POWER OVER FIBER

PoF Power Splitter

Optical Splitting with Remote Power Supply

Integrates optical splitting and remote power supply in one compact unit, delivering data and PoF power over optoelectronic composite cable to ONUs, MDUs and PON optical APs that are difficult to power.

MODELS

SP-POF-1-0-4 | SP-POF-1-1-4 | SP-POF-1-0-8 | SP-POF-1-1-8



1×4 · 1×8 STANDARD 1×5 · 1×9 WITH CASCADE	~30 W	1260–1650 nm	UPC / APC	802.3af/at
	MAX. PER PORT	WAVELENGTH RANGE	SC OPTICAL INTERFACE	IEEE PD COMPATIBLE

01 OVERVIEW

The UGRID PoF Power Splitter combines optical signal splitting with remote power supply. Over PoF optical power composite cable, it provides data transmission and remote power to terminal equipment at the same time, making it a practical way to serve ONUs, MDUs and PON optical APs where power is hard to obtain. Four models cover 1×4 and 1×8 splitting, plus 1×5 and 1×9 versions that add a cascade port to feed a further splitter. Compact and easy to deploy, it suits indoor access networks in enterprise parks, business buildings, schools and homes, and addresses both access-equipment power supply difficulties and cabling clutter.

Highly Versatile

Compatible with a wide range of terminal equipment that is difficult to power.

Voltage / Current Protection

Built-in voltage and current protection for stable operation.

Low Insertion Loss

Low insertion loss helps maintain signal integrity across the network.

IEEE 802.3af/at Compatible

54 V DC output, compatible with IEEE 802.3af/at powered devices.

DEPLOYMENT SCENARIOS

Enterprise | Business Buildings | Schools | Homes | ONU / MDU / PON AP

02 KEY FEATURES

- **Integrated functionality**
  Simultaneous data transmission and remote power supply over optoelectronic composite cable.
- **High versatility**
  Compatible with a wide range of terminal equipment that is difficult to power.
- **Advanced protection**
  Built-in voltage and current protection for stable operation.
- **Efficient performance**
  Low insertion loss to ensure signal integrity across the network.
- **IEEE 802.3af/at compatible**
  54 V DC output, compatible with IEEE 802.3af/at powered devices.

03 TYPICAL APPLICATION

The PoF Power Splitter takes the optical feed from the OLT and delivers data and remote power to ceiling-mounted ONUs or PON optical APs over PoF optical power composite cable. On the 1×5 and 1×9 models, the cascade port feeds a further PoF Power Splitter.

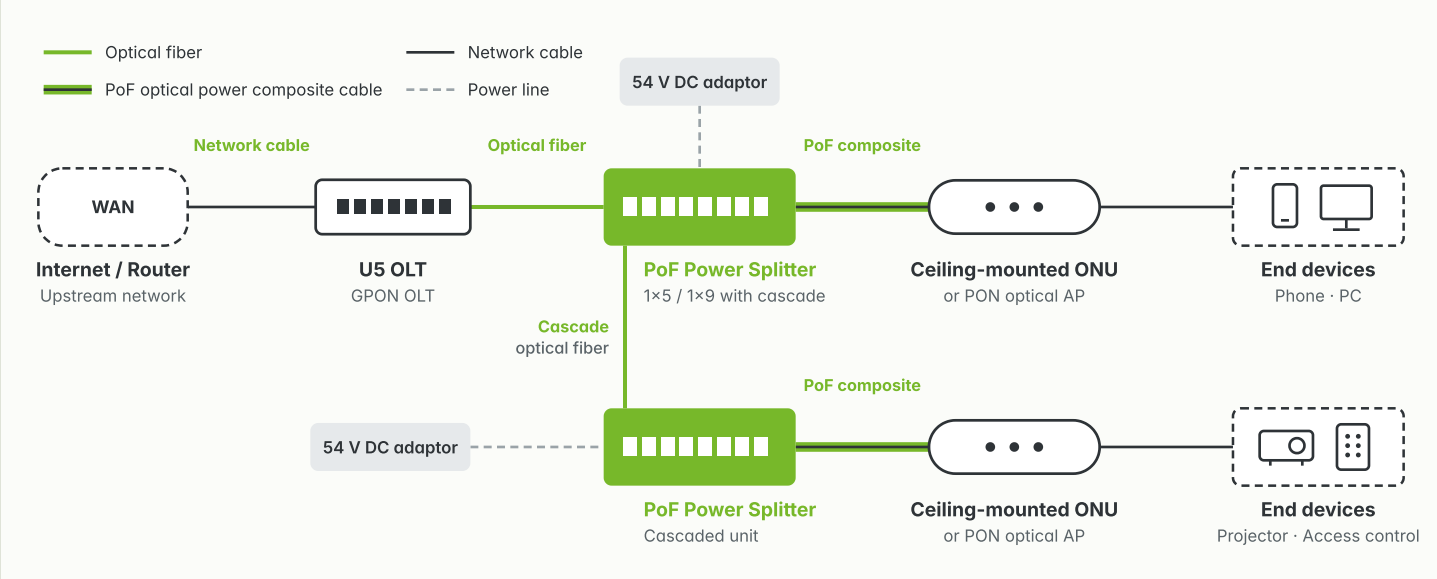


Figure 1 — PoF Power Splitter deployment with a cascaded second unit (PoF Power Splitters highlighted).

04 SPECIFICATIONS

PARAMETER	1×4 Splitter SP-POF-1-0-4	1×5 Splitter SP-POF-1-1-4	1×8 Splitter SP-POF-1-0-8	1×9 Splitter SP-POF-1-1-8
OPTICAL				
Insertion loss, output port (dB)	≤ 7.8	≤ 15.6	≤ 10.9	≤ 16.5
Insertion loss, cascade port (dB)	—	≤ 1.8	—	≤ 2.3
Uniformity (dB)	≤ 0.7	≤ 0.7	≤ 1.0	≤ 1.0
Polarization dependent loss, PDL (dB)	≤ 0.3	≤ 0.3	≤ 0.3	≤ 0.3
Return loss (dB)	≥ 50			
Directivity (dB)	≥ 55			
Operating wavelength range (nm)	1260 – 1650			
Interface type	SC/UPC or SC/APC (optional)			
PORTS & POWER				
Output ports	4×	4× + 1× cascade	8×	8× + 1× cascade
Output port type	PoF optical power composite cable port			
Number of power outputs	4	4	8	8
Max. power per port	About 30 W			
Power supply	≤ 60 W	≤ 60 W	≤ 130 W	≤ 130 W
AC-DC power adaptor	DC 54 V / 1.11 A	DC 54 V / 1.11 A	DC 54 V / 2.4 A	DC 54 V / 2.4 A
PoE compatibility	54 V DC output, compatible with IEEE 802.3af/at powered devices			
Protection	Built-in voltage and current protection			

04 SPECIFICATIONS (CONTINUED)

PARAMETER	1×4 Splitter SP-POF-1-0-4	1×5 Splitter SP-POF-1-1-4	1×8 Splitter SP-POF-1-0-8	1×9 Splitter SP-POF-1-1-8
ENVIRONMENTAL & PHYSICAL				
Operating temperature	−20 °C to +45 °C			
Storage temperature	−20 °C to +55 °C			
Dimensions	180 × 120 × 26 mm			
Installation	Desktop or wall mounted			

05 ORDERING INFORMATION

MODEL NUMBER KEY

SP-POF – **1** – **0 / 1** – **4 / 8**

- SP-POF: PoF power splitter
- 1: 1 optical input
- 0 / 1: Cascade output port (0 = none · 1 = one)
- 4 / 8: Output ports

PART NO.	DESCRIPTION	POWER CONFIGURATION
SP-POF-1-0-4	1×4 PoF power splitter: 4× output ports; about 30 W max. per port	AC-DC adaptor, DC 54 V / 1.11 A
SP-POF-1-1-4	1×5 PoF power splitter: 1× cascade output port, 4× output ports; about 30 W max. per port	AC-DC adaptor, DC 54 V / 1.11 A
SP-POF-1-0-8	1×8 PoF power splitter: 8× output ports; about 30 W max. per port	AC-DC adaptor, DC 54 V / 2.4 A
SP-POF-1-1-8	1×9 PoF power splitter: 1× cascade output port, 8× output ports; about 30 W max. per port	AC-DC adaptor, DC 54 V / 2.4 A

Optical interface: SC/UPC or SC/APC — specify when ordering.

06 REVISION HISTORY

REVISION	DATE	DESCRIPTION
R01	2026-11-02	Initial release.

Specifications are subject to change without notice. Product images are for illustration only. Actual performance may vary with network configuration and environment. © 2026 UGRID Network Inc. All rights reserved.