



AT-MC1001
AT-MC1001SC/GS2
AT-MC1001SC/GS3
AT-MC1001SC/GS4

Gigabit Media Converters

Installation Guide

Copyright © 2000 Allied Telesyn International, Corp.
960 Stewart Drive Suite B, Sunnyvale CA USA 94085

All rights reserved. No part of this publication may be reproduced without prior written permission from Allied Telesyn International, Corp.

Ethernet is a registered trademark of Xerox Corporation. All other product names, company names, logos or other designations mentioned herein are trademarks or registered trademarks of their respective owners.

Allied Telesyn International, Corp. reserves the right to make changes in specifications and other information contained in this document without prior written notice. The information provided herein is subject to change without notice. In no event shall Allied Telesyn International, Corp. be liable for any incidental, special, indirect, or consequential damages whatsoever, including but not limited to lost profits, arising out of or related to this manual or the information contained herein, even if Allied Telesyn International, Corp. has been advised of, known, or should have known, the possibility of such damages.

Safety Warnings

Standards: This product meets the following standards.

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 meets all requirements of the Canadian Interference-Causing Equipment Regulations.

Cet appareil numérique de la classe A respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.


RFI Emission

EN55022 Class A  1




Warning: In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.  2

Immunity


EN50082-1 1997  3


Electrical Safety


TUV-EN60950, UL1950, CSA 950  4





Laser


EN60825  5


Important: Appendix A contains translated safety statements for installing this equipment. When you see the , go to Appendix A for the translated safety statement in your language.


Wichtig: Anhang A enthält übersetzte Sicherheitshinweise für die Installation dieses Geräts. Wenn Sie  sehen, schlagen Sie in Anhang A den übersetzten Sicherheitshinweis in Ihrer Sprache nach.


Viktigt: Tillæg A indeholder oversatte sikkerhedsadvarsler, der vedrører installation af dette udstyr. Når De ser symbolet , skal De slå op i tillæg A og finde de oversatte sikkerhedsadvarsler i Deres eget sprog.


Belangrijk: Appendix A bevat vertaalde veiligheidsopmerkingen voor het installeren van deze apparatuur. Wanneer u de  ziet, raadpleeg Appendix A voor vertaalde veiligheidsinstructies in uw taal.


Important: L'annexe A contient les instructions de sécurité relatives à l'installation de cet équipement. Lorsque vous voyez le symbole , reportez-vous à l'annexe A pour consulter la traduction de ces instructions dans votre langue.

Tärkeää: Liite A sisältää tämän laitteen asentamiseen liittyvät käännetyt turvaohjeet. Kun näet , katso käännettyä turvaohjetta liitteestä A.

Importante: L'appendice A contiene avvisi di sicurezza tradotti per l'installazione di questa apparecchiatura. Il simbolo , indica di consultare l'appendice A per l'avviso di sicurezza nella propria lingua.

Viktig: Tillegg A inneholder oversatt sikkerhetsinformasjon for installering av dette utstyret. Når du ser , åpner du til Tillegg A for å finne den oversatte sikkerhetsinformasjonen på ønsket språk.

Importante: O Anexo A contém advertências de segurança traduzidas para instalar este equipamento. Quando vir o símbolo , leia a advertência de segurança traduzida no seu idioma no Anexo A.

Importante: El Apéndice A contiene mensajes de seguridad traducidos para la instalación de este equipo. Cuando vea el símbolo , vaya al Apéndice A para ver el mensaje de seguridad traducido a su idioma.


Obs! Bilaga A innehåller översatta säkerhetsmeddelanden avseende installationen av denna utrustning. När du ser , skall du gå till Bilaga A för att läsa det översatta säkerhetsmeddelandet på ditt språk.

Table of Contents

Safety Warnings	iii
Welcome to Allied Telesyn	vii
Where to Find Web-based Guides	vii
Document Conventions	vii
Contacting Allied Telesyn	viii
Online Support	viii
Telephone and Fax Support.....	viii
E-mail Support	viii
Returning Products	ix
FTP Server.....	ix
For Sales or Corporate Information	x
Tell Us What You Think	x
AT-MC1001 Series Gigabit Media Converters	1
Key Features.....	2
1000Base-SX Port.....	3
1000Base-LX Port.....	3
Status LEDs	3
Link Test/MissingLink Switch	4
Link Test Standalone/Back to Back Button	6
Half- and Full-Duplex Mode	6
External AC/DC Power Adapter	7
Network Topologies	8
Standalone Topology	8
Back to Back Topology	9
Installing the Media Converter	10
Planning the Installation.....	10
Cabling Specifications	10
Verifying the Package Contents	11
Reviewing Safety Guidelines	12
Installing the Media Converter	13
Testing and Troubleshooting the Media Converter.....	15
Warranty Registration	16
Technical Specifications	17
Physical Specifications	17
Agency Certifications	17
Power Requirements	17
Port Specifications.....	18

Appendix A
Translated Safety Statements 19

Appendix B
AT-MC1001 Series Installation Guide Feedback 31

Appendix C
Technical Support Fax Order 33
Incident Summary 33

Welcome to Allied Telesyn

This guide contains instructions on how to install an AT-MC1001 Series Gigabit Media Converter.

Where to Find Web-based Guides

The Allied Telesyn web site at **www.alliedtelesyn.com** provides you with an easy way to access the most recent documentation and technical information for all of our products. All web-based documents relating to this product and other Allied Telesyn products can be downloaded from the web site in PDF format.

Document Conventions

This guide uses several conventions that you should become familiar with first before you begin to install the product.

Note

A note provides additional information.



Caution

A caution indicates that performing or omitting a specific action may result in equipment damage or loss of data.



Warning

A warning indicates that performing or omitting a specific action may result in bodily injury.

Contacting Allied Telesyn

There are several ways to contact Allied Telesyn technical support: online, telephone, fax or e-mail.

Online Support

You can request technical support online by filling out the Online Technical Support Form at www.alliedtelesyn.com/forms/support.htm.

Telephone and Fax Support

Americas

United States, Canada, Mexico,
Central America, South America
Tel: 1 (800) 428-4835, option 4
Fax: 1 (503) 639-3176

Asia

Singapore, Taiwan, Thailand, Malaysia,
Indonesia, Korea, Philippines, China,
India, Hong Kong
Tel: (+65) 381-5612
Fax: (+65) 383-3830

Australia

Tel: 1 (800) 000-880
Fax: (+61) 2-9438-4966

France

France, Belgium, Luxembourg,
The Netherlands, Middle East, Africa
Tel: (+33) 0-1-60-92-15-25
Fax: (+33) 0-1-69-28-37-49

Germany

Germany, Switzerland, Austria, Eastern
Europe
Tel: (+49) 0130/83-56-66
Fax: (+49) 30-435-900-115

Italy

Italy, Spain, Portugal, Greece, Turkey,
Israel
Tel: (+39) 02-416047
Fax: (+39) 02-419282

Japan

Tel: (+81) 3-3443-5640
Fax: (+81) 3-3443-2443

United Kingdom

United Kingdom, Denmark, Norway,
Sweden, Finland
Tel: (+0044) 1235-442500
Fax: (+44) 1-235-442680

E-mail Support

United States and Canada

TS1@alliedtelesyn.com

Latin America, Mexico, Puerto Rico, Caribbean, and Virgin Islands

latin_america@alliedtelesyn.com

United Kingdom, Sweden, Norway, Denmark, and Finland

support_europe@alliedtelesyn.com

Returning Products

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

To obtain an RMA number, contact Allied Telesyn's Technical Support at one of the following locations:

North America

2205 Ringwood Ave

San Jose, CA 95131

Tel: 1-800-428-4835, option 4

Fax: 1-503-639-3716

European Customer Support Centre

10/11 Bridgemoor Close

Westmead Industrial Estate

Swindon, Wiltshire SN5 7YT

England

Tel: +44-1793-501401

Fax: +44-1793-431099

Latin America, the Caribbean,

Virgin Islands

Tel: international code + 425-481-3852

Fax: international code + 425-483-9458

Mexico and Puerto Rico

Tel: 1-800-424-5012, ext 3852 or

1-800-424-4284, ext 3852

Mexico only: 95-800-424-5012, ext 3852

Fax: international code + 425-489-9191

FTP Server

If you know the name of a device driver that you need for an Allied Telesyn device, you can download the driver by connecting directly to our FTP server at **ftp://gateway.centre.com**.

At login, enter 'anonymous'. Enter your e-mail address for the password as requested by the server at login.

For Sales or Corporate Information

Allied Telesyn International, Corp.
19800 North Creek Parkway, Suite 200
Bothell, WA 98011
Tel: 1 (425) 487-8880
Fax: 1 (425) 489-9191

Allied Telesyn International, Corp.
960 Stewart Drive, Suite B
Sunnyvale, CA 94085
Tel: 1 (800) 424-4284 (USA and Canada)
Fax: 1 (408) 736-0100

Tell Us What You Think

If you have any comments or suggestions on how we might improve this or other Allied Telesyn documents, please fill out the “AT-MC1001 Series Installation Guide Feedback” on page 31 and return the form to us at the address or fax number provided. You can also provide feedback online by filling out the Send Us Feedback Form at www.alliedtelesyn.com/forms/feedback.htm.

AT-MC1001 Series Gigabit Media Converters

The AT-MC1001 Series Gigabit Media Converters include the following models:

- ❑ AT-MC1001
- ❑ AT-MC1001SC/GS3
- ❑ AT-MC1001SC/GS2
- ❑ AT-MC1001SC/GS4

The AT-MC1001 Series Gigabit Media Converters are designed to extend the distance of your network by converting Ethernet data between multimode and single-mode fiber optic cables. Each media converter features a 1000Base-SX port and a 1000Base-LX port. The 1000Base-SX port has a maximum operating distance of 550 meters (1,804 feet) while the 1000Base-LX port has a maximum operating distance of 10 kilometers (6.2 miles) to 70 kilometers (43.4 miles), depending on the model. Both ports feature an SC connector and operate at 1000 Mbps with half-duplex or full-duplex operation.

The media converters can be installed on a table or in an AT-MCR12 chassis. The AT-MC1001 Series Gigabit Media Converters are easy to install and do not require any software configuration or management. Figure 1 shows an example of an AT-MC1001 Series Media Converter.

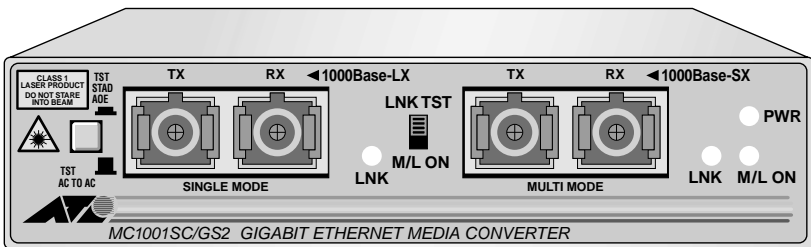


Figure 1 AT-MC1001 Series Gigabit Media Converter (Model AT-MC1001SC/GS2)

Table 1 list the cabling distances for the AT-MC1001 Series Gigabit Media Converters.

Table 1 Maximum Cabling Distances

Model	1000Base-LX		1000Base-SX	
	Type of Connector	Maximum Distance ¹	Type of Connector	Maximum Distance ²
AT-MC1001	SC	10 km (6.2 mi)	SC	550 m (1,804 ft)
AT-MC1001SC/GS2	SC	20 km (12.4 mi)	SC	550 m (1,804 ft)
AT-MC1001SC/GS3	SC	50 km (31 mi)	SC	550 m (1,804 ft)
AT-MC1001SC/GS4	SC	70 km (43.4 mi)	SC	550 m (1,804 ft)

1. Assumes 10/125 micron single-mode fiber optic cable.

2. Assumes 50/125 micron multimode fiber optic cable.

Key Features

The media converters have the following key features:

- LEDs for unit and port status
- 1000Base-SX port with a maximum operating distance of 550 meters (1,804 feet) using multimode fiber optic cabling
- 1000Base-LX port with a maximum operating distance of 10 kilometers (6.2 miles) to 70 kilometers (43.4 miles), depending on the model, using single-mode fiber optic cabling
- Link Test/MissingLink™ switch for performing a link test and notifying nodes of connection failures
- Half- or full-duplex operation
- External AC/DC power adapter
- Standard, compact size for use on a table or with an AT-MCR12 rackmount chassis

1000Base-SX Port

The 1000Base-SX port has an SC connector and is designed to operate with multimode fiber optic cabling. The port has a maximum distance of 275 (902 feet) meters using 62.5/125 micron multimode fiber optic cable and 550 meters (1,804 feet) using 50/125 micron multimode fiber optic cable.

1000Base-LX Port

The 1000Base-LX fiber optic port has an SC connector and is designed to operate with multimode or single-mode fiber optic cable. The port has a maximum operating distance of 550 meters (1,804 feet) using either 50/125 micron or 62.5/125 micron multimode fiber cable. Using 10/125 micron single-mode fiber optic cable, the port has a maximum operating distance of 10 kilometers (6.2 miles) to 70 kilometers (43.4 miles), depending on the model.

Status LEDs

Table 2 defines the units LEDs.

Table 2 Status LEDs

LED	State	Color	Description
PWR	ON	Green	Power is applied.
LNK	ON	Green	A link has been established on the port.
M/L ON	ON	Green	The MissingLink feature is activated on the media converter.
	OFF		The MissingLink feature is disabled and the media converter is operating in the link test mode.

Link Test Standalone/Back to Back Button

Link Test/MissingLink Switch

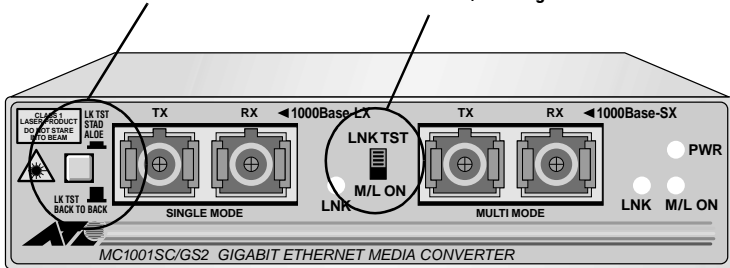


Figure 2 Link Test and Topology Features

Link Test/MissingLink Switch

The Link Test/MissingLink switch (see Figure 2) allows you to perform a link test on the ports on the media converter. This switch also allows you to activate the MissingLink feature on the unit. Both features are described in this section.

Link Test. The link test is a fast and easy way for you to test the connections between the ports on the media converter and the nodes that are connected to the ports. If a network problem occurs, you can perform a link test to determine which port is experiencing a problem, and so be able to identify the fiber optic cable and node where the problem resides.

A link test is performed when the switch is in the LNK TST (UP) position. For instructions on performing a link test, refer to “Testing and Troubleshooting the Media Converter” on page 15.



Caution

The media converter will not pass network traffic when a link test is being performed, thus possibly disrupting network operation. Only when the Link Test switch is in the M/L ON (DOWN) position will the media converter pass network traffic.

MissingLink. The MissingLink feature enables the fiber optic ports on the media converter to pass the “Link” status of their connections to each other. When the media converter detects a problem with one of the ports, such as the loss of connection to a node, the media converter shuts down the connection to the other port, thus notifying the node that the connection has been lost.

For example, Figure 3 illustrates an AT-MC1001 media converter that interconnects an AT-8224XL switch and an AT-8216FXL switch. If the fiber optic cable on the 1000Base-SX port were to fail, the media converter would respond by dropping the link on the 1000Base-LX fiber optic port. In this way, the media converter notifies the AT-8224XL switch that the connection to the AT-8216FXL switch has been lost. If the failure had started on the 1000Base-LX port, the unit would drop the link to the 1000Base-SX port.

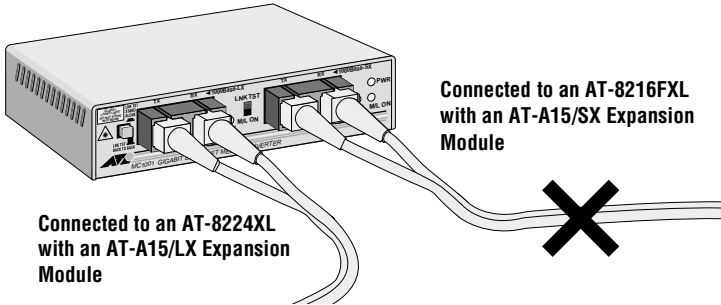


Figure 3 Example of MissingLink

The value to this type of network monitoring and fault notification is that some hubs and switches can be configured to take a specific action in the event of the loss of connection on a port. In some cases, the unit can be configured to seek a redundant path to a disconnected node or send out a trap to a network management station, and so alert the network administrator of the problem. In the example above, once the AT-8224XL switch is notified that its connection to the media converter has been lost, it can attempt to take corrective action.

Note

The MissingLink feature is disabled when you perform a link test with the Link Test/MissingLink switch. Consequently, to ensure that the MissingLink feature is activated on the media converter, always set the switch to the M/L ON (DOWN) position during normal network operations.

Link Test Standalone/Back to Back Button

The Link Test Standalone/Back to Back button (see Figure 2) is used together with the Link Test/MissingLink switch. When performing a link test on the media converter, use this switch to configure the unit to match the topology in which you installed the media converter. The two possible network topologies for the media converter, standalone and back to back, are described in the section “Network Topologies” on page 8. This button must be set correctly in order for a link test to be performed accurately. To perform a link test, refer to “Testing and Troubleshooting the Media Converter” on page 15.



Caution

The media converter will not pass network traffic when a link test is being performed, thus possibly disrupting network operation. Only when the Link Test switch is in the M/L ON (DOWN) position will the media converter pass network traffic.

Half- and Full-Duplex Mode

Duplex mode refers to the way a node sends and receives data on the network. A node can operate in either half- or full-duplex mode, depending on its capabilities. A node that is operating in half-duplex mode can either send data or receive data, but it cannot do both at the same time. A node that is operating in full-duplex mode can send and receive data simultaneously. The best network performance is achieved when a node can operate at full-duplex, since the node is able to both send and receive data simultaneously.

The media converter is transparent to the duplex mode of the nodes that are connected to its two ports. That is, the media converter can operate with nodes operating at either half-duplex or full-duplex mode. However, it is important to remember that the two nodes connected to the ports on the unit must operate with the same duplex mode.

For example, assume that the 1000Base-SX port on the media converter is connected to a port on an Ethernet switch configured for half-duplex operation, while the 1000Base-LX port is connected to a port on another Ethernet switch configured for full-duplex operation. This would be an invalid configuration and could adversely impact the performance of the network. Either the port on the Ethernet switch connected to the 1000Base-SX port would have to be changed to full-duplex (if it supports that capability), or the Ethernet switch port connected to the 1000Base-LX port would need to be changed to half-duplex.

External AC/DC Power Adapter

The media converter comes with an external AC-to-DC power adapter (see Figure 4). The power adapter supplies 12 volts DC to the media converter. Allied Telesyn supplies an approved safety compliant AC power adapter for the 120 and 240 V AC versions with an unregulated output of 12 V DC at 1 A. The power required for the media converter is 12 V DC, 500 mA.

Note

The power adapter is not used if you install the media converter in an AT-MCR12 chassis.

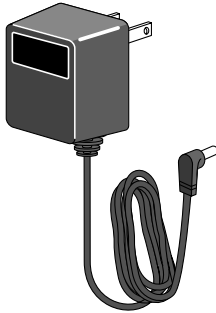


Figure 4 External AC/DC Power Adapter (North American version)

Network Topologies

Standalone Topology

A standalone topology refers to when there is only one media converter between the end nodes. Figure 5, for example, illustrates a standalone topology that uses two AT-MC1001 Series Media Converter to interconnect three remote campuses. Campus 1 has an AT-8224XL switch with two AT-A15/LX expansion modules. The modules, which provide a connection of up to 10 kilometers (6.2 miles), are connected to the 1000Base-LX ports on the media converter. The 1000Base-SX ports on the media converters are connected to the AT-A15/SX expansion modules in the AT-8216FXL switches at Campus 2 and Campus 3.

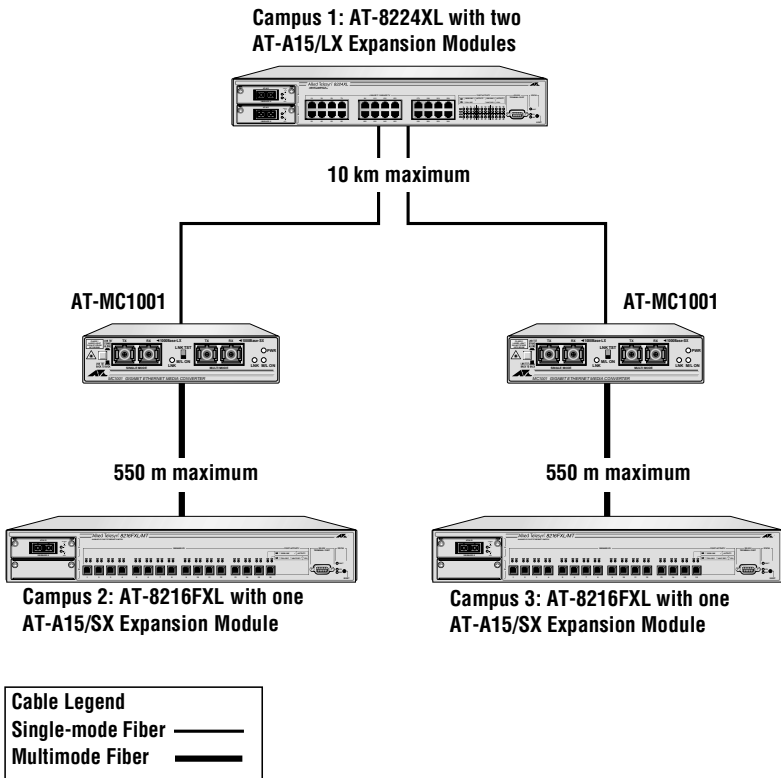


Figure 5 Standalone Topology

Back to Back Topology

In some network configurations you may want to interconnect two media converters in what is referred to as a back to back topology (see Figure 6). In this topology, the AT-MC1001 Series Media Converters not only extend the distance of your network but also convert the fiber optic cable from multimode to single-mode and back again. The figure shows one AT-8224XL switch with an AT-A15/SX expansion module at each campus. The switches are interconnected by two AT-MC1001SC/GS3 media converters. The 1000Base-SX ports on the media converters are connected to the AT-A15/SX expansion modules in the switches, while the 1000Base-LX ports on the media converters are directly connected together.

Campus 1: AT-8224XL with one AT-A15/SX Expansion Module

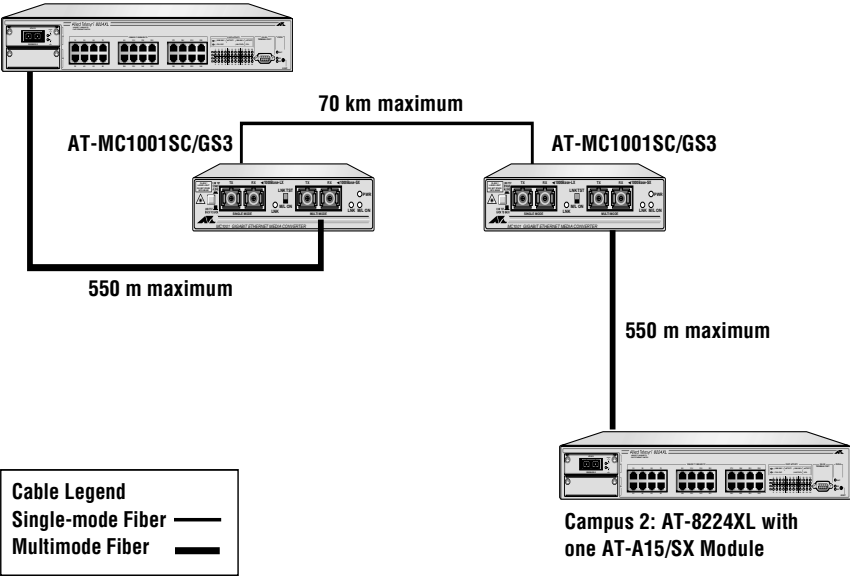


Figure 6 Back to Back Topology

Installing the Media Converter

The following sections explain how to install the media converter. The media converter can be installed on a table or in an AT-MCR12 chassis.

Planning the Installation

Be sure to observe the following guidelines when planning the installation of your media converter.

- The nodes connected to the media converter must operate at 1000 Mbps.
- The two nodes connected to the ports of the media converter must operate with the same duplex mode, either half- or full-duplex. The media converter itself can operate in either mode.
- The devices connected to the two ports on the media converter can be network adapter cards, repeaters, switches, or routers.
- Be sure to observe the cabling specifications. Refer to “Cabling Specifications” below.

Cabling Specifications

Table 3 list the IEEE 802.3u cabling specifications for the AT-MC1001 Series Media Converters.

Table 3 Cabling Specifications

Port	Cable Type	Maximum Distance
1000Base-SX		
All Models	62.5/125 μm multimode fiber	275 m (902 ft)
	50/125 μm multimode fiber	550 m (1,804 ft)
1000Base-LX		
AT-MC1001	62.5/12 $5\mu\text{m}$ multimode fiber	550 m (1,804 ft)
	50/12 $5\mu\text{m}$ multimode fiber	550 m (1,804 ft)
	10/125 μm single-mode fiber	10,000 m (32,800 ft)
AT-MC1001/GS2	10/125 μm single-mode fiber	20 km (12.4 mi)
AT-MC1001/GS3	10/125 μm single-mode fiber	50 km (31 mi)
AT-MC1001/GS4	10/125 μm single-mode fiber	70 km (43.4 mi)

Note

Many factors contribute to the ability of a fiber optic data link to transfer data efficiently. When the data rate across a fiber optic datalink reaches gigabit rates, the factors that had very minor effect at 10Base and 100Base on the ability to recover the transmitted optical data now carry a major influence. The designed/tuned optical bandwidth is a key factor. Most single-mode fiber installed in the last 10 years is designed and optically tuned to operate in the 1310 nanometer band. The IEEE Gigabit Standard for 1000Base-LX is setup to operate in this optical bandwidth.

In order to extend gigabit optical datalink's beyond 20 kilometers (12.4 miles), the 1550 nanometer band is being used. To recover a gigabit data at this optical frequency band, the fiber has to be optimized or tuned for 1550 nanometers. The fiber optic's industry has classified the best fiber for this function as Non-Zero/Dispersion Shifted Fiber (NZ/DSF).

Contact your fiber optic installation contractor for all specifications of your fiber.

Verifying the Package Contents

Make sure the following items are included in your media converter package. If any of the following items are missing or damaged, contact your sales representative.

- One AT-MC1001 Series Gigabit Media Converter
- Four protective feet (for standalone use only)
- External AC/DC power adapter (North America, Continental Europe, United Kingdom, or Australia)
- This installation guide
- Warranty card

Reviewing Safety Guidelines

Please review the following safety guidelines before you begin to install the media converter.



Warning

Class 1 laser device. ⚡ 6



Warning

Do not stare into the laser beam. ⚡ 7



Warning

Electric Shock Hazard: To prevent electric shock, do not remove the cover. There are no user-serviceable parts inside. The unit contains hazardous voltages and should only be opened by a trained and qualified technician. ⚡ 8



Warning

Lightning Danger: Do not work on this equipment or cables during periods of lightening activity. ⚡ 9



Caution

Power cord is used as a disconnection device: To de-energize equipment, disconnect the power cord. ⚡ 10



Caution

Pluggable Equipment: The socket outlet should be installed near the equipment and should be easily accessible. ⚡ 11



Caution

Air vents: The air vents must not be blocked on the unit and must have free access to the room ambient air for cooling. ⚡ 12



Caution

Operating Temperature: This product is designed for a maximum ambient temperature of 40°C. ⚡ 13



Caution

All Countries: Install this product in accordance with local and National Electric Codes. ⚡ 14

Installing the Media Converter

The following procedure explains how to install the media converter in your network.

If you are building a back to back installation, please review the following guidelines. See Figure 6 for an example of a back to back topology.

- ❑ During installation, setup, and testing of back to back media converters, make sure each media converters Link Test/MissingLink switch is in the LNK TST (UP) position.
- ❑ When two media converters are connected back to back with no UTP/STP cables connected and when the Link Test/MissingLink switch is in the LNK TST (UP) position, the LNK LEDs on the fiber port may flash. This is normal and will not affect the normal operation of the units.

To install the unit, perform the following procedure:

1. Remove all equipment from the package and store the packaging in a safe place.

Note

Do not remove the dust covers from the fiber optic ports on the unit until you are ready to connect the fiber optic cables. Dust contamination can adversely impact the operating performance of the ports and the media converter.

2. If you are installing the unit on a desktop, attach the four rubber feet to the base of the unit, placing one rubber foot in each corner. Do not attach the rubber feet if you are installing the unit in an AT-MCR12 chassis.
3. Set the Link Test/MissingLink switch to LNK TST (UP) position.
4. If you are installing the unit in an AT-MCR12 chassis, refer to the chassis' installation guide for instructions on how to install the media converter in the unit.
5. Place the device horizontally on a hard, clean surface (such as a desk or table), leaving free space around the unit for ventilation.

6. Plug the AC/DC power adapter into an appropriate AC power outlet and insert the power plug into the DC receptacle located on the back of the unit. (This step does not apply if you installed the unit in an AT-MCR12 chassis.)

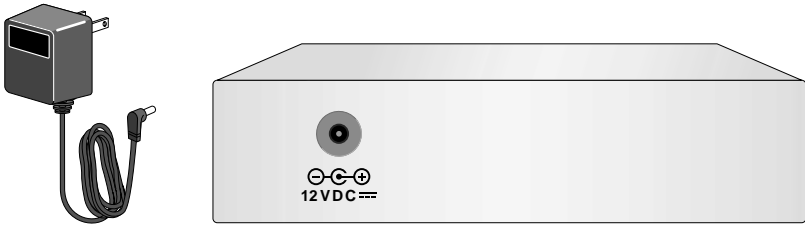


Figure 7 12 V DC Connector on the Back of the Media Converter

7. Verify that the PWR LED is green.
8. Remove the dust covers from the fiber optic connectors.
9. Connect the fiber optic cables to the fiber optic ports on the media converter.
10. Connect the other end of the fiber cables to the desired end stations.

Note

End stations used with the media converter must operate with the same duplex mode (either both full-duplex or both half-duplex).

Refer to “Testing and Troubleshooting the Media Converter” on page 15 for further instructions.

Testing and Troubleshooting the Media Converter

This procedure explains how to test and troubleshoot the media converter by performing a link test. A link test will determine whether each port on the media converter is successfully receiving a signal from the node connected to it. You should perform this test immediately after you have installed the media converter or whenever you are experiencing a problem with the unit. To perform a link test, perform these steps:

1. Verify that the PWR LED on the media converter is green. If the LED is OFF, do the following:
 - If the unit is installed on the table, check to be sure that the power adapter is securely connected to a power outlet and that the adapter cable is securely connected to the back of the media converter.
 - If the unit is installed in an AT-MCR12 chassis, check that the unit is fully seated in the slot.
 - Verify that the power outlet has power by connecting another device to it.
 - Try using another power adapter.
2. Turn ON the nodes (such as the hubs or switches) that are connected to the ports on the media converter.
3. Set the Link Test Standalone/Back to Back button to either standalone or back to back, depending on your topology. Refer to “Network Topologies” on page 8 for a description of the standalone and back to back topologies.
4. Set the Link Test/MissingLink switch on the media converter to LNK TST (UP) position. If you installed a back to back topology, be sure to set this switch to LNK TST on both media converters.
5. The two LNK LEDs should be green. This indicates that the ports on the media converter are receiving a signal from the nodes. If a LNK LED is OFF, do the following:
 - Verify that the node connected to the port is powered ON.
 - Verify that the fiber optic cable is securely connected to the fiber optic port.
 - Verify that the appropriate type of fiber optic cable for the port is being used. Refer to Table 3 on page 10 for cable specifications.
6. Set the Link Test/MissingLink switch on the media converter to M/L ON (DOWN) position. The M/L ON position activates the MissingLink feature on the media converter.

7. If the two LNK LEDs are green but there is a communication problem between the nodes connected to the media converter (and you are not running a link test), do the following:
 - Verify that the nodes connected to the ports are operating at 1000 Mbps.
 - Verify that the nodes connected to the media converter are operating in the same duplex mode. The media converter is transparent to the duplex mode.
 - Verify that the Link Test/MissingLink switch on the media converter is in the M/L ON (DOWN) position.

Note

When two media converters are in a back to back topology and the converters are not performing a link test, the LNK LEDs for the 1000Base-LX ports will remain green if a failure occurs on a connection to either one of the 1000Base-SX ports. Additionally, the loss of a 1000Base-SX connection will cause the 1000Base-SX LED on both media converters in the back to back topology to turn OFF. Should a loss of connectivity occur in a back to back topology, perform a link test using the link test mode on the two media converters. You can then use the LNK LEDs on the media converters to identify which cable or node has caused the problem.

If you are still experiencing problems after testing and troubleshooting the installation, contact Allied Telesyn Technical Support. Refer to “Contacting Allied Telesyn Technical Support” on page viii or visit our web site at www.alliedtelesyn.com for support information.

Warranty Registration

When you finish the installation, register your product by completing the enclosed warranty card and sending it in. You can also visit our web site at www.alliedtelesyn.com/forms/warranty.htm and fill out the registration online.

Technical Specifications

Physical Specifications

Dimensions:	W x D x H 10.5 cm x 9.5 cm x 2.5 cm (4.125 in x 3.75 in x 1.0 in)
Maximum Operating Temperature:	0° C to 40° C (32° F to 104° F)
Maximum Storage Temperature:	-25° C to 70° C (-13° F to 158° F)
Operating Altitude:	Up to 3,048 meters (10,000 feet)
Humidity:	5% to 95% (non-condensing)

Agency Certifications

EMI/RFI:	FCC Class A, EN55022 Class A
Safety:	UL 1950, CSA 950, EN60950, EN60825
Immunity:	EN50082-1 1997 Immunity Standard

Power Requirements

Input Supply Voltage:	12 V DC \pm 5%
Maximum Current:	500 mA
Power Consumption:	6W

Port Specifications

Table 4 AT-MC1001 Series Media Converters Port Specifications

Port	Cable	Transmitter Output Power (dBm avg.)	Wavelength (nm)	Minimum Receiver Sensivity (dBm avg.)
1000Base-SX				
All Models	50/125 or 62.5/125 micron multimode	-9.5 to -4.0	850	-17.0
1000Base-LX				
AT-MC1001	10/125 micron single-mode	-9.5 to -3.0	1310	-20.0
	50/125 or 62.5/125 micron multimode	-11.5 to -3.0	1310	-20.0
AT-MC1001/GS2	10/125 micron single-mode	-3.0 to 0.0	1310	-24.0
AT-MC1001/GS3	10/125 micron single-mode	-5.0 to 0.0	1550	-24.0
AT-MC1001/GS4	10/125 micron single-mode	0.0 to 5.0	1550	-24.0

Appendix A

Translated Safety Statements

Important: This appendix contains multiple-language translations for the safety statements in this guide.

Wichtig: Dieser Anhang enthält Übersetzungen der in diesem Handbuch enthaltenen Sicherheitshinweise in mehreren Sprachen.

Vigtigt: Dette tillæg indeholder oversættelser i flere sprog af sikkerhedsadvarslerne i denne håndbog.

Belangrijk: Deze appendix bevat vertalingen in meerdere talen van de veiligheidsopmerkingen in deze gids.

Important: Cette annexe contient la traduction en plusieurs langues des instructions de sécurité figurant dans ce guide.

Tärkeää: Tämä liite sisältää tässä oppaassa esiintyvät turvaohjeet usealla kielellä.

Importante: questa appendice contiene traduzioni in più lingue degli avvisi di sicurezza di questa guida.

Viktig: Dette tillegget inneholder oversettelser til flere språk av sikkerhetsinformasjonen i denne veiledningen.

Importante: Este anexo contém traduções em vários idiomas das advertências de segurança neste guia.

Importante: Este apéndice contiene traducciones en múltiples idiomas de los mensajes de seguridad incluidos en esta guía.

Obs! Denna bilaga innehåller flerspråkiga översättningar av säkerhetsmeddelandena i denna handledning.

Standards: This product meets the following standards.

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 meets all requirements of the Canadian Interference-Causing Equipment Regulations.

Cet appareil numérique de la classe A respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.







- | | | |
|-----|---|--------------------------|
| ☞ 1 | RFI Emission | EN55022 Class A |
| ☞ 2 |  WARNING: In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures. | |
| ☞ 3 | Immunity | EN50082-1 1997 |
| ☞ 4 | Electrical Safety | EN60950, UL1950, CSA 950 |
| ☞ 5 |  Laser | EN60825 |

SAFETY



- | | | |
|-----|---|--|
| ☞ 6 |  WARNING: Class 1 Laser product. | |
| ☞ 7 |  WARNING: Do not stare into the laser beam. | |

- | | | |
|-----|--|--|
| ☞ 8 |  ELECTRICAL NOTICES
WARNING: ELECTRIC SHOCK HAZARD | |
|-----|--|--|







To prevent ELECTRIC shock, do not remove the cover. No user-serviceable parts inside. This unit contains HAZARDOUS VOLTAGES and should only be opened by a trained and qualified technician. To avoid the possibility of ELECTRIC SHOCK, disconnect electric power to the product before connecting or disconnecting the LAN cables.




- 9  **LIGHTNING DANGER**
DANGER: DO NOT WORK on equipment or CABLES during periods of LIGHTNING ACTIVITY.
- 10  **CAUTION: POWER CORD IS USED AS A DISCONNECTION DEVICE.**
 TO DE-ENERGIZE EQUIPMENT, disconnect the power cord.
- 11  **PLUGGABLE EQUIPMENT,** the socket outlet shall be installed near the equipment and shall be easily accessible.
- 12  **CAUTION:** Air vents must not be blocked and must have free access to the room ambient air for cooling.
- 13  **OPERATING TEMPERATURE:** This product is designed for a maximum ambient temperature of 40° degrees C.
- 14  **ALL COUNTRIES:** Install product in accordance with local and National Electrical Codes.

Normen: Dieses Produkt erfüllt die Anforderungen der nachfolgenden Normen.



- 1 Hochfrequenzstörung EN55022 Klasse A
- 2  **WARNUNG:** Bei Verwendung zu Hause kann dieses Produkt Funkstörungen hervorrufen. In diesem Fall müßte der Anwender angemessene Gegenmaßnahmen ergreifen.
- 3 Störsicherheit EN50082-1
- 4 Elektrische Sicherheit EN60950, UL1950, CSA 950
- 5  Laser EN60825

SICHERHEIT








- 6  **WARNUNG** Laserprodukt der Klasse 1.
- 7  **WARNUNG** Nicht direkt in den Strahl blicken.
- 8  **ACHTUNG: GEFÄHRLICHE SPANNUNG**
 Das Gehäuse nicht öffnen. Das Gerät enthält keine vom Benutzer wartbaren Teile. Das Gerät steht unter Hochspannung und darf nur von qualifiziertem technischem Personal geöffnet werden. Vor Anschluß der LAN-Kabel, Gerät vom Netz trennen.
- 9  **GEFAHR DURCH BLITZSCHLAG**
GEFAHR: Keine Arbeiten am Gerät oder an den Kabeln während eines Gewitters ausführen.
- 10  **VORSICHT: DAS NETZKABEL DIEN TUM ZUM TRENNEN DER STROMVERSORGUNG. ZUR TRENNUNG VOM NETZ, KABEL AUS DER STECKDOSE ZIEHEN.**
- 11  **STECKBARES GERÄT:** Die Anschlußbuchse sollte in der Nähe der Einrichtung angebracht werden und leicht zugänglich sein."



- 12  **VORSICHT**
Die Entlüftungsöffnungen dürfen nicht versperrt sein und müssen zum Kühlen freien Zugang zur Raumluft haben.
- 13  **BETRIEBSTEMPERATUR:** Dieses Produkt wurde für den Betrieb in einer Umgebungstemperatur von nicht mehr als 40° C entworfen.
- 14  **ALLE LÄNDER:** Installation muß örtlichen und nationalen elektrischen Vorschriften entsprechen.

Standarder: Dette produkt tilfredsstiller de følgende standarder.



- 1 Radiofrekvens forstyrrelsesemission EN55022 Klasse A
- 2  **ADVARSEL:** I et hjemligt miljø kunne dette produkt forårsage radio forstyrrelse. Bliver det tilfældet, påkræves brugeren muligvis at tage tilstrækkelige foranstaltninger.
- 3 Immunitet EN50082-1
- 4 Elektrisk sikkerhed EN60950, UL1950, CSA 950
- 5  Laser EN60825

SIKKERHED










- 6  **ADVARSEL** Laserprodukt av klasse 1.
- 7  **ADVARSEL** Stirr ikke på strålen.
- 8  **ELEKTRISKE FORHOLDSREGLER**
ADVARSEL: RISIKO FOR ELEKTRISK STØD
For at forebygge ELEKTRISK stød, undlad at åbne apparatet. Der er ingen indre dele, der kan repareres af brugeren. Denne enhed indeholder LIVSFARLIGE STRØMSPÆNDINGER og bør kun åbnes af en uddannet og kvalificeret tekniker. For at undgå risiko for ELEKTRISK STØD, afbrydes den elektriske strøm til produktet, før LAN-kablerne monteres eller afmonteres.
- 9  **FARE UNDER UVEJR**
FARE: UNDLAD at arbejde på udstyr eller KABLER i perioder med LYNAKTIVITET.
- 10  **ADVARSEL: DEN STRØMFØRENDE LEDNING BRUGES TIL AT AFBRYDE STRØMMEN. SKAL STRØMMEN TIL APPARATET AFBRYDES,** tages ledningen ud af stikket.
- 11  **UDSTYR TIL STIKKONTAKT,** stikkontakten bør installeres nær ved udstyret og skal være lettilgængelig.
- 12  **ADVARSEL:** Ventilationsåbninger må ikke blokeres og skal have fri adgang til den omgivende luft i rummet for afkøling.

- 13  **BETJENINGSTEMPERATUR:** Dette apparat er konstrueret til en omgivende temperatur på maksimum 40 grader C.
- 14  **ALLE LANDE:** Installation af produktet skal ske i overensstemmelse med lokal og national lovgivning for elektriske installationer.



Eisen: Dit product voldoet aan de volgende eisen.

- 1 RFI Emissie EN55022 Klasse A
- 2  **WAARSCHUWING:** Binnenshuis kan dit product radiostoring veroorzaken, in welk geval de gebruiker verplicht kan worden om gepaste maatregelen te nemen.
- 3 Immunitet EN50082-1
- 4 Electricische Veilighei EN60950, UL1950, CSA 950
- 5  Laser EN60825










VEILIGHEID

- 6  WAARSHUWING Klasse-1 laser produkt.
- 7  WAARCHUWING Neit in de straal staren.
- 8  **WAARSCHUWINGEN MET BETREKKING TOT ELEKTRICITEIT**
WAARSCHUWING: GEVAAR VOOR ELEKTRISCHE SCHOKKE
 Verwijder het deksel niet, teneinde ELEKTRISCHE schokken te voorkomen. Binnenin bevinden zich geen onderdelen die door de gebruiker onderhouden kunnen worden. Dit toestel staat onder GEVAARLIJKE SPANNING en mag alleen worden geopend door een daartoe opgeleide en bevoegde technicus. Om het gevaar op ELEKTRISCHE SCHOKKEN te vermijden, moet u het toestel van de stroombron ontkoppelen alvorens de LAN-kabels te koppelen of ontkoppelen.
- 9  **GEVAAR VOOR BLIKSEMINSLA**
GEVAAR: NIET aan toestellen of KABELS WERKEN bij BLIKSEM.
- 10  **WAARSCHUWING: HET TOESTEL WORDT UITGESCHAKELD DOOR DE STROOMKABEL TE ONTKOPPELEN. OM HET TOESTEL STROOMLOOS TE MAKEN: de stroomkabel ontkoppelen.**
- 11  **AAN TE SLUITEN APPARATUUR,** de contactdoos wordt in de nabijheid van de apparatuur geïnstalleerd en is gemakkelijk te bereiken."
- 12  **OPGELET:** De ventilatiegaten mogen niet worden gesperd en moeten de omgevingslucht ongehinderd toelaten voor afkoeling.
- 13  **BEDRIJFSTEMPERATUUR:** De omgevingstemperatuur voor dit produkt mag niet meer bedragen dan 40 graden Celsius.
- 14  **ALLE LANDEN:** het toestel installeren overeenkomstig de lokale en nationale elektrische voorschriften.



Normes: ce produit est conforme aux normes de suivantes:

- 1 Emission d'interférences radioélectriques EN55022 Classe A
- 2  **MISE EN GARDE** : dans un environnement domestique, ce produit peut provoquer des interférences radioélectriques. Auquel cas, l'utilisateur devra prendre les mesures adéquates.
- 3 Immunité EN50082 - 1
- 4 Sécurité électrique EN60950, UL1950, CSA 950
- 5  Laser EN60825










SÉCURITÉ

- 6  ATTENTION Produit laser de classe 1.
- 7  ATTENTION Ne pas fixer le faisceau des yeux.
- 8  **INFORMATION SUR LES RISQUES ÉLECTRIQUES**
AVERTISSEMENT: DANGER D'ÉLECTROCUTION
Pour éviter toute ÉLECTROCUTION, ne pas ôter le revêtement protecteur du matériel. Ce matériel ne contient aucun élément réparable par l'utilisateur. Il comprend des TENSIONS DANGEREUSES et ne doit être ouvert que par un technicien dûment qualifié. Pour éviter tout risque d'ÉLECTROCUTION, débrancher le matériel avant de connecter ou de déconnecter les câbles LAN.
- 9  **DANGER DE Foudre**
DANGER: NE PAS MANIER le matériel ou les CÂBLES lors d'activité orageuse.
- 10  **ATTENTION: LE CORDON D'ALIMENTATION SERT DE MISE HORS CIRCUIT. POUR COUPER L'ALIMENTATION DU MATÉRIEL,** débrancher le cordon.
- 11  ÉQUIPEMENT POUR BRANCHEMENT ÉLECTRIQUE, la prise de sortie doit être placée près de l'équipement et facilement accessible".
- 12  **ATTENTION:** Ne pas bloquer les fentes d'aération, ceci empêcherait l'air ambiant de circuler librement pour le refroidissement.
- 13  **TEMPÉRATURE DE FONCTIONNEMENT:** Ce matériel est capable de tolérer une température ambiante maximum de ou 40 degrés Celsius.
- 14  **POUR TOUS PAYS:** Installer le matériel conformément aux normes électriques nationales et locales.



Standardit: Tämä tuote on seuraavien standardien mukainen.

- | | | |
|-----|---|--------------------------|
| ☞ 1 | Radioaaltojen häirintä | EN55022 Luokka A |
| ☞ 2 |  VAROITUS: Kotiolosuhteissa tämä laite voi aiheuttaa radioaaltojen häiriötä, missä tapauksessa laitteen käyttäjän on mahdollisesti ryhdyttävä tarpeellisiin toimenpiteisiin. | |
| ☞ 3 | Kestävyys | EN50082-1 |
| ☞ 4 | Sähköturvallisuus | EN60950, UL1950, CSA 950 |
| ☞ 5 |  Laser | EN60825 |










TURVALLISUUS

- | | |
|------|--|
| ☞ 6 |  VAROITUS Luokan 1 Lasertuote. |
| ☞ 7 |  VARIOTUS Älä katso säteeseen. |
| ☞ 8 |  SÄHKÖÖN LIITTYVIÄ HUOMAUTUKSIA
VAROITUS: SÄHKÖISKUVAARA
Estääksesi SÄHKÖISKUN älä poista kantta. Sisällä ei ole käyttäjän huollettavissa olevia osia. Tämä laite sisältää VAARALLISIA JÄNNITTEITÄ ja sen voi avata vain koulutettu ja pätevä teknikko. Vältääksesi SÄHKÖISKUN mahdollisuuden katkaise sähkövirta tuotteeseen ennen kuin liität tai irrotat paikallisverkon (LAN) kaapelit. |
| ☞ 9 |  SALAMANISKUVAARA
HENGENVAARA: ÄLÄ TYÖSKENTELE laitteiden tai KAAPELEIDEN KANSSA SALAMOINNIN AIKANA. |
| ☞ 10 |  HUOMAUTUS: VIRTAJOHTOA KÄYTETÄÄN
VIRRANKATKAISULAITTEENA. VIRTA KATKAISTAAN irrottamalla virtajohto. |
| ☞ 11 |  PISTORASIAAN KYTKETTÄVÄ LAITE; pistorasia on asennettava laitteen lähelle ja siihen on oltava esteetön pääsy." |
| ☞ 12 |  HUOMAUTUS: Ilmavaihtoreikiä ei pidä tukkia ja niillä täytyy olla vapaa yhteys ympäröivään huoneilmaan, jotta ilmanvaihto tapahtuisi. |
| ☞ 13 |  KÄYTTÖLÄMPÖTILA: Tämä tuote on suunniteltu ympäröivän ilman maksimilämpötilalle 40°C. |
| ☞ 14 |  KAIKKI MAAT: Asenna tuote paikallisten ja kansallisten sähköturvallisuusmääräysten mukaisesti. |



Standard: Questo prodotto è conforme ai seguenti standard.

- 1 Emissione RFI (interferenza di radiofrequenza) EN55022 Classe A
- 2  **AVVERTENZA:** in ambiente domestico questo prodotto potrebbe causare radio interferenza. In questo caso potrebbe richiedersi all'utente di prendere gli adeguati provvedimenti.
- 3 Immunità EN50082-1
- 4 Sicurezza elettrica EN60950, UL1950, CSA 950
- 5  Laser EN60825










NORME DI SICUREZZA

- 6  **AVVERTENZA** Prodotto laser di Classe 1.
- 7  **AVVERTENZA** Non fissare il raggio con gli occhi.
- 8  **AVVERTENZE ELETTRICHE**
ATTENZIONE: PERICOLO DI SCOSSE ELETTRICHE
Per evitare SCOSSE ELETTRICHE non asportare il coperchio. Le componenti interne non sono riparabili dall'utente. Questa unità ha TENSIONI PERICOLOSE e va aperta solamente da un tecnico specializzato e qualificato. Per evitare ogni possibilità di SCOSSE ELETTRICHE, interrompere l'alimentazione del dispositivo prima di collegare o staccare i cavi LAN.
- 9  **PERICOLO DI FULMINI**
PERICOLO: NON LAVORARE sul dispositivo o sui CAVI durante PRECIPITAZIONI TEMPORALESCHIE.
- 10  **ATTENZIONE: IL CAVO DI ALIMENTAZIONE È USATO COME DISPOSITIVO DI DISATTIVAZIONE. PER TOGLIERE LA CORRENTE AL DISPOSITIVO** staccare il cavo di alimentazione.
- 11  **APPARECCHIATURA COLLEGABILE**, la presa va installata vicino all'apparecchio per risultare facilmente accessibile".
- 12  **ATTENZIONE:** le prese d'aria non vanno ostruite e devono consentire il libero ricircolo dell'aria ambiente per il raffreddamento.
- 13  **TEMPERATURA DI FUNZIONAMENTO:** Questo prodotto è concepito per una temperatura ambientale massima di 40 gradi centigradi.
- 14  **TUTTI I PAESI:** installare il prodotto in conformità delle vigenti normative elettriche nazionali.



Sikkerhetsnormer: Dette produktet tilfredsstiller følgende sikkerhetsnormer.

- | | | |
|-----|---|--------------------------|
| ☞ 1 | RFI stråling | EN55022 Klasse A |
| ☞ 2 |  ADVARSEL: Hvis dette produktet benyttes til privat bruk, kan produktet forårsake radioforstyrrelse. Hvis dette skjer, må brukeren ta de nødvendige forholdsregler. | |
| ☞ 3 | Immunitet | EN50082-1 |
| ☞ 4 | Elektrisk sikkerhet | EN60950, UL1950, CSA 950 |
| ☞ 5 |  Laser | EN60825 |










SIKKERHET

- | | | |
|------|--|--|
| ☞ 6 |  ADVARSEL Laserprodukt av klasse 1. | |
| ☞ 7 |  ADVARSEL Stirr ikke på strålen. | |
| ☞ 8 |  ELEKTRISITET
ADVARSEL: FARE FOR ELEKTRISK SJOKK
For å unngå ELEKTRISK sjokk, må dekslet ikke tas av. Det finnes ingen deler som brukeren kan reparere på innsiden. Denne enheten inneholder FARLIGE SPENNINGER, og må kun åpnes av en faglig kvalifisert tekniker. For å unngå ELEKTRISK SJOKK må den elektriske strømmen til produktet være avslått før LAN-kablene til- eller frakobles. | |
| ☞ 9 |  FARE FOR LYNNEDSLAG
FARE: ARBEID IKKE på utstyr eller KABLER i TORDENVÆR. | |
| ☞ 10 |  FORSIKTIG: STRØMLEDNINGEN BRUKES TIL Å FRAKOBLE UTSTYRET. FOR Å DEAKTIVISERE UTSTYRET, må strømforsyningen kobles fra. | |
| ☞ 11 |  UTSTYR FOR STIKKONTAKT. Stikkontakten skal monteres i nærheten av utstyret og skal være lett tilgjengelig." | |
| ☞ 12 |  FORSIKTIG: Lufteventilene må ikke blokkeres, og må ha fri tilgang til luft med romtemperatur for avkjøling. | |
| ☞ 13 |  DRIFTSTEMPERATUR: Dette produktet er konstruert for bruk i maksimum romtemperatur på 40 grader celsius. | |
| ☞ 14 |  ALLE LAND: Produktet må installeres i samsvar med de lokale og nasjonale elektriske koder. | |



Padrões: Este produto atende aos seguintes padrões.

- 1 Emissão de interferência de radiofrequência EN55022 Classe A
- 2  **AVISO:** Num ambiente doméstico este produto pode causar interferência na radiorrecepção e, neste caso, pode ser necessário que o utente tome as medidas adequadas.
- 3 Imunidade EN50082-1
- 4 Segurança Eléctrica EN60950, UL1950, CSA 950
- 5  Laser EN60825










SEGURANÇA

- 6  **AVISO** Produto laser de classe 1
- 7  **AVISO** Não olhe fixamente para o raio.
- 8  **AVISOS SOBRE CARACTERÍSTICAS ELÉTRICAS**
ATENÇÃO: PERIGO DE CHOQUE ELÉTRICO
Para evitar CHOQUE ELÉTRICO, não retire a tampa. Não contém peças que possam ser consertadas pelo usuário. Este aparelho contém VOLTAGENS PERIGOSAS e só deve ser aberto por um técnico qualificado e treinado. Para evitar a possibilidade de CHOQUE ELÉTRICO, desconecte o aparelho da fonte de energia elétrica antes de conectar e desconectar os cabos da LAN.
- 9  **PERIGO DE CHOQUE CAUSADO POR RAIOS**
PERIGO: NÃO TRABALHE no equipamento ou nos CABOS durante períodos suscetíveis a QUEDAS DE RAIOS.
- 10  **CUIDADO: O CABO DE ALIMENTAÇÃO É UTILIZADO COMO UM DISPOSITIVO DE DESCONEXÃO. PARA DESELETRIFICAR O EQUIPAMENTO, desconecte o cabo de ALIMENTAÇÃO.**
- 11  **EQUIPAMENTO DE LIGAÇÃO**, a tomada eléctrica deve estar instalada perto do equipamento e ser de fácil acesso."
- 12  **CUIDADO:** As aberturas de ventilação não devem ser bloqueadas e devem ter acesso livre ao ar ambiente para arrefecimento adequado do aparelho.
- 13  **TEMPERATURA DE FUNCIONAMENTO:** Este produto foi projetado para uma temperatura ambiente máxima de 40 graus centígrados.
- 14  **TODOS OS PAÍSES:** Instale o produto de acordo com as normas nacionais e locais para instalações eléctricas.



Estándares: Este producto cumple con los siguientes estándares.

- 1 Emisión RFI EN55022 Clase A
- 2  **ADVERTENCIA:** en un entorno doméstico, este producto puede causar radiointerferencias, en cuyo caso, puede requerirse del usuario que tome las medidas que sean convenientes al respecto.
- 3 Inmunidad EN50082-1
- 4 Seguridad eléctrica EN60950, UL1950, CSA 950
- 5  Laser EN60825










SEGURIDAD

- 6  ¡ADVERTENCIA! Producto láser Clase 1.
- 7  ¡ADVERTENCIA! No mirat fijamente el haz.
- 8  **AVISOS ELECTRICOS**
ADVERTENCIA: PELIGRO DE ELECTROCHOQUE
Para evitar un ELECTROCHOQUE, no quite la tapa. No hay ningún componente en el interior al cual puede prestar servicio el usuario. Esta unidad contiene VOLTAJES PELIGROSOS y sólo deberá abrirla un técnico entrenado y calificado. Para evitar la posibilidad de ELECTROCHOQUE desconecte la corriente eléctrica que llega al producto antes de conectar o desconectar los cables LAN.
- 9  **PELIGRO DE RAYOS**
PELIGRO: NO REALICE NINGUN TIPO DE TRABAJO O CONEXIO en los equipos o en LOS CABLES durante TORMENTAS ELECTRICAS.
- 10  **ATENCION:** EL CABLE DE ALIMENTACION SE USA COMO UN DISPOSITIVO DE DESCONEXION. PARA DESACTIVAR EL EQUIPO, desconecte el cable de alimentación.
- 11  EQUIPO CONECTABLE, el tomacorriente se debe instalar cerca del equipo, en un lugar con acceso fácil".
- 12  **ATENCION:** Las aberturas para ventilación no deberán bloquearse y deberán tener acceso libre al aire ambiental de la sala para su enfriamiento.
- 13  **TEMPERATURA REQUERIDA PARA LA OPERACIÓN:** Este producto está diseñado para una temperatura ambiental máxima de 40 grados C.
- 14  **PARA TODOS LOS PAÍSES:** Monte el producto de acuerdo con los Códigos Eléctricos locales y nacionales.

Standarder: Denna produkt uppfyller följande standarder.

- ☞ 1 Radiostörning EN55022 Klass A
- ☞ 2  **WARNING:** Denna produkt kan ge upphov till radiostörningar i hemmet, vilket kan tvinga användaren till att vidtaga erforderliga åtgärder.
- ☞ 3 Immunitet EN50082-1
- ☞ 4 Elsäkerhet EN60950, UL1950, CSA 950
- ☞ 5  Laser EN60825

SÄKERHET

- ☞ 6  **WARNING!** Laserprodukt av klass 1.
- ☞ 7  **WARNING!** Laserstrålning när enheten är öppen.
- ☞ 8  **TILLKÄNNAGIVANDEN BETRÄFFANDE ELEKTRICITETSRIK:**
RISK FÖR ELEKTRISK STÖT För att undvika **ELEKTRISK stöt**, ta ej av locket. Det finns inga delar inuti som behöver underhållas. Denna apparat är under **HÖGSPÄNNING** och får endast öppnas av en utbildad kvalificerad tekniker. För att undvika **ELEKTRISK STÖT**, koppla ifrån produktens strömanslutning innan LAN-kablarna ansluts eller kopplas ur.
- ☞ 9  **FARA FÖR BLIXTNEDSLAG**
FARA: ARBETA EJ på utrustningen eller kablarna vid ÅSKVÄDER.
- ☞ 10  **WARNING: NÄTKABELN ANVÄNDS SOM STRÖMBRYTARE FÖR ATT KOPPLA FRÅN STRÖMMEN**, dra ur nätkabeln.
- ☞ 11  **UTRUSTNING MED PLUGG.** Uttaget skall installeras i utrustningens närhet och vara lättåtkomligt".
- ☞ 12  **WARNING:** Luftventilerna får ej blockeras och måste ha fri tillgång till omgivande rumsluft för avsvälning.
- ☞ 13  **DRIFTSTEMPERATUR:** Denna produkt är konstruerad för rumstemperatur ej överstigande 40 grader Celsius.
- ☞ 14  **ALLA LÄNDER:** Installera produkten i enlighet med lokala och statliga bestämmelser för elektrisk utrustning.

Appendix B

AT-MC1001 Series Installation Guide Feedback

Please tell us what additional information you would like to see discussed in this guide. If there are topics you would like information on that were not covered in this guide, please photocopy this page, answer the questions and fax or mail this form back to Allied Telesyn. The mailing address and fax number are at the bottom of the page. Your comments are valuable when we plan future revisions of this guide.

I found the following the most valuable _____

I would like the following more developed _____

I would find this guide more useful if _____

Please fax or mail your feedback. Fax to 1-408-736-0100. Or mail to:

Allied Telesyn International, Corp.

c/o Technical Communications

960 Stewart Drive, Suite B

Sunnyvale, CA 94085 USA

PN 613-10831-00 Rev B

Appendix C

Technical Support Fax Order

Name _____

Company _____

Address _____

City _____ State/Province _____

Zip/Postal Code _____ Country _____

Phone _____ Fax _____

Incident Summary

Model number of Allied Telesyn product I am using _____

Firmware release number of Allied Telesyn product _____

Other network software products I am using (e.g., network managers)

Brief summary of problem _____

Conditions (List the steps that led up to the problem.) _____

Detailed description (Please use separate sheet)

Please also fax printouts of relevant files such as batch files and configuration files. When completed, fax this sheet to the appropriate Allied Telesyn office. Fax numbers can be found on page viii.

