



**Server Technology**

Solutions for the Data Center Equipment Cabinet

# Ambassador

## IP Remote Power Manager

- AMIP-H008-1

### Installation and Operations Manual

**Instructions**

This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

**Dangerous Voltage**

This symbol is intended to alert the user to the presence of un-insulated dangerous voltage within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

**Protective Grounding Terminal**

This symbol indicates a terminal that must be connected to earth ground prior to making any other connections to the equipment.

**Life-Support Policy**

As a general policy, Server Technology does not recommend the use of any of its products in the following situations:

- life-support applications where failure or malfunction of the Server Technology product can be reasonably expected to cause failure of the life-support device or to significantly affect its safety or effectiveness.
- direct patient care.

Server Technology will not knowingly sell its products for use in such applications unless it receives in writing assurances satisfactory to Server Technology that:

- the risks of injury or damage have been minimized,
- the customer assumes all such risks, and
- the liability of Server Technology is adequately protected under the circumstances.

The term life-support device includes but is not limited to neonatal oxygen analyzers, nerve stimulators (whether used for anesthesia, pain relief or other purposes), auto-transfusion devices, blood pumps, defibrillators, arrhythmia detectors and alarms, pacemakers, hemodialysis systems, peritoneal dialysis systems, neonatal ventilator incubators, ventilators (for adults or infants), anesthesia ventilators, infusion pumps, and any other devices designated as "critical" by the U.S. FDA.

**Compliance**

Units have been safety tested/certified to the following standards: USA and Canada to UL 60950:2000 and CAN/CSA 22.2 No. 60950-00, European Union to EN60950:2000.

This product is also designed for Norwegian IT power system with phase-to phase voltage 230V.

**USA Notification**

Warning: Changes or modifications to these units not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment under FCC rules.

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the 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 the 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.

**Canadian Notification**

This digital apparatus does not exceed the Class A limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la classe A prescrites dans le Règlement sur le brouillage radioélectrique édicté par le Ministère des Communications du Canada.

**Japanese Notification**

この装置は、情報処理装置等電波障害自主規制協議会（VCCI）の基準に基づくクラスA情報技術装置です。この装置を家庭環境で使用すると電波妨害を引き起こすことがあります。この場合には使用者が適切な対策を講ずるよう要求されることがあります。

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# Chapter 1: Introduction

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# Introduction

The Server Technology Inc. Ambassador family of products provides easy, practical, and secure solutions for power distribution and power management for remote internetworking equipment and branch AC circuits.

The Ambassador IP continues to support the elimination of unnecessary trips to remote locations by allowing remote control of the power on/off status for distant critical equipment, minimizing the impact of locked-up devices on mission-critical networks.

## Features and Benefits

The Ambassador IP Remote Power Manager is available in an 8 outlet configurations for 100-120V AC for support up to 20A. See *Models* in Appendix C: Technical Specifications.

### **Communication Access Modes**

The Ambassador IP is equipped standard with a 10/100 Base-T Ethernet port for in-band web browser (HTML). A Console RS-232 port is standard for system configuration.

### **Power Distribution & Remote Management**

The Ambassador IP distributes up to 20A AC power and offer individual remote control over the power on/off status of up to 8 devices.

### **Load and Environment Measurement**

The Ambassador IP's load measurement feature eliminates guesswork by supplying the cumulative operating load in amperes. This allows administrators to maximize the equipment installed and operated on a circuit without worry. Use of the circuit is maximized, while effectively allowing a 10% to 20% safety margin.

### **Power-up Sequencing**

When the Ambassador IP is powered on, each of the power receptacles are powered sequentially with a two-second delay between each port. Power sequencing staggers the individual loads, eliminating the potential of a blown fuse or circuit breaker due to excessive in-rush current and allows circuit support for operating load capacities of 80% to 90%.

### **Outlet Grouping**

For operations across multiple attached devices or devices with multiple or redundant power supplies, The Ambassador IP's outlets may be included in one or more named groups of outlets. Changes may then be applied to all outlets in the named group with one easy command sequence.

### **User Interfaces and LEDs**

The Ambassador IP features two user interfaces: the HTML interface and the command line. For easy recognition, both individual outlets and groups may be assigned descriptive names for use in control commands. For the on-site technician, LEDs on the Ambassador IP indicates power status for individual outlets.

### **Security**

The Ambassador IP ships with one predefined administrative user account. The administrator may create up to 128 user accounts, with individualized access to outlets and commands. All accounts support username and password protection. For configurations requiring multiple fully-privileged users, the Ambassador IP allows the administrator to grant administrative privileges to other user accounts in the system.

### **Automatic Timeout**

For added security, a user session will be automatically terminated after five minutes of inactivity; if a user is called away unexpectedly, an unprotected channel will not remain open indefinitely.

## Technical Support

Server Technology understands that there are often questions when installing and/or using a new product. Free Technical Support is provided from 8:30 AM to 5:00 PM, Monday-Friday, Pacific Time. See *Technical Support* in Warranty, Product Registration and Support for more information.

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## Quick Start Guide

The following instructions will help you quickly install and configure your Ambassador for use on your network. For detailed information on each step, go to the page number listed to the right.

**For your network security, Server Technology strongly recommends the removal of the predefined user account prior to attachment to your network.**

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# Installation

Before installing your Ambassador, refer to the following lists to ensure that you have all the items shipped with the unit as well as all other items required for proper installation.

## Standard Accessories

- Mounting bracket hardware: two mounting brackets and four screws
- RJ45 to RJ45 crossover cable
- RJ45 to DB9F serial port adapter (for connection to standard DB9M DTE serial port)

## Additional Required Items

- Phillips screwdriver
- Screws, washers and nuts to attach the Ambassador to your rack

## Equipment Overview

A number is printed above each outlet. These numbers may be used in commands that require an outlet name. The power inlet connects to the electrical power source.

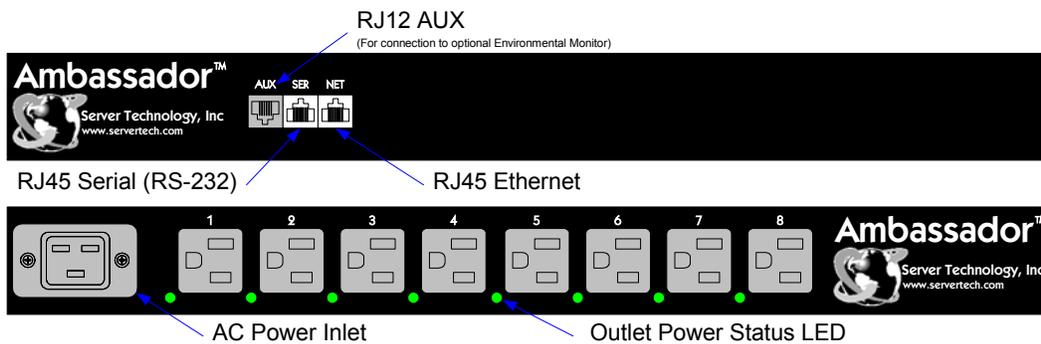


Figure 2.1 Ambassador IP Product Views

## Safety Precautions

This section contains important safety and regulatory information that should be reviewed before installing and using the Ambassador product. For input and output current ratings, see *Power Ratings* in Appendix C: Technical Specifications.

	Only for installation and use in a Service Access Location in accordance with the following installation and use instructions.	<i>Destiné à l'installation et l'utilisation dans le cadre de Service Access Location selon les instructions d'installation et d'utilisation.</i>	Nur für Installation und Gebrauch an Anschlusszugriffspunkten gemäß der folgenden Installations- und Gebrauchsanweisungen.
	This equipment is designed to be installed on a dedicated circuit.	<i>Cet équipement est conçu à être installé sur un circuit spécialisé.</i>	Diese Ausrüstung ist zur Installation in einem festen Stromkreis vorgesehen.
	Dedicated circuit must have circuit breaker or fuse protection. Ambassadors have been designed without a master circuit breaker or fuse to avoid becoming a single point of failure. It is the customer's responsibility to provide adequate protection for the dedicated power circuit. Protection of capacity equal to the current rating of the Ambassador must be provided and must meet all applicable codes and regulations. In North American, protection must have a 10,000A interrupt capacity.	<i>Le circuit spécialisé doit avoir un disjoncteur ou une protection de fusible. Ambassadors ont été conçus sans disjoncteur général ni fusible pour éviter que cela devient un seul endroit de panne. C'est la responsabilité du client de fournir une protection adéquate pour le circuit-alimentation spécialisé. Protection de capacité équivalant à la puissance de l'équipement, et respectant tous les codes et normes applicables. Les disjoncteurs ou fusibles destinés à l'installation en Amérique du Nord doivent avoir une capacité d'interruption de 10.000 A.</i>	Der feste Stromkreis muss mit einem Schutzschalter oder einem Sicherungsschutz versehen sein. Ein Ambassadors verfügt über keinen Hauptschutzschalter bzw. über keine Sicherung, damit kein einzelner Fehlerpunkt entstehen kann. Der Kunde ist dafür verantwortlich, den Stromkreis sachgemäß zu schützen. Der Kapazitätsschutz entspricht der aktuellen Stromstärke der Geräte und muss alle relevanten Codes und Bestimmungen erfüllen. Für Installation in Nordamerika müssen Ausschalter bzw. Sicherung über 10.000 A Unterbrechungskapazität verfügen.
	The plug on the power supply cord shall be installed near the equipment and shall be easily accessible.	<i>La prise sur le cordon d'alimentation sera installée près de l'équipement et sera facilement disponible.</i>	Der Stecker des Netzkabels muss in der Nähe der Ausrüstung installiert werden und leicht zugänglich sein.
	Always disconnect the power supply cord before opening to avoid electrical shock.	<i>Toujours déconnecter le cordon d'alimentation avant d'ouvrir pour éviter un choc électrique.</i>	Ziehen Sie vor dem Öffnen immer das Netzkabel heraus, um die Gefahr eines elektrischen Schlags zu vermeiden.
	<b>WARNING!</b> High leakage current! Earth connection is essential before connecting supply!	<b>ATTENTION !</b> <i>Haut fuite très possible ! Une connection de masse est essentielle avant de connecter l'alimentation !</i>	<b>ACHTUNG!</b> Hoher Verluststrom! Ein Erdungsanschluss ist vor dem Einschalten der Stromzufuhr erforderlich!

## Mounting

1. Select the appropriate bracket mounting points for proper mounting depth within the rack.
2. Attach the brackets to these mounting points with two screws for each bracket.
3. Install the enclosure into your rack, using the slots in each bracket. The slots allow about ¼ inch of horizontal adaptability to align with the mounting holes of your rack.

---

**NOTE:** A mounting bracket kit for 23" wide racks or cabinets is available. Contact your Server Technology Sales Representative for more information.

---

## Connecting to the Power Source

Connect the female end of the power cord firmly into the connector, use a screwdriver to tighten the screws on the retention bracket and plug the male end of the power cord into the AC power source.

## Connecting Devices

### To avoid the possibility of noise due to arcing:

1. Keep the device's on/off switch in the off position until after it is properly attached to the outlets, or  
Log in to the Ambassador and turn the outlets off before connecting the devices to the unit(s).
2. Connect devices to the outlets.



---

Always disconnect the power supply cord before opening to avoid electrical shock.

Afin d'éviter les chocs électriques, débranchez le câble électrique avant d'ouvrir.

Immer Netzleitung auskuppeln vor den Aufmachen um elektrischen Schlag zu vermeiden.

---

## Connecting to the Ambassador

### Console (RS232) port

The Ambassador is equipped with an RJ45 Console RS-232 port for attachment to a PC or networked terminal server using the supplied RJ45 to RJ45 crossover cable with the RJ45 to DB9F serial port adapter. See *Data Connections* in Appendix C: Technical Specifications for more information on the Console RS-232 port.

### Ethernet port

The Ambassador is equipped with an RJ45 10/100Base-T Ethernet port for attachment to an existing network. This connection allows access to the Ambassador via HTML.

The Ambassador is configured with the following network defaults to allow unit configuration out-of-the-box through HTML:

- IP address: 192.168.1.254
- Subnet Mask: 255.255.255.0
- Gateway: 192.168.1.1

The local PC network connection must be configured as noted below:

---

**NOTE:** Contact your system administrator for instructions in reconfiguring the network connection. Reconfiguration of your network connection may require a restart to take effect.

---

- IP address: 192.168.1.x (where x is 2-253)
- Subnet Mask: 255.255.255.0



# Chapter 3: Operations

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# Operations

## Interfaces

The Ambassador has two interfaces: the HTML interface accessed via the HTTP enabled Ethernet connections and the command line for serial connections; the command line interface is limited to system configuration commands only.

### Usernames and Passwords

The Ambassador has one predefined administrative user account (username/password: admn/admn) and supports a maximum of 128 defined user accounts

**NOTE: For security, Server Technology recommends removal of the predefined administrative user account after a new account with administrative rights has been created.**

Only an administrative-level user may perform operations such as creating/removing user accounts and command privileges, changing passwords and displaying outlet and user information. An administrator may also view the status of and control power to all outlets.

The administrator may create additional user accounts and then grant these users the right to view the status of and control power to specific outlets, groups and ports.

Usernames may contain from 1-16 characters and are not case sensitive; spaces are not allowed. Passwords may contain up to 16 characters, and are case sensitive.

## HTML Interface

The HTML interface is constructed of three major components: the System Location bar, the User/Navigation bar and the Control Screen. The System Location bar displays the Ambassador's location and IP address as well as the current Control Screen title. The User/Navigation bar displays the current user and privilege level and provides access to all HTML pages. And the Control Screen is used to display current data and allow changes to outlet states or system configuration.

The following sections describe each interface section/page and their use.

The screenshot shows the Ambassador Remote Power Manager web interface in a Microsoft Internet Explorer browser window. The browser title is "Ambassador Remote Power Manager - Microsoft Internet Explorer" and the address bar shows "http://64.42.31.207/main.html". The interface has a dark header with the "Ambassador Remote Power Manager" logo and "Server Technology, Inc. www.servertech.com" on the right. Below the header, a grey bar displays "Server Technology - Reno, NV" and "64.42.31.207". A yellow bar below that says "Outlet Control - Individual". The main content area is titled "Individual Outlet Control" and contains a table with columns: "Outlet ID", "Outlet Name", "Outlet Status", "Control State", and "Control Action". The table lists outlets A1 through A8, all with "On" status and "Wake On" control state. Below the table are "Apply" and "Cancel" buttons and a "Refresh" link. At the bottom, there is a "Global Control Action" dropdown menu set to "None" with "Apply" and "Cancel" buttons. A "Logout" button is in the bottom left. A left sidebar contains navigation links: "Outlet Control", "Environmental Monitoring", "Configuration", and "Tools". Three blue arrows point to specific parts of the interface: one to the left sidebar (labeled "User/Navigation"), one to the grey bar (labeled "System Location"), and one to the table (labeled "Control Screen").

Outlet ID	Outlet Name	Outlet Status	Control State	Control Action
A1	TowerA_Outlet1	On	Wake On	None
A2	TowerA_Outlet2	On	Wake On	None
A3	TowerA_Outlet3	On	Wake On	None
A4	TowerA_Outlet4	On	Wake On	None
A5	TowerA_Outlet5	On	Wake On	None
A6	TowerA_Outlet6	On	Wake On	None
A7	TowerA_Outlet7	On	Wake On	None
A8	TowerA_Outlet8	On	Wake On	None

Figure 3.1 Example HTML page

## Logging In

Logging in through HTML requires directing the HTML client to the configured IP address of the unit.

### **To log in by HTML:**

1. In the login window, enter a valid username and password and press **OK**.

If you enter an invalid username or password, you will be prompted again.

You are given three attempts to enter a valid username and password combination. If all three fail, the session ends and a protected page will be displayed.

## Outlet Control

The Outlet Control section offers access to the Individual and Group outlet control pages. From the Individual and Group pages, the user can review and manipulate power control functions for all outlets and groups assigned to the current user. Both pages include the outlets absolute and descriptive names, the Outlet Status reported to the Ambassador by the outlet, the current Control State being applied by the Ambassador and the outlet load in amperes.

Available outlet and group power states may be set to on, off or reboot; the reboot operation turns the outlet(s) off, delays for a period of 15 seconds and then turns the outlet(s) on.

### **Outlet State/Control State Field Values**

<b>Outlet State</b>	<b>Control State</b>	<b>Description</b>
On	On	Outlet is on
Off	Off	Outlet is off
Off	Pend On	Outlet is off and about to turn on in response to a sequence timer
Off	Reboot	Outlet is off and a Reboot action has been initiated
On	Idle On	A restart has occurred – Last Control State has been maintained
Off	Idle Off	A restart has occurred – Last Control State has been maintained
On	Wake On	A power-loss has occurred – Wakeup State has been applied
Off	Wake Off	A power-loss has occurred – Wakeup State has been applied
On/Wait	Off	Outlet state in transition – Requery of outlet status required
Off/Wait	On	Outlet state in transition – Requery of outlet status required
On/Error	varies	Error State – Outlet should be off but current is sensed at the outlet
Off/Error	varies	Error State – Outlet should be on but no current is sensed at the outlet
No Comm	varies	Communication to the outlet has been lost*

\* Control State will be applied when communication is re-established

## Individual

The Individual outlet control page displays all outlets assigned to the current user. The user may apply on, off or reboot actions to individual, multiple or all accessible outlets.

### **To apply actions to individual or multiple outlets:**

In the Individual Outlet Control section, select the desired action from the Control Action drop-down menu for each individual outlet to be changed and press **Apply**.

### **To apply an action to all outlets:**

In the Global Control section, select the desired action from the Control Action drop-down menu and press **Apply**.

## Group

The Group outlet control page displays all groups assigned to the current user as well as the outlets for each group.

### **To select a group:**

Select the group name from the drop-down menu and press **Select**. The page will refresh to display all outlets associated to the selected group name.

### **To apply an action to a group:**

Select the desired action from the drop-down menu and press **Apply**.

## **Environmental Monitoring**

The Environmental Monitoring section offers access to the Input Feed page. This section is available to administrative level users and users with Environmental Monitoring view rights.

### **Input Feeds**

The Input Load page displays the Ambassador's absolute and descriptive name and the cumulative input load in amperes of all devices attached to the Ambassador at the time the page was loaded. This page will refresh automatically every 10 seconds.

## **Configuration**

The Configuration section offers access to all unit configuration options including Network, HTTP, Outlets, Groups, Users, and FTP. This section is available to administrative level users only.

### **System**

The System configuration page is used for reference of system information such as Ethernet NIC Serial Number, Ethernet MAC address and system firmware and hardware revisions as well as assignment and maintenance of the system location and Ambassador descriptive names.

For description names, up to 24 alphanumeric and other typeable characters (ASCII 33 to 126 decimal – spaces and colon characters are not allowed) are allowed.

---

**NOTE:** Spaces may be used for the location description only.

---

#### **Creating a descriptive location name:**

Click on the **Tower Names** link.

On the subsequent Tower Names page, enter a descriptive name and press **Apply**.

#### **Creating a descriptive input feed name:**

Click on the **Input Feed Names** link.

On the subsequent Input Feed Names page, enter a descriptive name and press **Apply**.

#### **Creating a descriptive outlet name:**

Click on the **Outlet Names** link which will open the Outlets configuration page. See Outlets on page 13 for additional information on creating descriptive outlet names.

## **Network**

The Network configuration page is used for maintenance of the network interface. From this page an administrator may configure the IP address, subnet mask and gateway address as well as view the link status, speed and duplex value.

The Ambassador is configured with the following network defaults to allow unit configuration out-of-the-box through HTML:

- IP address: 192.168.1.254
- Subnet Mask: 255.255.255.0
- Gateway: 192.168.1.1

The initial local PC network connection must be configured as noted below:

---

**NOTE:** Contact your system administrator for instructions in reconfiguring the network connection. Reconfiguration of your network connection may require a restart to take effect.

---

- IP address: 192.168.1.x (where x is 2-253)
- Subnet Mask: 255.255.255.0

---

**NOTE:** The unit must be restarted after network configuration changes. See *Performing a warm boot*: on page 15.

---

#### **Setting the IP address, subnet mask or gateway:**

In the appropriate field, enter the IP address, subnet mask or gateway address and press **Apply**.

## HTTP

The HTTP configuration page used to configure the port number that the HTTP server watches and responds to and selection of the method of authentication used.

### **Changing the HTTP server port number:**

In the appropriate Port field, enter the port number and press **Apply**.

### **Setting the HTTP authentication method:**

The Ambassador HTTP server supports two authentication methods for security and validation of the username-password – Basic and MD5 digest.

The Basic method utilizes Base64 encoding to encode and deliver the username-password over the network to the HTTP server for decoding and authentication. This basic method is supported by all web browsers and offers a minimum level of security.

---

**NOTE:** The Base64 algorithm is widely-known and susceptible to packet-sniffer attack for acquisition of the encoded username-password string.

---

The MD5 digest method provides stronger protection utilizing one-way encoded hash numbers, never placing the username-password on the network. Instead, the sending browser creates a challenge code based on the hash algorithm, provided username-password and unique items such as the device IP address and timestamp, which is compared against the HTTP server internal user database of valid challenge codes. The MD5 digest method offers a higher level of security than the Basic method but at present is not supported by all browsers.

---

**NOTE:** MD5 is known to be fully supported by Internet Explorer 5.0+

---

Select **Basic** or **MD5** from the Authentication drop-down menu and press **Apply**.

## Outlets

The Outlets configuration page is used for assignment and/or editing of outlet descriptive names and wakeup states.

### **Editing the outlet descriptive name:**

Click on the **Edit** link in the Action column next to the outlet to be configured.

On the subsequent Outlet Edit page, enter the descriptive name. Up to 24 alphanumeric and other typeable characters (ASCII 33 to 126 decimal, spaces and colon characters are not allowed) are allowed. Press **Apply**.

### **Changing the outlet wakeup state:**

Click on the **Edit** link in the Action column next to the outlet to be configured.

On the subsequent Outlet Edit page, select **On** or **Off** from the Wakeup State drop-down menu and press **Apply**.

## Groups

The Groups configuration page is used for creation and deletion of group and assignment of outlets to groups.

### **Creating a group:**

Enter a descriptive group name in the Group Name field. Up to 24 alphanumeric and other typeable characters (ASCII 33 to 126 decimal, spaces and colon characters are not allowed) are allowed. Press **Apply**.

### **Removing a group:**

Click on the **Remove** link in the Action column for the group to be removed and press **Yes** on the subsequent confirmation window.

### **Adding and Deleting outlets from a group:**

Press the **Edit** link in the Action column for the associated group.

On the subsequent Group Edit page, select or deselect outlets to be included in that group. Press **Apply**.

## **Users**

The Users configuration page is used for creation and removal of usernames, assignment of accessible outlets and group, assignment of privilege levels and the changing of user passwords.

### **Creating a new user:**

Enter a user name in the Username field. Up to 24 alphanumeric and other typeable characters (ASCII 33 to 126 decimal, spaces and colon characters are not allowed) are allowed.

Enter a password for the new user and verify in the Password and Verify Password fields. For security, password characters are not displayed. Press **Apply**.

### **Removing a user:**

Click on the **Remove** link in the Action column for the user to be removed and press **Yes** on the subsequent confirmation window.

### **Changing a user password:**

Click on the **Edit** link in the Action column for the associated user.

On the subsequent User Edit page, enter a password and verify the new password for the new user in the Password and Verify Password fields. For security, password characters are not displayed. Press **Apply**.

### **Changing a user's access privilege level:**

The Ambassador has two defined access privilege levels; Admin and User:

- Admin: Full-access for all configuration, control (On, Off, Reboot) and status.
- User: Partial-access for control (On, Off, Reboot) and status of assigned outlets and groups.

The administrator may also grant administrative privileges to other user accounts allowing the Ambassador to have more than one administrative-level user.

---

**NOTE:** You cannot remove administrative privileges from the Admn user unless another user has already been given administrative access level privileges created.

---

Click on the **Edit** link in the Action column for the associated user.

On the subsequent User Edit page, select **Admin**, **User**, **On-only** or **View-only** from the Access Level drop-down menu and press **Apply**.

### **Granting or removing Environmental Monitoring viewing privileges:**

Click on the **Edit** link in the Action column for the associated user.

On the subsequent User Edit page, select **Yes** or **No** from the Environmental Monitoring drop-down menu and press **Apply**.

---

**NOTE:** This also grants or removes viewing privileges for the optional Equipment Cabinet Environmental Manager. See the [Equipment Cabinet Environmental Manager Installation and Operations manual](#) for more information.

---

### **Adding and Deleting outlet access:**

Click on the **Outlets** link in the Access column for the associated user.

On the subsequent User Outlets page, select or deselect outlets to be accessed by the user and press **Apply**.

### **Adding and Deleting group access:**

Click on the **Groups** link in the Access column for the associated user.

On the subsequent User Groups page, select or deselect group to be accessed by the user and press **Apply**.

## **FTP**

The FTP configuration page is used for setup and maintenance of all settings required to perform an FTP firmware upload. See Appendix B: Uploading Firmware for more information on uploading firmware.

### **Setting the FTP Host IP Address:**

Enter the IP address in the Host IP Address field and press **Apply**.

### **Setting the FTP username:**

Enter the FTP server username in the Username field, and press **Apply**.

### **Setting the FTP password:**

Enter the FTP server password in the Password field, and press **Apply**.

### **Setting the filepath:**

Enter the path of the file to be uploaded in the Directory field, and press **Apply**.

### **Setting the filename for upload:**

Enter the filename of the file to be uploaded in the Filename field, and press **Apply**.

### **Testing the FTP upload configuration:**

This test validates that the unit is able to contact and log onto the specified FTP server, download the firmware file and verify that the firmware file is valid for this unit.

Press **Test**.

## **Tools**

The Tools section contains access to rebooting the unit, uploading new firmware as well as resetting the unit to factory defaults. This section is available to administrative level users only.

## **Restart**

### **Performing a warm boot:**

Select the **Restart** from the Action drop-down menu and press **Apply**.

---

**Note:** System user/outlet/group configuration or outlet states are NOT changed or reset with this command.

---

### **Resetting to factory defaults:**

See Appendix A: Resetting to Factory Defaults for more information on resetting an Ambassador to factory defaults from the HTML interface.

### **Uploading new firmware:**

See Appendix B: Uploading Firmware for more information on uploading new firmware from the HTML interface.

## Command Line Interface

### Logging In

Logging in through the Console (RS232) port requires the use of a terminal or terminal emulation software configured to support ANSI or VT100 and a supported data rate (300, 1200, 2400, 4800, 9600, 19200, 38400, 57600, or 115200 BPS) - 8 data bits-no parity-one stop bit and Device Ready output signal (DTR or DSR).

#### To log in by RS-232:

1. Press **Enter**. The following appears, where **x.xx** is the firmware version:  
Ambassador Version x.xx  
Username:
2. At the Username: and Password: prompts, enter a valid username and password. And press **Enter**.  
You are given three attempts to enter a valid username and password combination. If all three fail, the session ends.

When you enter a valid username and password, the command prompt (Ambassador:) appears. If a location identifier has been defined, it will be displayed before the Ambassador: prompt.

You may enter commands in any combination of uppercase and lowercase. You must enter all command characters correctly; there are no command abbreviations. There are two types of commands: operations and administration. A user must have administrative privileges to use the administration commands. The following tables list and briefly describe each command.

#### Operations Command Summary

Command	Description
Login	Ends the current session and brings up the Username: prompt
Logout	Ends a session
Quit	Ends a session

#### Administrative Command Summary

Restart	Performs a warm boot
Set FTP Filename	Specifies the file to be uploaded via FTP
Set FTP Filepath	Specifies the filepath for the file to be uploaded
Set FTP Host	Sets the FTP Host IP address
Set FTP Password	Sets the password for the FTP Host
Set FTP Username	Sets the username for the FTP Host
Set Gateway	Sets the Gateway
Set HTTP Port	Sets the HTTP server port number
Set HTTP Security	Sets the HTTP server authentication method
Set Ipaddress	Sets the Ambassador IP address
Set Subnet Mask	Sets the Subnet Mask
Show FTP	Displays FTP configuration information
Show Network	Display network configuration information
Version	Displays the Ambassador firmware version

## Operations Commands

### **Starting a new session**

The Login command activates the Username: prompt. The current session ends, allowing a user to log in and start a new session under a different username.

#### *To start a new session:*

At the Ambassador: prompt, type **login** and press **Enter**. The Username: prompt appears.

### **Ending a session**

The Quit or Logout commands ends a session. A session ends automatically when no activity is detected for five minutes, or upon loss of connection.

#### *To end a session:*

At the Ambassador: prompt, type **quit** and press **Enter**, or

Type **logout** and press **Enter**.

## Administration Commands

### System Administration

#### **Displaying the Ambassador firmware version**

The Version command displays the Ambassador firmware version.

#### *To display the firmware version:*

At the Ambassador: prompt, type **version** and press **Enter**.

#### **Performing a warm boot**

The Restart command performs a warm boot.

---

**NOTE:** System user/outlet/group configuration or outlet states are NOT changed or reset with this command.

---

#### *To perform a warm boot:*

At the Ambassador: prompt, type **restart** and press **Enter**.

### Network Administration Commands

---

**NOTE:** A restart is required after setting or changing ANY TCP/IP configurations. See *Performing a warm boot* on page 17 for more information.

---

#### **Setting the IP address**

The Set Ipaddress command sets the TCP/IP address of the network interface controller.

#### *To set the IP address:*

At the Ambassador: prompt, type **set ipaddress**, followed by the IP address and press **Enter**.

#### **Example**

The following command sets the IP address to 12.34.56.78:

```
Ambassador: set ipaddress 12.34.56.78<Enter>
```

#### **Setting the subnet mask**

The Set Subnet command sets the subnet mask for the network the Ambassador will be attached to.

#### *To set the subnet mask:*

At the Ambassador: prompt, type **set subnet**, followed by the subnet mask and press **Enter**.

#### **Example**

The following command sets the subnet mask to 255.0.0.0

```
Ambassador: set subnet 255.0.0.0<Enter>
```

## Setting the gateway

The Set Gateway command sets the IP address of the default gateway the Ambassador uses to access external networks.

### *To set the gateway IP address:*

At the Ambassador: prompt, type **set gateway**, followed by the gateway IP address and press **Enter**.

### **Example**

The following command set the gateway IP address to 12.34.56.1:

```
Ambassador: set gateway 12.34.56.1<Enter>
```

## **HTTP Administration Commands**

### **Changing the HTTP server port**

With HTTP support enabled, the HTTP server watches and responds to requests on the default HTTP port number 80. This port number may be changed using the Set HTTP Port command.

### *To change the HTTP port:*

At the Ambassador: prompt, type **set http port**, followed by the port number and press **Enter**.

### **Example**

The following changes the HTTP port number to 2048:

```
Ambassador: set HTTP port 2048<Enter>
```

### **Setting the HTTP authentication method**

The Set HTTP Security command is used to set the method of authentication. The Ambassador IP HTTP server supports two authentication methods for security and validation of the username-password – Basic and MD5 digest.

For more information on authentication methods, see *Setting the HTTP authentication method*: on page 13.

### *To set the HTTP authentication method:*

At the Ambassador: prompt, type **set http security**, followed by **basic** or **md5** and press **Enter**.

### **Displaying network configuration information**

The Show Network command displays TCP/IP and Web configuration information.

- NIC module serial number, MAC address and hardware revision code
- IP address, subnet mask and gateway
- HTTP port number
- HTTP authentication method
- Network link status, connection speed and duplex value

### *To display network configuration information:*

At the Ambassador: prompt, type **show network** and press **Enter**.

### **Example**

The following command displays the network configuration information:

```
Ambassador: show network<Enter>
Network Configuration
NIC S/N :      1600001
MAC Address:   00-0a-9c-10-00-01
H/W Rev Code:  0
IP Address:    12.34.56.78
Subnet Mask:   255.0.0.0
Gateway:       12.34.56.1
HTTP Port:     80           Security: Basic
Network Status
Link:          Up
Speed:         100 Mbps
Duplex:        Half
```

## **FTP Administration**

The following commands are used to configure the Ambassador for an FTP firmware upload. See Appendix B: Uploading Firmware for more information on initiating a FTP firmware upload.

### **Setting the FTP Host IP address**

The Set FTP Host command sets the FTP host IP address allowing for firmware file uploads.

#### ***To set the FTP Host IP address:***

At the Ambassador: prompt, type **set ftp host**, followed by the Host IP address and press **Enter**.

#### ***Example***

The following command sets the FTP Host IP address to 12.34.56.99:

```
Ambassador: set ftp host 12.34.56.99<Enter>
```

### **Setting the FTP username**

The FTP Username command sets the username as required by the FTP Host.

#### ***To set the FTP username:***

At the Ambassador: prompt, type **set ftp username**, followed by the FTP username and press **Enter**.

#### ***Example***

The following command sets the FTP username to Guest:

```
Ambassador: set ftp username guest<Enter>
```

### **Setting the FTP Password**

The FTP Password command sets the password as required by the FTP Host.

#### ***To set the FTP password:***

At the Ambassador: prompt, type **set ftp password**, followed by the FTP password and press **Enter**.

#### ***Example***

The following command sets the FTP password to OpenSesame:

```
Ambassador: set ftp password OpenSesame<Enter>
```

### **Setting the filename to be uploaded**

The FTP Filename command sets the filename of the firmware file to be uploaded.

#### ***To set the FTP filename:***

At the Ambassador: prompt, type **set ftp filename**, followed by the firmware filename and press **Enter**.

#### ***Example***

The following command sets the FTP filename to snb\_s50a.bin:

```
Ambassador: set ftp filename am-v51a.bin<Enter>
```

### **Setting the filepath for the file to be uploaded**

The FTP Filepath command sets the filepath for the firmware file to be uploaded.

#### ***To set the FTP filepath:***

At the Ambassador: prompt, type **set ftp filepath**, followed by the filepath and press **Enter**.

#### ***Example***

The following command sets the FTP filepath to ftp://ambassador:

```
Ambassador: set ftp filepath ftp://ambassador<Enter>
```

## Displaying FTP configuration information

The Show FTP command displays all FTP configuration information.

- FTP Host IP address
- FTP Host username and password
- Firmware filepath and filename

### *To display FTP configuration information:*

At the Ambassador: prompt, type **show ftp** and press **Enter**.

### **Example**

The following command displays the FTP configuration information:

```
Ambassador: show ftp<Enter>
FTP Configuration
Host IP Address: 12.34.56.99
Username:       guest
Password:       OpenSesame
Directory:      ftp://ambassador
Filename:       am-v51a.bin
```

# Chapter 4: Appendices

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# Appendices

## Appendix A: Resetting to Factory Defaults

You may reset the non-volatile RAM that stores all configurable options. This clears all administrator-editable fields and resets all command line configurable options to their default values, including all user accounts.

You may reset the unit to factory defaults from the HTML interface, the command line or by pressing the reset button. You must have administrator-level privileges to issue the command. Using the reset button may be necessary when a forgotten password prevents administrator login. Each of the methods update the current working configuration to the factory defaults.

---

**NOTE:** Resetting the unit to factory defaults resets all TCP/IP and Web configurations. Reconfiguring of the TCP/IP and Web settings will be required.

---

### To reset the to factory defaults from the command line

At the Ambassador: prompt, type **restart factory** and press **Enter**.

### To reset to factory defaults from the HTML interface

On the Restart page in the Tools section of the HTML interface, select **Restart and reset to factory defaults** from the drop-down menu and press **Apply**.

### To reset to factory defaults using the reset button

Press and hold the reset button between ten and fifteen seconds.

---

**NOTE:** If the reset button is depressed and held for more than 15 seconds, the reset will abort.

---

## Appendix B: Uploading Firmware

You may upload new versions of firmware using File Transfer Protocol (FTP). This allows access to new firmware releases for firmware improvements and new features additions.

---

**NOTE:** To begin an FTP upload session, you must first configure the FTP Host address, username/password, filename and filepath. For information on configuring the FTP settings required for firmware upload see Chapter 3: Operations.

---

You may initiate an FTP upload session by issuing a command or from the HTML interface. You must have administrator-level privileges to initiate an upload.

### To initiate an FTP upload session

On the Restart page in the Tools section of the HTML interface, select **Restart and upload firmware via FTP** from the drop-down menu and press **Apply**.

Upon issuing this command the unit will restart and upload the firmware file specified with the FTP Filename command from the previously configured FTP Host. See *FTP Administration* in Chapter 3: for more information.

### To initiate an FTP upload session from the command line

The Restart FTPLoad command initiates an upload of firmware. Upon issuing this command the Ambassador will restart and upload the firmware file specified with the FTP Filename command from the previously configured FTP Host. See *FTP Administration* in Chapter 3: for more information.

To initiate an FTP firmware upload session:

At the Ambassador: prompt, type **restart ftpload** and press **Enter**.

## Appendix C: Technical Specifications

### Models

#### Standard Models

Model	Voltage	Inlet	Outlets
AMIP-H008-1-02	100-120V AC, 50/60 Hz	IEC 60320 C20	8x NEMA 5-15

### Power Ratings

Model Modele Modell	Input Current Ratings <sup>1</sup> <i>L'indice du courant d'entrée</i> Eingangsstromstärke		Output Current Ratings <i>L'indice du courant de sortie</i> Ausgangsstromstärke			
	Voltage <i>Tension</i> Spannung	Current <i>Courant</i> Strom	Outlet <i>Prise</i> Anschlussstelle	Quad <sup>2</sup>	Octet <sup>3</sup>	Total <i>Total</i> Insgesamt
AMIP-H008-1	100-120V 50/60Hz	15	10	15	15	15

<sup>1</sup> All current ratings are in amperes.

*Tous les indices de courant sont en ampères.*

Alle Angaben der Stromstärke erfolgen in Ampere.

<sup>2</sup> 1-4, 5-8

<sup>3</sup> 1-8

### Physical Specifications

Model	AMIP-H008-1	
Physical Size (H x W x D)	3.5 x 17.0 x 17.0 in.	
Weight	22.8 lbs	
Temperature	Operating	0° to 50° C (32° to 122° F)
	Storage	-40° to 85° C (-40° to 185° F)
Elevation (above MSL)	Operating	0 to 10,000 ft (0 to 3000 m)
	Storage	0 to 50,000 ft (0 to 15 000 m)
Relative Humidity	Operating	10 to 90%, non-condensing
	Storage	10 to 90%, non-condensing
Approvals	cCSAus, TUV-GS <sup>1</sup>	

<sup>1</sup> cCSAus - UL 1950, CAN/CSA 22.2 No. 950-95

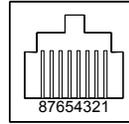
TUV-GS - EN60950:2000

## Data Connections

### **RS-232 port**

Ambassador IPs are equipped standard with an RJ45 DTE RS-232c serial port. This connector may be used for direct local access or from other serial devices such as a terminal server. An RJ45 crossover cable is provided for connection to an RJ45 DCE serial port.

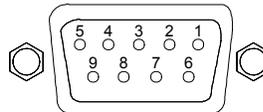
Pin	DTE Signal Name		Input/Output
1	Request to Send	RTS	Output
2	Data Terminal Ready	DTR	Output
3	Transmit Data	TD	Output
4	Signal Ground		
5	Signal Ground		
6	Receive Data	RD	Input
7	Data Set Ready	DSR	Input
8	Clear to Send	CTS	Input



### **RJ45 to DB9F serial port adapter**

Additionally, an RJ45 to DB9F serial port adapter is provided for use in conjunction with the RJ45 crossover cable to connect to a PC DB9M DCE serial port. The adapter pinouts below reflect use of the adapter with the provided RJ45 crossover cable.

Pin	DCE Signal Name		Input/Output
2	Receive Data	RD	Output
3	Transmit Data	TD	Input
4	Data Terminal Ready	DTR	Input
5	Signal Ground		
6	Data Set Ready	DSR	Output
7	Request to Send	RTS	Input
8	Clear to Send	CTS	Output



### **LED Indicators**

Ambassador IPs are equipped with a status LED for each outlet. A lit/on LED indicates that power is being supplied to the outlet and a darkened/off LED indicates that there is no power at the outlet.

### Warranty and Limitation of Liability

Server Technology, Inc. agrees to repair or replace Products that fail due to a defect within twelve (12) months after the shipment date of each Product unit to Buyer (“Warranty Period”). For purposes of this Agreement the term “defect” shall mean the Product fails to operate or fails to conform to its applicable specifications. Any claim made pursuant to this Agreement shall be asserted or made in writing only by Buyer. Buyer shall comply with Server Technology’s Standard Return Merchandise Authorization (“RMA”) procedure for all warranty claims as set forth in Server Technology’s operation manual.

**Buyer must return Products in original packaging and in good condition.** This limited warranty does not include labor, transportation, or other expenses to repair or reinstall warranted Products on site or at Buyer’s premises.

Server Technology reserves the right to investigate any warranty claims to promptly resolve the problem or to determine whether such claims are proper. In the event that after repeated efforts Server Technology is unable to repair or replace a defective Product, then Buyer’s exclusive remedy and Server Technology’s entire liability in contract, tort, or otherwise shall be the payment by Server Technology of Buyer’s actual damages after mitigation, but shall not exceed the purchase price actually paid by Buyer for the defective Product.

Server Technology shall have no responsibility or liability for any Product, or part thereof, that (a) has had the Serial Number, Model Number, or other identification markings altered, removed or rendered illegible; (b) has been damaged by or subject to improper installation or operation, misuse, accident, neglect and/or has been used in any way other than in strict compliance with Server Technology’s operation and installation manual; (c) has become defective or inoperative due to its integration or assembly with any equipment or products not supplied by Server Technology; (d) has been repaired, modified or otherwise altered by anyone other than Server Technology and/or has been subject to the opening of any sealed cabinet boxes without Server Technology’s prior written consent. If any warranty claim by Buyer falls within any of the foregoing exceptions, Buyer shall pay Server Technology its then current rates and charges for such services.

THE ABOVE WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THOSE OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ALL OF WHICH ARE EXPRESSLY DISCLAIMED. SERVER SHALL NOT BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, OR EXEMPLARY DAMAGES; EVEN OF IT HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

For warranty issues, contact the Product Support Department at the number listed above. All repair and return shipments must be approved by Server and must be accompanied by a RMA (Return Merchandise Authorization) number and dated proof of purchase.

### Product Registration

Registration is your key to special offers and services reserved for Registered Users.

- Excellent Technical Support Services
- Special Update and Upgrade Programs
- Warranty Protection
- Extended Warranty Service
- New Product Information

Register your products online today!

[www.servertech.com](http://www.servertech.com)

## **Technical Support**

Server Technology understands that there are often questions when installing and/or using a new product. Free Technical Support is provided from 8:30 AM to 5:00 PM, Monday-Friday, Pacific Time.

Server Technology, Inc.

1040 Sandhill Drive

Reno, Nevada 89521 USA

Tel: 775.284.2000

Fax: 775.284.2065

Web: [www.servertech.com](http://www.servertech.com)

Email: [support@servertech.com](mailto:support@servertech.com)

## **Return Merchandise Authorization**

If you have a unit that is not functioning properly and is in need of technical assistance or repair:

Submit a request for support by phone at the above number, or via the web at

[http://www.servertech.com/support/support\\_form.html](http://www.servertech.com/support/support_form.html).

Be ready to provide:

Company Name

Contact Name, Phone Number, and Email address

Model or Part Number (from the label on the equipment)

Server Technology Serial Number

Version of code (See Chapter 3)

Description of problem

1. Technical Support will work to diagnose/resolve the problem remotely, if possible. If the problem cannot be resolved, Technical Support will then issue an RMA# for the return/repair of the equipment in question. RMA#'s are valid for 30 days only from the issue date.
2. Shipping charges for the return of the equipment to Server Technology shall be the responsibility of the customer. For warranty repairs, Server Technology shall assume return shipping charges but for non-warranty repairs, the shipping charges shall be billed.
3. The RMA# shall be placed conspicuously on all shipping documentation, associated correspondence, and the shipping container.
4. Equipment must be returned in proper/original packaging to protect the equipment in transit. The customer shall be financially responsible for any damage/destruction of the equipment due to improper packaging.
5. Equipment shall typically be turned around within 48-72 hours of receipt at Server Technology. Equipment under warranty shall be repaired at no cost. Equipment NOT under warranty shall be repaired at the standard labor rate plus parts. Upon diagnosis of the equipment, the customer shall be notified of estimated charges prior to repair.
6. For non-warranty repairs, return of the equipment will be expedited with the inclusion of a Purchase Order or credit card number for incurred charges.





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