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Santa Clara, CA 95054

Installing the BayStack 380 10/100/1000 Switch

NORTTEL
NETWORKS™

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Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the 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. If it is not installed and used in accordance with the instruction manual, it may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case users will be required to take whatever measures may be necessary to correct the interference at their own expense.

EN 55 022 Declaration of Conformance

This is to certify that the Nortel Networks BayStack 380 10/100/1000 Switch is shielded against the generation of radio interference in accordance with the application of Council Directive 89/336/EEC, Article 4a. Conformity is declared by the application of EN 55 022 Class A (CISPR 22).



Caution: This device is a Class A product. In a domestic environment, this device can cause radio interference, in which case the user may be required to take appropriate measures.

About this guide

This guide provides instructions to install the Nortel Networks* BayStack* 380 10/100/1000 switch on a table or in an equipment rack. For more detailed information about the switch, refer to *Using the BayStack 380 10/100/1000 Switch* (part number 212859-A).

This guide includes information about the following topics:

- Environmental requirements for the installation site (next)
- Installing the switch on a table ([page 5](#)) or in a rack ([page 6](#))
- Network connection requirements ([page 7](#))
- Connecting AC power ([page 9](#))
- Descriptions of LEDs ([page 9](#))
- Initial switch setup ([page 11](#))

Before you begin

Make sure the area where you will install and use the BayStack 380 Switch meets these environmental requirements:

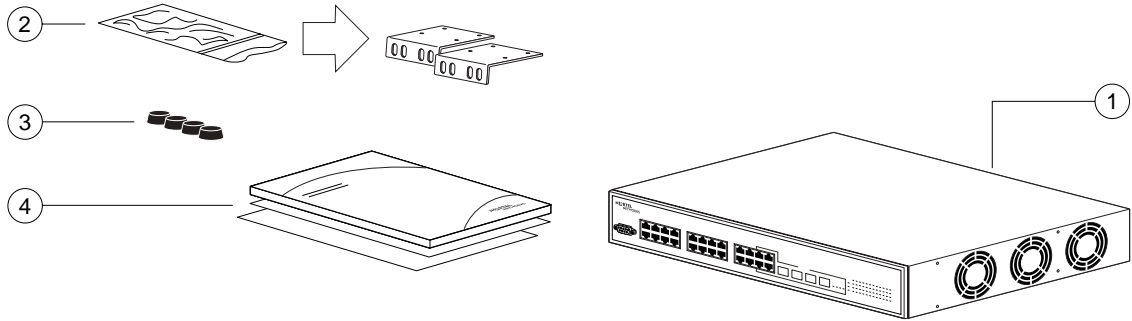
- Ambient temperature between 41° and 104° F (5° and 40° C)
- Relative humidity between 5% and 85% noncondensing
- No nearby heat sources such as hot air vents or direct sunlight
- No nearby sources of severe electromagnetic noise
- No excessive dust
- Adequate power source within six feet; one 15-Amp circuit required for each power supply
- At least 2 inches (5.08 cm) on each side of the switch unit for ventilation.
- Adequate space at the front and rear of the switch for access to cables.

If you are installing a single BayStack 380 Switch on a table or shelf, make sure the surface will support at least 5 to 10 pounds.



Note: The direction of air flow in the BayStack 380 switch is from left to right.

Package contents



10524FB

1 = BayStack 380 Switch

2 = Rack-mounting hardware:

- Rack-mount brackets
- Screws for attaching brackets to the switch
- Screws for attaching the switch to the equipment rack

3 = Rubber footpads

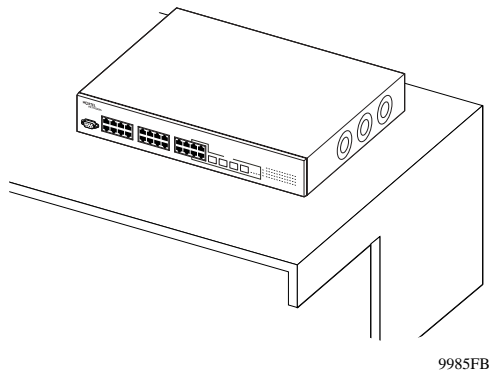
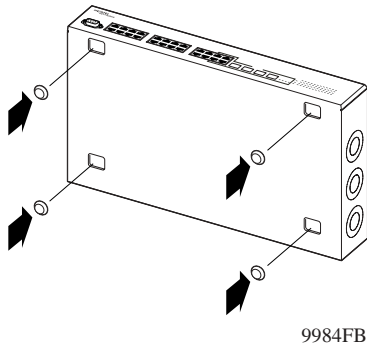
4 = Documentation Kit

- *Read Me First* sheet
- *Installing the BayStack 380 10/100/1000 Switch*
- Warranty
- Software license agreement
- Safety Instructions

Installing the switch on a table or shelf

You can install a single BayStack 380 Switch on any flat surface that can safely support the weight of the switch (5 to 10 pounds).

- 1 Attach the rubber feet at the marked locations.



- 2 Set the switch on a table or shelf.

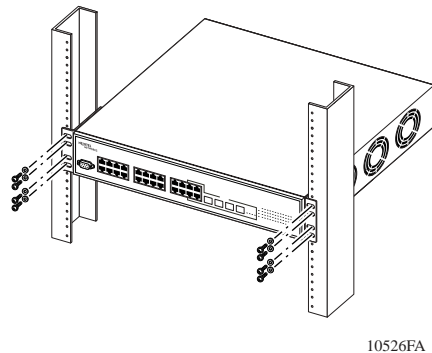
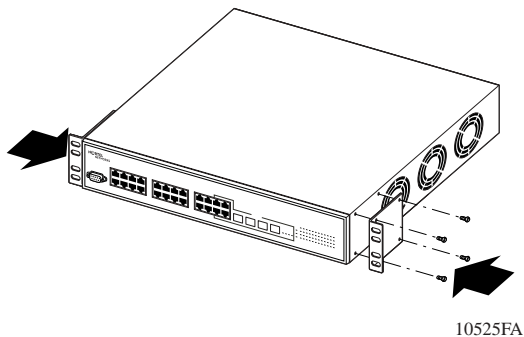
Allow at least 2 inches (5.1 cm) on each side for proper ventilation and at least 5 inches (12.7 cm) at the back for power cord clearance.

Installing the switch in an equipment rack

Required tool: Phillips screwdriver for attaching brackets to the switch

Rack requirements:

- A space of 2.8 inches is provided for each switch in an EIA or IEC standard 19-inch (48.2-centimeter) equipment rack.
- The rack is bolted to the floor and braced if necessary.
- The rack is grounded to the same grounding electrode used by the power service in the area. The ground path must be permanent and must not exceed 1 ohm of resistance from the rack to the grounding electrode.



- 1** Attach a bracket to each side of the switch.
The bracket with the round holes goes on the right side of the switch, where the round fan vents are located.
- 2** Slide the switch into the rack. Insert and tighten the rack-mount screws.

Connection requirements

Required cables:

10/100/1000 BASE-T ports:	For 10 Mb/s operation: Category 3, 4, or 5 UTP cable with an RJ-45 connector For 100/1000 Mb/s operation: Category 5 UTP cable with an RJ-45 connector
Console port:	Serial cable with DB-9 female connector on one end
Mini-GBIC ports:	Varies with the installed mini-GBIC; refer to the documentation that was shipped with the GBIC for specifications.



Note: Auto-MDI-X support is available for the RJ-45 ports on a switch when the ports are configured with auto-negotiation enabled. For example, if you connect a RJ-45 port on the BayStack 380 to a MDI-X port on another switch, and both ports are configured with auto-negotiation enabled, you can use a straight through cable. Otherwise, you must use a crossover cable.

Refer to the following tables for connector pin assignments.

Table 1 Pin assignments for MDIX ports for 10/100 operation


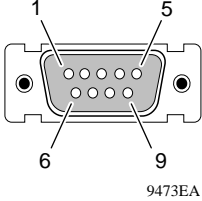
Connector	Pin number	Signal
 87654321 9464EA	1	Input receive data + (RX+)
	2	Input receive data - (RX-)
	3	Output transmit data + (TX+)
	4	Not applicable
	5	Not applicable
	6	Output transmit data - (RX-)
	7	Not applicable
	8	Not applicable

Table 2 Pin assignments in the Console port

Connector	Pin number	Signal
	1	Carrier detect (not used)
	2	Transmit data (TXD)
	3	Receive data (RXD)
	4	Data terminal ready (not used)
	5	Signal ground (GND)
	6	Not used
	7	Request to send (not used)
	8	Not used
	9	Ring indicator (not used)

For 1000BASE-T, all 8 pins are used for four pairs of bi-directional data.

[Table 3](#) lists the types of bi-directional data for each of the 1000BASE-T pin connectors.

Table 3 1000BASE-T Pin Connectors

Pin	Type of Data
1	Bi-directional data A+
2	Bi-directional data A-
3	Bi-directional data B+
4	Bi-directional data C+
5	Bi-directional data C-
6	Bi-directional data B-
7	Bi-directional data D+
8	Bi-directional data D-

Auto-polarity

The BayStack 380 Switch features auto-polarity. With autonegotiation enabled, auto-polarity automatically reverses the polarity of a pair of pins from positive to negative or negative to positive. This corrects the polarity of the received data if the port detects that the polarity of the data has been reversed due to a wiring error.

AC power specifications

Input current:	1.5A to 100 AC
Input voltage (rms):	100 to 240 VAC at 47 to 63 Hz
Power consumption:	150 W
Thermal rating:	1000 BTU/hr maximum

Checking LEDs

Refer to the illustration and tables that follow for descriptions of the LEDs on the BayStack 380 Switch. The tables describe LED operation for a switch that has completed its power-on self-tests.

Figure 1 BayStack 380 Switch LED display panel

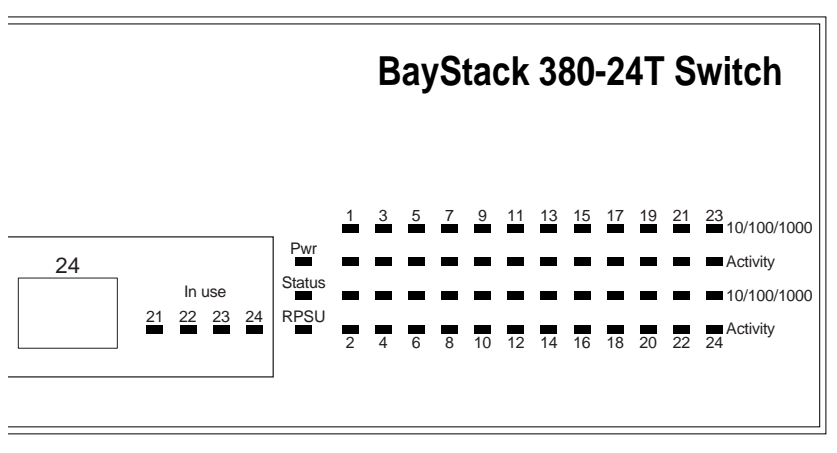


Table 4 BayStack 380 switch LED descriptions

Label	Type	Color	State	Meaning
Pwr	Power status	Green	On	DC power is available to the switch's internal circuitry.
			Off	No AC power to switch or power supply failed.
Status	System status	Green	On	Self-test passed successfully and switch is operational.
			Blinking	A nonfatal error occurred during the self-test. (This includes nonworking fans.)
			Off	The switch failed the self-test.
RPSU	RPSU status	Green	On	The switch is connected to the RPSU and can receive power if needed.
			Off	The switch is not connected to the RPSU or RPSU is not supplying power.
10/100/ 1000	Speed indicator	Alternating Green/Amber	On	The corresponding port is set to operate at 10 Mb/s, and the link is good.
			Blinking	The corresponding 10 Mb/s port has been disabled by software.
		Amber	On	The corresponding port is set to operate at 100 Mb/s, and the link is good.
			Blinking	The corresponding port has been disabled by software.
			Off	The link connection is bad, or there is no connection to this port.
		Green	On	The corresponding port is set to operate at 1000 Mb/s and the link is good.
			Blinking	The corresponding 1000 Mb/s port has been disabled by software.
			Off	The link connection is bad, or there is no connection to this port.
		Link	Link status	Green
Off	The communications link connection is bad or there is no connection to this port.			
Blinking	The corresponding port is management disabled.			
Activity	Port activity	Green	Blinking	Indicates network activity for the corresponding port. A high level of network activity can cause the LEDs to appear to be on continuously.



Note: The speed indicator LED for a port operating at 10 Mb/s is solid amber for 5 seconds, then switches to green for 1 second. It alternates in this way while the switch is on.

Initial switch setup

The BayStack 380 Switch begins switching as soon as you attach network devices and connect the switch to power. To manage the switch over the network or to perform TFTP operations, you must set certain IP parameters. Refer to *Using the BayStack 380 10/100/1000 Switch* for more information about the console menus and configuring your switch.

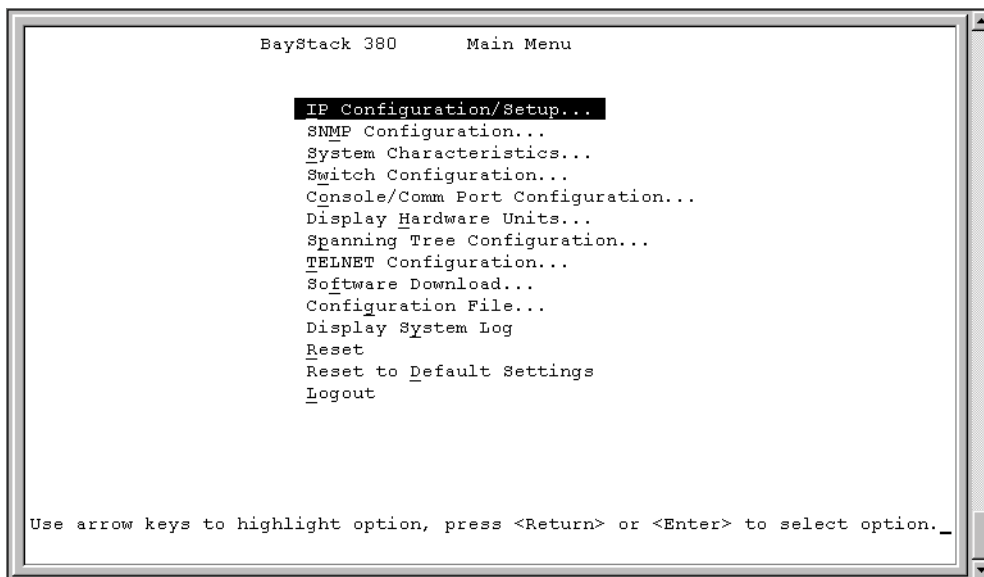
Setting IP parameters

For the initial setup of a standalone switch, you must set the following IP parameters:

- IP address of the switch
- Subnet mask
- Gateway address.

To set the IP parameters:

- 1** Connect a terminal to the Console port on a standalone switch.
Set the terminal protocol as described in *Using the BayStack 380 10/100/1000 Switch*.
- 2** Connect the switch to power.
- 3** After the Nortel Networks logo is displayed, press [Ctrl]-Y to display the Main Menu.
The screen displays the Main Menu for the switch.

Figure 2 BayStack 380 Main Menu screen

- 4 Select IP Configuration/Setup (or press i) to display the IP Configuration/Setup menu.



Note: The default management VLAN in the BayStack 380 Switch is VLAN 1. To manage the switch, make sure the network management station is on the management VLAN or is connected to the management VLAN through routers.

Figure 3 IP Configuration/Setup screen

IP Configuration/Setup

BootP Request Mode: [BootP Disabled]

	Configurable -----	In Use -----	Last BootP -----
In-Band Switch IP Address:	[0.0.0.0]		0.0.0.0
In-Band Subnet Mask:	[0.0.0.0]	0.0.0.0	0.0.0.0
Default Gateway:	[0.0.0.0]	0.0.0.0	0.0.0.0
IP Address to Ping:	[0.0.0.0]		
Start Ping:	[No]		

Use space bar to display choices, press <Return> or <Enter> to select choice.
Press Ctrl-R to return to previous menu. Press Ctrl-C to return to Main Menu.

- 5 In the In-Band Switch IP Address field, enter the IP address of the switch in dotted-decimal notation.



Note: If the In-Band Subnet Mask field does not already contain a value when you enter the IP address in the In-Band IP Address field, the switch software provides an in-use default value for the In-Band Subnet Mask field. This value is based on the class of the entered IP address.

- 6 In the In-Band Subnet Mask field, enter the IP subnet mask address.
- 7 In the Default Gateway field, enter the default gateway address.

