



Auto-MDIX

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Prerequisites for Auto-MDIX

To configure Layer 2 parameters, if the interface is in Layer 3 mode, you must enter the **switchport** interface configuration command without any parameters to put the interface into Layer 2 mode. This shuts down the interface and then re-enables it, which might generate messages on the device to which the interface is connected. When you put an interface that is in Layer 3 mode into Layer 2 mode, the previous configuration information related to the affected interface might be lost, and the interface is returned to its default configuration.

Automatic medium-dependent interface crossover (auto-MDIX) is enabled by default.

Restrictions for Auto-MDIX

- The device might not support a pre-standard powered device—such as Cisco IP phones and access points that do not fully support IEEE 802.3af—if that powered device is connected to the device through a crossover cable. This is regardless of whether auto-MIDX is enabled on the switch port.
- After each device reload, interfaces configured with the **no mdix auto** command will be in down state. To enable the interface, each time after a reload, you have to remove the SFP and reinsert the SFP.

Information About Auto-MDIX

The following sections provide information about Auto-MDIX.

Auto-MDIX on an Interface

When automatic medium-dependent interface crossover (auto-MDIX) is enabled on an interface, the interface automatically detects the required cable connection type (straight through or crossover) and configures the connection appropriately. When connecting devices without the auto-MDIX feature, you must use

straight-through cables to connect to devices such as servers, workstations, or routers and crossover cables to connect to other devices or repeaters. With auto-MDIX enabled, you can use either type of cable to connect to other devices, and the interface automatically corrects for any incorrect cabling. For more information about cabling requirements, see the hardware installation guide.



Note Auto-MDIX is enabled by default.

This table shows the link states that result from auto-MDIX settings and correct and incorrect cabling.

Table 1: Link Conditions and Auto-MDIX Settings

Local Side Auto-MDIX	Remote Side Auto-MDIX	With Correct Cabling	With Incorrect Cabling
On	On	Link up	Link up
On	Off	Link up	Link up
Off	On	Link up	Link up
Off	Off	Link up	Link down