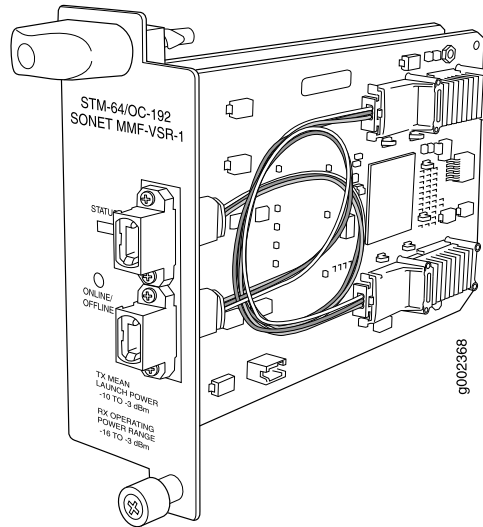


## SONET/SDH OC192c/STM64 PIC



Software release	<ul style="list-style-type: none"> <li>Junos 9.4 and later</li> </ul>
Description	<ul style="list-style-type: none"> <li>One OC192 port</li> <li>Power requirement: 0.45 A @ 48 V (21.6 W)</li> <li>Model Number: PC-1OC192-SON-VSR</li> </ul>
Hardware features	<ul style="list-style-type: none"> <li>Multiplexing and demultiplexing</li> <li>Rate policing on input</li> <li>Rate shaping on output</li> <li>Packet buffering, Layer 2 parsing</li> </ul>
Software features	<ul style="list-style-type: none"> <li>SONET/SDH framing</li> <li>Link aggregation</li> <li>Alarm and event counting and detection</li> <li>Dual-router automatic protection switching (APS)</li> <li>Multiprotocol Label Switching (MPLS) fast reroute</li> <li>Encapsulations: <ul style="list-style-type: none"> <li>High-Level Data Link Control (HDLC)</li> <li>Frame Relay</li> <li>Circuit cross-connect (CCC)</li> <li>Translational cross-connect (TCC)</li> <li>Point-to-Point Protocol (PPP)</li> </ul> </li> </ul>

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>.

- Very short reach (VSR 1): 12-ribbon multimode fiber with MTP connector (Rx and Tx)
- Fiber-optic 10-gigabit small form-factor pluggable (XFP) transceivers: 10GBASE-S very short reach (VSR-1) (model number: XFP-10G-S)

**NOTE:** To extend the life of the laser, when a PIC is not being actively used with any valid links, take the PIC offline until you are ready to establish a link to another device. For information about taking a PIC offline, see the **request chassis pic offline** command in the [CLI Explorer](#).

#### LEDs

One tricolor LED per port:

- Off—Not enabled
- Green—Online with no alarms or failures
- Yellow—Online with alarms for remote failures
- Red—Active with a local alarm; router has detected a failure

**Alarms, errors, and events**

- SONET alarms:
  - Alarm indication signal—line (AIS-L)
  - Alarm indication signal—path (AIS-P)
  - Bit error rate—signal degrade (BERR-SD)
  - Bit error rate—signal fail (BERR-SF)
  - Bit interleaved parity (BIP) error B1, B2, B3
  - Far-end bit error: remote error indication—line (REI-L), far-end line coding violations (CV-LFE)
  - Far-end bit error: remote error indication—path (REI-P), far-end path coding violations (CV-PFE)
  - Loss of frame (LOF)
  - Loss of pointer (LOP-P)
  - Loss of signal (LOS)
  - Payload label mismatch (PLM-P)
  - Payload unequipped (unequipped STS at path level) (UNEQ-P)
  - Remote defect indication—line (RDI-L)
  - Remote defect indication—path (RDI-P)
- SDH alarms:
  - Administrative unit alarm indication signal (AU-AIS)
  - Bit error rate signal degrade (BERR-SD)
  - Bit error rate signal fail (BERR-SF)
  - Bit interleaved parity (BIP) error B1, B2, B3
  - Higher order path—payload label mismatch (HP-PLM)
  - Higher order path—loss of pointer (HP-LOP)
  - Higher order path—remote defect indication (HP-RDI)
  - Higher order path—unequipped (HP-UNEQ)
  - Loss of frame (LOF)
  - Loss of signal (LOS)
  - Multiplex section—alarm indication signal (MS-AIS)
  - Multiplex section—remote defect indication (MS-RDI)
  - Multiplex section—remote error indication (MS-REI)
- Error detection:
  - Errored seconds (ES-S, ES-L, ES-P)
  - Far-end errored seconds (ES-LFE, ES-PFE)
  - Far-end severely errored seconds (SES-LFE, SES-PFE)
  - Far-end unavailable seconds (UAS-LFE, UAS-PFE)
  - Severely errored framing (SEF)
  - Severely errored framing seconds (SEFS-S)
  - Severely errored seconds (SES-S, SES-L, SES-P)
  - Unavailable seconds (UAS-L, UAS-P)

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**Related Documentation**

- [MX Series FPC and PIC Overview on page 35](#)
- [FPCs Supported by MX240, MX480, and MX960 Routers on page 36](#)
- [PICs Supported by MX240, MX480, and MX960 Routers on page 37](#)