

Stacking Module

AT-MCF2000S

Installation Guide

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Electrical Safety and Emission Compliance Statement

Standards: This product meets the following standards when installed in compliant host equipment.

U.S. Federal Communications Commission

Radiated Energy

Note: This equipment has been tested and found to comply with the limits for a Class A digital device pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with this instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Note: Modifications or changes not expressly approved of by the manufacturer or the FCC can void your right to operate this equipment.

Industry Canada

This Class A digital apparatus complies with Canadian ICES-003.
Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.

European Union Restrictions of Use of Certain Hazardous Substances (RoHS) in Electrical and Electronic Equipment

This Allied Telesis RoHS-compliant product conforms to the European Union Restriction of the Use of Certain Hazardous Substances (RoHS) in Electrical and Electronic Equipment. Allied Telesis ensures RoHS conformance by requiring supplier Declarations of Conformity, monitoring incoming materials, and maintaining Manufacturing process controls.

RFI Emissions

FCC Class A, EN55022 Class A, EN61000-3-2,
EN61000-3-3, VCCI Class A, C-TICK, CE

WARNING:



In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

EMC (Immunity)

EN55024

Electrical Safety

EN60950-1 (TUV), UL 60950-1 (CUL_{US})

Translated Safety Statements

Important: When you see the , go to the Allied Telesis website www.alliedtelesis.com for the translated safety statement in your language.

Contents

Preface	7
Document Conventions	8
Where to Find Web-based Guides	9
Contacting Allied Telesis	10
Online Support	10
Email and Telephone Support	10
Warranty	10
Returning Products	10
Sales or Corporate Information	11
Chapter 1: Installation	13
Overview	14
Features	14
Verifying the Package Contents	15
Cable Requirements	15
Reviewing Safety Guidelines	16
Installing the AT-MCF2000S Stacking Module	17
Cabling a Media Converter Stack	23
AT-MCF2000S Stacking Module LED	27
Removing the AT-MCF2000S Stacking Module	28
Troubleshooting	29
Warranty Registration	30
Appendix A: Technical Specifications	31
Physical	31
Temperature	31
Standards & Compliance	32
Agency Certifications	32

Contents

Preface

This guide provides a description of the AT-MCF2000S Stacking Module and instructions on how to install it. This guide contains the following chapters and appendices:

- ❑ Chapter 1, "Installation" on page 13
- ❑ Appendix A, "Technical Specifications" on page 31

This preface contains the following sections:

- ❑ "Document Conventions" on page 8
- ❑ "Where to Find Web-based Guides" on page 9
- ❑ "Contacting Allied Telesis" on page 10

Document Conventions

This document uses the following conventions:

Note

Notes provide additional information.



Caution

Cautions inform you that performing or omitting a specific action may result in equipment damage or loss of data.



Warning

Warnings inform you that performing or omitting a specific action may result in bodily injury.

Where to Find Web-based Guides

The installation and user guides for all Allied Telesis products are available in portable document format (PDF) on our web site at **www.alliedtelesis.com**. You can view the documents online or download them onto a local workstation or server.

For details about the features and functions of the AT-MCF2000 Multi-channel Media Converter Chassis, the AT-MCF2000M Management Module, and the AT-S85 and AT-S97 Management Software, refer to the following manuals on our web site:

- ❑ *AT-MCF2000 Multi-channel Media Converter Chassis Installation Guide* (part number 613-000573)
- ❑ *AT-MCF2000M Management Module Installation Guide* (part number 613-000709)
- ❑ *AT-S85 and AT-S97 Management Software Command Line Interface User's Guide* (part number 613-000789)

Contacting Allied Telesis

This section provides Allied Telesis contact information for technical support as well as sales or corporate information.

Online Support

You can request technical support online by accessing the Allied Telesis Knowledge Base: **www.alliedtelesis.com/support**. You can use the Knowledge Base to submit questions to our technical support staff and review answers to previously asked questions.

Email and Telephone Support

For technical support via email or telephone, refer to the Allied Telesis web site: **www.alliedtelesis.com**. Select your country from the list displayed on the website. Then select the appropriate menu tab.

Warranty

The AT-MCF2000S Stacking Module has a 5 Year Warranty. All Allied Telesis warranties are subject to the terms and conditions set out in the Allied Telesis Limited Warranties on our web site at **www.alliedtelesis.com/warranty**.

Returning Products

Products for return or repair must first be assigned a Return Materials Authorization (RMA) number. A product sent to Allied Telesis without an RMA number will be returned to the sender at the sender's expense.

To obtain an RMA number, contact Allied Telesis' Technical Support group at our web site: **www.alliedtelesis.com/support/rma**. Select your country from the list displayed on the website. Then select the appropriate menu tab.

Sales or Corporate Information

You can contact Allied Telesis for sales or corporate information on our web site: **www.alliedtelesis.com**. Select your country from the list displayed on the website. Then select the appropriate menu tab.

Chapter 1

Installation

This chapter describes how to install the stacking module. It contains the following sections:

- ❑ “Overview” on page 14
- ❑ “Verifying the Package Contents” on page 15
- ❑ “Cable Requirements” on page 15
- ❑ “Reviewing Safety Guidelines” on page 16
- ❑ “Installing the AT-MCF2000S Stacking Module” on page 17
- ❑ “Troubleshooting” on page 29
- ❑ “Warranty Registration” on page 30

Overview

The AT-MCF2000S Module is a stacking module for the AT-MCF2000 Media Converter Series. See Figure 1.

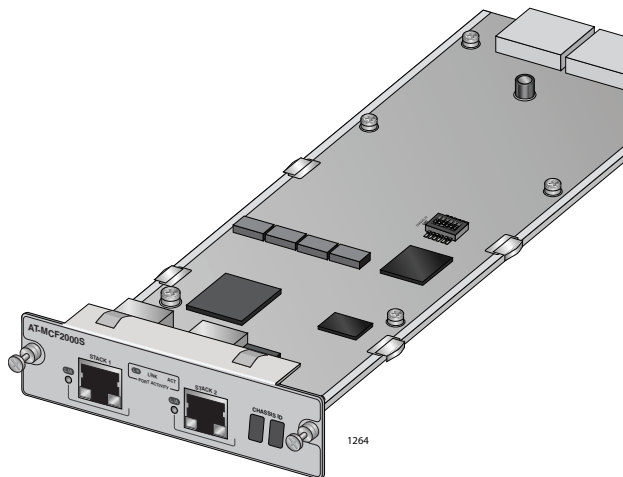


Figure 1. AT-MCF2000S Stacking Module

Features

The stacking module contains the following features:

- ❑ There are two RJ-45 Fast Ethernet connections on the front of the module. The port on the left is labeled STACK 1 and the port on the right is labeled STACK 2. Each port has an LED that displays link activity. For more information about the LEDs, see “AT-MCF2000S Stacking Module LED” on page 27.

- ❑ An LED display shows the chassis ID of the stacking module.
- ❑ A set of DIP switches located on the top of the module permits you to set the chassis ID. For the stacking module, the range of chassis ID is from 1 to 30.

Verifying the Package Contents

Make sure the following items are included in your package. If any item is missing or damaged, contact your Allied Telesis sales representative for assistance.

- ❑ An AT-MCF2000S Stacking Module
- ❑ This installation guide

Cable Requirements

The cable requirements for the STACK 1 and STACK 2 ports on the AT-MCF2000S Stacking Module are provided here:

- ❑ Standard straight-through or crossover TIA/EIA 568-A-compliant Category 5 or TIA/EIA 568-B-compliant Enhanced Category 5 (Cat 5e) shielded or unshielded cabling with 100 ohm impedance.
- ❑ Standard 8-pin RJ-45 connectors
- ❑ Maximum length of 100 meters (328 feet)

Reviewing Safety Guidelines

Review the following safety guidelines affecting the host equipment before installing the module.



Warning: Power cord is used as a disconnection device. To de-energize equipment, disconnect the power cord. ⚡ E3

Pluggable Equipment. The socket outlet shall be installed near the equipment and shall be easily accessible. ⚡ E5



Caution: Air vents must not be blocked and must have free access to the room ambient air for cooling. ⚡ E6

Warning: Operating Temperature. This product is designed for a maximum ambient temperature of 40° degrees C. ⚡ E7

All Countries: Install product in accordance with local and National Electrical Codes. ⚡ E8

Installing the AT-MCF2000S Stacking Module

This section provides a description of how to install the stacking module.

Before you begin to install the module in the chassis, review the following information:

- ❑ For information and guidelines on the stacking feature of the AT-MCF2000 Media Converter Series, refer to the *AT-MCF2000M Management Module Installation Guide* and the *AT-S85 and AT-S97 Management Software Command Line Interface User's Guide*.
- ❑ Refer to the chassis' Installation Guide to verify that the module is appropriate for the unit.
- ❑ The AT-MCF2000S Stacking Module is hot-swappable. You can install or replace the module while the chassis is powered on.
- ❑ The following procedure uses the AT-MCF2000 chassis for illustration purposes. Your chassis may be different.



Caution

The AT-MCF2000S Stacking Module is sensitive to and can be damaged by electrostatic discharge. When installing the module in the chassis, wear a grounding device and observe electrostatic discharge precautions.

For a list of available chassis models in the AT-MCF2000 Media Converter Series, contact your Allied Telesis sales representative or visit our web site at www.alliedtelesis.com.

To install the AT-MCF2000S Stacking Module, perform the following procedure:

1. Remove the module from the shipping package.

Note

Store the packaging material in a safe location. You must use the original shipping material if you need to return the unit to Allied Telesis.

2. Remove the blank panel from the management slot on the chassis by loosening the two captive screws on the panel with a cross-head screwdriver. See Figure 2.

Refer to the chassis' Installation Guide for the location of the management slot.

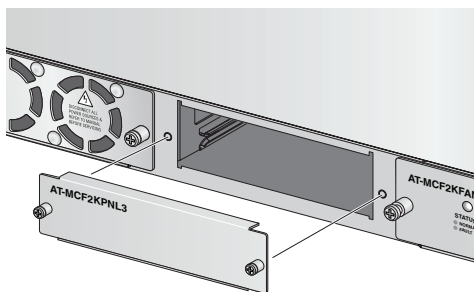


Figure 2. Removing the Blank Panel

Note

Do not remove the blank panel from the chassis until you are ready to install a module. An open slot allows dust to enter the unit and hinders the ability of the chassis to maintain proper airflow and cooling.

3. Remove the tape from the DIP switch.
4. Set the chassis ID of the stacking module. Use the tip of a ballpoint pen to change the setting of the DIP switch. See Figure 3 on page 20. The chassis ID can be from 1 through 30. The default value is 1.

Use the table of DIP switch settings that is printed on the module to determine the new chassis ID. Use the switches labeled 1 through 5.

**Caution**

You cannot use the switch labeled 6.

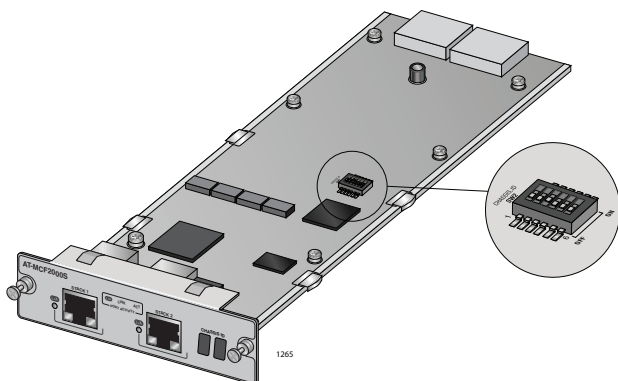


Figure 3. Changing the DIP switch

5. Align the edges of the module with the guides in the slot and carefully slide the module into the chassis until it is flush with the back panel of the chassis. See Figure 4 on page 21.

You may need to exert light pressure to seat the module on the connector on the back panel of the chassis.



Caution

Do not force the module into place. Doing so may damage the connector pins on the backplane inside the chassis. If there is resistance, remove the module and reinsert it after verifying that the edges of the card are properly aligned in the guides.

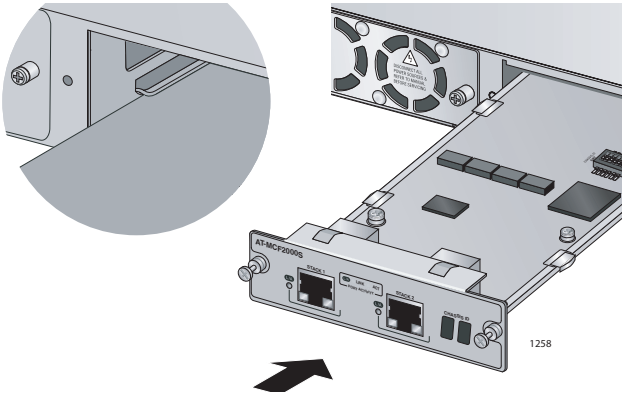


Figure 4. Installing the AT-MCF2000S Stacking Module

6. Secure the module to the chassis by the tightening the two captive screws with a cross-head screwdriver. See Figure 5 on page 22.

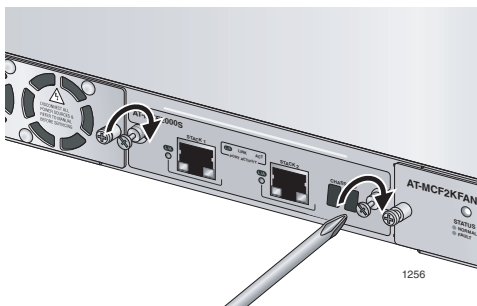


Figure 5. Securing the AT-MCF2000S Stacking Module

7. Connect the cables from the STACK ports on the other units in the stack to the STACK 1 and STACK 2 ports. See Figure 6 on page 22.

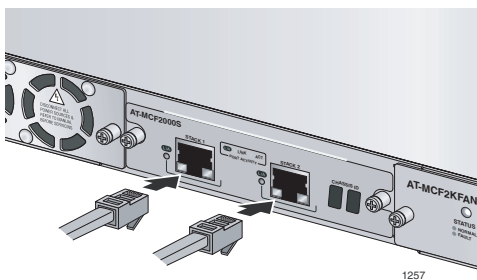


Figure 6. Connecting the Stacking Cables

If this is the last chassis in the stack, you can connect the stacking cable to either port. For cabling guidelines, see the next section.

Cabling a Media Converter Stack

To create a stack of media converters, you daisy-chain the units with the Stack ports. The Stack port on the AT-MCF2000M Management Module must be connected to the STACK 1 or STACK 2 port on the AT-MCF2000S Stacking Module in the next chassis.

Connect the remaining Stack port on the stacking module to the STACK 1 or STACK 2 port in the next chassis, and so on. Loops and redundant connections are not supported. For cable specifications, see “Cable Requirements” on page 15.

To cable a media converter stack, perform the following procedure:

1. To connect the AT-MCF2000M Management Module to the AT-MCF2000S Stacking Module, connect the Stack port on the management module to either the STACK 1 or STACK 2 port on the stacking module. See Figure 7 on page 24.

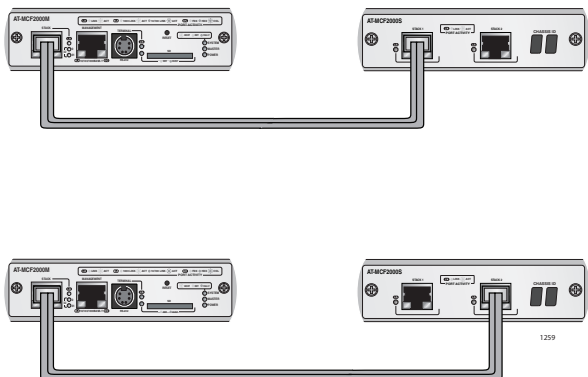


Figure 7. Connecting the Management and Stacking Modules

2. To cable two stacking modules, connect the STACK 1 or STACK 2 port on one stacking module to either the STACK 1 or STACK 2 port on another stacking module.

All port combinations are supported. See Figure 8 on page 25.

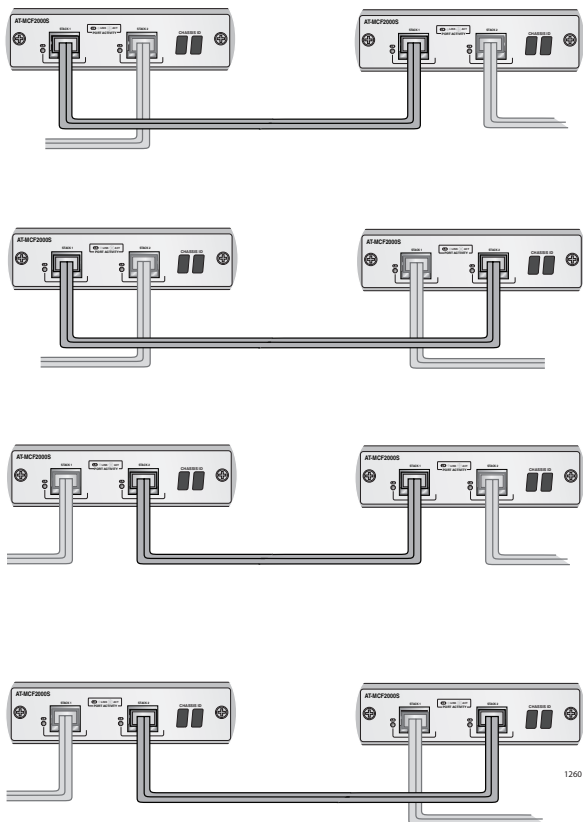


Figure 8. Cabling Two AT-MCF2000S Stacking Modules

3. If this is the last chassis in the stack without a redundant management module, connect the stacking cable to either STACK 1 or STACK 2 port. For more cabling guidelines, see the *AT-MCF2000 Multi-channel Media Converter Chassis Installation Guide*.

Note

If this is the initial installation of the chassis, see the *AT-MCF2000 Multi-channel Media Converter Chassis Installation Guide* for instructions on how to install the remaining modules in the chassis.

AT-MCF2000S Stacking Module LED

The AT-MCF2000S Stacking Module has two ports labeled STACK 1 and STACK 2. See Figure 1 on page 14. Each Stack port has one LED labeled L/A for Link/Activity. The states of the LED are defined in Table 1.

Table 1. LED

State	Description
Off	The port has not established a link with a port on another stacking module.
Steady green	The port has established a link with a port on another stacking module.
Flashing green	The stacking port is transmitting or receiving management packets.

Removing the AT-MCF2000S Stacking Module

To remove the AT-MCF2000S Stacking Module, perform the following procedure:

1. Remove all cables from ports on the module.
2. Using a cross-head screwdriver, loosen the two captive screws that secure the module to the chassis.
3. Slide the module from the chassis.



Caution

The AT-MCF2000S Stacking Module is sensitive to and can be damaged by electrostatic discharge. When installing the module in the chassis, wear a grounding device and observe electrostatic discharge precautions.

4. If you are not replacing the module, reinstall the blank panel over the management slot.

Note

Do not leave a chassis slot open. An open slot allows dust to enter the chassis and reduces the airflow and cooling of components.

5. If you are replacing the module, begin the installation of the new stacking module with “Verifying the Package Contents” on page 15.

Troubleshooting

If the STACK ports on the module are unable to establish a link, try the following:

- ❑ Verify the module is fully seated in the management slot in the AT-MCF2000 Chassis.
- ❑ Verify the chassis is powered on and operating properly.
- ❑ Verify you are using Standard TIA/EIA 568-A-compliant Category 5 or TIA/EIA 568-B-compliant Enhanced Category 5 (Cat 5E) shielded or unshielded cabling.
- ❑ Verify the cables are firmly secured to the port.
- ❑ Verify the other AT-MCF2000 Chassis in the stack are powered on and operating properly.
- ❑ Remove and reinstall the module.
- ❑ Replace the stacking cables.
- ❑ Replace the AT-MCF2000S Stacking Module with another module.

Note

For additional assistance, contact Allied Telesis Support on our web site at **www.alliedtelesis.com**.

Warranty Registration

Allied Telesis hardware products are covered under limited warranties. Some products have a longer warranty coverage than others.

The AT-MCF2000S Stacking Module has a limited warranty of 5 years.

All Allied Telesis warranties are subject to the terms and conditions set out on the Allied Telesis website at **www.alliedtelesis.com/warranty**.

Appendix A

Technical Specifications

Physical

Dimensions:	H x W x D 3.1 cm x 9.7 cm x 20.8 cm (1.2 in x 3.8 in x 8.2 in)
Weight:	.295 g (0.65 lbs)

Temperature

Operating Temperature:	0° C to 40° C (32° F to 104° F)
Storage Temperature:	-25° C to 70° C (-13° F to 158° F)
Operating Humidity:	5% to 90% non- condensing
Storage Humidity:	5% to 95% non- condensing
Maximum Operating Altitude:	Up to 3,048 meters (10,000 feet)
Maximum Nonoperating Altitude:	Up to 4,000 meters (13,123 feet)

Standards & Compliance

IEEE 802.3	10T Ethernet
IEEE 802.3u	100TX Fast Ethernet
IEEE 802.3x	Full-duplex flow control

Agency Certifications

The following agency certifications apply when the AT-MCF2000S Stacking Module is installed in the host equipment:

RFI Emissions	FCC Class A, EN55022 Class A, EN6100-3-2, EN6100-3-3, VICCI Class A, C-TICK, CE
Immunity	EN55024
Electrical Safety	UL 60950-1 (CUL _{US}), EN60950-1 (TUV)