

1. Product Overview

The Nokia Optical Network Terminal (ONT) U-490XP-P is designed to deliver gigabit speed via GPON (Gigabit Passive Optical Network) and XGS-PON (10 Gb/s symmetrical PON) Ethernet interface in an Optical LAN environment. The device provides four POTS ports (on specific variants), one 10G Ethernet and eight Gigabit Ethernet (GigE) user interfaces, and delivers a premium service experience for all services, including voice, data and video. U-490XP-P ONTs provide Power over Ethernet (PoE) which enables them to provide power to a remote device such as an IP camera or IP phone. The maximum PoE output is 120 W total.

The ONT is compliant with ITU-T G.9807.1 supporting 10 Gb/s downstream and upstream physical layer rate and 2.5 Gb/s downstream/1.25 Gb/s upstream. Compliant with standard OMCI definition, the Nokia ONT U-490XP-P can be managed from a remote site.



Figure 1 Nokia ONT U-490XP-P

A. Technical Specifications

Width: 235 mm (9.3 in)

Height: 40 mm (1.6 in)

Depth: 160 mm (6.3 in)

Weight: 2.15kg (4.7 lb) (including PSU)

Desk or wall mount

Power consumption:

- Standby mode: 4.6 W
- Typical mode: 8 W

B. Manufacturer Information

For Products Purchased in EU/EAA Countries

The products are manufactured and imported by Nokia Solutions and Networks Oy, Karakaari 7, 02160 Espoo, Finland.

Nokia is a registered trademark of Nokia Corporation.

For Products Purchased in the United States

The products are imported by Nokia of America Corporation.

- Offices: <https://www.nokia.com/contact-us/worldwide-offices/north-america>
- Support: <https://www.nokia.com/support/>
- Other contacts: <https://www.nokia.com/contact-us/>

Please contact your Internet Services Provider in case of questions on the product.

2. Safety Guidelines

ALWAYS READ THE PRODUCT GUIDE BEFORE SET UP OR USE OF THE PRODUCT. IT IS YOUR RESPONSIBILITY TO FAMILIARIZE YOURSELF WITH THE PRODUCT GUIDE AND WARNINGS, AND TO USE A PRODUCT PROPERLY. CONTACT YOUR INTERNET SERVICES PROVIDER FOR FURTHER QUESTIONS.

Warning - Risk of electric shock or fire

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Nokia ONT U-490XP-P Quick Reference Guide

Connect the Product power adaptor or cord to the right supply voltage (for example, 230V in Europe, Australia, South Africa and 120V in US).

The socket-outlet shall be easily accessible.

Pay attention to the power load of the electrical outlet and possible extension cord. An overburdened power outlet or damaged cords and plugs may cause electric shock or fire. Check the power cords regularly. If you find any damage, replace the cord immediately.

Do not connect the plug into an extension cord, receptacle, or other outlet unless the plug can be fully inserted with no part of the blades exposed.

Leave adequate space for heat dissipation to avoid any damage caused by overheating the Product. Do not cover the Product or its ventilation holes. Blocking the ventilation holes may cause fire.

Use the power adapter provided with your Product and do not fasten the power cable to building surfaces. Ensure the cable can move freely. Do not place heavy objects on the cable.

Do not use the Product outside, and make sure all the connections are indoors.

Do not install, use, or service this Product during a thunderstorm. There is a remote risk of electric shock from lightning.

Caution - Potential equipment damage

Follow these recommendations to protect yourself and the Product from harm:

- Do not look directly at the optical port without protection.
- Do not insert any sharp object into the openings of a Product.
- Do not put the Product near a heat source. Avoid placing the Product in direct sunlight.
- Do not put the Product in damp or wet locations; for example, near a bathtub, washbowl, kitchen sink or laundry tub, in a wet basement, or near a swimming pool. Do not spill any liquid on the Product.
- Do not touch the Product or its power adapter or cord with wet hands.
- Do not place the Product on an unstable surface or support.
- Do not place heavy objects on top of the Products.
- Do not use liquid or aerosol cleaners; unplug the Product and use a soft, dry cloth for cleaning.
- When connecting a PC or other electronic device to a Product, make sure you use the right cables and connect the device to the right port of the Product. Incorrect connections may damage the device and/or the Product.
- Do not open or try to open the Product. Opening or removing covers can expose you to dangerous high voltage points or other risks.

It is recommended that users and other individuals maintain a distance of at least 10 cm between themselves and the Product to avoid exposure. The Product contains components that emit an electromagnetic field and could interfere with pacemakers or other electronic medical devices. If you have a pacemaker or other implantable or personal medical device, please consult your physician or medical device manufacturer about the required minimum safe distance between the Product and your medical device.

Keep your product and accessories out of reach of pets. They could damage it and cause injury or electrocution.

If the Product malfunctions or fails to perform as expected, stop using it immediately.

The product is expected to operate at a temperature of -5 to 60 degrees Celsius for a relative humidity between 5% and 95%.

3. Install the ONT

The ONT is normally installed by a professional installer.

1. Plug the power cable to the ONT into power input jack.
2. Plug the power socket to the wall socket.
3. Remove the protective cap on the optical port of the ONT.
4. Remove the protective cap from the optical fiber.
5. Plug the optical fiber to the optical port of the ONT.
6. Connect the ONT to the home router via an Ethernet cable into the Ethernet port
7. Push the power button to be "ON". ("ON" = recessed state, "OFF" = non-recessed state)

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4. LED description

The following table describes the LEDs of the device:

LED indicator	LED color and behavior	LED behavior description
Power	Green solid	Power on.
Power	Off	Power off.
SYS	Red Solid	The LED becomes red if one of these conditions are met: <ul style="list-style-type: none"> • POST fails on startup (example, flash is corrupt). • The LED is red by default until the software is running which can then turn it green. • The ONT does self-test on powerup. If self-test fails, the LED remains red.
PON	Green solid	Full communication, ranging established between OLT and ONT
PON	Off	GPON is down or no link connected
GE1-8	Yellow solid	10M/100M Link
GE1-8	Green solid	1G Link
GE1-8	Yellow blinking	10M/100M Activity
GE1-8	Green blinking	1G Activity
10GE	Green solid	100M/1G/2.5G/5G/10G Link
10GE	Yellow blinking	TX/RX activity
TEL1 – 4	Green solid	Phone is off hook
TEL1 – 4	Flashing Green	Phone is in 'call in' or 'talking' condition
TEL1 – 4	Off	All phones are on hook
POE1-9	Green solid	Detection PD, and PSE can supply power for PD
POE1-9	Off	Without PD or PSE cannot provide power for PD

5. EU Declaration of Conformity

Hereby, Nokia Solutions and Networks Oy declares that the Product is in compliance with Low Voltage Directive 2014/35/EU; EMC Directive 2014/30/EU, Directive RoHS 2011/65/EU and 2015/863/EU, Directive Eco-design 2009/125/EC and European Accessibility Act Directive 2019/882/EU. The full text of the EU declaration of conformity, as well as additional compliance information, is available at www.nokia.com/notices/declaration-of-conformity/.

Products are for indoor use only.

Specific precautions for EMC Warning

The Products are compliant with Class B of EN 55032. In a residential environment, this equipment may cause radio interference. The Products are tested to the requirements of EN 55032 (Emissions) and EN 55024 (immunity). There are no specific precautions which must be taken in order to comply with the requirements of Directive 2014/30/EU Essential Requirements in Section 1 of Annex I. In addition, the Products are further tested to ensure spurious emissions are within the specified limits, as well as meeting the requirements for adaptivity, which mitigates against

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problems caused by co-location with other wireless products. The Products are not subject to the requirements in Section 2 of Annex I of Directive 2014/30/EU for fixed installations.

End of Life Collection and Treatment



In the European Union and European Economic Area, this label indicates that this product should not be disposed of with household waste. It should be deposited in an appropriate facility to enable recovery and recycling.



The Product is marked with this symbol, which is known as the WEEE mark. WEEE stands for Waste Electronics and Electrical Equipment. Electronic products bearing or referencing the WEEE mark shown above, when put on the market within the European Union (EU) and European Economic Area (EEA), 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.

At the end of their life, the Products are subject to the applicable local legislations that implement the European Directive 2012/19EU on 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 Products bearing the logo above at the end of their useful life, or Products displaced by Nokia equipment offers. The equipment can be disposed at electronic waste collection points or to stores that sell electronics.



For information regarding take-back of equipment by Nokia, or for more information regarding the requirements for recycling/disposal of the Product, contact your service provider. Regulatory compliance information, including EU Declaration of Conformity, can be found at www.nokia.com/notices/declaration-of-conformity/.

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