

Turbo Chain

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This Tech Note applies to the following Moxa switches:

- EDS-400A series
- EDS-500A series (includes the EDS-G509 and EDS-P510 series)
- EDS-600 series
- EDS-700 series
- EDS-800 series
- IKS-6524/6526 Series
- IKS-6726 Series
- PT-7828 Series
- PT-7700 Series
- PT-G7509 Series
- TN-5500 Series

What is a Turbo Chain?

Moxa's Turbo Chain is an advanced software-technology that gives network administrators the flexibility of constructing any type of redundant network topology. When using the "chain" concept, you first connect Ethernet switches in a chain and then simply link the two ends of the chain to an Ethernet network.

Switches in the chain architecture can be divided into three categories: the Head switch, the Tail switch, and the Member switches. The Head port of the Head switch usually acts as the external port for the entire chain. The Tail port of the Tail switch acts as the redundant port. When the Head port is disconnected, the Tail port is immediately activated for data transfer.

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About Moxa

Moxa manufactures one of the world's leading brands of device networking solutions. Products include serial boards, USB-to-serial hubs, media converters, device servers, embedded computers, Ethernet I/O servers, terminal servers, Modbus gateways, industrial switches, and Ethernet-to-fiber converters. Our products are key components of many networking applications, including industrial automation, manufacturing, POS, and medical treatment facilities.

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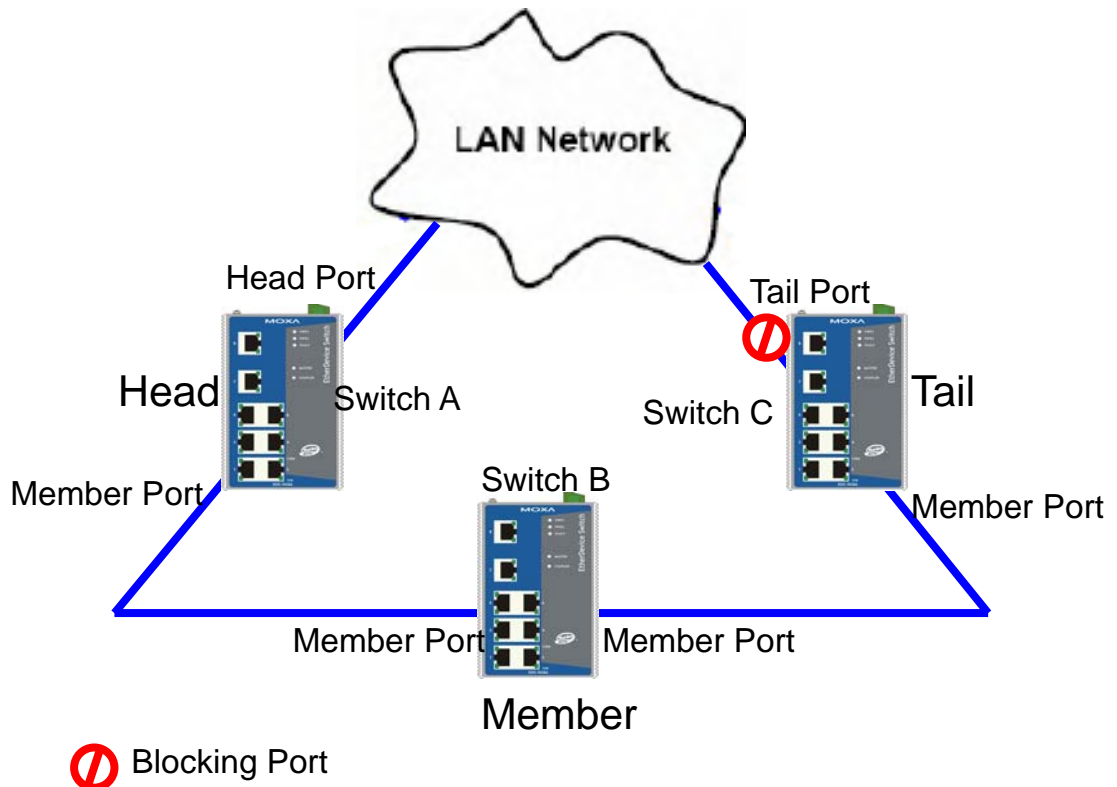
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Enabling Turbo Chain

Enabling Turbo Ring by web console for the EDS-400A/500A/600/700/800 series, IKS-6524/6526 Series, IKS-6726 Series, PT-7828 Series, PT-G7509 Series, PT-7700 Series, and TN-5500 Series

Before performing the following steps, restore the Moxa switch default settings via web console.

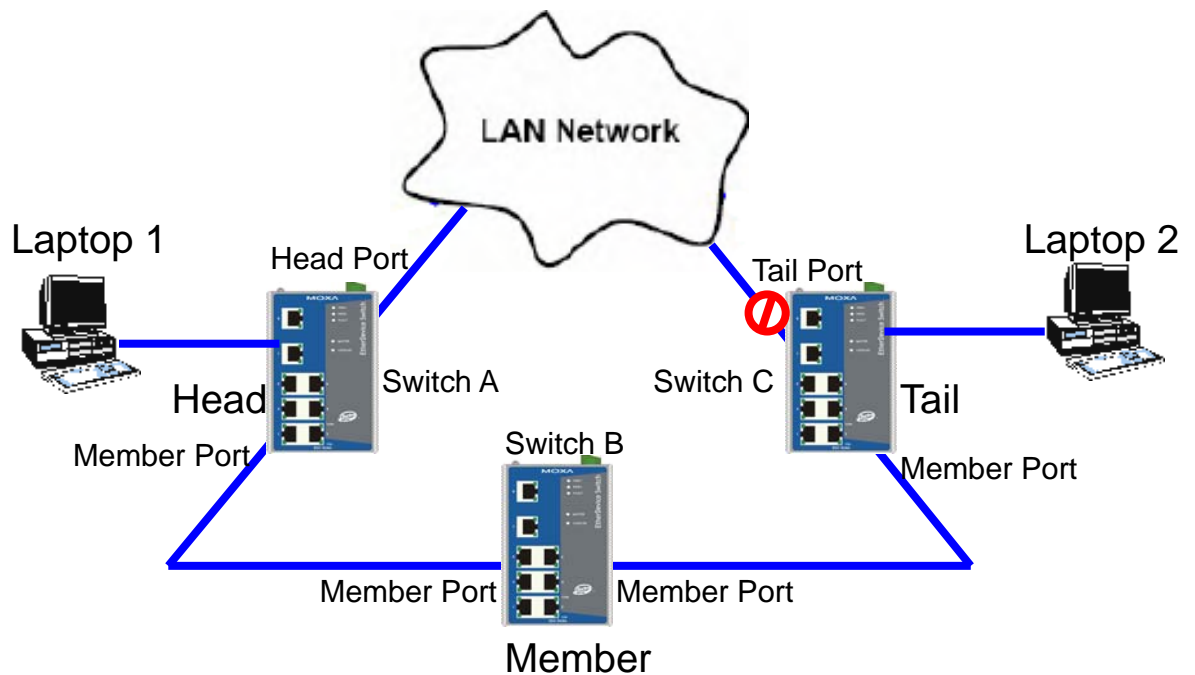
1. Make sure that all DIP switches are set to OFF and then power on the Moxa switch.
2. Make sure that the Moxa switch and the host PC are properly connected to the network.
3. Adjust the Moxa switch's IP settings as necessary so that it is on the same network as your PC. You may also need to modify the host PC's IP configuration. Make sure you can ping the Moxa switch from your host PC.
Note: The IP addresses of the Moxa switch and the PC must be on the same subnet. If one IP address is modified, you may need to modify the other IP address.
4. Prepare 3 Turbo Chain devices (i.e., Switch A, B, C) to form 1 chain.



5. Set up switches A, B, C as the Head switch, Member switch and Tail switch, separately.

6. Configure one port as the Head port and one port as the Member port in the Head switch, configure one port as the Tail port and one port as the Member port in the Tail switch, and configure two ports as Member ports in Member switches. It can be found through the web console as follows:
Communication Redundancy → Redundancy Protocol → "Turbo Chain"
7. Connect the Head switch, Tail switch, and Member switches as shown in the diagram.
8. Monitor the status of the Head port, Tail port, and Member port.

Testing Turbo Chain



Blocking Port

1. Configure Laptop 1 and 2 to be located in the same subnet.
2. Connect Laptop 1 and 2 to switch A and C, separately.
3. Run a **Ping** x.x.x.x command from Laptop 1. (x.x.x.x is Laptop 2's IP address)
4. Unplug the Head port of switch A and make sure the ping session recovers immediately.
5. Monitor the status of the Head port, Tail port, and Member port.
6. Plug in the Head port of switch A and make sure the ping session recovers immediately.
7. Monitor the status of the Head port, Tail port, and Member port.