

Technical Specifications

Maximum Operating Temperature:	0° C to 40° C (32° F to 104° F)
Maximum Storage Temperature:	-20° C to 80° C (-4° F to 176° F)
Operating Altitude:	Up to 3,048 meters (10,000 feet)
Humidity:	5% to 80% (non-condensing)
EMC:	FCC Class A, EN55022 Class A, EN55024
Safety:	EN60825, EN60950, UL1950 (UL/cUL)

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



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 EN60950, UL1950 (UL/cUL)



Laser EN60825

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AT-PB200 Series Fast Ethernet Switches Quick Install Guide

For use in the PowerBlade Chassis

Overview

The AT-PB200 Series Fast Ethernet Switches are hot swappable modules for the PowerBlade Chassis. The AT-PB200 Series Switches are designed to interconnect LAN devices and subnetworks over large distances into an integrated network. These dual-port switches can also be used to improve the performance of your network by dividing it into smaller, more manageable segments. Each switch features a 10/100Base-TX twisted pair port and an 100Base-FX fiber optic port. The twisted pair port has an RJ-45 connector and a maximum operating distance of 100 meters (328 feet). The fiber optic port has a FJ, SC, ST, LC, MT-RJ, or VF-45 connector and a maximum operating distance of 2 kilometers (1.2 miles) to 100 kilometers (62 miles), depending on the model.

Related Documents

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

Cable Specifications

The following table lists the maximum operating distances for the AT-PB200 Series Switches.

Model	10/100Base-TX		100Base-FX	
	Connector	Maximum Distance ¹	Connector	Maximum Distance ²
AT-PB201	RJ-45	100 m (328 ft)	ST	2 km (1.2 mi)
AT-PB202	RJ-45	100 m (328 ft)	SC	2 km (1.2 mi)
AT-PB202/1	RJ-45	100 m (328 ft)	SC	15 km (9.3 mi)
AT-PB202/2	RJ-45	100 m (328 ft)	SC	40 km (24.8 mi)
AT-PB202/3	RJ-45	100 m (328 ft)	SC	70 km (43.4 mi)
AT-PB202/4	RJ-45	100 m (328 ft)	SC	100 km (62 mi)
AT-PB204	RJ-45	100 m (328 ft)	MT-RJ	2 km (1.2 mi)

Model	10/100Base-TX		100Base-FX	
	Connector	Maximum Distance ¹	Connector	Maximum Distance ²
AT-PB205	RJ-45	100 m (328 ft)	VF-45	2 km (1.2 mi)
AT-PB206	RJ-45	100 m (328 ft)	LC	2 km (1.2 mi)
AT-PB207	RJ-45	100 m (328 ft)	FJ	2 km (1.2 mi)

- Maximum distance can only be obtained when the UTP/STP cabling is installed and verified to TIA/EIA 568A Commercial Building Telecommunications Cabling Standard.
- Maximum distance for 100 Mbps Optical Datalinks is dependent on the following factors: type of optical fiber, duplex mode of both end-nodes, and maximum optical loss budget for each of the optical fiber at the operating optical wavelength.

The following table lists the cable specifications for the 100Base-FX fiber optic port when operating in full-duplex mode.

Model	Cable	Maximum Distance	Maximum Allowable Loss Budget
AT-PB201 AT-PB202 AT-PB204 AT-PB205 AT-PB206 AT-PB207	50/125 or 62.5/125 micron multimode	2 km (1.2 mi)	13 dB at 1310 nm
AT-PB202/1	50/125 or 62.5/125 multimode	2 km (1.2 mi)	13 dB at 1310 nm
	9/125 micron single-mode	15 km (9.3 mi)	16 dB at 1310 nm
AT-PB202/2	9/125 micron single-mode	40 km (24.8 mi)	30 dB at 1310 nm
AT-PB202/3	9/125 micron single-mode	70 km (43.4 mi)	37 dB at 1310 nm
AT-PB202/4	9/125 micron single-mode	100 km (62 mi)	37 dB at 1310 nm

The following table lists the cabling specifications for the 10/100Base-TX twisted pair port when operating in full-duplex mode.

Operating Mode	Cable	Maximum Distance
10Base-T	Shielded or unshielded Category 3 or better	100 m (328 ft)
100Base-TX	Shielded or unshielded Category 5 or better	100 m (328 ft)

Cable specifications for half-duplex operation and fiber optic port specifications can be found in the *PowerBlade Chassis Installation Guide*.

Package Contents

Make sure the following items are included in your package. If any item is missing or damaged, contact your Allied Telesyn sales representative for assistance.

- One AT-PB200 Series Switch Module
- This quick install guide
- Warranty card

Installing a Switch

- Remove a blank faceplate from an empty expansion slot on the front of the chassis. The module can be installed in any slot.
- Remove the module from the shipping package and store the packaging material in a safe place. Be sure to observe standard ESD precautions.
- Check the setting of the J6 jumper. If the chassis does not contain an AT-PBM02 management module, set the jumper to the Enabled (RIGHT) position. Refer to the *PowerBlade Chassis Installation Guide* for the jumper location.
- For the twisted pair port, set the AUTO NEG switch to either ON or OFF to enable or disable the auto-negotiation on the port. Refer to the *PowerBlade Chassis Installation Guide* for the location of the Auto-negotiation switch.
- Set the DIP switches to the appropriate settings. Refer to the *PowerBlade Chassis Installation Guide* for possible DIP switch settings.
- Slide the module into the expansion slot, aligning it with the guiderails until it firmly connects to the chassis' backplane.
- Secure the module to the chassis by tightening the thumbscrew.
- Verify that the PR LED on the switch is green. If the LED is OFF, refer to the *PowerBlade Chassis Installation Guide* for troubleshooting instructions.
- Remove the dust cover from the fiber optic port and connect the fiber optic cable to the 100Base-FX port. Verify that the module's transmitter port (TX) is connected to the end-node's receiver port (RX) and that the module's receiver port (RX) is connected to the end-node's transmitter port (TX).
- Connect the twisted pair cable to the 10/100Base-TX twisted pair port.
- Set the MDI/MDI-X button to the appropriate setting. Refer to the *PowerBlade Chassis Installation Guide* for additional information on the MDI/MDI-X button.
- Power ON the end-nodes.
- Check that the LK/AT LED for both ports on the module are green. If the LEDs are OFF, refer to *PowerBlade Chassis Installation Guide* for troubleshooting instructions.
- The module is now ready for use. Repeat this procedure to install additional AT-PB200 Series modules.

Refer to the *PowerBlade Chassis Installation Guide* for additional information.

Status LEDs

LED	Color	Description
PR	Green	Power is applied to the switch.
LK/AT	Green	A link has been established on the port.
	Blinking	Data is being transmitted or received on the port.
100M	Green	The port is operating at 100 Mbps.
	OFF	The port is operating at 10 Mbps.
FD	Green	The switch is operating in full-duplex mode.
	OFF	The switch is operating in half-duplex mode.
AUTO	Green	The 10/100Base-TX port is auto-negotiating.