



Industrial single-pair Ethernet (SPE) devices

Support the growth of IIoT in demanding environments

Eaton's Tripp Lite series single-pair Ethernet (SPE) devices deliver 10 Mbps Ethernet connectivity up to 1000 meters over existing two-wire fieldbus infrastructure to bridge the gap between legacy Ethernet devices and modern IP-based networks.

The unmanaged SPE switch (model NFI-U04-SPE) and RJ45-to-SPE converter (model N785-001-SPE) carry data over a single pair of copper wires using standard Ethernet protocol. This allows a network to be extended from the server to field-level industrial Internet of Things (IIoT) devices without the high material and labor costs of installing new cabling infrastructure.

Long-distance transmission

When used with two-wire copper cabling, the SPE devices support 10BASE-T1L transmission up to 1000 meters (3280 feet), which is ten times farther than the maximum limit of standard four-pair cabling.

Designed for industrial environments

Built for cabinets or control panels, the SPE devices can withstand demanding environmental conditions in factories, warehouses and other industrial settings. The switch and the converter both have a pre-installed rail clip that mounts to a standard 35 mm DIN rail.

- Ruggedized metal case withstands vibration, shock and electromagnetic interference (EMI).
- IP30 rating indicates protection from solid objects.
- Wide operating temperature range allows equipment to function in cold and hot environments.



Easy to deploy

SPE simplifies connectivity deployment by eliminating complex wiring, allowing SPE devices to seamlessly deliver data to building automation systems, factory automation systems and IIoT devices.

- A 3-pin terminal block accommodates a wide range of wire gauges (24–12 AWG), which lets you easily terminate thicker 18 AWG and 16 AWG conductors.
- Low power consumption supports energy-efficient edge deployments.
- MDI/MDIX crossover detection allows the RJ45 ports to automatically detect and choose the connection required without using special crossover cables.
- The SPE switch (model NFI-U04-SPE) has an eight-position DIP switch for control of auto mode, clock scheme and leader/follower settings.

Intuitive monitoring

LEDs indicate system power and activity status.

TAA compliance

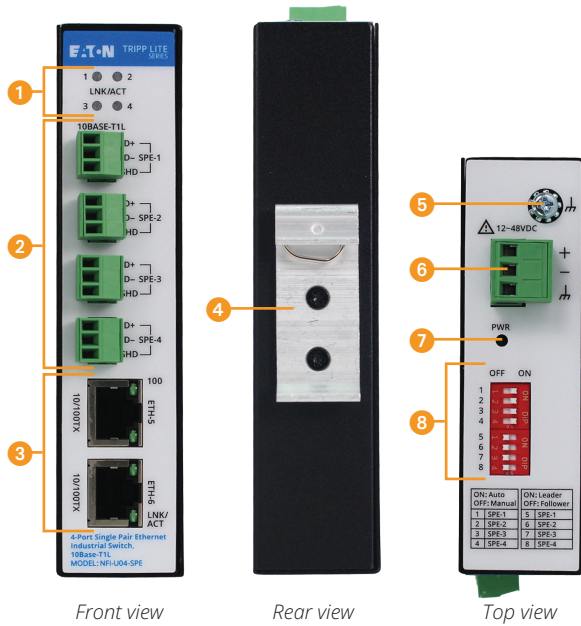
The SPE devices comply with the Federal Trade Agreements Act (TAA), making them eligible for GSA Schedule purchases.



Powering Business Worldwide

Feature focus

Industrial SPE switch Model: NFI-U04-SPE



- 1 Status LEDs
- 2 SPE terminal blocks (10BASE-T1L)
- 3 RJ45 Ethernet ports (10/100 Mbps)
- 4 DIN-rail clip

- 5 Grounding screw
- 6 Power input terminal block
- 7 Power LED
- 8 DIP switches

Industrial SPE media converter Model: N785-001-SPE



- 9 Wall-mounting slots
- 10 RJ45 Ethernet port (10 Mbps)

Specifications

Model	NFI-U04-SPE	N785-001-SPE
Product type	SPE switch	SPE media converter
Input voltage	12-48 VDC/0.25A	12-48 VDC/0.5A
Input connector	3-pin terminal block	3-pin terminal block
Power consumption (system only)	4W	3W
RJ45 ports	(x2) 10/100 Mbps	(x1) 10 Mbps
SPE ports	(x4) 10BASE-T1L	(x1) 10BASE-T1L
Switching capacity	480 Mbps	N/A
Supported distance	Up to 1000 m (3280 ft.)	RJ45: up to 100 m (328 ft.), SPE: up to 1000 m (3280 ft.)
Operating temperature range	-40° to 75° C (-40° to 167° F)	-40° to 75° C (-40° to 167° F)
IP rating	IP30	IP30
Mounting support	DIN-rail mount	DIN-rail mount or wall mount
Size (H x W x D)	136 x 31 x 105 mm (5.35 x 1.22 x 4.13 in.)	86.2 x 23.4 x 59.4 mm (3.4 x 0.9 x 2.3 in.)
Weight	493 g (1.09 lb.)	205.5 g (0.45 lb.)
Limited warranty	3 years	3 years

Due to continuous improvement programs, all specifications are subject to change without notice.

Visit **Eaton.com** to learn more about industrial network switches and media converters.

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