Managed Gigabit Fiber Switch
Model: ES-12F
Introduction

Thank you for purchasing the Ubiquiti Networks® EdgeSwitch® Fiber. This Quick Start Guide is designed to guide you through installation and also includes warranty terms.

Package Contents

- EdgeSwitch Fiber
- Power Cord
- Rack-Mount Brackets (Qty. 2)
- Bracket Screws (M4, Qty. 8)
- Mounting Screws (Qty. 4)
- Cage Nuts (Qty. 4)
- Quick Start Guide

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, indoor cabling requirements, and Dynamic Frequency Selection (DFS) requirements.
Installation Requirements

• Phillips screwdriver (for rack- or wall-mounting)
• Standard-sized, 19” wide rack with a minimum of 1U height available (for rack-mounting)
• Use compatible fiber SFP modules with the appropriate fiber optic cabling. For information about compatible fiber SFP modules, visit: community.ubnt.com/edgemax
• For indoor applications, use Category 5 (or above) UTP cabling approved for indoor use.
• For outdoor applications, shielded Category 5 (or above) cabling should be used for all wired Ethernet connections and should be grounded through the AC ground of the power supply.

We recommend that you protect your networks from harmful outdoor environments and destructive ESD events with industrial-grade, shielded Ethernet cable from Ubiquiti Networks. For more details, visit: www.ubnt.com/toughcable

WARNING: To reduce the risk of fire or electric shock, do not expose the EdgeSwitch Fiber to rain or moisture.

Note: Although the cabling can be located outdoors, the EdgeSwitch Fiber itself should be housed inside a protective enclosure.

Hardware Overview

Front Panel Ports

<table>
<thead>
<tr>
<th>Port</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SFP 1-12</td>
<td>Hot-swappable SFP ports support 1 Gbps connections. Ports 1-8 also support 100 Mbps.</td>
</tr>
<tr>
<td>RJ45 13-16</td>
<td>RJ45 ports support 10/100/1000 Ethernet connections.</td>
</tr>
</tbody>
</table>
## Front Panel LEDs

The System LED functionality has been updated with firmware v1.8.0. We recommend that you update the EdgeSwitch to the latest firmware.

<table>
<thead>
<tr>
<th>State</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flashing White</td>
<td>Bootup in progress.</td>
</tr>
<tr>
<td>White</td>
<td>Ready for use, not connected to Ubiquiti® Network Management System (UNMS™).</td>
</tr>
<tr>
<td>Blue</td>
<td>Ready for use, connected to UNMS.</td>
</tr>
<tr>
<td>Steady Blue with Occasional Flashing</td>
<td>Ready for use, unable to connect to UNMS, check connection to UNMS server.</td>
</tr>
<tr>
<td>Quickly Flashing Blue</td>
<td>Used to locate a device in UNMS.</td>
</tr>
<tr>
<td>Alternating Blue/White</td>
<td>Firmware upgrade in progress.</td>
</tr>
</tbody>
</table>

You can use the EdgeSwitch Configuration Interface or UNMS to manage your device. UNMS lets you configure, monitor, upgrade, and back up your devices using a single application. Get started at [www.unms.com](http://www.unms.com)
### SFP LEDs

<table>
<thead>
<tr>
<th>LED</th>
<th>State</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Speed/Link/Activity</td>
<td>Off</td>
<td>No Link</td>
</tr>
<tr>
<td></td>
<td>Amber</td>
<td>Link Established at 100 Mbps</td>
</tr>
<tr>
<td></td>
<td>Amber</td>
<td>Link Activity at 100 Mbps</td>
</tr>
<tr>
<td></td>
<td>Green</td>
<td>Link Established at 1000 Mbps (1 Gbps)</td>
</tr>
<tr>
<td></td>
<td>Green</td>
<td>Link Activity at 1000 Mbps (1 Gbps)</td>
</tr>
</tbody>
</table>

### RJ45 LEDs

<table>
<thead>
<tr>
<th>LED</th>
<th>State</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Speed/Link/Activity</td>
<td>Off</td>
<td>No Link</td>
</tr>
<tr>
<td></td>
<td>Amber</td>
<td>Link Established at 10/100 Mbps</td>
</tr>
<tr>
<td></td>
<td>Amber</td>
<td>Link Activity at 10/100 Mbps</td>
</tr>
<tr>
<td></td>
<td>Green</td>
<td>Link Established at 1000 Mbps (1 Gbps)</td>
</tr>
<tr>
<td></td>
<td>Green</td>
<td>Link Activity at 1000 Mbps (1 Gbps)</td>
</tr>
</tbody>
</table>
There are two methods to reset the EdgeSwitch Fiber to factory defaults:

**Runtime Reset (Recommended)**

The EdgeSwitch Fiber should be running after bootup is complete, and the System LED is white. Press and hold the **Reset** button. The EdgeSwitch Fiber will reboot, and the System LED becomes blue after three seconds. Continue to hold the **Reset** button for about 15 seconds until the System LED flashes blue for two seconds. This indicates that the EdgeSwitch Fiber has reset to its factory defaults.

**Power-on Reset**

1. Disconnect the **Power Cord** from the EdgeSwitch Fiber.
2. While connecting the **Power Cord** to the EdgeSwitch Fiber, hold the **Reset** button for about 15 seconds until the System LED flashes blue for two seconds. This indicates that the EdgeSwitch Fiber has reset to its factory defaults.
**Back Panel Console Port**

![Console Port](image)

<table>
<thead>
<tr>
<th>Port</th>
<th>Description</th>
</tr>
</thead>
</table>
| Console| RJ45 serial console port for Command Line Interface (CLI) management. Use an RJ45-to-DB9, serial console cable, also known as a rollover cable, to connect the Console port to your computer. Then configure the following settings as needed:  
  - *Baud rate* 115200  
  - *Data bits* 8  
  - *Parity* NONE  
  - *Stop bits* 1  
  - *Flow control* NONE |
Back Panel Power

**DC Input**  The 25VDC input can connect a redundant or stand-alone DC power source (not included) with minimum power: 56W, 25 to 16V, and 2.5 mm DC power inline connector.

**Note:** You can use the redundant DC power source as a hot spare; if the internal AC/DC power supply no longer provides power, then the EdgeSwitch Fiber will switch to the DC power source without interrupting its operation.

**Power**  Connect the included *Power Cord* to the *Power* port.

Side Panel

**Bracket Mounting Holes**  **Ventilation Holes**
Hardware Installation

The EdgeSwitch Fiber can be placed on a horizontal surface, mounted on a wall, or mounted in a rack.

⚠️ **WARNING:** FAILURE TO PROVIDE PROPER VENTILATION MAY CAUSE FIRE HAZARD. KEEP AT LEAST 20 MM OF CLEARANCE NEXT TO THE VENTILATION HOLES FOR ADEQUATE AIRFLOW.

Mounting in a Rack (Optional)

1. Attach the *Rack-Mount Brackets* to the EdgeSwitch Fiber using the eight *Bracket Screws*.

2. Attach the EdgeSwitch Fiber to the rack or wall using the four *Mounting Screws*. (If the rack has square slots, then use the *Cage Nuts* with the *Mounting Screws*.)
Connecting Power

1. Connect the *Power Cord* to the *Power* port of the EdgeSwitch Fiber.

2. Connect the other end of the *Power Cord* to a power outlet.
Connecting SFP

1. Remove the protective plug covering the SFP port.
2. Plug a compatible fiber module into the SFP port.

1000Mbps SM/SC 20KM DDM Tx1550nm/Rx1310nm

3. Connect the fiber optic cable to the fiber module. Then connect the other end of the cable to another fiber device.

4. Repeat steps 1-3 to connect additional SFP ports.
Connecting RJ45

1. Connect an Ethernet cable from your computer or host system to any RJ45 port of the EdgeSwitch Fiber.

2. Connect Ethernet cables from the RJ45 ports of your devices to the other RJ45 ports of the EdgeSwitch Fiber.
Accessing the Configuration Interface

The EdgeSwitch Fiber is set to *DHCP* by default, so it will try to automatically obtain an IP address. If that fails, then it will use the default fallback IP address, 192.168.1.2. Proceed to the appropriate section, *DHCP* or *Fallback IP Address*:

**DHCP**

Use one of the following methods:

- Set up the DHCP server to provide a specific IP address to the EdgeSwitch Fiber based on its MAC address (on the label).
- Let the EdgeSwitch Fiber obtain an IP address and then check the DHCP server to see which IP address was assigned.

To log in, follow these steps:

1. Launch your web browser. Type the appropriate IP address in the address field. Press enter (PC) or return (Mac).
2. Enter ubnt in the Username and Password fields. Click Sign In. (When you sign in, you agree to accept the Ubiquiti License Agreement.)

The EdgeSwitch Configuration Interface will appear. Customize additional settings as needed. For more information, refer to the EdgeSwitch documentation, which is available at [www.ubnt.com/download/edgemax](http://www.ubnt.com/download/edgemax)

You can also manage your device using the Ubiquiti® Network Management System. UNMS™ lets you configure, monitor, upgrade, and back up your devices using a single application. Get started at [www.unms.com](http://www.unms.com)
Fallback IP Address

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

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 the appropriate IP address in the address field (192.168.1.2 is the default fallback IP address). Press enter (PC) or return (Mac).

4. Enter ubnt in the Username and Password fields. Click Sign In. (When you sign in, you agree to accept the Ubiquiti License Agreement.)

5. The EdgeSwitch Configuration Interface will appear. Click the System Settings tab.
6. Change the *IP Address* to a unique IP address or keep the default, DHCP. Click **Apply**.

**Note:** If you change the IP settings, then the session will be cut off, and you will need to reconnect to the EdgeSwitch Fiber using the new IP address.

Customize additional settings as needed. For more information, refer to the EdgeSwitch documentation, which is available at [www.ubnt.com/download/edgemax](http://www.ubnt.com/download/edgemax)

You can also manage your device using the Ubiquiti Network Management System. UNMS lets you configure, monitor, upgrade, and back up your devices using a single application. Get started at [www.unms.com](http://www.unms.com)
## Specifications

<table>
<thead>
<tr>
<th></th>
<th>ES-12F</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dimensions</strong></td>
<td>443 x 221 x 43 mm (17.44 x 8.70 x 1.69”)</td>
</tr>
<tr>
<td><strong>Weight</strong></td>
<td></td>
</tr>
<tr>
<td>Rack-Mount Brackets Included</td>
<td>2.68 kg (5.91 lb)</td>
</tr>
<tr>
<td>Rack-Mount Brackets Excluded</td>
<td>2.59 kg (5.71 lb)</td>
</tr>
<tr>
<td><strong>Total Non-Blocking Line Rate</strong></td>
<td>16 Gbps</td>
</tr>
<tr>
<td><strong>Max. AC Power Consumption</strong></td>
<td>56W</td>
</tr>
<tr>
<td><strong>Power Method</strong></td>
<td></td>
</tr>
<tr>
<td>AC</td>
<td>100-240VAC/50-60 Hz, Universal Input DC 56W, 25 to 16V, with 2.5 mm DC Power Inline Connector</td>
</tr>
<tr>
<td>DC</td>
<td></td>
</tr>
<tr>
<td><strong>Power Supply</strong></td>
<td>AC/DC, Internal, 56W DC</td>
</tr>
<tr>
<td><strong>Supported Voltage Range</strong></td>
<td>100 to 240VAC 25 to 16VDC</td>
</tr>
<tr>
<td><strong>LEDs Per Data Port</strong></td>
<td>Speed/Link/Activity</td>
</tr>
<tr>
<td><strong>Interfaces</strong></td>
<td></td>
</tr>
<tr>
<td>Networking Interfaces</td>
<td>(8) 100/1000 Mbps SFP Ethernet Ports (4) 1000 Mbps SFP Ethernet Ports (4) 10/100/1000 Mbps RJ45 Ethernet Ports (1) RJ45 Serial Port Out-of-Band, Ethernet In-Band</td>
</tr>
<tr>
<td>Management Interface</td>
<td></td>
</tr>
<tr>
<td><strong>Rackmount</strong></td>
<td>Yes, 1U High</td>
</tr>
<tr>
<td><strong>ESD/EMP Protection</strong></td>
<td>Air: ± 24 kV, Contact: ± 24 kV</td>
</tr>
<tr>
<td><strong>Shock and Vibration</strong></td>
<td>ETSI300-019-1.4 Standard</td>
</tr>
<tr>
<td><strong>Operating Temperature</strong></td>
<td>-5 to 40° C (23 to 104° 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:** Failure to provide proper ventilation may cause fire hazard. Keep at least 20 mm of clearance next to the ventilation holes for adequate airflow.

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

⚠️ **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.

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

The limited warranty requires the use of arbitration to resolve disputes on an individual basis, and, where applicable, specify arbitration instead of jury trials or class actions.

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 acquisito il prodotto.
Declaration of Conformity

English  Hereby, UBIQUITI NETWORKS, declares that this ES-12F 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
Con la presente, UBIQUITI NETWORKS, dichiara che questo dispositivo ES-12F, è conforme ai requisiti essenziali ed alle altre disposizioni pertinenti delle directive 2014/30/UE, 2014/35/UE. Il testo completo della dichiarazione di conformità UE è disponibile al seguente indirizzo Internet: www.ubnt.com/compliance