

10G-Base-KR Interface Configuration

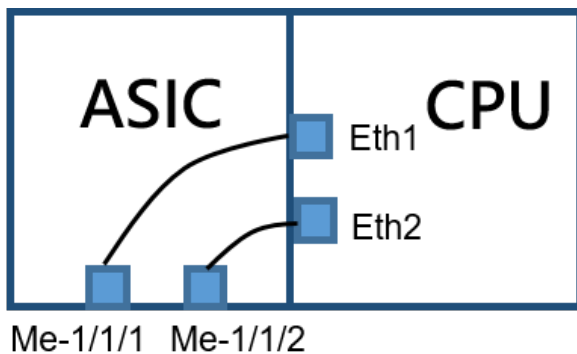
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Introduction

AS7726-32X and AS7736-56X have two 10G-Base-KR ports (10G-KR) to support additional high-speed link between CPU and ASIC (switch chip). Additionally, the two 10G-Base-KR ports can be configured to be used as 10G SFP+ front panel data ports or they can be configured to provide additional high speed links between the switch CPU and ASIC.

When configured as front panel data ports, they can be used as normal SFP+ port. As a data port, the interface name becomes *Te-1/1/m*. As shown in **Figure 1**, when configured as two 10G-KR ports, the ports are linked to two management ports eth1 and eth2 on the CPU with 10G bandwidth, and the port name becomes *Me-1/1/n* (Management Ethernet port) under PICOS CLI. This allows the management traffic and data traffic through the *Me-1/1/n* ports can be processed by eth1 and eth2 ports on the CPU.

Figure 1. 10G-KR ports link between CPU and ASIC



Supported Platforms

Currently only AS7726-32X and AS7736-56X switches have the 10G-Base-KR ports which can be configured as two 10G SFP+ data ports on the front panel or as two 10G-KR management ports linked to CPU.

Configuration

This section describes how to configure the two 10G-Base-KR ports as front panel ports or management ports linked to CPU.

Configuring as the Management Port

- From the Linux shell prompt, run **sudo picos_boot management-port-mapping** command to configure the 10G-Base-KR ports as two 10G-KR management ports linked to CPU.

```
admin@Xorplus:~$ sudo picos_boot management-port-mapping
[1] To Host CPU
[2] To Front Panel * default
Enter your choice(1,2):1

To Host CPU is selected.
```

- Restart PICOS to make the configuration take effect.

```
admin@Xorplus:~$ sudo systemctl restart picos
```

- We can use **run show interface brief** to check the interface configuration information.

Take AS7726-32X as an example, we can see that the port name of the last two 10G-Base-KR ports are me-1/1/1 and me-1/1/2. They are two 10G-KR management ports linked to CPU.

```
admin@Xorplus# run show interface brief
Interface  Management  Status  Flow Control  Duplex  Speed  Description
-----
xe-1/1/1   Enabled     Down    Disabled      Full    Auto
xe-1/1/2   Enabled     Down    Disabled      Full    Auto
xe-1/1/3   Enabled     Up      Disabled      Full    40Gb/s
xe-1/1/4   Enabled     Up      Disabled      Full    40Gb/s
xe-1/1/5   Enabled     Up      Disabled      Full    40Gb/s
xe-1/1/6   Enabled     Up      Disabled      Full    40Gb/s
xe-1/1/7   Enabled     Up      Disabled      Full    40Gb/s
xe-1/1/8   Enabled     Up      Disabled      Full    40Gb/s
xe-1/1/9   Enabled     Up      Disabled      Full    40Gb/s
xe-1/1/10  Enabled     Up      Disabled      Full    40Gb/s
xe-1/1/11  Enabled     Up      Disabled      Full    40Gb/s
xe-1/1/12  Enabled     Up      Disabled      Full    40Gb/s
xe-1/1/13  Enabled     Up      Disabled      Full    40Gb/s
xe-1/1/14  Enabled     Up      Disabled      Full    40Gb/s
xe-1/1/15  Enabled     Up      Disabled      Full    40Gb/s
xe-1/1/16  Enabled     Up      Disabled      Full    40Gb/s
xe-1/1/17  Enabled     Down    Disabled      Full    Auto
xe-1/1/18  Enabled     Down    Disabled      Full    Auto
xe-1/1/19  Enabled     Down    Disabled      Full    Auto
xe-1/1/20  Enabled     Down    Disabled      Full    Auto
xe-1/1/21  Enabled     Down    Disabled      Full    Auto
xe-1/1/22  Enabled     Down    Disabled      Full    Auto
xe-1/1/23  Enabled     Down    Disabled      Full    Auto
xe-1/1/24  Enabled     Down    Disabled      Full    Auto
xe-1/1/25  Enabled     Down    Disabled      Full    Auto
xe-1/1/26  Enabled     Down    Disabled      Full    Auto
xe-1/1/27  Enabled     Down    Disabled      Full    Auto
xe-1/1/28  Enabled     Down    Disabled      Full    Auto
xe-1/1/29  Enabled     Down    Disabled      Full    Auto
xe-1/1/30  Enabled     Down    Disabled      Full    Auto
xe-1/1/31  Enabled     Down    Disabled      Full    Auto
xe-1/1/32  Enabled     Down    Disabled      Full    Auto
me-1/1/1   Enabled     Up      Disabled      Full    Auto
me-1/1/2   Enabled     Up      Disabled      Full    Auto
```

Under Linux shell, you can see the two ports eth1 and eth2 in addition to the management port eth0 as the **ifconfig -a** command shows below. Under PICOS CLI, the Me ports are bound to the two management ports eth1 and eth2 on CPU. Applications of Linux including PICOS can access (read/write) eth1 and eth2. For example, port configurations such as trunk VLANs can be applied to Me ports.

```

root@Xorplus:/home/admin# ifconfig -a
dummy0    Link encap:Ethernet  HWaddr 72:c9:69:6f:35:2d
          BROADCAST NOARP  MTU:1500  Metric:1
          RX packets:0 errors:0 dropped:0 overruns:0 frame:0
          TX packets:0 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:0 (0.0 B)  TX bytes:0 (0.0 B)

eth0      Link encap:Ethernet  HWaddr b8:6a:97:8a:77:68
          inet addr:10.10.51.60  Bcast:10.10.51.255 Mask:255.255.255.0
          inet6 addr: fe80::ba6a:97ff:fe8a:7768/64 Scope:Link
          UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
          RX packets:6923 errors:0 dropped:0 overruns:0 frame:0
          TX packets:188 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:494847 (483.2 KiB)  TX bytes:24437 (23.8 KiB)
          Interrupt:16

eth1      Link encap:Ethernet  HWaddr b8:6a:97:8a:77:69
          BROADCAST MULTICAST  MTU:1500  Metric:1
          RX packets:0 errors:0 dropped:0 overruns:0 frame:0
          TX packets:0 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:0 (0.0 B)  TX bytes:0 (0.0 B)

eth2      Link encap:Ethernet  HWaddr b8:6a:97:8a:77:6a
          BROADCAST MULTICAST  MTU:1500  Metric:1
          RX packets:0 errors:0 dropped:0 overruns:0 frame:0
          TX packets:0 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000

```

NOTE:

- By default, the two 10G-Base-KR ports are configured as two 10G-KR management ports linked to CPU.
- The interface rate of the two Me ports can only support auto-negotiation mode.

Configuring as Front Panel Ports

- From the Linux shell prompt, run **sudo picos_boot management-port-mapping** command to configure the 10G-Base-KR ports as 10G SFP+ data ports on the front panel.

```

admin@Xorplus:~$ sudo picos_boot management-port-mapping
[1] To Host CPU      * default
[2] To Front Panel
Enter your choice(1,2):2

To Front Panel is selected.

```

- Restart PICOS to make the configuration take effect.

```

admin@Xorplus:~$ sudo systemctl restart picos

```

- We can use **run show interface brief** to check the interface configuration information.

Take AS7726-32X as an example, we can see the last two 10G-Base-KR ports are configured as two 10G SFP+ ports and the port names are te-1/1/1 and te-1/1/2. When configured as the front panel ports, the 10G-Base-KR ports can be used as normal 10G SFP+ ports.

```
admin@Xorplus# run show interface brief
```

Interface	Management	Status	Flow Control	Duplex	Speed	Description
xe-1/1/1	Enabled	Down	Disabled	Full	Auto	
xe-1/1/2	Enabled	Down	Disabled	Full	Auto	
xe-1/1/3	Enabled	Up	Disabled	Full	40Gb/s	
xe-1/1/4	Enabled	Up	Disabled	Full	40Gb/s	
xe-1/1/5	Enabled	Up	Disabled	Full	40Gb/s	
xe-1/1/6	Enabled	Up	Disabled	Full	40Gb/s	
xe-1/1/7	Enabled	Up	Disabled	Full	40Gb/s	
xe-1/1/8	Enabled	Up	Disabled	Full	40Gb/s	
xe-1/1/9	Enabled	Up	Disabled	Full	40Gb/s	
xe-1/1/10	Enabled	Up	Disabled	Full	40Gb/s	
xe-1/1/11	Enabled	Up	Disabled	Full	40Gb/s	
xe-1/1/12	Enabled	Up	Disabled	Full	40Gb/s	
xe-1/1/13	Enabled	Up	Disabled	Full	40Gb/s	
xe-1/1/14	Enabled	Up	Disabled	Full	40Gb/s	
xe-1/1/15	Enabled	Up	Disabled	Full	40Gb/s	
xe-1/1/16	Enabled	Up	Disabled	Full	40Gb/s	
xe-1/1/17	Enabled	Down	Disabled	Full	Auto	
xe-1/1/18	Enabled	Down	Disabled	Full	Auto	
xe-1/1/19	Enabled	Down	Disabled	Full	Auto	
xe-1/1/20	Enabled	Down	Disabled	Full	Auto	
xe-1/1/21	Enabled	Down	Disabled	Full	Auto	
xe-1/1/22	Enabled	Down	Disabled	Full	Auto	
xe-1/1/23	Enabled	Down	Disabled	Full	Auto	
xe-1/1/24	Enabled	Down	Disabled	Full	Auto	
xe-1/1/25	Enabled	Down	Disabled	Full	Auto	
xe-1/1/26	Enabled	Down	Disabled	Full	Auto	
xe-1/1/27	Enabled	Down	Disabled	Full	Auto	
xe-1/1/28	Enabled	Down	Disabled	Full	Auto	
xe-1/1/29	Enabled	Down	Disabled	Full	Auto	
xe-1/1/30	Enabled	Down	Disabled	Full	Auto	
xe-1/1/31	Enabled	Down	Disabled	Full	Auto	
xe-1/1/32	Enabled	Down	Disabled	Full	Auto	
te-1/1/1	Enabled	Up	Disabled	Full	10Gb/s	
te-1/1/2	Enabled	Up	Disabled	Full	10Gb/s	