



*AT-MC104XL*

*AT-MC104LH*

*AT-MC104SC/FS3, FS4*

*AT-MC104ST/FS3, FS4*

*Version 3 Fast Ethernet Media Converters*

*Installation Guide*

Copyright © 2000 Allied Telesyn International, Corp.  
960 Stewart Drive Suite B, Sunnyvale CA 94086 USA

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 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

### DECLARATION OF CONFORMITY

Manufacture Name: Allied Telesyn International, Corp.  
Manufacture Address: 960 Stewart Drive, Suite B  
Sunnyvale, CA 94086 USA  
Manufacture Telephone: 408-730-0950  
Declares that the Product: Fast Ethernet Media Converters  
Model Numbers: AT-MC104XL, AT-MC104LH, AT-MC104SC/FS3,  
AT-MC104ST/FS3, AT-MC104SC/FS4,  
AT-MC104ST/FS4

This product complies with FCC Part 15B, Class B Limits:  
This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device must not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

### RADIATED ENERGY

Note: This equipment has been tested and found to comply with the limits for a Class B digital device pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with instructions, may cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on; the user is encouraged to try to correct the interference by one or more of the following measures:





- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Changes and modifications not expressly approved by the manufacturer or registrant of this equipment can void your authority to operate this equipment under Federal Communications Commission rules.


## Industry Canada

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

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

<b>RFI Emission</b>	EN55022 Class B  <b>1</b>
<b>Immunity</b>	EN50082-1 1997  <b>2</b>
<b>Electrical Safety</b>	TUV-EN60950, UL1950, CSA 950  <b>3</b>
<b>Laser</b>	EN60825  <b>4</b>



Power to the hub must be sourced only from the adapter.  **9**

### USA/CANADA


Use a UL Listed/CSA Certified AC adapter of DC 12V, 500mA.


## **EUROPE - EU**


Use TÜV licensed AC adapter of DC 12V, 500mA.


## **UK**


Use a UK Safety Approved AC adapter of DC 12V, minimum 500mA.


**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.

**Vigtigt:** 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 näe -symbolin, 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***

---

<b>Safety Warnings</b> .....	iii
<b>Welcome to Allied Telesyn</b> .....	vii
Where to Find Web-based Guides .....	vii
Document Conventions .....	vii
Contacting Allied Telesyn Technical Support.....	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
<b>AT-MC104 Series Fast Ethernet Media Converters</b> .....	1
Key Features.....	2
Status LEDs .....	3
Link Test/MissingLink Button .....	3
External AC/DC Power Adapter .....	4
Network Topologies .....	5
Installing the Media Converter .....	6
Planning the Installation.....	6
Cable Specifications .....	7
Verifying the Package Contents .....	9
Reviewing Safety Precautions .....	9
Installing the Media Converter .....	10
Testing the Installation .....	11
Warranty Registration .....	13
Technical Specifications .....	13
Physical Specifications.....	13
Agency Certifications .....	13
Power Requirements .....	13
Single-mode Port Specifications .....	14
Multimode Port Specifications (All Models) .....	16

**Appendix A**

**Translated Safety Statements ..... 19**

**Appendix B**

**AT-MC104 Series Installation Guide Feedback ..... 29**

**Appendix C**

**Technical Support Fax Order ..... 31**

# *Welcome to Allied Telesyn*

---

This guide contains instructions on how to install an AT-MC104 Series Fast Ethernet Media Converter.

## **Where to Find Web-based Guides**

The Allied Telesyn web site at **[www.alliedtelesyn.com](http://www.alliedtelesyn.com)** provides you with an easy way to access the most recent documentation and technical information for all of our products. For product guides, you can go directly to the following web page: **[www.alliedtelesyn.com/support/prd\\_libs.htm](http://www.alliedtelesyn.com/support/prd_libs.htm)**.

## **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 Technical Support

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 Technical Support Form at [www.alliedtelesyn.com/forms/support.htm](http://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](mailto:TS1@alliedtelesyn.com)

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

[latin\\_america@alliedtelesyn.com](mailto:latin_america@alliedtelesyn.com)

### United Kingdom, Sweden, Norway, Denmark, and Finland

[support\\_europe@alliedtelesyn.com](mailto: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 specific driver that you need for an Allied Telesyn device, you can download the software 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 94086  
Tel: 1 (800) 424-4284 (USA and Canada)  
Fax: 1 (408) 736-0100

## Tell Us What You Think

If you have comments or suggestions to improve this or other Allied Telesyn documents, please fill out the “AT-MC104 Series Installation Guide Feedback” on page 29 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](http://www.alliedtelesyn.com/forms/feedback.htm).

# AT-MC104 Series Fast Ethernet Media Converters

---

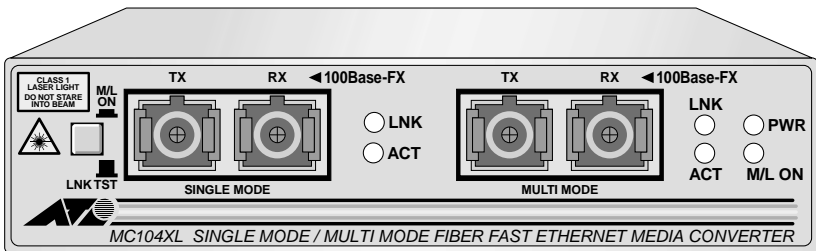
The AT-MC104 Series Media Converters include the following models:

- AT-MC104XL
- AT-MC104ST/FS3
- AT-MC104LH
- AT-MC104SC/FS4
- AT-MC104SC/FS3
- AT-MC104ST/FS4

AT-MC104 Series Fast Ethernet Media Converters are designed to extend the distance of your network by interconnecting multimode fiber optic cabling and single-mode fiber optic cabling. The media converters allow you to interconnect LAN devices that are physically separated by large distances.

Each media converter features two 100Base-FX ports with either SC or ST connectors. One port uses multimode fiber optic cabling and has a maximum distance of 2 kilometers (1.2 miles). The second port uses single-mode fiber optic cabling and has a maximum distance of 15 kilometers (9.3 miles) to 100 kilometers (62 miles), depending on the model. These units operate at 100 Mbps and feature half-duplex and full-duplex operation.

The media converters can be installed either as standalone units, such as on a table, or in an AT-MCR12 Rackmount Chassis or AT-TRAY4 Rackmount Tray. AT-MC104 Series Media Converters are easy to install and do not require any software configuration or management. Figure 1 shows an AT-MC104 Series Media Converter.



**Figure 1** AT-MC104 Series Media Converter (AT-MC104XL model)

Table 1 list the maximum cabling distances for each model.

**Table 1** Maximum Operating Distances

Model	Type of Connector		Maximum Distance <sup>1</sup>	
	Port 1 (Single-mode)	Port 2 (Multimode)	Port 1 (Single-mode)	Port 2 (Multimode)
AT-MC104XL	SC	SC	15 km (9.3 mi)	2 km (1.2 mi)
AT-MC104LH	SC	SC	40 km (24.8 mi)	2 km (1.2 mi)
AT-MC104SC/FS3	SC	SC	75 km (46.5 mi)	2 km (1.2 mi)
AT-MC104ST/FS3	ST	ST	75 km (46.5 mi)	2 km (1.2 mi)
AT-MC104SC/FS4	SC	SC	100 km (62 mi)	2 km (1.2 mi)
AT-MC104ST/FS4	ST	ST	100 km (62 mi)	2 km (1.2 mi)

1. Maximum distance may be less depending on the duplex mode of the end stations and the type of fiber optic cabling used with the port.

## Key Features

The media converters have the following key features:

- LEDs for unit and port status
- Two 100Base-FX fiber optic ports
- Link Test/MissingLink™ button for performing a link test on the fiber ports and notifies node of connection failures
- Half- or full-duplex operation
- External AC/DC power adapter
- Standard size for use with an AT-MCR12 chassis or AT-TRAY4 tray

## Status LEDs

Table 2 defines the system LEDs.

**Table 2** Status LEDs

LED	State	Color	Description
LNK	ON	Green	Link is established on the port.
ACT	ON	Green	Data is being received on the port.
PWR	ON	Green	Power is applied.
M/L ON	ON	Green	The MissingLink feature is activated on the media converter.
	OFF		The MissingLink feature is disabled and the unit is operating in the link test mode.

## Link Test/MissingLink Button

The Link Test/MissingLink button allows you to perform a link test on the ports on the media converter. This button also allows you to activate the MissingLink feature on the unit. Both features are describe in the following 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 be able to focus on the fiber optic cable and node where the problem resides.

A link test is performed when the button is in the LNK TST (OUT) position. For instructions on performing a link test, refer to “Testing the Installation” on page 11.

---

### Note

Performing a link test does not interfere with a media converter’s ability to pass network traffic.

---

**MissingLink.** The MissingLink feature activates 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, if the fiber optic cable connected to the multimode port on the media converter were to fail, the unit would respond by dropping the link on the single-mode port. In this way, the media converter notifies the end node connected to the single-mode port that the connection on the other port has been lost. If the failure had started on the single-mode port, the unit would drop the connection to the multimode port.

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.

---

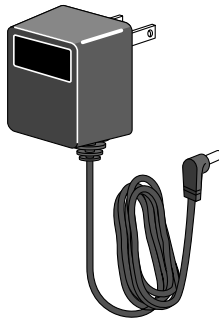
**Note**

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

---

**External AC/DC Power Adapter**

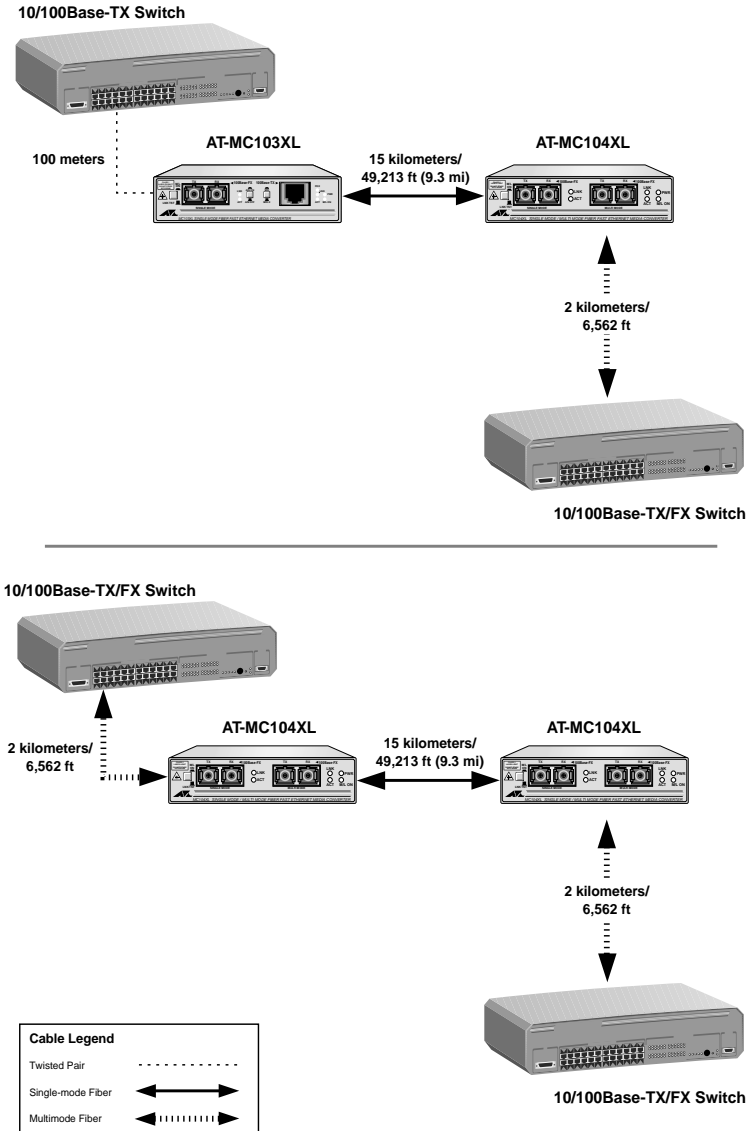
The power adapter supplies 12 volts DC to the media converter. Allied Telesyn supplies an approved safety compliant AC power adapter for the 120 and 240 V AC versions with an unregulated output of 12 VDC at 1A.



**Figure 2** External AC/DC Power Adapter (North American version)

## Network Topologies

Figure 3 shows two typical network configurations of the media converter.



**Figure 3** Typical Configurations

# Installing the Media Converter

The following sections explain how to install the media converter. The media converter can be installed either as a standalone unit (such as on a table) or in an AT-MCR12 chassis or an AT-TRAY4 tray.

## 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 100 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 appropriate cabling specifications. Refer to “Cable Specifications” on page 7.



## Cable Specifications

Table 3, Table 4, and Table 5 list the IEEE 802.3u cabling specifications for the AT-MC104 Series Media Converter.

**Table 3** Multimode Port Specifications

Cable Type	Maximum Distance
50/125 or 62.5/125 micron multimode fiber	2 km (1.2 mi)

**Table 4** Single-mode Port Specifications (Full-duplex)

Media Converter	Type of Fiber Optic Cable	Maximum Distance	Maximum Allowable Loss Budget
AT-MC104XL	50/125 or 62.5/125 micron multimode	2 km (1.2 mi)	20 dB at 1310 nm
	9/125 micron single-mode	15 km (9.3 mi)	13 dB at 1310 nm
AT-MC104LH	50/125 or 62.5/125 micron multimode	2 km (1.2 mi)	20 dB at 1310 nm
	9/125 micron single-mode	40 km (24.8 mi)	18 dB at 1310 nm
AT-MC104SC/FS3	9/125 micron single-mode	75 km (46.5 mi) <sup>1</sup>	33 dB at 1310 nm
AT-MC104ST/FS3	9/125 micron single-mode	75 km (46.5 mi) <sup>1</sup>	33 dB at 1310 nm
AT-MC104SC/FS4	9/125 micron single-mode	100 km (62 mi) <sup>2</sup>	34 dB at 1550 nm
AT-MC104ST/FS4	9/125 micron single-mode	100 km (62 mi) <sup>2</sup>	34 dB at 1550 nm

1. The port has a minimum operating distance of 15 km (9.4 mi). This is to prevent blinding or burning out the optical receiver on the far-end node.
2. The port has a minimum operating distance of 40 km (24.8 mi). This is to prevent blinding or burning out the optical receiver on the far-end node.

**Table 5** Single-mode Port Specifications (Half-duplex)<sup>1</sup>

<b>Number of Media Converters</b>	<b>Connected Devices</b>	<b>Maximum Distance</b>
One Media Converter Inline	Switch to switch	372 m (1,221 ft)
	Workstation to switch	372 m (1,221 ft)
	Switch to Class I repeater	137 m (450 ft)
	Switch to Class II repeater	185 m (607 ft)
Two Media Converters Inline	Switch to switch	332 m (1,089 ft)
	Workstation to switch	322 m (1,089 ft)
	Switch to Class I repeater	97 m (318 ft)
	Switch to Class II repeater	145 m (476 ft)

1. The total distance of the fiber optic lengths cannot exceed the limits stated in the table. Each media converter used inline within a single collision domain reduces the overall segment length by 40 m (131 ft).

---

**Note**

For additional technical information on the media converter's fiber optic ports, refer to "Technical Specifications" on page 13.

---

## 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-MC104 Series Fast Ethernet Media Converter
- Four protective feet (for standalone use only)
- External AC/DC power adapter
- This installation guide
- Warranty card

## Reviewing Safety Precautions

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




---

### Warning

Class 1 laser product. [§ 5](#)

---




---

### Warning

Do not stare into the laser beam. [§ 6](#)

---




---

### Warning

Lightning Danger: Do not work on equipment or cables during periods of lightening activity. [§ 7](#)

---




---

### Caution

Do not block air vents. [§ 8](#)

---




---

### Caution

Power to the hub must be sourced only from the adapter. [§ 9](#)

---




---

### Caution

#### Operating Temperature

This product is designed for a maximum ambient temperature of 40 degrees C. [§ 10](#)

---




---

### Caution

**All Countries:** Install product in accordance with local and National Electrical Codes. [§ 11](#)

---

## Installing the Media Converter

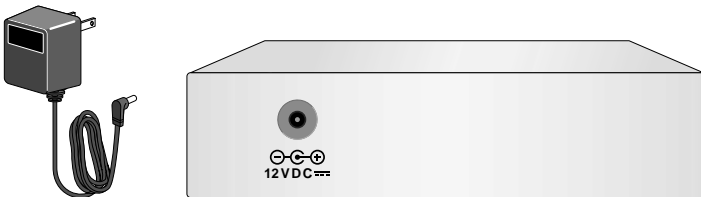
The following procedure explains how to install the media converter.

If you are building a back-to-back installation, please review the following. See Figure 3 for an illustration of a back-to-back-media converter configuration.

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

To install the unit, perform the following procedure:

1. Remove all equipment from the package and store the packaging material in a safe place.
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. If you are installing the unit in an AT-MCR12 chassis or AT-TRAY4 tray, do not attach the rubber feet.
3. Set the Link Test/MissingLink button to LNK TST (OUT) position.
4. If you are installing the unit in an AT-MCR12 chassis or AT-TRAY4 tray, refer to the appropriate installation guide for instructions on how to install the media converter into the unit.
5. Plug the AC/DC power adapter into an appropriate AC power outlet and inset the power plug into the DC receptacle located on the rear panel. (This step does not apply if you installed the unit in an AT-MCR12 chassis.)



**Figure 4** 12V DC Connector on Rear Panel with External Power Adapter

6. Verify that the Power LED is green.

7. Remove the dust covers from the fiber optic connectors.
8. Connect the fiber optic cables to their respective ports on the media converter.
9. Connect the other end of the fiber cable to the desired end station.

---

**Note**

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

---

Go to “Testing the Installation” on page 11 for instructions on how to test the unit.

## Testing the Installation

This procedure explains how to test 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 Power LED on the media converter is green. If the LED is OFF, check the following:
  - If installed as a standalone unit, check to be sure that the adapter cable is securely connected to the back of the media converter and that the power adapter is securely connected to a power outlet.
  - If 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/MissingLink button on the media converter to the LNK TST (OUT) position.

4. Check the two LNK LEDs. They should be green, indicating that the media converter is receiving a signal from the nodes connected to the ports. If a LNK LED is not green, check the following:
  - The node connected to the port is powered ON.
  - The fiber optic cable is securely connected to the fiber optic port.
  - The appropriate type of fiber optic cable for the port is being used. Refer to Table 3 through Table 5 for cable specifications.
  - The maximum allowable loss budget for the fiber optic cable has not been exceeded.
5. 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), check the following:
  - The nodes connected to the ports are operating at 100 Mbps.
  - The nodes connected to the media converter are operating in the same duplex mode. The media converter is transparent to the duplex mode.
  - The Link Test/MissingLink button on the media converter is in the M/L ON (IN) position.
  - Check that the maximum allowable loss budget for the fiber optic cable has not been exceeded.
6. Set the Link Test/MissingLink button on the media converter to M/L ON (IN) position. The M/L ON position activates the MissingLink feature on the media converter.

---

**Note**

When operating two media converters in a back-to-back configuration, it is recommended that the MissingLink feature on one or both of the converters be disabled. The MissingLink feature can be disabled by placing the LNK TST to the OUT position. Disabling the MissingLink feature does not interfere with the converter's ability to pass network traffic.

---

If you are still experiencing problems after testing the installation, contact Allied Telesyn Technical Support. Technical support is offered online, telephone, fax or e-mail.

Refer to “Contacting Allied Telesyn Technical Support” on page viii or visit our web site at **[www.alliedtelesyn.com](http://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](http://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:	-20° C to 60° C (-4° F to 140° F)
Operating Altitude:	Up to 3,048 meters (10,000 feet)
Humidity:	5% to 95% (non-condensing)

### Agency Certifications

EMI/RFI:	FCC Class B, EN55022 Class B, VCCI Class B
Safety:	UL 1950, CSA 22.2 No. 950, TUV (EN60950), CE Compliant
Immunity:	EN50082-1 1997 Immunity Standard

### Power Requirements

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

# Single-mode Port Specifications

**Table 6** Fiber Optic Transmitter

Model	Fiber Type <sup>1</sup>	Fiber Optic Diameter (microns)	Optical Frequency	Launch Power (dBm) <sup>2</sup>		
				Max.	Avg.	Min.
AT-MC104XL	SMF	9/125	1310 nm	-8.0	-11.5	-15.0
AT-MC104LH	SMF	9/125	1310 nm	0.0	-3.0	-5.0
AT-MC104SC/FS3 and AT-MC104ST/FS3	SMF	9/125	1310 nm	0.0	-2.0	-4.0
AT-MC104SC/FS4 and AT-MC104ST/FS4	SMF	9/125	1550 nm	0.0	-1.5	-3.0

1. SMF = Single-mode Fiber
2. The launch power measured at one meter from the transmitter

**Table 7** Fiber Optic Receiver

Model	Fiber Type <sup>1</sup>	Fiber Optic Diameter (microns)	Optical Frequency	Receive Power (dBm)		
				Min.	Typical	Saturation
AT-MC104XL	SMF	9/125	1310 nm	-31.0	-31.0	-8.0
AT-MC104LH	SMF	9/125	1310 nm	-35.0	-38.0	0.0
AT-MC104SC/FS3 and AT-MC104ST/FS3	SMF	9/125	1310 nm	-37.0	-37.0	-3.0
AT-MC104SC/FS4 and AT-MC104ST/FS4	SMF	9/125	1550 nm	-37.0	-37.0	-3.0

1. SMF = Single-mode Fiber



**Table 8** Fiber Optic Datalink

<b>Model</b>	<b>Fiber Optic Diameter (microns)</b>	<b>Optical Freq.</b>	<b>Min. Power/ Link Budget (dB)</b>	<b>Avg. Signal Loss (dB)</b>	<b>Min. Distance Spec.<sup>1</sup></b>	<b>Max. Distance Spec. (Full-duplex only)</b>
AT-MC104XL	9/125	1310 nm	16.0	19.50	0	15 km (9.3 mi)
AT-MC104LH	9/125	1310 nm	30.0	35.00	0	40 km (24.8 mi)
AT-MC104SC/FS3 and AT-MC104ST/FS3	9/125	1310 nm	33.0	35.00	15 km (9.3 mi)	75 km (46.5 mi)
AT-MC104SC/FS4 and AT-MC104ST/FS4	9/125	1550 nm	34.0	35.50	40 km (24.8 mi)	100 km (62 mi)

1. The launch power measured at one meter from the transmitter

**Table 9** Fiber Optic Loss Specifications (Benchmarks)

<b>Fiber Type<sup>1</sup></b>	<b>Fiber Optic Diameter (microns)</b>	<b>Optical Frequency</b>	<b>Typical Loss Factor (dB/km)</b>	<b>Worst Case Loss Factor (dB/km)</b>
SMF	9/125	1310 nm	0.40	1.00
	9/125	1550 nm	0.30	0.75

1. SMF = Single-mode Fiber

## Multimode Port Specifications (All Models)

**Table 10** Fiber Optic Transmitter

Fiber Type <sup>1</sup>	Fiber Optic Diameter (microns)	Optical Frequency	Launch Power (dBm) <sup>2</sup>		
			Maximum	Average	Minimum
MMF	50/125	1310 nm	-14.0	-20.3	-22.5
MMF	62.5/125	1310 nm	-14.0	-16.8	-19.0

1. MMF = Multimode Fiber
2. Launch power measured at one meter from the transmitter.

**Table 11** Fiber Optic Receiver

Fiber Type <sup>1</sup>	Fiber Optic Diameter (microns)	Optical Frequency	Receive Power (dBm)		
			Minimum	Typical	Saturation
MMF	50/125	1310 nm	-31.8	-34.5	-14.0
MMF	62.5/125	1310 nm	-31.8	-34.5	-14.0

1. MMF = Multimode Fiber

**Table 12** Fiber Optic Datalink

Fiber Type <sup>1</sup>	Fiber Optic Diameter (microns)	Optical Frequency	Minimum Power/ Link Budget (dB)	Average Signal Loss (dB)	Minimum Distance Specs <sup>2</sup>	Maximum Distance Specs (Full-duplex only)
MMF	50/125	1310 nm	13.00	18.70	0	2 km (1.2 mi)
MMF	62.5/125	1310 nm	16.80	22.50	0	2 km (1.2 mi)

1. MMF = Multimode Fiber
2. In all cases where the maximum transmitter output power exceeds the receivers sensitivity, a recommended minimum ranges is stated. This is to prevent blinding or burning out the optical receiver on the far-end node.

**Table 13** Fiber Optic Loss Specifications (Benchmarks)

<b>Fiber Type<sup>1</sup></b>	<b>Fiber Optic Diameter (microns)</b>	<b>Optical Frequency</b>	<b>Typical Loss Factor (dB/km)</b>	<b>Worst Case Loss Factor (dB/km)</b>	<b>Bandwidth (Mhz/km)</b>
MMF	50/125	850 nm	3.00	3.50	400
	62.5/125	850 nm	3.00	3.75	200
	100/140	850 nm	4.00	4.00	100
	50/125	1310 nm	1.00	1.50	400
	62.5/125	1310 nm	1.00	1.50	500



## **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.

**Viktigt:** 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

#### DECLARATION OF CONFORMITY

Manufacture Name: Allied Telesyn International, Corp.  
Manufacture Address: 960 Stewart Drive, Suite B  
Sunnyvale, CA 94086 USA

Manufacture Telephone: 408-730-0950

Declares that the Product: Fast Ethernet Media Converters

Model Numbers: AT-MC104XL, AT-MC104LH, AT-MC104SC/FS3,  
AT-MC104ST/FS3, AT-MC104SC/FS4,  
AT-MC104ST/FS4

This product complies with FCC Part 15B, Class B Limits:

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device must not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

#### RADIATED ENERGY

Note: This equipment has been tested and found to comply with the limits for a Class B digital device pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with instructions, may cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on; the user is encouraged to try to correct the interference by one or more of the following measures:










- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Changes and modifications not expressly approved by the manufacturer or registrant of this equipment can void your authority to operate this equipment under Federal Communications Commission rules.

### Industry Canada


This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.


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


- |  |   |  |                          |
|--|---|--|--------------------------|
|  | 1 | RFI Emission   | EN55022 Class B          |
|  | 2 | Immunity   | EN50082-1 1997           |
|  | 3 | Electrical Safety  | EN60950, UL1950, CSA 950 |
|  | 4 |  Laser  | EN60825                  |
|  | 5 |  <b>Warning</b> Class 1 Laser product.            |                          |
|  | 6 |  <b>Warning</b> Do not stare into the Laser beam. |                          |

At time of installation, the Fiber Optic Lasers comply with FDA Radiation Performance Standard 21CFR Subchapter J, applicable at date of manufacture. Use of controls or adjustments of performance or procedures other than those specified herein may result in hazardous radiation exposure.

**SAFETY**

 **7 LIGHTNING DANGER**  
**DANGER: DO NOT WORK** on equipment or CABLES during periods of LIGHTNING ACTIVITY.

 **8 DO NOT BLOCK AIR VENTS**

 **9** Power to the hub must be sourced only from the adapter.

**USA/CANADA**


Use a UL Listed/CSA Certified AC adapter of DC 12V, 500mA.


**EUROPE - EU**

Use TÜV licensed AC adapter of DC 12V, 500mA.







**UK**

Use a UK Safety Approved AC adapter of DC 12V, minimum 500mA.

 **10 OPERATING TEMPERATURE**  
 This product is designed for a maximum ambient temperature of 40 degrees C.

 **11 ALL COUNTRIES:** Install product in accordance with local and National Electrical Codes.


**Normen:** Dieses Produkt erfüllt die Anforderungen der nachfolgenden Normen.

- |   |          |  |                              |
|---|----------|--|------------------------------|
|    | <b>1</b> | Hochfrequenzstörung                                | EN55022 Klasse B             |
|    | <b>2</b> | Störsicherheit                                     | EN50082-1 1997               |
|    | <b>3</b> | Elektrische Sicherheit                             | TUV-EN60950, UL1950, CSA 950 |
|   | <b>4</b> | Laser  | EN60825                      |
|  | <b>5</b> | <b>Warnung</b> Laserprodukt der Klasse 1.          |                              |
|  | <b>6</b> | <b>Warnung</b> Nicht direkt in den Strahl blicken. |                              |

**SICHERHEIT**



 **7 GEFAHR DURCH BLITZSCHLAG**  
**GEFAHR:** Keine Arbeiten am Gerät oder an den Kabeln während eines Gewitters ausführen

 **8 ENTLÜFTUNGSÖFFNUNGEN NICHT VERSPERREN**




 **9** Der Buchse darf nur aus dem Adapter Strom zugeführt werden.

**EUROPE - EU**




Gebrauchen Sie einen von TÜV zugelassenen Wechselstromadapter für Gleichstrom 12 V, 500 mA.

- 10  **BETRIEBSTEMPERATUR**  
Dieses Produkt wurde für den Betrieb in einer Umgebungstemperatur von nicht mehr als 40° C entworfen.
- 11  **ALLE LÄNDER:** Installation muß örtlichen und nationalen elektrischen Vorschriften entsprechen.

**Standarder:** Dette produkt tilfredsstiller de følgende standarder.



- 1 Radiofrekvens forstyrrelsesemission EN55022 Klasse B
- 2 Immunitet EN50082-1 1997
- 3 Elektrisk sikkerhed TUV-EN60950, UL1950, CSA 950
- 4  **Laser** EN60825
- 5  **Advarsel** Laserprodukt av klasse 1.
- 6  **Advarsel** Stirr ikke på strålen.

**SIKKERHED**




- 7  **FARE UNDER UVEJØR**  
**FARE:** UNDLAD at arbejde på udstyr eller KABLER i perioder med LYNAKTIVITET.
- 8  VENTILATIONSÅBNINGERNE MÅ IKKE BLOKERES
- 9  Strømforsyningen til apparatet må udelukkende tages fra tilpasningstransformatoren.

**EUROPE - EU**

Brug kun TÜV godkendt vekselstrømstransformator på 12 V jævnstrøm, 500 mA.





- 10  **BETJENINGSTEMPERATUR**  
Dette apparat er konstrueret til en omgivende temperatur på maksimum 40 grader C.
- 11  **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 B
- 2 Immunitet EN50082-1 1997
- 3 Electricische Veiligheid TUV-EN60950, UL1950, CSA 950
- 4  **Laser** EN60825
- 5  **Waarshuwing** Klasse-1 laser produkt.
- 6  **Waarchuwing** Neit in de straal staren.

**VEILIGHEID**








- 7  **GEVAAR VOOR BLIKSEMINSLAG**  
**GEVAAR:** NIET aan toestellen of KABELS WERKEN bij BLIKSEM.
- 8  VENTILATIEGATEN NIET BLOKKEREN
- 9  Stroom mag alleen via de adapter naar het apparaat toegevoerd worden.  
**EUROPE - EU**  
Gebruik een door TÜV gekeurde wisselstroomadapter van 12 Volt gelijkstroom, 500 milliampères.
- 10  **BEDRIJFSTEMPERATUUR**  
De omgevingstemperatuur voor dit produkt mag niet meer bedragen dan 40 graden Celsius.
- 11  **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 B
- 2 Immunité EN50082 - 1 1997
- 3 Sécurité électrique TUV-EN60950, UL1950, CSA 950
- 4  Laser EN60825
- 5  **Attention** Produit laser di classe 1.
- 6  **Attention** Ne pas fixer le faisceau des yeux.

**SÉCURITÉ**






- 7  **DANGER DE Foudre**  
**DANGER:** NE PAS MANIER le matériel ou les CÂBLES lors d'activité orageuse.
- 8  NE PAS BLOQUER LES FENTES D'AÉRATION
- 9  L'alimentation du concentrateur doit être uniquement fournie par l'adaptateur.  
**EUROPE - EU**  
Utiliser un adaptateur secteur conforme TÜV de 12 V, 500 mA en courant continu.
- 10  **TEMPÉRATURE DE FONCTIONNEMENT**  
Ce matériel est capable de tolérer une température ambiante maximum de 40 degrés Celsius.
- 11  **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 B             |
| ☞ 2 | Kestävyys  | EN50082-1 1997               |
| ☞ 3 | Sähköturvallisuus  | TUV-EN60950, UL1950, CSA 950 |
| ☞ 4 |  Laser                                | EN60825                      |
| ☞ 5 |  <b>Varoitus</b> Luokan 1 Lasertuote. |                              |
| ☞ 6 |  <b>Variotus</b> Älä katso säteeseen. |                              |




### TURVALLISUUS

- |      |  |  |
|------|--|--|
| ☞ 7  |  <b>SALAMANISKUVAARA</b><br><b>ENGENVAARA: ÄLÄ TYÖSKENTELE</b> laitteiden tai <b>KAAPELEIDEN KANSSA</b><br><b>SALAMOINNIN AIKANA.</b> |  |
| ☞ 8  |  <b>ÄLÄ TUKI</b> ILMAREIKIÄ   |  |
| ☞ 9  |  Tähtipisteeseen (hub) syötettävän virran pitää tulla ainoastaan sovittimesta.  |  |
|      | <b>EUROPE - EU</b><br>Käytä TÜV-lisensillä valmistettua verkkosovittinta, jonka tasajännitteen nimellisarvot ovat DC 12 V, 500 mA (milliampeeria).   |  |
| ☞ 10 |  <b>KÄYTTÖLÄMPÖTILA</b><br>Tämä tuote on suunniteltu ympäröivän ilman maksimilämpötilalle 40° C.                                      |  |
| ☞ 11 |  <b>KAIKKI MAAT:</b> Asenna tuote paikallisten ja kansallisten sähköturvallisuusmääräysten mukaisesti.                                |  |









---

**Standard:** Questo prodotto è conforme ai seguenti standard.

- |     |   |                              |
|-----|---|------------------------------|
| ☞ 1 | Emissione RFI (interferenza di radiofrequenza)  | EN55022 Classe B             |
| ☞ 2 | Immunità  | EN50082-1 1997               |
| ☞ 3 | Sicurezza elettrica   | TUV-EN60950, UL1950, CSA 950 |
| ☞ 4 |  Laser   | EN60825                      |
| ☞ 5 |  <b>Avvertenza</b> Prodotto laser di Classe 1.   |                              |
| ☞ 6 |  <b>Avvertenza</b> Non fissare il raggio con gli occhi.  |                              |
|     | <b>NORME DI SICUREZZA</b>   |                              |
| ☞ 7 |  <b>PERICOLO DI FULMINI</b><br><b>PERICOLO: NON LAVORARE</b> sul dispositivo o sui CAVI durante PRECIPITAZIONI TEMPORALESCHIE. |                              |
| ☞ 8 |  <b>NON OSTRUIRE</b> LE PRESE D'ARIA   |                              |




- 9  Questo dispositivo deve essere alimentato solo mediante l'adattatore.  
**EUROPE - EU**  
 Utilizzare l'adattatore per c.a. da 12 V c.c. e 500 mA conforme alla normativa TÜV.
- 10  **TEMPERATURA DI FUNZIONAMENTO**  
 Questo prodotto è concepito per una temperatura ambientale massima di 40 gradi centigradi.
- 11  **TUTTI I PAESI:** installare il prodotto in conformità delle vigenti normative elettriche nazionali.

**Sikkerhetsnormer:** Dette produktet tilfredsstiller følgende sikkerhetsnormer.






- |    |   |                              |
|----|---|------------------------------|
| 1  | RFI stråling  | EN55022 Klasse B             |
| 2  | Immunitet   | EN50082-1 1997               |
| 3  | Elektrisk sikkerhet   | TUV-EN60950, UL1950, CSA 950 |
| 4  |  Laser   | EN60825                      |
| 5  |  <b>ADVARSEL</b> Laserprodukt av klasse 1.   |                              |
| 6  |  <b>ADVARSEL</b> Stirr ikke på strålen.  |                              |
|    | <b>SIKKERHET</b>  |                              |
| 7  |  <b>FARE FOR LYNNEDSLAG</b><br><b>FARE:</b> ARBEID IKKE på utstyr eller KABLER i TORDENVÆR.  |                              |
| 8  |  <b>BLOKKER IKKE LUFTVENTILENE</b>   |                              |
| 9  |  All strømtilførsel må komme fra adapteren.<br><br><b>EUROPE - EU</b><br>Benytt TÜV-godkjent AC-adapter på 12V DC, 500mA (millismpere) |                              |
| 10 |  <b>DRIFTSTEMPERATUR</b><br>Dette produktet er konstruert for bruk i maksimum romtemperatur på 40 grader celsius.                    |                              |
| 11 |  <b>ALLE LAND:</b> 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 B             |
| 2 | Imunidade  | EN50082-1 1997               |
| 3 | Segurança Eléctrica  | TUV-EN60950, UL1950, CSA 950 |
| 4 |  Laser  | EN60825                      |
| 5 |  <b>Aviso</b> Produto laser de classe 1.      |                              |
| 6 |  <b>Aviso</b> Não olhe fixamente para o raio. |                              |

### SEGURANÇA



- |    |  |  |
|----|--|--|
| 7  |  <b>PERIGO DE CHOQUE CAUSADO POR RAIOS</b><br><b>PERIGO:</b> NÃO TRABALHE no equipamento ou nos CABOS durante períodos suscetíveis a QUEDAS DE RAIOS. |  |
| 8  |  NÃO BLOQUEIE AS ABERTURAS DE VENTILAÇÃO  |  |
| 9  |  Use somente o adaptador fornecido para alimentação elétrica do hub.  |  |
|    | <b>EUROPE - EU</b><br>Use um adaptador de corrente alternada com saída DC de 12V e 500mA em conformidade com as especificações da TÜV.   |  |
| 10 |  <b>TEMPERATURA DE FUNCIONAMENTO</b><br>Este produto foi projetado para uma temperatura ambiente máxima de 40 graus centígrados.                      |  |
| 11 |  <b>TODOS OS PAÍSES:</b> Instale o produto de acordo com as normas nacionais e locais para instalações elétricas.                                     |  |




---

**Estándares:** Este producto cumple con los siguientes estándares.









- |   |  |                              |
|---|--|------------------------------|
| 1 | Emisión RFI  | EN55022 Clase B              |
| 2 | Inmunidad  | EN50082-1 1997               |
| 3 | Seguridad eléctrica  | TUV-EN60950, UL1950, CSA 950 |
| 4 |  Laser                                    | EN60825                      |
| 5 |  ¡ADVERTENCIA! Producto láser Clase 1.    |                              |
| 6 |  ¡ADVERTENCIA! No mirat fijamente el haz. |                              |

### SEGURIDAD

- |   |   |  |
|---|---|--|
| 7 |  <b>PELIGRO DE RAYOS</b><br><b>ELIGRO:</b> NO REALICE NINGUN TIPO DE TRABAJO O CONEXION en los equipos o en LOS CABLES durante TORMENTAS ELECTRICAS. |  |
| 8 |  NO BLOQUEE LAS ABERTURAS PARA VENTILACION   |  |

- 9  La energía para el dispositivo central o "hub" debe provenir únicamente del adaptador.
- EUROPE - EU**  
Utilizar un adaptador de corriente alterna autorizado TÜV de 12 voltios de corriente continua y 500 miliamperios.
- 10  **TEMPERATURA REQUERIDA PARA LA OPERACIÓN**  
Este producto está diseñado para una temperatura ambiental máxima de 40 grados C.
- 11  **PARA TODOS LOS PAÍSES:** Monte el producto de acuerdo con los Códigos Eléctricos locales y nacionales.

**Standarder:** Denna produkt uppfyller följande standarder.

- |    |  |                              |
|----|--|------------------------------|
| 1  | Radioströrning   | EN55022 Klass B              |
| 2  | Immunitet  | EN50082-1 1997               |
| 3  | Elsäkerhet   | TUV-EN60950, UL1950, CSA 950 |
| 4  |  Laser  | EN60825                      |
| 5  |  <b>WARNING!</b> Laserprodukt av klass 1.   |                              |
| 6  |  <b>WARNING!</b> Laserstrålning när enheten är öppen.   |                              |
|    | <b>SÄKERHET</b>  |                              |
| 7  |  <b>FARA FÖR BLIXTNEDSLAG</b><br><b>FARA:</b> ARBETA EJ på utrustningen eller kablarna vid ÅSKVÄDER.                  |                              |
| 8  |  <b>BLOCKERA INTE LUFTVENTILERN</b>   |                              |
| 9  |  Endast anslutningsenheten får vara kraftkälla till centralen.  |                              |
|    | <b>EUROPE - EU</b><br>Använd en växelströmsanslutningsenhet licensierad av TÜV. Likström 12V, 500mA.   |                              |
| 10 |  <b>DRIFTSTEMPERATUR</b><br>Denna produkt är konstruerad för rumstemperatur ej överstigande 40 grader Celsius.      |                              |
| 11 |  <b>ALLA LÄNDER:</b> Installera produkten i enlighet med lokala och statliga bestämmelser för elektrisk utrustning. |                              |



## **Appendix B**

# **AT-MC104 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 94086 USA





# **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.

