

Technical Specifications






| | |
|--------------------------------|---|
| Maximum Operating Temperature: | 0° C to 40° C (32° F to 104° F) |
| Maximum Storage Temperature: | -25° C to 70° C (-13° F to 158° F) |
| Operating Altitude: | Up to 3,048 meters (10,000 feet) |
| Humidity: | 5% to 95% (non-condensing) |
| EMI/RFI: | FCC Class A, EN55022 Class A, EN61000-3-2, EN61000-3-3 |
| Safety: | UL 1950 (UL/cUL), EN60950, EN60825 |
| Immunity: | EN55024 Immunity Standard |

Electrical Safety and Emission Statement

Standards: This product meets the following standards.

| U.S. Federal Communications Commission |
|--|
| RADIATED ENERGY Note: This equipment has been tested and found to comply with the limits for a Class A digital device pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with this instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense. Note: Modifications or changes not expressly approved of by the manufacturer or the FCC, can void your right to operate this equipment. |

| Industry Canada |
|--|
| This Class A digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations. Cet appareil numérique de la classe A respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada. |

| | | |
|---|---|---|
|  | RFI Emission | EN55022 Class A, EN61000-3-2, EN61000-3-3 |
|  | WARNING: In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures. | |
|  | Immunity | EN55024 |
|  | Electrical Safety | TUV-EN60950, UL1950 (UL/cUL) |
|  | Laser | EN60825 |

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Allied Telesyn International Corp.
960 Stewart Drive, Suite B
Sunnyvale, CA 94085 USA
Tel 1 (408) 730-0950 • Fax 1 (408) 736-0100
Visit our web site at: www.alliedtelesyn.com



AT-PB1000 Series Gigabit Media Converters

Quick Install Guide

For use with the PowerBlade Chassis

Overview

The AT-PB1000 Series Gigabit Media Converter is designed for the PowerBlade Chassis. This media converter extends the distance of your network by converting Ethernet data between multimode and single-mode fiber optic cable. The media converters feature a 1000Base-SX port and a 1000Base-LX port. The 1000Base-SX port has a maximum operating distance of 550 meters (1,804 feet) while the 1000Base-LX port has a maximum operating distance of 10 kilometers (6.2 miles) up to 70 kilometers (43.4 feet) depending on the model. Both ports feature an SC connector and operate at 1000 Mbps in half-duplex or full-duplex mode.

Related Documents

This quick install guide is an abbreviated version of the installation procedure. For complete details on the features, functions and installation instructions, refer to the *PowerBlade Chassis Installation Guide*. This guide is available from Allied Telesyn's web site at www.alliedtelesyn.com.

Cable Specifications

The following table lists the cabling distances for the AT-PB1000 Series modules.

| Model | 1000Base-LX | | 1000Base-SX | |
|-------------|-------------------|-------------------------------|-------------------|-------------------------------|
| | Type of Connector | Maximum Distance ¹ | Type of Connector | Maximum Distance ² |
| AT-PB1001/1 | SC | 10 km (6.2 mi) | SC | 550 m (1,804 ft) |
| AT-PB1001/2 | SC | 20 km (12.4 mi) | SC | 550 m (1,804 ft) |
| AT-PB1001/3 | SC | 50 km (31 mi) | SC | 550 m (1,804 ft) |
| AT-PB1001/4 | SC | 70 km (43.4 mi) | SC | 550 m (1,804 ft) |

1. Assumes 10/125 micron single-mode fiber optic cable.
2. Assumes 50/125 micron multimode fiber optic cable.

The following table lists the IEEE 802.3u cabling specifications for the AT-PB1000 Series modules when operating in full-duplex mode.

| Port | Cable Type | Maximum Distance |
|--------------------|---|----------------------|
| 1000Base-SX | | |
| All Models | 62.5/125 μm multimode fiber | 275 m (902 ft) |
| | 50/125 μm multimode fiber | 550 m (1,804 ft) |
| 1000Base-LX | | |
| AT-PB1001/1 | 62.5/12 5 μm multimode fiber | 550 m (1,804 ft) |
| | 50/12 5 μm multimode fiber | 550 m (1,804 ft) |
| | 10/125 μm single-mode fiber | 10,000 m (32,800 ft) |
| AT-PB1001/2 | 10/125 μm single-mode fiber | 20 km (12.4 mi) |
| AT-PB1001/3 | 10/125 μm single-mode fiber | 50 km (31 mi) |
| AT-PB1001/4 | 10/125 μm single-mode fiber | 70 km (43.4 mi) |

Cabling specifications for half-duplex operation can be found in the *PowerBlade Chassis Installation Guide*.

Package Contents

Make sure the following items are included in your package. If any of these items are missing or damaged, contact your Allied Telesyn sales representative.

- One AT-PB1000 Series Gigabit Media Converter
- This quick install guide
- Warranty card

Installing the Media Converter

1. Remove a blank faceplate from an empty expansion slot on the front of the chassis. The module can be installed in any slot.
2. Remove the module from the shipping package and store the packaging in a safe place. Be sure to observe standard ESD precautions.
3. Slide the module into the expansion slot, aligning it with the guiderails, until it firmly connects to the chassis' backplane.
4. Secure the module to the chassis by tightening the thumbscrew.
5. Verify that the PR LED on the front of the module is green.
6. Set the ML/LT switch to the LT (Link Test) position.
7. Set the LT BB/LT SA button to either back to back or standalone, depending on your topology. Refer to the *PowerBlade Chassis Installation Guide* for additional information.
8. Remove the dust covers from the fiber optic connectors and connect the data cables.
9. Power ON the end nodes.

Note

End stations used with the media converter must operate with the same duplex mode (either both full-duplex or both half-duplex mode).

10. Check that the LK LEDs on both ports on the media converter are green. If the LEDs are OFF, refer to the *PowerBlade Chassis Installation Guide* for troubleshooting instructions.
11. If the link test is successful, set the ML/LT switch to the ML (MissingLink) position. The ML LED should be green. The media converter will not pass network traffic when a link test is being performed.
12. Repeat this procedure to install additional AT-PB1000 Series modules.

Status LEDs

| LED | Color | Description |
|--------------------|-------|---|
| System LEDs | | |
| PR | Green | Power is applied to the media converter. |
| ML | Green | The MissingLink feature is activated. |
| | OFF | The MissingLink feature is disabled and the media converter is operating in the link test mode. |
| Port LEDs | | |
| LK | Green | A link has been established on the port. |

Fiber Optic Port Specifications

| Port | Cable | Transmitter Output Power (dBm avg.) | Wavelength (nm) | Minimum Receiver Sensivity (dBm avg.) |
|--------------------|-------------------------------------|-------------------------------------|-----------------|---------------------------------------|
| 1000Base-SX | | | | |
| All Models | 50/125 or 62.5/125 micron multimode | -9.5 to -4.0 | 850 | -17.0 |
| 1000Base-LX | | | | |
| AT-PB1001 | 10/125 micron single-mode | -9.5 to -3.0 | 1310 | -20.0 |
| | 50/125 or 62.5/125 micron multimode | -11.5 to -3.0 | 1310 | -20.0 |
| AT-PB1001/2 | 10/125 micron single-mode | -3.0 to 0.0 | 1310 | -24.0 |
| AT-PB1001/3 | 10/125 micron single-mode | -5.0 to 0.0 | 1550 | -24.0 |
| AT-PB1001/4 | 10/125 micron single-mode | 0.0 to 5.0 | 1550 | -24.0 |