Connectivity Quick Reference

for the HP AdvanceStack Switch 2000

100VG Connectivity

- **Basic Configuration Guidelines:**

To connect to	Set 100VG Port Mode to
Network device	Auto Detect
PC or workstation	Master

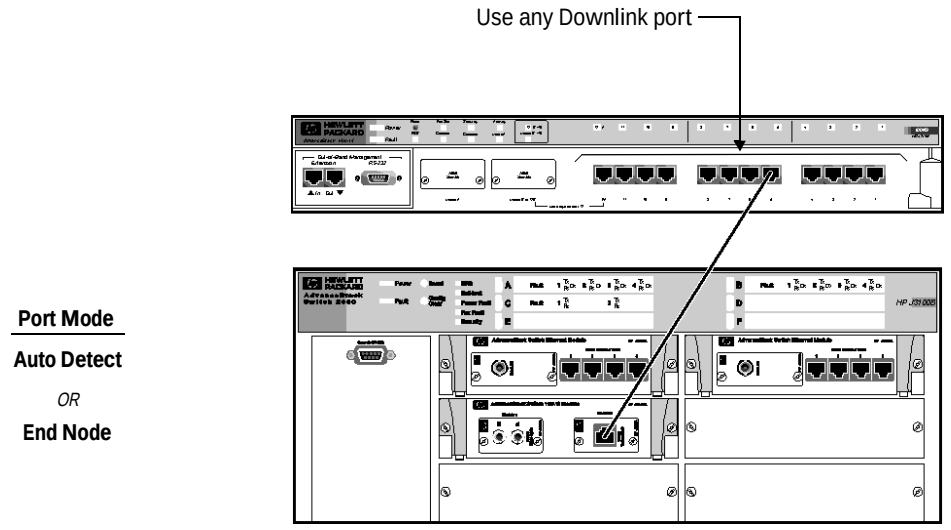
The default Mode setting for the 100VG ports on the Switch 2000 and Switch-16 is **Auto Detect**. When connecting these switches to other network devices, such as hubs or other switches, the **Auto Detect** setting works in most cases and should be tried before making any configuration changes. When connecting these switches to PCs and workstations that have HP 10/100VG LAN Adapters, HP recommends setting the Mode to **Master**.

Other allowable Mode settings are shown in the illustrations on the following pages under “Port Mode”. The port Mode can be set through the Configuration menu using the Switch 2000 console interface.

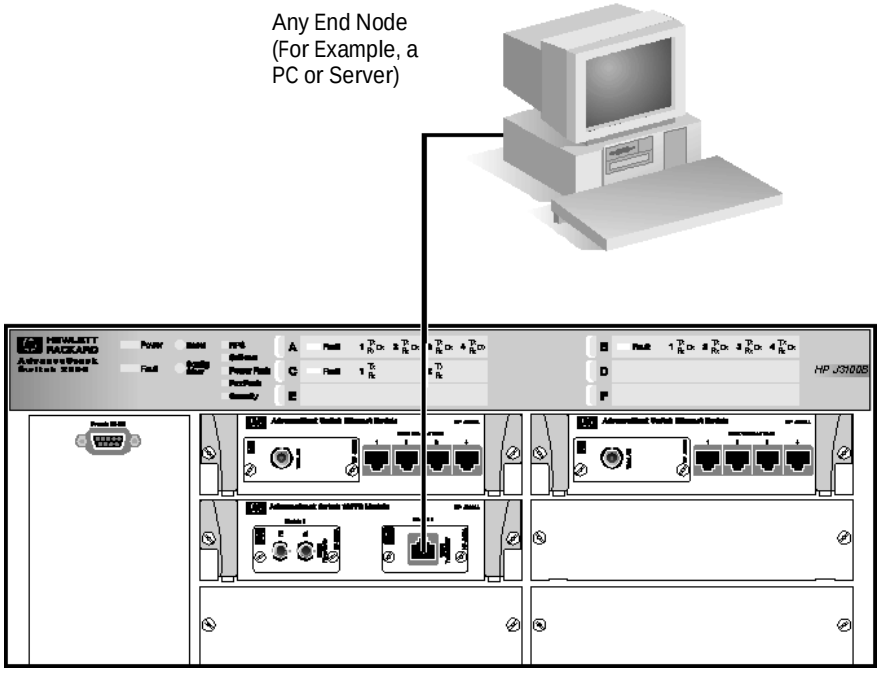
- **Connections:** *100VG ports on the Switch 2000* ***must not*** *be connected to any 100VG ports labeled “Uplink”. These ports are reserved for hub-to-hub connections.*

  Note that the illustrations show only twisted-pair connections; devices supporting fiber-optic connections are connected similarly.

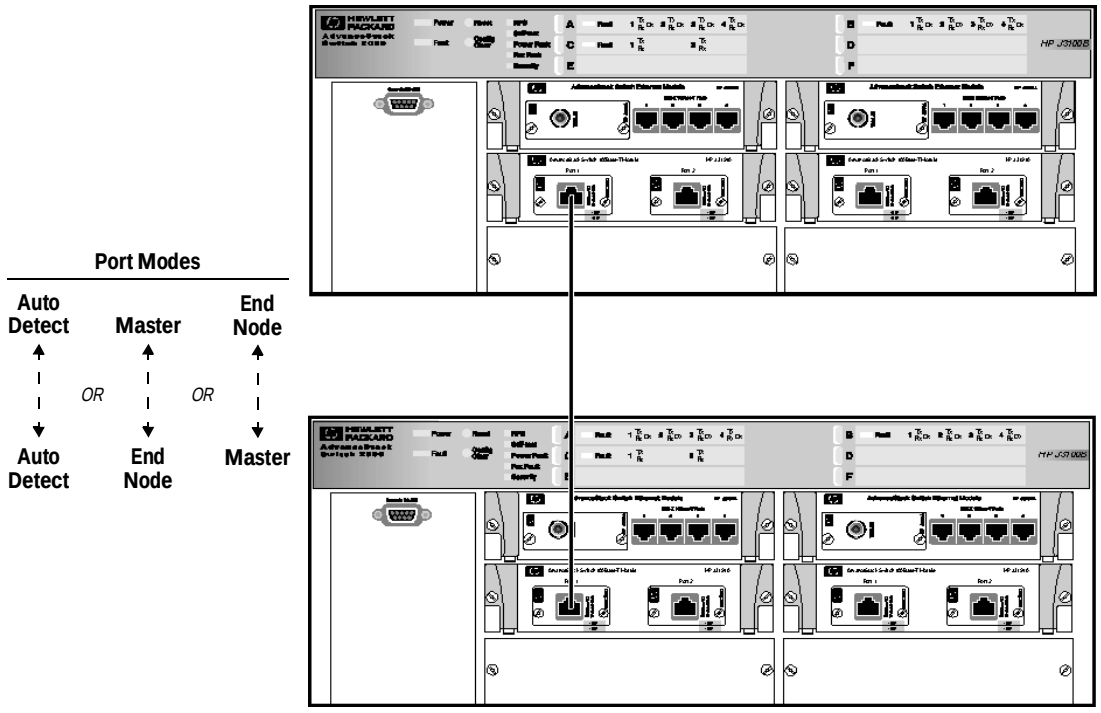
Switch 2000 to 100VG Hub



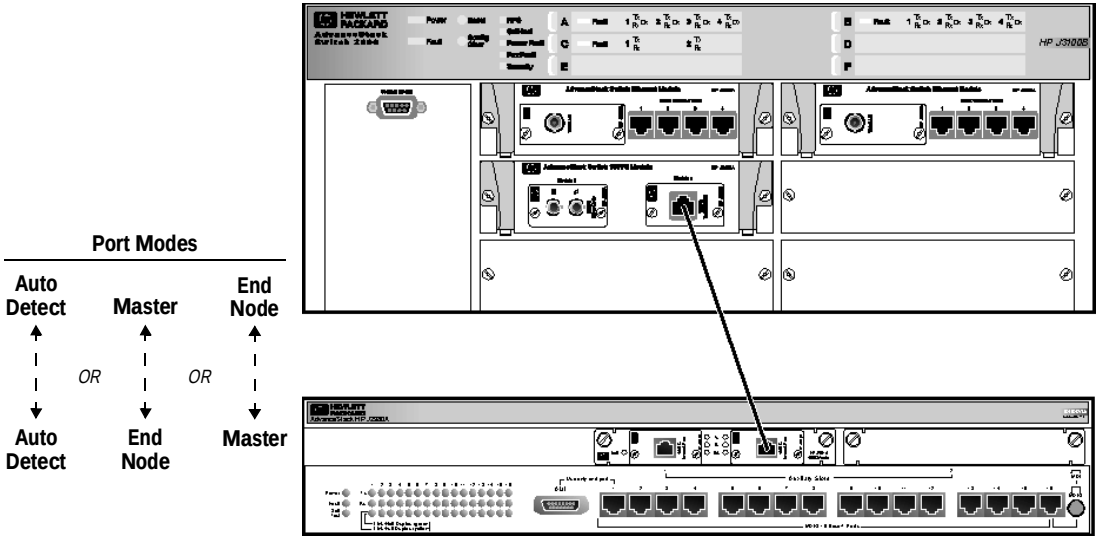
Switch 2000 to PC



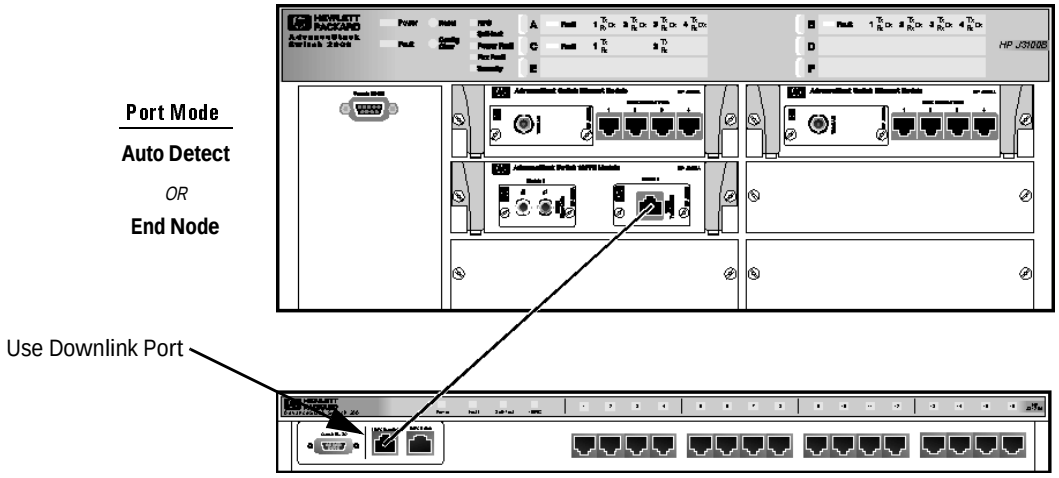
Switch 2000 to Switch 2000



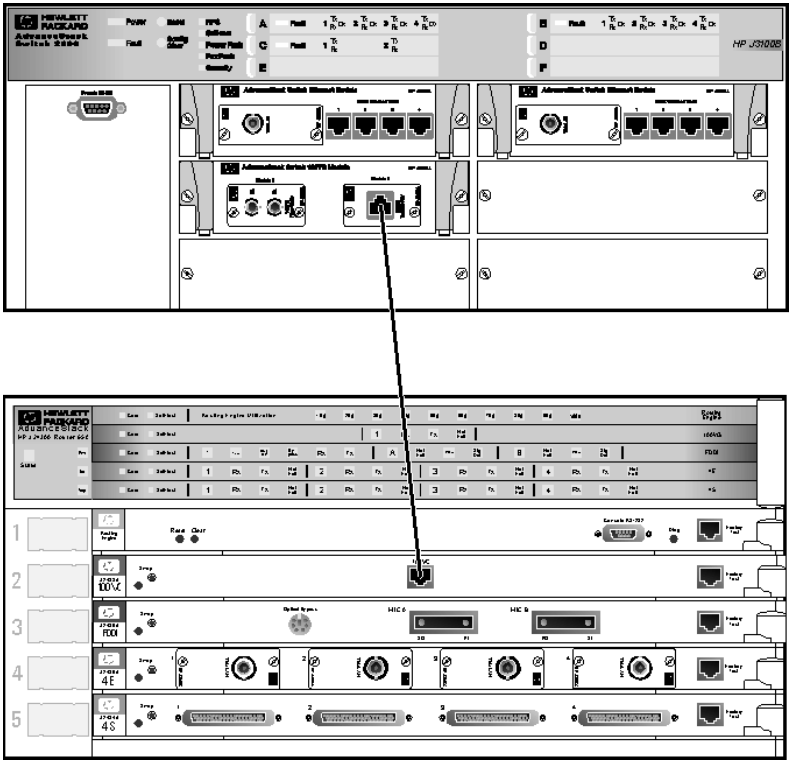
Switch 2000 to Switch-16



Switch 2000 to Switch 200



Switch 2000 to Router 650



UTP Ethernet/10Base-T Connectivity

Ethernet connectivity includes twisted pair (UTP) cabling (below), and fiber-optic cabling (page 9).

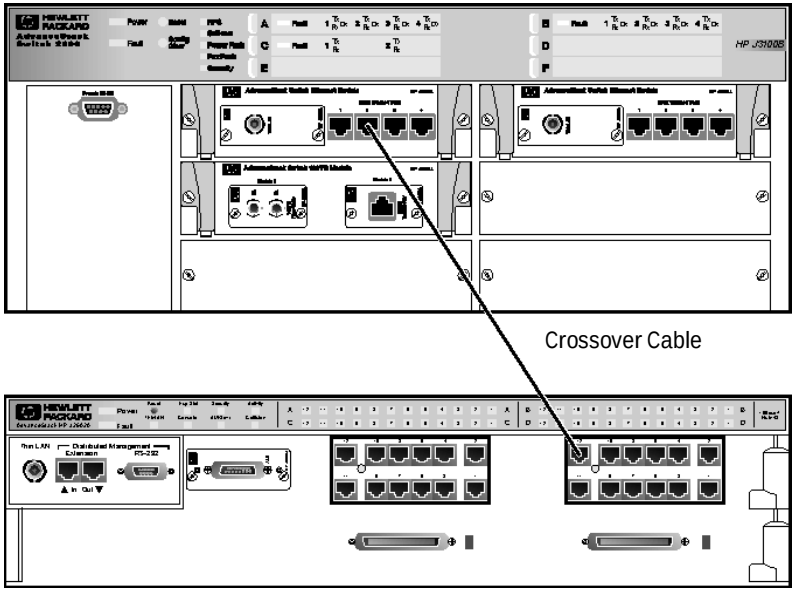
Twisted Pair Cabling

The Ethernet module for the Switch 2000 has 10Base-T ports that operate as MDI-X ports, and a slot to install a 10Base-T transceiver that operates as an MDI port.

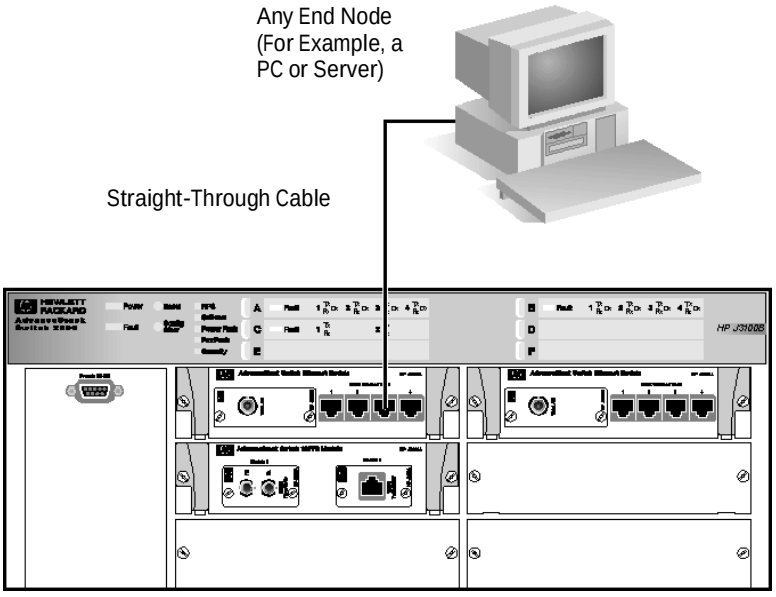
- **MDI-X Operation:** The four 10Base-T ports built into the module are designed for MDI-X operation (that is, for connecting end nodes to the switch). Thus, if you connect any of these ports to an MDI-X port on another device, use a “crossover” cable. But if the connection is to an MDI port, use a “straight-through” cable.
- **MDI Operation:** An optional 10Base-T transceiver in the transceiver slot operates in MDI mode (that is, for connecting hubs or other switches to the Switch 2000). In this case, use a “straight-through” cable to connect the transceiver to an MDI-X port on another device, or a “crossover cable” to connect the transceiver to another transceiver or other MDI port on another device.

Note that if the connection from the 10Base-T transceiver is to another HP 10Base-T transceiver (requiring a crossover cable), the “long cable” option can be set on both transceivers, allowing the connection to be up to 200 meters. See the transceiver documentation for more information. (For more on straight-through and crossover cables, see appendix A, “Cables and Connectors”, in the *HP AdvanceStack Switch 2000 Installation Guide*.)

Switch 2000 to AdvanceStack 10Base-T 48-Port Hub

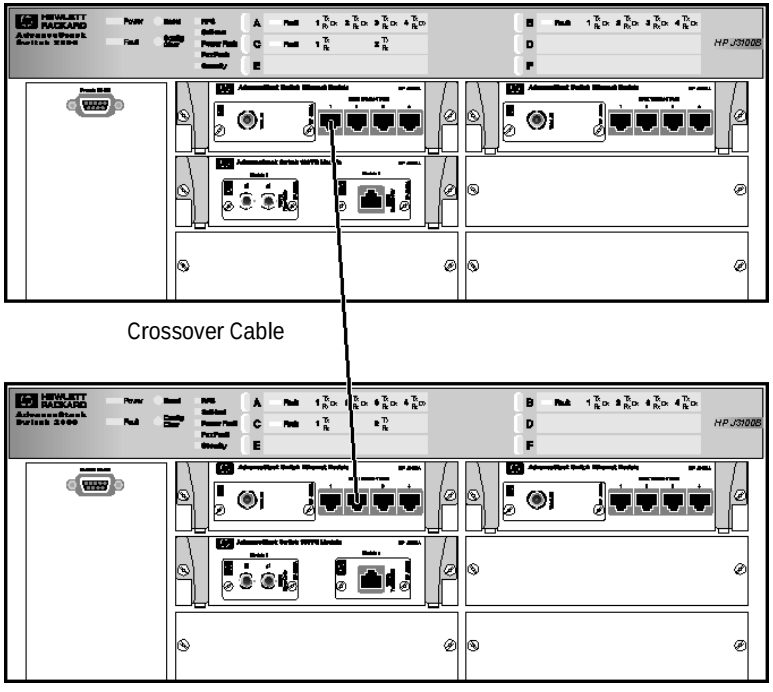


Switch 2000 to PC

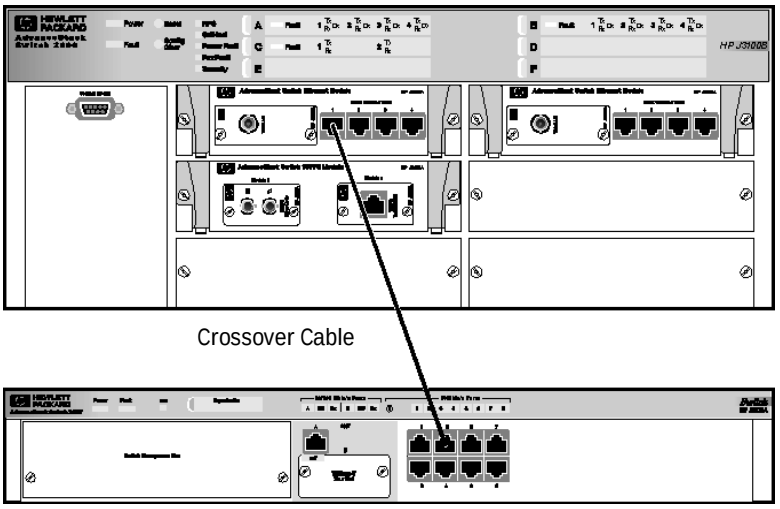


Switch 2000 to Switch 2000, Switch-16, or Switch 200

Note: This illustration also applies when connecting a Switch 2000 to a Switch-16 or a Switch 200.



Switch 2000 to Switch 208T



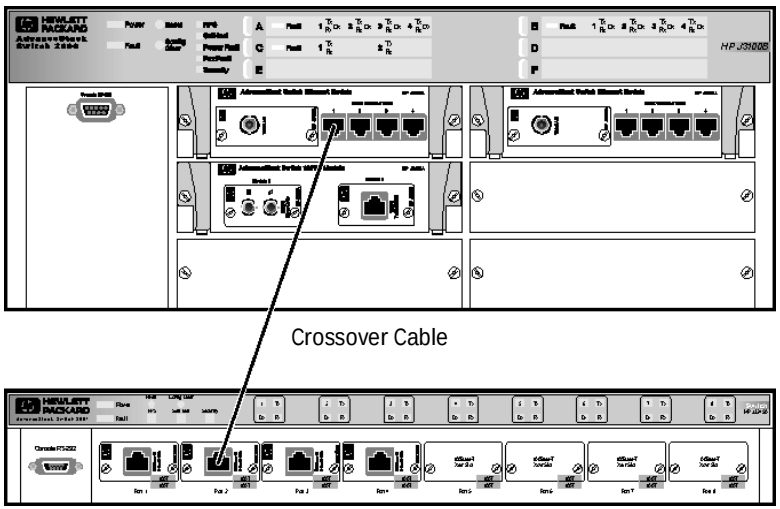
Switch 2000 to Switch 800T

Illustrates use of Switch 800T's 10/100 capability for a 10 Mbit/connection.

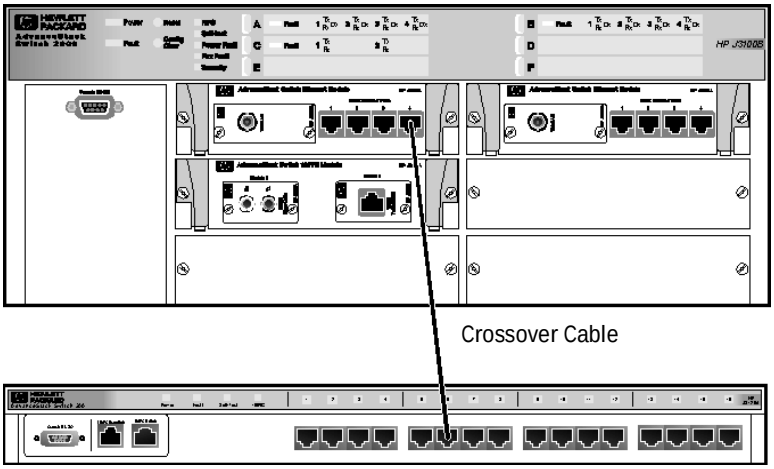
Port Mode

Switch 2000: Half Duplex
Switch 800T: Auto Detect or **10/Half Dx**

Switch 2000: Full Duplex
Switch 800T: Auto Detect or **10/Full Dx**

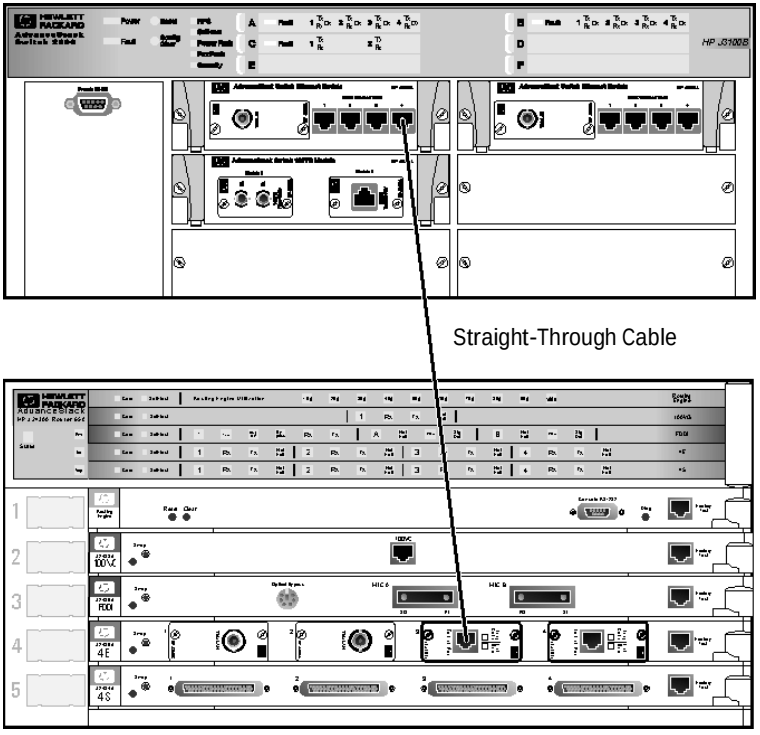


Switch 2000 to Switch 200



Switch 2000 to Router 650

Note: As shown in this illustration, a straight-through cable is used to connect the Router 650 to a built-in RJ-45 port in the Switch 2000 Ethernet module. If the connection from the Router 650 is to a 10Base-T transceiver in the Switch 2000 Ethernet module, use a crossover cable instead.

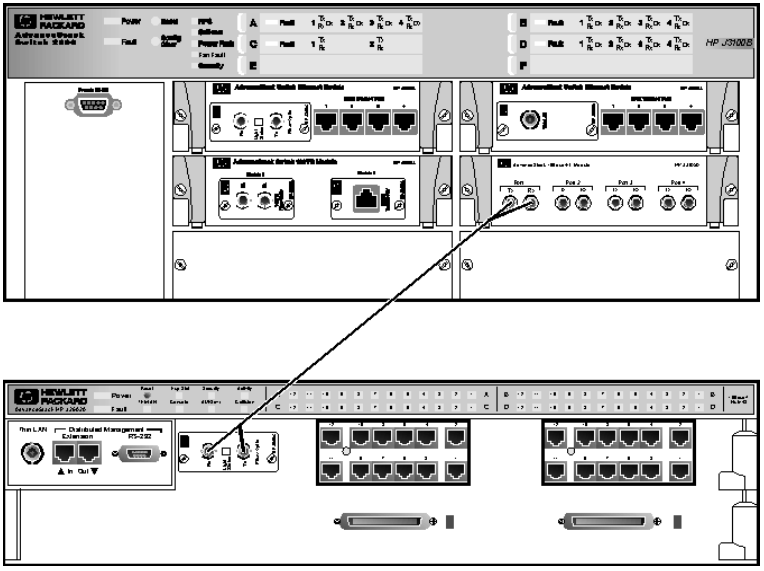


Fiber Optic 10Base-FL Connectivity

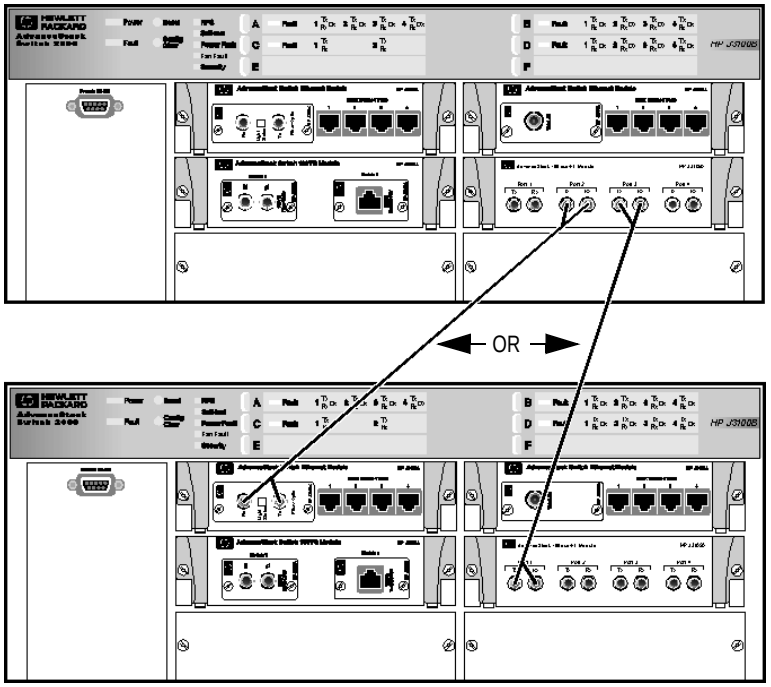
The 10Base-FL module for the Switch 2000 has four ports offering half-duplex or full-duplex operation. The module supports the following fiber cable and connector types:

- 62.5/125 µm multimode graded-index fiber cable
- ST connectors

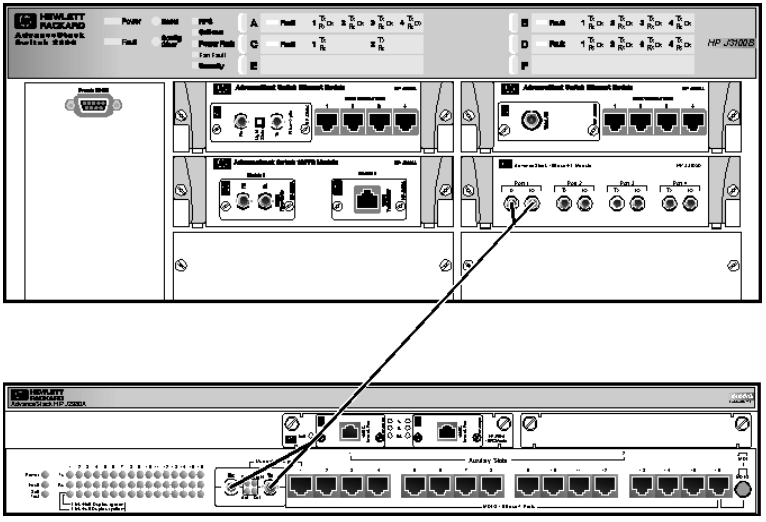
Switch 2000 to an AdvanceStack Hub



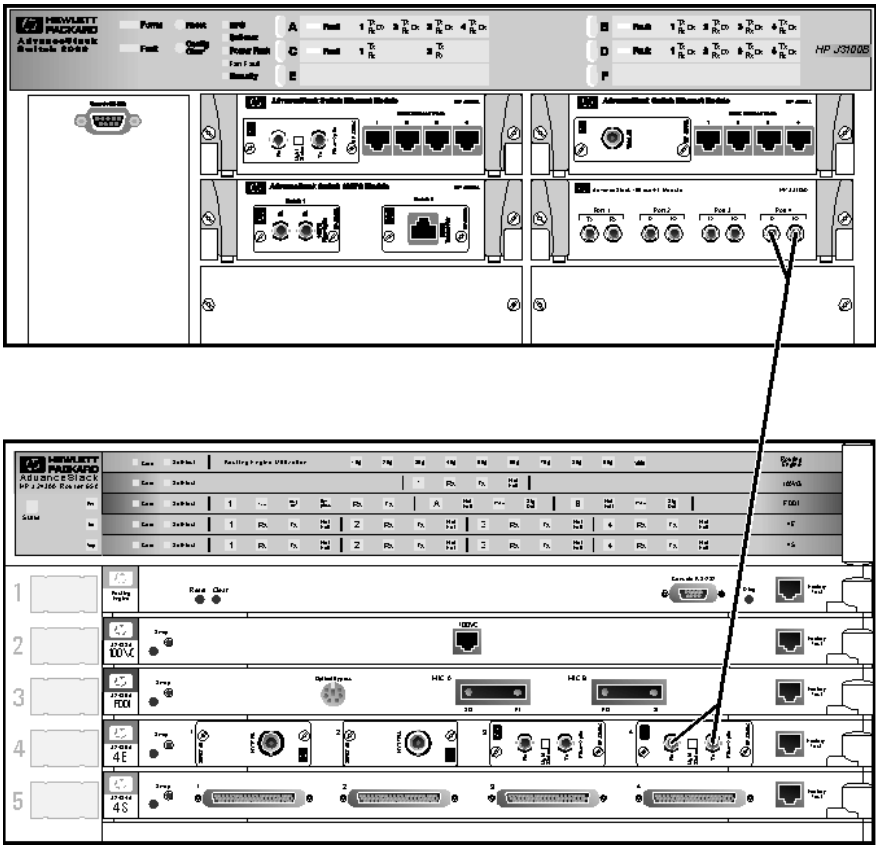
Switch 2000 to Another Switch 2000



Switch 2000 to a Switch-16



Switch 2000 to a Router 650



100Base-T Connectivity

The 100Base-T Module for the Switch 2000 enables up to two ports offering half-duplex or full-duplex operation with options for either twisted-pair (UTP) cabling (below) or fiber-optic cabling (page 16).

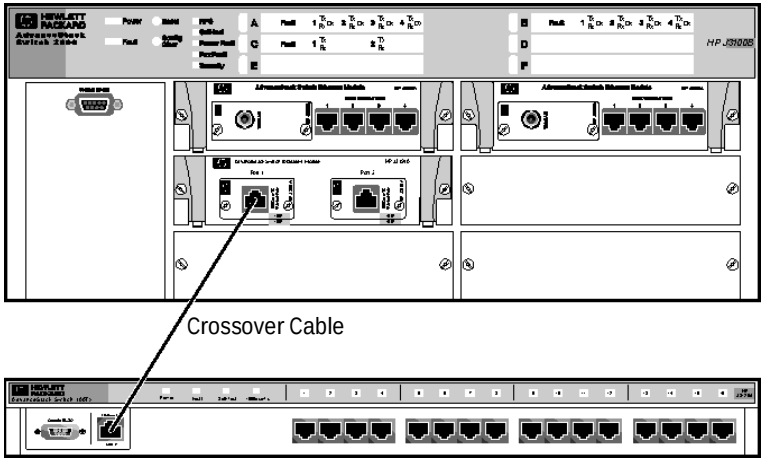
Note: The 100Base-T Module can also be configured for 10Mbit/s operation using the HP J3192A/B 100Base-TX Twisted-Pair Transceiver Module. Cabling is done in the same way as shown in the "Twisted Pair Cabling" section that begins on page 5. *A "Caution" similar to the one below applies to such connections*.

Caution: For any connection between a pair of 100Base-T ports, ensure that both ports are configured the same. For example, network speed and the transfer mode (full- or half-duplex) should be the same for both ports. If Auto Negotiation is used between the ports, *both* ports must comply with the IEEE 802.3u "Auto-Negotiation" standard. Configuration differences or use of devices that are not standards-compliant could result in significant network errors. For more information, refer to the online Help included in the Switch 2000 console interface.

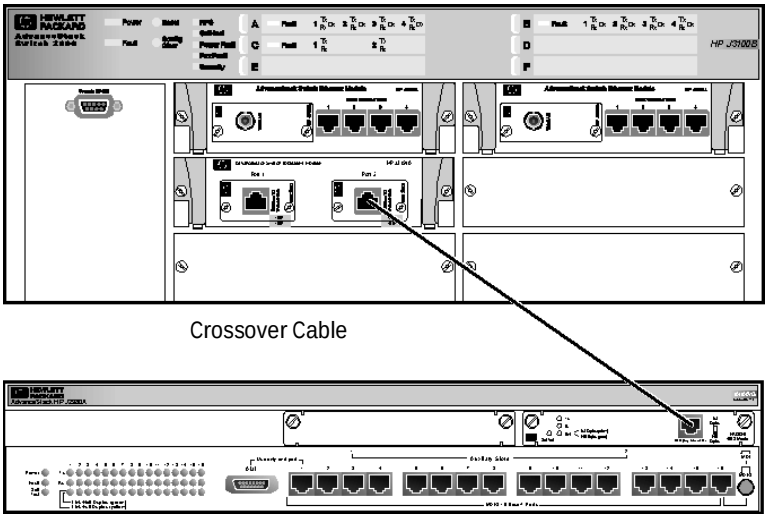
UTP 100Base-T Cabling

The 100Base-T Module for the Switch 2000 has two slots for installing HP J3192A/B 100Base-TX Twisted-Pair Transceiver Modules. These transceivers require category 5 UTP cable and offer half-duplex or full-duplex operation at either 10 Mbit/s or 100 Mbit/s speeds. (Refer to the manual provided with the transceiver.)

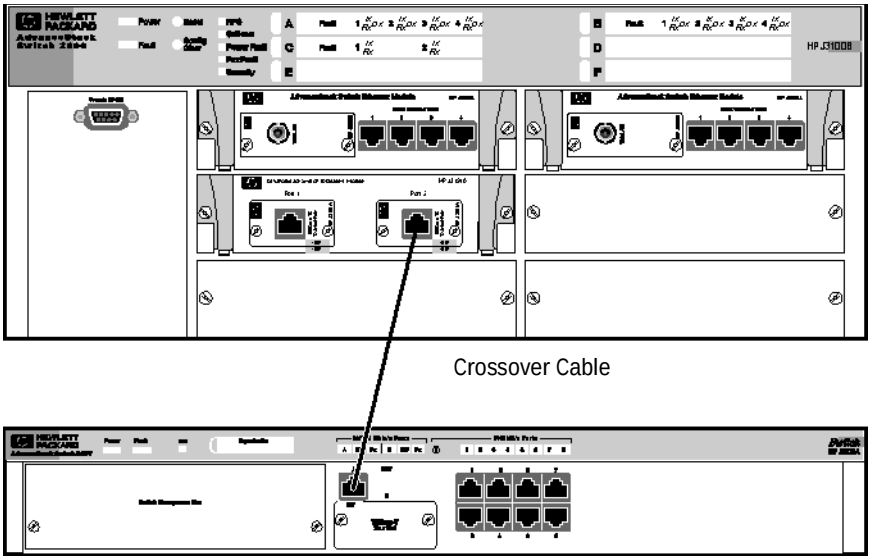
Switch 2000 to Switch 100



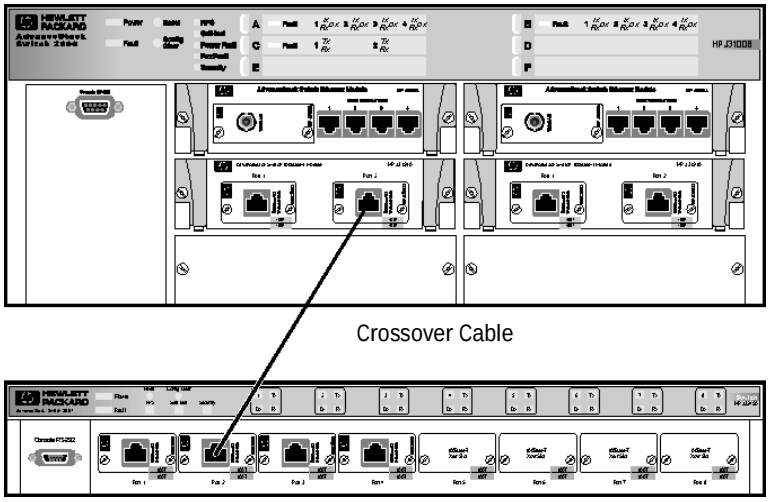
Switch 2000 to Switch 16



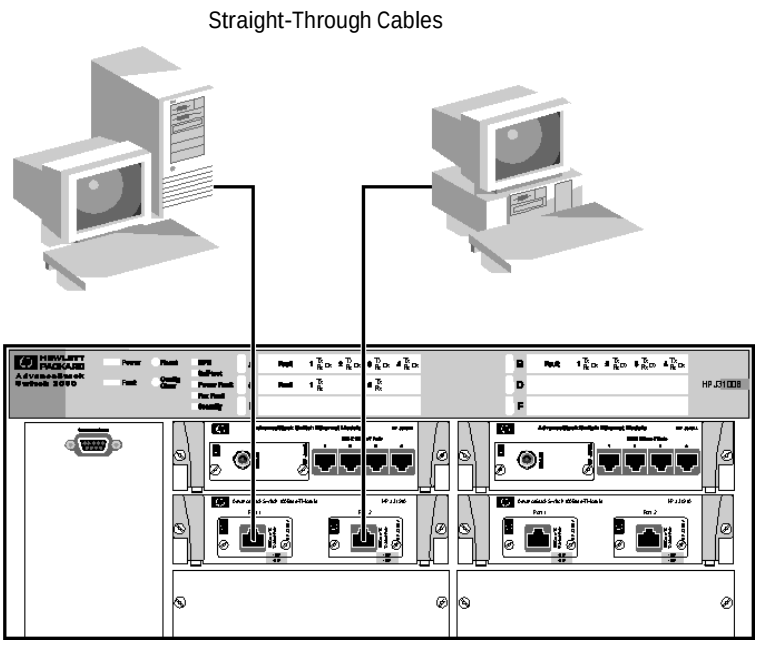
Switch 2000 to Switch 208T or 204



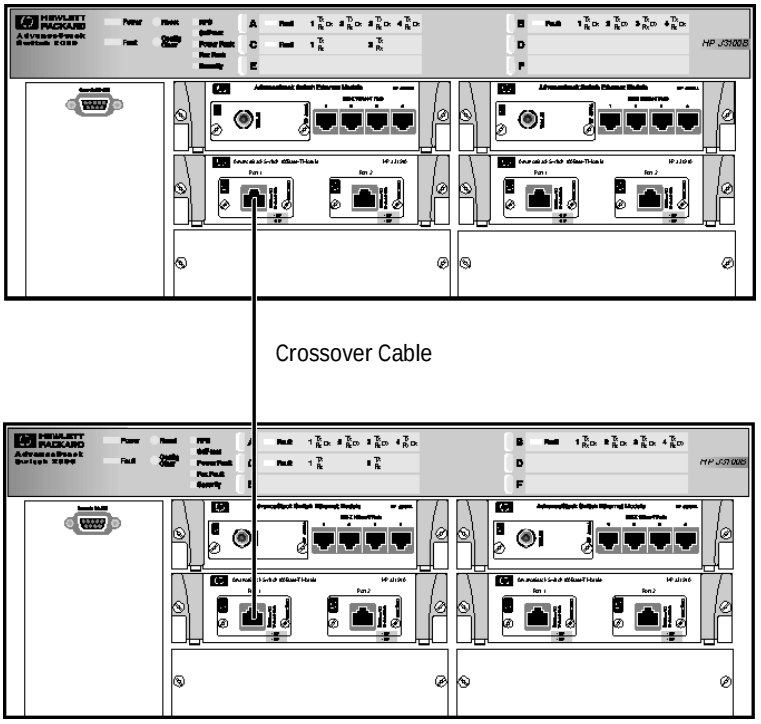
Switch 2000 to Switch 800T



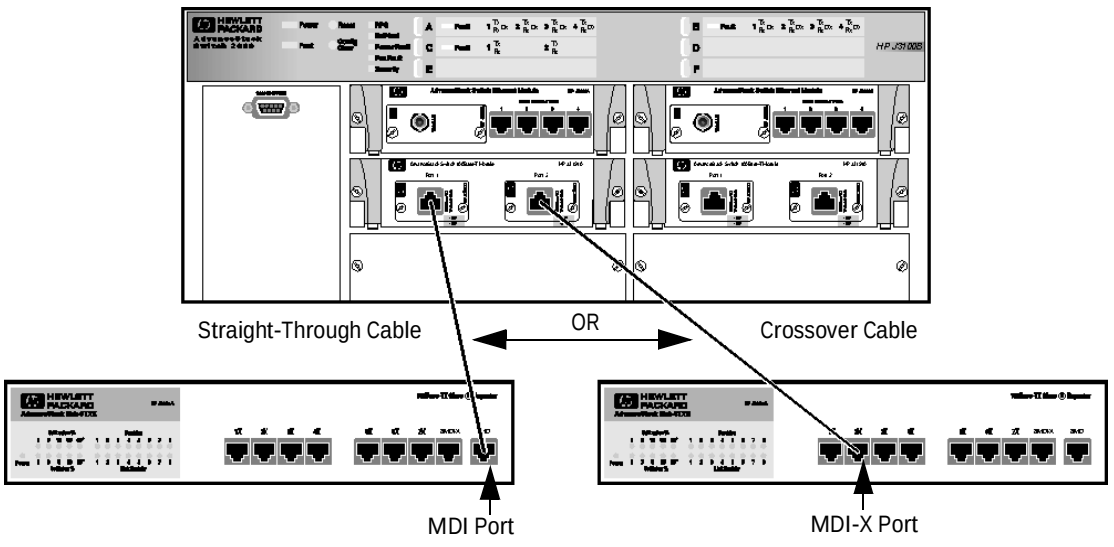
Switch 2000 to a Server or a PC Workstation



Switch 2000 to Another Switch 2000

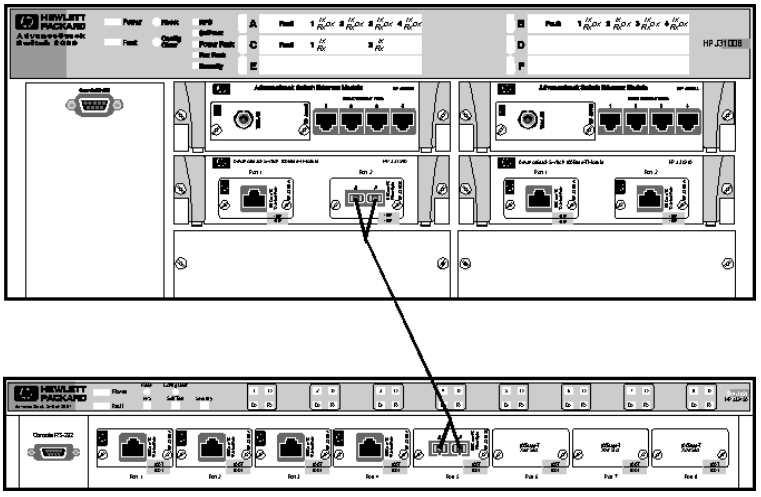


Switch 2000 to an AdvanceStack 100Base-T Hub

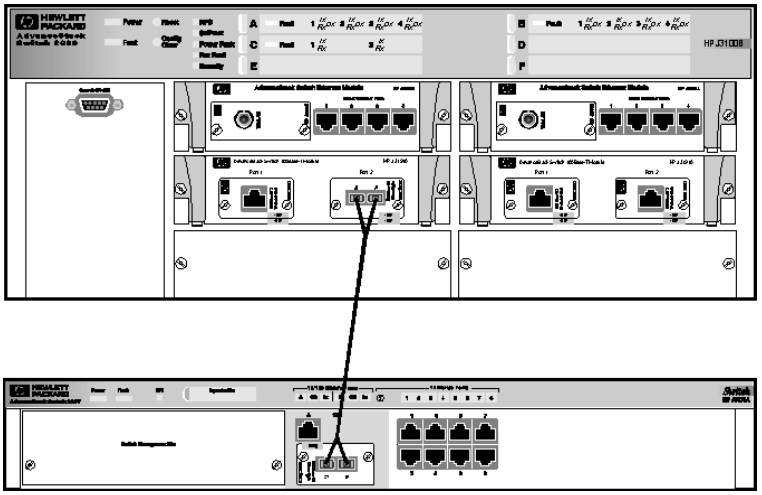


Fiber-Optic 100Base-T Connectivity

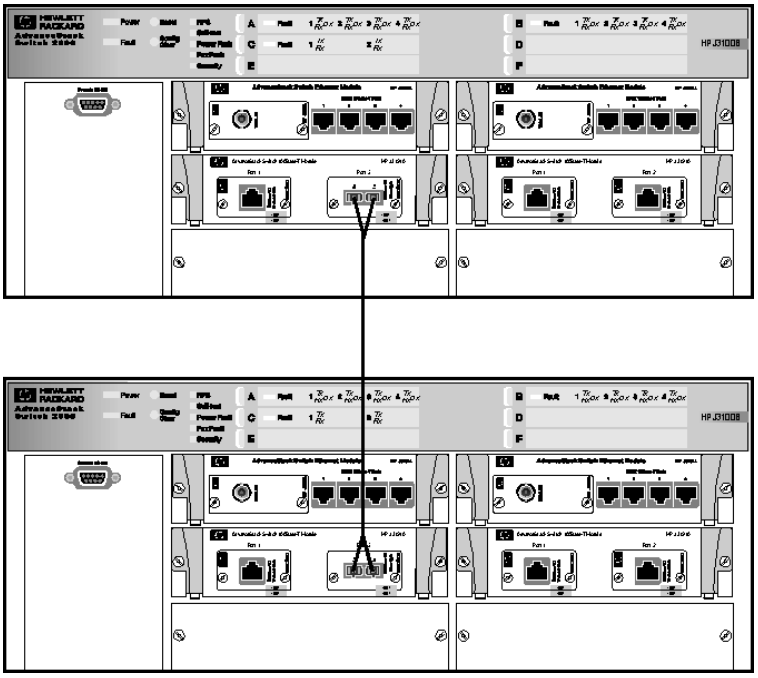
Switch 2000 to Switch 800T



Switch 2000 to Switch 208T



Switch 2000 to Switch 2000



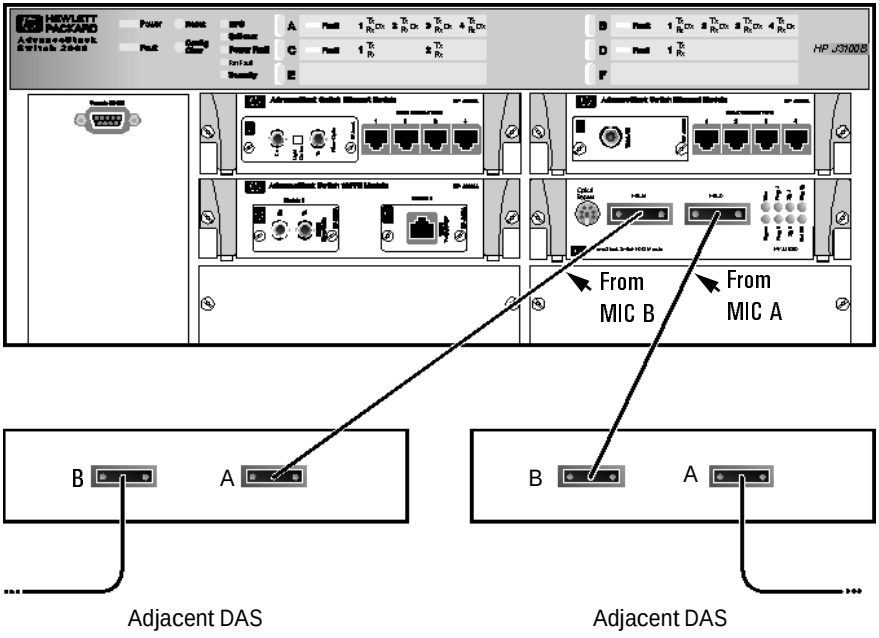
FDDI Connectivity

The FDDI Module for the Switch 2000 uses a dual-port FDDI interface, with two FSD (fixed shroud duplex) connectors labeled MIC A and MIC B (media interface connector).

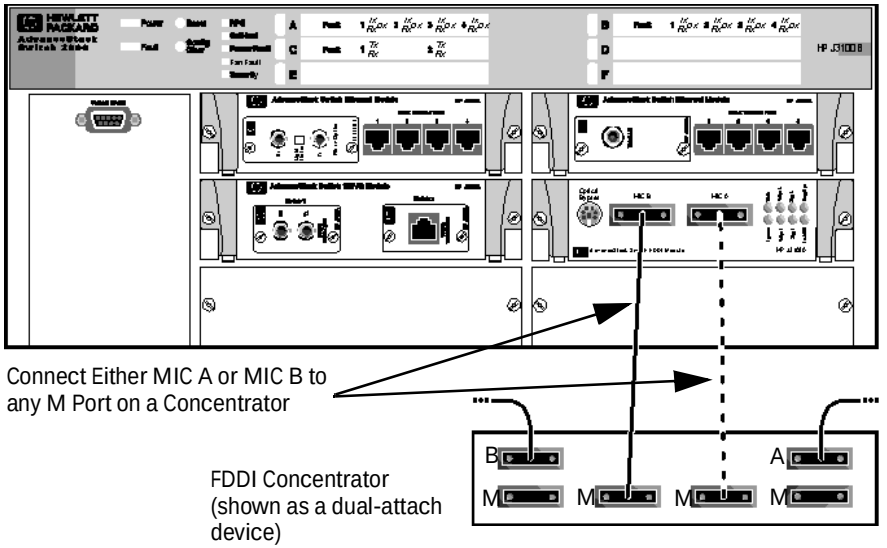
- Either MIC A or MIC B is used to attach the switch to a single attach station (SAS).
- Both MIC A and MIC B are used in one of the following ways:
  - To attach the switch as a dual attach station (DAS)
  - To attach the switch to two single attach stations
  - To set up the switch as a dual-homed device

You can also use an optical bypass switch to prevent the FDDI ring from "wrapping" if the switch connected as a DAS loses power or if the FDDI port becomes available. For more information on this topic, refer to the installation guide provided for the FDDI Module.

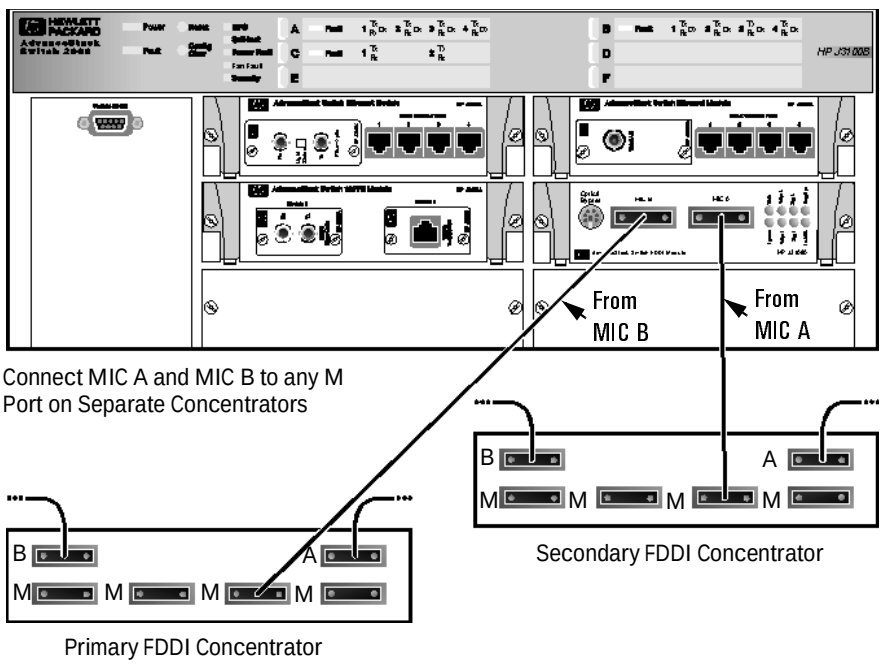
Example of the Switch 2000 as a Dual-Attachment Station (DAS)



Example of the Switch 2000 as a Single-Attachment Station (SAS)

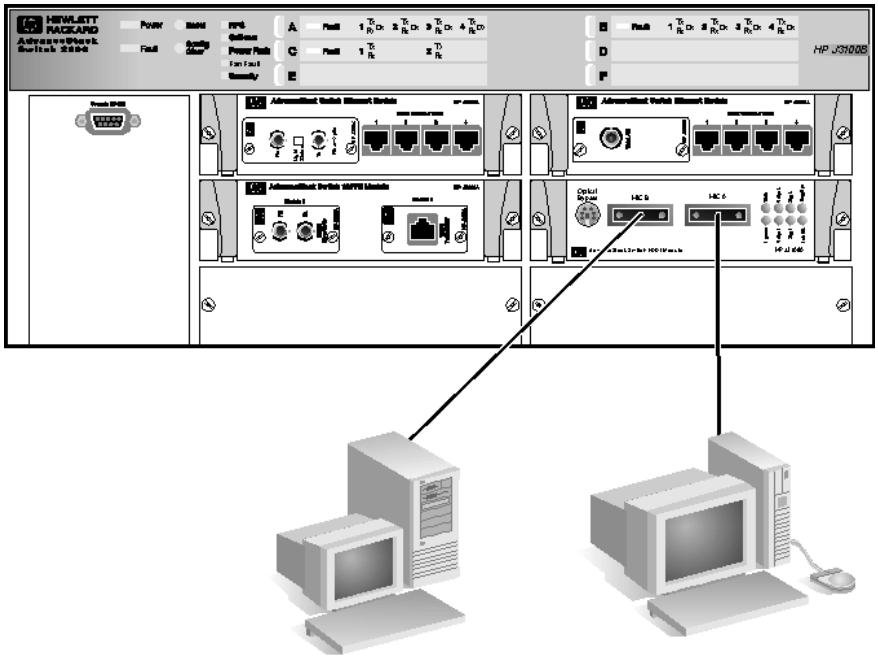


Example of the Switch 2000 as a Dual-Homed Station



Note: The connection to the secondary concentrator operates only if the connection to the primary concentrator becomes disabled.

Example of FDDI Standalone Networking with Two SAS Connections



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