Allied Telesis™

AT-iMG1400 Series

- AT-iMG1405
- AT-iMG1425
- AT-iMG1405W
- AT-iMG1425W

Installation Guide

613-001636 Rev. C

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Electrical Safety and Emissions Standards

U.S. Federal Communications Commission

Interference Statement

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

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the 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 the instruction manual, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does 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 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.

The Federal Communications Commission warns that changes or modifications of the unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment and any assurances of safety or performance, and could result in violation of part 15 of the FCC Rules.

The following statements apply to wireless models:

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator and your body.

The following models are deployed in markets where emissions compliance is governed by the FCC:

- ❒ AT-iMG1405W-01
- ❒ AT-iMG1405W-11
- ❒ AT-iMG1425W-01
- ❒ AT-iMG1425W-11

On these models, only 802.11 channels 1 – 11 are enabled. This channel allocation is locked during the manufacturing process and cannot be reversed.

Industry Canada

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

The following applies to wireless models:

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

This equipment complies with radio frequency exposure limits set forth by Industry Canada for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20 cm between the device and the user or bystanders.

Cet équipement est conforme aux limites d'exposition aux radiofréquences définies par Industrie Canada pour un environnement non contrôlé. Cet équipement doit être installé et utilisé avec un minimum de 20 cm de distance entre le dispositif et l'utilisateur ou des tiers.

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

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

EMI/RFI: FCC Class B, EN55022 Class B, VCCI Class B, CISPR Class B

Immunity: EN55024

Electrical Safety: UL60950 (cTUVus), CSA, C-TICK, CE

Translated Safety Statements

Important: The ☞ indicates that a translation of the safety statement is available in a PDF document titled "Translated Safety Statements" on the Allied Telesis web site at http://www.alliedtelesis.com/support.

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Preface

This guide contains instructions on how to install the AT-iMG1400 series models.

Safety Symbols Used in this Document

This document uses the following conventions:

Note
Notes provide additional information.

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

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

Warning
Warnings inform you that an eye and skin hazard exists due to the presence of a Class 1/1M Laser device.

Safety Precautions

Review the following safety precautions before you install the gateway.

Note
The ☞ indicates that a translation of the safety statement is available in a PDF document titled "Translated Safety Statements" on the Allied Telesis website at http://www.alliedtelesis.com.

Warning
Class 1 Laser product. ☞ L1

Warning

For SFP model AT-SPBD20EPON-13:

Laser Radiation.
Do not view directly with optical instruments.
Class 1M Laser product.

Rayonnement Laser.
Ne pas observer directement à l'aide d'instruments d'optique.
Appareil à Laser de classe 1M.

Warning
To prevent electric shock, do not remove the cover. No user-serviceable parts are 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.

Warning
Do not work on equipment or cables during periods of lightning activity.

Additional notes and precautions:

- DO NOT use this product in an environment that could potentially corrode the unit, including direct sunlight, humidity, excessive dust or corrosive gas.
- DO NOT open the electronics unit. The unit contains hazardous voltages and has no user serviceable parts.
- DO NOT block air vents or overheating may occur.
- Use only the power supply provided with the unit.

Contacting Allied Telesis

If you need assistance with this product, you may contact Allied Telesis technical support by going to the Services section of the Allied Telesis web site at http://www.alliedtelesis.com/. You can find links for the following services on this page:

- 24/7 Online Support - Enter our interactive support center to search for answers to your questions in our knowledge database, check support tickets, learn about Return Merchandise Authorization (RMA), and contact Allied Telesis technical experts.
- USA and EMEA phone support - Select the phone number that best fits your location and customer type.
- Hardware warranty information - Learn about Allied Telesis warranties and register

your product online.

- Replacement Services - Submit an RMA request via our interactive support center.
- Documentation - View the most recent installation guides, user guides, software release notes, white papers and data sheets for your product.
- Software Updates - Go to http://www.alliedtelesis.com/support/software/restricted to download the latest software releases for your product. You must have an account to access the restricted site.

For sales or corporate contact information, go to http://www.alliedtelesis.com/purchase.

Chapter 1

Technical Specifications

Electronics

The AT-iMG1400 series models provide five 10/100/1000T LAN ports.

Figure 1: AT-iMG1400 series unit

Physical Specifications

Dimensions: 26 cm x 15 cm x 4.5cm (10.2 in x 5.9 in x 1.8 in)

Weight: 0.450 kg (1.0 lb)

Environmental Specifications

Operating Temperature: 0°C to 40°C (32°F to 104°F)

Storage Temperature: -20°C to 70°C (-4°F to 158°F)

Operating Humidity: 5% to 90% non-condensing

Storage Humidity: 5% to 95% non-condensing

Operating Altitude Range: Up to 3,000 m (9,843 ft)

Power Specifications

Input Supply Voltage: 12 V DC

Power Consumption: 10W to 16.6W (depending on model)

Local Management Connection

The MGMT port is a standard USB-B for a Telnet connection.

Chapter 2

Installing the Gateway

Package Contents

The following items are included in the box. If any item is missing or damaged, contact your Allied Telesis representative for assistance.

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

- ❒ Mounting base
- ❒ iMG electronics module
- ❒ AC/DC power adapter
- ❒ Rubber mounting feet (4X)
- ❒ Tamper-evident label

Required Tools and Supplies

Have the following tools on hand before you install the unit:

- ❒ Tools for mounting the unit to the wall, such as screwdrivers and a drill.
- ❒ Fasteners appropriate for the wall surface material. #8 or M4 are recommended.
- ❒ Small cable ties for securing fiber optic cables.
- ❒ RJ11 telephone cables, 26 AWG or larger.
- ❒ RJ45 LAN Ethernet cables, maximum length 100M. Cat5e is recommended.

Before You Begin

Complete the following tasks before you install the unit:

- ❒ Prepare the fiber optic cable by installing the appropriate connector on the end that will connect to the iMG electronics.
- ❒ Determine the point-of-entry for the fiber: bottom, top or rear of the unit. (Figure 2)

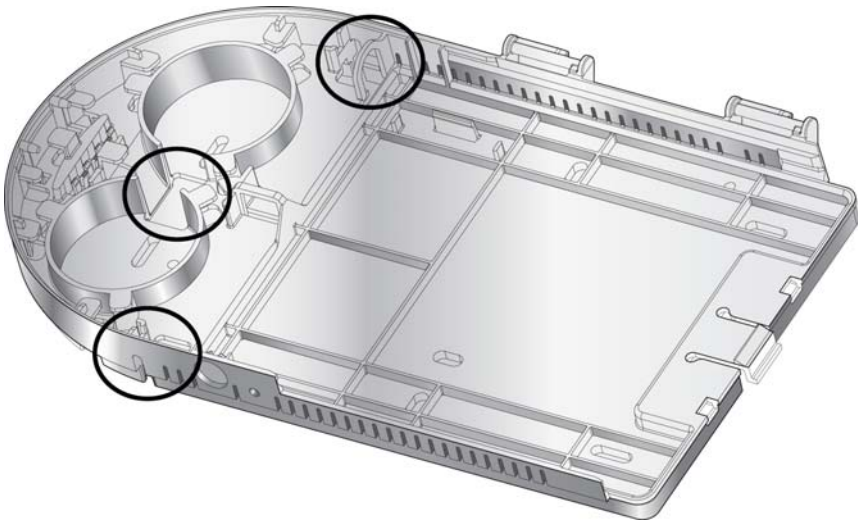

Figure 2: Empty unit with the fiber cable points-of-entry identified.

Installation Instructions

1. Thread the fiber into the base from the desired point-of-entry and secure the fiber to the base with a cable tie. Leave a minimum of 590-600mm of the fiber to wrap it around the fiber reel in the base. (Figure 3)

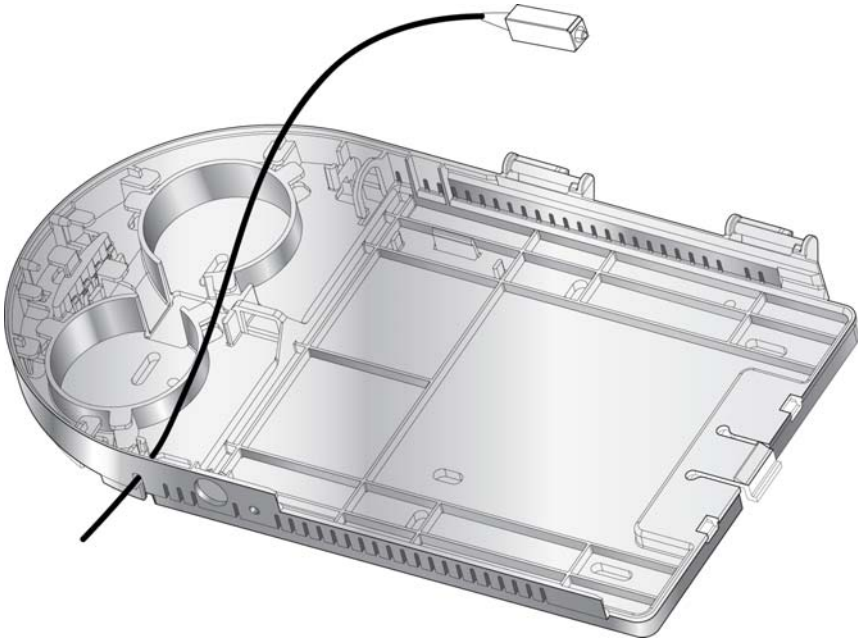

Figure 3: Fiber threaded into the unit from the bottom entry point.

2. Mount the base by doing one of the following:

   To mount the base to a wall: Select a wall location, mark the hole locations for the wall fasteners, then attach the base to the wall surface using the fasteners. Ensure the top edge of the base is level and that the base is flat when flush with the wall. If necessary, use washers or shims to prevent the base from warping. (Figure 4)

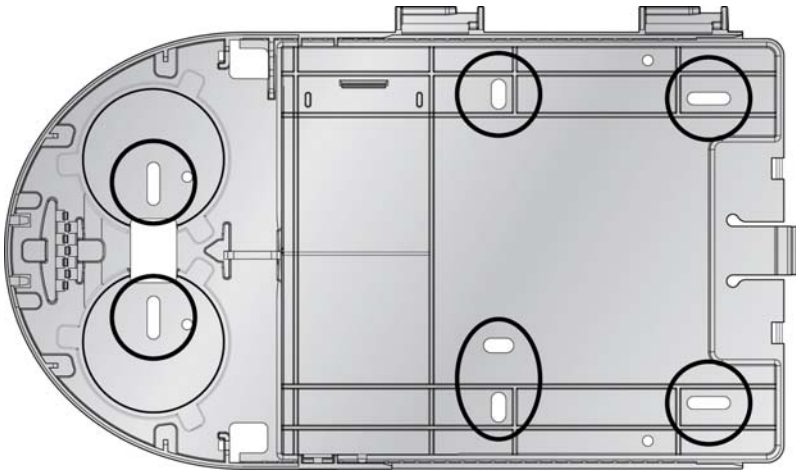

Figure 4: Bottom mounting base with mounting holes identified.

   To mount the base on a desktop: Apply the four adhesive feet to the square locating features on the underside of the base.

3. Wrap the fiber around the center reels to take up the excess fiber. If a fusion splice was used to attach a connector pigtail to the fiber, secure the splice protection sleeve in the clip features. (Figure 5)

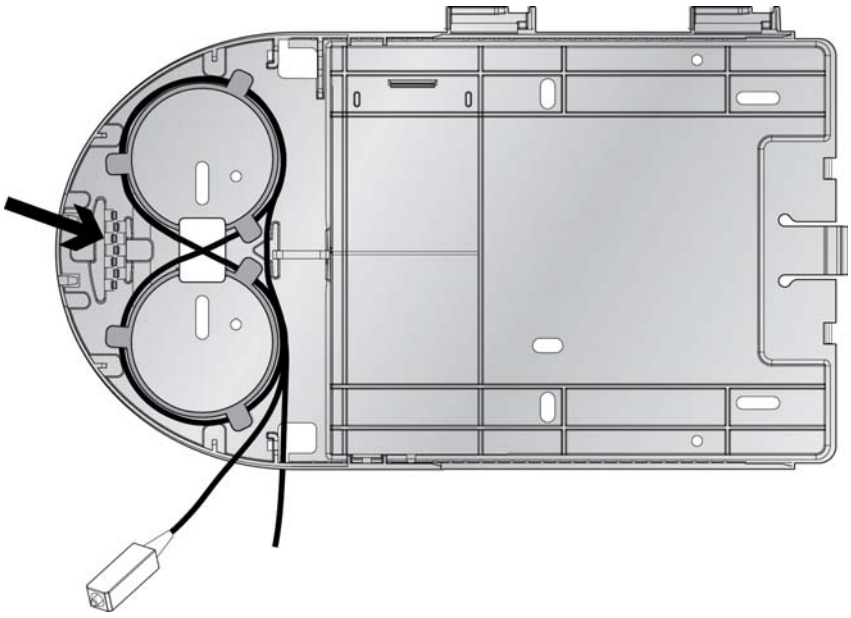

Figure 5: Fiber looped around center reels with the sleeve clip identified.

4. Route the fiber along the outside curved wall, allowing for approximately 100mm to protrude beyond the tie-wrap point. (Figure 6)

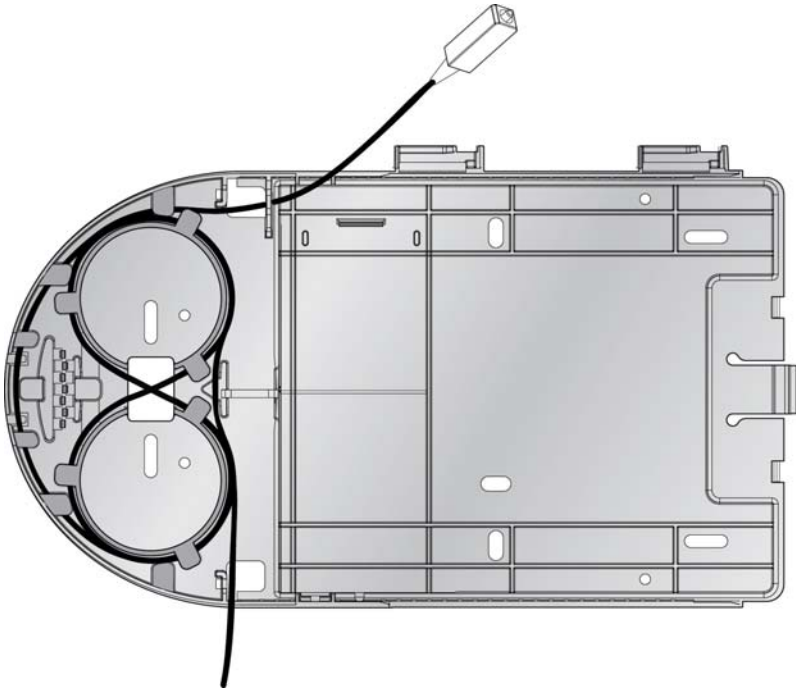

Figure 6: Completed fiber wrap configuration for iMG electronics.

5. Snap the hinges on the electronics unit onto the pivot pins on the mounting base. (Figure 7)

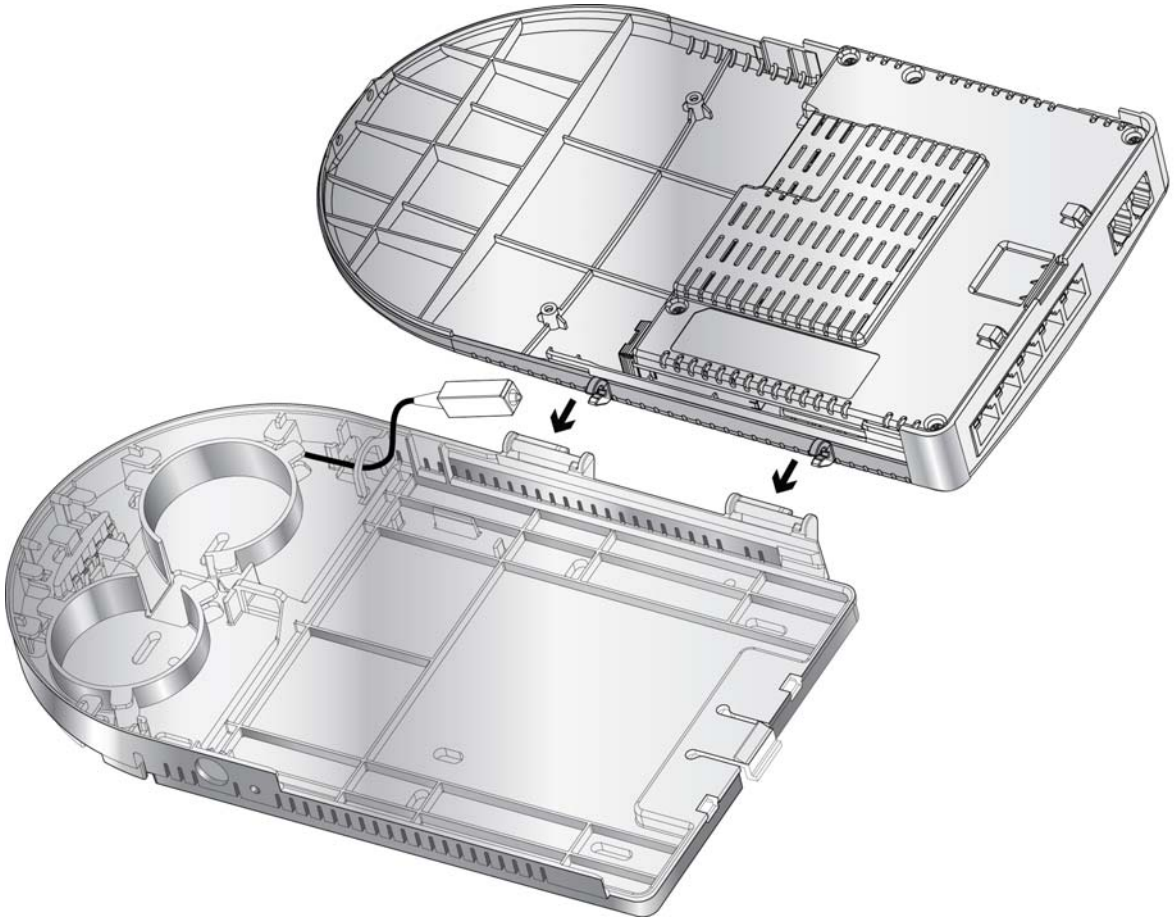

Figure 7: Location of the pivot pins on the mounting base.

6. Install the SFP optic module into the connector cage on the unit. Plug the fiber connector into the SFP. (Figure 8)

Figure 8: Fiber connector plugged into the SFP optic.

7. To secure the electronics unit to the base, first rotate the electronics down on the base. (Figure 9)

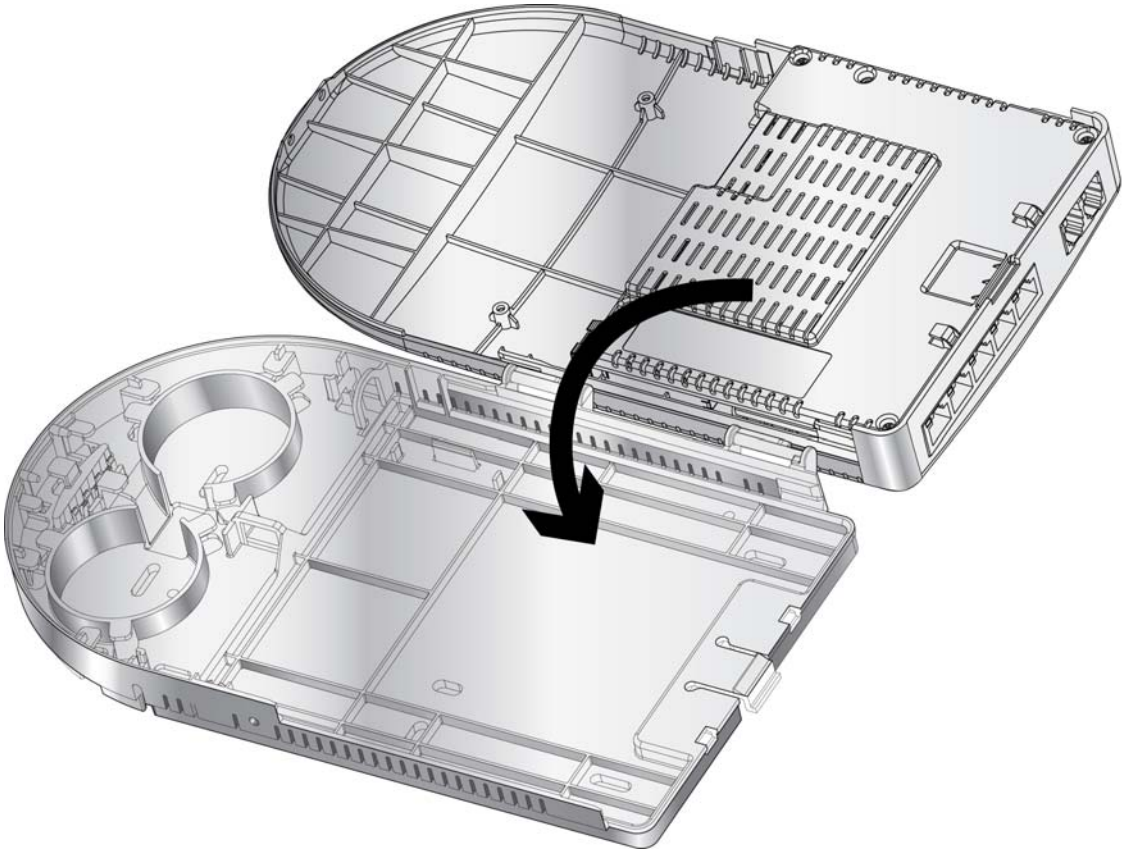

Figure 9: Rotating the electronics into place.

8. Slide the electronics unit to lock the electronics to the base. The electronics unit should be completely flush with the base. (Figure 10)

Figure 10: Locking the electronics into place.

9. Connect the telephone and LAN ports. Connect the TEL1 and LAN1 ports first. Use the other ports for additional devices. (Figure 11)

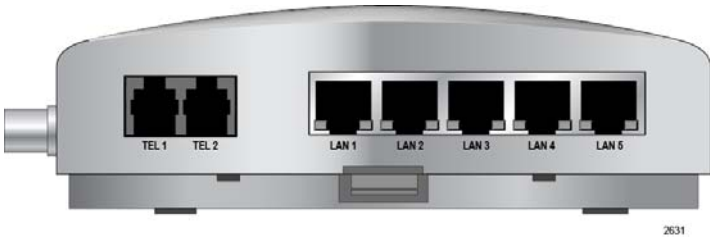

Figure 11: Telephone and LAN ports.

10. If you are using an uninterrupted power supply (UPS) to provide a battery backup to the unit, install the UPS according to the manufacturer's instructions and connect the power cable to the UPS. Allied Telesis UPS model AT-iMG008NB and power cable model AT-iMG016 are approved with AT-iMG1400 series models.

11. Plug the power supply cord into the POWER connector. Power is immediately supplied to the device. (Figure 12)

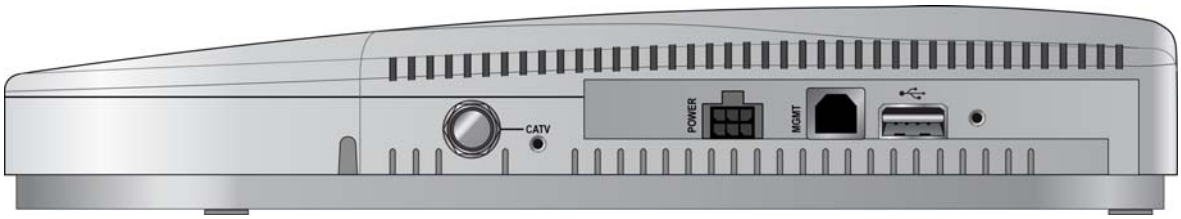

Figure 12: The POWER connector.

12. Check that the unit has booted correctly. Once the unit is powered up and has booted, the LEDs will reflect the unit's status as follows:

Table 1: LED Status

LED	Status	Description/Troubleshooting
SYST	Green light on	The device is receiving power and the voltage is within the acceptable range.
	Green light off	The device is not receiving power. Check that the AC power plug is plugged in correctly.
	Red light on	The device is in recovery mode. Refer to the *Allied Telesis Gateway Product Family Software Reference* on how to reinstall the primary application load. If this does not fix the problem, contact your supplier for assistance.
WAN	Green light on	The WAN link is established.
	Green light off	The WAN link has not been established. If the unit is wall-mounted, ensure that the unit is seated correctly. Contact your supplier for additional assistance.
VoIP	Green light on	The phone is off the hook.
	Green light flashing	Voice service is active.

Table 1: LED Status

LED	Status	Description/Troubleshooting
WLAN (if applicable)	Green light on	The link is up.
	Green light flashing	The unit is transmitting and receiving packets.
LAN Link/Act	Green light on	The LAN link is established.
	Green light flashing	The LAN link is active.
	Green light off	The LAN link has not been established. Ensure the connected devices are powered on, have no problems with their network interface cards, and have LAN cables attached to the correct port.

13. If desired, seal the unit with the tamper-evident label included in the box with the unit. Adhere the label across the seam in the plastic chassis as shown in Figure 13.

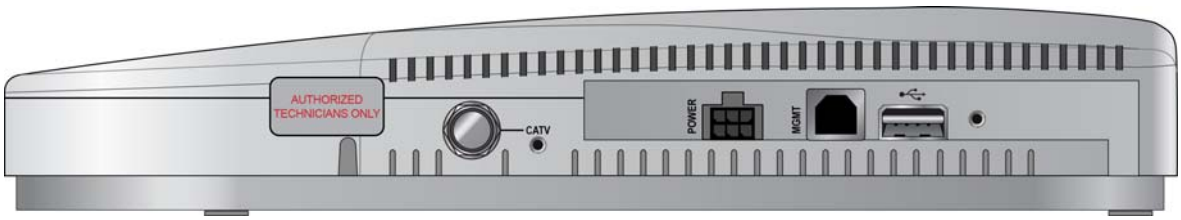

Figure 13: Unit with the tamper-evident label in place.

Chapter 3

Loading Software

The product is shipped with software pre-installed with the default configuration. For information on loading software, refer to the *Allied Telesis Gateway Product Family Software Reference* available at http://www.alliedtelesis.com/support/software/restricted.

The POWER LED sequence will be 4 Hz red while files are being downloaded and 2 Hz red while files are being written to flash memory. This sequence may repeat if additional files are being updated. Once files are downloaded, the system will restart.

You can provision the product using the local command set (MGMT Port) or through telnet. The AlliedView Network Management System (NMS) is also available to configure large numbers of units. Information on the NMS is available on the Allied Telesis web site at http://www.alliedtelesis.com/.