

ONU-634HA Series

Optical Network Unit with Transceiver

User's Guide

Version 1.00

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Edition 1



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Introduction

The ONU-634HA is an optical network unit (ONU) that allows you to enjoy high-speed Internet access over optical networks. The ONU-634HA comes with one fiber and four 10/100Mbps Ethernet ports. No configuration is required. On the ONU-634HA, all device configuration is done remotely by the OLT (Optical Line Terminal). Once you have connected the hardware, you are ready to enjoy Internet access.

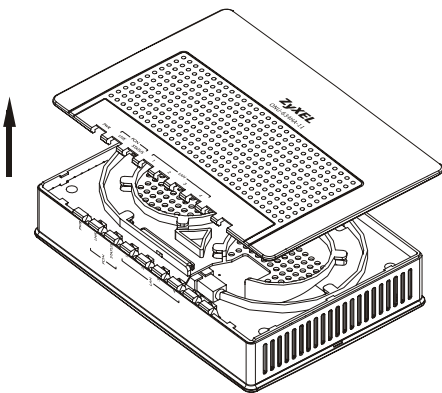
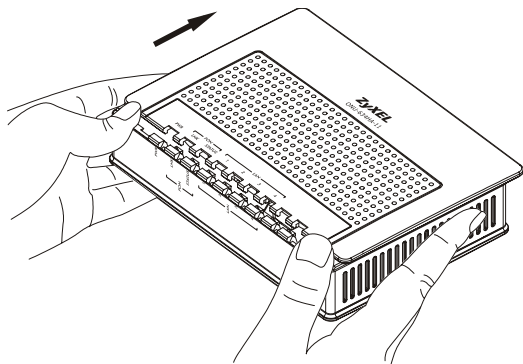
Two ONU-634HA models are discussed in this guide: ONU-634HA-11 (with a 10km transceiver) and ONU-634HA-12 (with a 20km transceiver).

1 Hardware Connections

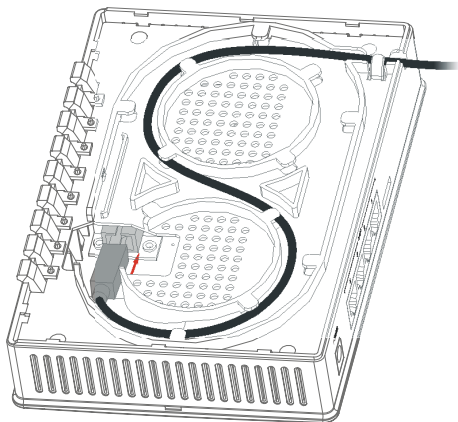
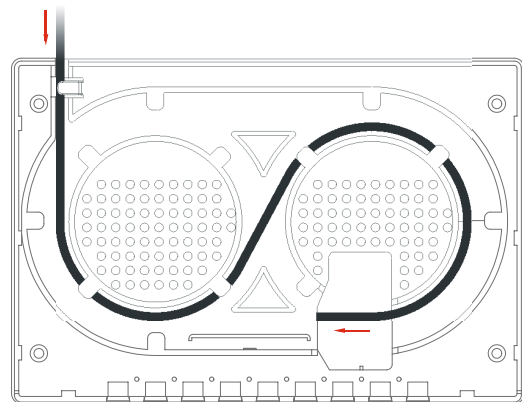
- 1 PON:** Follow the steps below to connect an SC-type, single-mode optical cable to the PON port for Internet access.



Only qualified technicians should perform these actions! Please skip this section if you are not a qualified technician.



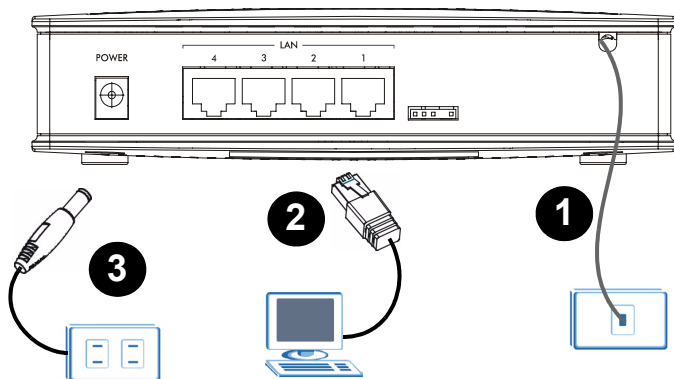
- a** Hold the ONU-634HA upright, push the top cover forward with the LEDs (lights) facing you, then lift up the top cover to remove it.



- b Wind the fiber-optic cable around the tray in the ONU-634HA.
 - c Connect the fiber-optic connector into the PON port.
 - d Put the top cover back.
-



To avoid possible eye injury, do NOT look into an operating fiber-optic module's connector.



- 2 LAN:** Use the included Ethernet cable to connect the **LAN** port to a computer.
- 3 POWER:** Use the included power adaptor to connect this power socket to an appropriate power source.

1.1 Check the LEDs (Lights)

- The **POWER** LED turns steady on when you connect the ONU-634HA to the power supply.
- The **PON** LED turns on when the fiber connection is available.
- Each **LAN** LED turns on when the corresponding **LAN** port is properly connected.

The following table describes the LEDs in detail.

Label	Color	Status	Description
POWER	Green	On	The ONU-634HA is receiving power and is ready.
		Off	The ONU-634HA is not receiving power.
PON LINK	Green	On	Connection to the optical network is up.
		Blinking	Connection to the optical network is down.
PON STATUS	Green	On	The ONU-634HA is receiving good optical signals from the OLT successfully.
	Red	Blinking	The ONU-634HA is receiving error signals or no optical signals from the OLT.

Label	Color	Status	Description
LAN 1 ~ 4	Yellow	On	The LAN port is connected to an Ethernet device at 100 Mbps.
		Blinking	The ONU-634HA is sending or receiving data at 100 Mbps.
	Green	On	The LAN port is connected to an Ethernet device at 10 Mbps.
		Blinking	The ONU-634HA is sending or receiving data at 10 Mbps.
		Off	No Ethernet device is connected to the LAN port.

2 Test Your Internet Connection

After you have connected the hardware and turned on the ONU-634HA, open a web browser on your computer and go to any web site (for example, www.zyxel.com) to test your Internet connection.

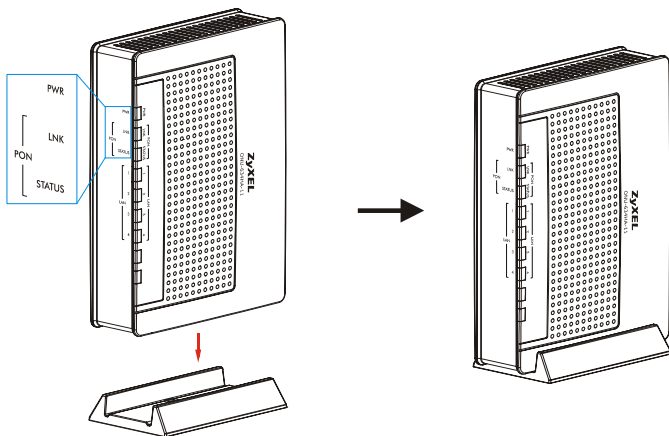
3 Hardware Installation

The ONU-634HA can be vertically placed on a desktop with the included stand or mounted on a wall.

3.1 Standing Instructions

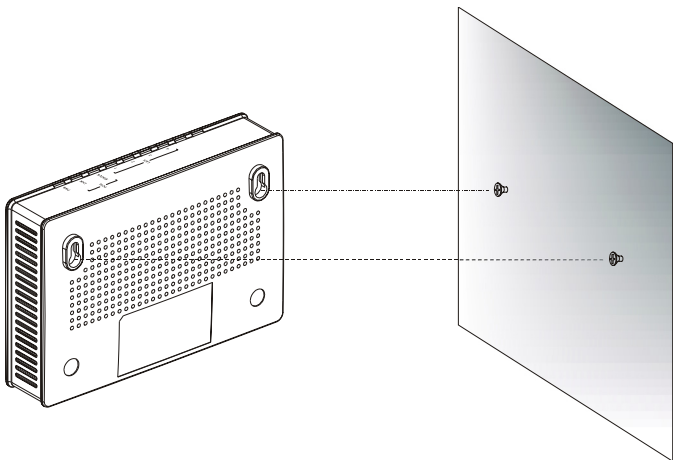
Place the right panel of the ONU-634HA (when facing the LEDs) onto the included stand until the ONU-634HA fits in the stand completely. Make sure the label names of the LEDs are displayed correctly and not upside-down. Place the ONU-

634HA and the stand on a flat, level surface that is strong enough to support the weight of the ONU-634HA with connection cables.



3.2 Wall-mounting Instructions

Complete the following steps to hang your ONU-634HA on a wall.



- 1 Select a position free of obstructions on a sturdy wall.
- 2 Drill two holes large enough for the M4 tap screws. Make sure the distance between the centers of the holes is 140mm.

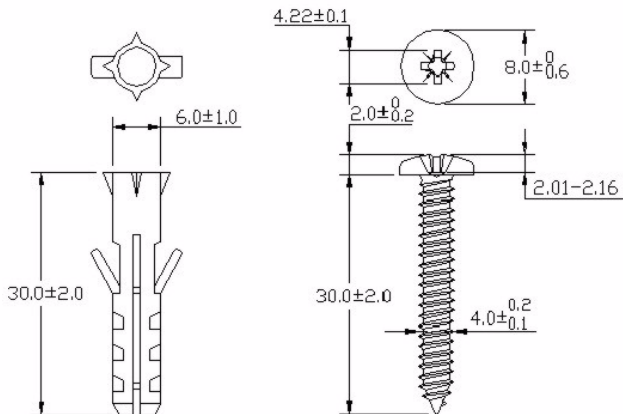


Be careful to avoid damaging pipes or cables located inside the wall when drilling holes for the screws.

- 3 Do not insert the screws all the way into the wall. Leave a small gap of about 0.5 cm between the heads of the screws and the wall.

- 4 Make sure the screws are snugly fastened to the wall.
They need to hold the weight of the ONU-634HA with the connection cables.
- 5 Align the holes on the back of the ONU-634HA with the screws on the wall. Hang the ONU-634HA on the screws.

The following are dimensions of an M4 tap screw and masonry plug used for wall mounting. All measurements are in millimeters (mm).



Troubleshooting

- 1 The **POWER** light is not on when I connect power to the ONU-634HA.
 - Check that the power source is turned on.

- You might be using the wrong power adaptor. Use the included power adaptor only.
- If you are using the correct power adaptor, disconnect and re-connect the power adaptor to turn on the ONU-634HA again.
- If the **POWER** light is still not on, use a different power outlet.
- If the problem continues, contact your local vendor.

2 The **PON** light is off.

- Check the connector on the optical cable and the **PON** port. Make sure they are clean and dust-free. Use an air duster to clean the connectors. Do NOT use a wet cloth to clean the connectors.
- Check the optical cable. Make sure it is not broken. If the cable is broken, contact your service provider to have the cable/connector replaced. Do NOT attempt to replace the optical cable/connector yourself.

3 I cannot connect to the Internet.

- Check the port connections and the lights.
- There might be problems with the optical network setting. Contact your service provider.

Power Adaptor Specifications

NORTH AMERICAN PLUG STANDARDS	
AC POWER ADAPTOR MODEL	MU18-2120150-A1
INPUT POWER	100-240VAC, 50/60HZ, 0.6A
OUTPUT POWER	O/P: 12V AC, 1A
POWER CONSUMPTION	18 W MAX.
SAFETY STANDARDS	UL, CUL (UL 60950-1 FIRST EDITIONCSA C22.2 NO. 60950-1-03 1ST.)

EUROPEAN PLUG STANDARDS	
AC POWER ADAPTOR MODEL	MU18-2120150-C5
INPUT POWER	100-240VAC, 50/60HZ, 0.6A
OUTPUT POWER	O/P: 12V AC, 1A
POWER CONSUMPTION	18 W MAX.
SAFETY STANDARDS	ITS-GS, CE (EN 60950-1)

UNITED KINGDOM PLUG STANDARDS	
AC POWER ADAPTOR MODEL	MU18-2120150-B2
INPUT POWER	100-240VAC, 50/60HZ, 0.6A
OUTPUT POWER	O/P: 12V AC, 1A
POWER CONSUMPTION	18 W MAX.
SAFETY STANDARDS	ITS-GS (BS EN 60950-1)

AUSTRALIA AND NEW ZEALAND PLUG STANDARDS

AC POWER ADAPTOR MODEL	MU18-2120150-A3
INPUT POWER	100-240VAC, 50/60HZ, 0.6A
OUTPUT POWER	O/P: 12V AC, 1A
POWER CONSUMPTION	18 W MAX.
SAFETY STANDARDS	EN 60950:2000

JAPAN PLUG STANDARDS

AC POWER ADAPTOR MODEL	PSA18R-120P (ZA)-R
INPUT POWER	100-240VAC, 50/60HZ, 0.5A
OUTPUT POWER	O/P: 12V AC, 1A
POWER CONSUMPTION	18 W MAX.
SAFETY STANDARDS	JET

Safety Warnings



For your safety, be sure to read and follow all warning notices and instructions.

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- Do NOT use this product near water, for example, in a wet basement or near a swimming pool.
- Do NOT expose your device to dampness, dust or corrosive liquids.
- Do NOT store things on the device.
- Do NOT install, use, or service this device during a thunderstorm. There is a remote risk of electric shock from lightning.
- Connect ONLY suitable accessories to the device.
- Do NOT open the device or unit. Opening or removing covers can expose you to dangerous high voltage points or other risks. ONLY qualified service personnel should service or disassemble this device. Please contact your vendor for further information.
- Make sure to connect the cables to the correct ports.
- Place connecting cables carefully so that no one will step on them or stumble over them.
- Always disconnect all cables from this device before servicing or disassembling.
- Use ONLY an appropriate power adaptor or cord for your device.
- Connect the power adaptor or cord to the right supply voltage (for example, 110V AC in North America or 230V AC in Europe).
- Do NOT allow anything to rest on the power adaptor or cord and do NOT place the product where anyone can walk on the power adaptor or cord.
- Do NOT use the device if the power adaptor or cord is damaged as it might cause electrocution.
- If the power adaptor or cord is damaged, remove it from the power outlet.
- Do NOT attempt to repair the power adaptor or cord. Contact your local vendor to order a new one.
- Do NOT remove the plug and plug into a wall outlet by itself; always attach the plug to the power supply first before you insert it into the wall.
- Do not use the device outside, and make sure all the connections are indoors. There is a remote risk of electric shock from lightning.
- Do NOT obstruct the device ventilation slots, as insufficient airflow may harm your device.

This product is recyclable. Dispose of it properly.



Legal Information

Certifications

Federal Communications Commission (FCC) Interference Statement

This device complies with Part 15 of FCC rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference.
- This device must accept any interference received, including interference that may cause undesired operations.

FCC Warning

This device has been tested and found to comply with the limits for a Class A digital switch, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a commercial environment. This device generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this device in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

CE Mark Warning:

This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

Taiwanese BSMI (Bureau of Standards, Metrology and Inspection)

A Warning:

警告使用者

這是甲類的資訊產品，在居住的環境使用時，

可能造成射頻干擾，在這種情況下，

使用者會被要求採取某些適當的對策。

Notices

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

This Class A digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.

CLASS 1 LASER PRODUCT

APPAREIL A LASER DE CLASS 1

PRODUCT COMPLIES WITH 21 CFR 1040.10 AND 1040.11.

PRODUIT CONFORME SELON 21 CFR 1040.10 ET 1040.11.

Viewing Certifications

- 1 Go to <http://www.zyxel.com>.
- 2 Select your product on the ZyXEL home page to go to that product's page.
- 3 Select the certification you wish to view from this page.

ZyXEL Limited Warranty

ZyXEL warrants to the original end user (purchaser) that this product is free from any defects in materials or workmanship for a period of up to two years from the date of purchase. During the warranty period, and upon proof of purchase, should the product have indications of failure due to faulty workmanship and/or materials, ZyXEL will, at its discretion, repair or replace the defective products or components without charge for either parts or labor, and to whatever extent it shall deem necessary to restore the product or components to proper operating condition. Any replacement will consist of a new or re-manufactured functionally equivalent product of equal or higher value, and will be solely at the discretion of ZyXEL. This warranty shall not apply if the product has been modified, misused, tampered with, damaged by an act of God, or subjected to abnormal working conditions.

Note

Repair or replacement, as provided under this warranty, is the exclusive remedy of the purchaser. This warranty is in lieu of all other warranties, express or implied, including any implied warranty of merchantability or fitness for a particular use or purpose. ZyXEL shall in no event be held liable for indirect or consequential damages of any kind to the purchaser.

To obtain the services of this warranty, contact ZyXEL's Service Center for your Return Material Authorization number (RMA). Products must be returned Postage Prepaid. It is recommended that the unit be insured when shipped. Any returned products without proof of purchase or those with an out-dated warranty will be repaired or replaced (at the discretion of ZyXEL) and the customer will be billed for parts and labor. All repaired or replaced products will be shipped by ZyXEL to the corresponding return address, Postage Paid. This warranty gives you specific legal rights, and you may also have other rights that vary from country to country.

Related Documentation

Please go to <http://www.zyxel.com> for product news, firmware, documentation, and other support materials.

Registration

Register your product online to receive e-mail notices of firmware upgrades and information at www.zyxel.com for global products, or at www.us.zyxel.com for North American products.

User Guide Feedback

Help us help you. E-mail all User Guide-related comments, questions or suggestions for improvement to techwriters@zyxel.com.tw or send regular mail to The Technical Writing Team, ZyXEL Communications Corp., 6 Innovation Road II, Science-Based Industrial Park, Hsinchu, 300, Taiwan. Thank you.

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Customer Support

Please have the following information ready when you contact customer support.

- Product model and serial number.
- Warranty Information.
- Date that you received your device.
- Brief description of the problem and the steps you took to solve it.

Corporate Headquarters (Worldwide)

- Support E-mail: support@zyxel.com.tw
- Sales E-mail: sales@zyxel.com.tw
- Telephone: +886-3-578-3942
- Fax: +886-3-578-2439
- Web: www.zyxel.com, www.europe.zyxel.com
- FTP: ftp.zyxel.com, ftp.europe.zyxel.com
- Regular Mail: ZyXEL Communications Corp., 6 Innovation Road II, Science Park, Hsinchu 300, Taiwan

Costa Rica

- Support E-mail: soporte@zyxel.co.cr
- Sales E-mail: sales@zyxel.co.cr
- Telephone: +506-2017878
- Fax: +506-2015098
- Web: www.zyxel.co.cr
- FTP: ftp.zyxel.co.cr
- Regular Mail: ZyXEL Costa Rica, Plaza Roble Escazú, Etapa El Patio, Tercer Piso, San José, Costa Rica

Czech Republic

- E-mail: info@cz.zyxel.com
- Telephone: +420-241-091-350
- Fax: +420-241-091-359
- Web: www.zyxel.cz
- Regular Mail: ZyXEL Communications, Czech s.r.o., Modranská 621, 143 01 Praha 4 - Modrany, Česká Republika

Denmark

- Support E-mail: support@zyxel.dk
- Sales E-mail: sales@zyxel.dk
- Telephone: +45-39-55-07-00
- Fax: +45-39-55-07-07
- Web: www.zyxel.dk
- Regular Mail: ZyXEL Communications A/S, Columbusvej, 2860 Soeborg, Denmark

Finland

- Support E-mail: support@zyxel.fi
- Sales E-mail: sales@zyxel.fi
- Telephone: +358-9-4780-8411
- Fax: +358-9-4780-8448
- Web: www.zyxel.fi
- Regular Mail: ZyXEL Communications Oy, Malminkaari 10, 00700 Helsinki, Finland

France

- E-mail: info@zyxel.fr
- Telephone: +33-4-72-52-97-97
- Fax: +33-4-72-52-19-20
- Web: www.zyxel.fr
- Regular Mail: ZyXEL France, 1 rue des Vergers, Bat. 1 / C, 69760 Limonest, France

Germany

- Support E-mail: support@zyxel.de
- Sales E-mail: sales@zyxel.de
- Telephone: +49-2405-6909-69
- Fax: +49-2405-6909-99
- Web: www.zyxel.de
- Regular Mail: ZyXEL Deutschland GmbH., Adenauerstr. 20/A2 D-52146, Wuersele, Germany

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- Regular Mail: ZyXEL Hungary, 48, Zoldomb Str., H-1025, Budapest, Hungary

India

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- Fax: +91-11-30888149, +91-11-26810715
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- Regular Mail: India - ZyXEL Technology India Pvt Ltd., II-Floor, F2/9 Okhla Phase -1, New Delhi 110020, India

Japan

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- Sales E-mail: zyp@zyxel.co.jp

- Telephone: +81-3-6847-3700
- Fax: +81-3-6847-3705
- Web: www.zyxel.co.jp
- Regular Mail: ZyXEL Japan, 3F, Office T&U, 1-10-10 Higashi-Gotanda, Shinagawa-ku, Tokyo 141-0022, Japan

Kazakhstan

- Support: <http://zyxel.kz/support>
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- Telephone: +7-3272-590-698
- Fax: +7-3272-590-689
- Web: www.zyxel.kz
- Regular Mail: ZyXEL Kazakhstan, 43 Dostyk Ave., Office 414, Dostyk Business Centre, 050010 Almaty, Republic of Kazakhstan

Malaysia

- Support E-mail: support@zyxel.com.my
- Sales E-mail: sales@zyxel.com.my
- Telephone: +603-8076-9933
- Fax: +603-8076-9833
- Web: <http://www.zyxel.com.my>
- Regular Mail: ZyXEL Malaysia Sdn Bhd., 1-02 & 1-03, Jalan Kenari 17F, Bandar Puchong Jaya, 47100 Puchong, Selangor Darul Ehsan, Malaysia

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- Web: www.us.zyxel.com
- FTP: <ftp.us.zyxel.com>
- Regular Mail: ZyXEL Communications Inc., 1130 N. Miller St., Anaheim, CA 92806-2001, U.S.A.

Norway

- Support E-mail: support@zyxel.no
- Sales E-mail: sales@zyxel.no
- Telephone: +47-22-80-61-80
- Fax: +47-22-80-61-81
- Web: www.zyxel.no
- Regular Mail: ZyXEL Communications A/S, Nils Hansens vei 13, 0667 Oslo, Norway

Poland

- E-mail: info@pl.zyxel.com
- Telephone: +48-22-333 8250

- Fax: +48-22-333 8251
- Web: www.pl.zyxel.com
- Regular Mail: ZyXEL Communications, ul. Okrzei 1A, 03-715 Warszawa, Poland

Russia

- Support: <http://zyxel.ru/support>
- Sales E-mail: sales@zyxel.ru
- Telephone: +7-095-542-89-29
- Fax: +7-095-542-89-25
- Web: www.zyxel.ru
- Regular Mail: ZyXEL Russia, Ostrovityanova 37a Str., Moscow 117279, Russia

Singapore

- Support E-mail: support@zyxel.com.sg
- Sales E-mail: sales@zyxel.com.sg
- Telephone: +65-6899-6678
- Fax: +65-6899-8887
- Web: <http://www.zyxel.com.sg>
- Regular Mail: ZyXEL Singapore Pte Ltd., No. 2 International Business Park, The Strategy #03-28, Singapore 609930

Spain

- Support E-mail: support@zyxel.es
- Sales E-mail: sales@zyxel.es
- Telephone: +34-902-195-420
- Fax: +34-913-005-345
- Web: www.zyxel.es
- Regular Mail: ZyXEL Communications, Arte, 21 5ª planta, 28033 Madrid, Spain

Sweden

- Support E-mail: support@zyxel.se
- Sales E-mail: sales@zyxel.se
- Telephone: +46-31-744-7700
- Fax: +46-31-744-7701
- Web: www.zyxel.se
- Regular Mail: ZyXEL Communications A/S, Sjöporten 4, 41764 Göteborg, Sweden

Thailand

- Support E-mail: support@zyxel.co.th
- Sales E-mail: sales@zyxel.co.th
- Telephone: +662-831-5315
- Fax: +662-831-5395

- Web: <http://www.zyxel.co.th>
- Regular Mail: ZyXEL Thailand Co., Ltd., 1/1 Moo 2, Ratchaphruk Road, Bangrak-Noi, Muang, Nonthaburi 11000, Thailand.

Ukraine

- Support E-mail: support@ua.zyxel.com
- Sales E-mail: sales@ua.zyxel.com
- Telephone: +380-44-247-69-78
- Fax: +380-44-494-49-32
- Web: www.ua.zyxel.com
- Regular Mail: ZyXEL Ukraine, 13, Pimonenko Str., Kiev 04050, Ukraine

United Kingdom

- Support E-mail: support@zyxel.co.uk
- Sales E-mail: sales@zyxel.co.uk
- Telephone: +44-1344-303044, 08707-555779 (UK only)
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- Web: www.zyxel.co.uk
- FTP: [ftp.zyxel.co.uk](ftp://ftp.zyxel.co.uk)
- Regular Mail: ZyXEL Communications UK Ltd., 11 The Courtyard, Eastern Road, Bracknell, Berkshire RG12 2XB, United Kingdom (UK)

+” is the (prefix) number you dial to make an international telephone call.

Procedure to View a Product's Certification(s)

- 1** Go to www.zyxel.com.
- 2** Select your product from the drop-down list box on the ZyXEL home page to go to that product's page.
- 3** Select the certification you wish to view from this page.

