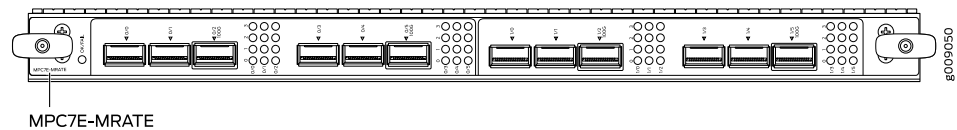


## MPC7E (Multi-Rate)



### Software release

- Junos OS Release 15.1F4 with Junos Continuity.
- Junos OS Release 15.1F6 and later.
- Junos OS release 16.1R1 and later.

### Description

- Fixed-configuration MPC with 10-Gbps, 40-Gbps, and 100-Gbps port speeds
- Weight: 15.7 lb (7.12 kg)
- Model number: MPC7E-MRATE
- Name in the CLI: **MPC7E-MRATE**

### Hardware features

- Line-rate throughput of up to 480 Gbps on MX240, MX480, and MX960 routers.
  - Line-rate throughput of up to 400 Gbps on MX2000 routers with SFB, and up to 430 Gbps on MX2000 routers with SFB2.
  - Junos Trio chipsets for increased scaling for bandwidth, subscribers, and services
  - Twelve Gigabit Ethernet ports that can be configured as 40-Gigabit Ethernet port or as 4 10-Gigabit Ethernet port using a breakout cable. The ports support quad small-form factor pluggable plus (QSFP+) transceivers.
  - Four out of the twelve ports can be configured as 100-Gigabit Ethernet ports. Port numbers **0/2**, **0/5**, **1/2** and **1/5** are the four 100-Gigabit Ethernet ports.
  - You can configure different combination of port speeds as long as the aggregate capacity per group of six ports labeled **0/0** through **0/5** does not exceed 240 Gbps. Similarly, aggregate capacity per group of the other six ports labeled **1/0** through **1/5** should not exceed 240 Gbps.
  - Requires high-capacity power supplies, high-capacity fan trays, and SCBE2 on MX240, MX480, and MX960 routers.
  - Requires an adapter card to be housed in MX2000 routers.
  - The ports are labeled as (with the MPC orientation as shown in the above figure):
    - 10-Gigabit Ethernet or 40-Gigabit Ethernet ports:  
**0/0**, **0/1**, **0/2 100G**, **0/3**, **0/4**, **0/5 100G**, **1/0**, **1/1**, **1/2 100G**, **1/3**, **1/4**, and **1/5 100G**
    - 100-Gigabit Ethernet ports:  
**0/2 100G**, **0/5 100G**, **1/2 100G** and **1/5 100G**
- NOTE:** Only ports marked **100G** support 100-Gigabit Ethernet speed using QSFP28 transceivers.
- Supports maximum transmission units (MTUs) from 256 bytes through 16,000 bytes for transit traffic, and from 256 bytes through 9,500 bytes for host bound packets.

**NOTE:** On MX960 routers, all the MPC slots can be occupied by MPC7E (Multi-Rate) at an ambient temperature of up to 40° C and at any altitude. All the MPC slots can be occupied by MPC7E (Multi-Rate) at temperatures of up to 55° C and at sea level. At an ambient temperature of 55° C and above, and at an altitude above sea level, slot 11 cannot host MPC7E (Multi-Rate).

**Software features**

- Supports rate selectability at the port level.
- By default, the ports are configured as 10-Gigabit Ethernet ports.
- Optical diagnostics and related alarms
- See “[Protocols and Applications Supported by the MPC7E for MX Series Routers](#)” on page 373 for information about the protocols and applications that the MPC7E supports.

**NOTE:** On MX240, MX480, and MX960 routers, MPC7E powers on only if the **network-services** mode on the router is configured as either **enhanced-ip** or **enhanced-ethernet**. On MX2000 router no additional configuration is required as by default the router operates in **enhanced-ip** mode.

**Cables and connectors**

**TIP:** You can use the [Hardware Compatibility Tool](#) to find information about the pluggable transceivers supported on your Juniper Networks device.

The list of supported transceivers for the MX Series is located at <https://pathfinder.juniper.net/hct/category/#catKey=100001&modelType;=All&pf;=MX+Series>.

**Power requirements**

- At different temperatures:
  - 55° C: 545 W
  - 40° C: 465 W
  - 25° C: 440 W