



Nokia ONT

Review

G-1426G-F Product Guide

3TN-01672-AAAA-TCZZA
Issue 1
August 2025

© 2025 Nokia. Nokia Confidential Information
Use subject to agreed restrictions on disclosure and use.

Review

Legal notice

Nokia is committed to diversity and inclusion. We are continuously reviewing our customer documentation and consulting with standards bodies to ensure that terminology is inclusive and aligned with the industry. Our future customer documentation will be updated accordingly.

This document includes Nokia proprietary and confidential information, which may not be distributed or disclosed to any third parties without the prior written consent of Nokia.

This document is intended for use by Nokia's customers ("You"/"Your") in connection with a product purchased or licensed from any company within Nokia Group of Companies. Use this document as agreed. You agree to notify Nokia of any errors you may find in this document; however, should you elect to use this document for any purpose(s) for which it is not intended, You understand and warrant that any determinations You may make or actions You may take will be based upon Your independent judgment and analysis of the content of this document.

Nokia reserves the right to make changes to this document without notice. At all times, the controlling version is the one available on Nokia's site.

No part of this document may be modified.

NO WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY WARRANTY OF AVAILABILITY, ACCURACY, RELIABILITY, TITLE, NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, IS MADE IN RELATION TO THE CONTENT OF THIS DOCUMENT. IN NO EVENT WILL NOKIA BE LIABLE FOR ANY DAMAGES, INCLUDING BUT NOT LIMITED TO SPECIAL, DIRECT, INDIRECT, INCIDENTAL OR CONSEQUENTIAL OR ANY LOSSES, SUCH AS BUT NOT LIMITED TO LOSS OF PROFIT, REVENUE, BUSINESS INTERRUPTION, BUSINESS OPPORTUNITY OR DATA THAT MAY ARISE FROM THE USE OF THIS DOCUMENT OR THE INFORMATION IN IT, EVEN IN THE CASE OF ERRORS IN OR OMISSIONS FROM THIS DOCUMENT OR ITS CONTENT.

Copyright and trademark: Nokia is a registered trademark of Nokia Corporation. Other product names mentioned in this document may be trademarks of their respective owners.

© 2025 Nokia.

Contents

About this document.....15

1 What's new.....21

1.1 Overview21

1.2 What's new in BBD Release 25.0221

2 ETSI ONT safety guidelines23

2.1 Safety instructions.....23

2.2 Safety standards compliance24

2.3 Electrical safety guidelines.....25

2.4 ESD safety guidelines26

2.5 Laser safety guidelines26

2.6 Environmental requirements29

3 ETSI environmental and CRoHS guidelines31

3.1 Environmental labels.....31

3.2 Hazardous Substances Table (HST).....33

3.3 Other environmental requirements33

4 ANSI ONT safety guidelines35

4.1 Safety instructions.....35

4.2 Safety standards compliance37

4.3 Laser safety guidelines39

4.4 Electrical safety guidelines.....42

4.5 ESD safety guidelines43

4.6 Environmental requirements43

5 G-1426G-F unit data sheet.....45

5.1 Overview45

5.2 G-1426G-F part numbers and identification.....45

5.3 G-1426G-F general description47

5.4 G-1426G-F software and installation feature support55

5.5 G-1426G-F interfaces and interface capacity56

5.6 G-1426G-F LEDs58

5.7 G-1426G-F detailed specifications.....60

5.8 G-1426G-F GEM ports and T-CONTs61

5.9 G-1426G-F performance monitoring statistics62

5.10	G-1426G-F functional blocks	63
5.11	G-1426G-F standards compliance	64
5.12	G-1426G-F special considerations	66
6	Install or replace a G-1426G-F indoor ONT	69
6.1	Overview	69
6.2	Prerequisites	69
6.3	Recommended tools	69
6.4	Safety information	70
6.5	Install a G-1426G-F indoor ONT	70
6.6	Replace a G-1426G-F indoor ONT	73
6.7	Wall mount a G-1426G-F indoor ONT	76
7	Configure a G-1426G-F indoor ONT	81
7.1	Overview	81
	GUI overview	84
7.2	General configuration	84
7.3	HGU mode GUI configuration	84
7.4	WAN services overview	84
7.5	Logging in to the web-based GUI	88
7.6	Viewing overview information	90
7.7	G-1426G-F WebGUI Menu	93
	WAN Configuration	95
7.8	Overview	95
7.9	Configuring WAN Services	95
7.10	Viewing WAN Statistics	103
7.11	Configuring TR-069	106
7.12	Configuring TR-369	108
7.13	Configuring GRE tunnel	109
7.14	Configuring Static routing	111
7.15	Viewing Optical Module Status	112
7.16	Configuring QoS	114
7.17	Configuring Upstream (US) Classifier	117
	LAN Configuration	124
7.18	Overview	124
7.19	Configuring DHCP IPv4	124
7.20	Configuring DHCP IPv6	126
7.21	Configuring DNS	128

7.22	Viewing LAN Statistics	131
WiFi Configuration		133
7.23	Overview	133
7.24	Configuring WiFi Network	133
7.25	Configuring the WiFi Password.....	137
7.26	Viewing Network Map, Adding WiFi Points, Renaming WiFi Points and Removing WiFi Points ..	139
7.27	Optimizing WiFi Network.....	143
7.28	Configuring Wireless 2.4 GHz.....	143
7.29	Configuring Wireless 5 GHz.....	145
7.30	Configuring Wireless Schedules	147
7.31	Viewing WiFi Statistics	149
Devices.....		151
7.32	Overview	151
7.33	Viewing Device Information.....	151
Voice Configuration		155
7.34	Overview	155
7.35	Configuring Voice Settings.....	155
7.36	Viewing Voice Status.....	157
Security Configuration		159
7.37	Overview	159
7.38	Configuring the Firewall	159
7.39	Configuring the MAC Filter.....	160
7.40	Configuring the IP Filter	162
7.41	Configuring the URL Filter.....	164
7.42	Configuring Family Profiles	166
7.43	Configuring DMZ and ALG.....	172
7.44	Configuring Access Control.....	174
Advanced Settings.....		177
7.45	Overview	177
7.46	Configuring Port Forwarding	177
7.47	Configuring Port Triggering	178
7.48	Configuring DDNS	179
7.49	Configuring NTP	180
7.50	Configuring USB	182
7.51	Configuring UPNP and DLNA	183

Maintenance	185
7.52 Overview	185
7.53 Configuring the Password	185
7.54 Backing Up the Configuration	187
7.55 Restoring the Configuration	187
7.56 Upgrading Firmware	189
7.57 Configuring LOID	190
7.58 Configuring SLID	191
7.59 Diagnosing WAN Connections	192
7.60 Viewing Log Files	197
7.61 Generating a delta configuration file	198
Troubleshooting	201
7.62 Troubleshooting counters	201
7.63 Speed Test	203
8 ONT configuration file over OMCI	205
8.1 Overview	205
8.2 Purpose	205
8.3 Supported configuration file types	205
8.4 ONT configuration file over OMCI	208

List of tables

Table 2-1	Safety labels.....	24
Table 4-1	Safety labels.....	36
Table 5-1	Identification of G-1426G-F indoor ONTs.....	45
Table 5-2	G-1426G-F power supply ordering information.....	46
Table 5-3	Plug types	46
Table 5-4	Hardware parts required for G-1426G-F installations	47
Table 5-5	Support for TR-181 parameter categories	54
Table 5-6	G-1426G-F indoor ONT interface connection capacity	56
Table 5-7	G-1426G-F indoor ONT physical connections	57
Table 5-8	G-1426G-F indoor ONT LED descriptions	59
Table 5-9	G-1426G-F indoor ONT physical specifications	60
Table 5-10	G-1426G-F indoor ONT power consumption specifications.....	60
Table 5-11	G-1426G-F indoor ONT environmental specifications	61
Table 5-12	G-1426G-F indoor ONT Dimension data specifications.....	61
Table 5-13	G-1426G-F indoor ONT capacity for GEM ports and T-CONTs	61
Table 5-14	Package S ONTs ONTENET performance monitoring statistics.....	62
Table 5-15	Package S ONTs ONTL2UNI performance monitoring statistics	62
Table 5-16	Package S ONTs PONONTTC, PONONTMCTC, PONONTTCHSI, PONONTTCES, PONONTTCFLOW, PONONTTCVOIP performance monitoring statistics	63
Table 5-17	Package S ONTs PONONTTC aggregate performance monitoring statistics.....	63
Table 5-18	G-1426G-F ONT considerations and limitations	67
Table 7-1	Supported combinations of OMCI and ACS/WebGUI	86
Table 7-2	G-1426G-F WebGUI Menu	93
Table 7-3	WAN services parameters	100
Table 7-4	WAN statistics parameters.....	105
Table 7-5	TR-069 parameters	107
Table 7-6	TR-369 parameters	108
Table 7-7	GRE Tunnel parameters.....	110
Table 7-8	IP routing parameters	112
Table 7-9	Optical module status parameters.....	113
Table 7-10	QoS config parameters	116
Table 7-11	US Classifier - Policy parameters.....	118

Table 7-12	<i>US Classifier - Classifier parameters</i>	120
Table 7-13	<i>US Classifier - Classifier Rules parameters</i>	123
Table 7-14	<i>DHCP IPv4 parameters</i>	126
Table 7-15	<i>Static DHCP parameters</i>	126
Table 7-16	<i>DHCP IPv6 parameters</i>	128
Table 7-17	<i>DNS parameters</i>	130
Table 7-18	<i>LAN statistics parameters</i>	132
Table 7-19	<i>Add WiFi network parameters</i>	135
Table 7-20	<i><Device> parameters</i>	142
Table 7-21	<i>Wireless 2.4 GHz parameters</i>	144
Table 7-22	<i>Wireless 5 GHz parameters</i>	146
Table 7-23	<i>WLAN statistics parameters</i>	149
Table 7-24	<i>Voice Setting parameters</i>	157
Table 7-25	<i>Voice status parameters</i>	158
Table 7-26	<i>Firewall parameters</i>	160
Table 7-27	<i>MAC filter - Ethernet Interface parameters</i>	161
Table 7-28	<i>MAC filter - WiFi SSID parameters</i>	162
Table 7-29	<i>IP filter parameters</i>	163
Table 7-30	<i>URL filter parameters</i>	165
Table 7-31	<i>ALG Configuration parameters</i>	173
Table 7-32	<i>DMZ Configuration parameters</i>	174
Table 7-33	<i>Access control parameters</i>	176
Table 7-34	<i>Trusted Network parameters</i>	176
Table 7-35	<i>Port forwarding parameters</i>	178
Table 7-36	<i>Port triggering parameters</i>	179
Table 7-37	<i>DDNS parameters</i>	180
Table 7-38	<i>NTP parameters</i>	181
Table 7-39	<i>USB parameters</i>	182
Table 7-40	<i>Change password parameters</i>	186
Table 7-41	<i>LOID config parameters</i>	191
Table 7-42	<i>SLID configuration parameters</i>	192
Table 7-43	<i>Diagnostics parameters</i>	193
Table 7-44	<i>Log parameters</i>	197

Table 7-45	<i>Troubleshooting counters</i> parameters.....	203
Table 7-46	<i>Speed test</i> parameters.....	204
Table 8-1	Supported configuration files.....	206
Table 8-2	Download configuration files	207

List of figures

Figure 2-1	Laser product label	27
Figure 2-2	Laser classification label.....	27
Figure 2-3	Laser warning labels.....	28
Figure 3-1	Products below MCV value label	32
Figure 3-2	Products above MCV value label	32
Figure 3-3	Recycling/take back/disposal of product symbol	34
Figure 4-1	Sample safety label on the ONT equipment.....	37
Figure 4-2	Sample laser product label showing CDRH 21 CFR compliance	39
Figure 4-3	Laser product label	40
Figure 4-4	Laser classification label.....	40
Figure 4-5	Laser warning labels.....	41
Figure 4-6	Sample laser product safety label on the ONT equipment	42
Figure 5-1	G-1426G-F ONT	48
Figure 5-2	G-1426G-F indoor ONT physical connections (back).....	56
Figure 5-3	G-1426G-F indoor ONT with fiber optic connector	57
Figure 5-4	G-1426G-F indoor ONT LEDs	58
Figure 5-5	G-1426G-F ONT functional block	64
Figure 6-1	G-1426G-F ONT connections.....	71
Figure 6-2	G-1426G-F indoor ONT connections.....	74
Figure 6-3	G-1426G-F wall mount bracket	77
Figure 6-4	G-1426G-F wall mount bracket - mounting holes	77
Figure 6-5	G-1426G-F - Distance between the mounting holes	78
Figure 6-6	ONT to wall mount connection.....	79
Figure 6-7	ONT in wall mount bracket—facing the room	80
Figure 7-1	Common forwarding model	86
Figure 7-2	Login page	89
Figure 7-3	Viewing Overview information	90
Figure 7-4	G-1426G-F Overview Root.....	91
Figure 7-5	Overview table in WAN services page.....	95
Figure 7-6	Create New Connection page	96
Figure 7-7	Create New Connection page - PPPoE Configuration	97

Figure 7-8	VLAN mode - VLAN Binding.....	98
Figure 7-9	Bridge mode - Transparent.....	99
Figure 7-10	Bridge mode - Tunnel	100
Figure 7-11	WAN Statistics page	104
Figure 7-12	WAN Statistics page info	105
Figure 7-13	TR-069 page.....	107
Figure 7-14	TR-369 page.....	108
Figure 7-15	GRE Tunnel page	110
Figure 7-16	IP routing page.....	111
Figure 7-17	Optical module status page	113
Figure 7-18	QoS config page (L2 Criteria)	114
Figure 7-19	QoS config page (L3 Criteria)	115
Figure 7-20	US Classifier - Policy page	118
Figure 7-21	US Classifier - Classifier page.....	120
Figure 7-22	US Classifier - Classifier Rules page.....	122
Figure 7-23	DHCP IPv4 page	125
Figure 7-24	DNS page (IPv4)	129
Figure 7-25	DNS page (IPv6)	130
Figure 7-26	LAN statistics page.....	131
Figure 7-27	WiFi network page.....	134
Figure 7-28	Add WiFi network page.....	135
Figure 7-29	WiFi network - example of SSID Configuration page	136
Figure 7-30	Edit Wi-Fi network page.....	138
Figure 7-31	Network map page	139
Figure 7-32	<Device> page	141
Figure 7-33	Change the name of your WiFi point page	142
Figure 7-34	Advanced settings - 2.4 GHz tab.....	144
Figure 7-35	Advanced settings - 5 GHz tab	146
Figure 7-36	Wireless schedule page.....	148
Figure 7-37	WiFi statistics page.....	149
Figure 7-38	Devices page	151
Figure 7-39	Device information page - L3 devices	152
Figure 7-40	Device Rename page	153

Figure 7-41	Device information page - L2 devices	154
Figure 7-42	Voice Setting page.....	156
Figure 7-43	Voice status page	158
Figure 7-44	Firewall page	159
Figure 7-45	MAC filter page.....	161
Figure 7-46	IP filter page.....	163
Figure 7-47	URL filter page.....	165
Figure 7-48	Family profiles (Parental control) page.....	166
Figure 7-49	Add a profile page	167
Figure 7-50	Assign devices to family profile	167
Figure 7-51	Family profiles table.....	168
Figure 7-52	Family profile configuration page.....	168
Figure 7-53	DMZ and ALG page.....	173
Figure 7-54	Access control page	175
Figure 7-55	Port forwarding page	177
Figure 7-56	Port triggering page	178
Figure 7-57	DDNS page	180
Figure 7-58	NTP page	181
Figure 7-59	USB page	182
Figure 7-60	UPNP and DLNA page	183
Figure 7-61	Change password page.....	186
Figure 7-62	Backup and restore page	187
Figure 7-63	Backup and restore page	188
Figure 7-64	Backup and restore: Serial number	188
Figure 7-65	Firmware upgrade page	189
Figure 7-66	Example of upgrade status messages	190
Figure 7-67	LOID config page.....	190
Figure 7-68	SLID configuration page	191
Figure 7-69	Diagnostics page	193
Figure 7-70	Example of ping results	195
Figure 7-71	Example of traceroute results.....	196
Figure 7-72	Log page.....	197
Figure 7-73	Delta CFG Tool page	199

Figure 7-74	<i>Troubleshooting counters</i> page	202
Figure 7-75	<i>Speed test</i> page	203

About this document

Purpose

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

Intended audience

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

The reader must be familiar with general telecommunications principles.

Safety information

For your safety, this document contains safety statements. Safety statements are given at points where risks of damage to personnel, equipment, and operation may exist. Failure to follow the directions in a safety statement may result in serious consequences.

Safety Information Examples



DANGER

Hazard

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

Equipment Damage

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



CAUTION

Service Disruption

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.

Acronyms and initialisms

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

Nokia quality processes

Nokia's ONT manufacturing, testing, and inspecting practices are in compliance with TL 9000 requirements. These requirements are documented in the Fixed Networks Quality Manual 3FQ-30146-6000-QRZZA.

The quality 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.

Documents

Documents are available using ALED or OLCS.

To download a ZIP file package of the customer documentation

- 1

Navigate to <http://customer.nokia.com/s/> and enter your user name and password. If you are a new user and require access to this service, please contact your Nokia sales representative.
- 2

Select **Products**.
- 3

Type your product name in the **Find and select a product** field and click the search icon. Select a product.
- 4

Click **Downloads: ALED** to go to the Electronic Delivery: Downloads page.
- 5

Select **Documentation** from the list.
- 6

Select a release from the list.
- 7

Follow the on-screen directions to download the file.

END OF STEPS

To access individual documents

Individual PDFs of customer documents are also accessible through the Nokia Support Portal website.

-
- 1

Navigate to <http://customer.nokia.com/s/> and enter your user name and password. If you are a new user and require access to this service, please contact your Nokia sales representative.
 - 2

Select **Products**.
 - 3

Type your product name in the **Find and select a product** field and click the search icon. Select a product.
 - 4

Click **Documentation: Doc Center** to go to the product page in the Doc Center.
 - 5

Select a release from the **Release** list and click **SEARCH**.
 - 6

Click on the PDF icon to open or save the file.

END OF STEPS

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.

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.

END OF STEPS

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:

- a. This is the first substep.
- b. This is the second substep.
- c. This is the third substep.

2

You must perform this step.

END OF STEPS

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.

To search multiple PDF files for a common term

1

Open Adobe Acrobat Reader.

2

Select **Edit**→**Search** from the Acrobat Reader main menu. The Search PDF panel displays.

3

Enter the search criteria.

4

Select **All PDF Documents In**.

5

Select the folder in which to search using the list.

6

Click **Search**.

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

END OF STEPS

Technical support

For details, refer to the [Nokia Support portal \(https://customer.nokia.com/support/s/\)](https://customer.nokia.com/support/s/).

For ordering information, contact your Nokia sales representative.

How to comment

Note to reviewers: The following "How to comment" text will appear in the final document when it is published. However, the feedback method described below is for use only on final documents. Please send your review comments to the author using the process you were given when you received this draft document.

To comment on this document, go to the [Online Comment Form \(https://documentation.nokia.com/comments/\)](https://documentation.nokia.com/comments/) or e-mail your comments to the [Comments Hotline \(mailto:comments@nokia.com\)](mailto:comments@nokia.com).



1 What's new

1.1 Overview

1.1.1 Purpose

This chapter provides the details of features and other documentation changes updated in the product guide in each release.

1.1.2 Contents

1.1 Overview	21
1.2 What's new in BBD Release 25.02	21

1.2 What's new in BBD Release 25.02

The Product guide is a new guide in BBD Release 25.02, issue 1. In future releases, this chapter will provide tables of the feature and document changes applicable to this guide.

2 ETSI ONT safety guidelines

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

2.1 Safety instructions

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

2.1.1 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

Hazard

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

Equipment Damage

Possibility of equipment damage.

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****Service Disruption**

Possibility of service interruption.

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.

2.1.2 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.

The following table provides sample safety labels on the ONT equipment.

Table 2-1 Safety labels

Description	Label text
ESD warning	Caution: This assembly contains an electrostatic sensitive device.
Laser classification	Class 1 laser product

2.2 Safety standards compliance

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

2.2.1 EMC, EMI, and ESD compliance

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

- EN 300-328 v1.9.1 wide band data transmission standards for 2.4GHz bands
- 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)
- EN 301489-1 and EN 301489-17
- EN 55032: Information Technology Equipment, Immunity Characteristics, limits and methods of measurement
- EN 61000-3-2

2.2.2 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).

2.2.3 Environmental standard compliance

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

2.2.4 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.

2.2.5 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 over currents.

2.2.6 Acoustic noise emission standard compliance

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

2.3 Electrical safety guidelines

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

i **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. The ONTs comply with BS EN 61140.

2.3.1 Power supplies

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

2.3.2 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.

2.3.3 Protective earth

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

2.4 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

Service Disruption

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.

2.5 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

Hazard

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

Hazard

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

2.5.1 Laser classification

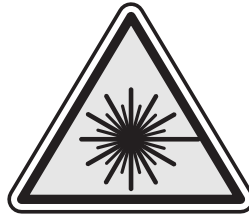
The ONT is classified as a Class 1 laser product based on its transmit optical output.

Laser warning labels

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

The following figure shows a laser product label.

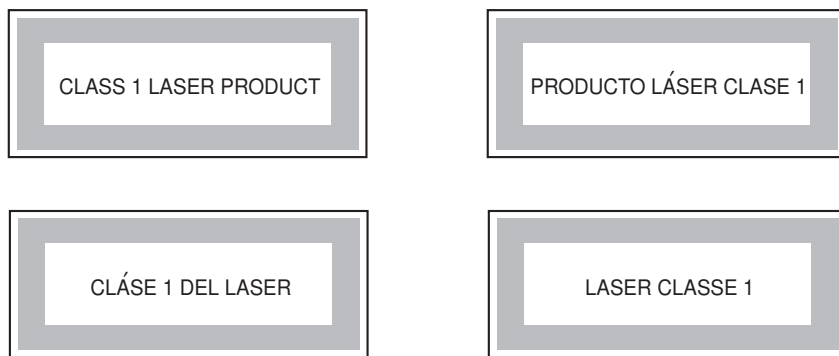
Figure 2-1 Laser product label



18455

Figure 2-2, “Laser classification label” (p. 27) shows a laser classification label. Laser classification labels may be provided in other languages.

Figure 2-2 Laser classification label



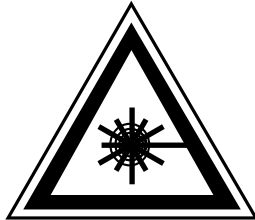
18992

Figure 2-3, “Laser warning labels” (p. 28) 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:

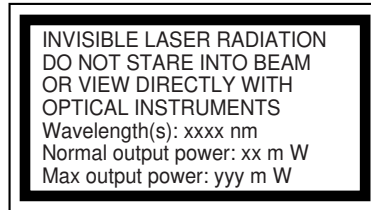
- A warning that calls attention to the invisible laser radiation
- An instruction against staring into the beam or viewing directly with optical instruments
- Wavelength
- Normal output power

- Maximum output power

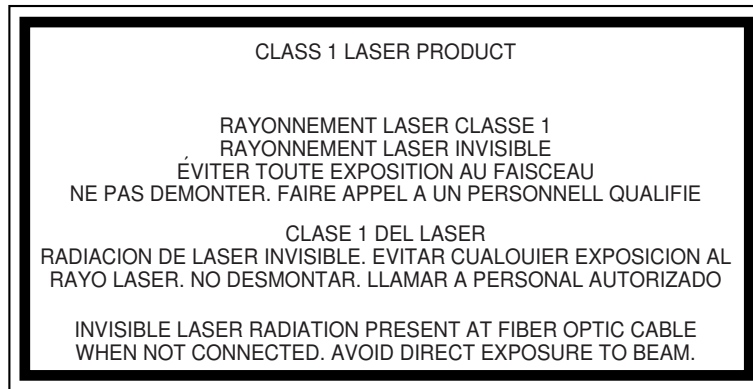
Figure 2-3 Laser warning labels



Laser Warning Label



Laser Warning Label



Laser Warning Label

18993

2.5.2 Transmit optical output

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

2.5.3 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

Hazard

Risk of eye damage by laser radiation.

2.5.4 Location class

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

2.6 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, Nokia 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.

3 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.

3.1 Environmental labels

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

3.1.1 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.

3.1.2 Environmental related labels

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

Products below Maximum Concentration Value (MCV) label

Figure 3-1, “Products below MCV value label” (p. 32) 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 3-1 Products below MCV value label



18986

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

Figure 3-2, “Products above MCV value label” (p. 32) 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 3-2 Products above MCV value label



Together with major international telecommunications equipment companies, Nokia 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 3.2 “Hazardous Substances Table (HST)” (p. 32) for more information.

3.2 Hazardous Substances Table (HST)

This section describes the compliance of the OLT and ONT equipment to the CRoHS standard when the product and sub assemblies contain hazardous substances beyond the MCV value. This information is found in this user documentation where part numbers for the product and sub assemblies 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 Nokia Hazardous Substance Table, in Chinese, from the following location:

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

3.3 Other environmental requirements

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

3.3.1 ONT environmental requirements

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

3.3.2 Storage

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

3.3.3 Transportation

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

3.3.4 Stationary use

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

3.3.5 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. Nokia products shipped to the EU after 1 July 2006 comply with the EU RoHS Directive.

Nokia has implemented a material/substance content management process. The process is described in: Nokia 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.

3.3.6 End-of-life collection and treatment

Electronic products bearing or referencing the symbol shown in the following figure, 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.

i **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 3-3 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, Nokia will offer to provide for the collection and treatment of Nokia products bearing the logo shown in [Figure 3-3, "Recycling/take back/disposal of product symbol" \(p. 34\)](#) at the end of their useful life, or products displaced by Nokia equipment offers. For information regarding take-back of equipment by Nokia, or for more information regarding the requirements for recycling/disposal of product, contact your Nokia account manager or Nokia take back support at sustainability.global@nokia.com.

4 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.

4.1 Safety instructions

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

4.1.1 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.



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.



Possibility of equipment damage.

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

Service Disruption

Possibility of service interruption.

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.

i **Note:** Information of special interest.

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

4.1.2 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.

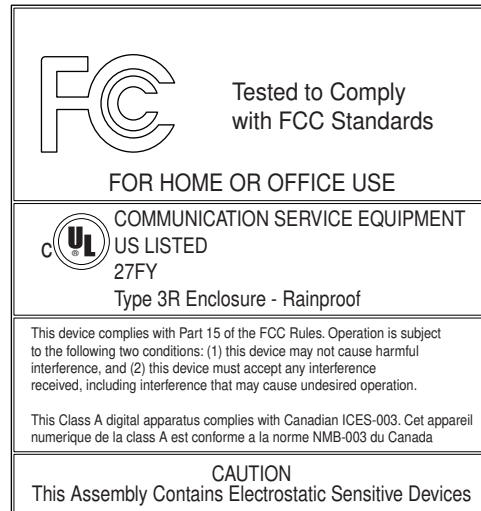
The following table provides examples of the text in the various ONT safety labels.

Table 4-1 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.
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.

The following figure shows a sample safety label on the ONT equipment.

Figure 4-1 Sample safety label on the ONT equipment



18533

4.2 Safety standards compliance

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



WARNING

Equipment Damage

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.

4.2.1 EMC, EMI, and ESD standards compliance

The ONT equipment complies with the Federal Communications Commission (FCC) CFR 47, Part 15, Subpart B, Class A requirements for OLT equipment.

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.

4.2.2 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).

4.2.3 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

4.2.4 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.

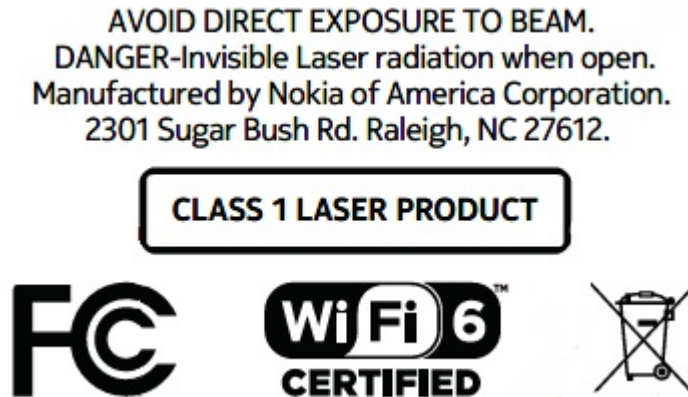
Per CDRH 21 CFR 10.40.10 (h) (1) (iv) distributors of Class 1 laser products, such as Nokia ONTs shall leave the following Laser Safety cautions with the end user.

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 4-2, “Sample laser product label showing CDRH 21 CFR compliance” \(p. 39\)](#) shows a laser product label.

Figure 4-2 Sample laser product label showing CDRH 21 CFR compliance



4.2.5 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 over currents.

4.3 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.



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.



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 Nokia 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."

4.3.1 Laser warning labels

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

The following figure shows a laser product label.

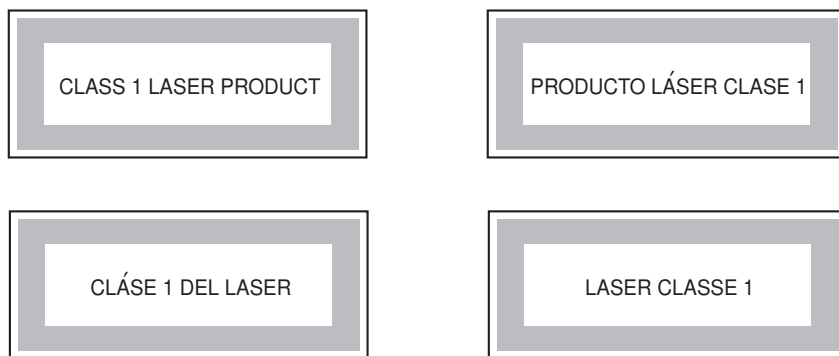
Figure 4-3 Laser product label



18455

Figure 4-4, "Laser classification label" (p. 40) shows a laser classification label. Laser classification labels may be provided in other languages.

Figure 4-4 Laser classification label



18992

Figure 4-5, "Laser warning labels" (p. 41) 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 4-5 Laser warning labels



18993

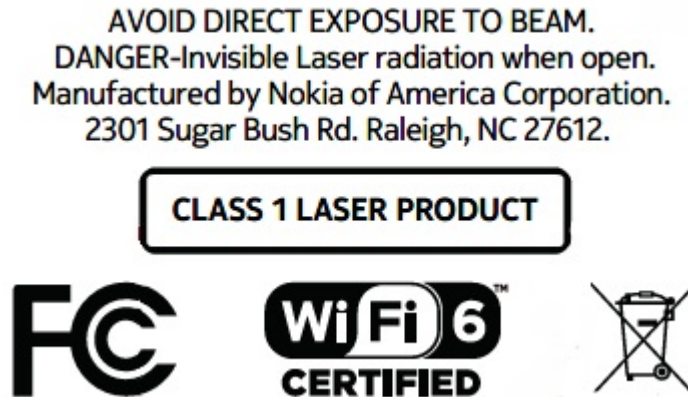
4.3.2 Laser classification

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 4-6, “Sample laser product safety label on the ONT equipment” \(p. 42\)](#) shows a sample laser product safety label on the ONT equipment.

Figure 4-6 Sample laser product safety label on the ONT equipment



4.3.3 Transmit optical output

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

4.3.4 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.



Risk of eye damage by laser radiation.

4.3.5 Location class

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

4.4 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.

4.4.1 Power supplies

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

4.4.2 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).

4.4.3 Protective earth

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

4.5 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

Service Disruption

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.

Nokia 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.

4.6 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, Nokia 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.

5 G-1426G-F unit data sheet

5.1 Overview

5.1.1 Purpose

5.1.2 Contents

5.1 Overview	45
5.2 G-1426G-F part numbers and identification	45
5.3 G-1426G-F general description	47
5.4 G-1426G-F software and installation feature support	55
5.5 G-1426G-F interfaces and interface capacity	56
5.6 G-1426G-F LEDs	58
5.7 G-1426G-F detailed specifications	60
5.8 G-1426G-F GEM ports and T-CONTs	61
5.9 G-1426G-F performance monitoring statistics	62
5.10 G-1426G-F functional blocks	63
5.11 G-1426G-F standards compliance	64
5.12 G-1426G-F special considerations	66

5.2 G-1426G-F part numbers and identification

Table 5-1, “Identification of G-1426G-F indoor ONTs” (p. 45) provides part numbers and identification information for the G-1426G-F indoor ONT.

Table 5-1 Identification of G-1426G-F indoor ONTs

Ordering kit part number	Provisioning number	Description	CLEI Code	CPR	ECI/ Bar code
3TN01669AA	3TN01672AA	G-1426G-F,GPON ONT, supports 1 POTS port, 4xGE UNI, WiFi 6, 2+2, 512MB, 5dBi internal antennas, black color variant. Includes a 12V 1A wall-mounted AC/DC power adapter with 2-pin LAT US input plug.	-	-	-

Table 5-1 Identification of G-1426G-F indoor ONTs (continued)

Ordering kit part number	Provisioning number	Description	CLEI Code	CPR	ECI/ Bar code
3TN01669BA	3TN01672BA	G-1426G-F, GPON ONT, supports 1POTS, 4xGE UNI, WiFi 6, 2+2, 512MB, internal antennas, black color variant. Includes a 12V 1A wall-mounted AC/DC power adapter with 2-pin EU input plug.	-	-	-

Table 5-2, “G-1426G-F power supply ordering information” (p. 46) provides the power supply information for the G-1426G-F ONT. For more information on power supplies, see the **Nokia ONT Power Supply and UPS Guide**. The power consumption is less than 11.32 W.

Table 5-2 G-1426G-F power supply ordering information

ONT part numbers	Power model (Model No./Manufacture Part Number)	Ordering part numbers	Power information	Customer category or country compliance tested for	Notes
KIT: 3TN01669AAAA EMA: 3TN01672AAAA	MNC: MAUS-1201001202/ MP1202-UX-35 KELI: KL-WA120100-E/SW-WB346C	NA	12V 1A wall mounted AC/DC power adapter with 2-pins US input plug	FCC/CB	
KIT: 3TN01669BAAA EMA: 3TN01672BAAA	MNC: MAES-1201001202/ MP1202-EX-32 KELI: KL-WE120100-B/SW-WB347C	NA	12V 1A wall mounted AC/DC power adapter with 2-pins EU input plug	ANATEL	

The following table describes the various plug types used in the ONTs:

Table 5-3 Plug types

Plug type	Icon
2-pin EU plug	
2-pin US plug	

Table 5-3 Plug types (continued)

Plug type	Icon
2-pin AU plug	
3-pin UK plug	
3-pin US plug	
3-pin India plug	

Table 5-4, “Hardware parts required for G-1426G-F installations” (p. 47) lists the hardware parts required for mounting an G-1426G-F ONT.

Table 5-4 Hardware parts required for G-1426G-F installations

Part	Description
ONT unit	The G-1426G-F ONT.
Wall mount bracket 3FE49555AA	The wall mount bracket is fastened to a wall. The G-1426G-F ONT is seated in the wall mount bracket. Color of the wall mount bracket: Black
Mounting screws	Two screws are required to mount the wall mount bracket. The recommended screw is a TA3.5X16 screw with a pan head style.

5.3 G-1426G-F general description

G-1426G-F 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 G-1426G-F has built-in concurrent dual-band Wi-Fi® 802.11 b/g/n/ax and 802.11 ac/ax networking with triple play capability and can provide triple play services with voice, video and data. The G-1426G-F supports Wi-Fi 6 and Wi-Fi EasyMesh™. This coverage can be expanded by installing additional Wi-Fi EasyMesh-capable beacons.

The overall Nokia WiFi solution is composed of one Nokia WiFi gateway (or Nokia WiFi beacon) as root AP, one or more Nokia WiFi Beacons, the Nokia WiFi Care Portal for the operator’s customer care team, and a mobile application for the end-user’s self care.

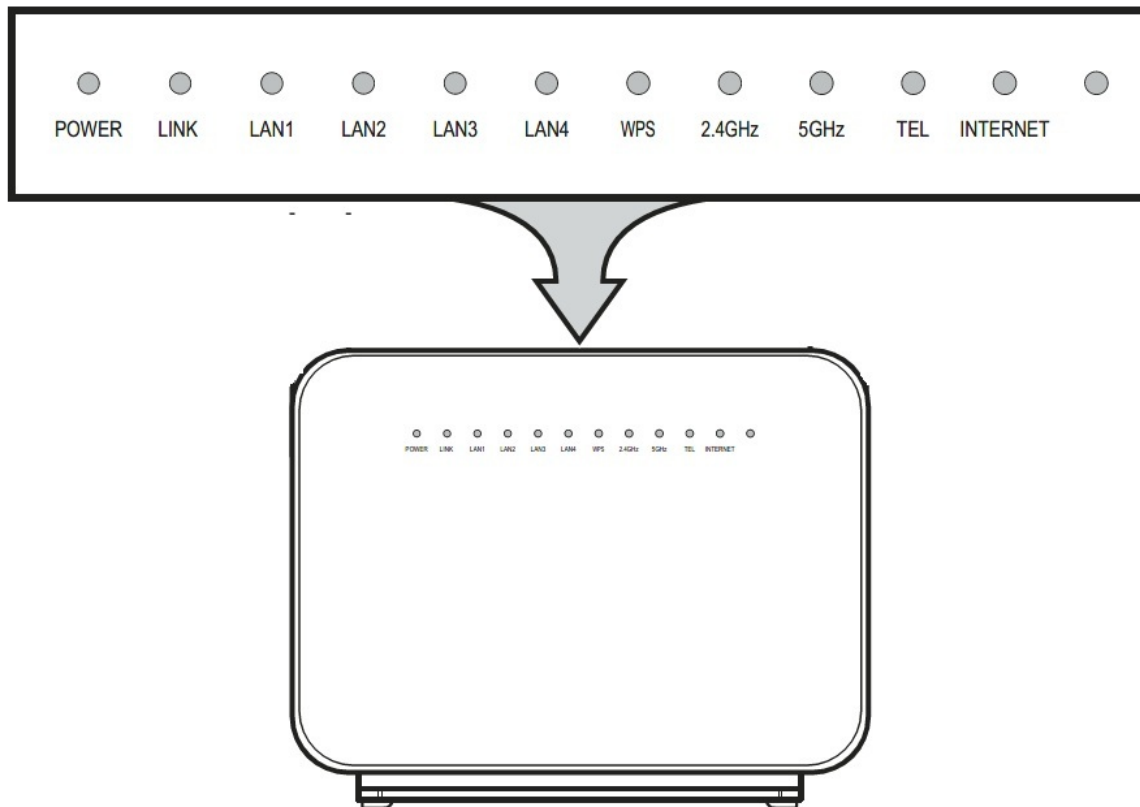
Note: The Nokia WiFi Care Portal can be accessed by the end user and the operator.

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).

The ONT can be placed on a flat surface, such as a desk or shelf.

Figure 5-1, “G-1426G-F ONT ” (p. 47) shows the G-1426G-F ONT.

Figure 5-1 G-1426G-F ONT



G-1426G-F indoor ONTs provide the following functions:

- Dual-band concurrent 2x2 IEEE 802.11 b/g/n/ax 2.4 GHz and 802.11ac/ax MIMO 5 GHz
- Supports 802.11 b/g/n/ax 2x2 Wireless 2.4 GHz MIMO; Channel bandwidth 20, 40 MHz
- Supports 802.11ac/ax 2x2 Wireless 5 GHz Mu-MIMO; Channel bandwidth 20, 40, 80, 160 MHz

Notes:

- When the channel bandwidth is configured to Auto in the ETSI domain, after boot up, the ONT can take up to 10 minutes (depending on the channel selection by the initial channel selection algorithm) to complete Connection Admission Control (CAC) as required by the

regulation. During this time, the 5GHz SSIDs will not be operational and it can be connected to 2.4GHz SSIDs instead. When the 5GHz SSIDs become operational, it can be band-steered to 5GHz, if appropriate.

- When the ONT is operational and needs to fall back from 160MHz to 80MHz channel bandwidth, it will only attempt to change to 160MHz between 2:00 am and 3:00 am. Hence, the potential 10-minute CAC will create minimal impact. This behavior can be changed through the configuration file by either limiting to 80MHz channels only (will limit CAC to 1 minute) or by disabling the expansion from 80MHz to 160MHz between 2:00 am and 3:00 am.
- Four Gigabit standard RJ-45 1000/100/10 Mbps, auto negotiating Ethernet ports and MDI/MDIX auto sensing
- One FXS port for VoIP service with RJ-11 connector
- GPON uplink: G.984 and G.988 series standard compliant
- 256MB NAND Flash with bad block management, 512MB DDR3 RAM, pin2pin compatible design for possible upgrade of RAM/Flash
- WiFi on/off push button
- WPS on/off push button
- Reset button
- Triple-Play services, including voice, video and high speed Internet access
- Support for fax services
- Built-in layer 2 switch; Line Rate L2 traffic
- IP video distribution
- Wavelength: 1490 nm downstream; 1310 nm upstream
- Supports WBF filter. The GPON ONTs can co-exist with XGSPON ONTs in the same PON
- PHY rate: 574 Mbps for 2.4 G and 2402 Mbps for 5 G
- External antennas with 5dBi gain for each
- Optics that support received signal strength indication (RSSI)
- G.984.3-compliant Advanced Encryption Standard (AES) in downstream
- WPA, WPA-PSK/TKIP
- WPA2, WPA2-PSK/AES
- WPA3
- VLAN tagging/detagging and marking/remarking of IEEE 802.1p per Ethernet port.
- Dying gasp support
- Voice Services via Session Initiation Protocol (SIP)
- Multiple voice Codecs
- DTMF dialing
- Echo cancellation (G.168)
- Fax mode configuration (T.30/T.38)
- Caller ID, call waiting, call hold, 3-way calling, call transfer, message waiting

-
- Forward Error Correction (FEC)
 - Support for multiple SSIDs (private and public instances); contact your Nokia representative for further details.
 - Conductive power: 200 mW/23 dBm (2.4 GHz); 200 mW/23 dBm (5GHz)
 - Bridged mode or routed mode per LAN port
 - TR-069 support
 - TR-181 support
 - TR-157 LXC support
 - Ethernet-based Point-to-Point (PPPoE)
 - DHCP client/server
 - DNS server/client
 - DDNS
 - Port forwarding
 - Network Address Translation (NAT)
 - Network Address Port Translation (NAPT)
 - UPnP IGD2.0 support
 - ALG
 - IGMP snooping and proxy (v2/v3)
 - Traffic classification and QoS capability
 - OMCI/TR-069 Web GUI configuration
 - Performance monitoring and alarm reporting
 - Remote software image downloading and activation
 - IP/MAC/URL filter
 - Multi-level firewall and ACL
 - SoftGRE supports IPv4 and IPv6 tunnel
 - Speed Test support

5.3.1 TR-069 parameter support

The G-1426G-F ONT supports the following TR-069 features:

- Host object
- Port forwarding
- Optical parameters
- Object support for optical parameters
- Statistics and troubleshooting
- Diagnostic parameter
- Component parameter

Host object support

The ONT provides host object support for: InternetGatewayDeviceLANDevice.Hosts.Host.

Port forwarding support

The ONT supports the port forwarding of objects via TR-069:

- Application name
- WAN port
- LAN port
- Internal client
- Protocol
- Enable mapping
- WAN connection list

These port forwarding parameters are also supported in the GUI. For more information, see [7.46 “Configuring Port Forwarding”](#) (p. 177) in [Chapter 7, “Configure a G-1426G-F indoor ONT”](#).

Optical parameters support

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

- Laser bias current
- Voltage
- Temperature
- Received signal levels
- Lower thresholds

These optical parameters are also supported in the GUI. For more information, see [7.15 “Viewing Optical Module Status”](#) (p. 112) in [Chapter 7, “Configure a G-1426G-F indoor ONT”](#).

Object support for Wi-Fi parameters

The ONT supports the status retrieval and configuration of the following Wi-Fi parameters via TR-069:

- Channel
- SSID
- Password for WPA
- Tx power (transmission rate in percentage of maximum transmit power)
- WPS

These TR-069 object parameters are also supported in the GUI. For more information, see [7.28 “Configuring Wireless 2.4 GHz”](#) (p. 143) and [7.29 “Configuring Wireless 5 GHz”](#) (p. 145) in [Chapter 7, “Configure a G-1426G-F indoor ONT”](#).

Statistics and troubleshooting support

The ONT supports TR-069 statistics and troubleshooting for LAN, WAN, and Wi-Fi.

Diagnostic parameter support

The ONT supports the following TR-069 diagnostic parameters:

- TR-143
- IP ping
- Traceroute

These diagnostic parameters are also supported in the GUI. For more information, see [7.59 “Diagnosing WAN Connections” \(p. 192\)](#) in [Chapter 7, “Configure a G-1426G-F indoor ONT”](#).

5.3.2 TR-069 authentication using TLS and CA certificates

G-1426G-F ONTs support TLS, as well as ACS authentication using SHA-256 pre-installed certificates.

If the URL is set to the HTTPs format, by default, the connection will use TLS without authentication mode. The ONT can also authenticate the ACS using a pre-installed CA certificate.

The G-1426G-F ONTs support TLSv1.3 for TR-069. The ONT supports download certification from ACS.

5.3.3 TR-104 parameter extension support for voice service

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

The -104 Voice Service Object is:
`InternetGatewayDevice.Services.VoiceService.{i}.Capabilities.SIP.`

The vendor specific attribute is: `X_ALU-COM_XML_File_Name_Path`.

5.3.4 TR-104 voice-related alarms

The G-1426G-F ONT supports the following four TR-104 voice-related alarms on a per FXS port basis.

These alarms all represent SIP registration failures with an alarm level of MAJOR.

- SIPREGDNS: domain name could not be resolved
- SIPREGAUTH: authentication failed
- SIPREGTO: re-transmissions timed out
- SIPREGERR: error response from the registration server

5.3.5 TR-104 parameters for FX line testing

New attributes have been added to the TR-104 Voice Service Object structure to enable the ACS to perform line tests. The ONT supports the following electrical line tests:

- Hazardous potential
- Foreign electrical motive force
- Resistive faults
- Receiver off-hook test

- Ringers test

5.3.6 TR-111 support

The G-1426G-F ONT supports TR-111, which extends the WAN Management Protocol defined in TR-069 to enhance the ability to remotely manage LAN devices.

The device-gateway association enables an ACS to identify the associated gateway through which a device is connected.

A connect request via the NAT gateway enables an ACS to initiate a TR-069 session with a device that is operating behind a NAT gateway.

5.3.7 TR-157 support

This ONT can support LXC container for third party software components on ONTs with minimal 512M memory. These software components are managed by ACS with the parameters defined in TR-157.

The TR-157 objects are:

- Manage each software component via SoftwareModules.DeploymentUnit.{i}
- Set software component execution environment via SoftwareModules.ExecEnv.{i}
- Run software component and get the execution status via SoftwareModules.ExecutionUnit.{i}

i **Note:** The device reserves and limits to 36MB RAM and 32MB flash in total for all of the third-party applications. The maximum CPU load created or provided to the third party application is limited to approximately 30%. Underlying non-priority processes may still use the remaining memory on a temporary basis.

Nokia can assist to review specific applications, taking into account the actual memory load of the current hardware, current and projected software evolution over time, and the projected use by a third party application of the software.

5.3.8 TR-181 parameter support

TR-181 and TR-369 parameter support has been introduced or enhanced for the parameter categories and functions listed in the following table.

TR-181 can be enabled (instead of TR-098) by defining the associated TR-181 parameter in a customer specific pre-configuration file downloadable into the ONT.

For details about which parameters are supported, see your Nokia representative.

Table 5-5 Support for TR-181 parameter categories

Parameter category	Functionality
Device info and statistics	Device information
	Optical statistics
	Ethernet statistics
	Wi-Fi statistics
	Bridge statistics
	PPP statistics
	IP statistics
	Periodic statistics
	Voice statistics
Diagnostics	Wi-Fi diagnostic
	Ping
	Trace route
	TR-143 Speed test
	Self test
	Voice diagnostics
	NSLookup diagnostics
Optical configuration	
Forwarding configuration	Ethernet
	Bridge
	PPP
	IP
	Routing
	QoS
	DSLite
	NAT
	Neighbor discovery
Hosts configuration	
Wi-Fi configuration	

Table 5-5 Support for TR-181 parameter categories (continued)

Parameter category	Functionality
Service configuration	Voice service
	DDNS
	DNS
	DHCP
	GRE
	IGMP
	NTP timing
Firewall	
WebGUI configuration	
Nokia Wi-Fi configuration	Nokia Wi-Fi cloud service



Note: Due to the internal chipset architecture, the application session time-out is not fully precise and ranges from session timer to session timer + 20 seconds. The applications with a session timer are ICMP connections, TCP sessions, and UDP sessions. The default session time-out of an ICMP connection is 30 seconds. The background of this constraint is that the application session time-out is maintained and refreshed by both the software and hardware session timers maintained separately. The hardware session timer refreshes the software session timer, which results in the deviation of the software timer. The range of application session time is from session timer to session timer + 20 seconds.

5.4 G-1426G-F software and installation feature support

For information on installing or replacing the G-1426G-F see [Chapter 6, “Install or replace a G-1426G-F indoor ONT”](#).

For information on the following topics, see the **Nokia 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

5.5 G-1426G-F interfaces and interface capacity

The following table describes the supported interfaces and interface capacity for G-1426G-F indoor ONTs.

Table 5-6 G-1426G-F indoor ONT interface connection capacity

ONT type and model	Maximum capacity								
	POTS	100/10 BASE-T	1000/100/10 BASE-T	RF video (CATV)	MoCA	VDSL2	E1/T1	Local craft	GPON
G-1426G-F ¹	1	—	4	—	—	—	—	—	1

Notes:

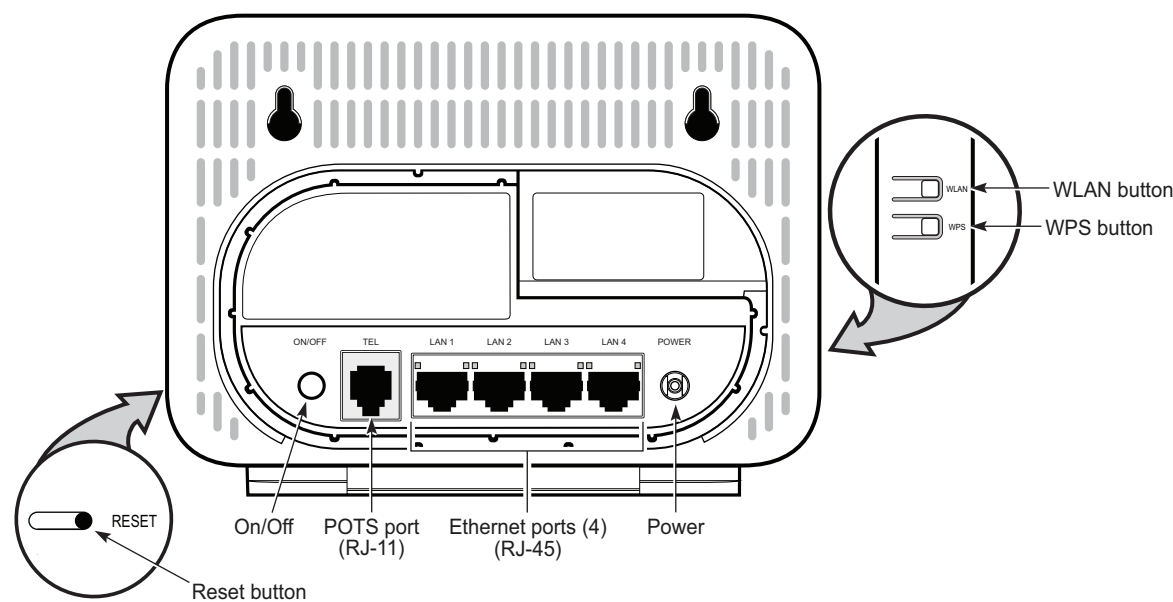
1. The G-1426G-F ONTs provide WiFi service that is enabled and disabled using a WiFi on/off switch.

5.5.1 G-1426G-F connections and components

Figure 5-2, “G-1426G-F indoor ONT physical connections (back)” (p. 56) shows the physical connections for G-1426G-F indoor ONTs.

Note: Some variants of G-1426G-F do not support USB.

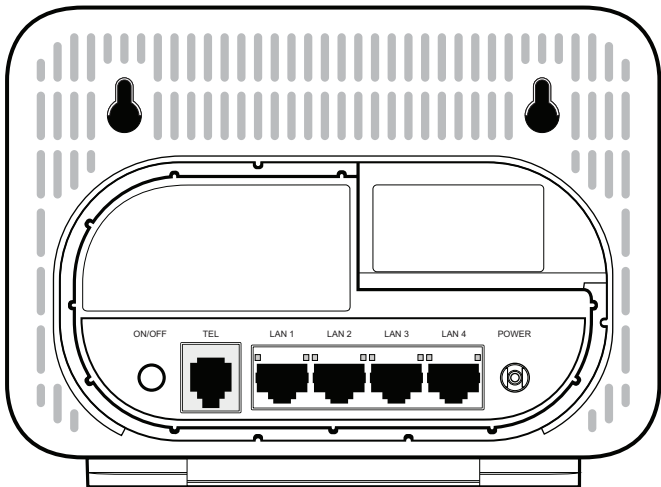
Figure 5-2 G-1426G-F indoor ONT physical connections (back)



40420

Figure 5-3, “G-1426G-F indoor ONT with fiber optic connector” (p. 57) shows the G-1426G-F indoor ONT with a fiber optic connector.

Figure 5-3 G-1426G-F indoor ONT with fiber optic connector



40419

Table 5-7, “G-1426G-F indoor ONT physical connections” (p. 57) describes the physical connections for G-1426G-F indoor ONTs.

Table 5-7 G-1426G-F indoor ONT physical connections

Connection ¹	Print Letters	Description
POTS port	TEL	This connection is provided through an RJ-11 port. One POTS connection is supported. The POTS port supports voice services.
Ethernet ports	LAN1 to LAN4	This connection is provided through Ethernet RJ-45 connectors. Up to four 1000/100/10 Base-T Ethernet interfaces are supported. The Ethernet ports can support both data and in-band video services on all four interfaces. The button is accessible through a 2mm pin hole
Power input	POWER	This connection is provided through the power connector. A power cable fitted with a barrel connector is used to make the connection.
Reset 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. Accessible through a 2mm pin hole.
WLAN button	WLAN	Wi-Fi service is compliant with IEEE 802.11 standards and is enabled and disabled using the WLAN button.
WPS button	WPS	The WiFi Protected Setup (WPS) button enables and disables the WPS for 2.4GHz and 5GHz.
On/Off button	ON/OFF	This button turns the ONT on or off.
Fiber optic port	-	The SC/APC fiber optic port is located at the back of the ONT and provides the connection for the fiber optic cable.

Table 5-7 G-1426G-F indoor ONT physical connections (continued)

Connection ¹	Print Letters	Description
USB port	USB	This connection is provided through 1 USB port on the side of the ONT. The ONT supports external USB hard drives that can be made accessible to all LAN devices. Note: Some variants of G-1426G-F do not support USB.
	Note: Not all variants of G-1426G-F support USB.	

Notes:

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

5.6 G-1426G-F LEDs

Figure 5-4, “G-1426G-F indoor ONT LEDs” (p. 58) shows the G-1426G-F indoor ONT LEDs.

Figure 5-4 G-1426G-F indoor ONT LEDs

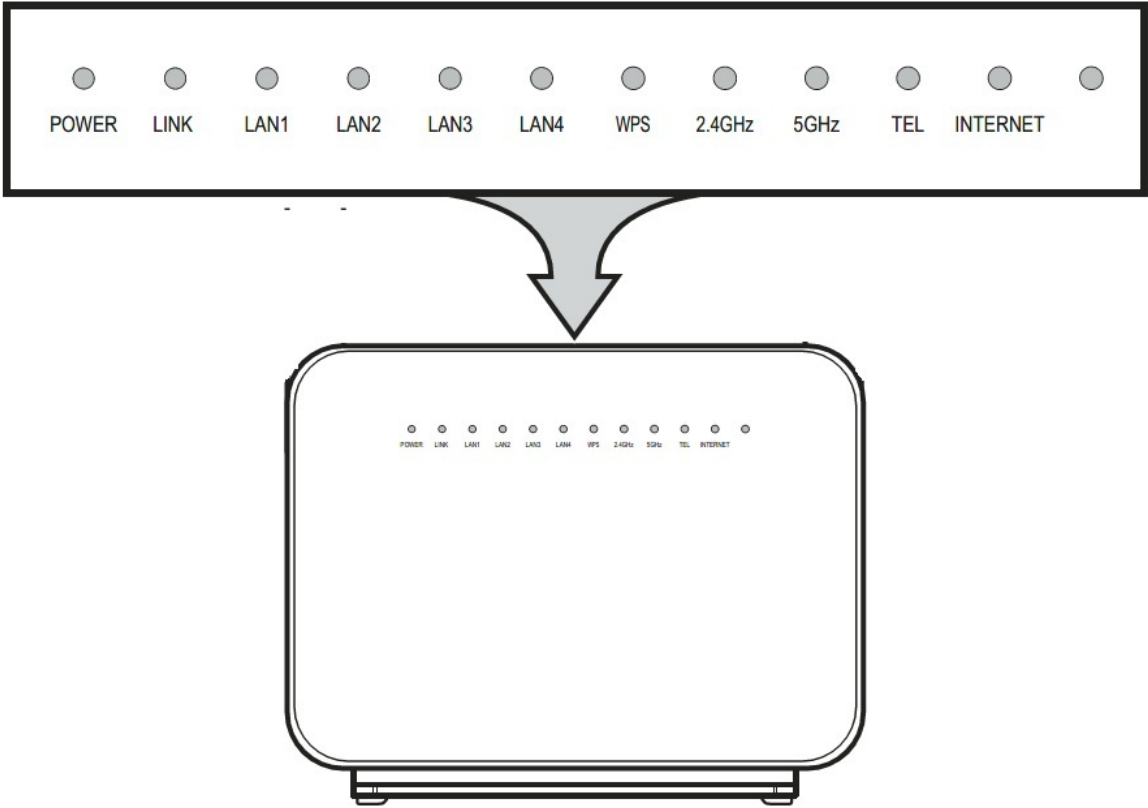


Table 5-8, “G-1426G-F indoor ONT LED descriptions” (p. 58) provides LED descriptions for G-1426G-F indoor ONTs.

Table 5-8 G-1426G-F indoor ONT LED descriptions

Indicator	LED color and behavior	LED behavior description
POWER	Green solid	Power on.
	Fast Green flashing	Software update in progress
	Slow Green Flashing	Failure at startup or loopback detected
	Off	Power off.
LINK	Green solid	ONT is configured on the OLT and is in service (UP).
	Off	PON link is not initialized or in O7 status
	Fast Green flashing	ONT is attempting to range with OLT Or ONT is awaiting or receiving OMCI data.
	Slow Green flashing	GPON link is down or no link is connected.
LAN 1 to 4	Off	ONT power is off or Ethernet is not connected.
	Green solid	ONT is connected to the associated LAN port (includes devices with wake-on-LAN capability where a slight voltage is supplied to an Ethernet connection).
	Green flashing	LAN activity is present (traffic in either direction).
TEL	Green solid	Phone is off hook and voip service is building up.
	Fast Green flashing	Phone is in “call in” or “talking” condition.
	Slow flashing Green	VOIP service is out of service
	Off	All phones are on hook, and VOIP service is not built up
WPS	Green solid	Wi-Fi protected setup link is up (negotiation and auto-configuration successful).
	Slow green flashing	Wi-Fi protected setup link activity (negotiation and auto-configuration ongoing).
	Off	Wi-Fi protected setup link down or no link connected (negotiation has not started or has failed). Wi-Fi protected setup processing exception or multiple peers using WPS simultaneously.
	Fast green flashing	WPS session overlap detected.
2.4 GHz	Green solid	WLAN link is enabled in 2.4 GHz.
	Green flashing	Traffic is passing through the WLAN link.
	Off	WLAN link is disabled or no link is connected
5 GHz	Green solid	WLAN link is enabled in 5 GHz.
	Green flashing	Traffic is passing through the WLAN link.
	Off	WLAN link is disabled or no link is connected.

Table 5-8 G-1426G-F indoor ONT LED descriptions (continued)

Indicator	LED color and behavior	LED behavior description
INTERNET	Green solid	IP connected (the device has a WAN IP address from IPCP/DHCP/Static and Broadband link is up) and no traffic detected. If the IP or PPPoE session is dropped due to an idle timeout, the light will remain green if PON link is still present. If the session is dropped for any other reason, the light is turned off.
	Green flickering	PPPoE or DHCP connection is in progress.
	Off	Broadband physical connection power off, device in bridged mode with no IP address assigned to the device, or Broadband physical interface connection not present.
USB	Green solid	A device is connected to the USB port.
	Green flashing	Traffic is passing through the USB connection.
	Off	No device is connected to the USB port.
	Note: Not all variants of G-1426G-F support USB.	

5.7 G-1426G-F detailed specifications

Table 5-9, “G-1426G-F indoor ONT physical specifications” (p. 60) lists the physical specifications for G-1426G-F indoor ONTs.

Table 5-9 G-1426G-F indoor ONT physical specifications

Description	Specification
Length (with external antenna)	8.9 in. (226.1 mm)
Length (without external antenna)	6.1 in. (156 mm)
Depth (with bottom plate)	1.75 in. (44.7 mm)
Depth (without bottom plate)	1.24 in. (31.5 mm)
Height (with external antenna)	10.1 in. (256.2 mm)
Height (without external antenna)	4.5 in. (114.7 mm)
Weight [within 0.5 lb (0.23 kg)] (net weight of ONT) (without fiber tray)	0.529 lb (0.24 kg) approximately

Table 5-10, “G-1426G-F indoor ONT power consumption specifications” (p. 60) lists the power consumption specifications for G-1426G-F indoor ONT.

Table 5-10 G-1426G-F indoor ONT power consumption specifications

Mnemonic	Maximum power (Not to exceed)	Condition	Minimum power	Condition
G-1426G-F	11.32 W	1 POTS off-hook, 4 1000/100/10 Base-T Ethernet, Wi-Fi operational	4.3 W	1 POTS on-hook, other interfaces/services not provisioned

Table 5-11, “G-1426G-F indoor ONT environmental specifications” (p. 61) lists the environmental specifications for G-1426G-F indoor ONT.

Table 5-11 G-1426G-F indoor ONT environmental specifications

Mounting method	Temperature range and humidity	Altitude
On desk or shelf	Operating: 32° F to 104° F (0° C to 40° C) ambient temperature 10% to 90% relative humidity, non-condensing	Contact your Nokia technical support representative for more information
	Storage: -4° F to 158° F (-20° C to 70° C)	

Table 5-12, “G-1426G-F indoor ONT Dimension data specifications” (p. 61) lists the dimension data specifications for G-1426G-F indoor ONT.

Table 5-12 G-1426G-F indoor ONT Dimension data specifications

Dimensions	Specifications
Packet size supported	2000 bytes
Number of IP addresses supported (or ranges)	In LAN network, the supported range is: - IPv4: 192.168.1.1 ~192.168.1.253 - IPv6: No limitation
Number of supported WiFi clients (per radio, per device, per mesh)	64 per radio, 128 per device, 256 per mesh
Number of supported Beacons /APs in a mesh	6 (including the device)
Number of supported WAN interfaces	Supports 8 WAN connections
Number of supported VLANs	Supports 4094 VLANs
Number of priority queues, and overall buffer size	256 priority queues. Max 16MB for WAN and 4MB for LAN, 512KB SRAM buffer in PONMAC
Number of multicast groups (DAACL entries)	512

5.8 G-1426G-F GEM ports and T-CONTs

The following table 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 5-13 G-1426G-F indoor ONT capacity for GEM ports and T-CONTs

ONT or MDU	Maximum	Notes
Package P ONTs		
GEM ports per indoor or outdoor ONT	256	256 are present; 254 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

5.9 G-1426G-F performance monitoring statistics

The following section identifies the supported performance monitoring statistics for G-1426G-F 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 5-14, “Package S ONTs ONTENET performance monitoring statistics” \(p. 61\)](#) provides statistics for ONTENET type counters
- [Table 5-15, “Package S ONTs ONTL2UNI performance monitoring statistics” \(p. 62\)](#) provides statistics for ONTL2UNI type counters
- [Table 5-16, “Package S ONTs PONONTTC, PONONTMCTC, PONONTTCHSI, PONONTTCES, PONONTTCFLOW, PONONTTCVOIP performance monitoring statistics” \(p. 63\)](#) provides statistics for PONONTTC, PONONTMCTC, PONONTTCHSI, PONONTTCES, PONONTTCFLOW, and PONONTTCVOIP type counters
- [Table 5-17, “Package S ONTs PONONTTC aggregate performance monitoring statistics” \(p. 63\)](#) provides statistics for PONONTTC aggregate type counters



Note: If you have trouble accessing G-1426G-F ONTs performance monitoring statistics using TL1, please contact your Nokia support representative for more information about how to access and retrieve performance monitoring type counters.

The following table provides statistics for ONTENET type counters

Table 5-14 Package S ONTs ONTENET performance monitoring statistics

ONT	ONTENET statistics													
	FCSE	EC	LC	RBO	SCF	MCF	DT	IMTE	CSE	AE	IMRE	FTL	TBO	SQE
G-1426G-F ¹	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Notes:

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

Table 5-15 Package S ONTs ONTL2UNI performance monitoring statistics

ONT	ONTL2UNI statistics									
	FRAMES	BYTES	MCFRAMES	DSDRPDFRMS	USDRPDFRMS	USFRAMES	DSFRAMES	DSBYTES	USMCFRAMES	DSMCFRAMES
G-1426G-F ¹	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Notes:

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

Table 5-16 Package S 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-1426G-F ¹	✓	✓	✓	✓	✓	—

Notes:

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

Table 5-17 Package S ONTs PONONTTC aggregate performance monitoring statistics

ONT	PONONTTC (aggregate) statistics					
	TXBLOCKS	TXFRAGS	RXBLOCKS	RXFRAGS	LOSTFRAGS	BADGEMHDRS
G-1426G-F ¹	✓	✓	✓	✓	✓	—

Notes:

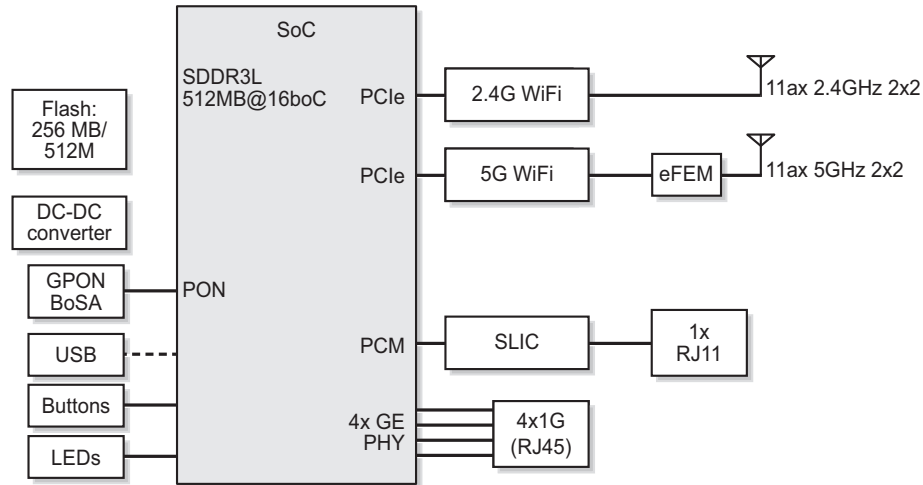
1. A 5 second polling window limitation exists on the ONT, therefore the margin of error for each 15-min window is 5 seconds.

5.10 G-1426G-F functional blocks

G-1426G-F indoor ONTs are single-residence ONTs that support Wireless (Wi-Fi) service. Wi-Fi service on these ONTs is compliant with the IEEE 802.11 standard and enabled or disabled using a WIFI button. In addition to the Wi-Fi service, these ONTs transmit Ethernet packets to four RJ-45 Ethernet ports and voice traffic to one RJ-11 POTS port. These ONTs also feature fiber optic, and power connectors.

The following figure shows the functional blocks for G-1426G-F indoor ONT.

Figure 5-5 G-1426G-F ONT functional block



40421

5.11 G-1426G-F standards compliance

G-1426G-F indoor ONTs are compliant with the following standards:

- CE marking for European standards for health, safety, and environmental protection
- EN 300-328 v1.9.1 wide band data transmission standards for 2.4GHz bands
- G.984 support GPON interface (framing)
- G.984.2 (Amd1, class B+) for GPON
- 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 dynamic bandwidth reporting
- 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
- G.984.4 and G.983.2 support for ONT management and provisioning
- IEEE 802.1p for traffic prioritization
- IEEE 802.1q for VLANs
- IEEE 802.3 (2012)
- IEEE 802.11 ax/ac/b/g/n for Wi-Fi
- ITU-T G.711 A-law, G.711 μ -law, and G.729A and G.729B, G.723.1
- SIP RFC 3261

5.11.1 Energy-related products standby and off modes compliance

Hereby, Nokia declares that the G-1426G-F 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-1426G-F ONTS qualify as equipment with high network availability (HiNA) functionality. Since the main purpose of G-1426G-F 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 [5.5 “G-1426G-F interfaces and interface capacity” \(p. 56\)](#) in this chapter.

For information about power consumption, see [5.7 “G-1426G-F detailed specifications” \(p. 60\)](#) in this chapter.

5.11.2 FCC statement

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

5.11.3 FCC Radiation Exposure Statement

This device complies with FCC radiation exposure limits set forth for an uncontrolled environment and it also complies with Part 15 of the FCC RF Rules. 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 co-located or operating in conjunction with any other antenna or transmitter. End-users and installers must be provided with antenna installation instructions and consider removing the no-collocation statement.

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.
2. This device must accept any interference received, including interference that may cause undesired operation.

**CAUTION****Service Disruption**

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

5.12 G-1426G-F special considerations

5.12.1 WiFi service

G-1426G-F indoor ONTs feature WiFi service as well as voice and data services. WiFi 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-1426G-F indoor ONTs have the following physical features that assist in providing WiFi service:

- 1 WiFi button for enabling and disabling WiFi service
- 1 WiFi Protected Setup (WPS) push button for adding WPS-enabled wireless devices
- 2 external antennas: for both 2.4 and 5G,

WiFi standards and certifications

The WiFi service on G-1426G-F indoor ONTs supports the following IEEE standards and Wi-Fi Alliance certifications:

- Wi-Fi CERTIFIED 6™
- Wi-Fi CERTIFIED™ a, b, g, n, ac
- WPA™, WPA2™, WPA3™
- Wi-Fi Agile Multiband™
- WMM®, WMM®-Power Save
- Wi-Fi Protected Setup™
- EasyMesh R4

WiFi GUI features

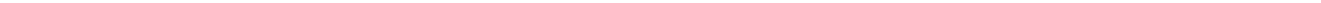
G-1426G-F indoor ONTs have HTML-based WiFi configuration GUIs.

5.12.2 G-1426G-F ONT considerations and limitations

The following table lists the considerations and limitations for G-1426G-F ONTs.

Table 5-18 G-1426G-F 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.
The maximum value of the ringing AC voltage is 60Vrms, and the ring DC offset voltage is suggested to be 0V.
The following voice features/ GSIP parameters are configurable on a per-Client/ per-ONT basis (not per-Subscriber): • 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: CW, Call Hold and Warmline



6 Install or replace a G-1426G-F indoor ONT

6.1 Overview

6.1.1 Purpose

This chapter provides the steps to:

- Install a G-1426G-F indoor ONT
- Replace a G-1426G-F indoor ONT
- Wall mount an G-1426G-F indoor ONT

6.1.2 Contents

6.1 Overview	69
6.2 Prerequisites	69
6.3 Recommended tools	69
6.4 Safety information	70
6.5 Install a G-1426G-F indoor ONT	70
6.6 Replace a G-1426G-F indoor ONT	73
6.7 Wall mount a G-1426G-F indoor ONT	76

6.2 Prerequisites

Ensure that you have all required cables.

6.3 Recommended tools

You need the following tools:

- #2 Phillips screwdriver
- 1/4 in. (6 mm) Phillips 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

6.4 Safety information

Read the following safety information before installing or replacing the unit.



DANGER

Hazard

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.

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.

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



WARNING

Equipment Damage

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



CAUTION

Service Disruption

Keep indoor ONTs away from direct sunlight. Prolonged exposure to direct sunlight can damage the unit.



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

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 precedence 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 [Chapter 5, "G-1426G-F unit data sheet"](#) for the temperature ranges of these ONTs.

6.5 Install a G-1426G-F indoor ONT

1

Place the indoor ONT unit on a flat surface, such as a desk or shelf.

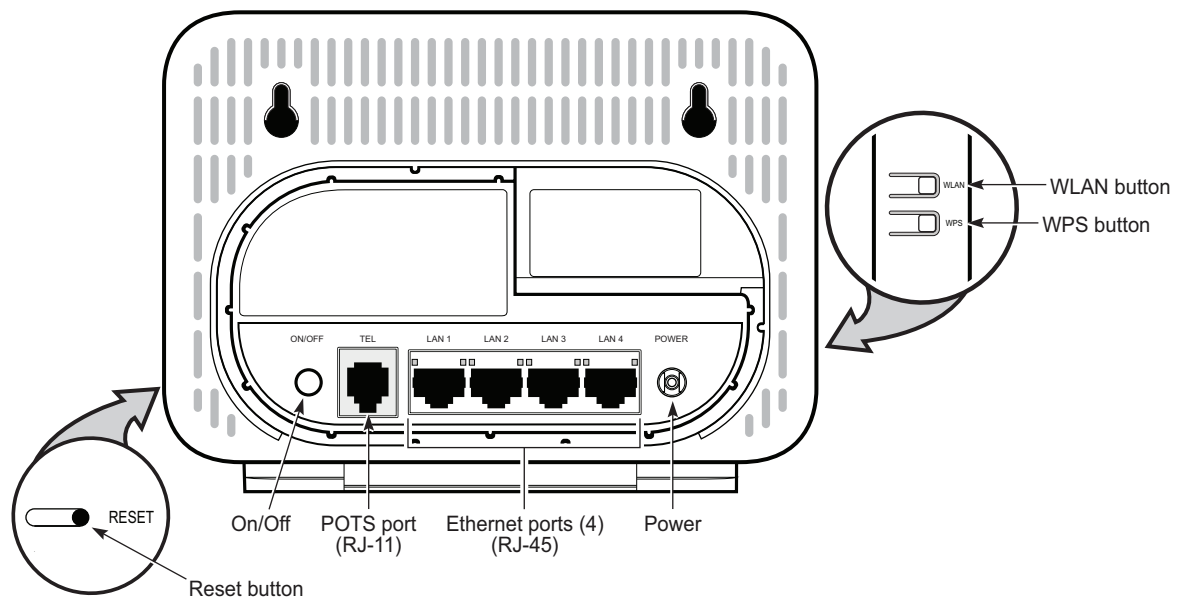
Note: The G-1426G-F cannot be stacked with another ONT or with other equipment. The ONT mounting requirements are:

- 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.

2

Review the connection locations, as shown in [Figure 6-1, “G-1426G-F ONT connections” \(p. 70\)](#).

Figure 6-1 G-1426G-F ONT connections



40420

3

Connect the Ethernet cables to the RJ-45 ports.

4

Route the POTS cable directly to the RJ-11 port as per local practices.

5

**DANGER****Hazard**

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

**WARNING****Equipment Damage**

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

Connect the fiber optic cable with SC/APC adapter to the SC/APC connector on the bottom of the ONT.



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.

6

Connect the power cable to the power connector.

7

Power up the ONT unit by using the power switch.

8

If used, enable the WiFi service.

- a. Locate the **WIFI (WLAN)** button on the ONT; see [Figure 6-1, "G-1426G-F ONT connections" \(p. 71\)](#) for location of the WLAN button.

Note: WiFi and WLAN has been used interchangeably throughout the document.

- b. Press the **WIFI (WLAN)** button to change the status of the WiFi service.

9

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

10

Activate and test the services; see the **Nokia ONT Hardware and Cabling Installation Guide**.

11

If used, configure the SLID; see the **Nokia ONT Configuration, Management, and Troubleshooting Guide**.

12

If necessary, reset the ONT.

- a. Locate the Reset button on a G-1426G-F indoor ONT as shown in [Figure 6-1, “G-1426G-F ONT connections” \(p. 71\)](#).
- b. Insert the end of a straightened paper clip or other narrow object into the hole in the Reset button to reset the ONT.

END OF STEPS

6.6 Replace a G-1426G-F 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).

- a. 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;
```

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

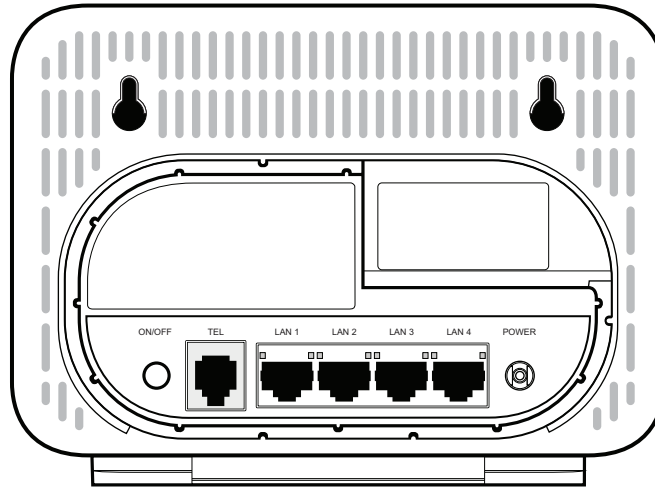
Example:

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

2

If used, disable the WiFi service by pressing the **WIFI** button. [Figure 6-2, “G-1426G-F indoor ONT connections” \(p. 74\)](#) shows the location of the **WIFI** button.

Figure 6-2 G-1426G-F indoor ONT connections



40419

- 3 _____
 Power down the unit by using the on/off power switch.

- 4 _____
 Disconnect the POTS, Ethernet, and power cables from the ONT; see [Figure 6-2, “G-1426G-F indoor ONT connections” \(p. 74\)](#) for the connector locations on the G-1426G-F indoor ONT.

5 _____



DANGER

Hazard

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

Disconnect the fiber optic cables.

- a. Unplug the fiber optic cable with SC/APC connector from the bottom of the ONT.
- b. Attach a fiber dust cover to the end of the SC/APC connector.

- 6 _____
 Replace the old ONT with a new ONT on a flat surface, such as a desk or shelf.

7

Connect the Ethernet cables directly to the RJ-45 ports; see [Figure 6-2, “G-1426G-F indoor ONT connections” \(p. 74\)](#) for the location of the RJ-45 ports.

8

Connect the POTS cable directly to the RJ-11 port as per local practices; see [Figure 6-2, “G-1426G-F indoor ONT connections” \(p. 74\)](#) for the location of the RJ-11 ports.

9



DANGER

Hazard

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

If required, have approved service personnel who are trained to work with optic fiber clean the fiber optic connection. See the **Nokia ONT Configuration, Management, and Troubleshooting Guide** for more information about fiber optic handling, inspection, and cleaning.

10



DANGER

Hazard

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



WARNING

Equipment Damage

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

Connect the fiber optic cable with SC/APC adapter into the SC/APC connector on the bottom of the ONT.



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

Connect the power cable to the power connector.

12 _____
Power up the unit by using the power switch.

13 _____
If required, enable the Wi-Fi (WLAN) service by pressing the WIFI (WAN) button; see [Figure 6-2, "G-1426G-F indoor ONT connections" \(p. 74\)](#) for the location of the WIFI (WLAN) button.

14 _____
If used, configure the SLID; see the **Nokia 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.

15 _____
Verify the ONT LEDs, voltage status, and optical signal levels; see the **Nokia ONT Hardware and Cabling Installation Guide**.

16 _____
Activate and test the services; see the **Nokia ONT Hardware and Cabling Installation Guide**.

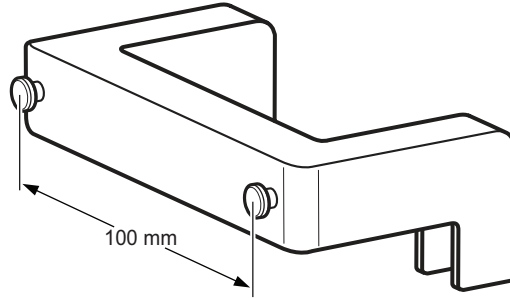
17 _____
If necessary, reset the ONT.
a. Locate the Reset button on a G-1426G-F indoor ONT as shown in [Figure 6-2, "G-1426G-F indoor ONT connections" \(p. 74\)](#).
b. Insert the end of a straightened paper clip or other narrow object into the hole in the Reset button to reset the ONT.

END OF STEPS _____

6.7 Wall mount a G-1426G-F indoor ONT

This chapter provides the steps to mount a G-1426G-F indoor ONT on a wall using a wall mount bracket (3FE49555AA). The G-1426G-F indoor ONT is shipped without the wall mount bracket. The wall mount bracket must be ordered separately (3FE49555AA).

Figure 6-3 G-1426G-F wall mount bracket



36713

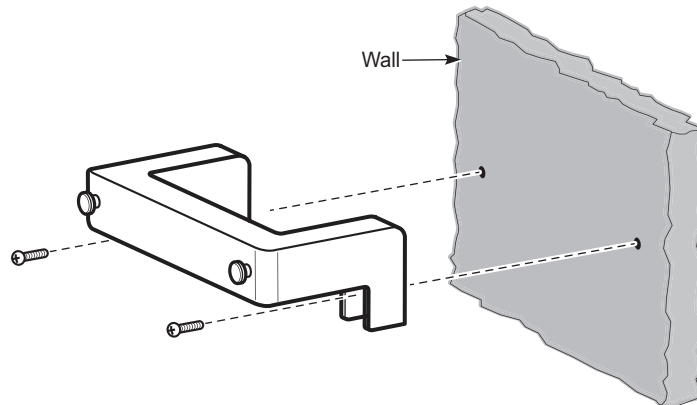
6.7.1 Recommended tools

See section 6.3 “Recommended tools” (p. 69) for the recommended tools.

6.7.2 Procedure

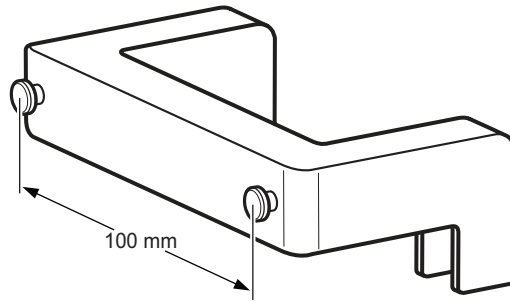
Use this procedure to mount a G-1426G-F ONT on a wall. The G-1426G-F ONT must be mounted in a horizontal position, as indicated by the wall mounting key holes in [Figure 6-5, “G-1426G-F - Distance between the mounting holes”](#) (p. 78).

Figure 6-4 G-1426G-F wall mount bracket - mounting holes



40039

Figure 6-5 G-1426G-F - Distance between the mounting holes



36713

1

Mount the bracket to the wall such that the two screws (Recommended TA3.5X16 screw with a pan head style.) fit into the designated keyholes on the bracket. Tighten the screws to secure the bracket to the wall firmly [Figure 6-5, “G-1426G-F - Distance between the mounting holes” \(p. 78\)](#)

It is recommended to use a level to ensure that the ONT unit is installed properly.

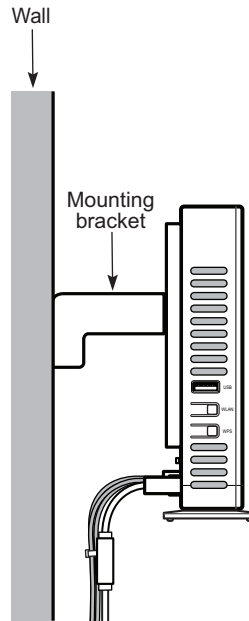
2

Connect the power cord and other cables to the G-1426G-F ONT.

3

Hang the unit on the wall as displayed in [Figure 6-6, “ONT to wall mount connection” \(p. 79\)](#).

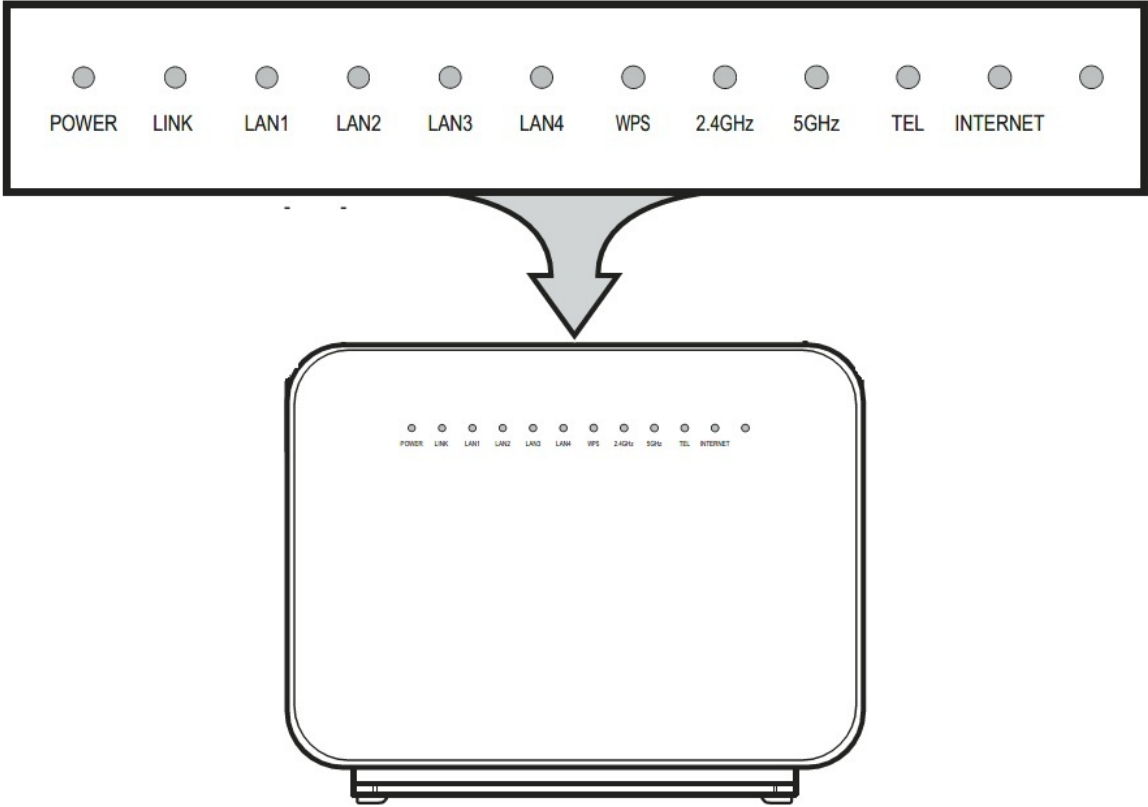
Figure 6-6 ONT to wall mount connection



40418

Figure 6-7, “ONT in wall mount bracket—facing the room” (p. 80) shows the cables connected to the wall mount bracket and the ONT facing the room.

Figure 6-7 ONT in wall mount bracket—facing the room



END OF STEPS

7 Configure a G-1426G-F indoor ONT

7.1 Overview

7.1.1 Purpose

This chapter describes the WebGUI configuration procedures.

7.1.2 Contents

7.1 Overview	81
GUI overview	84
7.2 General configuration	84
7.3 HGU mode GUI configuration	84
7.4 WAN services overview	84
7.5 Logging in to the web-based GUI	88
7.6 Viewing overview information	90
7.7 G-1426G-F WebGUI Menu	93
WAN Configuration	95
7.8 Overview	95
7.9 Configuring WAN Services	95
7.10 Viewing WAN Statistics	103
7.11 Configuring TR-069	106
7.12 Configuring TR-369	108
7.13 Configuring GRE tunnel	109
7.14 Configuring Static routing	111
7.15 Viewing Optical Module Status	112
7.16 Configuring QoS	114
7.17 Configuring Upstream (US) Classifier	117
LAN Configuration	124
7.18 Overview	124
7.19 Configuring DHCP IPv4	124
7.20 Configuring DHCP IPv6	126

7.21 Configuring DNS	128
7.22 Viewing LAN Statistics	131
WiFi Configuration	133
7.23 Overview	133
7.24 Configuring WiFi Network	133
7.25 Configuring the WiFi Password	137
7.26 Viewing Network Map, Adding WiFi Points, Renaming WiFi Points and Removing WiFi Points	139
7.27 Optimizing WiFi Network	143
7.28 Configuring Wireless 2.4 GHz	143
7.29 Configuring Wireless 5 GHz	145
7.30 Configuring Wireless Schedules	147
7.31 Viewing WiFi Statistics	149
Devices	151
7.32 Overview	151
7.33 Viewing Device Information	151
Voice Configuration	155
7.34 Overview	155
7.35 Configuring Voice Settings	155
7.36 Viewing Voice Status	157
Security Configuration	159
7.37 Overview	159
7.38 Configuring the Firewall	159
7.39 Configuring the MAC Filter	160
7.40 Configuring the IP Filter	162
7.41 Configuring the URL Filter	164
7.42 Configuring Family Profiles	166
7.43 Configuring DMZ and ALG	172
7.44 Configuring Access Control	174
Advanced Settings	177
7.45 Overview	177

7.46 Configuring Port Forwarding	177
7.47 Configuring Port Triggering	178
7.48 Configuring DDNS	179
7.49 Configuring NTP	180
7.50 Configuring USB	182
7.51 Configuring UPNP and DLNA	183
Maintenance	185
7.52 Overview	185
7.53 Configuring the Password	185
7.54 Backing Up the Configuration	187
7.55 Restoring the Configuration	187
7.56 Upgrading Firmware	189
7.57 Configuring LOID	190
7.58 Configuring SLID	191
7.59 Diagnosing WAN Connections	192
7.60 Viewing Log Files	197
7.61 Generating a delta configuration file	198
Troubleshooting	201
7.62 Troubleshooting counters	201
7.63 Speed Test	203

GUI overview

This section provides an overview of the G-1426G-F WebGUI.

7.2 General configuration

For HTTP/HTTPS configuration procedures, refer to the **Nokia ONT Configuration, Management, and Troubleshooting Guide**.

7.3 HGU mode GUI configuration

Use the procedures below to use the web-based GUI for the G-1426G-F 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.

7.4 WAN services overview

This section provides a brief overview of the WAN services in different modes and interactions with ONT.

The following WAN services can be configured.

7.4.1 Forwarding model

WAN ports are broadly grouped into Layer-2 and Layer-3 WAN ports. A Bridging forwarding service uses the Layer-2 WAN port for forwarding packets to WAN side, and a routing forwarding service uses the Layer-3 WAN port for forwarding.

A LAN port is a virtual LAN (VLAN) interface above a physical interface. The LAN ports are broadly grouped into Layer-2 and Layer-3 LAN ports. Bridging forwarding services are attached to the Layer-2 LAN ports whereas Routing forwarding services are attached to the Layer-3 LAN ports. (Layer-2 LAN ports are typically VLAN created over the Ethernet physical interface or SSID mapped to a VLAN. Each WiFi SSID is mapped only to one VLAN, whereas an Ethernet interface can be mapped to multiple VLAN interfaces.

7.4.2 VLAN binding service

In this model, a bridging service can be associated with multiple Ethernet ports. An Ethernet UNI can be a member of multiple VLANs (services), but a WiFi SSID can be associated only to one bridging service.

The VLAN binding service switches packets from LAN port to WAN port and also LAN port to LAN port based on destination MAC address.

7.4.3 Tunnel service

In this model, bridging service can be associated with more than one LAN port and a WAN Port. The traffic from the LAN ports whether its tagged or untagged (traffic from SSID will always be untagged) are received on this interface and the Bridge Tunnel service adds a service VLAN to the received traffic and forwards on the WAN port. It also learns and saves the MAC address on the receiver port. Tunnel service also performs a LAN to LAN switching based on destination MAC address.

7.4.4 Transparent service (Special case of Tunnel mode)

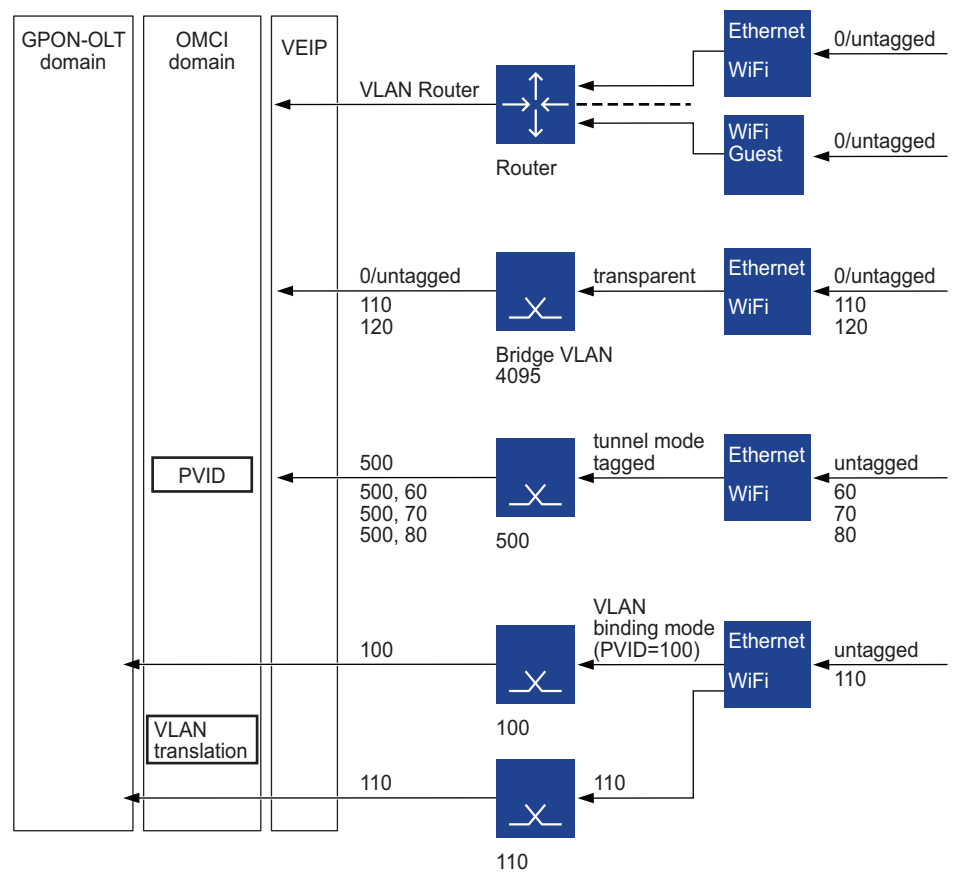
This service is an extension of the bridge tunnel service, where the service VLAN is considered as NULL or empty. This model is applicable only for xPON RGs. The traffic from the LAN side is transmitted on the associated WAN side without adding/stripping a service VLAN. In this service, a PVID is configured through OMCI on xPON , so that all untagged traffic received is tagged with this VLAN on the upstream direction and stripped on the downstream direction. Application of this service model is very limited and recommended only in very specific cases.

7.4.5 Routing service

On the home network (LAN side) the routing traffic can be segregated to multiple groups for traffic isolation (for example, a Home network and a guest network). Each group is identified with a unique VLAN ID and referred as a Routing Slice. A Routing slice for xPON and Ethernet RGs, the LAN port associated with a routing slice can receive only untagged frames. A Routing service operates above one or more routing slices on LAN side and routes packets to one or more WAN(s) based on routing policies. In a RG, only one routing service is supported.

The following figure provides common forwarding model for routed services and bridging services.

Figure 7-1 Common forwarding model



38446

7.4.6 Supported combinations

The following table describes the applicable and supported combinations of OMCI and ACS/ WebGUI configurations.

Table 7-1 Supported combinations of OMCI and ACS/WebGUI

Service Type	Operation	Untagged traffic at LAN	Tagged traffic at LAN
Untagged Routed WAN	Set PVID, P-bit	OMCI (ACS/WebGUI with VLAN Disabled)	NA (only untagged in for routed)

Table 7-1 Supported combinations of OMCI and ACS/WebGUI (continued)

Service Type	Operation	Untagged traffic at LAN	Tagged traffic at LAN
Tagged Routed WAN	Set WAN P-bit	ACS/WebGUI	NA (only untagged in for routed)
	SET WAN-VID	ACS/WebGUI	NA (only untagged in for routed)
	Remark P-bit per VLAN (single P-bit)	For future development (OMCI)	NA (only untagged in for routed)
	DSCP to P-bit for untagged LAN traffic	L3 QoS + DSCP to P-bit ACS/WebGUI. DSCP_classification ACS_only Policy based routing for future development	NA (only untagged in for routed)
	DSCP to P-bit for untagged LAN traffic	OMCI not supported	NA (only untagged in for routed)
	Translate VLAN (OMCI domain)	Supported (no N:1 support, each forwarder different VLAN)	NA (only untagged in for routed)
	L2 QoS (Port, MAC)	ACS/ WebGUI	NA (only untagged in for routed)
	P-bit to P-bit (VLAN regeneration profile)	NA	NA (only untagged in for routed)
Bridged WAN (transparent Tunnel)	Set WAN P-bit	OMCI supported from BBDR2302 (Fixed value 0 in BBDR2301)	P-bit same as incoming packet at LAN
	SET WAN-VID	OMCI (PVID)	VLAN_ID same as incoming packet at LAN
	Remark P-bit per VLAN (single P Bit)	NA	NA
	Remap P-bit per protocol	Not supported	Not supported
	DSCP to P-bit for untagged LAN traffic	L3 QoS + DSCP to P-bit ACS/WebGUI. DSCP_classification ACS_only. Policy based routing is not applicable.	ACS/WebGUI is not applicable
	DSCP to P-bit for untagged LAN traffic	OMCI - NA	OMCI - NA
	Translate VLAN (OMCI domain)	NA	For future development
	L2 QoS (Port, MAC)	ACS/WebGUI	ACS/WebGUI
	P-bit to P-bit (VLAN regeneration profile)	NA	Not supported

Table 7-1 Supported combinations of OMCI and ACS/WebGUI (continued)

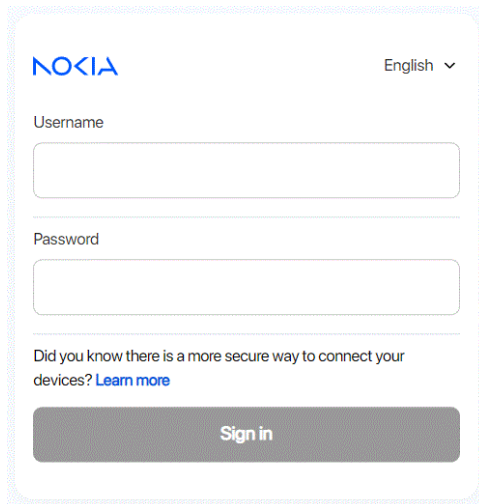
Service Type	Operation	Untagged traffic at LAN	Tagged traffic at LAN
Bridge (VLAN binding, Tunnel)	Set WAN P-bit	ACS/WebGUI	ACS/WebGUI (take recent P-bit)
	Set WAN-VID	ACS/WebGUI	ACS/WebGUI
	Remark P-bit per VLAN (single P-bit)	Not supported (OMCI) (no PVID configured)	Not supported (OMCI)
	Remap P-bit per protocol	Not supported	Not supported
	DSCP to P-bit for untagged LAN traffic	L3 QoS + DSCP to P-bit ACS/WebGUI. DSCP_classification ACS_only. Policy based routing is not applicable.	NA (not supported)
	DSCP to P-bit for untagged LAN traffic	OMCI - NA	NA (not supported)
	Translate VLAN (OMCI domain)	VLAN Binding - Supported Tunnel - Supported N:1 - Not supported	VLAN Binding - Supported Tunnel - Supported N:1 - Not supported
	L2 QoS (Port, MAC)	ACS/WebGUI	ACS/WebGUI
	P-bit to P-bit (VLAN regeneration profile)	For future development	For future development

7.5 Logging in to the web-based GUI

1

Open a web browser and enter the IP address of the ONT in the address bar.
 The *Login* page displays.

Figure 7-2 Login page



The default gateway IP address must be same as the one printed on the device label. You can connect to this IP address using your web browser after connecting your PC to one of Ethernet ports of the ONT or via WiFi connection. The static IP address of your PC must be in the same default gateway subnet as the ONT. You can also access the login page via "https://www.webgui.nokiawifi.com/" and "http://www.webgui.nokiawifi.com/".

2



CAUTION

Service Disruption

*If you forget the current username and password, press the **Reset** button for 10 seconds to reset the values to the default username and password provided at startup.*

*Pressing the **Reset** button for less than 10 seconds reboots the device.*

Enter your username and password in the *Login* page, as shown in [Figure 7-2, "Login page" \(p. 89\)](#).

The superadmin account is meant for the operator and the password is unique per device unless specified differently in customer specific pre configuration. Contact your Nokia representative to obtain the superadmin password for device.

The default end-user account name and the default password for this account are printed on the device label.

The superadmin user has access to all WebGUI features while the end-user account has only limited access to WebGUI features. This access for the end-user can be adapted with a WebGUI configuration file. Contact your Nokia representative to know the factory default settings of which WebGUI access is available to your end user or how to get a WebGUI configuration file.

3 Click **Sign in**. The *Overview* page displays.

Note: To help protect the security of your Internet connection, the application displays a pop-up reminder to change both the WiFi password and the ONT password. To increase password security, use a minimum of 10 characters, consisting of a mix of numbers and upper and lower case letters.

END OF STEPS

7.6 Viewing overview information

1 Click **Overview** from the left pane. The Overview page displays the following cards.

Figure 7-3 Viewing Overview information

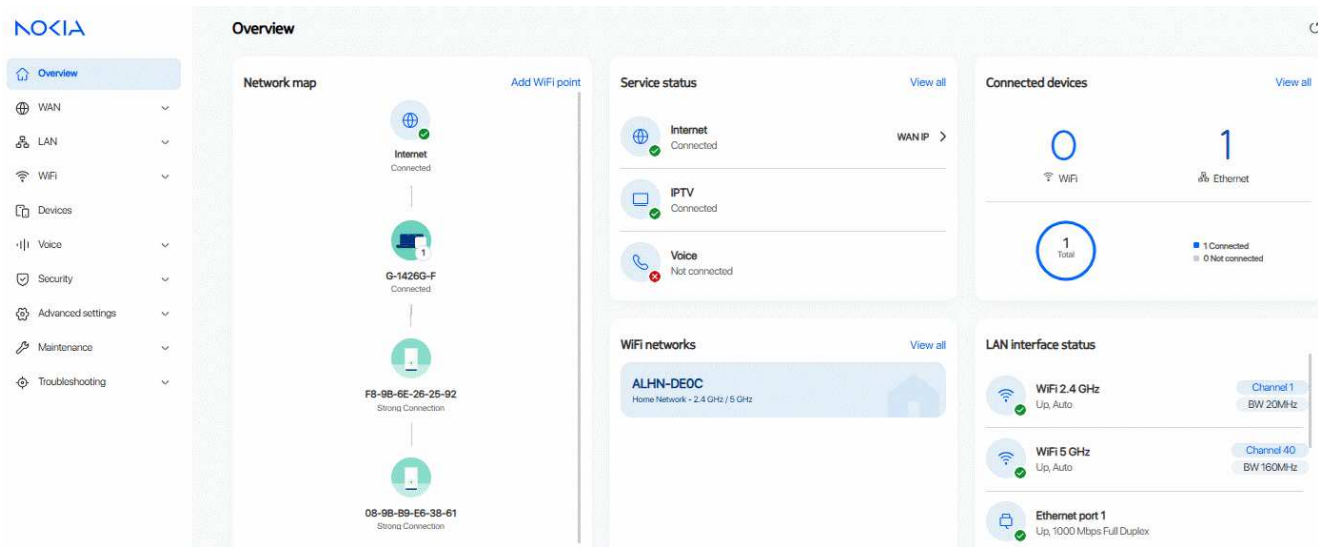
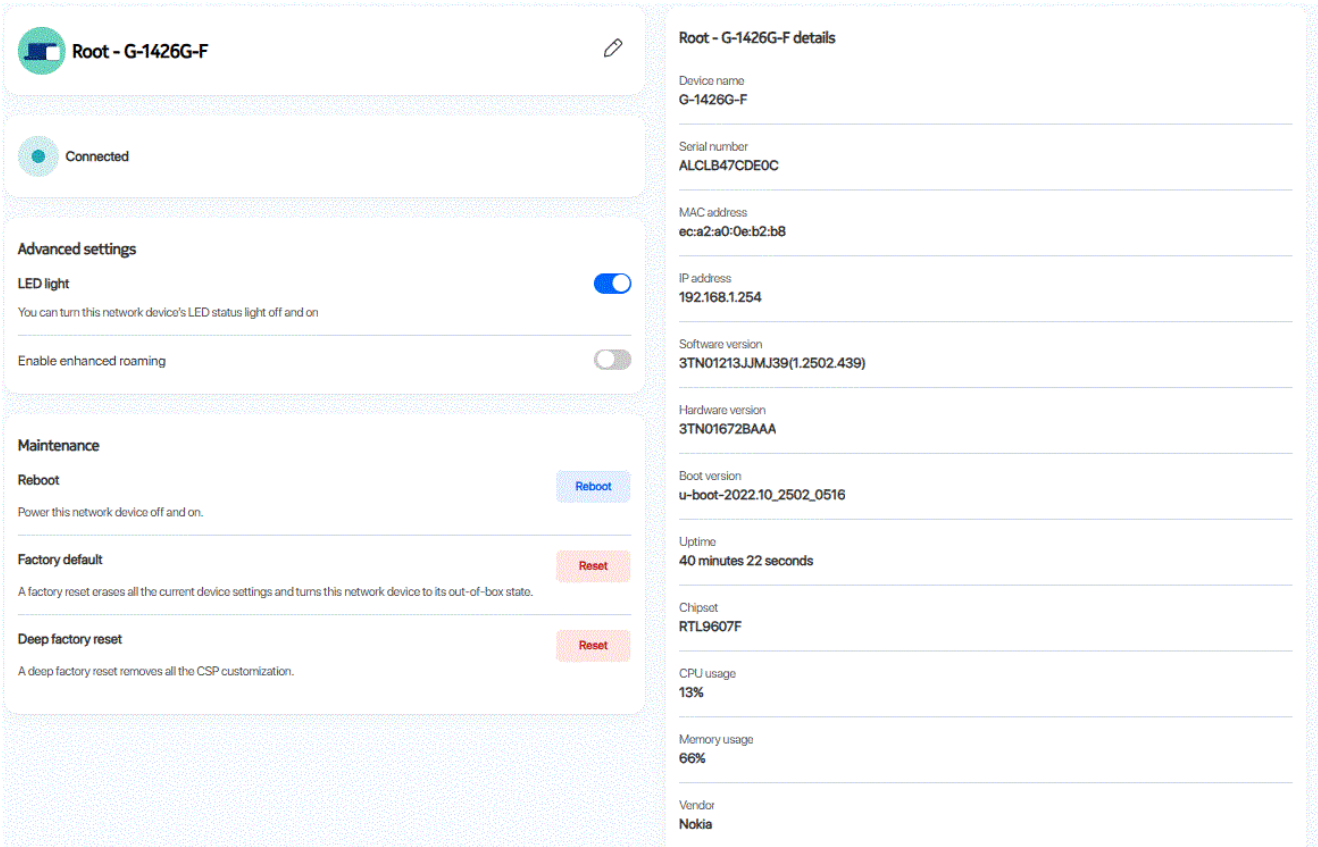


Figure 7-4 G-1426G-F Overview Root



END OF STEPS

7.6.1 Network Map

Displays information about the status of the mesh network and connection to the internet. The status of the internet connection is defined by the presence of an IP address on the internet service. *Up* is indicated with green and *Down* is indicated with red.

Root device

Displays the mnemonic of the device. The colored indicator as well as the status under the name reflects the physical status of the WAN connection (5G, PON port, WAN port). *Up* is Green, *Down* is Red.

Extender device

Displays the mnemonic of the device. The colored indicator as well as the status under the name reflects the physical status of the backhaul connection (Strong Signal = Green, Poor Signal = Amber, Not connected = red).

7.6.2 Service Status

Displays the active status of the triple-play services.

Internet service

The internet service represents the presence of a WAN IP address for the routed network that has the internet attached to it. The card shows the WAN IP address (IPv4 and/or IPv6).

IPTV service

Shows the status of the IPTV service. If the IPTV flag is enabled on a routed service, the online or offline state is indicated by the presence of a WAN IP address for that routed service. If the IPTV is attached to a bridged service, the online or offline state is defined by the WAN uplink status.

7.6.3 WiFi Networks

Displays a network card per activated single or dual band WiFi network containing the bands supported, the name of the network and the type of network (bridge or routed).

7.6.4 Connected Clients

Displays the total number of online and offline clients connected to this device .

7.6.5 LAN Interface Status

Displays information about all the LAN ports of the device.

WiFi 2.4GHz

Shows the status of the 2.4GHz (Up/Down) network and the current band setting. This can either be auto which indicates Radio Resource Management is enabled or in the range 1-13 when manually configured.

WiFi 5GHz

Shows the status of the 5GHz network (Up/Down) and the current band setting. This can either be auto, which indicates Radio Resource Management is enabled or in the range of 36-161 when manually configured.

Ethernet Port

Shows the status of the Ethernet ports (Up/Down), the sync rate (10Mbps, 100Mbps, 1Gbps, 2.5Gbps, 5Gbps, 10Gbps) and the duplex mode (Half duplex, Full duplex).

7.7 G-1426G-F WebGUI Menu

The following table lists the main menu and sub-menu options in the G-1426G-F WebGUI:

Table 7-2 G-1426G-F WebGUI Menu

Main Menu	Sub-menu	Procedure Reference
Overview	-	7.6 "Viewing overview information" (p. 90)
WAN	WAN services	7.9 "Configuring WAN Services" (p. 95)
WAN	WAN statistics	7.10 "Viewing WAN Statistics" (p. 103)
WAN	TR-069	7.11 "Configuring TR-069" (p. 106)
WAN	TR-369	7.12 "Configuring TR-369" (p. 108)
WAN	IP routing	7.14 "Configuring Static routing" (p. 111)
WAN	Qos config	7.16 "Configuring QoS" (p. 114)
WAN	GRE tunnel	7.13 "Configuring GRE tunnel" (p. 109)
LAN	DHCP IPv4	7.19 "Configuring DHCP IPv4" (p. 124)
LAN	DHCP IPv6	7.20 "Configuring DHCP IPv6" (p. 126)
LAN	DNS	7.21 "Configuring DNS" (p. 128)
LAN	LAN statistics	7.22 "Viewing LAN Statistics" (p. 131)
WiFi	WiFi networks	7.24 "Configuring WiFi Network" (p. 133)
WiFi	Network map	7.26 "Viewing Network Map, Adding WiFi Points, Renaming WiFi Points and Removing WiFi Points" (p. 139)
WiFi	Advanced settings	7.28 "Configuring Wireless 2.4 GHz" (p. 143) 7.29 "Configuring Wireless 5 GHz" (p. 145)
WiFi	Wireless schedule	7.30 "Configuring Wireless Schedules" (p. 147)
WiFi	WiFi statistics	7.31 "Viewing WiFi Statistics" (p. 149)
Devices	-	7.33 "Viewing Device Information" (p. 151)
Security	Firewall	7.38 "Configuring the Firewall" (p. 159)
Security	MAC filter	7.39 "Configuring the MAC Filter" (p. 160)
Security	IP filter	7.40 "Configuring the IP Filter" (p. 162)
Security	Family profiles	7.42 "Configuring Family Profiles" (p. 166)
Security	DMZ and ALG	7.43 "Configuring DMZ and ALG" (p. 172)
Security	Access control	7.44 "Configuring Access Control" (p. 174)
Advanced settings	Port forwarding	7.46 "Configuring Port Forwarding" (p. 177)
Advanced settings	Port triggering	7.47 "Configuring Port Triggering" (p. 178)
Advanced settings	DDNS	7.48 "Configuring DDNS" (p. 179)
Advanced settings	NTP	7.49 "Configuring NTP" (p. 180)

Table 7-2 G-1426G-F WebGUI Menu (continued)

Main Menu	Sub-menu	Procedure Reference
Advanced settings	UPNP and DLNA	7.51 "Configuring UPNP and DLNA" (p. 183)
Maintenance	Change password	7.53 "Configuring the Password" (p. 185)
Maintenance	Backup and restore	7.54 "Backing Up the Configuration" (p. 187) 7.55 "Restoring the Configuration" (p. 187)
Maintenance	Firmware upgrade	7.56 "Upgrading Firmware" (p. 189)
Maintenance	Diagnostics	7.59 "Diagnosing WAN Connections" (p. 192)
Maintenance	Log	7.60 "Viewing Log Files" (p. 197)
Maintenance	Delta CFG tool	7.61 "Generating a delta configuration file" (p. 198)
Troubleshooting	-	7.62 "Troubleshooting counters" (p. 201)

WAN Configuration

7.8 Overview

This section describes the WAN configuration procedures that can be performed from the following sub-menu options under the **WAN** menu:

Sub-menu	Procedure
WAN services	7.9 "Configuring WAN Services" (p. 95)
WAN statistics	7.10 "Viewing WAN Statistics" (p. 103)
TR-069	7.11 "Configuring TR-069" (p. 106)
TR-369	7.12 "Configuring TR-369" (p. 108)
IP routing	7.14 "Configuring Static routing" (p. 111)
Optical module status	7.15 "Viewing Optical Module Status" (p. 112)
Qos config	7.16 "Configuring QoS" (p. 114)
GRE tunnel	7.13 "Configuring GRE tunnel" (p. 109)
US classifier	7.17 "Configuring Upstream (US) Classifier" (p. 117)

7.9 Configuring WAN Services

1

Click **WAN**→**WAN services** in the left pane. The *WAN services* page displays the existing WAN connections in the *Overview* table. You can click on a connection to modify the connection configuration.

The device supports dual-stack functionality on the WAN side, enabling it to use both IPv4 and IPv6 simultaneously. Typically, both addresses are assigned automatically through DHCP. However, the IPv4 address can also be configured manually (static), while IPv6 continues to be assigned automatically.

Figure 7-5 Overview table in WAN services page

WAN / WAN services				
Overview				
Service Name	Connection mode	Enable/Disable status	Service	IP address
1_TR069_INTERNET_VOIP_R_VID_881	Route	Enable	VOIP, TR-069, Internet	-
2_INTERNET_R_VID_1081	Route	Enable	Internet	-
3_OTHER_R_VID_981	Route	Enable	IPTV	-

2

Click **Add +** to create a WAN connection. The *Create New Connection* page displays.

Figure 7-6 Create New Connection page

← WAN / WAN services / **Create New Connection**

↺ Delete

Save

WAN connection list

Create New Connection

Enabled

Connection type

IPoE

Connection mode

Route Mode

IP mode

IPv4

NAT

TR-069

VOIP

Internet

IPTV

Enable VLAN

VLAN ID

VLAN PRI

WAN IP mode

DHCP

Manual DNS

Pri DNS

Sec DNS

Figure 7-7 Create New Connection page - PPPoE Configuration

← WAN / WAN services / **Create New Connection**

↺ Delete

Save

WAN connection list

Create New Connection

Enabled

Connection type

PPPoE

Connection mode

Route Mode

IP mode

IPv4

NAT

TR-069

VOIP

Internet

IPTV

Enable VLAN

VLAN ID

VLAN PRI

WAN IP mode

PPPoE

Connection trigger

AlwaysOn

Username

Password

Keep alive time

(5-60 seconds)

Keep alive retry

(1-10 times)

Echo value

Manual DNS

Dsl PAMC

Figure 7-8 VLAN mode - VLAN Binding

← WAN / WAN services / **Create New Connection**

↻ Delete Save

WAN connection list

Create New Connection

Enabled

Connection mode

Bridge Mode

IPTV

VLAN mode

VLAN binding

VLAN ID

VLAN PRI

LAN port binding

LAN 1

PVID

LAN 2

PVID

LAN 3

PVID

LAN 4

PVID

SSID port binding

SSID 1

PVID

SSID 2

PVID

SSID 3

PVID

SSID 4

PVID

SSID 5

PVID

SSID 6

PVID

SSID 7

PVID

Review

98

© 2025 Nokia. Nokia Confidential Information
Use subject to agreed restrictions on disclosure and use.
3TN-01672-AAAA-TCZZA

August 2025
Issue 1

Figure 7-9 Bridge mode - Transparent

← WAN / WAN services / **Create New Connection**

↺

Delete

Save

WAN connection list

Create New Connection

Enabled

Connection mode

Bridge Mode

IPTV

VLAN mode

Transparent

LAN port binding

LAN 1

LAN 2

LAN 3

LAN 4

SSID port binding

SSID 1

SSID 2

SSID 3

SSID 4

SSID 5

SSID 6

SSID 7

SSID 8

Figure 7-10 Bridge mode - Tunnel

← WAN / WAN services / **Create New Connection**

↺ Delete Save

WAN connection list

Create New Connection

Enabled

Connection mode

Bridge Mode

IPTV

VLAN mode

Tunnel

VLAN ID

VLAN PRI

LAN port binding

LAN 1

LAN 2

LAN 3

LAN 4

SSID port binding

SSID 1

SSID 2

SSID 3

SSID 4

SSID 5

SSID 6

SSID 7

SSID 8

3

Configure the following parameters:

Table 7-3 WAN services parameters

Field	Description
WAN connection list	Select a WAN connection from the list.

Table 7-3 WAN services parameters (continued)

Field	Description
Enabled	Select the toggle button to enable the WAN connection.
Connection type	Select a connection type from the list: • IPoE • PPPoE
Connection mode	Select the connection mode of the WAN connection from the list: • Route Mode • Bridge Mode
IP mode	This field is applicable only if the connection mode is Route Mode . Select an IP mode from the list: • IPv4 • IPv4 & IPv6 • IPv6 When the IP mode IPv4 & IPv6 or IPv6 is selected, you need to configure Address method , Enabled prefix delegation and Prefix type .
NAT	Select the toggle button to enable NAT. This option is applicable only if the connection mode is Route Mode .
TR-069	Select the toggle button to enable TR-069. This option is applicable only if the connection mode is Route Mode .
Internet	Select the toggle button to enable Internet. This option is applicable only if the connection mode is Route Mode .
IPTV	Select the toggle button to enable IPTV.
Enable VLAN	Select the toggle button to enable VLAN. This option is applicable only if the connection mode is Route Mode .
VLAN mode	Select a VLAN mode from the list: • VLAN binding • Tunnel • Transparent This option is applicable only if the connection mode is Bridge Mode .
VLAN ID	Enter the VLAN ID. Allowed values: 2 to 4094 In the bridge mode, this option is applicable only if the VLAN mode is VLAN binding and Tunnel .
VLAN PRI	Enter the VLAN PRI. VLAN priority allows to assign a priority to outbound packets containing the specified VLAN ID. Allowed values: 0 to 7 In the bridge mode, this option is applicable only if the VLAN mode is VLAN binding or Tunnel .
LAN port binding	Select the toggle button next to the LAN to enable it. Select the toggle button next to the PVID to enable it. This option is applicable in all VLAN modes.

Table 7-3 WAN services parameters (continued)

Field	Description
SSID port binding	Select the toggle button next to the SSID to enable it. Select the toggle button next to the PVID to enable it. This option is applicable in all VLAN modes.
WAN IP mode	Select an IP mode from the list: • DHCP • PPPoE This option is visible only if you select PPPoE as the connection type. • Static
Manual DNS	If the selected IP mode is IPv4 and the WAN IP mode is DHCP , enter the Domain Name Server (DNS) to be configured manually. You can also enter the Domain Name Server (DNS) to be configured manually if the selected IP mode is IPv4 and the connection type is PPPoE .
IPv4 Address	If the selected IP mode is IPv4 or IPv4&IPv6 and the WAN IP mode is Static , enter the static IPv4 address.
Netmask	If the selected IP mode is IPv4 or IPv4&IPv6 and the WAN IP mode is Static , enter the netmask.
Gateway	If the selected IP mode is IPv4 or IPv4&IPv6 and the WAN IP mode is Static , enter the gateway IP address.
Pri DNS	If the selected IP mode is IPv4 or IPv4&IPv6 and the WAN IP mode is Static , enter the primary Domain Name Server (DNS). Also, if the selected IP mode is IPv4 and the Connection type is PPPoE , enter the primary Domain Name Server (DNS).
Sec DNS	If the selected IP mode is IPv4 or IPv4&IPv6 and the WAN IP mode is Static , enter the secondary Domain Name Server (DNS). Also, if the selected IP mode is IPv4 and the Connection type is PPPoE , enter the secondary Domain Name Server (DNS).
Ter DNS	If the selected IP mode is IPv4 or IPv4&IPv6 and the WAN IP mode is Static , enter the tertiary Domain Name Server (DNS).
Connection trigger	Select the connection trigger type from the list. The default option is Always On . This option is applicable only if the WAN IP mode is PPPoE .
Username	Enter the username to log in to the configuration server. This option is applicable only if the WAN IP mode is PPPoE .
Password	Enter the password to log in to the configuration server. Allowed values are limited to numbers, letters and special characters ! # + , - . / : = @ _ . This option is applicable only if the WAN IP mode is PPPoE .
Keep alive time	The PPPoE connection type triggers one heartbeat each, at the configured time interval to keep the session online. Allowed values: 5 to 60 seconds. This option is applicable only if the WAN IP mode is PPPoE .

Table 7-3 WAN services parameters (continued)

Field	Description
Keep alive retry	Configure the number of retries to check the Keep Alive status of the PPPoE session after time-out. Allowed values: 1 to 10. This option is applicable only if the WAN IP mode is PPPoE .
Echo value	Indicates the number of times the device sends messages to the server to check if the IP address is available or not. This option is applicable only if the WAN IP mode is PPPoE .
Address method	If the selected IP mode is IPv6 or IPv4&IPv6 , select the address method from the list: • AutoConfigured • DHCPv6 • DHCPv6_PD • DHCPv6_NA • Static
Enable prefix delegation	If the selected address method is AutoConfigured , select the toggle button to enable inclusion of the Identity Association (IA) for Prefix Delegation option in Solicit messages.
Prefix type	Displays mechanism through which the prefix was assigned or most recently updated.
IP Address (v6)	If the selected address method is Static , enter the IPv6 address.
Gateway (v6)	If the selected address method is Static , enter the gateway IPv6 address.
IPv6 address prefix	If the selected address method is Static , enter the IPv6 address prefix.
Pri DNS (v6)	If the selected address method is Static , enter the primary DNS IP address.
Sec DNS (v6)	If the selected address method is Static , enter the secondary DNS IP address.
DHCP option 50 persistent	Select the toggle button to enable DHCP Option 50 persistent.
Enable DHCP option 60	Select the toggle button to enable DHCP Option 60 (vendor class identifier).
Enable DHCP option 61	Select the toggle button to enable DHCP Option 61 (client identifier).
Enable DHCP option 77	Select the toggle button to enable DHCP Option 77 (user class information).
Enable DHCP option 90	Select the toggle button to enable DHCP Option 90 (authentication information).

4

Click **Save**. The connection is listed in the *Overview* table of the *WAN services* page.

END OF STEPS

7.10 Viewing WAN Statistics

1

Click **WAN→WAN statistics** in the left pane. The *WAN Statistics* page displays the following information for WAN ports.

Figure 7-11 WAN Statistics page

WAN / **WAN statistics** 

Overview

Service Name	Connection mode	Enable/Disable status	Service	IP address
1_TR069_INTERNET_VOIP_R_VID_881	Route	Enable	VOIP, TR-069, Internet	-
2_INTERNET_R_VID_1081	Route	Enable	Internet	-
3_OTHER_R_VID_981	Route	Enable	IPTV	-

2 Click on the service name to display the WAN statistics details page.

Figure 7-12 WAN Statistics page info

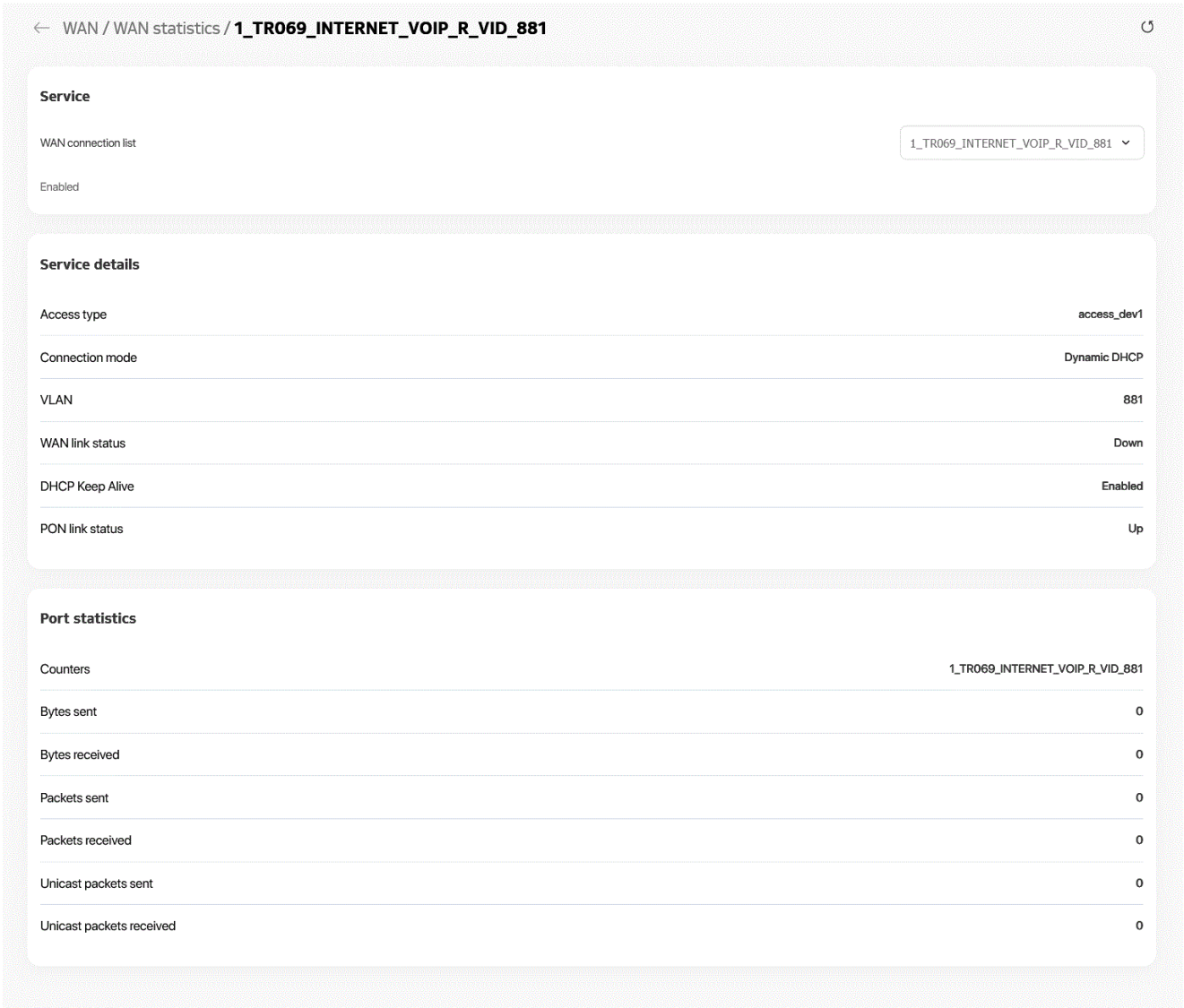


Table 7-4 WAN statistics parameters

Field	Description
PON port status	
PON link status	Displays the PON link status whether it is Up or Down.
Service	
WAN connection list	Select a WAN connection from the list.

Table 7-4 WAN statistics parameters (continued)

Field	Description
Enabled	Displays whether WAN connection is either enabled or disabled.
Service details	
Access type	Displays the access type.
Connection mode	Displays the connection mode of the WAN connection.
VLAN	Displays the VLAN mode based on WAN connection mode.
WAN link status	Displays the WAN status link whether it is Up or Down. This option is available when the IP mode is IPv4 & IPv6 or IPv6 .
DHCP Keep Alive	Displays whether the DHCP Keep Alive is enabled or Disabled.
PON link status	Displays whether the PON link status is Up or Down.
Primary DNS	Displays the primary DNS address.
Secondary DNS	Displays the secondary DNS address.
Ethernet link status	Displays the Ethernet status link whether it is Up or Down.
Pri DNS(v6)	Displays the primary DNS address. This option is available when the IP mode is IPv4 & IPv6 or IPv6 .
Service statistics	
Counters	Displays the counters details.
Bytes sent/received	Displays the bytes sent and received.
Packets sent/received	Displays the packets sent and received.
Errors sent/received	Displays the errors sent and received.
Unicast packets sent/received	Displays the unicast packets sent and received.
Discard packets sent/received	Displays the discard packets sent and received.
Broadcast packets sent/received	Displays the broadcast packets sent and received.
Unknown proto packets received	Displays the proto packets received.
Rx/Tx drops	Displays the Rx/Tx dropped packets.
Rx/Tx errors	Displays the Rx/Tx error packets.

END OF STEPS

7.11 Configuring TR-069

1

Click **WAN**→**TR-069** in the left pane. The *TR-069* page displays.

Figure 7-13 TR-069 page

WAN / TR-069

Save

Enable

Periodic inform enable

Periodic inform interval(s)

5

URL

https://acsgpon.alu.net

Username

AdminGPON

Password

Connection request username

itms

Connection request password

2

Configure the following parameters:

Table 7-5 TR-069 parameters

Field	Description
Enable	Select the toggle button to enable CWMP function.
Periodic inform enable	Select the toggle button to enable periodic inform updates.
Periodic inform interval(s)	Enter the time between periodic inform updates, in seconds.
URL	Enter the URL of the auto-configuration server. Note: When you enter a HTTP URL, a security warning is displayed that a HTTPS URL is recommended. Click OK to continue.
Username	Enter the Username used to authenticate the CPE when making a connection to the ACS.
Password	Enter the Password used to authenticate the CPE when making a connection to the ACS.
Connect request username	Enter the Username used to authenticate an ACS making a Connection Request to the CPE.
Connect request password	Enter the Password used to authenticate an ACS making a Connection Request to the CPE.

3

Click **Save**.

END OF STEPS

7.12 Configuring TR-369

Note: The TR-369 configuration option is available only if the TR-181 data model is active.

- 1
- Click **WAN**→**TR-369** in the left pane. The *TR-369* page displays.

Figure 7-14 TR-369 page

WAN / **TR-369** Save

Enable TR369 / USP

Controller endpoint ID

MTP protocol

MQTT

Transport

Select option

Broker address

Broker Port

1883

Username

Password

••••••••

- 2
- Configure the following parameters:

Table 7-6 TR-369 parameters

Field	Description
Enable TR369/USP	Select the toggle button to enable TR-369/USP and click Save .
Controller endpoint ID	Enter the controller endpoint ID.
MTP Protocol	Select the MTP protocol from the list (currently only MQTT is supported).

Table 7-6 TR-369 parameters (continued)

Field	Description
Transport	Select the transport option from the list: • TCP/IP • TLS Note: If you attempt to change the configuration from TLS to TCP/IP, a security warning is displayed that this option poses security risks. Click OK to continue.
Broker address	Enter the broker IP address.
Broker port	Enter the broker port number.
Username	Enter the username to authenticate with MQTT broker.
Password	Enter the password to authenticate with MQTT broker.

3 _____
Click **Save**.

END OF STEPS _____

7.13 Configuring GRE tunnel

1 _____
Click **WAN**→**GRE Tunnel** from the left pane in the GPON Home Gateway page. The GRE Tunnel page displays.

Figure 7-15 GRE Tunnel page

WAN / GRE tunnel ↺ Add Delete

Tunnel name

Create new GRE tunnel

IP mode

IPv4

WAN interface

1_TR069_INTERNET_VOIP_R_VID_881

Primary remote end

Secondary remote end

Connected remote end

-

Connectivity check

☒

Traffic timeout to start pings

10

2-1024 seconds

No. of retries before unreachable

3

0-100 times

2

Configure the following parameters:

Table 7-7 GRE Tunnel parameters

Field	Description
Tunnel Name	Select Create new GRE Tunnel or select an existing tunnel from the list. The tunnel name is automatically assigned by the system. Up to 3 GRE tunnels are supported.
IP mode	Select an IP mode from the drop-down list.
WAN Interface	Select a WAN interface from the list. GRE tunnels can only be created on HSI-enabled WAN interfaces.
Primary Remote End Secondary Remote End (optional)	Enter an IP address or FQDN that is unique in the system. If the primary remote endpoint is down or unreachable, the secondary remote endpoint becomes active, if configured. The secondary remote endpoint remains active until it becomes unreachable, in which case the primary remote endpoint becomes active again. Revertive mode is not supported. If both endpoints are unreachable, the GRE tunnel is declared down.
Connected Remote End	This field displays the current data traffic path for the GRE tunnel.
Connectivity check	This feature is automatically selected by the system.

Table 7-7 GRE Tunnel parameters (continued)

Field	Description
Traffic timeout to start pings	Enter the traffic timeout in seconds (2 to 1024).
No. of retries before unreachable	Enter the number of retries before the tunnel is declared down (0 to 100).

- 3
- Click **Save**.

 **Note:** To delete the entries, click **Delete**.

END OF STEPS

7.14 Configuring Static routing

- 1
- Click **WAN**→**Static routing** in the left pane. The *IP routing* page displays.

Figure 7-16 IP routing page

WAN / Static routing

IP routing

Enable IP routing

Destination IP address

Destination netmask

Gateway

IPv4 interface

Forwarding policy ⓘ

Add

0.0.0.0

1_INTERNET_R_VID_81

No Policy:-1

- 2
- Configure the following parameters:

Table 7-8 IP routing parameters

Field	Description
Enable IP routing	Select the toggle button to enable IP routing.
Destination IP address	Enter the destination IP address.
Destination netmask	Enter the destination netmask.
Gateway	Enter the gateway IP address.
IPv4 interface	Select an IPv4 interface from the list.
Forwarding policy	Select a forwarding policy from the list.

3

Click **Add**. The IP route is added to the *IP routing table*.

END OF STEPS

7.15 Viewing Optical Module Status

1

Click **WAN**→**Optical module status** in the left pane. The *Optical module status* page displays the following information.

Figure 7-17 Optical module status page

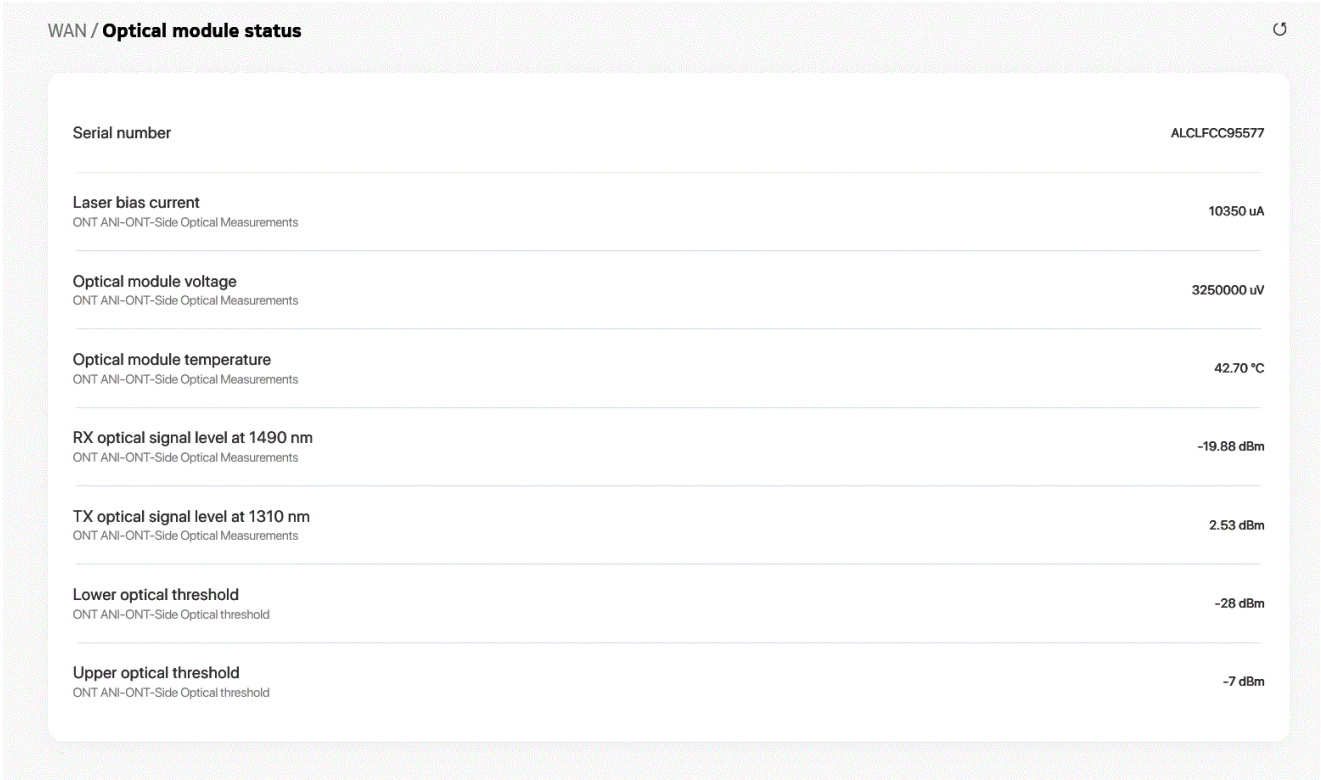


Table 7-9 Optical module status parameters

Field	Description
Serial Number	Indicates the serial number.
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.
Rx 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 Threshold)	Lower optical threshold, measured in dBm.
Upper (ONT ANI-ONT-Side Optical Threshold)	Upper optical threshold, measured in dBm.

END OF STEPS

7.16 Configuring QoS

1

Click **WAN→QoS config** in the left pane. The *QoS config* page displays.

Figure 7-18 QoS config page (L2 Criteria)

WAN / QoS config ↻ Add

Type L2 Criteria

Classification criteria

Source Mac Ex. AA:BB:CC:DD:EE:FF

Enable source MAC mask

Interface Select option

Classification row

DSCP remark Range 0-63

802.1p Remark Range 0-7

Forwarding policy Range 1-7

Review

114

© 2025 Nokia. Nokia Confidential Information
Use subject to agreed restrictions on disclosure and use.
3TN-01672-AAAA-TCZZA

August 2025
Issue 1

Figure 7-19 QoS config page (L3 Criteria)

WAN / QoS config

Type

L3 Criteria

Classification criteria

Protocol

None

Application

Customer Setting

Source IP

Source IP Mask

Dest IP

Dest IP mask

Source Port

Source Port Max

Destination Port

Dest Port Max

802.1p

Interface

Select option

Classification row

DSCP remark

Range 0-63

802.1p Remark

Range 0-7

Forwarding policy

Range 1-7

2

Configure the following parameters:

Table 7-10 QoS config parameters

Field	Description
Type	Select a QoS service layer type from the list: • L2 Criteria • L3 Criteria
Classification criteria (L2)	
Source MAC	Enter the source MAC address.
Enable source MAC mask	Select the toggle button to enable the source MAC mask. This button is disabled by default.
Source MAC mask	Enter the source MAC mask address. The syntax is for example: FF:FF:FF:00:00:00 which must be a continuous bit mask pattern on this device. This field is visible only if the Enable source MAC mask button is enabled.
Interface	Select an interface from the list.
Classification criteria (L3)	
Protocol	Select a protocol from the list.
Application	Select an application from the list or select Custom Settings and enter an application name.
Source IP	Enter the source IP address.
Source IP mask	Enter the source IP address netmask.
Destination IP	Enter the destination IP address.
Destination IP mask	Enter the destination IP address netmask.
Source port	Enter the source port number.
Source port max	Enter the values for the source port max (highest port number)
Destination port	Enter the destination port number.
Destination port max	Enter the values for the destination port max (highest port number)
802.1p	Indicates whether 802.1p is enabled.
Interface	Select an interface from the list.
Classification row	
DSCP remark	Enter the value for the DSCP remark (applicable only for L3 criteria). Allowed values: 0 to 63
802.1p Remark	Enter the value for the 802.1p remark. Allowed values: 0 to 7
Forwarding policy	Enter the number for the forwarding policy. Allowed values: 1 to 7

3

Click **Add** to add a QoS policy.

END OF STEPS

7.17 Configuring Upstream (US) Classifier

The US Classifier feature is used to create policies, classifiers, and classifier rules for upstream traffic handling. This feature is available to admin users (super users) only.

A policy defines an action to be performed on a set of LAN or WAN packets. A policy can be created at any time and then subsequently assigned to one or more classifiers.

A classifier is used to select key fields for which the classifier rules will be written. A classifier can be created at any time and then subsequently assigned to one or more classifier rules.

A classifier rule is used to assign actions to a group of packets based on a set of parameters. A classification rule must be created against a pre-defined classifier.

Up to 16 policies can be created, with up to 8 classifiers and 32 classifier rules.

1

Click **WAN→US Classifier** in the left pane and select the **Policy** tab.

All classifier policies are displayed in the policy table in the page.

Figure 7-20 US Classifier - Policy page

WAN / US classifier

Policy

Classifier

Classifier Rules

Tunnel Type

Select option

Tunnel Interface

Select option

VLAN id

0-4093

VLAN Tag

hex

VLAN Priority

0-7

IP TOS/DSCP

0-63

Drop

Save

Reset

Name	Tunnel Type	Tunnel Interface	VLAN id	VLAN Tag	VLAN Priority	IP TOS/DSCP	Drop	No. of Rules	Delete
1									Delete

2

Configure the following parameters:

Table 7-11 US Classifier - Policy parameters

Field	Description
Tunnel Type	The tunnel type is set to GRE and cannot be modified.
Tunnel Interface	Select a tunnel interface from the list: No Tunnel

Table 7-11 US Classifier - Policy parameters (continued)

Field	Description
VLAN ID	Enter a VLAN ID. Allowed values: 0 to 4093
VLAN Tag	This field is not configurable. The VLAN tag is set to 8100 (hexadecimal). Determines the VLAN tag used inside the GRE tunnel.
VLAN Priority	Enter a VLAN priority level. A lower number indicates a higher priority. Allowed values: 0 to 7
IP TOS/DSCP	This field is not configurable. All tunnel packets are generated with a default DSCP value (usually 0). Allowed values: 0 to 63
Drop	Select the toggle button to enable dropping of the packets.

3

Click **Save**. The policy is added to the policies table.

To delete a policy, click **Delete** next to the policy entry in the table. A policy can only be deleted if it is not associated with any classifier rules.

4

Select the **Classifier** tab.

All classifiers are displayed in the classifier table in the page.

Figure 7-21 US Classifier - Classifier page

WAN / US classifier

Policy

Classifier

Classifier Rules

Interface

Select option

Source MAC

Source IP

Source Port

Protocol

Destination MAC

Destination IP

Destination Port

Priority

Select option

Save

Reset

Name	Interface	Source MAC	Source IP	Source Port	Destination MAC	Destination IP	Destination Port	Protocol	Priority	No. of Rules	Delete
1											Delete

5

Configure the following parameters:

Table 7-12 US Classifier - Classifier parameters

Field	Description
Interface	Select an interface from the list; for example, None, LAN, 2.4G SSID, or 5G SSID. The option None indicates that all interfaces are selected.
Source MAC	Select the toggle button to enter a source MAC address.
Source IP	Select the toggle button to enter a source IP address.