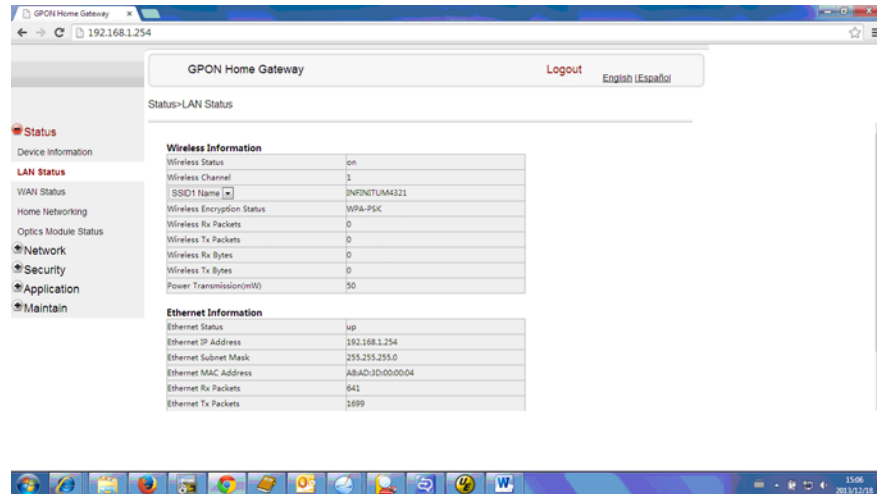


Table 4-2 describes the fields in the LAN status window.

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

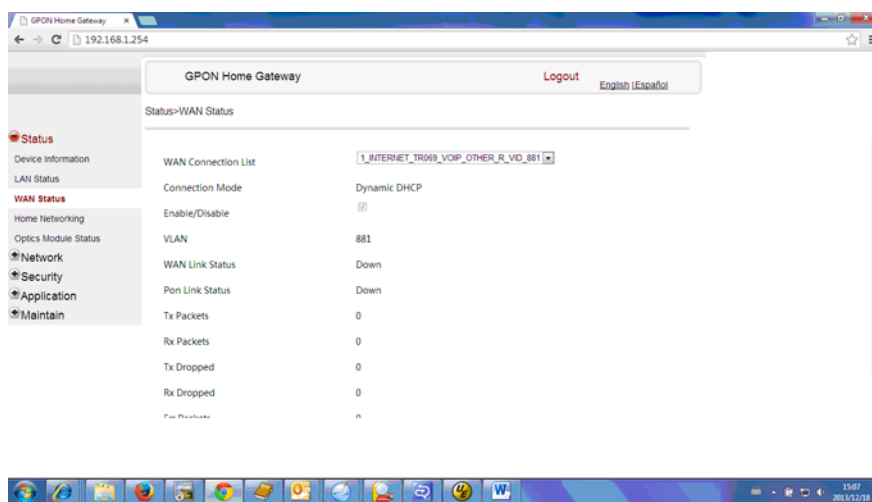


Table 4-3 describes the fields in the WAN status window.

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 |
| PPPoE Concentrator | Displays the PPPoE Access Concentrator (AC) name This field applies only if the Connection Mode is set to PPPoE |
| 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

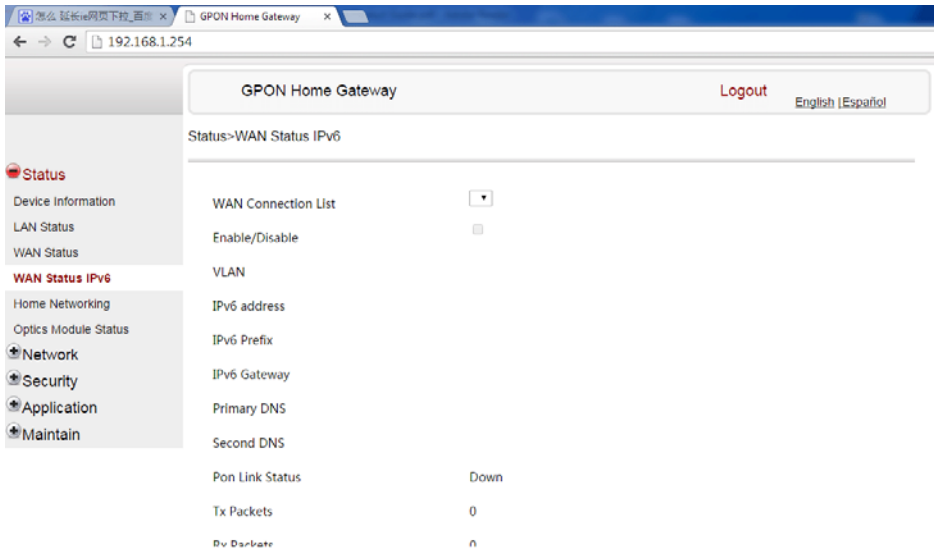


Table 4-4 describes the fields in the WAN status IPv6 window.

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

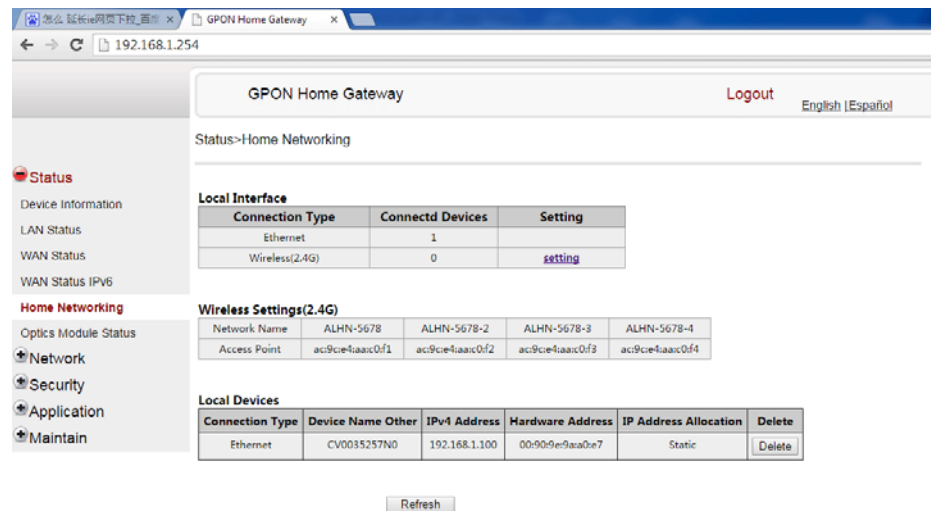


Table 4-5 describes the fields in the Home networking window.

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

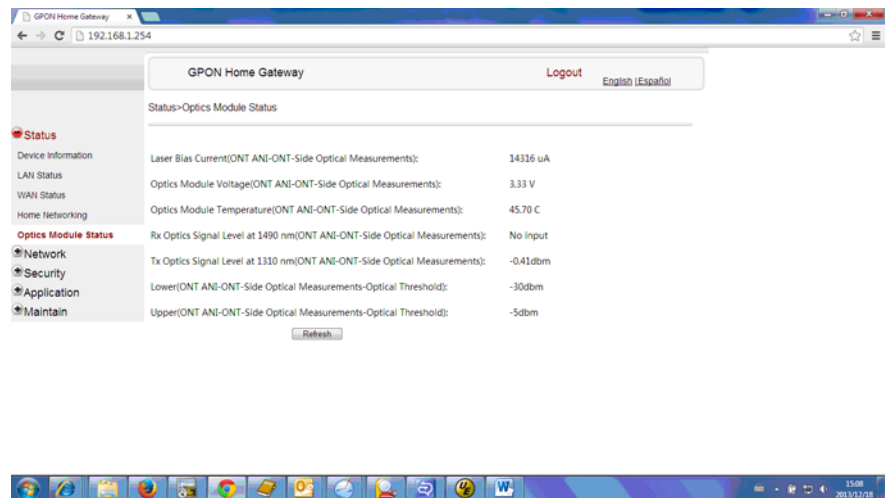


Table 4-6 describes the fields in the Optics module status window.

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

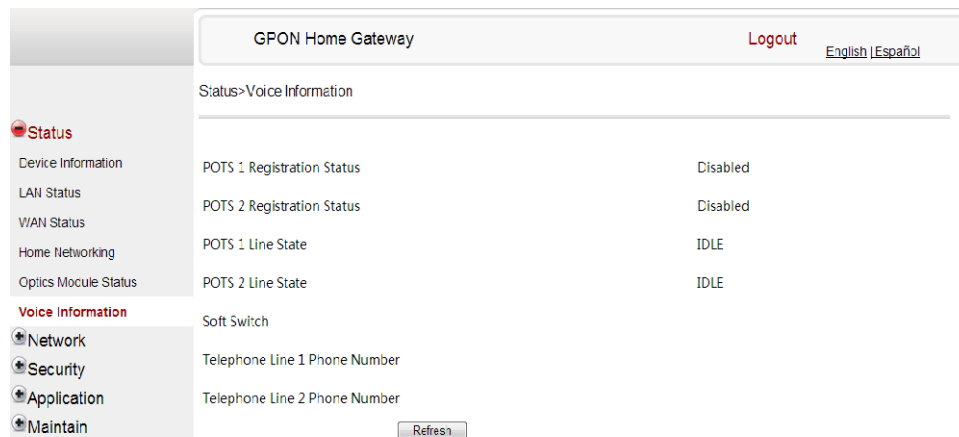


Table 4-7 describes the fields in the Voice Information window.

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 |

Note

- ⁽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-240W-A ONTs also 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

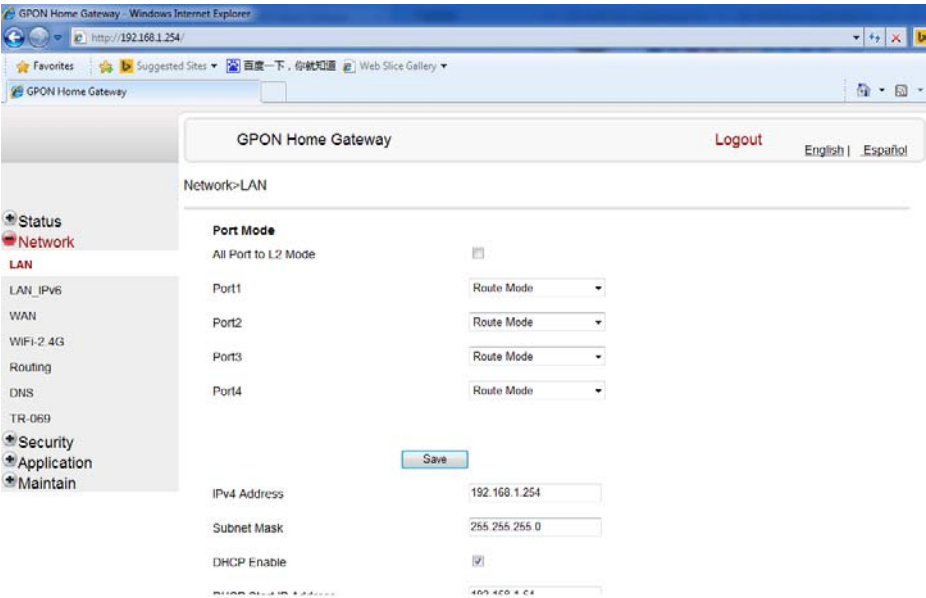


Table 4-8 describes the fields in the LAN network window.

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 |
| 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 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

GPON Home Gateway [Logout](#) [English](#) [Español](#)

Network>LAN_IPv6

IPv6 LAN Host Configuration

DNS Server: HGWProxy

prefix config: WANConnection

Interface: none

☐ DHCPv6 Server Enable

DHCP Start IP Address: 0.0.0.2

DHCP End IP Address: 0.0.0.255

Whether the address info through DHCP: ☐

Whether other info obtained through DHCP: ☒

Maximum interval for periodic RA messages: 600

Minimum interval for periodic RA messages: 200

[Save/Apply](#)

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: <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> • Route • Bridge |

(1 of 2)

| Field | Description |
|---------------------|---|
| Encrypt Mode | Choose an encryption mode from the drop-down menu: <ul style="list-style-type: none">• OPEN• WEP• WPA/WPA2 Personal• WPA/WPA2 Enterprise |
| WPA Version | Choose a WPA version from the drop-down menu: <ul style="list-style-type: none">• WPA1• WPA2• WPA1/WPA2 |
| WPA Encryption Mode | Choose a WPA encryption mode from the drop-down menu: <ul style="list-style-type: none">• 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: <ul style="list-style-type: none">• 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

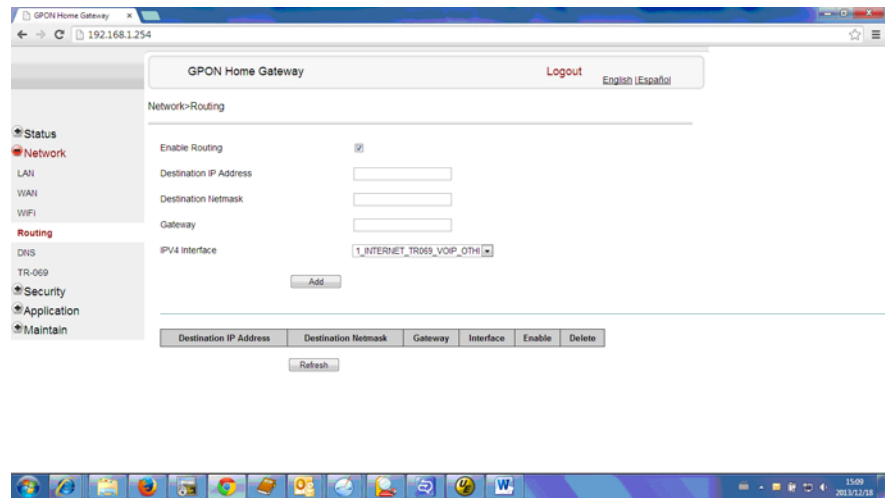


Table 4-12 describes the fields in the Routing network window.

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 |
|----------------|----------------|------------------------|
| dslddevice.lan | dslddevice.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

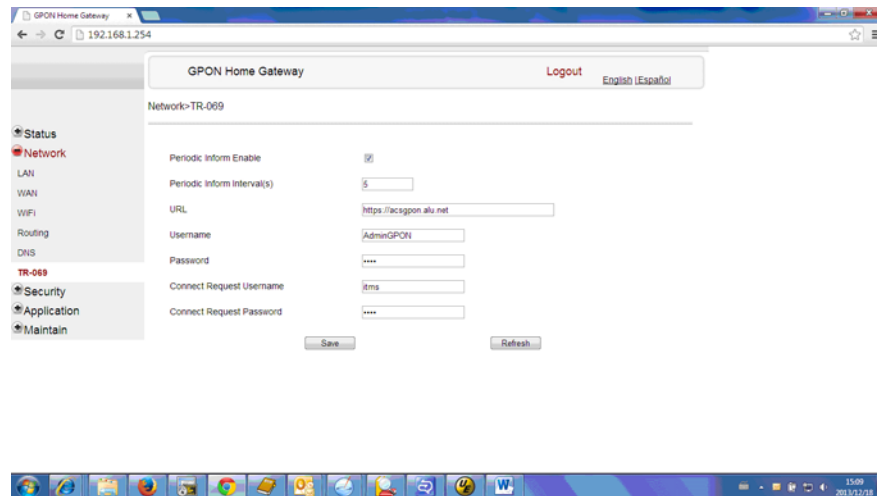


Table 4-14 describes the fields in the TR-069 network window.

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-240W-A ONT also supports 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

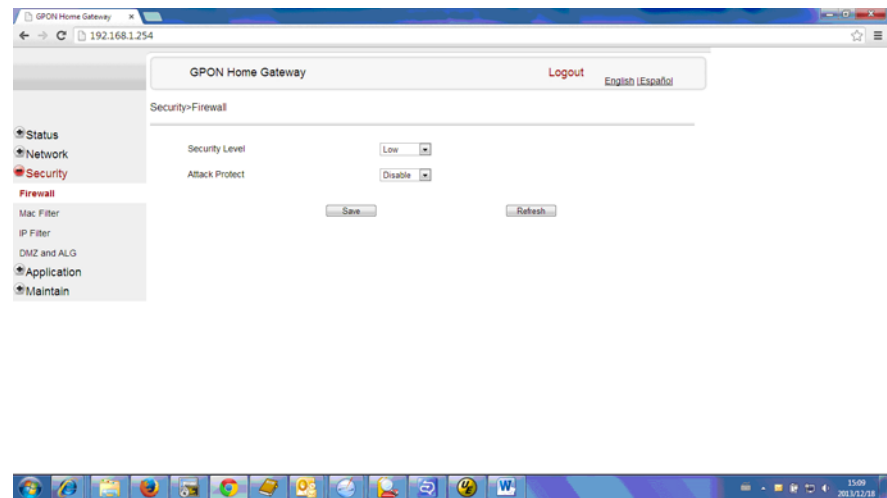


Table 4-15 describes the fields in the firewall window.

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

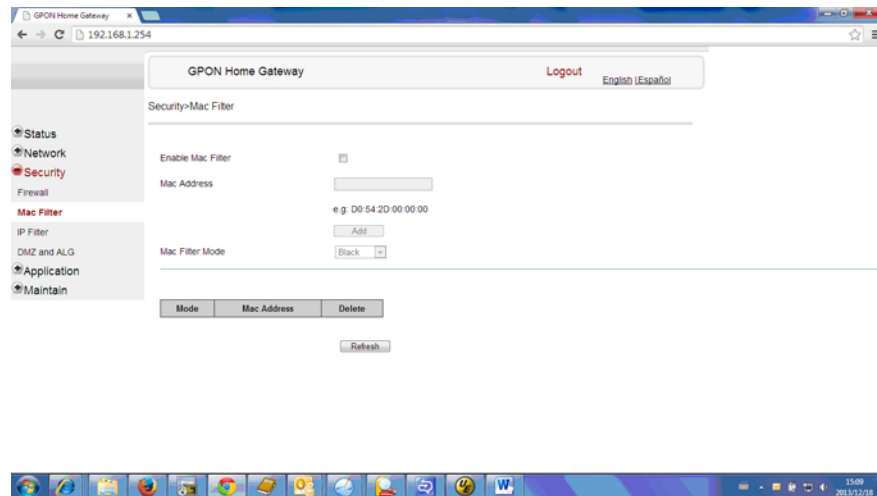


Table 4-16 describes the fields in the MAC filter window.

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

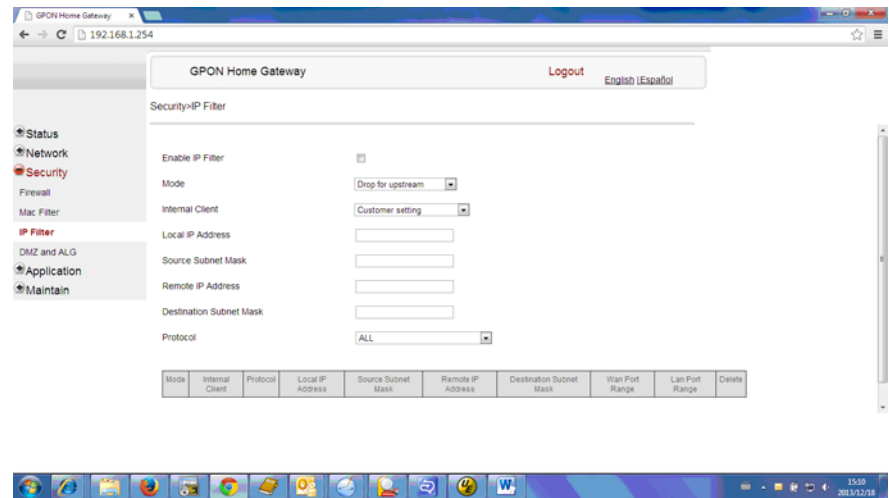


Table 4-17 describes the fields in the IP filter window.

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: <ul style="list-style-type: none">• Drop for upstream• Drop for downstream |
| Internal Client | Choose an internal client from the drop-down menu: <ul style="list-style-type: none">• 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

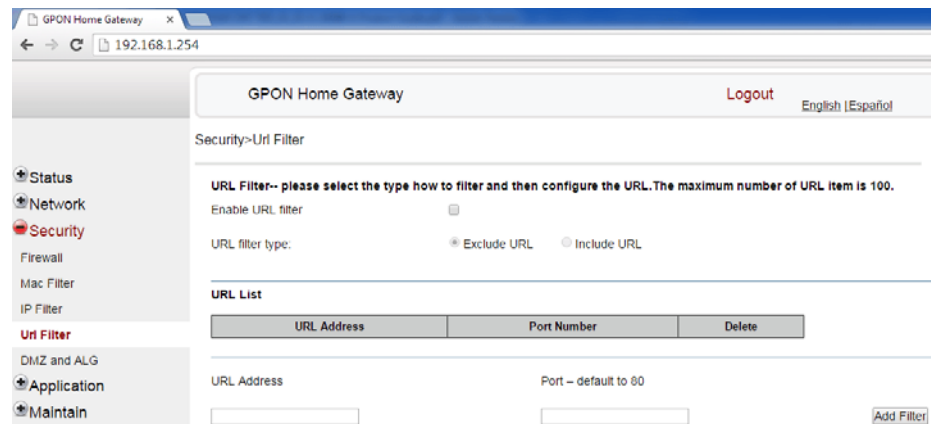


Table 4-18 describes the fields in the URL Filter window.

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

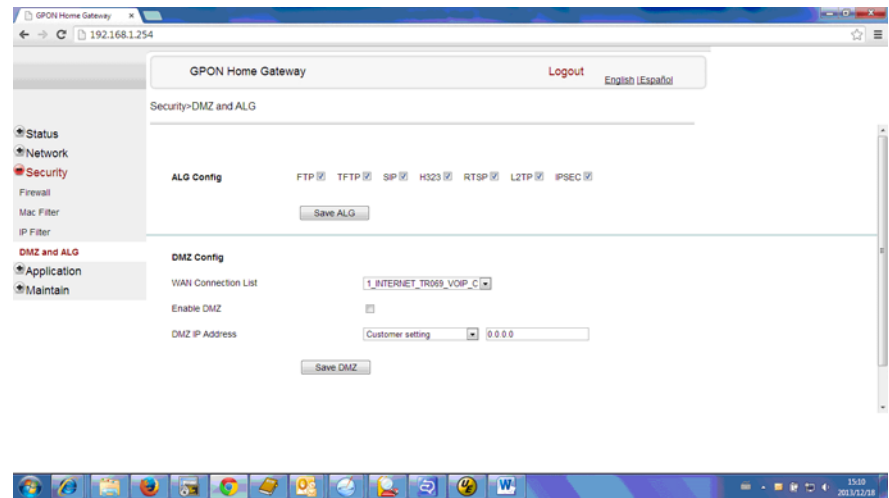


Table 4-19 describes the fields in the DMZ and ALG window.

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-240W-A ONT also supports 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

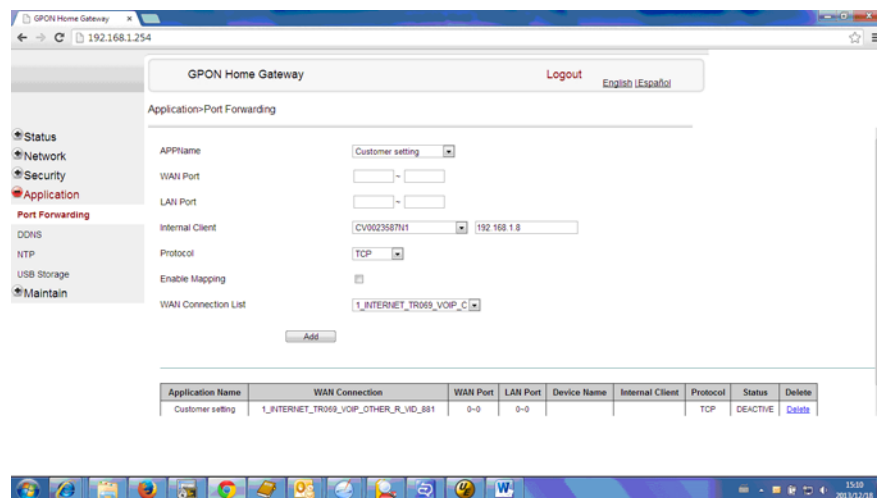


Table 4-20 describes the fields in the port forwarding window.

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: <ul style="list-style-type: none"> • 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

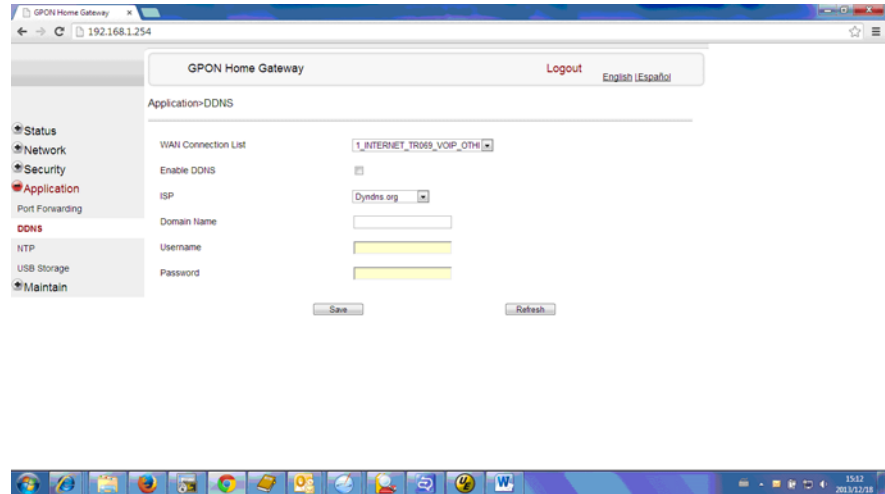


Table 4-21 describes the fields in the DDNS window.

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

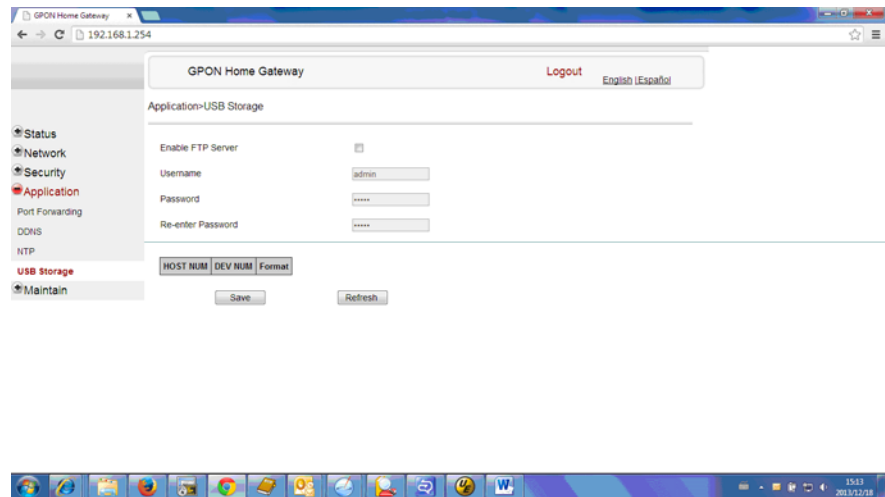


Table 4-23 describes the fields in the USB storage window.

Table 4-23 USB storage parameters

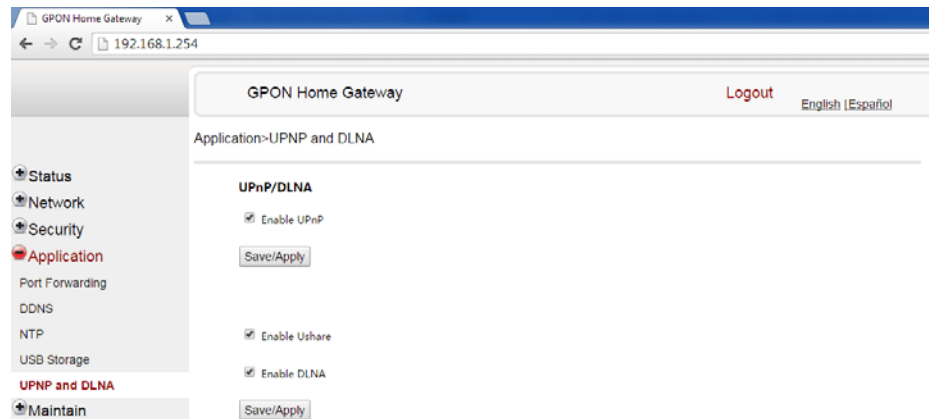
| Field | Description |
|-------------------|---|
| Enable FTP server | Select this checkbox to enable using an FTP server for data storage |
| Username | Username for FTP server |
| Password | Password for FTP server |
| Re-enter Password | Password for FTP server |

- 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-240W-A ONT also supports 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

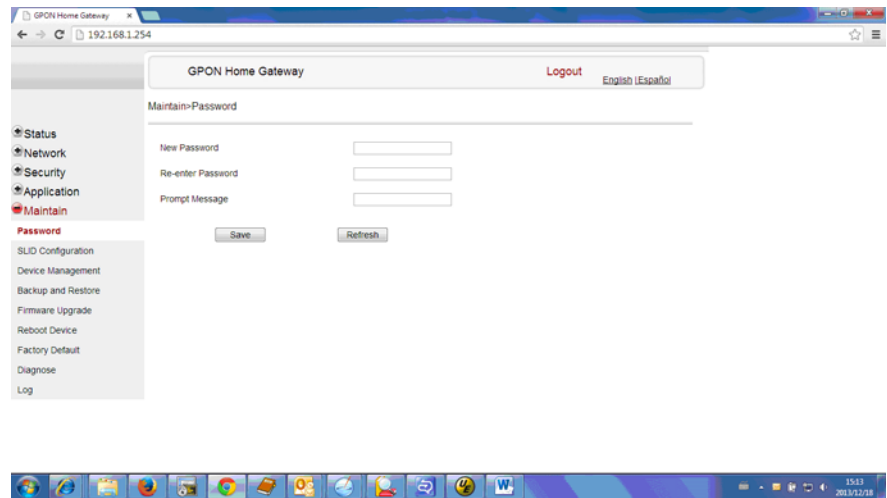


Table 4-24 describes the fields in the password window.

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

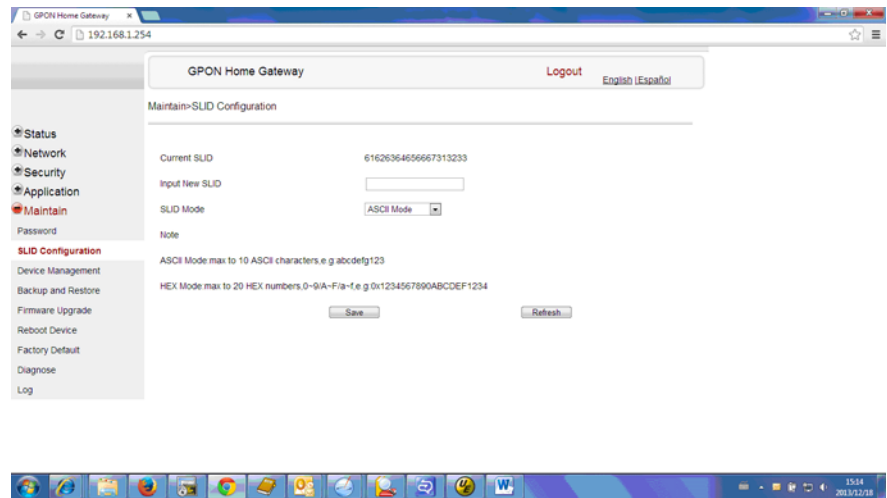


Table 4-26 describes the fields in the SLID configuration window.

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

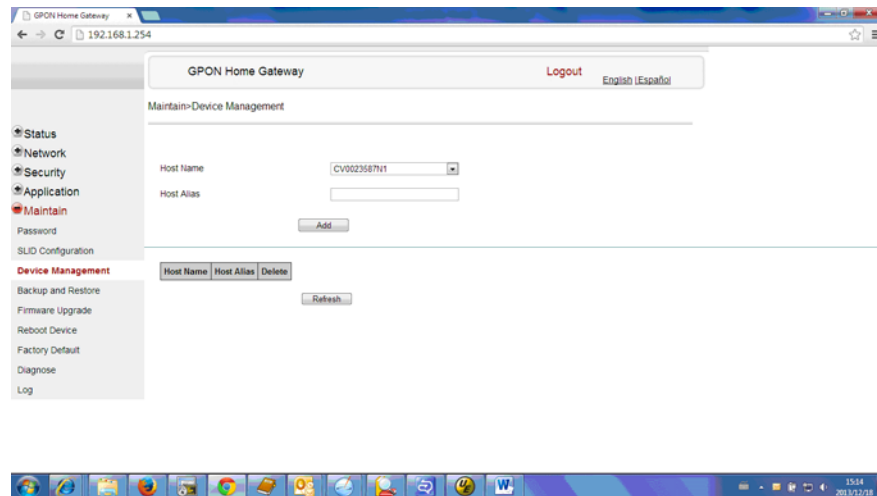


Table 4-27 describes the fields in the Device management window.

Table 4-27 Device management parameters

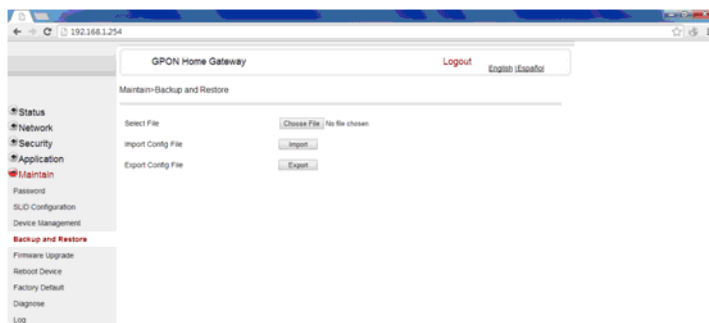
| Field | Description |
|-----------|---------------------------------------|
| Host name | Choose a host from the drop-down menu |
| Alias | Enter an alias for the chosen host |

- 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

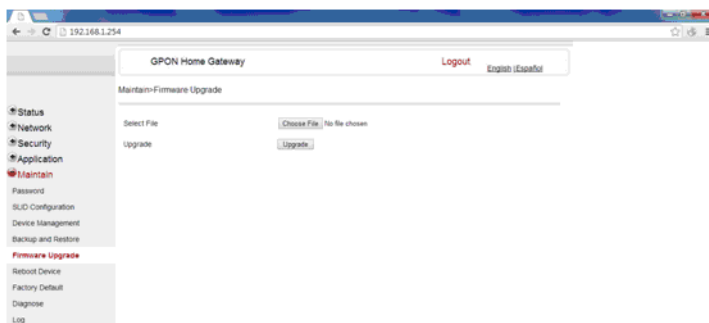


- 2 Click Select File and choose the backup file.
 - 3 Click Import Config File to restore the ONT to the saved backup or click Export Config File to export the current ONT configuration to the backup file.
 - 4 STOP. This procedure is complete.
-

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



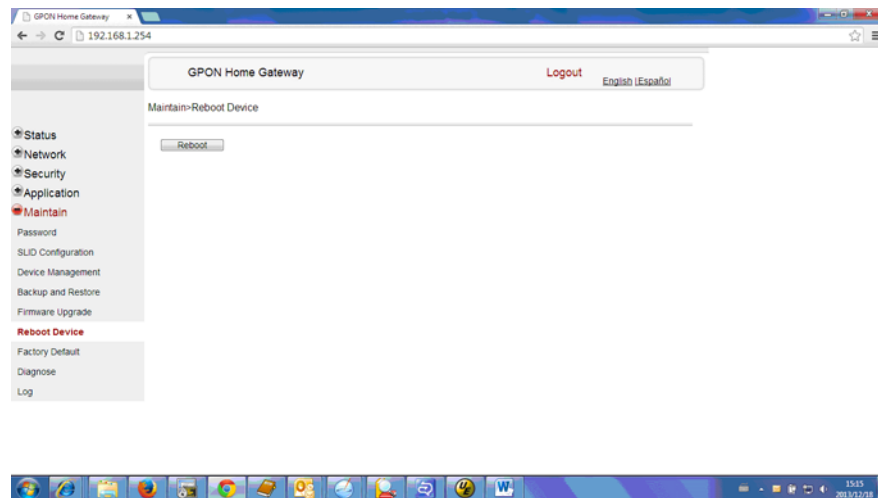
- 2 Click Select File and choose the firmware file.

- 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

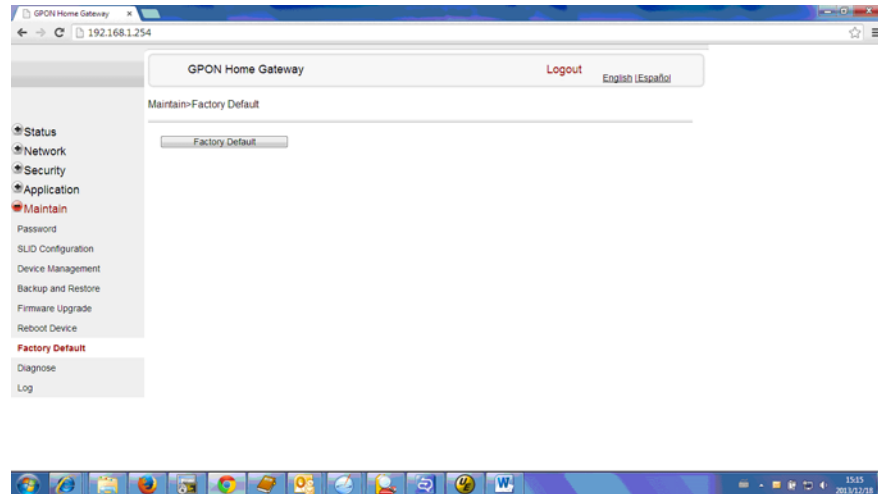


- 2 Click Reboot to reboot the ONT.
 - 3 STOP. This procedure is complete.
-

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

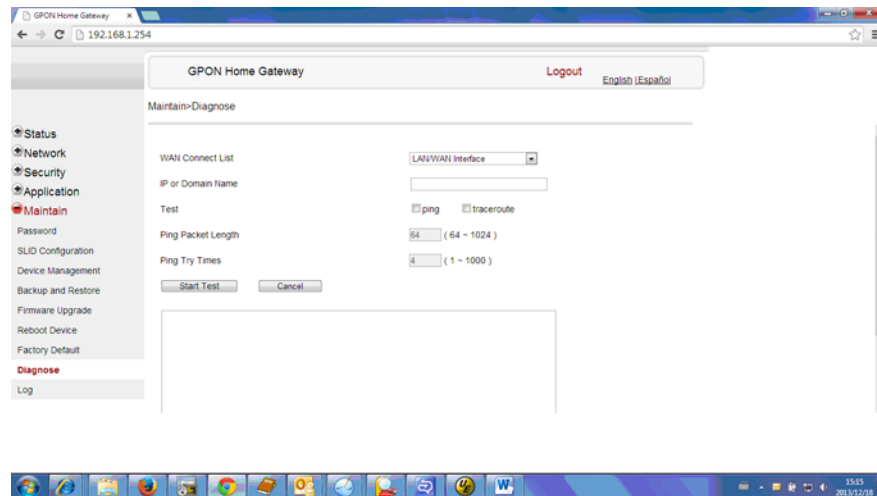


- 2 Click Factory Default to reset the ONT to its factory default settings.
 - 3 STOP. This procedure is complete.
-

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

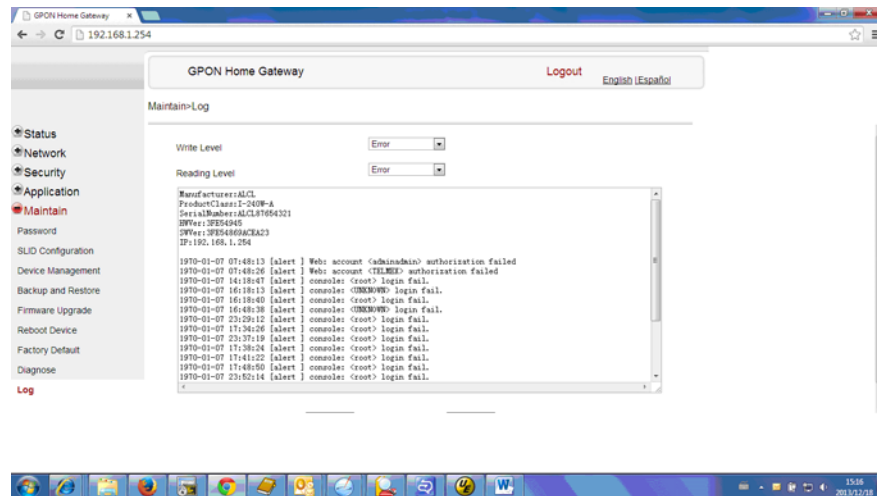


- 2 Choose a WAN connection to diagnose from the drop-down menu.
- 3 Enter the IP address or domain name.
- 4 Select the test type by selecting either ping or traceroute.
- 5 Enter a ping packet length (64-1024).
- 6 Enter the number of ping attempts to perform (1 - 1000).
- 7 Click Start Test. Results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

GPON Home Gateway Logout English | Español

RG Troubleshooting>RG Troubleshoot Counters

WAN Connection List: 1_INTERNET_R_VID_750

US Throughput: US-SpeedTest

DS Throughput: DS-SpeedTest

US Packet Loss: 0

DS Packet Loss: 0

Internet Status: UP

Latency: LatencyTest

DNS Response Time: DNSResponseTest

Refresh

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 utilize the web-based GUI for the G-240W-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 login to the web-based GUI for the G-240W-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.

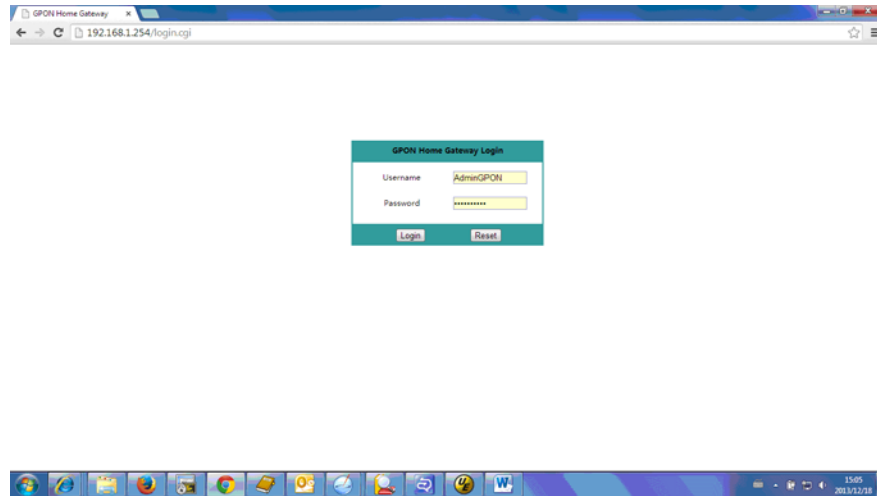
The login window appears.

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 — Pressing the Reset button for less than 10 seconds reboots the ONT; pressing the Reset button for 10 seconds resets the ONT to the factory defaults, except for the LOID and SLID.



Note — If you forget the current username and password, press the reset button for 10 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-240W-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

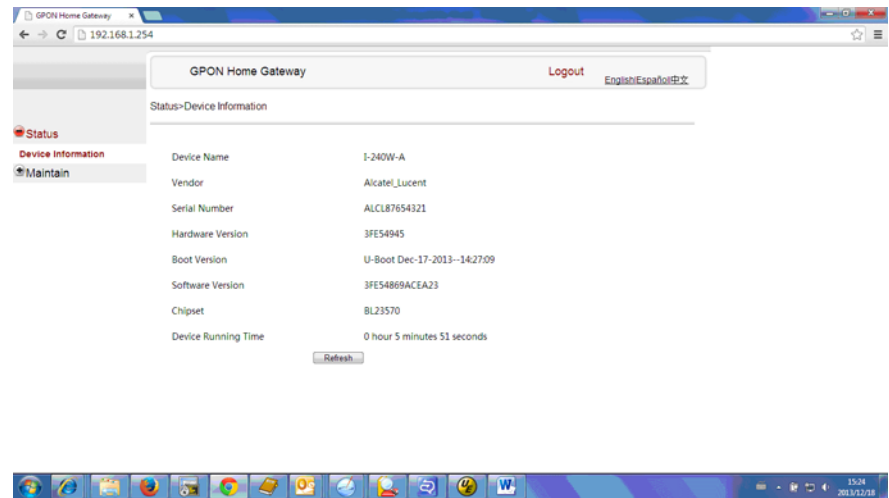


Table 4-29 describes the fields in the Device Information window.

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-240W-A ONT also supports 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

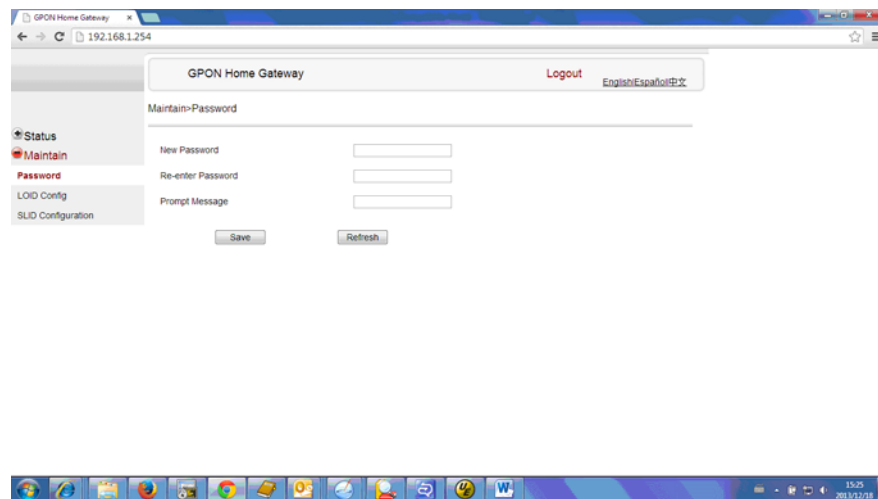


Table 4-30 describes the fields in the password window.

Table 4-30 Password parameters

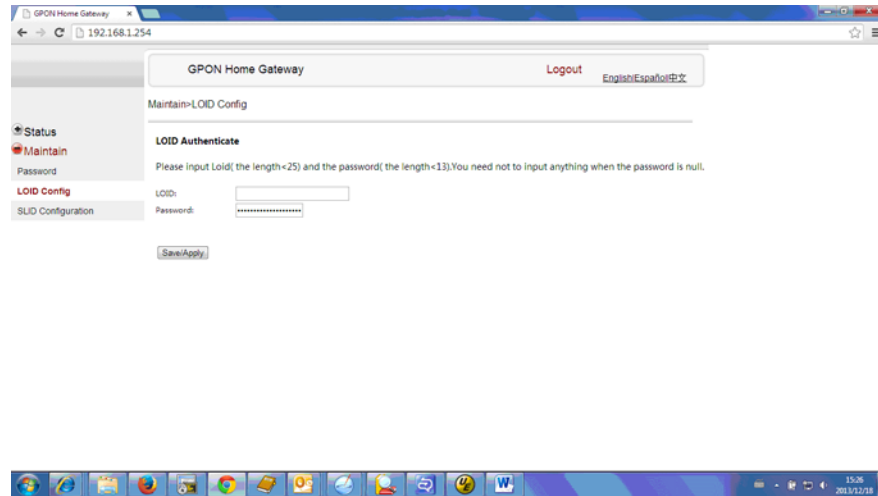
| Field | Description |
|-------------------|--|
| New Password | New password |
| Re-enter password | Password must match password entered above |
| Prompt message | Password prompt message |

- 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

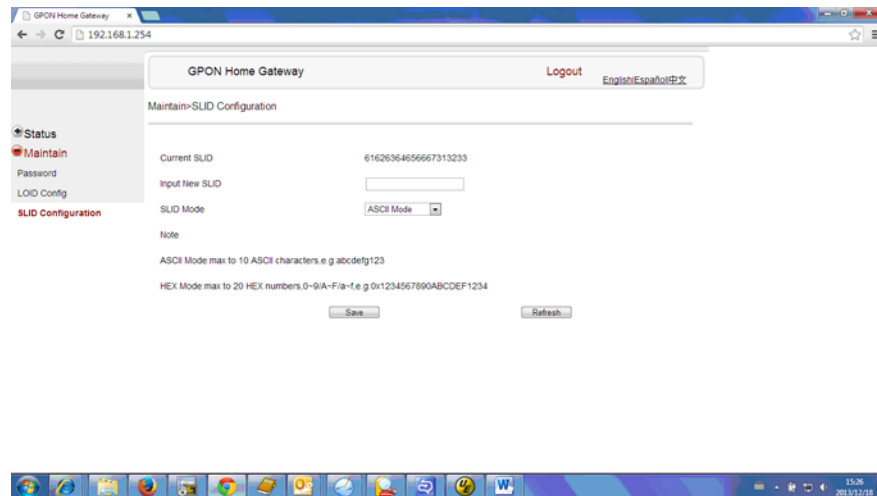


Table 4-31 describes the fields in the SLID configuration window.

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-240W-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 OntConfi.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-ONTSWCTRL::1:::HWVER=hwver,VARNT=,PLNSWSVER=UNPLANNED,  
PLNSWSVERCONF=UNPLANNED,DLDSWVER=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:::DLNW=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:::DLNW=DISABLED;
```
 - 9 STOP. This procedure is complete.
-

5 — ONT configuration file over OMCI

- 5.1 Purpose 5-2
- 5.2 Supported configuration file types 5-2
- 5.3 ONT configuration file over OMCI 5-4

5.1 Purpose

This procedure describes how to use configuration files over OMCI to configure ONTs. Some advantages include:

- flexibility to change the ONT default behavior by downloading configuration file
- flexibility to update a deployed ONT by downloading updated parameters
- ability to securely download any configuration file to an ONT
- ability to avoid using embedded configuration files in ONT software



Note — This feature is supported for use with 7360 ISAM FX only; it is not supported for use with 7342 ISAM FTTU.

5.2 Supported configuration file types

Table 5-1 describes the configuration file types that are supported from 7368 ISAM ONT R05.02.00 and later.

Table 5-1 Supported configuration files

| File Index | Description | Details | Supported ONTs/DPU |
|------------|------------------------------|--|--|
| PRE | ONT pre-configuration file | <p>The XML-based PRECONFIG file controls the working mechanics of the ONT for various services. The default behavior of different ONTs may vary based on the factory settings.</p> <p>The pre-configuration file includes the factory default value for the residential gateway.</p> <p>Note: the pre-configuration file does not work with SFU ONTs; therefore, this feature applies only to Residential Gateway ONTs.</p> <p>The pre-configuration file can be used as is, but Alcatel-Lucent provides its customers with the flexibility to customize the pre-configuration file.</p> <p>This pre-configuration file enables operators to change the default behavior by downloading a customized pre-configuration based on customer inputs.</p> <p>This PRE XML file includes a custom OPERID.</p> <p>The Alcatel-Lucent defined index for the PRECONFIG file is: "PRE"</p> | HGU ONTs: G-240G-C, G-240W-A, G-240W-B, G-440G-A |
| CFG | ONT configuration delta file | <p>The XML-based CFG file updates the configurable parameters (the PRE settings) in the existing PRE file of a deployed ONT, where required.</p> <p>This configuration file enables operators to change the deployed behavior by downloading customized updates in the CFG file.</p> <p>This file is used only to modify the parameters in the PRE file; it is not used for service provisioning.</p> <p>No OPERID is required, because the update is based on the OPERID used for the PRE file.</p> <p>The Alcatel-Lucent defined index for the PRECONFIG DELTA file is: "CFG"</p> | |
| XML | Voice XML file | <p>The Voice XML file provides an alternate method for securely downloading voice parameters from the OLT, rather than using FTP (OMCiv1/OMCiv2) or HTTPS (TR-069). Downloading this file makes the applicable changes in the voice parameters.</p> <p>This file enables operators to change the voice behavior by downloading the updated voice XML file.</p> <p>Alcatel-Lucent recommends using this procedure, rather than embedded voice XML files.</p> <p>The Alcatel-Lucent defined index for the Voice XML file is: "XML"</p> | |

(1 of 2)

| File Index | Description | Details | Supported ONTs/DPU |
|------------|-----------------------------------|---|--------------------|
| GFT | G.fast-related configuration file | <p>This text-based json script file controls the default behavior of the G.Fast ONT.</p> <p>This file includes the provisioning parameters of the G.fast transports layer; it does not include VLAN or QoS provisioning.</p> <p>While the ONT functions well with the default values; they can optionally be customized.</p> <p>While default values can work in VDSL mode, a download file is required for the device to function as a G.fast ONT.</p> <p>The Alcatel-Lucent defined index for the G.fast file is: "GFT"</p> | G-010F-A, G-010F-B |

(2 of 2)

Filename conventions

Alcatel-Lucent provides the raw configuration files, which must be saved by the operator in a TAR file to be uploaded. TAR file names must be unique.

The filenames of the raw configuration files may not adhere to the naming conventions outlined below. In this case, the files must be renamed to adhere to the naming conventions before the operator generates the TAR file. Filenames are not case-sensitive.

ABCXXXXVER

where

ABC is the file index type (PRE, CFG, XML, GFT)

XXXX is the operator ID

For PRE and CFG, a valid operator ID is required

For XML and GFT, any characters may be used

VER is the file version (from 001 to 999)

Note: you cannot update the configuration using two files with the same name.

5.3 ONT configuration file over OMCI



Warning — Executing the following procedure will trigger the ONT to reboot, which will impact ongoing services.

Use this procedure to configure ONTs using configuration files via OMCI.

Procedure 5-1 Configuring an ONT using a configuration file via OMCI

- 1 Generate the TAR file to be uploaded to the OLT.

Using the raw configuration file(s) provided by Alcatel-Lucent, generate the TAR file as follows:

- i On a Linux platform, rename the raw configuration file to adhere to the naming convention, as described in section 5.2.
- ii Tar the *ABCXXXXVER* raw configuration file:

```
tar -cf ABCXXXXVER.tar ABCXXXXVER
```

Where

ABCXXXXVER

Is the name of the file created in step i.

This creates two files: *ABCXXXXVER* and *ABCXXXXVER.tar*.

- iii Rename *ABCXXXXVER* to *ABCXXXXVER.org*
- iv Remove the ".tar" extension from *ABCXXXXVER.tar* file.

- 2 Upload the *ABCXXXXVER* TAR file to the /ONT/ directory in the OLT.

A maximum of 250 files can be kept in the OLT file system.

- 3 Using OLT commands, download the TAR file to the ONT.

For OLT commands, refer to the *7360 ISAM FX CLI Command Guide for 100_320Gbps FD NT and FX NT*.

Please note:

- *pri-cfgfile-pland/dnload* or *sec-cfgfile-pland/dnload* can be 1 to 14 characters.
- *pri-cfgfile-pland* and *pri-cfgfile-dnload* should be the same name.

Examples

Note: X can be 1 or 2 unless specified:

- i If *pland-cfgfileX= Disabled* and *dnload-cfgfileX= Disabled*, no file will be downloaded to the ONT.
- ii If *pland-cfgfileX=FILENAME1* and *dnload-cfgfileX= Disabled*, *FILENAME1* will be downloaded and *FILENAME1* will be made active. An ONT reboot is required.
- iii If *pland-cfgfileX=Disabled* and *dnload-cfgfileX= FILENAME2*, *FILENAME2* will be downloaded and *FILENAME2* will be made passive. An ONT reboot is not required.
- iv If *pland-cfgfileX=FILENAME3* and *dnload-cfgfileX= FILENAME 4*, the OLT reports an error because the filenames are not the same.

- v Configure equipment interface ... pland-cfgfile1=XMLXXXXXX1 and
dnload-cfgfile1 XMLXXXXXX1

Configure equipment interface ... pland-cfgfile2=XMLXXXXXX2 and
dnload-cfgfile2 XMLXXXXXX2

Although the OLT permits the above two steps without reporting an error,
Alcatel-Lucent does not recommend executing them, because the ONT may
exhibit unexpected behavior.

- vi If pland-cfgfileX=Auto and dnload-cfgfileX= Auto

The OLT will download the XML file from "sw-ctr-list" (configure
equipment ont sw-ctrl)

4 STOP. This procedure is complete.

The ONT will distribute the configuration files to the different services based on the
active indication from the OLT and on the Alcatel-Lucent defined index.

The ONT automatically reboots to apply the configuration files. After the ONT reboots
and reports the active version, the OLT completes the file download procedure.

Operators must check the committed file from the OLT to verify whether the
corresponding file has been applied. If an error occurs, contact Alcatel-Lucent for
support.

Customer documentation and product support



Customer documentation

<http://www.alcatel-lucent.com/myaccess>

Product manuals and documentation updates are available at [alcatel-lucent.com](http://www.alcatel-lucent.com). If you are a new user and require access to this service, please contact your Alcatel-Lucent sales representative.



Technical Support

<http://support.alcatel-lucent.com>



Documentation feedback

documentation.feedback@alcatel-lucent.com



Federal Communications Commission (FCC) 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 generate, 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.

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.

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.

RF exposure warning

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment must be installed and operated in accordance with provided instructions and the antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be collocated or operating in conjunction with any other antenna or transmitter.