Server Technology

Solutions for the Data Center Equipment Cabinet

Ambassador

Serial Remote
Power Manager

- AMSS-U008-x

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 is 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

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 Serial Ambassador 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

Power Distribution

A Serial Ambassador distributes a maximum of 20A AC power across four attached devices.

Remote Power Management

A Serial Ambassador offers individual remote control over the power on/off status to four devices.

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 Serial Ambassador 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.

Security

The Serial Ambassador ships with three predefined usernames, including an administrator. The administrator may create up to 57 additional usernames, with individualized access to ports and commands. All usernames support password protection. For configurations requiring multiple fully-privileged users, the Serial Ambassador allows the administrator to grant administrative privileges to other users in the system.

User Interfaces and LEDs

The Ambassador Serial Ambassador features two types of user interfaces: the command line and the control screen. For easy port recognition, both individual ports and port groups may be assigned descriptive names for use in control commands. For the on-site technician, LEDs on the Serial Ambassador indicate individual port power status and cumulative power load.

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 ***Error! Reference source not found.*** in Warranty, Product Registration and Support for more information.

Server Technology, Inc.
1040 Sandhill Drive	Tel: 775.284.2000	Web:	www.servertech.com
Reno, Nevada 89521 USA	Fax: 775.284.2065	Email:	support@servertech.com

Quick Start Guide

The following instructions will help you quickly install and configure your Serial 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 changing of all predefined passwords prior to attachment to your network.

Chapter 2: Installation

Installation

Before installing your Serial 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 sets of screws and washers
- RJ45 to RJ45 crossover cable
- RJ45 to DB9F serial port adapter (for connection to standard DB9M DTE serial port)
- Outlet retention clips, one per outlet (208-240V units only)

Additional Required Items

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

Equipment Overview

A letter/number combination is printed above each Serial Ambassador port. The ports are labeled 1 through 4. These names may be used in commands that require an outlet name. See *Port Naming and Grouping* in Chapter 3: Operations for more information. The power inlet of the Serial Ambassador connects the Serial Ambassador to the electrical power source. See Technical Specifications for more information.
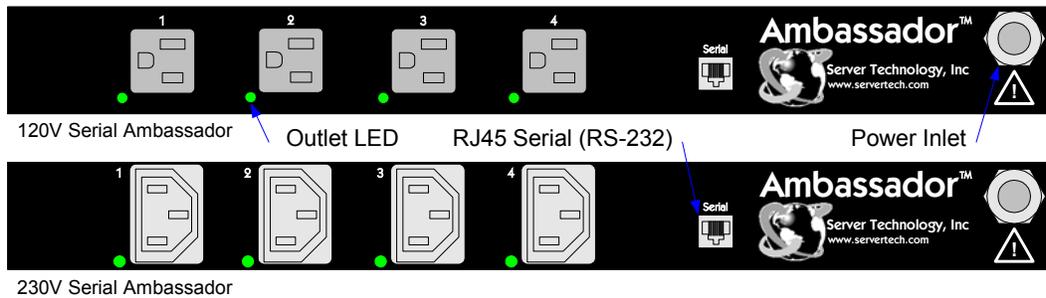

Figure 2.1 Serial Ambassador Views

Safety Precautions

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

	Only for installation and use in a Restricted Access Location in accordance with the following installation and use instructions.	*Seulement pour l'installation et l'utilisation dans une Zone Interdite conformément aux installations et l'utilisation des indications suivants.*	Nur zur Installation und Verwendung in einem Sicherheitsbereich gemäß den folgenden Installations- und Verwendungsanleitungen.
	This equipment is designed to be installed on a dedicated circuit.	*Cet équipement est conçu à être installé sur un circuit spécialisé.*	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 should not exceed 120% of the Total Output Rating of the Ambassador and must meet all applicable local, state and federal codes and regulations.	*Le circuit spécialisé doit avoir un disjoncteur ou une protection de fusible.* *Des Ambassador 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. La protection ne doit pas dépasser 120 % l'Indice du Total de Sortie de la Ambassador et doit être conforme à toutes les régulations locales, d'état et fédéral applicables.*	Der feste Stromkreis muss mit einem Schutzschalter oder einem Sicherungsschutz versehen sein. Ein Ambassador 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 Schutz darf 120% der Gesamtausgangsnennleistung des Ambassador nicht überschreiten und muss alle geltenden lokalen, regionalen und Bundesvorschriften erfüllen.
	The plug on the power supply cord shall be installed near the equipment and shall be easily accessible.	*La prise sur le cordon d'alimentation sera installée près de l'équipement et sera facilement disponible.*	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.	*Toujours déconnecter le cordon d'alimentation avant d'ouvrir pour éviter un choque électrique.*	Ziehen Sie vor dem Öffnen immer das Netzkabel heraus, um die Gefahr eines elektrischen Schlags zu vermeiden.
⚡	WARNING! High leakage current! Earth connection is essential before connecting supply!	*ATTENTION ! Haut fuite très possible ! Une connection de masse est essentielle avant de connecter l'alimentation !*	ACHTUNG! Hoher Verluststrom! Ein Erdungsanschluss ist vor dem Einschalten der Stromzufuhr erforderlich!
	Warning: 208-240/230V models only: Outlets are not fused. Outlet circuit protection is provided by the building installation, which shall not exceed 20A branch circuit protection	*Attention: les modèles 208-240/230V seulement : Les prises n'ont pas de fusible incorporé. Une protection de la prise du circuit est fournie par l'installation du bâtiment, qui ne devrait pas dépasser 20A protection d'une branche de circuit.*	Achtung: Nur für 208-240/230V-Modelle: Die Anschlussstellen sind nicht gesichert. Der Ausgangsstromkreisschutz erfolgt durch die elektrische Gebäudeinstallation, die einen Abzweigschutz von 20A nicht übersteigen darf.

Mounting

1. Select the appropriate mounting orientation for your installation.
2. Attach the brackets to the 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 adaptability to align with the mounting holes of your rack.

NOTE: Contact your Server Technology Sales Representative for information regarding custom bracket design and fabrication services if you are unable to find a suitable manner for utilizing the included mounting brackets.

Connecting to the Power Source

Plug the male end of the Serial Ambassador power cord into the AC power source.

Each port powers up sequentially, with a two-second delay between each port, eliminating a potential blown primary fuse or circuit breaker from excessive in-rush current.

Connecting Devices

To avoid the possibility of noise due to arcing, keep the device's on/off switch in the off position until after it is plugged into the outlet, or log in to the Ambassador and turn the outlets off before connecting the devices to the unit(s). After connecting the devices, turn them on using the Ambassador.

1. Connect devices to the outlets.
   On 230V units, install a retention clip for each outlet; Pull the prongs out slightly and insert them into holes on the Ambassador, then insert the device's power cord and snap the clip over the cord.

NOTE:
1. Server Technology recommends even distribution of attached devices across the all available outlets to avoid exceeding the outlet, quad or octet ratings limitations. See Power Ratings in Appendix B: for more information.
2. The outlet retention clips on the 230V Serial Ambassador are designed for use with Server Technology's IEC 60320/C13 to IEC 60320/C14 cable (CAB-1302). The retention clip may not properly fit 3rd party cables.

Always disconnect the power supply cord before opening to avoid electrical shock.
Afin d'éviter les chocs électriques, débranchez le cable électrique avant d'ouvrir.
Immer Netzleitung auskuppeln vor den Aufmachen um elektrischen Schlag zu vermeiden.

Connecting to the Ambassador

Serial (RS232) port

The Ambassador is equipped with an RJ45 Serial 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 B: Technical Specifications for more information on the Serial RS-232 port.

Chapter 3: Operations

Chapter 3: Operations

Interfaces

The Serial Ambassador has two interfaces: command line and control screen. When a valid user logs in, the command line prompt (Ambassador:)appears. From this prompt, commands may be issued according to the user's privileges. The control screen is accessed from the command line with the Show command. You may return to the command line from the control screen by typing **c**.

You may end a Serial Ambassador session either from the command line or the control screen.

Port Naming and Grouping

When a command calls for a Serial Ambassador port name, you may specify it in one of two ways: a predefined absolute name or a descriptive name assigned by the administrator.

An absolute name is specified by a period (.) followed by a group letter and port number. All ports on the Serial Ambassador are a member of group letter 'A'. Ports are numbered 1 through 4. To specify an absolute port name, enter a period followed by the group letter and the labeled port numerical value.

Alternatively, descriptive port names may be created on the control screen and used in commands that require a port name. See *Using the Control Screen* in this chapter for more information about descriptive port names.

Additionally, Ambassador ports may be assigned group names on the control screen, enabling you to issue a command that affects all ports in the group. Specify the group name with the command, such as on, off or reboot. See *Using the Control Screen* for more information about group names.

Usernames and Passwords

The Ambassador has three predefined usernames, shown in the following table.

Predefined Usernames

Name	Password	Privileges
Admn	admn	Fully-privileged
Gen1	gen1	Semi-privileged
Gen2	gen2	Semi-privileged

NOTE: For security, Server Technology recommends changing the passwords for the predefined usernames. See *Changing a password* for more information about changing passwords.

An additional 57 users may be added.

By default, only the Admn user may perform administrative operations such as adding/deleting usernames and command privileges, changing passwords and displaying port and user information. The Admn user may also view the status of all Ambassador ports, access the control screen and control power to all ports.

NOTE: By default, the Gen1 and Gen2 users may view the status of all Ambassador ports, access the control screen and control power to all ports. The administrator may change these privileges.

The administrator creates additional usernames with the Add User command, and then uses the Add Port command to grant these users the right to view the status of and control power to specific Ambassador ports. The administrator uses the Set Show command to grant control screen access to additional users.

The administrator may grant administrative privileges to another user with the Admnp command. This command may also be used to remove administrative privileges previously granted. This feature allows the Ambassador to have more than one administrator-level user.

Additional usernames must contain from 1-16 characters; spaces are not allowed. A username is not case sensitive. Passwords may contain up to 16 characters, and are case sensitive. The administrator may change a password with the Set Password command. See Administration Commands in this chapter for more information about commands that create and manage usernames.

NOTE: For security, when a password is typed, either blanks or asterisks appear on the screen instead of the typed password characters.

Command Line Interface

Logging In

Logging in through the Serial (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	Brings up the Username: prompt
Off	Turns one or more ports off
On	Turns one or more ports on
Quit	Ends a session
Reboot	Reboots one or more ports
Report	Displays available port information for current user
Show	Displays the control screen
Status	Displays the on/off status of one or more ports
Vers	Displays the Ambassador firmware version

Administrative Command Summary

Add Port	Grants a username access to one or all ports
Add User	Adds a username
Admnp	Grants or removes administrative privileges for a username
Del Port	Removes access to one or all ports for a username
Del User	Deletes a username
List Port(s)	Displays information about one or all ports
List User(s)	Displays information about one or all users
Set Banner	Enables or disables the Ambassador banner displayed at the Username: prompt
Set Location	Specifies a descriptive field for the control screen and login banner
Set Password	Changes the password for a username
Set Screen	Enables or disables confirmation for control screen operations that change port states
Set Show	Enables or disables Show command access for a username

To display the names of commands that you may execute:

At the command prompt, press **Enter**. A list of valid commands for your username appears.

Operations Commands

Operations commands manage Ambassador port states, provide information about the Ambassador environment and control session operations.

For most operations commands that affect port states, you may specify multiple port names on one command line, separated by a space or a comma, to a maximum of 50 characters.

NOTE: Users must be granted access to affect any change in port state.

Turning ports on

The On command turns on one or more ports. When the command completes, a display indicates the number of ports that were turned on and the number of ports that are locked in their current state.

To turn ports on:

At the Ambassador: prompt, type **on**, followed by one or more port names separated by spaces or commas, and press **Enter**, or

Type **on**, followed by a group name, and press **Enter**, or

Type **on all** and press **Enter**.

Examples

The following command turns the second port on, using the port 's absolute name:

```
Ambassador: on port .a2<Enter>
```

The following command turns on all the ports in the group named ops_srv:

```
Ambassador: on port ops_srv<Enter>
```

The following command turns on ports 1 and 3, using the ports' absolute names:

```
Ambassador: on ports .a1 .a3<Enter>
```

Turning ports off

The Off command turns off one or more ports. When the command completes, a display indicates the number of ports that were turned off and the ports that are locked in their current state.

To turn ports off:

At the Ambassador: prompt, type **off**, followed by one or more port names separated by spaces or commas, and press **Enter**, or

Type **off**, followed by a group name, and press **Enter**, or

Type **off all** and press **Enter**

Examples

The following command turns the second and fourth ports off, using the ports' absolute names:

```
Ambassador: off port .a2 .a4<Enter>
```

The following command turns off the port named ops_2:

```
Ambassador: off port ops_2<Enter>
```

The following command turns off all ports:

```
Ambassador: off port all<Enter>
```

Rebooting ports

The Reboot command reboots one or more ports. This operation turns the port(s)off, delays for a period of time and then turns the port(s)on. The delay interval is 15 seconds by default, or the minimum-off time specified on the control screen, whichever is greater.

When the command completes, a display indicates the number of ports that were rebooted and the ports that are locked in their current state.

If you plan to reboot a large number of ports simultaneously by specifying all ports or a group name that is assigned to many ports, it may be beneficial to set staggered minimum-off time values among the ports. This enables you to avoid an excessive in-rush of current and possible circuit overload. See *Using the Control Screen* for information about the minimum-off time.

To reboot one or more ports:

At the Ambassador: prompt, type **reboot**, followed by one or more port names separated by spaces or commas, and press **Enter**, or

Type **reboot**, followed by a group name, and press **Enter**, or

Type **reboot all** and press **Enter**.

Examples

The following command reboots the ports named ops_2 and shp_2:

```
Ambassador: reboot ops_2 shp_2<Enter>
```

The following command reboots all the ports in the group named ops_srv:

```
Ambassador: reboot ops_serv<Enter>
```

The following command reboots all ports:

```
Ambassador: reboot all<Enter>
```

Displaying port status

The Status command displays the on/off status of one or more ports. For the three predefined usernames Admn, Gen1 and Gen2, this command may be used to display the status of all ports, including ports for which power control access is not allowed. For additional usernames, the command displays the status of only those ports for which the username has power control access.

The display indicates the number of ports that are on as well as those that are off. If you do not specify any parameter with this command, the status of all ports is displayed.

To display on/off status of one or more ports:

At the Ambassador: prompt, type **status**, followed by one or more port names separated by spaces or commas, and press **Enter**, or

Type **status**, followed by a group name, and press **Enter**, or

Type **status all** and press **Enter**, or

Type **status** and press **Enter**, or

Examples

The following command displays the on/off status of the port named shp_2:

```
Ambassador: status shp_2<Enter>
```

The following command displays the on/off status of all ports:

```
Ambassador: status<Enter>
```

Accessing the control screen

The Show command displays the control screen The Show command is always available to the predefined usernames Admn, Gen1 and Gen2. By default, added usernames are not allowed to use the Show command. The administrator may use the Set Show command to enable and disable Show command access for other usernames.

To access the control screen:

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

To return to the command line from the control screen, press **c**.

Displaying the firmware version

The Vers command displays the firmware version.

To display the firmware version:

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

Displaying the available port information and status

The Report command is used to display port information and status for all assigned ports for the current user.

To display available port information and status:

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

Example

```
Ambassador: report<Enter>
Port   Port      Group      Control   Module
 ID    Name      Name       Status    Status
 .A1   Port_A1   Group_A    Lckd On   Normal
 .A2   Port_A2   Group_A    Off       Normal
```

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 command ends a session. You may also end the current session and immediately start a new one with the Login command. Additionally, you may end a session from the control screen by pressing **q**. 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.

Administration Commands

Administration commands include the Add, Del, List and Set commands, plus the Admnp command. Some of these commands manage usernames and their privileges. Other administration commands affect the control screen. Administration commands may only be issued by a user with administrative privileges, such as the predefined Admn user or another user who has been granted administrative privileges with the Admnp command.

User Administration

Adding a username

The Add User command adds a username and password. See *Usernames and Passwords* in this chapter for more information.

To add a username:

At the Ambassador: prompt, type **add user**, optionally followed by a 1-16 character username. Spaces and colon characters are not allowed, and usernames are not case sensitive. Press **Enter**.

At the Password: prompt, type a password of up to 16 alphanumeric and other typeable characters (ASCI I 32 to 126 decimal). Passwords are case sensitive. Press **Enter**. To specify no password, press **Enter** at the prompt.

At the Verify Password: prompt, retype the password. Press **Enter**. To verify no password, press **Enter** at the prompt.

Example

The following command adds username JaneDoe:

```
Ambassador: add user JaneDoe<Enter>
Password: *****<Enter>
Verify New Password: *****<Enter>
```

For security, password characters are displayed as asterisks.

Deleting a username

The Del User command removes a username.

NOTE: You cannot delete the predefined usernames Admn, Gen1 or Gen2.

To delete a username:

At the Ambassador: prompt, type **del user**, optionally followed by a username. Press **Enter**.

Changing a password

The Set Password command changes a username's password. For security, when you type a password, the characters are not displayed on the screen. See *Usernames and Passwords* for more information.

NOTE: To change the password for the Admn user, you must know the current password.

To change a password:

At the Ambassador: prompt, type **set password**, optionally followed by a username and press **Enter**.

If you are changing the password for the Admn user, the Enter Current Password: prompt appears. Type the current password and press **Enter**.

At the Enter New Password: prompt, type the new password and press **Enter**. Passwords may contain up to 16 characters, and spaces are not allowed. To specify no password, press **Enter** at the prompt.

At the Verify New Password: prompt, retype the new password and press Enter. To verify no password, press **Enter** at the prompt.

Examples

The following command changes the password for the user named JohnDoe:

```
Ambassador: set password johndoe<Enter>
Enter New Password: ******<Enter>
Verify New Password: ******<Enter>
```

The following command blanks the password for the user named JaneDoe:

```
Ambassador: set password<Enter>
Username: janedoe<Enter>
Enter New Password: <Enter>
Verify New Password: <Enter>
```

Granting port access to a username

The Add Port command grants a username access to one or all ports. To grant access for more than one port, but not all ports, you must use multiple Add Port commands.

To grant port access to a username:

At the Ambassador: prompt, type **add port**, optionally followed by a username and a port name. Press **Enter**, or

Type **add port**, followed by a username, then **all**. Press **Enter**.

Examples

The following commands use absolute port names to grant the username JaneDoe access to ports A1 and A2:

```
Ambassador:add port janedoe .a1<Enter>
Ambassador:add port janedoe .a2<Enter>
```

The following commands grant access to the same ports, but they use the ports' descriptive names that were previously defined on the control screen (ops_1, ops_2 and shp_2):

```
Ambassador:add port janedoe ops_1<Enter>
Ambassador:add port janedoe ops_2<Enter>
```

The following command grants access to all ports for the username JohnDoe:

```
Ambassador: add port<Enter>
Username: johndoe<Enter>
Port Name: all<Enter>
```

Deleting port access for a username

The Del Port command removes a username 's access to one or all ports. You cannot remove access to any port for the Admn user.

To delete port access for a username:

At the Ambassador: prompt, type **del port**, optionally followed by a username and a port name. Press **Enter**, or

Type **del port all**. Press **Enter**.

Enabling and disabling user access to the control screen

The Set Show command enables or disables a username 's access to the Show command. This determines whether the username may access the control screen.

To enable or disable control screen access:

At the Ambassador: prompt, type **set show**, followed by a username and on or off. Press **Enter** .

Examples

The following command enables Show command access for the user JohnDoe:

```
Ambassador: set show johndoe on<Enter>
```

The following command disables Show command access for the user JaneDoe:

```
Ambassador: set show<Enter>
Username: janedoe<Enter>
Specify ON or OFF: off<Enter>
```

Granting and removing administrative privileges

The Admnp command grants or removes administrative privileges for usernames other than the predefined Admn user. This command allows a Ambassador to have more than one administrative-level user. You cannot remove administrative privileges from the Admn user.

To grant or remove administrative privileges for a username:

At the Ambassador: prompt, type **admnp**, followed by **on** or **off**, followed by a username and press **Enter**.

Examples

The following command grants administrative privileges to the username JohnDoe:

```
Ambassador: admnp on johndoe<Enter>
```

The following command removes administrative privileges from the username JohnDoe:

```
Ambassador: admnp off<Enter>
Username: johndoe<Enter>
```

Displaying user information

The List User and List Users commands display information about one or all users, respectively. When requesting information about one user, the display includes a list of all ports the user may access, and whether the Show command is enabled or disabled for the user. When requesting information about all users, the display indicates whether the Show command is enabled or disabled for each user and whether each user has been given administrative privileges.

To request information about one user:

At the Ambassador: prompt, type **list user**, optionally followed by a username. Press **Enter**.

To request information about all users:

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

Examples

The following command displays information about the username JaneDoe:

```
Ambassador: list user janedoe<Enter>

Active Port List for Username JANEDOE Show command disabled
A1 ops_1 ops_srv
A2 ops_2 ops_srv
List Complete
```

The display indicates that JaneDoe may not use the Show command to access the control screen. JaneDoe may access the following ports: A1 which has a descriptive name of ops_1 and is in the port group named ops_srv and A2 which has a descriptive name of ops_2 and is in the port group named ops_srv.

The following command requests information about all users:

```
Ambassador: list users<Enter>

ADMN Show command enabled Administrative user
GEN1 Show command enabled
GEN2 Show command enabled
JANEDOE Show command disabled
JOHNDOE Show command enabled
List Complete
```

<u>**Outlet Administration**</u>

Displaying port information

The List Port and List Ports commands display information about one or all ports, respectively. This information includes:

- Descriptive port name, if applicable
- Group name assigned to the port, if any
- Usernames who may access the port

When requesting information about all ports, the display begins with port A1 's information, followed by a prompt to either continue with the next port 's information or quit the display. If you choose to continue, port A2 's information is displayed, followed by a prompt to continue or quit. You may choose to quit at any time. After the information for all ports has been displayed, or after quitting, you are returned to the command prompt.

To display information about one port:

At the Ambassador: prompt, type **list port**, optionally followed by a port name. Press **Enter**.

To display information about all ports:

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

Examples

The following command requests information about port B1 by specifying its absolute port name:

```
Ambassador: list port .b1<Enter>

.B1 hr_1 hr_srv
Usernames:
ADMN GEN1 GEN2
JOHNDOE
Username List for .B1 Complete
```

The display indicates that port B1 has the descriptive name hr_1 and is in the port group named hr_srv. The usernames who may access this port are Admn, Gen1, Gen2 and JohnDoe.

The following command requests information about all ports:

```
Ambassador: list ports<Enter>

.A1 ops_1 ops_serv
Usernames:
ADMN GEN1 GEN2
JANEDOE
Username List for .A1 Complete
Press:N)ext,Q)uit:
```

The first screen of the resulting display indicates that port A1 has a descriptive port name of ops_1 and is in the port group named ops_srv. The usernames who may access port A1 are Admn, Gen1, Gen2 and JaneDoe. The page ends with a prompt to continue with the display for the next port, A2, or quit and return to the Ambassador: prompt.

Enabling and disabling the banner

The Set Banner command is used to enable or disable the banner displayed at the Username: prompt.

To enable or disable the banner:

At the Ambassador: prompt type **set banner**, followed by **on** or **off** and press **Enter**.

Creating a location description and login banner

The Set Location command specifies text that appears in the control screen's Location field. The text is also appended to a Welcome to banner that appears when a user successfully logs in.

If you do not issue this command, or if you issue this command without specifying any text, the control screen 's Location field will be blank and no Welcome to banner will be displayed.

To create a location description and login banner:

At the Ambassador: prompt, type **set location**, optionally followed by up to 16 characters. Spaces are allowed. Press **Enter**.

Omitting any characters after typing 'set location' deletes any previously specified text.

Examples

The following command specifies Florida HQ as the descriptive location for the control screen and the login banner:

```
Ambassador: set location Florida HQ<Enter>
```

The following command deletes any previously-specified location description:

```
Ambassador: set location<Enter>
```

Enabling or disabling confirmation for control screen operations

The Set Screen command enables or disables a confirmation query when requesting port power changes on the control screen. When the Confirm option is set, the user is prompted with `Are you sure?(Y/N)` when an on, off or reboot operation is initiated on the control screen. When the Noconfirm option is set, the requested operation is completed immediately. The default value is Noconfirm. The Set Screen setting applies to all usernames.

To enable or disable confirmation for control screen operations:

At the Ambassador: prompt, enter **set screen**, followed by **confirm** or **noconfirm** and press **Enter**.

Example

The following command enables control screen confirmation queries:

```
Ambassador: set screen confirm<Enter>
```

Using the Control Screen

The control screen contains Ambassador configuration and status information. Figure 3.1 shows an example of a control screen.

```
               Power Control System (c) Server Technology, Inc.          1 of 1
Location:
Port Name:          [        ]    [        ]    [        ]    [        ]
Control Status:        (x)On         (x)On         (x)On         (x)On
                       ( )Off        ( )Off        ( )Off        ( )Off
Module Status:         Normal        Normal        Normal        Normal
Minimum-On Time:       00:00:00      00:00:00      00:00:00      00:00:00
Minimum-Off Time:      00:00:00      00:00:00      00:00:00      00:00:00
Wake-Up State:         On            On            On            On
Group:              [        ]    [        ]    [        ]    [        ]
Access:                All           All           All           All
Page: [        ]
Press: C)mnd, E)dit,N)ext, Q)uit, Space-Bar to Select
```

Figure 3.1 Example Control Screen

The Show command accesses the control screen from the command line. Use the Arrow keys on your keyboard to move the cursor from field to field. The help line at the bottom of the screen displays key commands that, when typed on your keyboard, perform specific operations. The following chart describes these keys.

An administrator may lock one or more ports on the control screen. When a port is locked, its on/off state cannot be changed (by general or added users) from the command line or the control screen until the administrator unlocks the port.

Control Screen Help Line

Key	Action
C)mnd	Pressing C activates the Ambassador command line.
E)dit	Pressing E moves the cursor to the end of the current entry in an editable field. Each press of the Backspace key erases one character. When you finish editing the field, press Enter or Tab.
N)ext	Pressing N displays the next control screen page.
P)revious	Pressing P displays the previous control screen page.
Q)uit	Pressing Q ends the session. This is equivalent to the Quit command in the command line.
Space-Bar to Select	Pressing the Spacebar toggles among preset values. You may also use the Spacebar in the Control Status rows to change a port 's state to the state of the current cursor location: On or Off. Alternatively, you may use the Plus (+) and Minus (-) keys on the numeric keypad to switch among preset values.

Some fields on the control screen are display-only and cannot be changed. Other fields may be changed by toggling among preset values or by entering text. The following sections describe each control screen field.

Location field

The display-only Location field may contain text that was specified with the Set Location command. The text in this field is also appended to a `Welcome to` banner that appears when a user successfully logs in.

Port Name field

The editable Port Name field may contain a descriptive name for the device connected to the port. You may use this name in commands that require a port name, as an alternative to using the port 's absolute name. See *Port Naming and Grouping* for more information about port names.

To specify a port name:

Position the cursor in the relevant Port Name field.

Type **e**. If you are changing an existing name, press the **Backspace** key to erase characters. Type a 1-8 character name. Press **Enter** or **Tab**.

Control Status field

The editable Control Status field indicates the port 's current state with a character in the On or Off field. An **x** indicates the port is accessible. An asterisk (*****) indicates that the administrator has locked the port, or that the current username does not have access rights to the port.

To turn a port on or off:

Position the cursor in the port 's desired state (On or Off) and press the **Spacebar** or the **Plus** (+) key. The x will move to the new state.

To reboot a port:

Position the cursor in the port's On or Off field and press **r** .If the port is already off, it will turn on immediately. If the port is on, it will turn off, delay and then turn back on. The delay interval is either 15 seconds or the minimum-off time, whichever is greater. During the reboot delay, the Off field contains an **r**, indicating that the port is going to reboot.

To lock or unlock a port:

Position the cursor in the port 's On or Off field and press **l** to lock or **u** to unlock. A locked port has an asterisk (*****) in the On or Off field and cannot be controlled by other usernames; only an administrator may lock or unlock a port.

Module Status field

The display-only Module Status field indicates the port 's current status.

Module Status Field Values

Display	Description	Control Status field
Normal	The port is working correctly.	'x'
No Rspns	The interface cannot communicate with the port.	'o'
OnS Fail	The port was instructed to be on, but it is off.	'o' in On field
Off Fail	The port was instructed to be off, but it is on.	'o' in Off field

Minimum-On Time field

The editable Minimum-On Time field indicates the minimum amount of time that a port will stay on before it can be turned off by a command. The default value is Ø. Manual commands in the control screen's On and Off fields are always immediate and ignore this value.

Minimum-Off Time field

The editable Minimum-Off Time field indicates the minimum amount of time that a port will stay off before it can be turned on by a command. The default is Ø. Manual commands in the control screen's On or Off fields are always immediate, ignoring this value except during a reboot. During a reboot, whether initiated from the command line or the control screen, the value in this field determines the time that a port remains in the off state during the reboot cycle, if it is longer than 15 seconds.

You may use this value to stagger the startup of ports when a command is issued to reboot multiple ports at the same time. For example, setting different minimum-off time values may be useful when you issue a Reboot All command or a Reboot command for a large group.

NOTE: The wake-up power sequencing feature applies only when the entire Ambassador unit receives power, not when the power state is changed from the command line or the control screen.

It may be important in your configuration to set the minimum-off time values differently to avoid a circuit overload caused by an excessive in-rush of current that may occur when too many devices power up simultaneously.

The following example shows one way to configure the minimum-off time values for the four ports on each control screen page:

```
    Minimum-Off Time:         00:00:15     00:00:30     00:00:45     00:01:00
```

To change a port 's minimum-off time value:

Position the cursor in the port 's Minimum-Off Time field and press the **Spacebar** or the **Plus** (+) or **Minus** (-) key. Each press moves through preset values to a one hour maximum.

The preset values are: 15 seconds, 30 seconds, 45 seconds, 1 minute,1 minute 15 seconds, 1 minute 30 seconds, 1 minute 45 seconds, 2 minutes, 3 minutes, 4 minutes, 5 minutes, 10 minutes, 15 minutes, 30 minutes and one hour.

Wake-up State field

The editable Wake-up State field indicates the state that the port will go to, in sequence, when the Ambassador is powered up, either during normal operation or when power is restored after an outage. The options are On and Off. The default is On. When power is first supplied to the Ambassador, the ports are off. Shortly after the Ambassador wakes up, the ports are sequenced on in two-second increments.

Only ports that are set with a wake-up state of Off will remain off.

To change a port's wake-up state:

Position the cursor in the field and press the **Spacebar**, the **Plus** (+) key or the **Minus** (-) key. Each press toggles between On and Off .

Group field

The editable Group field may contain a descriptive name. All ports with the same group name may be acted upon simultaneously with the On, Off and Reboot commands from the command line. Individual on, off and reboot commands initiated on the control screen do not affect other ports that have been assigned the same group name. Only command line actions that contain the group name parameter will cause all ports within the same group to power up, down or reboot as a group.

If you assign the same group name to a significant number of ports, consider staggering the minimum-off time values of the affected ports to help prevent an excessive in-rush load from occurring when a command is issued to reboot the group.

To specify a group name:

Position the cursor in the port's Group field.

Press **e** .If you are changing an existing name, press the **Backspace** key to erase characters. Type a 1-8 character name. Press **Enter** or **Tab**.

Access field

The editable Access field allows the administrator to easily change port access for the usernames Admn, Gen1 and Gen2. Port access for additional usernames must be enabled with the Add Port command from the command line.

To change port access for the Admn, Gen1 or Gen2 usernames:

1. Position the cursor in the port 's Access field.
2. Use the **Spacebar**, the **Plus** (+) key or the **Minus** (-) key to switch among the preset options:
   All -grants port access to Admn, Gen1 and Gen2; this is the default
   Admn -grants port access to Admn
   Gen1 -grants port access to Admn and Gen1
   Gen2 -grants port access to Admn and Gen2

Page field

The editable Page field may contain a name for the current control screen page. When you want to display a specific page of the control screen, you may use this page name as a parameter in the Show command, or you may specify a page with its absolute name: .A for page 1,.B for page 2,.C for page 3, .D for page 4 etc.

To specify a page name:

1. Position the cursor in the Page field.
2. Press **e**. If you are changing an existing name, use the **Spacebar** to erase characters. Type a 1-8 character string. Press **Enter** or **Tab**.

Ending a Session

You may end a session from the command line or the control screen.

If you made configuration changes during the session, they are automatically stored in non-volatile memory. After you end the session, wait for the following message before taking any action that will power down the Ambassador:

```
Updating configuration memory ...
Update complete
Session ended
```

A session ends automatically after five minutes of inactivity.

To end a session:

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

From the control screen, press **q**.

Chapter 4: Appendices

Appendices

Appendix A: Resetting to Factory Defaults

You may reset the non-volatile RAM that stores all configurable Serial Ambassador options. This clears all administrator-editable fields on the control screen and resets all command line configurable options to their default values, including usernames and passwords.

You may reset the Serial Ambassador to factory defaults by issuing a command 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. Either method updates the current working configuration to the factory defaults.

To reset to factory defaults from the command line:

At the Ambassador: prompt, type **set cnfg all factory** and press **Enter**.

To reset to factory defaults using the reset button:

On the front of the Serial Ambassador, locate the recessed reset button. You will need a non-conductive, non-metallic tool that fits inside the recess.

Insert the tool in the recess, then depress and hold the reset button for ten to fifteen seconds.

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

Appendix B: Technical Specifications

Models

Standard Models

Model*	Voltage	Inlet	Cordset	Outlets
AMSS-U008-1	100-120V, 50/60Hz	Hardwired	NEMA 5-15P, 15A/125V straight	4 NEMA 5-20R
AMSS-H008-2	208-240V, 50/60Hz	Hardwired	20A unterminated Harmonized	4 IEC 60320/C13

Power Ratings

Model Modele Modell	Input Current Ratings[1] L'indice du courant d'entrée Eingangsstromstärke			Output Current Ratings L'indice du courant de sortie Ausgangsstromstärke	
	Voltage Tension Spannung	Current Courrant Strom	Outlet Prise Anschlussstelle	Total Total Insgesamt
AMSS-U008-1	100-120/v 50/60Hz	15	10	15
AMSS-U008-2	208-240V 60Hz (230V 50/60Hz)	20 (16)	6	20 (16)

[1] **All current ratings are in amperes. European ratings in parentheses.**
Tous les indices de courant sont en ampères. Estimations européennes entre parenthèses
Alle Angaben der Stromstärke erfolgen in Ampere. Europäische Bewertungen in Klammern

Physical Specifications

Model		AMSS-U008-x
Physical	Size (H x W x D)	1.75 x 17.0 x 2.25 in.
	Weight	8.2 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		cTUVus, TUV-GS[1]

[1] cTUVus - UL 60950:2000, CAN/CSA 22.2 No. 60950-00
TUV-GS - EN60950:2000

Data Connections

RS-232 Serial port

Serial Ambassadors are equipped standard with an RJ45 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 DTE 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

87654321
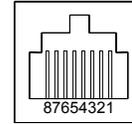
RJ45 to DB9F serial port adapter

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 DTE serial port. The adapter pinouts below reflect use of the adapter with the provided RJ45 crossover cable.

Pin	DCE Signal Name		Input/Output
1			
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

5 4 3 2 1
9 8 7 6
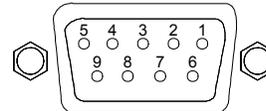
LED Indicators

A Serial Ambassador is equipped with a status LED for each power receptacle. A lit/on LED indicates that power is being supplied at the port and a darkened/off LED indicates that there is no power at the port.

Appendix C: Warranty, Product Registration and Support

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\support\supportindex.htm

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   Tel: 775.284.2000   Web: www.servertech.com
Reno, Nevada 89521 USA   Fax: 775.284.2065   Email: 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.

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 (type 'vers' at the Ambassador: prompt)
                     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.

Server Technology, Inc.