

## Chapter 13

# Configuring Unchannelized OC Modules

This chapter describes how to configure the following unchannelized optical carrier (OC) line modules:

- OCx/STMx ATM
- OCx/STMx POS
- OC3/STM1 GE/FE

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### Overview

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The NMC-RX application supports OC modules that provide high-speed communications between E-series routers and core routers in an ATM network. Several versions of unchannelized OC modules can be configured with the NMC-RX application.

OC line modules pair with I/O modules to provide particular capabilities and connections. For more information about unchannelized OC modules, see Table 43 and the *JUNOS Physical Layer Configuration Guide*.

**Table 43: OCx/STMx Unchannelized Line Modules and I/O Modules**

Line Module	I/O Module	Description	NMC-RX Software Reference Name
<b>E-series modules (ERX-7xx models, ERX-14xx models, ERX-310)</b>			
OCx/STMx ATM	OC3-4	4-port, concatenated OC3/STM-1 module for ATM	OC3 ATM-4 port
	OC12/STM4	1-port, concatenated OC12/STM-4 module for ATM	OC12 ATM-1 port
OCx/STMx POS	OC3-4	4-port, concatenated OC3/STM-1 module for POS	OC3 POS-4 port
	OC12/STM4	1-port, concatenated OC12/STM-4 module for POS	OC12 POS-1 port
OC48/STM16 POS	OC 48 FRAME APS	1-port, concatenated OC48/STM16 module for POS <b>NOTE:</b> Requires two adjacent slots: either slots 2 and 3 or slots 4 and 5; second slot is listed as “EMPTY” in the Instance Explorer; only available on the ERX-1440 router	OC48 POS-1 port
OC3/STM1 GE/FE	OC3-2 GE APS	<ul style="list-style-type: none"> <li>■ 3-port hybrid module for ATM or GE <ul style="list-style-type: none"> <li>■ Ports 0 and 1—OC3/STM1 ATM interfaces</li> <li>■ Port 2—Gigabit Ethernet interface</li> </ul> </li> <li>■ Provides Gigabit Ethernet operation through one line interface and OC3/STM1 ATM operation through two line interfaces</li> <li>■ Uses a range of small form-factor pluggable transceivers (SFPs) to support different optical modes and cabling distances</li> </ul>	Hybrid-2xOC3 ATM, 1xGE
<b>E320 modules</b>			
LM-4	OC3/STM1-8 ATM	<ul style="list-style-type: none"> <li>■ 8-port, concatenated OC3/STM-1 module for ATM</li> <li>■ Uses a range of SFPs to support different optical modes and cabling distances</li> </ul>	OC3 ATM 8-port
LM-4	OC12/STM4-2 ATM	<ul style="list-style-type: none"> <li>■ 2-port, concatenated OC12/STM-4 module for ATM</li> <li>■ Uses a range of SFPs to support different optical modes and cabling distances</li> </ul>	OC12 ATM-2 port
LM-4	OC12/STM4-2 POS	<ul style="list-style-type: none"> <li>■ 2-port, concatenated OC12/STM-4 module for POS</li> <li>■ Uses a range of SFPs to support different optical modes and cabling distances</li> </ul>	OC12 POS-2 port
LM-4	OC48/STM16 POS	<ul style="list-style-type: none"> <li>■ 1-port, unchannelized, concatenated OC48/STM16 for POS</li> <li>■ Uses a range of SFPs to support different optical modes and cabling distance</li> </ul>	OC48 POS-1 port

## Configuration Tasks

To configure an unchannelized OC module:

1. Set the parameters that provide basic identification and status information about the module.
2. Set the line interface parameters.

3. Configure an ATM, POS, or Ethernet interface on the module. (See *Chapter 18, Configuring ATM*, *Chapter 26, Configuring POS*, or *Chapter 15, Configuring Ethernet Modules*.)

## Configuring Modules

You can configure only a module's admin status (enabled or disabled).

To configure a module:

1. In the Instance Explorer list, select the module you want to configure.
2. Right-click, and select Configure.

The Module Config tab appears in the work area.

3. Set the module parameters (Table 44).

**Table 44: Module Configuration Parameters (Unchannelized OC)**

Field	Description
Module Type	Module type (cannot edit)
Admin Status	<ul style="list-style-type: none"> <li>■ Enabled—Module is running</li> <li>■ Disabled—Module is not in operation</li> </ul>
Serial Number	Ten-digit identification number (S/N) on the module's faceplate. This value is automatically retrieved from the device, and you cannot edit it.
IOA Serial Number	Ten-digit identification number (S/N) on the input/output adapter's faceplate. This value is automatically retrieved from the device, and you cannot edit it; not applicable to E320 devices

4. Click Save.

The settings are saved.

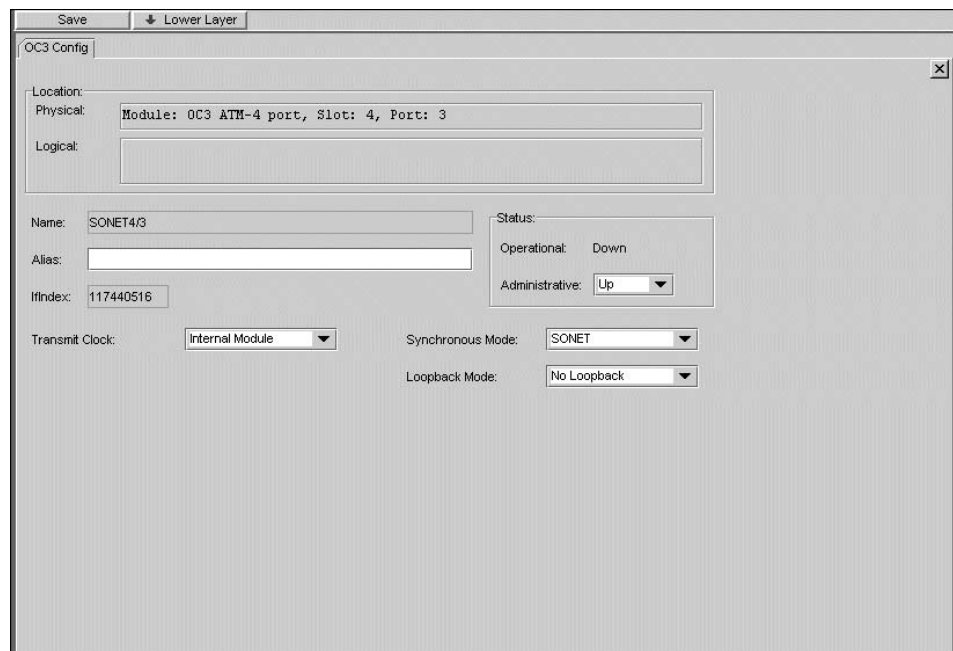
## Configuring a Line Interface

An OCx module can have one, two, three, four, or eight line interfaces.

To configure a line interface:

1. In the Instance Explorer, select the line interface you want to configure.
2. Right-click, and select Configure.

The OCx Config tab appears in the work area.



3. Set the line interface parameters (Table 45).

**Table 45: Line Interface Parameters (Unchannelized OC)**

Field	Description
Name	Identifies the interface; generated automatically
Alias	Description of the interface; 0–15 characters; default: blank
IfIndex	Identifies the interface on the particular line interface; generated automatically
Operational	Current operational status of the interface
Administrative	Desired status of the interface: Up/Down; default: Up
Transmit Clock	<ul style="list-style-type: none"> <li>■ Loop Timing—Device receives its clocking from a network source</li> <li>■ Internal Module—Device receives its clocking from a network source</li> <li>■ Internal Chassis—Device receives its clocking from the configured system clock</li> </ul>

**Table 45: Line Interface Parameters (Unchannelized OC) (continued)**

Field	Description
Synchronous Mode	<ul style="list-style-type: none"> <li>■ SONET—Synchronous Optical Network</li> <li>■ SDH—Synchronous Digital Hierarchy</li> </ul>
Loopback Mode	<ul style="list-style-type: none"> <li>■ No Loopback—Disables loopback mode</li> <li>■ Line Loopback—Loops the data toward the network; connects the received network signal directly to the transmit network signal line.</li> <li>■ Internal Loopback—Loops the data toward the interface of the module; connects the local transmitted signal to the local received signal.</li> </ul>

4. When you finish setting the line interface parameters, click Save.

