Owner’s Manual

Gigabit Fiber to Ethernet Media Converters with PoE

Models:
N785-P01-LC-MM1, N785-P01-SC-MM1,
N785-P01-SC-MM2, N785-P01-SC-SM1,
N785-P01-SFP

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Package Includes

- N785-P01-Series Media Converter
- External Power Supply with NEMA 1-15P Power Cord (100-240V)

Product Features

All Models:
- Convert your fiber network to a copper network with the addition of power
- Supports 10/100/1000 Mbps speeds
- Supports up to 100 m (328 ft.) over Cat5e/Cat6 cable to your PoE-compliant device
- IEEE 802.3af Power over Ethernet (PoE) and IEEE 802.3at compliant
- Auto identification of MDI/MDI-X
- Supports full-duplex and half-duplex modes
- LED indicators monitor Ethernet and Fiber link status
- Link Fault Pass Through (LFP) allows network personnel to quickly identify faults

<table>
<thead>
<tr>
<th>Model</th>
<th>Optical Fiber Connector</th>
<th>Wavelength</th>
<th>Mode</th>
<th>Max Distance from Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>N785-P01-LC-MM1</td>
<td>LC</td>
<td>850 nm</td>
<td>Multimode</td>
<td>550 m (1804 ft.)</td>
</tr>
<tr>
<td>N785-P01-SC-MM1</td>
<td>SC</td>
<td>850 nm</td>
<td>Multimode</td>
<td>550 m (1804 ft.)</td>
</tr>
<tr>
<td>N785-P01-SC-MM2</td>
<td>SC</td>
<td>1310 nm</td>
<td>Multimode</td>
<td>2000 m (6561 ft.)</td>
</tr>
<tr>
<td>N785-P01-SC-SM1</td>
<td>SC</td>
<td>1310 nm</td>
<td>Singlemode</td>
<td>20 km (12.4 mi.)</td>
</tr>
<tr>
<td>N785-P01-SFP</td>
<td>User-definable</td>
<td>Dependent on transceivers used</td>
<td>Dependent on transceivers used</td>
<td>Dependent on transceivers used</td>
</tr>
</tbody>
</table>

Accessories

All Models:
- N001-Series Cat5e Snagless Patch Cables
- N201-Series Cat6 Snagless Patch Cables

N785-P01-SFP Model Only:
- N286-01GSX-MDLC SFP to LC Multimode Transceiver (850 nm / 550 m)
- N286-01GLX-SLX SFP to LC Singlemode Transceiver (1310 nm / 10 km)
Installation

Notes:

- To avoid Electrostatic Discharge (ESD) damage, it is recommended you handle the product while wearing an ESD wrist grounding strap, or touch a conductive surface (such as metal) to discharge any potential ESD prior to handling the product.
- Before installation, verify your fiber equipment’s wavelength (850 nm or 1310 nm) and mode type (Single or Multi) matches that of the N785-P01-Series Media Converter.

1. Ensure all equipment in the installation is powered off.

2. (N785-P01-SFP Model Only): Install a user-supplied SFP transceiver that matches your fiber equipment’s credentials.
   
   Note: Your fiber equipment’s wavelength and mode type must match that of the N785-P01-Series Media Converter.

3. Using existing fiber cable from your network infrastructure, connect the media converter to your fiber network.

4. With a user-supplied Cat5e/Cat6 cable (up to 100 m / 328 ft.), connect your IEEE 802.3 af/at PoE-compliant device to the media converter’s 10/100/1000Base-T UTP port.
   
   Note: If your PoE-compliant device is farther than 100 m (328 ft.) away, moving DIP switch 3 (10M) to the ON position allows you to run an additional 230 m (750 ft.) of Cat5e/6 cable (up to 330 m / 1082 ft. away in total) at 10 Mbps speeds only.

5. Connect the included power supply to the media converter.

6. Turn on power to all equipment in the installation.
Note: DIP switches 2 and 4 have no function.

**DIP Switch 1 – Link Fault Pass Through (LFP)**
To enable the LFP function, move DIP switch 1 to the ON position.

**Link Fault Pass Through (LFP)**
LFP provides constant monitoring of the links connected to the media converter. If either the copper or fiber link fails, the media converter will pass the fail state through both links (copper and fiber), preventing the connected equipment from transmitting packets that would otherwise end up lost.

The LFP function includes both the LLCF (Link Loss Carry Forward) and LLF (Link Loss Return) functions. LLCF and LLR functions can immediately alarm network administrators to the problem of the link media and provide an efficient solution to monitor the network.

**Link Loss Carry Forward (LLCF)**
LLCF occurs when a device is connected to the converter and the TP (copper) line of the media converter loses the link, resulting in the media converter’s fiber to disconnect from the transmission link.

**Link Loss Return (LLR)**
LLR occurs when a device is connected to the converter and the FP (fiber) line loses the link, resulting in the media converter’s fiber to disconnect from the transmission link.

**DIP Switch 3 – 10M**
With DIP switch 3 in the ON position, the supported transfer distance of the RJ45 port changes to 330 m (1082 ft.) and the data transfer rate changes to 10 Mbps. This allows you to extend beyond the 100 m (328 ft.) limit while running at lower speeds. When in this mode, speeds of 100 and 1000 Mbps are not supported.
## LED Functions

<table>
<thead>
<tr>
<th>LED</th>
<th>Color</th>
<th>Status</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>PWR</td>
<td>Green</td>
<td>ON</td>
<td>The device is powered on</td>
</tr>
<tr>
<td>PoE</td>
<td>Green</td>
<td>ON</td>
<td>RJ45 port is providing DC 52V to the remote PoE device</td>
</tr>
<tr>
<td></td>
<td></td>
<td>OFF</td>
<td>RJ45 port is not providing DC 52V to the remote PoE device</td>
</tr>
<tr>
<td>SD</td>
<td>Green</td>
<td>ON</td>
<td>Fiber port is receiving optical signal</td>
</tr>
<tr>
<td></td>
<td></td>
<td>OFF</td>
<td>Fiber port is not receiving optical signal</td>
</tr>
<tr>
<td>000M</td>
<td>Green</td>
<td>ON</td>
<td>1000 Mbps speed</td>
</tr>
<tr>
<td></td>
<td></td>
<td>OFF</td>
<td>10/100 Mbps speed</td>
</tr>
<tr>
<td>L/A – TP</td>
<td>Green</td>
<td>ON</td>
<td>Indicates the RJ45 port link is operating at 10/100/1000 Mbps</td>
</tr>
<tr>
<td>L/A – FP</td>
<td>Green</td>
<td>Blinking</td>
<td>Indicates the PoE media converter is actively sending or receiving data over the RJ45 port</td>
</tr>
<tr>
<td></td>
<td></td>
<td>OFF</td>
<td>Indicates the RJ45 port link is not operating</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ON</td>
<td>Indicates the fiber port link is operating</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Blinking</td>
<td>Indicates the PoE media converter is actively sending or receiving data over the fiber port</td>
</tr>
<tr>
<td></td>
<td></td>
<td>OFF</td>
<td>Indicates the fiber port link is not operating</td>
</tr>
</tbody>
</table>
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2-YEAR LIMITED WARRANTY
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