

## Industrial Single-Pair Ethernet (SPE) Media Converter - 10BASE-T1L, 10 Mbps, 1000 m, RJ45/Phoenix, -40° to 75°C, DC Power, TAA

MODEL NUMBER: N785-001-SPE



Delivers 10 Mbps Ethernet connectivity up to 1000 meters over one pair of copper wires, which reduces installation costs.

### Features

#### SPE Media Converter Routes Critical Network Traffic up to 1000 Meters

The N785001SPE enables longdistance Ethernet communications in Industrial Internet of Things (IIoT) environments where traditional fourpair Ethernet is impractical or too costly. Fully compliant with IEEE 802.3cg 10BASET1L, this industrial media converter delivers reliable 10 Mbps Ethernet connectivity up to 1000 meters over a single pair of copper wires.

#### Ideal for Industrial Applications

The N785001SPE allows legacy sensors, actuators, PLCs and IIoT edge devices to connect seamlessly into modern IPbased infrastructures, which eliminates material and labor costs associated with pulling new Cat5e/6 or fiber cabling. The unmanaged media converter's rugged, compact form factor and wide temperature tolerance make it ideal for factories, warehouses, building automation systems, surveillance networks and other harsh industrial environments.

#### Seamless Bridging Between SPE and RJ45 Networks

This point-to-point converter is a bridge between fieldlevel single-pair Ethernet (SPE) devices and standard RJ45 Ethernet networks. Using lightweight two-wire copper cabling, it supports 10BASE-T1L transmission up to 1000 meters, which is ten times farther than the maximum limits of standard four-pair cabling. It easily integrates with PLCs, industrial PCs, NVRs, switches and other Ethernet equipment.

#### Easy to Deploy and Inexpensive to Operate

This plug-and-play converter can be mounted on a DIN rail or a wall within a cabinet or rack enclosure. A robust 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 (3W) is ideal for energy-efficient edge deployments. Bypassing expensive fiber optic runs and minimizing complex, labor-intensive cable installations can drastically reduce your infrastructure costs.

#### Built to Withstand Harsh Environments

Designed for cabinet, control panel and field installations, the IP30-rated metal housing resists vibration, shock and electromagnetic interference (EMI). A wide range of operating temperatures from -40°F to 167°F (-40°C to 75°C) help make the N785001SPE a reliable operator in outdoor, surveillance, security, building maintenance and other extreme environments.

### Highlights

- Bridges single-pair Ethernet (SPE) devices to standard RJ45 Ethernet networks
- Enables costeffective IT/OT convergence using existing twowire fieldbus infrastructure
- Industrialgrade metal housing with wide -40°C to 75°C operating range
- DINrail or wall-mountable design for industrial control cabinets and edge deployments
- Compliant with the Federal Trade Agreements Act (TAA) for GSA Schedule purchases

### Package Includes

- N785-001-SPE Industrial SPE Media Converter
- DIN-rail mounting kit
- (2) Terminal blocks
- RJ45 rubber insert
- User documentation



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**TAA-Compliant for GSA Schedule Purchases**

The N785-001-SPE is compliant with the Federal Trade Agreements Act (TAA), which makes it eligible for GSA (General Services Administration) Schedule and other federal procurement contracts.

## Specifications

OVERVIEW	
UPC Code	037332300379
Product Type	Single Pair Ethernet (SPE) Media Converter
VIDEO	
Signal Range (m)	1000
POWER	
Power Source	Terminal Block- 3pin
Power Consumption (Watts)	3.00
CONNECTIONS	
Number of Ports	2
Ports Detail	(x1) RJ45 Ethernet Port & (x1)Single Pair Ethernet (SPE) Port
Side A - Connector 1	RJ45 (FEMALE)
Side B - Connector 1	SPE
PHYSICAL	
Color	Black
Material of Construction	Metal Shell
Housing Color	Black
Shipping Dimensions (hwd / in.)	2.44 x 5.04 x 6.42
Shipping Dimensions (hwd / cm)	6.20 x 12.80 x 16.31
Shipping Weight (lbs.)	0.71
Shipping Weight (kg)	0.32
Unit Dimensions (hwd / in.)	3.400 x 0.900 x 2.300
Unit Dimensions (hwd / cm)	8.64 x 2.29 x 5.84
Unit Dimensions (hwd / mm)	86.2 x 23.4 x 59.4
Unit Packaging Type	Box
Unit Weight (lbs.)	0.46
Unit Weight (kg)	0.21
Housing	Metal



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ENVIRONMENTAL	
Operating Temperature Range	-40° to 167°F (-40° to 70°C)
Storage Temperature Range	-40° to 185°F (-40° to 85°C)
Relative Humidity	5% to 90% RH, Non Condensing
COMMUNICATIONS	
Network Compatibility	10 Mbps
Transmission Distance	100M for RJ45 and 1000M for Single Pair Ethernet
IEEE Standards Supported	802.3; 802.3u; 802.3x
FEATURES & SPECIFICATIONS	
Data Transfer Rate	10 Mbps
Mounting Accessory Included	Yes
Auto MDIX Support	No
DIN Mountable	Yes
STANDARDS & COMPLIANCE	
Product Certifications	CSA (Canada); ICES (Canada); UL Listed
Product Compliance	IEEE 802.3 10Base-T; IEEE 802.3u 100Base-TX/FX; IEEE 802.3x Flow Control; Trade Agreements Act (TAA)
WARRANTY & SUPPORT	
Product Warranty Period (Worldwide)	3-year limited warranty

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