High-Performance GPON CPE
Model: UF-Nano

Nano™ G
High-Performance GPON CPE
Model: UF-Nano
Introduction

Thank you for purchasing the Ubiquiti Networks® Nano™G High-Performance GPON CPE. This Quick Start Guide is designed to guide you through the installation and also includes the warranty terms.

Package Contents

TERMS OF USE: All Ethernet cabling runs must use CAT5 (or above). It is the professional installer’s responsibility to follow local country regulations, including operation within legal frequency channels, output power, and indoor cabling requirements.
System Requirements

• Linux, Mac OS X, or Microsoft Windows 7/8/10
• Web Browser: Google Chrome (Other browsers may have limited functionality)

Hardware Overview

Ports

<table>
<thead>
<tr>
<th>Port</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PON</td>
<td>SC/APC GPON port supports WAN connections of 2.488 Gbps downstream and 1.244 Gbps upstream.</td>
</tr>
<tr>
<td>RJ45</td>
<td>RJ45 Ethernet port supports 10/100/1000 Mbps connections and passive PoE to power the device.</td>
</tr>
<tr>
<td>Reset</td>
<td>Press and release the Reset button to restore the device to factory default settings.</td>
</tr>
</tbody>
</table>
### LED Display

<table>
<thead>
<tr>
<th>LED</th>
<th>State</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>✨</td>
<td>Green</td>
<td>GPON connected and device is integrated into a network and working properly</td>
</tr>
<tr>
<td>🚫</td>
<td>Red</td>
<td>No GPON connection. Error code is shown on the <em>Digital Display.</em></td>
</tr>
<tr>
<td>🔋</td>
<td>Flashing Red</td>
<td>Device is discovered by OLT and waiting to be integrated</td>
</tr>
<tr>
<td>💡</td>
<td>Off</td>
<td>No power, device is off</td>
</tr>
<tr>
<td>🔥</td>
<td>Off</td>
<td>No Ethernet connection</td>
</tr>
<tr>
<td>🔄</td>
<td>Green</td>
<td>Ethernet is connected</td>
</tr>
<tr>
<td>🔄</td>
<td>Flashing</td>
<td>Ethernet activity</td>
</tr>
</tbody>
</table>
Digital Display

The *Digital Display* shows device status and RX/TX details of the PON connection. The *Digital Display* is also a physical button. Press the display to cycle through the information.

- **Mbps** Displays the active download (RX) and upload (TX) speeds of the PON connection.

![Digital Display](image)

- **dBm** Displays the RX and TX power of the PON connection.

![Digital Display](image)

**Note:** If the GPON LED lights red, a malfunction or error with the PON connection exists. Check and test the fiber optic cable to ensure proper operation.
• **GB** Displays the total aggregate data sent downstream and upstream through the PON connection. The counter can be reset using the U Fiber Configuration Interface.

![GB Display](image)

• **IP** Displays the PON (LAN) IP address.

![IP Display](image)

• **Time** Only shown when the time is synced correctly from the servers. Enable or disable the time display using the U Fiber Configuration Interface.

![Time Display](image)
Hardware Installation

The Nano G can be mounted on a wall or placed on a desktop.

⚠️ WARNING: To reduce the risk of fire or electric shock, do not expose the Nano G to rain or moisture.

Wall Mounting

1. Use the *Wall Mount Bracket* as a template and drill four 6 mm holes as shown below.

2. Insert a *Screw Anchor* into each hole, and then fasten the *Wall Mount Bracket* using four *Screws*.
3. Insert the top of the Nano G into the *Mount Bracket* and then pivot the bottom into the bracket until it locks into place.
Connecting Fiber

Connect the fiber optic cable from the Passive Optical Network to the **PON** port.
Connecting Power

1. Connect an Ethernet cable to the **LAN** port.

2. Connect the power using one of the following options:
   - Using the included *Gigabit PoE Adapter*: Go to *Connecting to the PoE Adapter*.
   - Using a separate PoE switch: Connect the Ethernet cable from the Nano G to a PoE-enabled Ethernet port on the switch.

   **WARNING:** The PoE switch must comply with the power specifications listed in the *Specifications* section of this Quick Start Guide.
Connecting to the PoE Adapter

1. Connect the Ethernet cable from the Nano G to the PoE port on the Gigabit PoE adapter.
2. Connect an Ethernet cable from your LAN to the LAN port on the Gigabit PoE adapter.
3. Connect the Power Cord to the Gigabit PoE adapter. Connect the other end of the Power Cord to a power outlet.

Mounting the Gigabit PoE Adapter (Optional)

1. Remove the PoE Mounting Bracket from the adapter, place the bracket at the desired location, and mark the two holes.
2. Pre-drill the holes if necessary, and secure the bracket using two fasteners (not included).
3. Align the slots on the back of the adapter with the tabs of the PoE Mounting Bracket, and then slide the adapter down.
Accessing the Configuration Interface

1. Ensure that your computer (or other host system) is connected to the Nano G.

2. Configure the Ethernet adapter on your host system with a static IP address on the 192.168.1.x subnet.

3. Launch your web browser. Type **http://192.168.1.1** in the address field. Press **enter** (PC) or **return** (Mac).

4. The login screen will appear. Enter **ubnt** in the **Username** and **Password** fields. Click **Login**.

The UFiber Configuration Interface will appear. Customize settings as needed. For more information, refer to the UFiber resources, which are available at: **http://ubnt.link/UFiber-Support**
OLT Compatibility Profiles

The Nano G is compatible with most major brands of OLT (Optical Line Terminals) and compatibility may be selected by using one of three compatibility profiles. By default, the Nano G is set to **Profile 1** - Ubiquiti Networks UFiber OLT. For other brands, manually select **Profile 2** or **3**.

**Note:** For more information, visit: [https://ubnt.link/Supported-3rd-Party-OLTs](https://ubnt.link/Supported-3rd-Party-OLTs)

1. Disconnect the power to the Nano G.

2. Press and hold the *Digital Display* button and reconnect the power.

3. Continue holding the button for about 35 seconds. Release the button once dashes are displayed.

4. Press the button to select the compatibility mode:
   - **Pr 1** - Profile 1 (Ubiquiti Networks UFiber OLT)
   - **Pr 2** - Profile 2
   - **Pr 3** - Profile 3

5. Double-click the *Digital Display* button to select the profile. Dashes will reappear to confirm your selection.

6. The Nano G will automatically restart with the new profile.
## Specifications

<table>
<thead>
<tr>
<th>UF-Nano</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dimensions</strong></td>
<td>77 x 77 x 28 mm (3.03 x 3.03 x 1.1&quot;)</td>
</tr>
<tr>
<td><strong>Weight</strong></td>
<td>110 g (3.88 oz)</td>
</tr>
<tr>
<td><strong>Networking Interfaces</strong></td>
<td>(1) SC/APC, GPON WAN (1) RJ45, Ethernet LAN</td>
</tr>
<tr>
<td><strong>Networking Interface Speeds</strong></td>
<td>(1) GPON WAN, ITU G.984, 2.488 Gbps Downstream, 1.244 Gbps Upstream (1) GbE LAN, 10/100/1000 Mbps</td>
</tr>
<tr>
<td><strong>Management Interface</strong></td>
<td>In-Band Ethernet/PON</td>
</tr>
<tr>
<td><strong>Normal Optical Power Range</strong></td>
<td>TX (Class B+): 1.5 to 5 dBm RX: -8 to -28 dBm</td>
</tr>
<tr>
<td><strong>Power Method</strong></td>
<td>24V Passive PoE (Pins +4, 5; -7, 8) Dying Gasp Support</td>
</tr>
<tr>
<td><strong>Power Supply</strong></td>
<td>PoE Adapter: 24V, 0.3A</td>
</tr>
<tr>
<td><strong>Max. Power Consumption</strong></td>
<td>7W</td>
</tr>
<tr>
<td><strong>Supported Voltage Range</strong></td>
<td>20 to 28V</td>
</tr>
<tr>
<td><strong>Processor Specs</strong></td>
<td>MIPS-32, 240 MHz</td>
</tr>
<tr>
<td><strong>Memory Information</strong></td>
<td>128 MB DDR3</td>
</tr>
<tr>
<td><strong>Buttons</strong></td>
<td>(1) Display Information (1) Reset</td>
</tr>
<tr>
<td><strong>Operating Temperature</strong></td>
<td>-10 to 45° C (14 to 113° F)</td>
</tr>
<tr>
<td><strong>Operating Humidity</strong></td>
<td>5 to 95% Noncondensing</td>
</tr>
<tr>
<td><strong>Certifications</strong></td>
<td>CE, FCC, IC</td>
</tr>
</tbody>
</table>
Safety Notices

1. Read, follow, and keep these instructions.
2. Heed all warnings.
3. Only use attachments/accessories specified by the manufacturer.

⚠️ **WARNING:** Do not use this product in location that can be submerged by water.

⚠️ **WARNING:** Avoid using this product during an electrical storm. There may be a remote risk of electric shock from lightning.

⚠️ **WARNING:** CLASS 1 LASER PRODUCT - Do not look into the ends of the fiber optic cable or SFP modules while converters are powered.

Electrical Safety Information

1. Compliance is required with respect to voltage, frequency, and current requirements indicated on the manufacturer’s label. Connection to a different power source than those specified may result in improper operation, damage to the equipment or pose a fire hazard if the limitations are not followed.

2. There are no operator serviceable parts inside this equipment. Service should be provided only by a qualified service technician.

3. This equipment is provided with a detachable power cord which has an integral safety ground wire intended for connection to a grounded safety outlet.
   a. Do not substitute the power cord with one that is not the provided approved type. Never use an adapter plug to connect to a 2-wire outlet as this will defeat the continuity of the grounding wire.
   b. The equipment requires the use of the ground wire as a part of the safety certification, modification or misuse can provide a shock hazard that can result in serious injury or death.
   c. Contact a qualified electrician or the manufacturer if there are questions about the installation prior to connecting the equipment.
   d. Protective earthing is provided by Listed AC adapter. Building installation shall provide appropriate short-circuit backup protection.
   e. Protective bonding must be installed in accordance with local national wiring rules and regulations.
Limited Warranty

UBIQUITI NETWORKS, Inc (“UBIQUITI NETWORKS”) warrants that the product(s) furnished hereunder (the “Product(s)”) shall be free from defects in material and workmanship for a period of one (1) year from the date of shipment by UBIQUITI NETWORKS under normal use and operation. UBIQUITI NETWORKS’ sole and exclusive obligation and liability under the foregoing warranty shall be for UBIQUITI NETWORKS, at its discretion, to repair or replace any Product that fails to conform to the above warranty during the above warranty period. The expense of removal and reinstallation of any Product is not included in this warranty. The warranty period of any repaired or replaced Product shall not extend beyond its original term.

Warranty Conditions

The above warranty does not apply if the Product:

(I) has been modified and/or altered, or an addition made thereto, except by Ubiquiti Networks, or Ubiquiti Networks’ authorized representatives, or as approved by Ubiquiti Networks in writing;

(II) has been painted, rebranded or physically modified in any way;

(III) has been damaged due to errors or defects in cabling;

(IV) has been subjected to misuse, abuse, negligence, abnormal physical, electromagnetic or electrical stress, including lightning strikes, or accident;

(V) has been damaged or impaired as a result of using third party firmware;

(VI) has no original Ubiquiti MAC label, or is missing any other original Ubiquiti label(s); or

(VII) has not been received by Ubiquiti within 30 days of issuance of the RMA.

In addition, the above warranty shall apply only if: the product has been properly installed and used at all times in accordance, and in all material respects, with the applicable Product documentation; all Ethernet cabling runs use CAT5 (or above), and for outdoor installations, shielded Ethernet cabling is used, and for indoor installations, indoor cabling requirements are followed.
Returns
No Products will be accepted for replacement or repair without obtaining a Return Materials Authorization (RMA) number from UBIQUITI NETWORKS during the warranty period, and the Products being received at UBIQUITI NETWORKS’ facility freight prepaid in accordance with the RMA process of UBIQUITI NETWORKS. Products returned without an RMA number will not be processed and will be returned freight collect or subject to disposal. Information on the RMA process and obtaining an RMA number can be found at: www.ubnt.com/support/warranty

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EXCEPT TO THE EXTENT PROHIBITED BY LOCAL LAW, IN NO EVENT WILL UBIQUITI OR ITS SUBSIDIARIES, AFFILIATES OR SUPPLIERS BE LIABLE FOR DIRECT, SPECIAL, INCIDENTAL, CONSEQUENTIAL OR OTHER DAMAGES (INCLUDING LOST PROFIT, LOST DATA, OR DOWNTIME COSTS), ARISING OUT OF THE USE, INABILITY TO USE, OR THE RESULTS OF USE OF THE PRODUCT, WHETHER BASED IN WARRANTY, CONTRACT, TORT OR OTHER LEGAL THEORY, AND WHETHER OR NOT ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

Note

Some countries, states and provinces do not allow exclusions of implied warranties or conditions, so the above exclusion may not apply to you. You may have other rights that vary from country to country, state to state, or province to province. Some countries, states and provinces do not allow the exclusion or limitation of liability for incidental or consequential damages, so the above limitation may not apply to you. EXCEPT TO THE EXTENT ALLOWED BY LOCAL LAW, THESE WARRANTY TERMS DO NOT EXCLUDE, RESTRICT OR MODIFY, AND ARE IN ADDITION TO, THE MANDATORY STATUTORY RIGHTS APPLICABLE TO THE LICENSE OF ANY SOFTWARE (EMBEDDED IN THE PRODUCT) TO YOU. The United Nations Convention on Contracts for the International Sale of Goods shall not apply to any transactions regarding the sale of the Products.
Compliance

FCC

Changes or modifications not expressly approved by the party responsible for compliance could void the user’s authority to operate the equipment. This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation.

NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment 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. Operations of this equipment 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.

ISED Canada

CAN ICES-3(A)/NMB-3(A)

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

CAN ICES-3(A)/NMB-3(A)

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

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.

CE Marking

CE marking on this product represents the product is in compliance with all directives that are applicable to it.

RoHS/WEEE Compliance Statement

**English**

European Directive 2012/19/EU requires that the equipment bearing this symbol on the product and/or its packaging must not be disposed of with unsorted municipal waste. The symbol indicates that this product should be disposed of separately from regular household waste streams. It is your responsibility to dispose of this and other electric and electronic equipment via designated collection facilities appointed by the government or local authorities. Correct disposal and recycling will help prevent potential negative consequences to the environment and human health. For more detailed information about the disposal of your old equipment, please contact your local authorities, waste disposal service, or the shop where you purchased the product.

**Deutsch**

Español
La Directiva 2012/19/UE exige que los equipos que lleven este símbolo en el propio aparato y/o en su embalaje no deben eliminarse junto con otros residuos urbanos no seleccionados. El símbolo indica que el producto en cuestión debe separarse de los residuos domésticos convencionales con vistas a su eliminación. Es responsabilidad suya desechar este y cualesquiera otros aparatos eléctricos y electrónicos a través de los puntos de recogida que ponen a su disposición el gobierno y las autoridades locales. Al desechar y reciclar correctamente estos aparatos estará contribuyendo a evitar posibles consecuencias negativas para el medio ambiente y la salud de las personas. Si desea obtener información más detallada sobre la eliminación segura de su aparato usado, consulte a las autoridades locales, al servicio de recogida y eliminación de residuos de su zona o pregunte en la tienda donde adquirió el producto.

Français
La directive européenne 2012/19/UE exige que l’équipement sur lequel est apposé ce symbole sur le produit et/ou son emballage ne soit pas jeté avec les autres ordures ménagères. Ce symbole indique que le produit doit être éliminé dans un circuit distinct de celui pour les déchets des ménages. Il est de votre responsabilité de jeter ce matériel ainsi que tout autre matériel électrique ou électronique par les moyens de collecte indiqués par le gouvernement et les pouvoirs publics des collectivités territoriales. L’élimination et le recyclage en bonne et due forme ont pour but de lutter contre l’impact néfaste potentiel de ce type de produits sur l’environnement et la santé publique. Pour plus d’informations sur le mode d’élimination de votre ancien équipement, veuillez prendre contact avec les pouvoirs publics locaux, le service de traitement des déchets, ou l’endroit où vous avez acheté le produit.

Italiano
La direttiva europea 2012/19/UE richiede che le apparecchiature contrassegnate con questo simbolo sul prodotto e/o sull’imballaggio non siano smaltite insieme ai rifiuti urbani non differenziati. Il simbolo indica che questo prodotto non deve essere smaltito insieme ai normali rifiuti domestici. È responsabilità del proprietario smaltire sia questi prodotti sia le altre apparecchiature elettriche ed elettroniche mediante le specifiche strutture di raccolta indicate dal governo o dagli enti pubblici locali. Il corretto smaltimento ed il riciclaggio aiuteranno a prevenire conseguenze potenzialmente negative per l’ambiente e per la salute dell’essere umano. Per ricevere informazioni più dettagliate circa lo smaltimento delle vecchie apparecchiature in Vostro possesso, Vi invitiamo a contattare gli enti pubblici di competenza, il servizio di smaltimento rifiuti o il negozio nel quale avete acquistato il prodotto.
Declaration of Conformity

English Hereby, UBIQUITI NETWORKS, declares that this UF-Nano device, is in compliance with the essential requirements and other relevant provisions of Directives 2014/30/EU, 2014/35/EU. The full text of the EU declaration of conformity is available at the following internet address: www.ubnt.com/compliance

砾语 [Bulgarian] С настоящото UBIQUITI NETWORKS декларира, че това устройство UF-Nano е в съответствие със съществените изисквания и други приложими разпоредби на Директиви 2014/30/EC, 2014/35/EC. Цялостният текст на ЕС декларацията за съответствие може да се намери на следния интернет адрес: www.ubnt.com/compliance


捷克 [Czech] UBIQUITI NETWORKS tímto prohlašuje, že toto UF-Nano zařízení, je ve shodě se základními požadavky a dalšími příslušnými ustanoveními směrnic 2014/30/EU, 2014/35/EU. Úplné znění EU prohlášení o shodě je k dispozici na této internetové adrese: www.ubnt.com/compliance


荷兰 [Dutch] Hierbij verklaart UBIQUITI NETWORKS, dat deze UF-Nano apparaat, in overeenstemming is met de essentiële eisen en de andere relevante bepalingen van richtlijnen 2014/30/EU, 2014/35/EU. De volledige tekst van de EU-conformiteitsverklaring kan worden geraadpleegd op het volgende internetadres: www.ubnt.com/compliance

英语 [English] Hereby, UBIQUITI NETWORKS, declares that this UF-Nano device, is in compliance with the essential requirements and other relevant provisions of Directives 2014/30/EU, 2014/35/EU. The full text of the EU declaration of conformity is available at the following internet address: www.ubnt.com/compliance


