



AT-2701 Series Fast Ethernet Network Adapters

Linux Configurations

This document describes how to configure the Ethernet Interface for AT-2701 series adapters in Linux systems. It contains the following topics:

- ❑ “Overview,”
- ❑ “Configuring Ubuntu,”
- ❑ “Configuring Red Hat” on page 3

Overview

The AT-2701 series adapters use a Linux inbox driver to operate. A driver supplied with an operating system is called an inbox driver. Current Linux systems come with the inbox driver that the AT-2701 series adapters need.

Since the driver software for the AT-2701 series adapters has already been in place, you do not need to install it; however, the speed and duplex mode for the fiber optic port are not automatically negotiated. You must disable Auto-negotiation and sets these properties for the AT-2701 series fiber optic port manually.

In addition, you must set the same property values on the port interfaces of the connected switch.

The following is the general instructions of how to set the speed and duplex mode to the Ethernet interfaces for Ubuntu and Red Hat Linux distributions. For other distributions of Linux, consult documentation for your systems.

Configuring Ubuntu

To configure Ethernet interfaces of AT-2701 series fiber optic adapters:

1. Verify that the `ethtool` utility is installed on your system by entering the following command:

```
ethtool
```

If the `ethtool` utility is not installed on your system, the system shows an error message. If the `ethtool` utility is installed, skip step 2.

2. If your system does not have the `ethtool` utility installed, Install it by entering the following command:

```
sudo apt-get install ethtool
```

3. Obtain the name of the Ethernet interface for the AT-2701 series adapter, such as `eth0` and `eth1`, by entering the following command:

```
ifconfig
```

You have one Ethernet interface per AT-2701 series adapter card.

Note

To identify the Ethernet interface of the AT-2701 series adapter, match the MAC address of the `ethN` interface that the `ifconfig` command displays with one on the label of the shipping package.

4. Edit `/etc/network/interfaces` file to disable Auto-negotiation and set the speed and duplex mode by inserting the following statements:

```
auto ethx
iface ethx inet dhcp
pre-up/sbin/ethtool -s ethx speed 100 duplex full autoneg off
```

Note

Replace "ethx" with the name of the Ethernet interface that you obtained in step 3. "ethx" appears three times in the statement.

5. Repeat step 4 for all of the Ethernet interfaces of AT-2701 series adapters on your system.
6. Save the `/etc/network/interfaces` file.
7. Reboot your Linux system.
8. Verify that your AT-2701 series adapter is running 100 Mbps in the full-duplex mode by entering the following command:

```
ethtool ethx
```

The command output should display:

```
Advertised Auto-Negotiation is No
Speed is 100
Duplex mode is Full
```

9. Repeat step 8 for all of the Ethernet interfaces of AT-2701 series adapters on your system.

Configuring Red Hat

To configure Ethernet interfaces of AT-2701 series fiber optic adapters:

1. Ensure that the `ethtool` utility is installed on your system.

Note

To verify that the `ethtool` utility is installed or install the `ethtool` utility on your system, consult the documentation for your Red Hat distribution.

2. Obtain the name of the Ethernet interface for the AT-2701 series adapter, such as `eth0` and `eth1`, by entering the following command:

```
ifconfig
```

You have one Ethernet interface per AT-2701 series adapter card.

Note

To identify the Ethernet interface of the AT-2701 series adapter, match the MAC address of the `ethN` interface that the `ifconfig` command displays with one on the label of the shipping package.

3. Create a new file with the name "`ifcfg-ethX`" in `/etc/sysconfig/network-scripts` directory.

For example, if the name of the Ethernet interface that you obtained in step 2 is `eth2`, then create a new file with the name "`ifcfg-eth2`."

4. Edit the `ifcfg-ethX` file to include the following information:

```
#####
DEVICE="ethX"
NM_CONTROLLED="yes"
ONBOOT=yes
HWADDR=XX:XX:XX:XX:XX:XX
TYPE=Ethernet
BOOTPROTO=dhcp
DEFROUTE=yes
PEERDNS=yes
PEERROUTES=yes
IPV4_FAILURE_FATAL=yes
IPV6INIT=no
NAME="auto ethX"
ETHTOOL_OPTS="autoneg off speed 100 duplex full"
#####
```

Note

Replace "ethx" with the name of the Ethernet interface that you obtained in step 2 and xx:xx:xx:xx:xx:xx with the hardware address of your adapter. "ethx" appears twice in the file.

5. Save the ifcfg-ethx file.
6. Repeat step 3 to 5 for all of the Ethernet interfaces of AT-2701 series adapters on your system.
7. Reboot your Linux system.
8. Verify that your AT-2701 series adapter is running 100 Mbps in the full-duplex mode by entering the following command:

```
ethtool ethx
```

The command output should display:

```
Advertised Auto-Negotiation is No  
Speed is 100  
Duplex mode is Full
```

9. Repeat step 8 for all of the Ethernet interfaces of AT-2701 series adapters on your system.