



Configuring Auto-MDIX

- [Prerequisites for Auto-MDIX, on page 1](#)
- [Restrictions for Auto-MDIX, on page 1](#)
- [Information About Configuring Auto-MDIX, on page 2](#)
- [How to Configure Auto-MDIX, on page 2](#)
- [Example for Configuring Auto-MDIX, on page 3](#)
- [Additional References for Auto-MDIX, on page 4](#)
- [Feature History and Information for Auto-MDIX, on page 4](#)

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.

Auto-MDIX is supported on all 10/100/1000-Mb/s and on 10/100/1000BASE-TX small form-factor pluggable (SFP)-module interfaces. It is not supported on 1000BASE-SX or -LX SFP module interfaces.

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-MDIX is enabled on the switch port.

Information About Configuring 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.

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 |

How to Configure Auto-MDIX

Configuring Auto-MDIX on an Interface

Auto MDIX is turned on by default. To disable Auto MDIX on a port, use the **no mdix auto** command under the interface configuration mode. To put it back to default, use the **mdix auto** command in the interface configuration mode. The following steps show how to enable the Auto MDIX.

Procedure

| | Command or Action | Purpose |
|---------------|---|--|
| Step 1 | enable Example: Device> enable | Enables privileged EXEC mode. <ul style="list-style-type: none"> • Enter your password if prompted. |
| Step 2 | configure terminal Example: | Enters global configuration mode |

| | Command or Action | Purpose |
|---------------|---|--|
| | Device# configure terminal | |
| Step 3 | interface <i>interface-id</i> Example: Device(config)# interface gigabitethernet1/0/1 | Specifies the physical interface to be configured, and enter interface configuration mode. |
| Step 4 | mdix auto Example: Device(config-if)# mdix auto | Enables the Auto MDIX feature. |
| Step 5 | end Example: Device(config-if)# end | Returns to privileged EXEC mode. |
| Step 6 | copy running-config startup-config Example: Device# copy running-config startup-config | (Optional) Saves your entries in the configuration file. |

Example for Configuring Auto-MDIX

This example shows how to enable auto-MDIX on a port:

```
Device# configure terminal
Device(config)# interface gigabitethernet1/0/1
Device(config-if)# mdix auto
Device(config-if)# end
```

Additional References for Auto-MDIX

MIBs

| MIB | MIBs Link |
|--|--|
| All the supported MIBs for this release. | To locate and download MIBs for selected platforms, Cisco IOS releases, and feature sets, use Cisco MIB Locator found at the following URL: http://www.cisco.com/go/mibs |

Technical Assistance

| Description | Link |
|---|---|
| <p>The Cisco Support website provides extensive online resources, including documentation and tools for troubleshooting and resolving technical issues with Cisco products and technologies.</p> <p>To receive security and technical information about your products, you can subscribe to various services, such as the Product Alert Tool (accessed from Field Notices), the Cisco Technical Services Newsletter, and Really Simple Syndication (RSS) Feeds.</p> <p>Access to most tools on the Cisco Support website requires a Cisco.com user ID and password.</p> | http://www.cisco.com/support |

Feature History and Information for Auto-MDIX

| Release | Modification |
|--------------------|------------------------------|
| Cisco IOS XE 3.3SE | This feature was introduced. |