



Preface

This guide provides an overview and explains how to configure various features for the following OCx interface modules:

Table 1: Supported Interface Module

Interface Module	Part Number	Mode
1 port OC-48/STM-16 or 4 port OC-12/OC-3 / STM-1/STM-4 + 12 port T1/E1 + 4 port T3/E3 CEM Interface Module	• NCS4200-3GMS	• T1/E1 • T3/E3
1-Port OC-192 or 8-Port Low Rate CEM Interface Module	• NCS4200-1T8S-10CS	
NCS 4200 1-Port OC-192 or 8-Port Low Rate CEM 20G Bandwidth Interface Module	• NCS4200-1T8S-20CS	

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- [Related Documentation, on page 3](#)

Document Organization

Chapter	Description
Overview of the OCx Interface Modules	Provides a high-level overview of OCx CEM interface modules. Also provides additional information such as restrictions, benefits, and so on.

Chapter	Description
Configuring Synchronous Optical Network (SONET) and Synchronous Digital Hierarchy (SDH)	<p>Provides information about how to configure the following features on SONET and SDH:</p> <ul style="list-style-type: none"> • Line and section configuration parameters such as BERT, clock, loopback, mode, and so on • SONET T1, T3, and VT parameters such as BERT, clock, framing, loopback, shutdown, and so on. • SDH T1, T3, and VC parameters such as BERT, CEM group, clock, loopback, shutdown, and so on. • Loopback remote on T1 and T3 interfaces • CEM group on framed SAToP
Configuring Interworking Multiservice Gateway (iMSG)	<p>Provides information on how to configure the following features:</p> <ul style="list-style-type: none"> • Serial Interfaces • iMSG Access Circuit Redundancy • Multilink Interfaces • VLAN Handoff
Configuring OCx Protection	<p>Provides information on how to configure the following port and path protection features:</p> <ul style="list-style-type: none"> • Automatic protection switching (APS) for port protection • Multiplex Section Protection (MSP) for port protection • Unidirectional Path Switching Ring (UPSR) • UPSR over HDLC • Subnetwork Connection Protection (SNCP)
Configuring Data Communication Channel (DCC) and Target Identifier Address Resolution Protocol (TARP)	<p>Provides information on how to configure DCC, Transparent Overhead Tunneling, and TARP.</p>
Configuring Bandwidth for OCx Modules	<p>Provides information on how to configure 5G mode on 1-Port OC-192 or 8-Port Low Rate CEM Interface Module</p>

Chapter	Description
Additional References	Provides information about SONET and SDH frames. <ul style="list-style-type: none">• SONET Frame Structure—Details on STS-1 and STS-3 frames , concatenated, and Channelized SONET frames.• SDH Frame Structure—Details on STM-1 frame and Virtual Container (VC).

Related Documentation

- [Alarm Configuring and Monitoring Guide](#)
- [CEM Generic Guide](#)
- [48-Port T1 or E1 CEM Interface Module Configuration Guide](#)
- [48-Port T3 or E3 CEM Interface Module Configuration Guide](#)

