DATASHEET



# UFiber

## SFP/SFP+ Modules and Cabling

Single-Mode, Multi-Mode, or Copper Compatibility

1 Gbps Using SFP or 10G Speeds Using SFP+

BiDi Models for Reuse of Existing Infrastructure

# FiberModule™

## Overview

Ubiquiti Networks offers a variety of U®Fiber modules to suit your fiber connectivity applications.

Two multi-mode models are available:

- UF-MM-1G: SFP, 1 Gbps
- UF-MM-10G: SFP+, 10 Gbps

Three single-mode models are available:

- UF-SM-1G-S: SFP, 1 Gbps, BiDi
- UF-SM-10G: SFP+, 10 Gbps
- UF-SM-10G-S: SFP+, 10 Gbps, BiDi

Two copper models are available:

- UF-RJ45-1G: 10/100/1000 Mbps
- UF-RJ45-10G: 1/10 Gbps

### Indoor Runs

For convenient multi-mode connections that extend beyond the 100-meter limitation of Ethernet cabling, use the UF-MM-10G for distances of up to 300 m and speeds of up to 10 Gbps, or use the UF-MM-1G for distances of up to 550 m and speeds of up to 1 Gbps.

To connect copper Ethernet cables to SFP ports, use the UF-RJ45-10G in an SFP+ port for speeds of up to 10 Gbps and distances of up to 30 m, or use the UF-RJ45-1G in an SFP port for speeds of up to 1 Gbps and distances of up to 100 m. For short distances of 1 to 3 m, use the UDC-1, UDC-2, or UDC-3 direct attach passive copper cables between SFP+ ports for speeds of up to 10 Gbps.

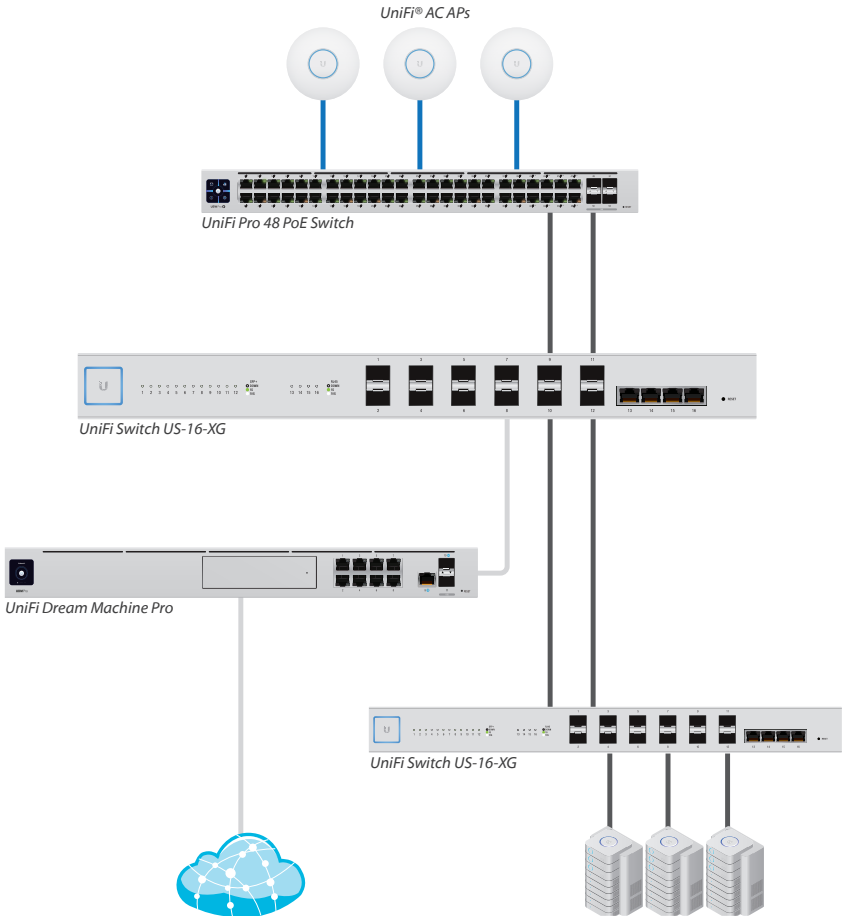
### Outdoor Use

For long-distance single-mode runs, use the UF-SM-10G for distances of up to 10 km at 10 Gbps, or use the UF-SM-1G for distances of up to 3 km at 1 Gbps. To protect DC power and fiber, deploy EdgePoint® with EdgePower™.

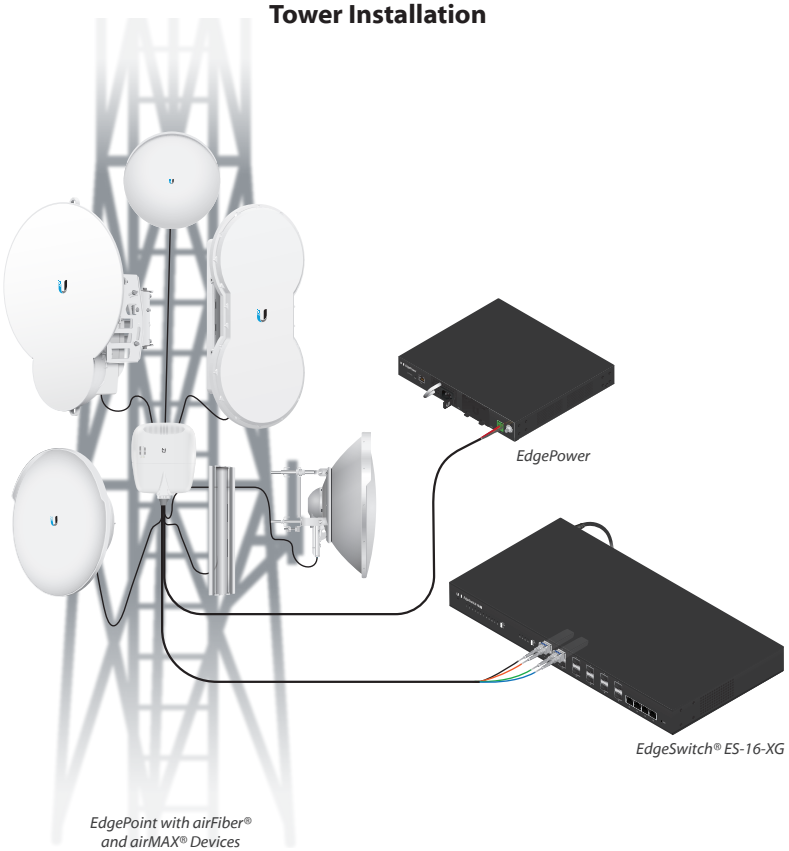
Deploy a BiDi (BiDirectional) model, UF-SM-1G-S or UF-SM-10G-S, to maximize re-use of existing infrastructure. You must deploy a BiDi model as a paired set of modules because the pair uses two different wavelengths, upstream and downstream, on a single fiber.

## Application Examples

### UniFi Site




### Tower Installation

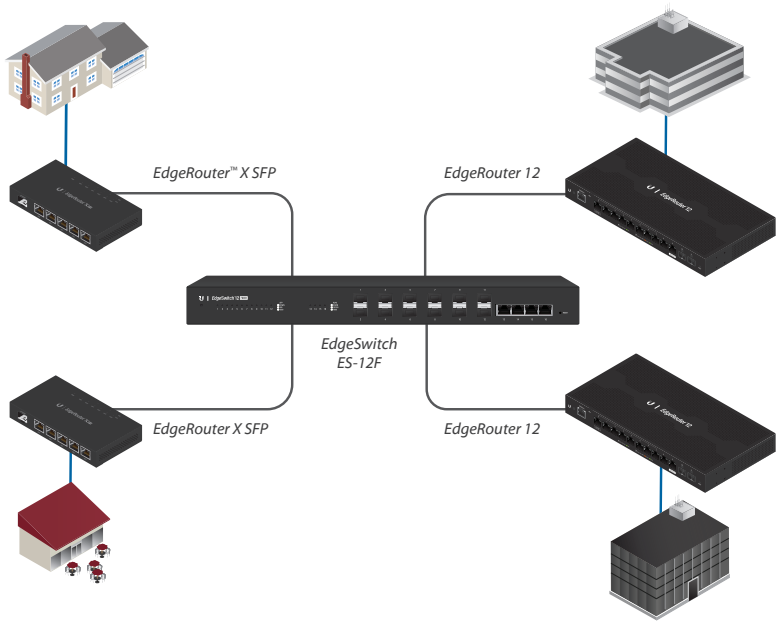


## Fiber Routing and Switching

Ubiquiti offers multiple options to suit your specific network infrastructure:

| | US-16-XG | ES-16-XG | ES-12F |
|---|---|---|---|
| 10G | ✓ | ✓ | |
| 1G | ✓ | ✓ | ✓ |
| UniFi | ✓ | | |
| Fiber to the X | | ✓ | ✓ |

### Fiber to the X Deployment




# FiberModule™

## Model Comparison



| | UF-MM-1G | UF-MM-10G | UF-SM-1G-S | UF-SM-10G | UF-SM-10G-S |
|---|---|---|---|---|---|
| Supported Media | Multi-Mode Fiber | Multi-Mode Fiber | Single-Mode Fiber | Single-Mode Fiber | Single-Mode Fiber |
| Connector Type | (2) LC | (2) LC | (1) LC | (2) LC | (1) LC |
| BiDi | | | ✓ | | ✓ |
| TX Wavelength | 850 nm | 850 nm | Blue / Yellow<br>1310 nm / 1550 nm | 1310 nm | Blue / Red<br>1270 nm / 1330 nm |
| RX Wavelength | 850 nm | 850 nm | Blue / Yellow<br>1550 nm / 1310 nm | 1310 nm | Blue / Red<br>1330 nm / 1270 nm |
| Data Rate | 1.25 Gbps SFP | 10 Gbps SFP+ | 1.25 Gbps SFP | 10 Gbps SFP+ | 10 Gbps SFP+ |
| Max. Power Consumption | 0.66W | 0.8W | 0.66W | 1W | 1W |
| Cable Distance | 550 m | 300 m | 3 km | 10 km | 10 km |
| Operating Temperature | 0 to 70° C (32 to 158° F) | 0 to 70° C (32 to 158° F) | 0 to 70° C (32 to 158° F) | 0 to 70° C (32 to 158° F) | 0 to 70° C (32 to 158° F) |
| Pack Options | 2-Pack, 20-Pack | 2-Pack, 20-Pack | 1-Pair, 10-Pairs | 2-Pack, 20-Pack | 1-Pair, 10-Pairs |

WARNING: CLASS 1 LASER PRODUCT, IEC/EN 60825-1:2014 – Do not look into the ends of the fiber optic cable or SFP modules while converters are powered.

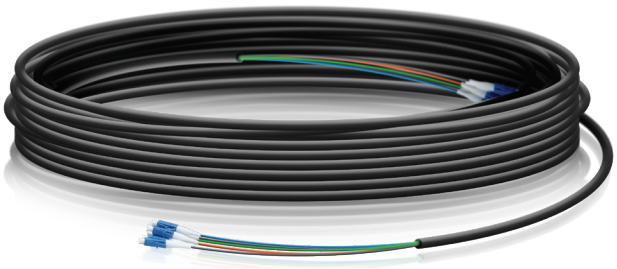
# CopperModule™

## Model Comparison




| | UF-RJ45-1G | UF-RJ45-10G | |
|---|---|---|---|
| Supported Media | Copper | Copper | |
| Connector Type | RJ45 | RJ45 | |
| Data Rate | 10/100/1000 Mbps | 1/10 Gbps | |
| Max. Power Consumption | 1.2W | 3W | |
| Cable Distance | 100 m | 1 Gbps (Cat 5e) | 10 Gbps (Cat 6A) |
| | | 100 m | 30 m |
| Operating Temperature | 0 to 70° C (32 to 158° F) | 0 to 70° C (32 to 158° F) | |
| Pack Options | 20-Pack | 1-Pack | |





# FiberCable™

### Models: FC-SM-100, FC-SM-200, FC-SM-300

### Single-Mode LC Fiber Cable

Build your outdoor fiber network using our FiberCable. Lightweight and flexible, FiberCable is ideal for tower deployments of our outdoor routing and switching products, such as the EdgePoint. Available in 100, 200, and 300 ft lengths.

- Outdoor-Rated Jacket with Ripcord
- Integrated Weatherproof Tape
- Kevlar Yarn for Added Tensile Strength
- Outer Diameter of Cable: 6.0 ± 0.2 mm
- Six-Strand Single-Mode (G.657.A2)
- Outer Diameter of Fiber Strand: 0.25 mm Nominal
- Insertion Loss
  - 1310 nm: ≤0.5 dB/km
  - 1550 nm: ≤0.5 dB/km

# FiberCable™

### Models: UDC-1, UDC-2, UDC-3

### 10G SFP+ Direct Attach Passive Copper Cables

Available in lengths of 1, 2 and 3 meters, the 10G SFP+ direct attach passive copper cables support multi-gigabit data rates of up to 10.5 Gbps. The SFP+ direct attach passive copper cables are ideal for indoor telecommunications and data networks using our routing and switching products, such as the EdgeRouter, EdgeSwitch, and UniFi Switch.

- Hot-swappable SFP+
- Cable Diameter: 30AWG
- Case Operating Temperature: 0 to 70° C (32 to 158° F)

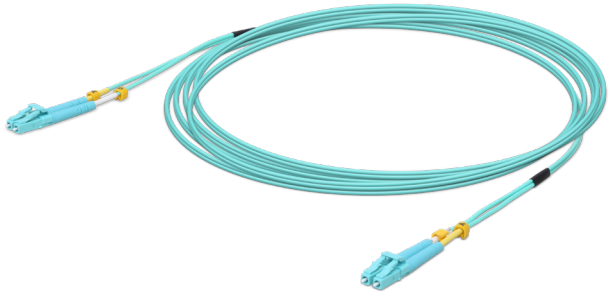


# FiberCable™

## Models: UOC-0.5, UOC-1, UOC-2, UOC-3, UOC-5

### 10G Multi-Mode ODN Cables

Scale your fiber network using our flexible and lightweight fiber patch cables. The 10G multi-mode fiber patch cables are ideal for indoor telecommunications and data networks using our routing and switching products, such as the EdgeRouter, EdgeSwitch, and UniFi Switch. Available in 0.5, 1, 2, 3, and 5 meter lengths.



# Specifications

| UFiber ODN Cables | |
|---|---|
| Connector | LC-LC |
| Fiber Mode | 50 / 125 µm |
| Fiber Type | Duplex |
| Cable Length | |
| UOC-0.5 | 0.5 m |
| UOC-1 | 1 m |
| UOC-2 | 2 m |
| UOC-3 | 3 m |
| UOC-5 | 5 m |
| Cable Jacket | PVC |
| Cable Standard | OM3 |
| Insertion Loss | ≤ 0.3 dB |
| Polish | UPC to UPC |
| Jacket OD | 2.0 mm |
| Wavelength | 850 / 1310 nm |
| Jacket Color | Aqua |
| Repeatability | ≤ 0.1 dB |
| Durability | ≤ 0.2 dB (1000 Times Mating) |
| Return Loss | ≤ 50 dB |
| Operating Temperature | -40 to 75° C (-40 to 167° F) |

Specifications are subject to change. Ubiquiti products are sold with a limited warranty described at: www.ui.com/support/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.
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