

Dual Ring for Turbo Ring V2

*Moxa Technical Support Team
support@moxa.com*

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 Dual Ring?

(Applies only to "Turbo Ring V2")

The "dual-ring" option provides another ring coupling configuration option, in which two adjacent rings share one switch. This type of configuration is ideal for applications that have inherent cabling difficulties.

For example, in the diagram below Ring 1 is composed of Switch A, B and C. Ring 2 is composed of Switch C, D and E. Ring 1 and Ring 2 share Switch C. In other words, Switch C belongs to Ring 1 and Ring 2 at the same time.

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About Moxa

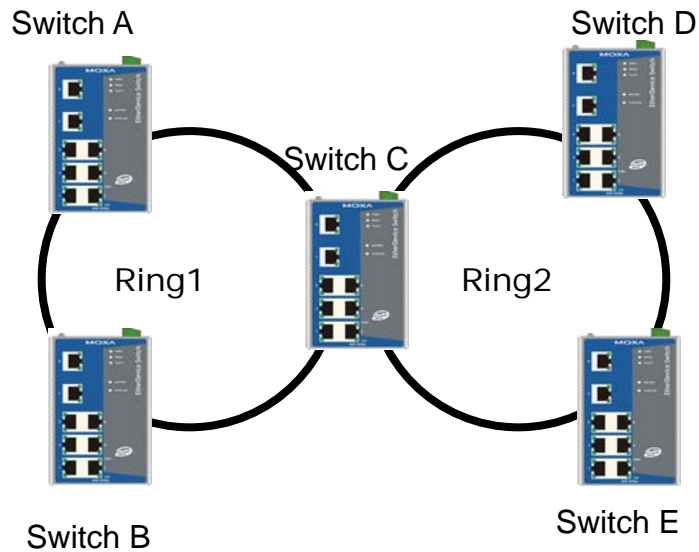
Moxa manufactures one of the world's leading brands of device networking solutions. Products include serial boards, USB-to-serial hubs, media converters, device servers, embedded computers, Ethernet I/O servers, terminal servers, Modbus gateways, industrial switches, and Ethernet-to-fiber converters.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

How to Contact Moxa

Tel: +886-2-8919-1230 Web: www.moxa.com
Fax: +886-2-8919-1231 Email: info@moxa.com



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Enabling Dual Ring

Enabling the Dual 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 5 Turbo Ring devices (i.e., Switch A, B, C, D and E as above diagram) to form 2 groups of Turbo Rings.
5. Decide which two ports in switch A,B and C to use as the "1st Redundant Port", "2nd Redundant Port" for Ring 1, and decide which two ports in switch C, D and E to use as "1st Redundant Port", "2nd Redundant Port" for Ring 2.
6. Enable Turbo Ring V2 on Switch A, B, for Ring 1. It can be found through the web console as follows:

Communication Redundancy→Turbo Ring V2

Check "Enable Ring 1" box and select the "Redundant Ports 1st Port" and "Redundant Ports 2nd Port" that you have decided.

7. Enable Turbo Ring V2 on D and E for Ring 2 via web console, separately. It can be found through the web console as follows:

Communication Redundancy→Turbo Ring V2

Check "Enable Ring 2" box and select "Redundant Ports 1st Port" and "Redundant Ports 2nd Port" that you have decided.

8. Enable Turbo Ring V2 on Switch C via web console. It can be found through the web console as follows:

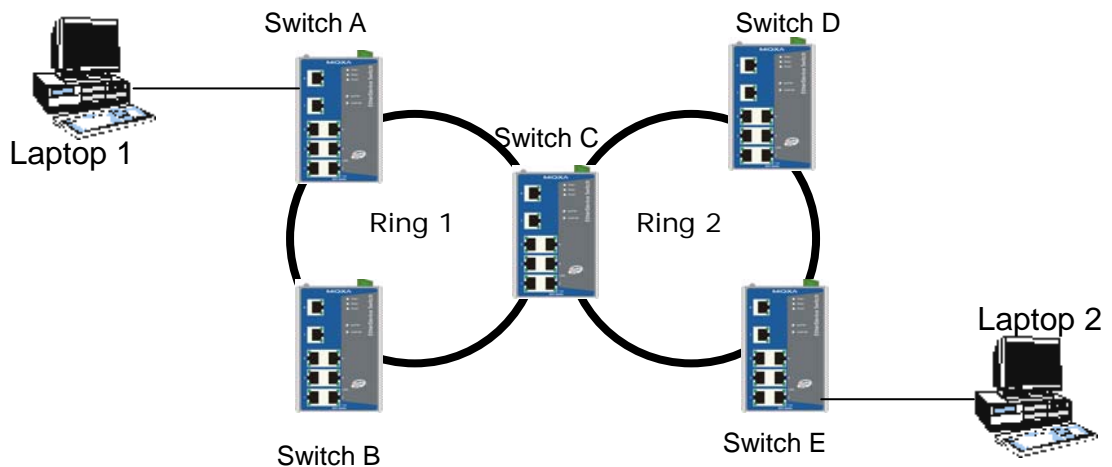
Communication Redundancy→Turbo Ring V2

Then check "Enabling Ring 1" box and select "Redundant Ports 1st Port" and "Redundant Ports 2nd Port" for Ring 1.

And check "Enabling Ring 2" box, select "Redundant Ports 1st Port" and "Redundant Ports 2nd Port" for Ring 2, and activate the change.

9. Carefully connect the Turbo Rings Ring 1 and Ring 2 cables.
10. Monitor the status of the 1st and 2nd redundant ports in Ring 1 and Ring 2

Testing Dual Ring function



1. Configure Laptop 1 and 2 to be located in the same subnet.
2. Connect Laptop 1 and 2 to switch A and E, 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 one of the Ring 1 path cables of switch C and confirm that the ping session recovers immediately.
5. Monitor the status of the 1st and 2nd redundant ports in Ring 1 and Ring 2
6. Plug in the removed Ring 1 path of switch C and confirm that the ping session recovers immediately.

7. Monitor the status of the 1st and 2nd redundant ports in Ring 1 and Ring 2