



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 | |

- [Document Organization, on page 1](#)
- [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](#)

