



*AT-MC301*

*AT-MC302*

*AT-MC303*

*Fast Ethernet Media Converters*

*Installation Guide*

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# Electrical Safety and Emission Statement

**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


EN60950, UL1950, CSA 950  4




### Laser


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
**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 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***

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<b>Electrical Safety and Emission Statement</b> .....	iii
<b>Welcome to Allied Telesyn</b> .....	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
<b>Overview</b> .....	1
Features and Components .....	2
100Base-FX Fiber Optic Port.....	3
100Base-TX Twisted Pair Port .....	3
MDI/MDI-X Switch .....	3
System and Port LEDs.....	3
MissingLink/Link Test Button .....	4
Auto-negotiation Button .....	5
External AC/DC Power Adapter .....	7
Network Configurations.....	7
Installing the AT-MC300 Series Media Converter .....	9
Selecting a Site .....	9
Verifying the Package Contents .....	9
Reviewing Safety Precautions .....	10
Planning the Installation.....	11
Installing the Unit.....	13
Verifying the Installation .....	15
Troubleshooting .....	16
Technical Specifications .....	18
Warranty Registration .....	19

**Appendix A**

**Translated Safety and Emission Information ..... 21**

**Appendix B**

**Technical Support Fax Order ..... 33**

Incident Summary ..... 33

**Appendix C**

**AT-MC300 Series Installation Guide Feedback ..... 35**

# ***Welcome to Allied Telesyn***

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This guide contains instructions on how to install an AT-MC300 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. 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.

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### **Note**

A note provides additional information.

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### **Caution**

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

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### **Warning**

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

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## Contacting Allied Telesyn

There are several ways to contact Allied Telesyn technical support: online, telephone, fax, and 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](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 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

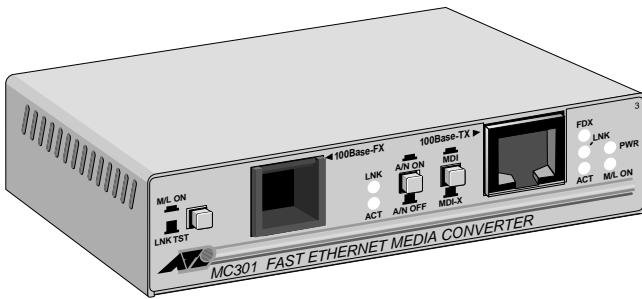
**Allied Telesyn International, Corp.**  
960 Stewart Drive, Suite B  
Sunnyvale, CA 94085  
Tel: 1 (800) 424-4284 (USA and Canada)  
Fax: 1 (408) 736-0100

## 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-MC300 Series Installation Guide Feedback” on page 35 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).

# Overview

The AT-MC300 Series Fast Ethernet Media Converters are designed to extend the distance of your network by allowing you to interconnect twisted pair cabling and fiber optic cabling. Each unit features a 100Base-TX twisted pair port with an RJ-45 connector and a maximum operating distance of 100 meters (328 feet). The units also have a 100Base-FX fiber optic port with a VF-45, MT-RJ, or LC connector, depending on the model, and a maximum operating range of 2 kilometers (1.24 miles).



**Figure 1** AT-MC300 Series Media Converter (Model AT-MC301)

The media converters are easy to install and do not require any software configuration or management. The units can be installed on a desktop or in an AT-MCR12 chassis.

Table 1 lists the AT-MC300 Series Fast Ethernet Media Converters.

**Table 1** AT-MC300 Series Fast Ethernet Media Converters

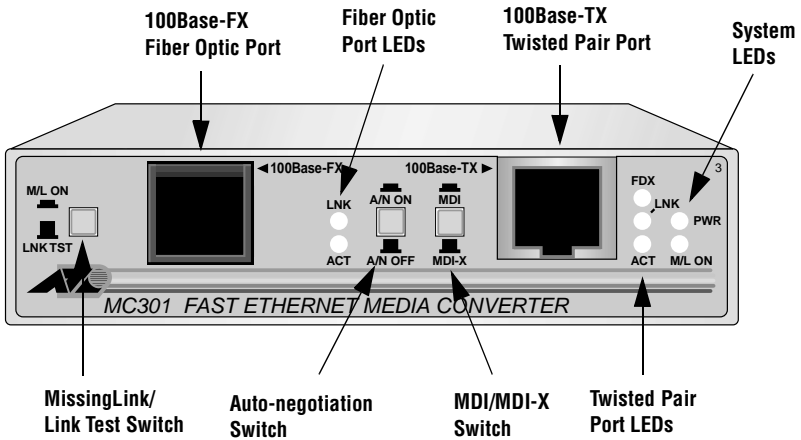
Model	100Base-FX Fiber Optic Port		100Base-T Twisted Pair Port	
	Type of Connector	Maximum Distance	Type of Connector	Maximum Distance
AT-MC301	VF-45	2 km (1.24 mi)	RJ-45	100 m (328 ft)
AT-MC302	MT-RJ	2 km (1.24 mi)	RJ-45	100 m (328 ft)
AT-MC303	LC	2 km (1.24 mi)	RJ-45	100 m (328 ft)

# Features and Components

The media converter has the following features:

- One 100Base-FX fiber optic port
- One 100Base-TX twisted pair port
- MDI/MDI-X button
- LEDs for unit and port status
- Link Test feature
- MissingLink™ feature
- External AC/DC Power Adapter

Figure 2 illustrates the front panel of the unit.



**Figure 2** Front Panel (Model AT-MC301)

## 100Base-FX Fiber Optic Port

The 100Base-FX fiber optic port can use either 50/125 or 62.5/125 micron multimode fiber cabling and can operate up to a maximum distance of 2 kilometers (1.24 miles).

## 100Base-TX Twisted Pair Port

The 100Base-TX twisted pair port operates with Category 5 or better twisted pair cabling and has a maximum operating distance of 100 meters (328 feet). The port has an RJ-45 connector.

## MDI/MDI-X Switch

The MDI/MDI-X (Media Dependent Interface/Media Dependent Interface with Crossover) switch on the front panel of the unit eliminates the need for a crossover cable when connecting a device to the twisted pair port on the media converter. The MDI setting is typically used when connecting a DTE device (such as a workstation or printer) to the twisted pair port. The setting of MDI-X is typically used when connecting a switch to the port.

## System and Port LEDs

Status LEDs are located on the front panel next to each port. Table 2 lists and defines the LEDs.

**Table 2** Status LEDs

LED	State	Description
<b>System LEDs</b>		
PWR	Steady Green	Power is applied to the media converter.
M/L ON	Steady Green	The MissingLink feature is activated.
	OFF	The unit is performing a Link Test.
FDX	Steady Green	The ports are operating in full-duplex mode.
	OFF	The ports are operating in half-duplex mode.
<b>Port LEDs</b>		
LNK	Steady Green	A link is established on the port.
ACT	Flashing Green	Data is being received or transmitted by the port.

## MissingLink/Link Test Button

The MissingLink/Link Test (M/L ON/LNK TST) 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.** A link test is a fast and easy way for you to test the integrity of the connections to the two ports on the media converter. The test determines whether the ports are receiving a valid signal from the end nodes connected to the ports. This test is typically used after installation to verify that the unit and connections are operating properly, or whenever you need to test the ports or the integrity of the connections to the nodes connected to the ports. The section “Verifying the Installation” on page 15 contains instructions on how to perform a link test.

---

### Note

Leaving the MissingLink/Link Test button in the Link Test position will not affect the operation of the media converter during normal network operations. However, the MissingLink feature of the media converter is disabled when the button is in the Link Test position.

---

**MissingLink.** The MissingLink feature enables the twisted pair port and the fiber optic port 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 device shuts down the connection to the other port, thus notifying the node that the connection has been lost.

For example, if the twisted pair cable to the 100Base-TX port on the media converter were to fail, the media converter would respond by dropping the link on the 100Base-FX fiber optic port. In this way, the media converter notifies the end node connected to the fiber optic port that the connection on the twisted pair port has been lost. If the failure had started with the fiber optic cabling, the unit would drop the link to the twisted pair 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. In the example, once the end node connected to the fiber optic port has realized that the connection to the end node on the twisted pair port has been lost on the media converter, the end node can send a trap to the management station, alerting the network administrator of the problem, or attempt to establish a redundant path to the disconnected node.

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**Note**

The MissingLink feature is disabled when the MissingLink/Link Test button is in the Link Test position.

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**Auto-negotiation Button**

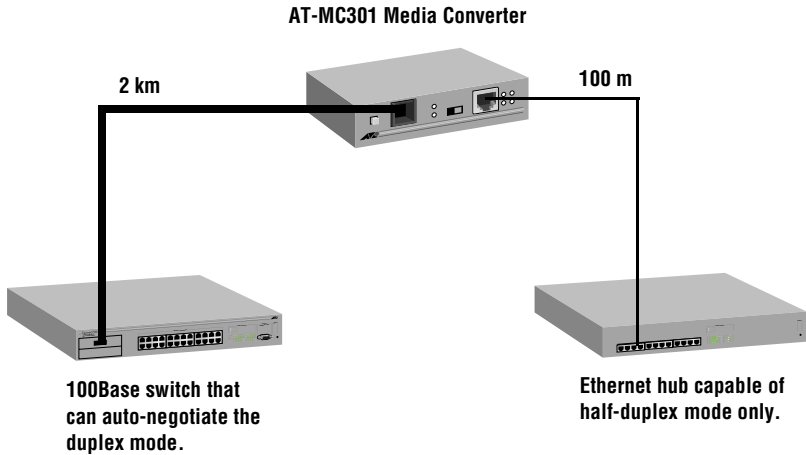
The AT-MC300 Series Media Converter can operate in either half- or full-duplex mode. Duplex mode refers to the manner in which an end node sends and receives data. An end node that is operating in half-duplex can either send data or receive data, but not both at the same time. A node that is operating in full-duplex mode can send and receive data simultaneously. The best network performance is achieved when a node can operate in full-duplex, since bandwidth is twice that compared to half-duplex.

The media converter is designed to determine the appropriate duplex port for its ports through auto-negotiation. With auto-negotiation, the media converter will determine the capabilities of the end nodes and will set the ports accordingly. For instance, if the end nodes are capable of half-duplex mode only, the unit will set its ports to half-duplex. It is important to note, however, that both end nodes must operate with the same duplex mode. The network will not function properly in situations where one end node is operating in half-duplex and the other is operating in full-duplex.

The auto-negotiation feature on the media converter can be activated or deactivated using the A/N button on the front panel. In nearly all situations, you will want to leave the auto-negotiation capability activated on the AT-MC300 Series Media Converter, so that the unit can determine the appropriate duplex mode for the ports, based on the capabilities of the end nodes. For example, auto-negotiation on the media converter should be left activated in situations where both end nodes are also capable of auto-negotiation, or where both end nodes have been pre-set to the same mode, or are capable of operating in only one duplex mode, such as half-duplex.

There is, however, one situation where it might be necessary for you to disable auto-negotiation on the unit, and that is to prevent a mismatch from occurring between the duplex modes of the end nodes. This can occur where one end node is capable of only half-duplex mode while the other end node will auto-negotiate the duplex mode. For example, Figure 3 illustrates a media converter that is interconnecting a 100Base-TX Ethernet hub capable of only half-duplex operation and a 100Base-TX Ethernet switch that can auto-negotiate the duplex mode.

With auto-negotiation activated on the media converter, the unit will determine that the hub is capable of half-duplex only, and will set the port connected to the hub accordingly. In auto-negotiating with the switch, the media converter will determine that the device is capable of full-duplex, and will set the port connected to the switch to full-duplex. The result is referred to as a classic duplex mode mismatch, where the end nodes are using different duplex modes.



**Figure 3** Duplex Mode Mismatch

There are two options to resolving this problem. One option is to manually configure the port on the switch that is connected to the media converter so that it operates only in half-duplex. The second option is to disable auto-negotiation on the media converter using the A/N button. With auto-negotiation disabled on the media converter, the switch will assume that the media converter is capable of only half-duplex mode operation, and will set its port accordingly, eliminating the mismatch in duplex modes between the end nodes.

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**Note**

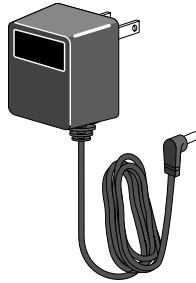
Changing the A/N button setting requires that you power OFF and power ON the media converter to activate the change on the unit.

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## External AC/DC Power Adapter

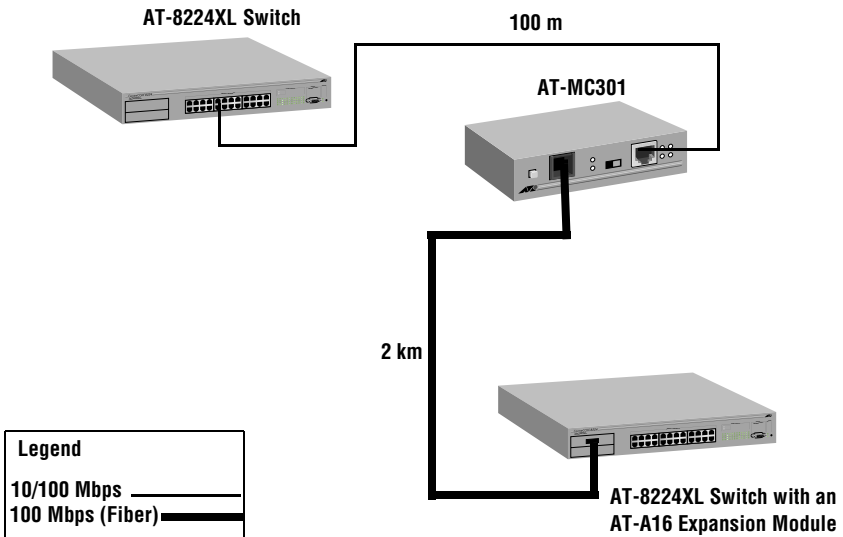
The power adapter supplies 12 volts DC to the media converter. Allied Telesyn supplies an approved safety compliant AC power adapter for the 120 and 240 V AC versions with an unregulated output of 12 V DC at 1 A.



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

## Network Configurations

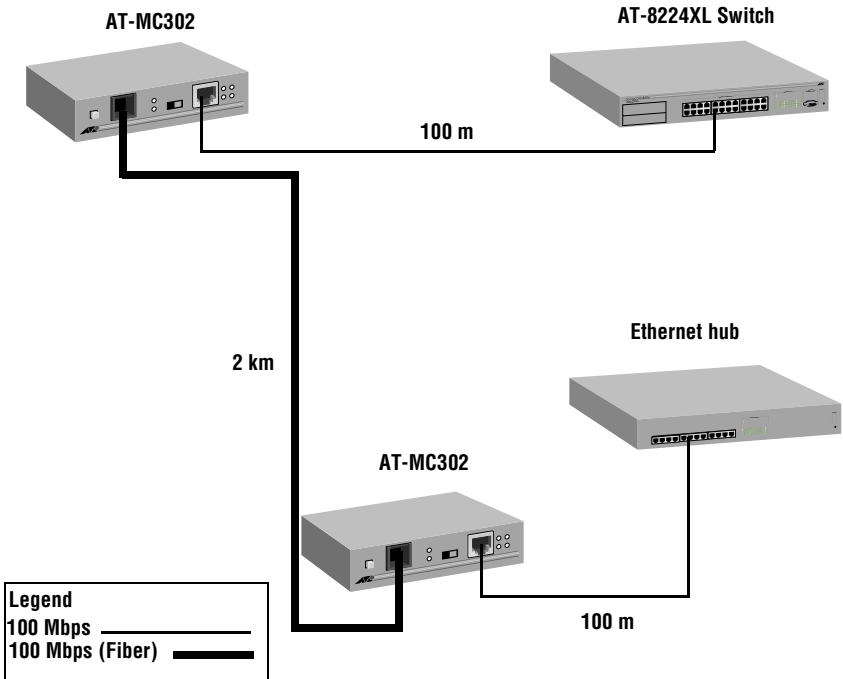
Figure 5 shows a network configuration that uses an AT-MC301 media converter to interconnect two AT-8224XL Fast Ethernet switches. This topology is referred to as a standalone configuration because only one media converter is used to interconnect the end nodes.



**Figure 5** Standalone Configuration

In some network environments, you might need to interconnect two media converters in what is referred to as a back-to-back topology. In this topology, the converters are used to extend the distance of the network and to convert the cabling from twisted pair to fiber optic, and back again.

Figure 6 illustrates an example of a back-to-back topology. Two AT-MC302 media converters are used to interconnect an AT-8224XL Fast Ethernet Switch and an Ethernet hub.



**Figure 6** Back-to-Back Configuration

## Installing the AT-MC300 Series Media Converter

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

### Selecting a Site

Be sure to observe the following guidelines when selecting a site for the media converter:

- Make sure that the unit's power is accessible and cables can be connected easily.
- Air flow around the unit and through its vents on the side and rear must not be restricted.
- If you are installing the unit on a desk, make sure it is placed on a level, secure desktop.
- Do not place objects on top of the unit.
- Do not expose the unit to moisture or water.
- Make sure it is in a dust-free environment.
- Use dedicated power circuits or power conditioners to supply reliable electrical power to the network devices.

### 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-MC300 Series Fast Ethernet Media Converter
- Four protective feet (for desktop installation 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. ⚡ 6

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### Warning

Do not stare into the laser beam. ⚡ 7

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### 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. To avoid the possibility of **ELECTRIC SHOCK**, disconnect electric power to the product before connecting or disconnecting the LAN cables. ⚡ 8

---



### Warning

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

---



### Warning

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

---



### Caution

**Pluggable Equipment:** The socket outlet shall be installed near the equipment and shall 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

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### 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

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## Planning the Installation

Please refer to the following guidelines when planning the installation.

- Both end nodes that will be connected to the two ports on the media converter must operate at 100 Mbps.
- Both end nodes must operate in the same duplex mode, either half-duplex or full-duplex, or they must be able to auto-negotiate the duplex mode.
- The end node for the 100Base-TX twisted pair port can be a workstation, a repeater, or a switch.
- The end node for the 100Base-FX fiber optic port can be a workstation, a repeater, a switch, or another AT-MC300 Series Media Converter.
- Refer to Table 3 for the cabling specifications for the 100Base-TX twisted pair port.

**Table 3** Twisted Pair Cabling Specifications

Model	Connector	Cable	Maximum Distance
All models	RJ-45	Unshielded/Shielded Twisted Pair Category 5 or better	100 m (328 ft)

- Refer to Table 4 for the cabling specifications for the 100Base-FX fiber optic port when operating in full-duplex mode.

**Table 4** Fiber Optic Port Cabling Specifications - Full-duplex

Model	Cable	Maximum Distance	Maximum Allowable Loss Budget
All models	50/125 micron multimode fiber optic cable	2 km (1.24 mi)	13.dB @ 1310 nm
All models	62.5/125 micron multimode fiber optic cable	2 km (1.24 mi)	16.8 dB @ 1310 nm

- Refer to Table 5 for the cabling specifications for the 100Base-FX fiber optic port when operating in half-duplex mode.

**Table 5** Fiber Optic Port Cabling Specifications - Half-duplex

<b>Model</b>	<b>Cable</b>	<b>Maximum Distance</b>
All models	50/125 or 62.5/125 micron multimode fiber optic cable	<p>The total distance of all fiber runs cannot exceed the following limits: <sup>1</sup></p> <p>With one Media Converter inline: Switch to Switch = 372 m (1221 ft) Workstation to Switch = 372 m (1221 ft) Switch to Class II Repeater = 185 m (607 ft) Switch to Class I Repeater = 137 m (450 ft)</p> <p>With two Media Converters inline: Switch to Switch = 332 m (1089 ft) Workstation to Switch = 332 m (1089 ft) Switch to Class II Repeater = 145 m (476 ft) Switch to Class I Repeater = 97 m (318 ft)</p>

1. Each media converter used inline within a single collision domain will reduce the overall segment length by 40 meters (131.24 feet) of fiber.

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**Note**

For additional technical information on the media converter's fiber optic port, refer to "Technical Specifications" on page 18.

---

## Installing the Unit

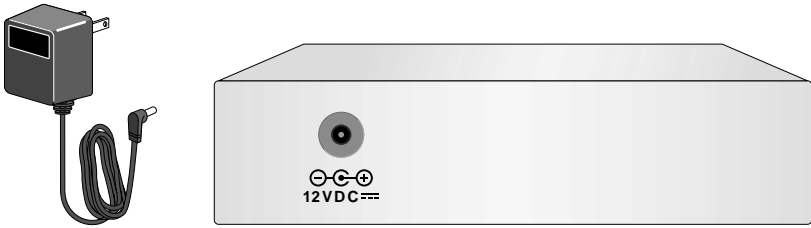
This section contains the procedure for installing the media converter.

If you are building a back-to-back topology, please observe the following:

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

To install the media converter in either a standalone or back-to-back topology, perform the following steps:

1. Remove all equipment from the package and store the packaging in a safe place.
2. If you are installing the media converter 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 four rubber feet if you are installing the media converter in an AT-MCR12 chassis.)
3. Set the M/L ON/LNK TST button to the Link Test mode (OUT) position.
4. Set the Auto-negotiation (A/N) button to either activate or deactivate auto-negotiation of the duplex mode on the unit. For information on this button, refer to “Auto-negotiation Button” on page 5.
5. If you are installing the unit in an AT-MCR12 chassis, refer to the instructions included with the chassis for directions on how to insert the media converter into the unit.
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 rear panel. (This step does not apply if you installed the media converter in an AT-MCR chassis.)



**Figure 7** 12 V DC Receptacle on Rear Panel

7. Verify that the PWR LED lights green.
8. Set the MDI/MDI-X button for the 100Base-TX twisted pair port to the appropriate setting, as follows:
  - If the twisted pair port on the media converter will be connected to an MDI port on an end node (such as on a workstation or server), set the button to the **MDI-X** position. (MDI-X is the default position.)
  - If the twisted pair port on the media converter will be connected to an MDI-X port on an end node (such as on a hub, switch, or another media converter), set the switch to the **MDI** position.
9. Connect a Category 5 or better twisted pair cable to the RJ-45 connector on the media converter. Connect the other end of the twisted pair cable to the desired end node.
10. Remove the dust cover from the fiber optic port.
11. Connect the fiber cable to the fiber optic connector on the media converter. Connect the other end of the cable to the desired end node.
12. Go to the next procedure, “Verifying the Installation”.



## Verifying the Installation

To verify the installation and check to be sure that the media converter is operating properly, perform the following procedure:

1. If you have not already, set M/L ON/LNK TST button to the Link Test mode (OUT) position. If you installed a back-to-back topology, set both media converters to the Link Test mode.
2. Power on the end nodes that are connected to the ports on the media converter.
3. Verify that the LNK (Link) LED for the twisted pair port is ON.
4. Verify that the LNK (Link) LED for the fiber optic port is ON.

---

**Note**

If either LNK LED is OFF, refer to the next section, “Troubleshooting” for guidelines on how to troubleshoot the unit.

---

5. Set the M/L ON/LNK TST button to the Link Test mode (OUT) position.

---

**Note**

When operating two media converters in a back-to-back configuration, Allied Telesyn recommends that the MissingLink feature on one or both of the converters be disabled. The MissingLink feature can be disabled by placing the LNK TST button in the OUT position (LNK TST Mode). The Link Test mode does not interfere with the converter’s ability to pass network traffic.

---

The media converter is now ready to support network operations.

## Troubleshooting

This section contains guidelines for troubleshooting the media converter. If a problem occurs, set the M/L ON/LNK TST button to the Link Test mode (OUT) position and then follow the instructions in this section.

If the PWR LED is OFF, verify the following:

- The power cord is securely connected to the power supply on the rear panel of the media converter and to the power outlet.
- The power outlet has power. If necessary, test the power outlet by connecting another device to it.
- The input power source is within the acceptable range for your area.

If the LNK LED for the fiber optic port is OFF, verify the following:

- The node connected to the port is powered ON.
- The fiber optic cable is securely and properly connected to the fiber optic port. (The near end node transmitter (TX) cable should be connected to the far end node receiver (RX) and vice versa.)
- The node connected to the fiber optic port is operating at 100 Mbps.
- The correct type of fiber optic cabling is being used to connect the end node to the media converter (refer to Table 4 on page 11).
- The maximum allowable operating distance has not been exceeded. (Refer to Table 4 and Table 5 on page 12.)
- The maximum allowable loss budget on the fiber optic cable is within acceptable limits for full-duplex operation. (Refer to Table 4 on page 11.)

---

### Note

In a back-to-back configuration where two media converters have been interconnected via their fiber optic ports and the units are not in Link Test mode, the LNK LEDs for the fiber optic ports will be OFF if the connection to either end node (such as a switch or hub) is lost.

---

If the LNK LED for the twisted pair port is OFF, verify the following:

- The node connected to the port is powered ON.
- The twisted pair cable is securely connected to both the port on the media converter and the end node.
- The MDI/MDI-X button is set to the correct position.
- Category 5 or better twisted pair cabling is being used to connect the end node to the media converter.
- The maximum operating distance of 100 meters (328 feet) has not been exceeded.

If the LNK LEDs are lit but there is communication problem between the end nodes connected to the media converter, verify the following:

- Both end nodes are operating at 100 Mbps.
- Both end nodes are operating with the same duplex mode. If necessary, use the Auto-Negotiation (A/N) button to deactivate auto-negotiation on the media converter. (Refer to “Auto-negotiation Button” on page 5 for a description of the button.)

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**Note**

Changing the A/N button setting requires that you power OFF and power ON the media converter to activate the change on the unit.

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- The correct type of fiber optic cabling and twisted pair cabling is being used to connect the end nodes to the media converter.
- The maximum allowable loss budget on the fiber optic cable is within acceptable limits for full-duplex operation. (Refer to Table 4 on page 11.)

## Technical Specifications

Table 6 lists the technical specifications for the media converter.

**Table 6** Technical Specifications

<b>Specifications</b>	
Dimensions (W x D x H)	4.125 in x 3.75 in x 1.0 in (10.5 cm x 9.5 cm x 2.5 cm)
Maximum Operating Temperature	0° C to 40° C (32° F to 104° F)
Maximum Storage Temperature	-20° C to 80° C (-4° F to 176° F)
Operating Altitude	up to 3,048 m (10,000 ft)
Humidity	5% to 80% (non-condensing)
EMI/RFI	meets FCC Class A, EN55022 Class A
Safety	EN60825 EN60950
Immunity	EN50082-1 Immunity Standard
Power: Input Supply Voltage Maximum Current Power Consumption	12 V DC $\pm$ 5% 500 mA 6 W

Table 7 and Table 8 list the technical specifications for the fiber optic port using either 50/125 or 62.5/125 micron multimode fiber optic cable.

**Table 7** Fiber Optic Port Launch Power and Receive Power

<b>Cable Type</b>	<b>Launch Power (dBm)</b>			<b>Receive Power (dBm)</b>		
	<b>Max.</b>	<b>Avg.</b>	<b>Min.</b>	<b>Minimum Sensitivity</b>	<b>Typical Sensitivity</b>	<b>Saturation</b>
50/125 micron	-14.0	-20.3	-22.5	-31.8	-34.5	-14.0
62.5/125 micron	-14.0	-16.8	-19.0	-31.8	-34.5	-14.0

**Table 8** Fiber Optic Datalink

<b>Cable Type</b>	<b>Optical Frequency</b>	<b>Minimum Power/ Link Budget</b>	<b>Average Signal Loss</b>
50/125 micron	1310 nm	13 dB	18.70 dB
62.5/125 micron	1310 nm	16.80 dB	22.50 dB

## Warranty Registration

When you have finished installing the product, you should register the 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.



## **Appendix A**

# ***Translated Safety and Emission Information***

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**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** TUV-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 1997
- 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 DIENT ZUM TRENNEN DE STROMVERSORGUNG. ZUR TRENNUNG VOM NETZ, KABEL AUS DE 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.

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**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 1997
- 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  |  <b>WAARSCHUWING:</b> Binnenshuis kan dit product radiostoring veroorzaken, in welk geval de gebruiker verplicht kan worden om gepaste maatregelen te nemen.   |                          |
| 3  | Immuniteit  | EN50082-1 1997           |
| 4  | Electrische Veiligheid  | EN60950, UL1950, CSA 950 |
| 5  |  <b>Laser</b>  | EN60825                  |
|    | <b>VEILIGHEID</b>   |                          |
| 6  |  <b>WAARSHUWING</b> Klasse-1 laser produkt.  |                          |
| 7  |  <b>WAARCHUWING</b> Neit in de straal staren.  |                          |
| 8  |  <b>WAARSCHUWINGEN MET BETREKKING TOT ELEKTRICITEIT</b><br><b>WAARSCHUWING: GEVAAR VOOR ELEKTRISCHE SCHOKKEN</b><br>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  |  <b>GEVAAR VOOR BLIKSEMINSLAG</b><br><b>GEVAAR: NIET</b> aan toestellen of KABELS WERKEN bij BLIKSEM.  |                          |
| 10 |  <b>WAARSCHUWING: HET TOESTEL WORDT UITGESCHAKELD DOOR DE STROOMKABEL TE ONTKOPPELEN.OM HET TOESTEL STROOMLOOS TE MAKEN:</b> de stroomkabel ontkoppelen.   |                          |
| 11 |  <b>AAN TE SLUITEN APPARATUUR,</b> de contactdoos wordt in de nabijheid van de apparatuur geïnstalleerd en is gemakkelijk te bereiken."  |                          |
| 12 |  <b>OPGELET:</b> De ventilatiegaten mogen niet worden gesperd en moeten de omgevingslucht ongehinderd toelaten voor afkoeling.   |                          |
| 13 |  <b>BEDRIJFSTEMPERATUUR:</b> De omgevingstemperatuur voor dit produkt mag niet meer bedragen dan 40 graden Celsius.   |                          |
| 14 |  <b>ALLE LANDEN:</b> het toestel installeren overeenkomstig de lokale en nationale elektrische voorschriften.  |                          |

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**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 1997
- 4 Sécurité électrique EN60950, UL1950, CSA 950
- 5  **Laser** EN60825  
**SÉCURITÉ.**
- 6  **ATTENTION** Produit laser di 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  **EQUIPEMENT POUR BRANCHEMENT ELECTRIQUE,** 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 EN50522 Luokka A
- 2  VAROITUS: Kotiolosuhteissa tämä laite voi aiheuttaa radioaaltojen häiriitä, missä tapauksessa laitteen käyttäjän on mahdollisesti ryhdyttävä tarpeellisiin toimenpiteisiin.
- 3 Kestävyys EN50082-1 1997
- 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.

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**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 1997
- 4 Sicurezza elettrica EN60950, UL1950, CSA 950
- 5  **Laser** EN60825
- NORME DI SICUREZZA**
- 6  **AVVERTENZA** Prodotto laser di Classe 1.
- 7  **AVERTENZA** 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 TEMPORALESCHÉ.
- 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 sikkerhetsnummer.












- |    |   |                          |
|----|---|--------------------------|
| 1  | RFI stråling  | EN55022 Klasse A         |
| 2  |  <b>ADVARSEL:</b> Hvis dette produktet benyttes til privat brug, kan produktet forårsake radioforstyrrelse. Hvis dette skjer, må brukeren ta de nødvendige forholdsregler.   |                          |
| 3  | Immunitet   | EN50082-1 1997           |
| 4  | Elektrisk sikkerhet   | EN60950, UL1950, CSA 950 |
| 5  |  <b>Laser</b>  | EN60825                  |
|    | <b>SIKKERHET</b>  |                          |
| 6  |  <b>ADVARSEL</b> Laserprodukt av klasse 1.   |                          |
| 7  |  <b>ADVARSA</b> L Stirr ikke på strålen.   |                          |
| 8  |  <b>ELEKTRISITET</b><br><b>ADVARSEL: FARE FOR ELEKTRISK SJO</b> KK<br>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  |  <b>FARE FOR LYNNEDSLAG</b><br><b>FARE:</b> ARBEID IKKE på utstyr eller KABLER i TORDENVÆR.  |                          |
| 10 |  <b>FORSIKTIG: STRØMLEDNINGEN BRUKES TIL Å FRAKOBLE UTSTYRET.</b> FOR Å DEAKTIVISERE UTSTYRET, må strømforsyningen kobles fra.   |                          |
| 11 |  <b>UTSTYR FOR STIKKONTAKT.</b> Stikkontakten skal monteres i nærheten av utstyret og skal være lett tilgjengelig."  |                          |
| 12 |  <b>FORSIKTIG:</b> Lufteventilene må ikke blokkeres, og må ha fri tilgang til luft med romtemperatur for avkjøling.  |                          |
| 13 |  <b>DRIFTSTEMPERATUR:</b> Dette produktet er konstruert for bruk i maksimum romtemperatur på 40 grader celsius.   |                          |
| 14 |  <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 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 1997
- 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 RAI**  
**PERIGO: NÃO TRABALHE** no equipamento ou nos CABOS durante períodos susceptíveis a QUEDAS DE RAI.
- 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 elétricas.














**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 1997
- 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 CONEXION 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.

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**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 1997
- 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**

## **Technical Support Fax Order**

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Name \_\_\_\_\_  
Company \_\_\_\_\_  
Address \_\_\_\_\_  
City \_\_\_\_\_ State/Province \_\_\_\_\_  
Zip/Postal Code \_\_\_\_\_ Country \_\_\_\_\_  
Phone \_\_\_\_\_ Fax \_\_\_\_\_

### **Incident Summary**

Allied Telesyn model number \_\_\_\_\_  
Firmware release number of Allied Telesyn product (if applicable) \_\_\_\_\_  
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.



# **Appendix C**

## **AT-MC300 Series Installation Guide**

### **Feedback**

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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

