

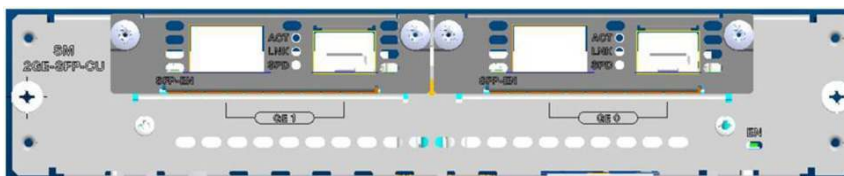
# Cisco SM-2GE-SFP-CU Service Module

## Product Overview

The Cisco® SM-2GE-SFP-CU Service Module has 2 Small Form-Factor Pluggable (SFP) slots that can be plugged into Cisco Integrated Services Routers Generation 2 (ISR G2) Service Module slots to provide additional copper and optical Gigabit Ethernet ports

Figure 1 shows the Cisco SM-2GE-SFP-CU Service Module faceplate.

**Figure 1.** Cisco SM-2GE-SFP-CU Service Module



## Features

Cisco SM-2GE-SFP-CU Service Module is based on EHWIC-1GE-SFP-CU technology.

SFP & feature support is therefore identical to that of the EHWIC-1GE-SFP-CU module

More information on features and a list of supported SFPs is found in the EHWIC-1GE-SFP-CU Data sheet

[https://www.cisco.com/en/US/prod/collateral/routers/ps10536/data\\_sheet\\_c78-660124.html](https://www.cisco.com/en/US/prod/collateral/routers/ps10536/data_sheet_c78-660124.html)

## Platform Support

The Cisco SM-2GE-SFP-CU Service Module increases the SFP port density in the Cisco 3900 and Cisco 3900E Integrated Services Routers.

The service module also carries the following:

- Support for a service module in any service module slot
- Support for 2 Ethernet high-speed SFP ports per service-module card

Table 1 lists the Cisco 3900 and 3900E Integrated Services Routers supported by the Cisco SM-2GE-SFP-CU Service Module and the Cisco IOS® Software releases required to support the platforms.

**Table 1.** Cisco SM-2GE-SFP-CU on Cisco 3900 and 3900E Routers

Maximum number of SFP ports supported per chassis is 6 with any combination of EHWIC-1GE-SFP-CU and SM-2GE-SFP-CU modules

Cisco ISR G2	Routers	Release
3900 and 3900E Series	3925, 3945, 3925E, and 3945E	15.1(4)M3 or 15.2(3)T

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**Note:** The Cisco IOS Software releases provided are typically the minimum version required to support the platform, module, or feature in question. Use the Software Advisor (available to registered customers only) to choose the appropriate software for your Cisco product.

## Installation

Service modules and network modules can be installed either before or after mounting the router.

Always make sure that the router is **off** when installing the Cisco SM-2GE-SFP-CU.

For important tips, safety warnings, and other information you need to know before and during installation of the Cisco SM-2GE-SFP-CU Service Module, refer to “Installing Cisco Network Modules and Service Modules in Cisco Access Routers” at:

<http://www.cisco.com/en/US/docs/routers/access/interfaces/nm/hardware/installation/guide/InstNetM.html>.

Warning: To comply with the Telcordia GR-1089 Network Equipment Building Standards (NEBS) standard for electromagnetic compatibility and safety, connect the Gigabit Ethernet ports only to intrabuilding or unexposed wiring or cable. The intrabuilding cable must be shielded and the shield must be grounded at both ends. The intrabuilding port(s) of the equipment or subassembly must not be metalically connected to interfaces that connect to the OSP or its wiring. These interfaces are designed for use as intrabuilding interfaces only (Type 2 or Type 4 ports as described in GR-1089-CORE) and require isolation from the exposed OSP cabling. The addition of Primary Protectors is not sufficient protection to connect these interfaces metalically to OSP wiring.

## Configuration

This module is managed using existing Cisco IOS command-line interface (CLI) commands and external management tools such as Cisco Configuration Professional.

For configuration instructions, refer to the “Configuring Ethernet, Fast Ethernet, or Gigabit Ethernet Interfaces” chapter of “Configuring LAN Interfaces”. The guidelines in this chapter apply to all Cisco modular access routers.

For more configuration instructions and other related documents, refer to the “Related Documents and Links” section on page 6 of that document.

**Note:** Use the **show diag** command to check the hardware information of the Cisco SM-2GE-SFP-CU module.

## Port Numbering

For external interfaces, two-tuple numbering is followed. The interface is addressed as **GigabitEthernet** <slot/port>.

Use the **show diag** CLI command to display the hardware information of the Cisco SM-2GE-SFP-CU Service Module.

**Note:** On the Cisco 3900 Series routers, some slots are built into the chassis and some are external. Slots that are part of a network module have numbers that begin with “1”. Refer to the “Slot, Port, and Interface Information” section of “Cisco 3900 Series and Cisco 2900 Series Hardware Installation Guide” for more information.

## EN LED

The Cisco SM-2GE-SFP-CU Service Module has an EN LED located on the right side of the module. This LED indicates that the module has passed its self-test and is available to the router.

Table 2 lists the EN LED colors and their meanings

**Table 2.** EN LED Colors and Their Meanings

EN LED Colors and What They Indicate	System Status
Off	Cisco SM-2GE-SFP-CU Service Module is not yet operational.
Green	Cisco SM-2GE-SFP-CU Service Module is operational.
Amber	Error has occurred.

## Additional References

Table 3 provides references related to hardware installation, software configuration, and regulatory compliance information.

**Table 3.** Related Documents and Links

Related Topic	Document Title
Configuration support information and instruction in connecting a Cisco Gigabit Ethernet port	Connecting Gigabit Ethernet High-Speed WAN Interface Cards
Information about Cisco Gigabit Transceiver Modules	Cisco Gigabit Ethernet Transceiver Modules Compatibility Matrix
Additional information about enhanced high-speed WAN interface cards (EHWICs) and supported SFP ports	Cisco Enhanced High-Speed WAN Interface Cards [Cisco 3900 Series Integrated Services Routers]
General information about the Cisco Gigabit Ethernet port	Cisco Enhanced High-Speed WAN Interface Cards
Hardware installation instructions for routers and network modules	Cisco 2900 Series and 3900 Series Hardware Installation Guide Installing Cisco Network Modules and Service Modules in Cisco Access Routers
General information about configuration and command reference	Cisco 3900 Series, 2900 Series, and 1900 Series Integrated Services Routers Software Configuration Guide Cisco Configuration Professional Software Advisor
Regulatory compliance information for Cisco network modules and interface cards	Cisco Network Modules and Interface Cards Regulatory Compliance and Safety Information
Regulatory compliance information for Cisco 3900 Series routers	Regulatory Compliance and Safety Information for Cisco 3900 Series Integrated Services Routers

## Technical Assistance

The Cisco Support website (<http://www.cisco.com/techsupport>) provides extensive online resources, including documentation and tools for troubleshooting and resolving technical problems with Cisco products and technologies.

To receive security and technical information about your products, you can subscribe to various services, such as the Product Alert Tool (accessed from Field Notices), the Cisco Technical Services Newsletter, and Really Simple Syndication (RSS) feeds.

Access to most tools on the Cisco Support website requires a Cisco.com user ID and password.



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