Chapter 16

Configuring X.21/V.35 Modules

This chapter describes how to configure the X.21/V.35 module, which supports high-speed WAN switching services, such as Frame Relay and PPP.

This chapter contains the following sections:

Overview

X.21 interfaces provide synchronous operation between data communication equipment (DCE) and data terminal equipment (DTE) on public data networks.

V.35 interfaces provide synchronous operation between DCE and DTE for data communication over the telephone network. Although the V.35 standard is considered obsolete and is no longer supported by ITU-T, many V.35 connections still exist in telephone networks.

ERX-7xx models and the ERX-1410 router support the X.21/V.35 line module and I/O module. The ERX-1440 router does not support the X.21/V.35 line module and I/O module.

The X.21/V.35 interface includes an HDLC layer. You can configure other protocols over this HDLC layer.

X.21/V.35 line modules pair with I/O modules to provide particular capabilities and connections.

For complete module details, see Table 50, the *E-series Module Guide*, and the *JUNOSe Physical Layer Configuration Guide*.

Table 50: X.21/V.35 Line Modules and I/O Modules

Line Module	I/O Module	Description	NMC-RX Software Reference Name
X.21/V.35-16	X.21/V.35-16	16-port module that supports X.21 and V.35 operation	X.21/V.35-16 port

Configuration Tasks

Typically, you configure X.21/V.35 modules in the following order. Some steps may not apply for a particular module.

1. Set the parameters that provide basic status information about the module.
2. Set the line interface parameters.
3. Create the interface stacking by choosing one of following options:
   - Frame Relay
   - Cisco HDLC

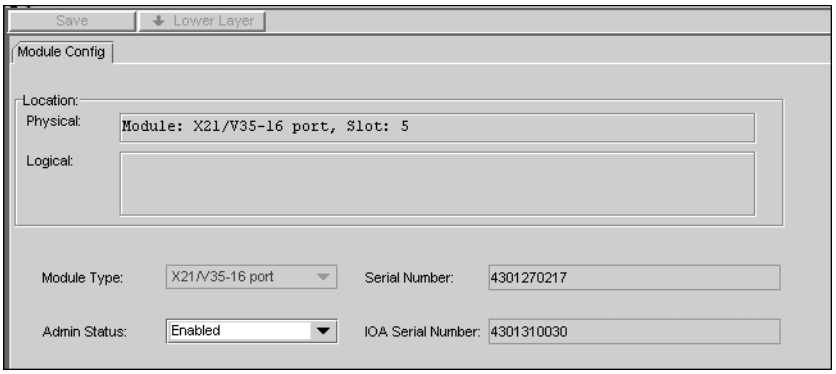
Configuring an X.21/V.35 Module

You can configure a module's admin status only by enabling or disabling it.

To change the admin status:

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 an admin status (Table 51).

Table 51: Module Config Parameters

Field	Description
Module Type	Module type (cannot edit)
Admin Status	■ Enabled—Module is running ■ Disabled—Module is not in operation
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.

4. Click Save.

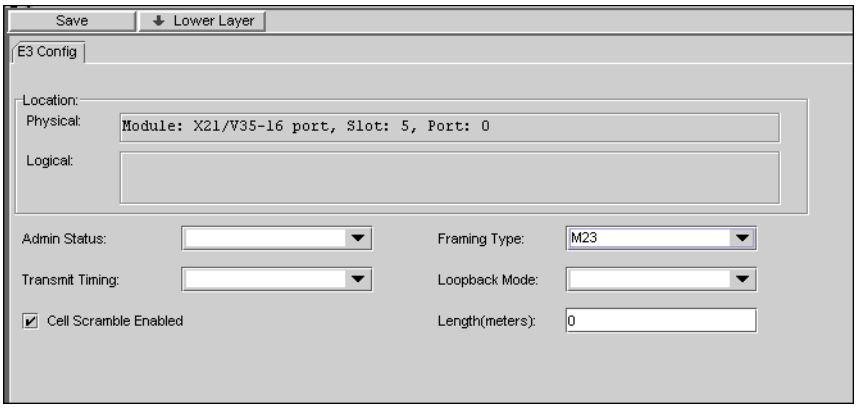
Configuring a Line Interface

There are 16 line interfaces (0–15) for the X.21/V.35 module.

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 X.21/V.35 Config tab appears in the work area.



3. Set the parameters (Table 52).

Table 52: Line Interface Parameters

Field	Description
Admin Status	■ Up—Module is running ■ Down—Module is not in operation
Framing Type	■ M23—M23 multiplexer framing ■ CbitParity—C-bit parity framing ■ M23 Plcp—M23 with PLCP framing ■ CbitParityPlcp—C-bit parity with PLCP framing
Transit Timing	■ Specifies the type of timing: ■ Module Timing—Receives its clocking from a network source ■ Chassis Timing—Receives its clocking from the configured system clock ■ Received Timing—Sets the clock source on the active line
Loopback Mode	■ None—No loopback specified (default) ■ Network Payload—Loops the data toward the network ■ Network Line—Sets a local loopback at the payload controllers ■ Local—Loops back outgoing data from the transmit to the receive side
Cell Scramble Enabled	Enables cell scrambling on the interface
Length (meters)	Specifies the cable length. The length of cable determines power requirements: ■ 0 to 224—Use for low-power output ■ 225 to 450—Use for high-power output

4. Click Save.