



Gigabit Passive Optical Network

Models: UF-OLT, UF-OLT-4, UF-Nano, UF-LOCO

GPON End-to-End Solution

High-Performance, Provider OLT

Low-Cost, Robust ONU CPE



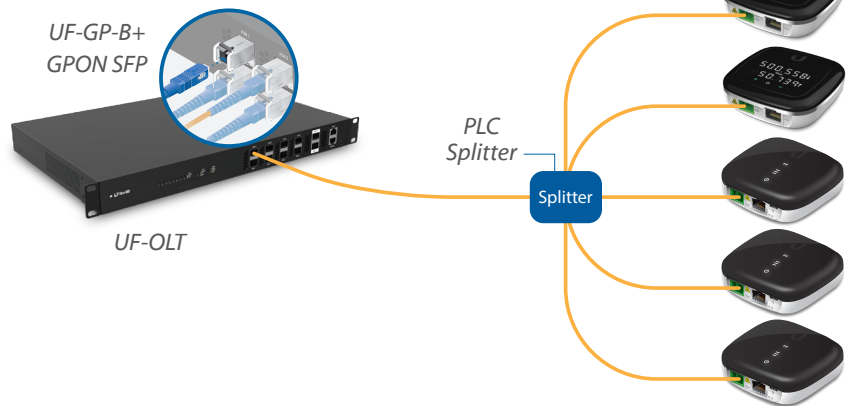


## High-Performance GPON

Configuring a fiber network just became as easy as setting up a smartphone. Say goodbye to command lines, manuals, and paid support licenses. Introducing the U Fiber OLT – a fiber solution that anyone can deploy.

U Fiber offers internet and telecom service providers a cost-effective fiber optic delivery system for Triple Play Services (data, voice, IPTV/VoD) with speeds of up to 2.488 Gbps downstream and 1.244 Gbps upstream.

The U Fiber network is intelligently managed using the included UNMS™ (Ubiquiti® Network Management System) controller. U Fiber devices consist of the U Fiber OLT or OLT-4 (deployed at the provider premises) and the U Fiber Nano™ G or loco clients, which function as ONU CPEs (Customer Premises Equipment).



Up to 128 UF-Nano or UF-LOCO per OLT GPON Port

## UNMS™

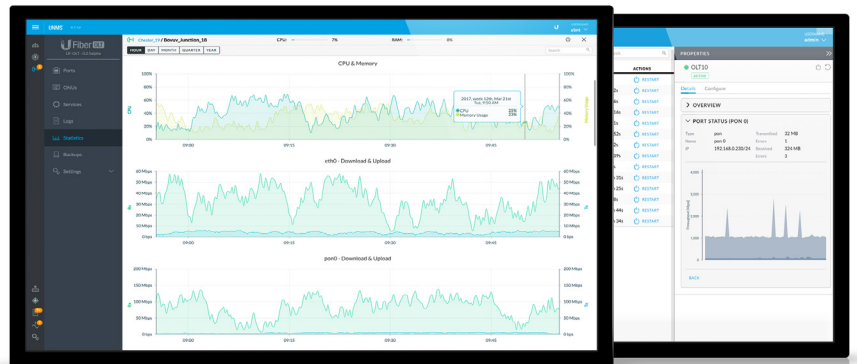
### U Fiber Controller Software

Ubiquiti Networks distinguishes itself with a library of powerful and intuitive management software that is included at no additional cost. UNMS is the latest addition to the library.

UNMS is a comprehensive management controller, featuring a graphical UI that is easy to learn and navigate. UNMS manages all of the registered U Fiber OLTs and all of their ONU clients.

### Features

- Intuitive, Graphical Web UI
- Quick Configuration and Deployment of U Fiber Devices
- Centralized Management of Multiple GPON Networks and Sites
- Graphical Reports for Efficient Monitoring and Troubleshooting
- Linux-based Software Installation
- Bundled Software – No Licensing or Support Fees



# Optical Line Terminal

The UFiber OLT supports up to 128 ONU CPEs per GPON port with physical links of up to 20 km in distance. It also features SFP+ connectivity for uplinking.

The UFiber OLT is available in two models: the UF-OLT for eight GPON ports and the UF-OLT-4 for four GPON ports.

## Features

- **GPON Speeds:**
  - 2.488 Gbps Upstream (TX)
  - 1.244 Gbps Downstream (RX)
- **Wavelengths:**
  - 1490 nm Upstream (TX)
  - 1310 nm Downstream (RX)
- **GPON Range:** Up to 20 km Link
- **Mounting Options:**
  - 1U Rack
  - Wall
  - Desktop
- **Management Options:**
  - Gigabit Ethernet Port (Out-of-Band)
  - RJ45 Serial Console Port (CLI)

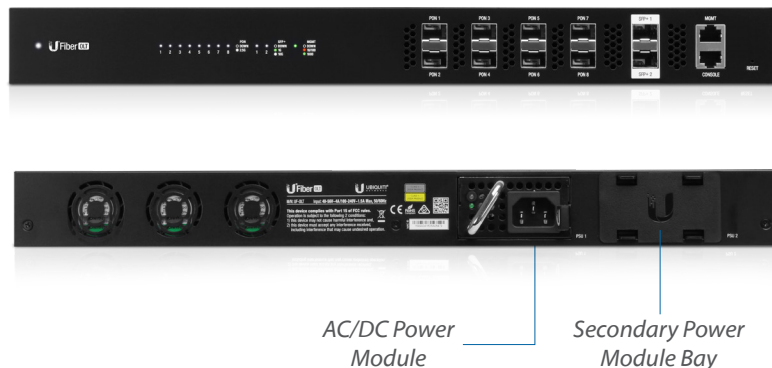


Model: UF-OLT

## 8-Port GPON Optical Line Terminal

### Features

- **Ports:**
  - (8) GPON SFP Ports
  - (2) SFP+ Ports
- **Concurrent Clients:** 1024 ONUs Total (128 Clients per Port)
- **Max. Power Consumption:** 40W
- **Power Method:** Hot-Swappable Power Module(s)
  - AC/DC Power Module (Included)
  - DC/DC Power Module (Optional)



Model: UF-OLT-4

## 4-Port GPON Optical Line Terminal

### Features

- **Ports:**
  - (4) GPON SFP Ports
  - (1) SFP+ Port
- **Concurrent Clients:** 512 ONUs Total (128 Clients per Port)
- **Max. Power Consumption:** 35W
- **Power Method:**
  - 100-240VAC/50-60 Hz, Universal Input
  - Secondary: 24VDC



# U Fiber | Nano™ G

Model: UF-Nano

## GPON Optical Network Unit

Featuring an informational LED display, the U Fiber Nano G is a robust, high-performance GPON CPE housed in a sophisticated design. It is powered by 24V passive PoE.

### Features

- **WAN:** (1) GPON Port
- **LAN:** (1) Gigabit Ethernet Port
- **GPON Speeds:** 2.488 Gbps Downstream (RX), 1.244 Gbps Upstream (TX)
- **Wavelengths:** 1490 nm Downstream (RX), 1310 nm Upstream (TX)
- **Display:** Digital LED for Status Reporting
- **Max. Power Consumption:** 7W
- **Power Method:** 24V Passive PoE
- **Mounting:** Wall-Mountable (Indoor)



# U Fiber loco

Model: UF-LOCO

## GPON Optical Network Unit

Sporting a sleek industrial design, the U Fiber loco is a robust, high-performance GPON CPE that features extremely low power consumption and the choice of 24V passive PoE or Micro-USB power.

### Features

- **WAN:** (1) GPON Port
- **LAN:** (1) Gigabit Ethernet Port
- **GPON Speeds:** 2.488 Gbps Downstream (RX), 1.244 Gbps Upstream (TX)
- **Wavelengths:** 1490 nm Downstream (RX), 1310 nm Upstream (TX)
- **Max. Power Consumption:** 3.5W
- **Power Method:** 24V Passive PoE or Micro-USB Power Adapter\*
- **Mounting:** Wall-Mountable (Indoor)

\* Included only in the single-pack of the UF-LOCO



# UFiber Accessories

## GPON SFP Modules

The UFiber OLT's GPON SFP ports are designed for use with the UF-GP-B+ and UF-GP-C+ SFP modules.

Each model, the UF-OLT or UF-OLT-4, includes one UF-GP-B+ module; additional modules can be purchased separately.

# FiberModule™ Model Comparison



	UF-GP-B+	UF-GP-C+
Supported Media	Single-Mode Fiber	Single-Mode Fiber
Connector Type	(1) SC/UPC	(1) SC/UPC
TX Wavelength	1490 nm	1490 nm
RX Wavelength	1310 nm	1310 nm
TX Power Range	1.5 to 5 dBm	3 to 7 dBm
RX Power Range	-28 to -8 dBm	-30 to -12 dBm
Downstream Data Rate	2.5 Gbps	2.5 Gbps
Upstream Data Rate	1.25 Gbps	1.25 Gbps
Cable Distance	20 km	20 km
Pack Options	20-Pack	20-Pack

## Power Modules

The UF-OLT comes with one AC/DC power module pre-installed and features two modular power adapter bays for flexible power options:

**Backup Power** The second power bay can house a backup power module. If the UF-OLT detects failure of the primary power module, the backup module automatically activates to supply uninterrupted power.

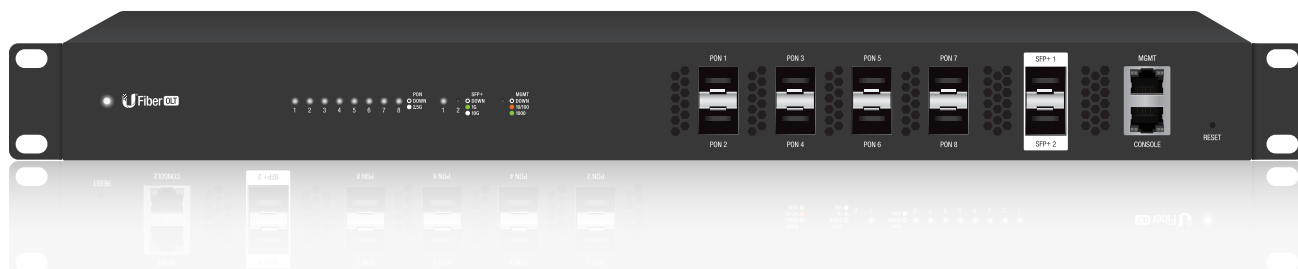
**DC/DC Power** Both power bays can also house a DC/DC power module for use with DC power.

Available power modules are: RPS-AC-100W and RPS-DC-100W.

# PowerModule™ Model Comparison



	RPS-AC-100W	RPS-DC-100W
Power Type	AC/DC	DC/DC
Input Voltage Range	90-264VAC	38-54VDC
Output Voltage Range	24-26VDC	23-25V
Operating Temperature	-10 to 45° C (14 to 104° F)	-10 to 50° C (14 to 122° F)
Operating Humidity	5 to 95% Noncondensing	5 to 95% Noncondensing



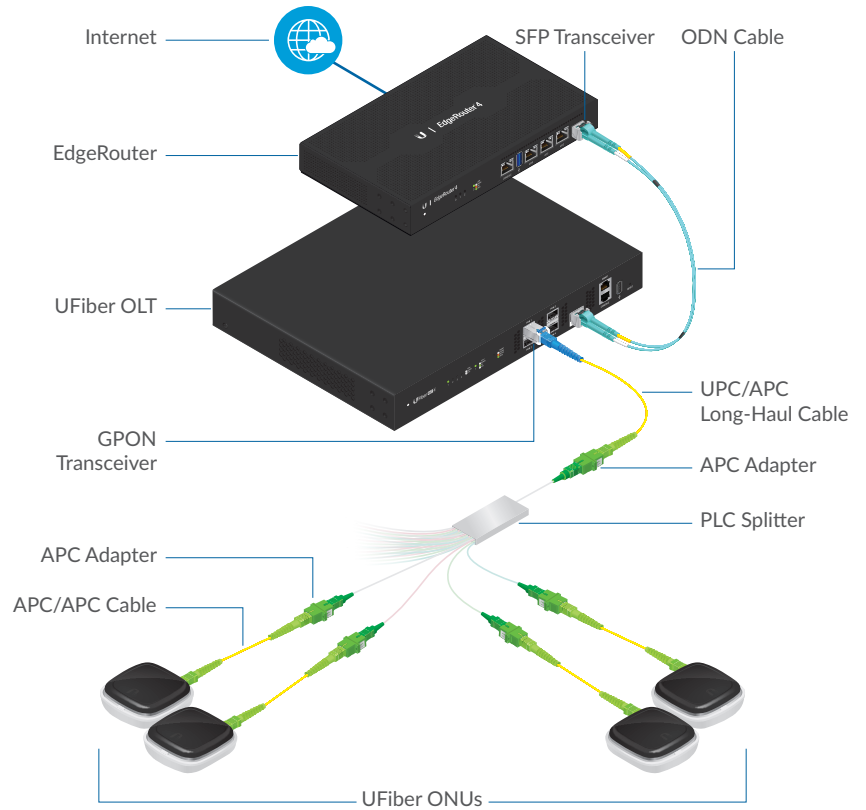
## GPON Network Accessories

To help you design and deploy your GPON networks, Ubiquiti offers the following accessories:

- Patch Cables
- PLC Splitters
- SC/APC Adapter

The diagram\* at right illustrates the basic topology for a GPON network using U Fiber accessories with U Fiber OLT and ONU equipment. Each GPON port of the OLT supports up to 128 ONUs.

\* Cable lengths are not shown to scale for maximum clarity.



*U Fiber GPON Network Topology Example*

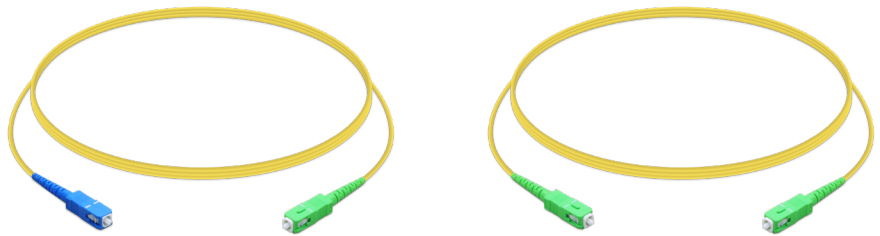
## Patch Cables

Ubiquiti offers two patch cables to help you build out your GPON networks:

- UF-SM-PATCH-UPC-APC
- UF-SM-PATCH-APC-APC

Each patch cable is available as a single-pack.

## Model Comparison



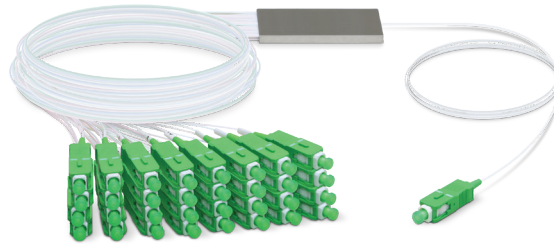
	UF-SM-PATCH-UPC-APC	UF-SM-PATCH-APC-APC
Connectors	(1) SC/UPC, (1) SC/APC	(2) SC/APC
Insertion Loss	≤ 0.3 dB	≤ 0.3 dB
Return Loss	UPC: ≥ 50 dB APC: ≥ 60 dB	≥ 60 dB
Cable Type	SM9/125 SX 2.0 mm, PVC Jacket, Yellow	SM9/125 SX 2.0 mm, PVC Jacket, Yellow
Connectors	(1) SC/UPC 2.0 mm SM SX Connector, Blue (1) SC/APC 2.0 mm SM SX Connector, Green	(2) SC/APC 2.0 mm SM SX Connector, Green
Total Length	1.5 m (59.1")	1.5 m (59.1")

## PLC Splitters

Ubiquiti offers four PLC splitters that provide from 4 to 32 outputs.

- UF-SPLITTER-4
- UF-SPLITTER-8
- UF-SPLITTER-16
- UF-SPLITTER-32

Each model is available as a single-pack.



UF-SPLITTER-32

## Model Comparison



	UF-SPLITTER-4	UF-SPLITTER-8	UF-SPLITTER-16	UF-SPLITTER-32
Input	(1) SC/APC	(1) SC/APC	(1) SC/APC	(1) SC/APC
Outputs	(4) SC/APC	(8) SC/APC	(16) SC/APC	(32) SC/APC
Insertion Loss with Connectors	7.4 dB	10.5 dB	13.7 dB	17.0 dB
Uniformity Loss	0.6 dB	0.8 dB	1.2 dB	1.5 dB
Polarization Dependent Loss	0.3 dB	0.3 dB	0.3 dB	0.3 dB
Wavelength Bandwidth	1260-1650 nm	1260-1650 nm	1260-1650 nm	1260-1650 nm
Return Loss (All Ports)	50 dB	50 dB	50 dB	50 dB
Directivity	55 dB	55 dB	55 dB	55 dB
Fiber Type	G657A1	G657A1	G657A1	G657A1
Operating Temperature	-40 to 85° C (-40 to 185° F)	-40 to 85° C (-40 to 185° F)	-40 to 85° C (-40 to 185° F)	-40 to 85° C (-40 to 185° F)
Total Length	4.06 m (13.32')	4.06 m (13.32')	4.06 m (13.32')	4.08 m (13.39')
Weight	58 g (2.0 oz)	62 g (2.2 oz)	110 g (3.9 oz)	160 g (5.6 oz)

## Adapter

Ubiquiti also offers an adapter, model UF-ADAPTER-APC, to connect cables with SC/APC-type connectors. The adapter is available in 50-packs.



UF-ADAPTER-APC

	UF-ADAPTER-APC
Connectors	(1) SC/APC
Insertion Loss	≤ 0.2 dB
Durability	< 0.2 dB typical change (1000 matings)
Operating Temperature	-40 to +85° C (-40 to +185° F)
Compliance	Telcordia, ANSI, TIA/EIA, NTT, and JIS
Dimensions	27.5 x 12.9 x 9.2 mm (1.08 x 0.50 x 0.36")

# Hardware Specifications

UF-OLT	
Dimensions	442.4 x 285.6 x 43.7 mm (17.42 x 11.24 x 1.72")
Weight (with Mount Brackets)	4.40 kg (9.70 lb) 4.495 kg (9.91 lb)
Networking Interfaces	(8) GPON OLT SFP (2) 1G/10G SFP+
Concurrent Clients	1024 Registered ONUs/ONTs (128 per GPON Port)
Management Interfaces	(1) Ethernet for Out-of-Band Management (1) RJ45 Serial Console Port
GPON Speeds	1.244 Gbps Upstream (TX) 2.488 Gbps Downstream (RX)
Operating Wavelengths	1490 nm TX 1310 nm RX
Normal Optical Power Range	TX (Class B+): 1.5 to 5 dBm RX: -28 to -8 dBm
Range	
Physical Reach	20 km
Logical Reach	60 km
Max. Differential Fiber Distance	20 km (B+) /40 km (C+)
Power Method	100-240VAC, 100W AC/DC Power Module (Included) 38-54VDC, 100W DC/DC Power Module (Optional)
Power Supply	(1) 25V, 100W AC/DC PSU Module (Included)
Max. Power Consumption	40W (Excluding SFP Modules)
Operating Mode	OLT 2/3 Ethernet Switch and GPON Core
Advanced QoS	Supports 8 Priority Queues per User Port and Traffic Classification
Processor Specs	MIPS 1004kc, 880 MHz Dual Core
Memory Information	512 MB DDR3, 512 MB NAND
Operating Temperature	-10 to 45° C (14 to 113° F)
Operating Humidity	10 to 90% Noncondensing
Certifications	CE, FCC, IC





# Hardware Specifications

UF-OLT-4	
Dimensions	299.80 x 258.95 x 42.55 mm (11.80 x 10.19 x 1.68")
Weight (with Mount Brackets)	1.93 kg (4.25 lb) 2.13 kg (4.70 lb)
Networking Interfaces	(4) GPON OLT SFP (1) 1G/10G SFP+
Concurrent Clients	512 Registered ONUs/ONTs (128 per GPON Port)
Management Interfaces	(1) Ethernet for Out-of-Band Management (1) RJ45 Serial Console Port
GPON Speeds	1.244 Gbps Upstream (TX) 2.488 Gbps Downstream (RX)
Operating Wavelengths	1490 nm TX 1310 nm RX
Normal Optical Power Range	TX (Class B+): 1.5 to 5 dBm RX: -28 to -8 dBm
Range	
Physical Reach	20 km
Logical Reach	60 km
Max. Differential Fiber Distance	20 km (B+) /40 km (C+)
Power Method	100-240VAC/50-60 Hz, Universal Input
Power Supply	AC/DC Internal 56W DC
Max. Power Consumption	35W (Excluding SFP Modules)
Operating Mode	OLT 2/3 Ethernet Switch and GPON Core
Advanced QoS	Supports 8 Priority Queues per User Port and Traffic Classification
Processor Specs	MIPS 1004kc, 880 MHz Dual Core
Memory Information	512 MB DDR3, 512 MB NAND
Operating Temperature	-10 to 45° C (14 to 113° F)
Operating Humidity	10 to 90% Noncondensing
Certifications	CE, FCC, IC



## Hardware Specifications

UF-Nano	
Dimensions	77 x 77 x 28 mm (3.03 x 3.03 x 1.1")
Weight	110 g (3.88 oz)
Networking Interface Speeds	(1) GPON WAN, ITU G.984, 2.488 Gbps Downstream, 1.244 Gbps Upstream (1) GbE LAN, 10/100/1000 Mbps
Management Interface	In-Band Ethernet/PON
Normal Optical Power Range	TX (Class B+): 1.5 to 5 dBm RX: -28 to -8 dBm
Power Method	Passive PoE (Pins +4, 5; -7, 8) Dying Gasp Support
Power Supply	PoE Adapter: 24V, 0.3A (Included)
Max. Power Consumption	7W
Supported Voltage Range	20V to 28V
Processor Specs	MIPS32, 240 MHz
Memory Information	128 MB DDR3
Buttons	(1) Display Information (1) Reset
Operating Temperature	-10 to 45° C (14 to 113° F)
Operating Humidity	5 to 95% Noncondensing
Certifications	CE, FCC, IC



# Hardware Specifications

UF-LOCO	
Dimensions	76.5 x 76.5 x 26.4 mm (3.01 x 3.01 x 1.04")
Weight	77 g (2.72 oz)
Networking Interface Speeds	(1) GPON WAN, ITU G.984, 2.488 Gbps Downstream, 1.244 Gbps Upstream (1) GbE LAN, 10/100/1000 Mbps
Management Interface	In-Band Ethernet/PON
Normal Optical Power Range	TX (Class B+): 1.5 to 5 dBm RX: -28 to -8 dBm
Power Method	Micro-USB: 5V, 1A 24V Passive PoE (Pins +4, 5; -7, 8)
Power Supply	Micro-USB Power Adapter*: 5V, 1A
Max. Power Consumption	3.5W
Supported Voltage Range	4.7 to 5.3V
Processor Specs	MIPS32, 240 MHz
Memory Information	128 MB DDR3
Buttons	(1) Reset
Operating Temperature	-10 to 45° C (14 to 113° F)
Operating Humidity	10 to 90% Noncondensing
Certifications	CE, FCC, IC

\* Included only in the single-pack of the UF-LOCO



Specifications are subject to change. Ubiquiti products are sold with a limited warranty described at: [www.ubnt.com/support/warranty](http://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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