DATASHEET

U Fiber

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

UBIQUITI NETWORKS

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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.

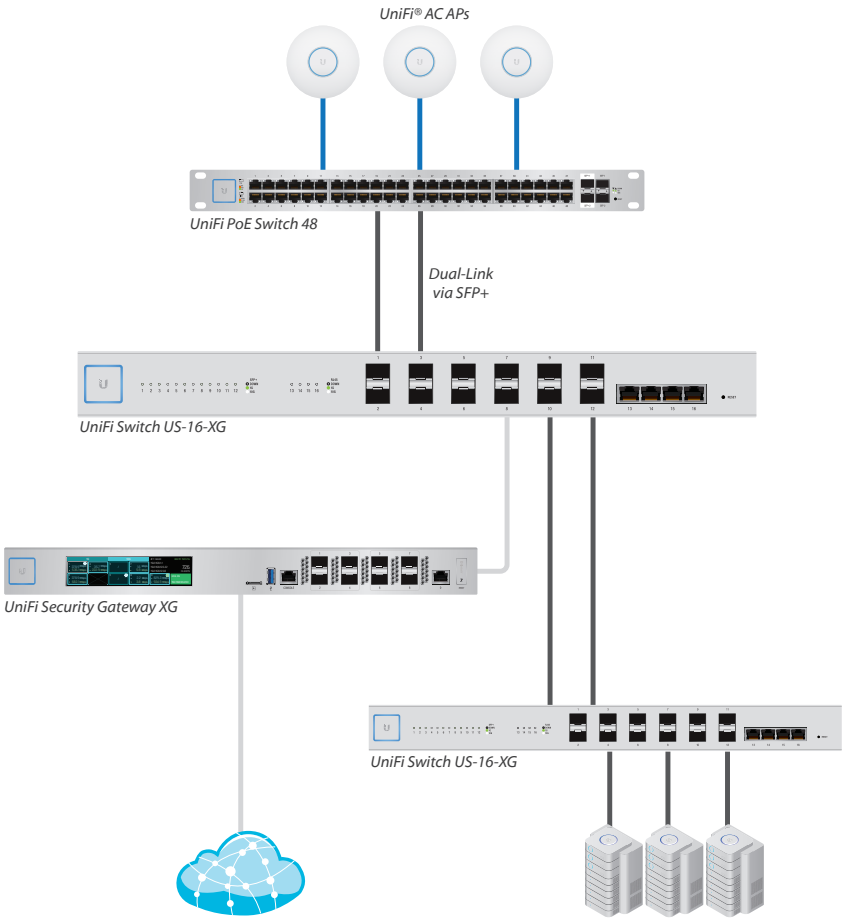
Outdoor Use

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™.

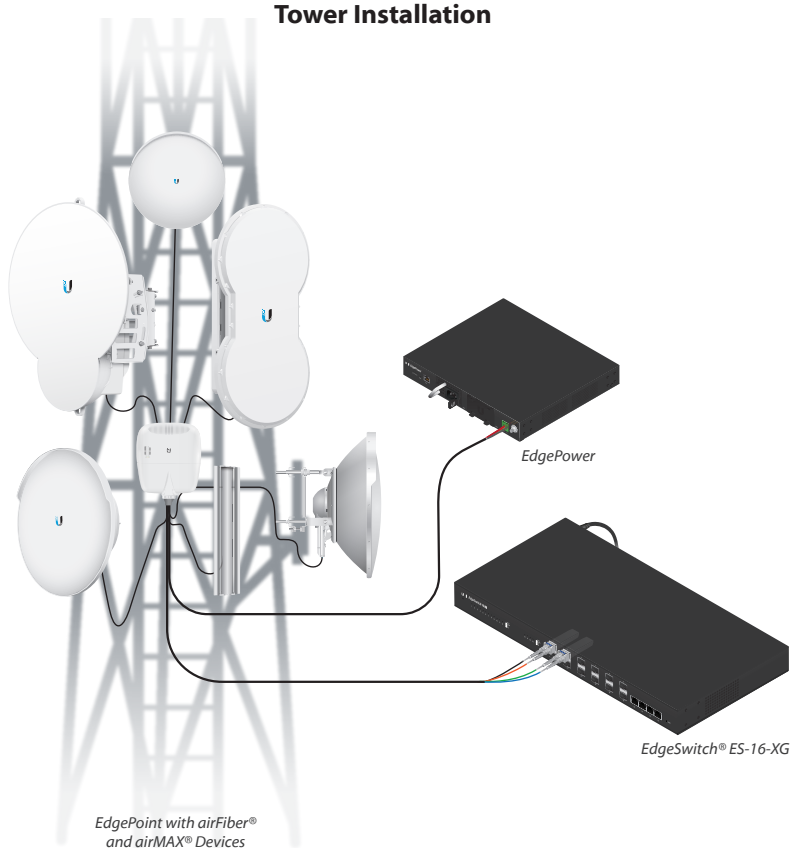
Deploy a BiDi (BiDirectional) model, UF-SM-1G-S or UF-SM-10G-S, to maximize re-use of existing infrastructure. You must deploy a BiDi model as a paired set of modules because the pair uses two different wavelengths, upstream and downstream, on a single fiber.

Application Examples

UniFi Site



Tower Installation



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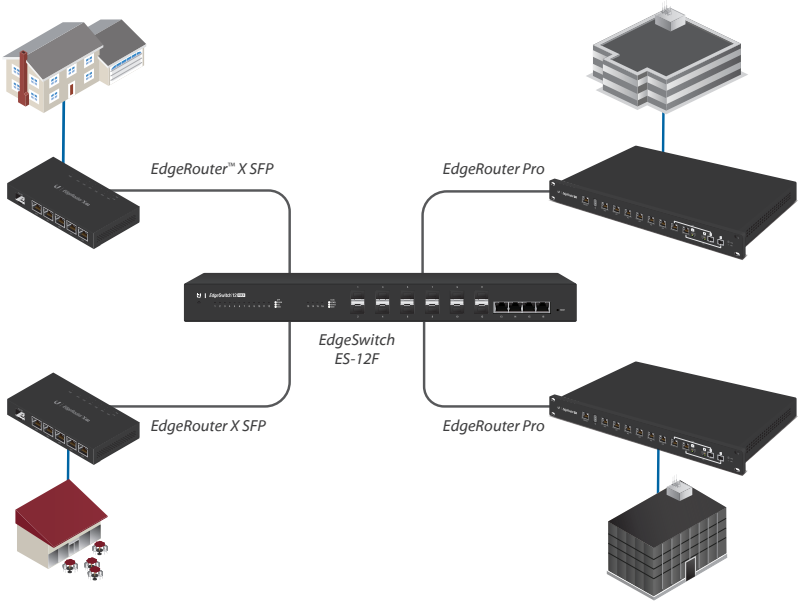
Fiber Routing and Switching

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	1310 nm	Blue	Red
			1310 nm	1550 nm		1270 nm	1330 nm
RX Wavelength	850 nm	850 nm	Blue	Yellow	1310 nm	Blue	Red
			1550 nm	1310 nm		1330 nm	1270 nm
Data Rate	1.25 Gbps SFP	10 Gbps SFP+	1.25 Gbps SFP		10 Gbps SFP+	10 Gbps SFP+	
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.

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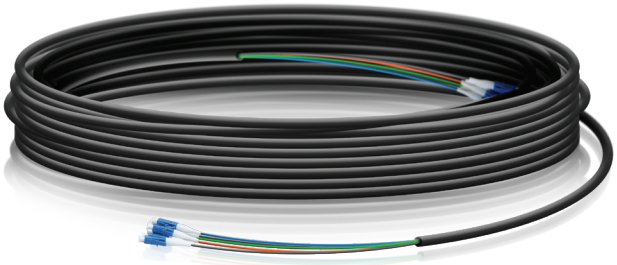
CopperModule™

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	
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)

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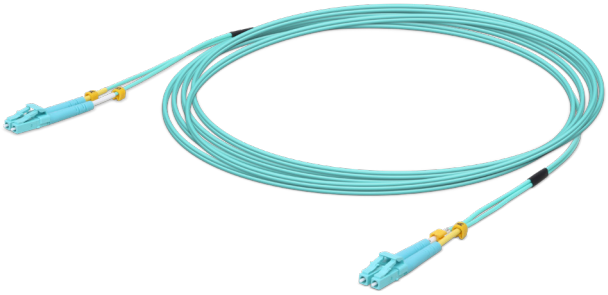
FiberCable™

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.ubnt.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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