The Plasmon UDO Archive Appliance

AA238 - AA638 ~ UDO Drive

User Manual

P/N 97707543 A

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Revision History

Revision	Date	Description
A	4/05	Initial release.

NOTE

The most current information about this product is available on the Plasmon web site (www.plasmon.com or www.plasmon.co.uk).

Conventions Used

WARNING

A **WARNING** is used to alert the reader to situations or conditions that could potentially result in personal injury, fire hazard, or equipment damage.

CAUTION

A **CAUTION** is used to warn of undesirable procedures, or of situations in which equipment damage could result.

NOTE

A **NOTE** is used to emphasize an area of text or to provide additional information.

Product Warranty

This Plasmon® library is warranted free from defects in materials, parts, and workmanship and to conform to the current product specification upon delivery. For the specific details of your warranty, refer to your sales contract or contact the company from which the library was purchased.

The Plasmon quality system is in compliance with and registered to ISO9001:2000. All products are assembled from new or remanufactured parts.

The warranty for the library shall not apply to failures of any unit when:

- The library is repaired by anyone other than Plasmon personnel or approved agent.

- The library is physically abused or is used in a manner that is inconsistent with the operating instructions or product specification defined by Plasmon.

- The library fails because of accident, misuse, abuse, neglect, mishandling, misapplication, alteration, faulty installation, modification, or service by anyone other than the factory service center or its approved agent.

- The library is repaired by anyone, including an approved agent, in a manner that is contrary to the maintenance or installation instructions supplied by Plasmon.

- The Plasmon serial number tag is removed.

- The library is damaged because of improper packaging on return.

CAUTION

Returning the library in unauthorized packaging may damage the unit and void the warranty.

If problems with the library occur, contact your maintenance organization; do not void the product warranty by allowing untrained or unauthorized personnel to attempt repairs.

WARNING

Untrained personnel operating the library may create dangerous situations. This could lead to physical harm to the operator, data loss, and/or disabling of the library system.

Please review and observe all safety rules concerning the operation of the library.

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CHAPTER 1
PRODUCT OVERVIEW

General Information

The Plasmon Archive Appliance^{TM} is a Network Attached Storage (NAS) device providing long term secure storage for archived and fixed content data. It combines the performance benefits of network attached RAID with the reliability and robustness of Plasmon UDO® (Ultra Density Optical) optical storage. The Archive Appliance includes a SATA RAID cache, Plasmon AA238 - AA638 optical library with UDO drives and media, and an integral PC server running enterprise class storage management software.

The Plasmon AA238 - AA638 libraries make multiple 5.25 inch 30GByte UDO (Ultra Density Optical) media available to computer systems for reading or writing. These libraries have capacities ranging from 238 to 638 media providing 7.14TB to 19.14TB of data storage. Media may be added or removed through an automated mailslot when the library is on-line. These libraries have a media transport element (MTE) with a dual picker, which holds two media simultaneously, to make rapid media exchanges and provide fast performance in a multi-user environment.

Library Models

This manual covers the following Plasmon libraries:

Table 1. AA238 - AA638 Library Models

Model	Maximum Number of Optical Media	Maximum Number of Drives
AA238	238	4
AA438	438	4
AA638	638	4

Media Movement

The media transport element (MTE) is used to move single media within the library between the media storage area and a drive or the mailslot. To speed the process, the MTE can move two media simultaneously.

Importing and Exporting

Single media can be imported or exported using the mailslot. The mailslot is accessible to both pickers in the media transport element (MTE). For data security, access to the mailslot function is controlled by the application software. The mailslot option may be disabled via software or front panel operation.

To manually import a media, press the open/close mailslot button on the far right of the front panel display. After inserting a media, the mailslot closes automatically. Depending on the application software it may be necessary for the library to re-inventory media after a manual import/export.

After manually exporting a media, the operator must press the open/close mailslot button to close the mailslot.

Bulk Loading Media

Not supported in Archive Appliance at this time.
Bulk loading of media is performed by using the ten slot magazine, or by opening the rear access door and placing media in each storage slot by hand.

UDO Media

The Plasmon AA238 - AA638 libraries use UDO media with 30GB capacity. UDO media is not compatible with MO drives, and MO media is not compatible with UDO drives. The media transport element (MTE) in the library mechanically identifies the media cartridge type while picking it, and does not try to insert incorrect media into a drive.

Data is written to and read from a UDO disk enclosed within a carrier cartridge. The library has a bar code scanner which reads a bar code label on the cartridge and identifies it to the library MTE.

Figure 1. UDO Media

Write Protecting UDO Media

To write protect one side of the media, slide the tab on that side in the direction of the protect arrow as shown in the figure below. There is a write protect tab on each side of the disk. When a side is protected, the Write Protect window is open.
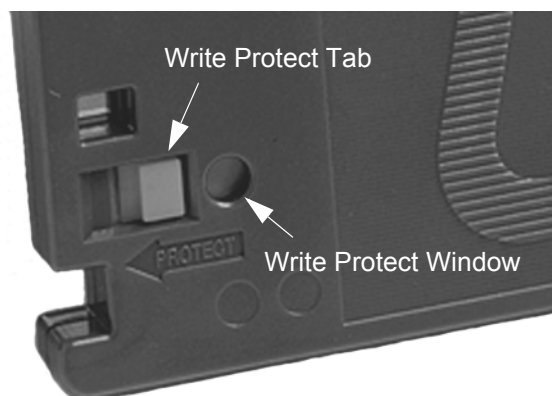
Figure 2. Write Protecting UDO Media

Plasmon UDO Media for Archive Appliance

Plasmon supports UDO media purchased from Plasmon only. UDO media purchased from Plasmon for Archive Appliance has a unique bar code label using seven characters.

Bar Code Label for UDO Media

For more detailed information about bar code data and how it is read, refer to the *G-Series SCSI Reference Manual.*

The bar code scanner supports Code 39 bar code symbology and the Biased - Double Bar Code (Type 2) label format.

CAULTION

Do not write on, cover, or obscure the bar codes on a media.
Doing so may cause the system to malfunction.

UDO Media Care and Handling

To maintain maximum reliability, the operator should take the time to inspect and clean each media cartridge used.

CAUTION

Always condition the media to the normal operating temperature
of the room before using them.

Improper handling or an inappropriate environment can damage the media. To ensure continued reliability:

• When media is loaded into the library, or when handling media, ensure that the cartridge case is clean. Dirty media cartridges can cause problems in loading or the loss of written data. If a cartridge case is dirty, wipe with a lint free cloth.

• Do not carry media loosely (for example, in a box or basket). Media should be carefully and securely packed for transport.

• Do not load damaged media into a drive or a library. Damaged media can interfere with read/write reliability.

• Never touch the disk. Opening the cartridge door and touching the disk may interfere with read/ write reliability.

• Do not expose the media to moisture or direct sunlight.

Major Hardware Components

Refer to the following figures when reading the information in this section.

Front Access Door

Front Panel Display

Mailslot Door

Power Supplies (behind panel)

Bulkload Magazine + Mailslot

Drive Modules

Main Power Switch and AC Power Connector
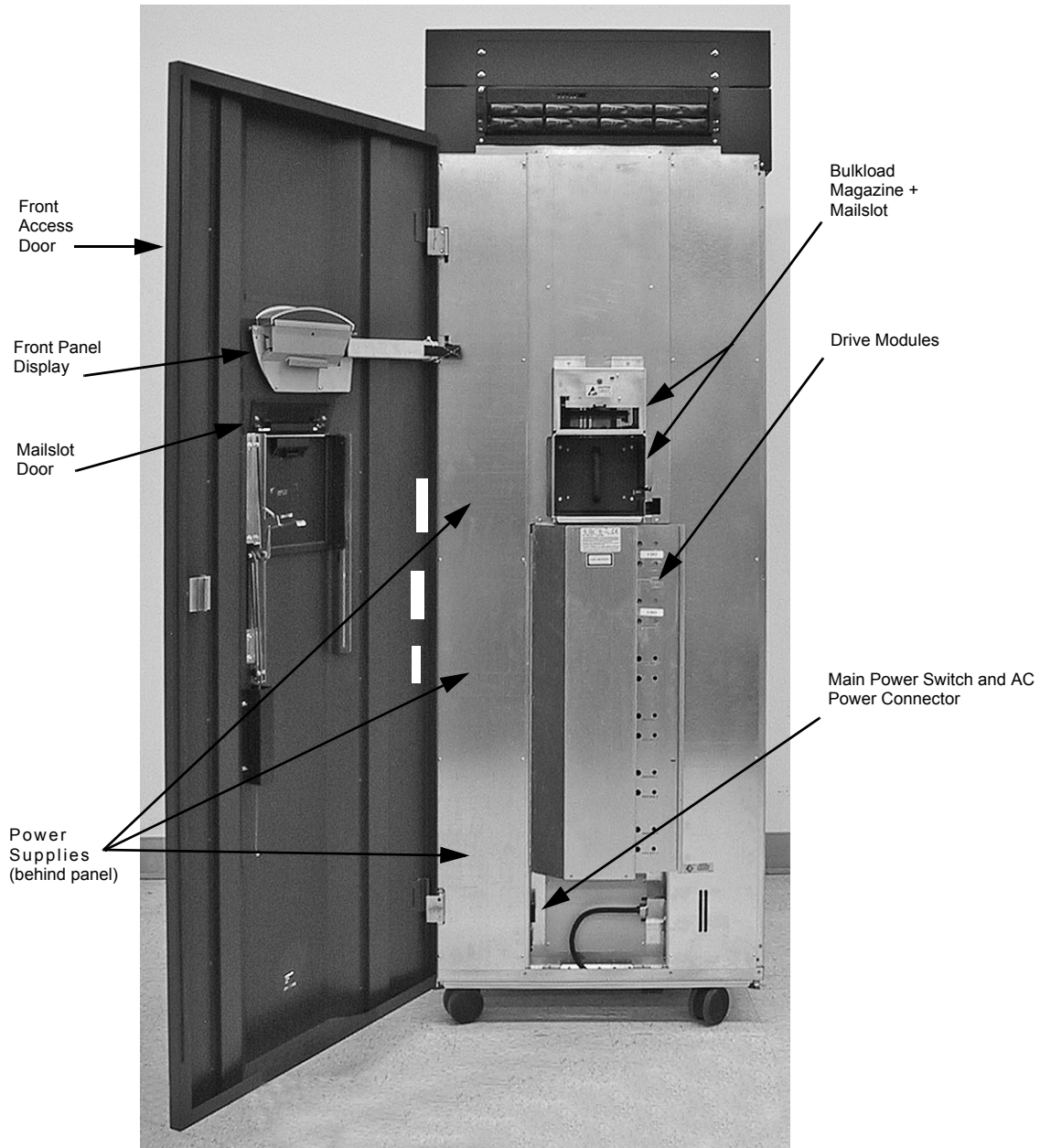
Figure 3. AA238 - AA638 Libraries, Front View

Rear
Access
Door

Media Store

Media Transport
Element (MTE)
(includes bar
code scanner)
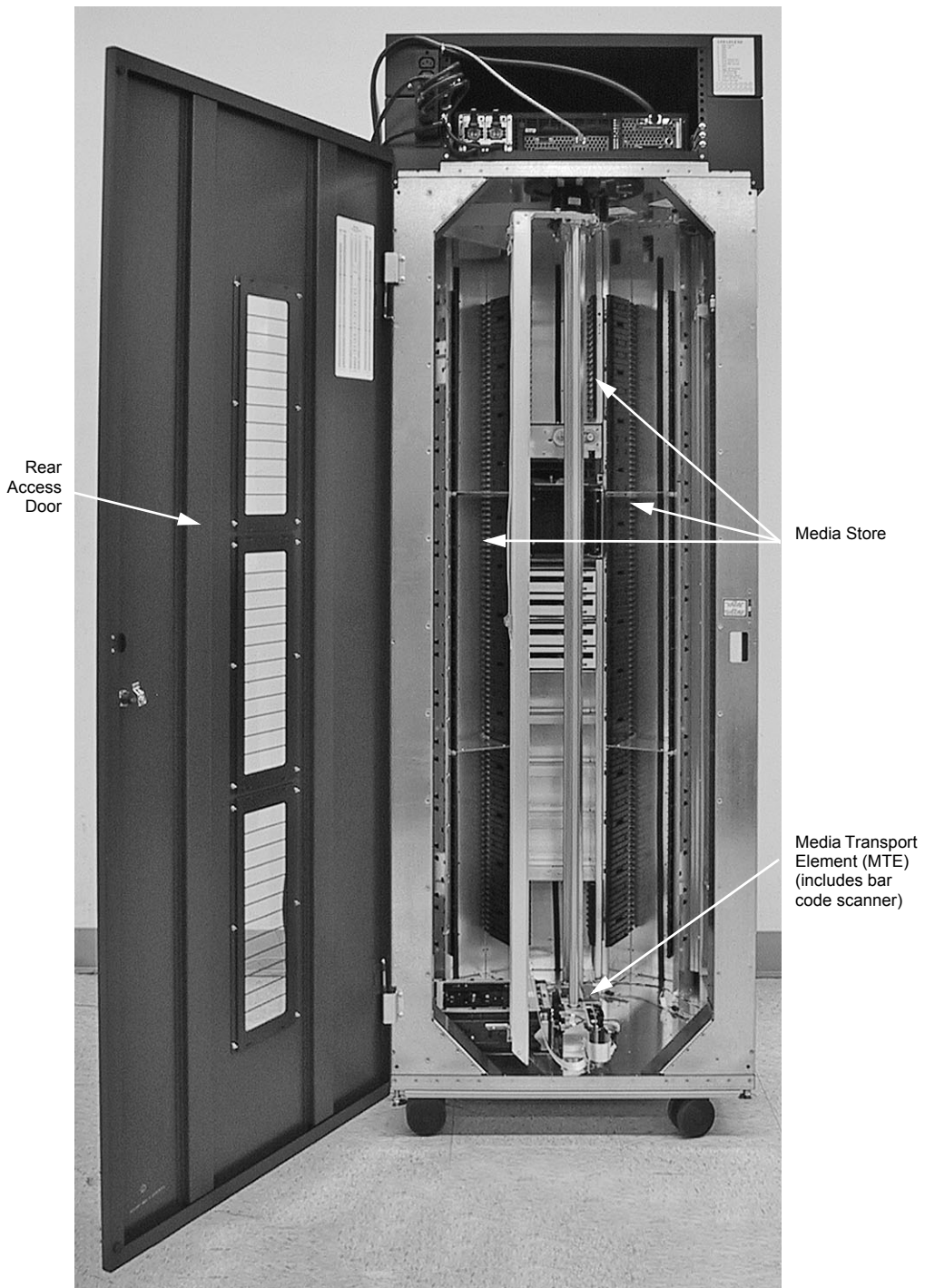
Figure 4. AA238 - AA638 Libraries, Rear View

Mailslot

The mailslot provides access for adding or removing individual media.

Front Panel Display

The front panel display consists of the keypad and display controller, which provide the operator interface to the system. Also called the operator panel, it is used to display user related status.

Media Store

The media store holds each media in place. It consists of two vertically arranged plates with plastic grooved guide panels that hold each media.

Bulk Load Magazine

Not supported in Archive Appliance at this time.
The bulk load magazine is capable of importing and exporting up to ten media.

Media Transport Element (MTE)

The media transport element (MTE) moves media between storage locations and the disk drives, and consists of the picker and flip assembly.

Drives

The optical drives used in the library allow reading and writing of data. They are fully tested to work with the library. This library uses UDO drives only.

Front Access Door

The front access door is used to gain access to the drive modules, power supplies, main power switch, AC connection, SCSI connections, and electronic components.

Rear Access Door

The rear access door is used to gain access to the robotics or to hand place media in storage slots for initial bulk loading. This door incorporates an interlock system requiring a key.

CHAPTER 2
HARDWARE INSTALLATION

Getting Started

This chapter provides a guide to installing the Plasmon AA238 - AA638 hardware and the procedures necessary to quickly get on-line.

Unpacking and Installing the Hardware

Please follow the unpacking instructions found on the shipping enclosures. Verify that all listed components are present. Save all packing material in case it is ever necessary to ship the hardware.

Before powering on the system:

1. Using the enclosed key, open the rear door of the library.

2. Carefully remove all the shipping restraints from the media transport element (MTE) attached to the lift rails inside the library.

<u>**CAUTION**</u>

Use minimum force when removing the restraints and packing material from the MTE.

3. Install the top rack, with the A8 NAS unit, on top of the library as explained later in this chapter.

4. For the AA438 and AA638, install one or two expansion bays as explained later in this chapter.

5. Mass load media as explained later in this chapter.

Library Position

Position the library in a location that allows both the front and rear door to open completely without obstruction. Allow at least a two inch clearance on the sides for ventilation. Lower the leveling feet to the floor to stabilize the library.

Library Environment

To ensure long term reliability, operate the library only between 10° to 32°C (50° to 90°F) and 10% to 80% relative humidity. The media and drives require a clean environment. Excessive dust and dirt can lead to data loss, and increase service calls.

Space Planning
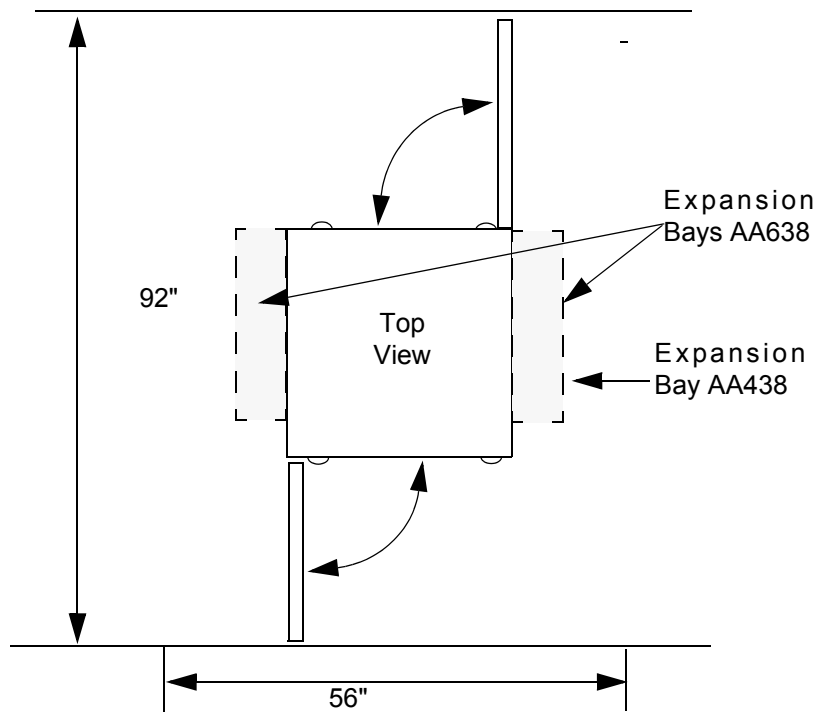
Figure 5. Space for AA164 - AA638

Installing the NAS Rack

The NAS (Network Attached Storage) component of the AA238 - AA638 is shipped separately and must be mounted on top of the library chassis. The following instructions and pictures explain how this is done. This installation should be performed by Plasmon trained service personnel.

1. Using two people, place the NAS mounting rack squarely on top of the library chassis with the power strip toward the back. Fasten the rack to the chassis using six 1/4-20 truss head phillips screws. Place three screws across the front and three across the back just inside the lower edge as shown below.

2. Fasten the rack side panels to the library chassis using four 4-40 x 1/4 flat head phillips screws. Place two screws on the front and two on the back, one at each corner, as shown below.

3. Using two people, slide the A8 into the rack from the front as shown below.

4. The A8 sliders have small restraint levers on each side that must be depressed to complete the insertion. See below.

5. Secure the A8 to the rack using two 10-32 x 1/2 pan head phillips screws, one on each side, as shown below.

6. Connect the two short power cables from the A8 power supplies to the power strip on the rack, and secure using tie wraps as shown below.
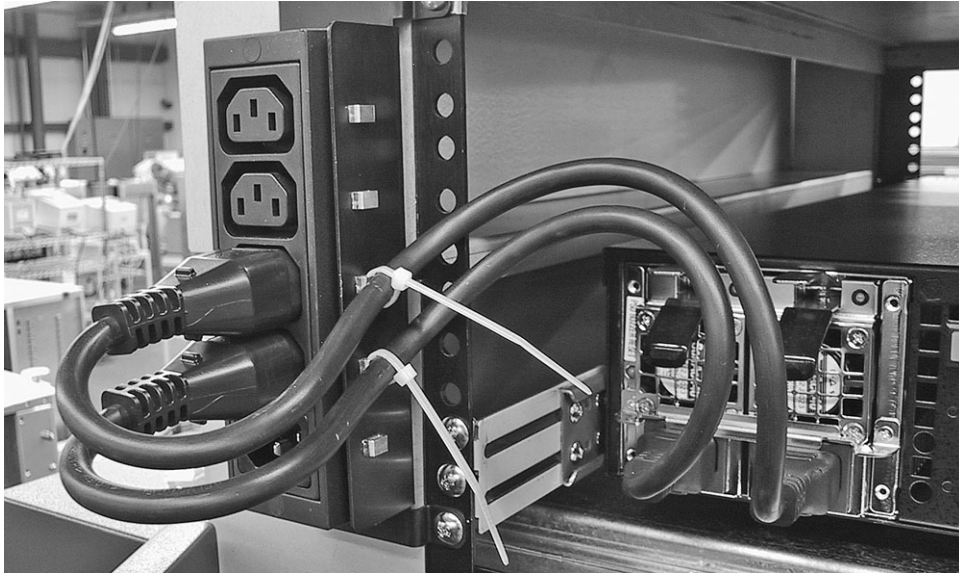
7. Mount at least two of the long cable ducts on the left side of the back door, one at the top and one at the bottom. Connect the main power cable to the power strip, and the SCSI and Ethernet (and recommended UPS) cables to the A8. Route all cables through the cable ducts as shown below.

UPS Connector   Ethernet Connector   SCSI Connector
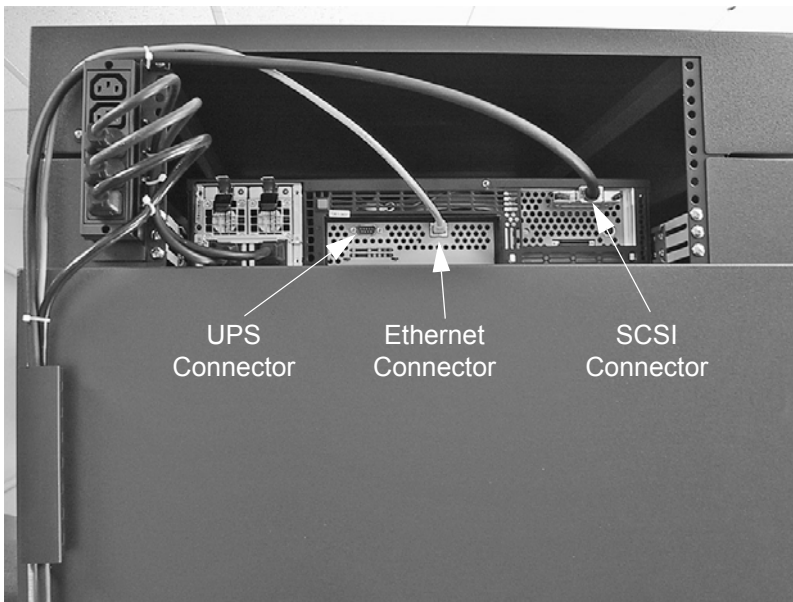
When ready to start up the system, route the power and Ethernet (and recommended UPS) cables to their respective sources.

8. Mount at least three short cable ducts under the library to route the SCSI cable to the front, bottom cable opening as shown below.

SCSI Cable Ducts
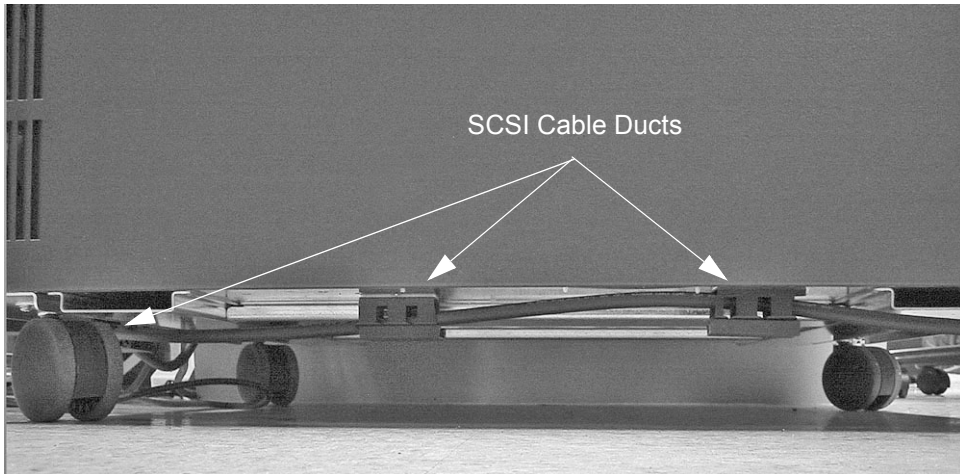
9. Bring the SCSI cable up through the cable opening and plug the SCSI cable into the library SCSI connector as shown below.
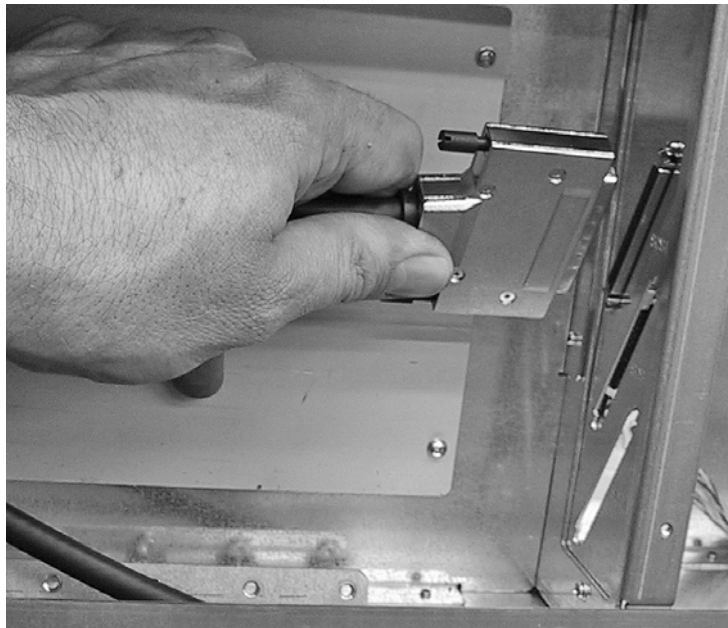
10. Use the remaining tie wraps to secure and route the cables as required.

11. The A8 unit is shipped with blanks in six of the eight drive positions. Two SATA drives, in their own carriers, are packaged separately.

To mount the drives into the unpopulated slots of the A8, prepare each SATA drive carrier by pushing the release lever lock to the right to pop out the release lever. Then fully insert each SATA drive carrier into the A8 and push the release lever all the way in to lock the drive carrier in place.

CAUTION

To avoid corruption of the NAS drives, do not power on the NAS unit until the library is mass loaded with media, powered on, and completes initialization.

If the NAS unit is powered on before library initialization, it must be restarted from the Archive Appliance GUI interface.

Cable Connections

The power switch, and the power and SCSI connectors for the library are accessed through the front door. The power, SCSI, UPS and diagnostics connectors for the NAS unit are located at the rear of the unit. The library and NAS unit require separate power input.

WARNING

Attention Service Personnel: This equipment is powered by multiple sources. The disconnect for the top mounted NAS unit is the plug on the power strip located on the back of the unit. The disconnect for the lower library unit is the plug at the bottom front of the unit. Disconnect power to the specified device before servicing.

Library Cable Connections

Route the power cable through the bottom of the library to the power cable connector. Using the supplied cable restraint, attach the cable and secure the plug to the library with the phillips head screw provided.
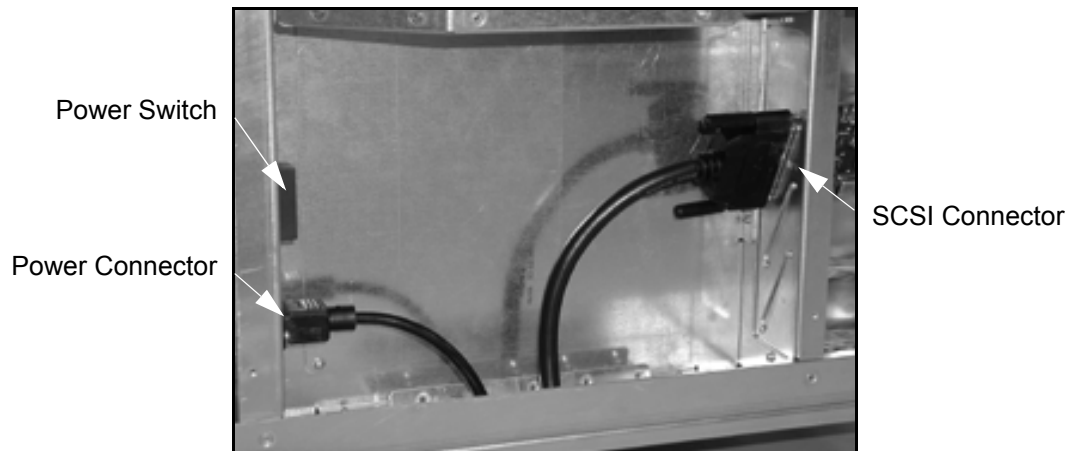
Figure 6. Library Cable Connections

The power cable can be plugged into any standard 120 volt to 240 volt wall outlet. The library uses an auto-ranging power supply.

NAS Unit Cable Connections

Route the power, SCSI, Ethernet, and UPS cables through the cable guides as explained in the NAS rack installation instructions in this chapter. Connections are made as shown below.
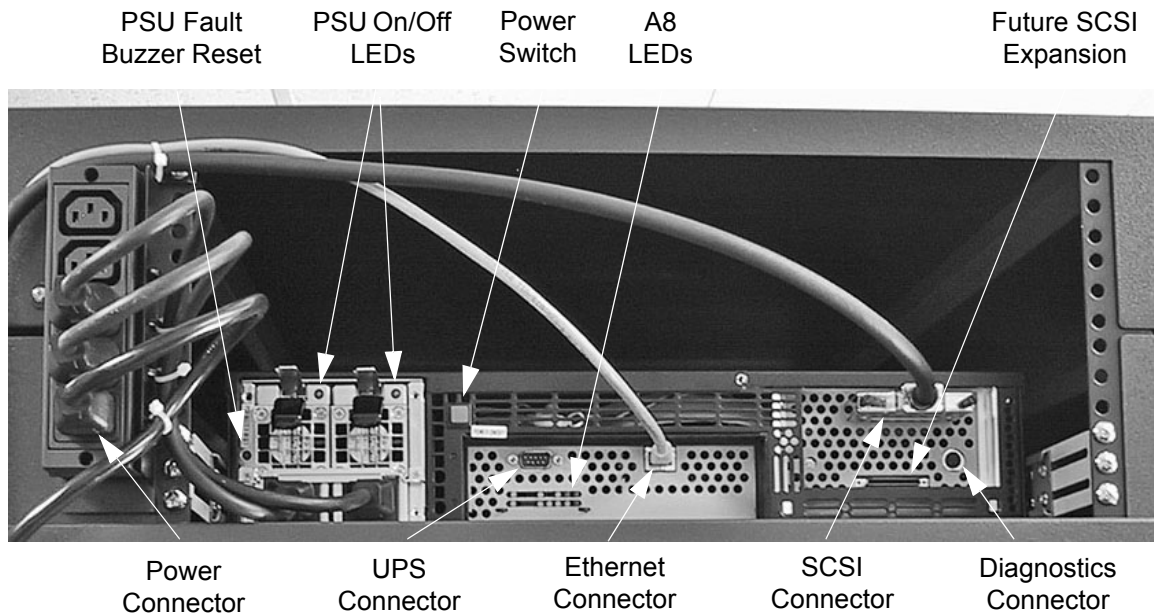
Figure 7. NAS Unit Back Panel

The power cable can be plugged into any standard 120 volt to 240 volt wall outlet. The NAS unit uses auto-ranging power supplies.

The diagnostics connector is provided for Plasmon trained service personnel.

CAUTION

To avoid corruption of the A8 SATA drives, do not power on the NAS unit until the library is mass loaded with media, powered on, and completes initialization.

If the NAS unit is powered on before library initialization, it must be restarted from the Archive Appliance GUI interface.

Loading Media

Use only Plasmon approved ISO standard 5.25 inch UDO media in the library. Media is loaded into the library using one of three methods.

- **Mass Loading (recommended):** This method is intended as a one time solution to mass load the entire library with media when the library is off-line and there is no power applied.

- **Automated Mailslot:** This is intended for importing and exporting a single piece of media while the library is on-line.

- **Ten Slot Magazine:** (Not supported in Archive Appliance at this time.) This is intended for importing and exporting up to ten pieces of media in a removable bulk load magazine while the library is on-line.

Mass Loading (Recommended)

Ensure that the library is turned off and that the power cable is disconnected from the wall outlet.

1. Using the enclosed key, open the rear door of the library.

2. Insert the media into the slots with the shutter end of the media going in first.

NOTE
There are no requirements for loading media in a specific order. Plasmon recommends filling the storage slots in numerical order, starting with slot number one. See the storage slot map on the inside of the rear door, or the diagrams later in this chapter, for the storage slot numbering system.

3. Insert the media completely into the storage slot until it contacts the back of the slot.

Figure 8. Mass Loading Media

4. Continue loading all media into the storage slots.

5. Close and lock the rear door.

Automated Mailslot

After the NAS is activated, the automated mailslot is the default method for importing and exporting single media while the library is on-line.

Figure 9. Using the Mailslot

Using the front panel display, a single piece of media can be imported or exported through the mailslot door. Once the appropriate button is selected on the front panel, the door opens automatically and a media carrier extends outward to accept a media. Insert a piece of media into the carrier so that the shutter end of the cartridge goes in first and the A side is up. Select the appropriate button on the front panel display to close the mailslot door.

CAUTION

Do not attempt to load a media in the mailslot until the media carrier is extended through the open door. Never open the mailslot door manually.

Ten Slot Magazine

Not supported in Archive Appliance at this time. The ten slot bulk load magazine loads ten pieces of media at one time. To use the magazine:

1. Release the magazine from the library using the Release Magazine menu option on the front panel display. Refer to *Archive Appliance Administrator Guide* for information.

2. Remove the magazine from the library.

3. Open the media catch lever.

4. Load media into the magazine.

5. Close the media catch lever.

6. Replace the magazine into the library.

Identifying Storage Columns and Slots

Inside the rear door of each G-Series library is a diagram of the slot numbering scheme for that library. Also, refer to the slot location diagrams on the following pages for slot numbering in different libraries.

AA238 Slot Configuration:

Viewing the system through the rear access door, the columns are viewed from left to right starting with column 3 (far left), and the storage slots are numbered in a zig-zag pattern from the top down, with slot 1 starting at column 3 and moving from left to right. For example, slot 2 column 4, slot 3 column 5, slot 4 column 3, etc. Drives are numbered from the top down with each module containing two drives and with drive 1 on the top. The ten slot magazine is numbered from the top down with slot 1 on the top.

AA438 Slot Configuration: (left expansion bay only)

Viewing the system through the rear access door, the columns are viewed from left to right starting with column 1 (far left) and the storage slots are numbered following the pattern for the 238 slot configuration for column 3, 4, and 5 and from the top down for column 1 and 2.

AA638 Slot Configuration: (left and right expansion bays)

Viewing the system through the rear access door, the columns are viewed from left to right starting with column 1 (far left) and the storage slots are numbered following the pattern for the 238 slot configuration for column 3, 4, and 5 and from the top down for column 1 and 2 and also from the top down for column 6 and 7.

Col 1	Col 2		Col 3	Col 4	Col 5		Col 6	Col 7
	239		1	2	3		439	
	240		4	5	6		440	
	241		7	8	9		441	
	-		-	-	-		-	
	-		-	-	-			543
343			-	-	-			544
344								545
345								-
-								-
-			-	-	-			-
			-	-	-			
			55	56	57			
			58	59	60			
			61		62			
			63		64			
			-		-			
			-	Mailslot	-			
			-		-			

Magazine
1
2
3
4
5
6
7
8
9
10

Drive 1
Drive 2
Drive 3
Drive 4
Drive 5
Drive 6
Drive 7
Drive 8
Drive 9
Drive 10
Drive 11
Drive 12

Col 1	Col 2	Col 3	Col 4	Col 5	Col 6	Col 7
		-		-		
		-		-		
		205		206		
		207		208		
		209	210	211		
		212	213	214		
		-	-	-		
		-	-	-		
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
437	341	233	234	235	541	637
348	342	236	237	238	542	638

├─── G438 ───┤   ├─── G164/G238 ───┤   ├─── G638 ───┤

Figure 10. AA238 - AA638 Slot Configuration

Initial Power On

Plasmon recommends the following initial start up procedure:

1. Mass load media into the library before powering on any hardware.

2. Power on the library first by opening the front door, turning on the power switch, and closing the front door. The library takes a few minutes to initialize. When the process is completed, the front panel indicates that the library is on-line and ready for operation.

3. Power on the NAS unit by plugging the power cord into the power source and pressing the red power switch on the back of the unit. Then connect the recommended UPS.

CAUTION

To avoid corruption of the NAS drives, do not power on the NAS unit until the library is mass loaded with media, powered on, and completes initialization.

If the NAS unit is powered on before library initialization, it must be restarted from the Archive Appliance GUI interface.

4. After initial power on, the Archive Appliance software must be configured. Please refer to the software *Quick Start Guide* on the provided resource CD.

A8 Unit LED Indicators

There is a bank of LED indicators on the back panel of the A8 unit located just below the UPS connector. A label on the back of the unit identifies these indicators.
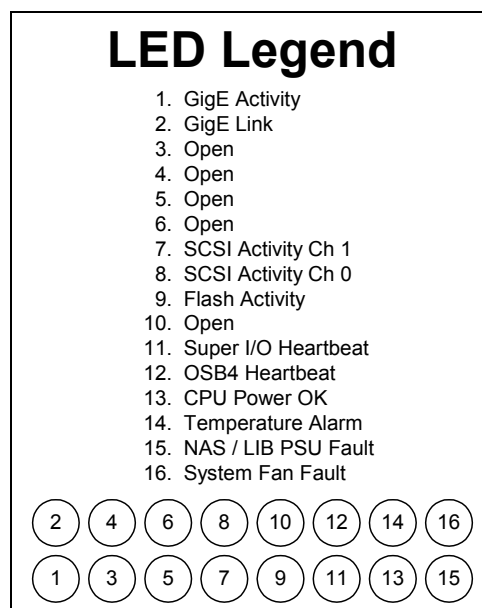
LED Legend

1. GigE Activity
2. GigE Link
3. Open
4. Open
5. Open
6. Open
7. SCSI Activity Ch 1
8. SCSI Activity Ch 0
9. Flash Activity
10. Open
11. Super I/O Heartbeat
12. OSB4 Heartbeat
13. CPU Power OK
14. Temperature Alarm
15. NAS / LIB PSU Fault
16. System Fan Fault

```
( 2 ) ( 4 ) ( 6 ) ( 8 ) ( 10 ) ( 12 ) ( 14 ) ( 16 )
( 1 ) ( 3 ) ( 5 ) ( 7 ) ( 9 ) ( 11 ) ( 13 ) ( 15 )
```

Figure 11. A8 Unit LED Indicators

Table 2. A8 Unit LED Signals

| LED	State	Indication
1. GigE Activity	Flashing/On	Ethernet activity
	Off	No Ethernet activity
2. GigE Link	On	Ethernet connection
	Off	No Ethernet connection
7. SCSI Activity Ch 1	Flashing/On	SCSI activity on Ch 1
	Off	No SCSI activity on Ch 1
8. SCSI Activity Ch 0	Flashing/On	SCSI activity on Ch 0
	Off	No SCSI activity on Ch 0
9. Flash Activity	Flashing/On	Flash activity
	Off	No flash activity
11. Super I/O Heartbeat	Flashing/On	Super I/O Heartbeat OK
	Off	Super I/O Heartbeat fault
12. OSB4 Heartbeat	Flashing/On	OSB4 Heartbeat OK
	Off	OSB4 Heartbeat fault
13. CPU Power OK	On	CPU power OK
	Off	CPU power fault
14. Temperature Alarm	On	Overheating warning
	Off	Temperature OK
15. NAS / LIB PSU Fault	On	Power supply failure
	Off	Power supplies OK
16. System Fan Fault	On	System fan failure
	Off	System fans OK

AA438 and AA638 Bay Installation

The expansion storage bays that attach to the sides of Plasmon AA438 and AA638 libraries are shipped separately. The following instructions explain how to mount the bays to the main library chassis.

1. The main library chassis is shipped without side panels. Remove the side panels if upgrading an AA238 library (for single bay upgrades remove left side panel only).
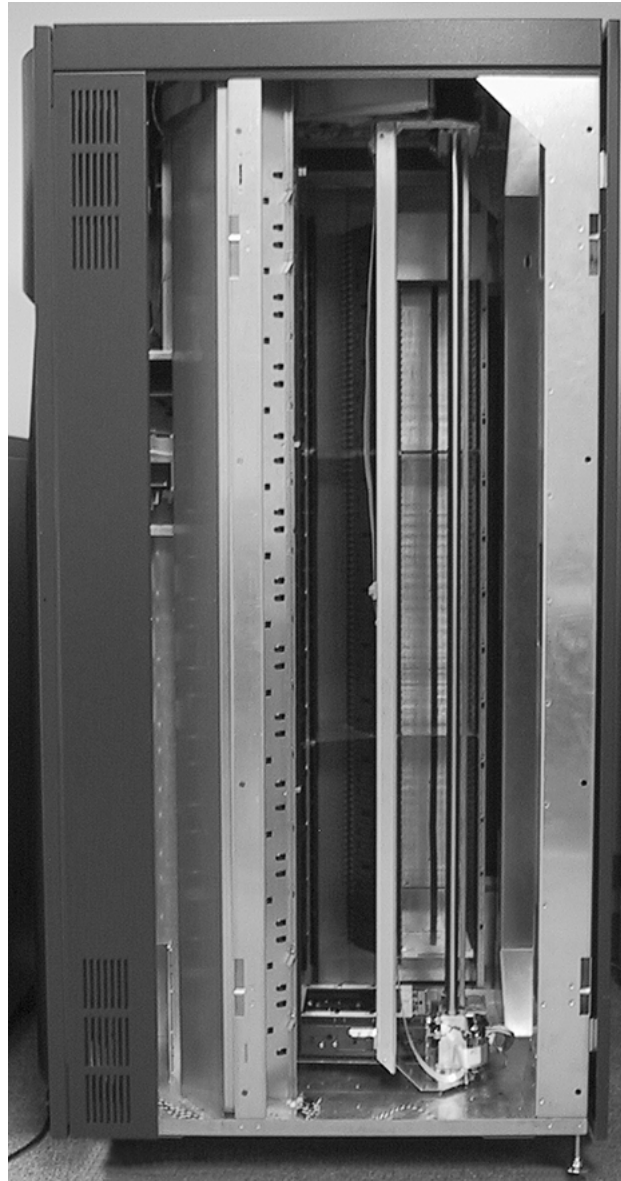
Figure 12. Expansion Bay Installation (a)

2. Position the expansion bay flush against the library chassis matching the guide pins on the chassis to the guide holes on the expansion bay.
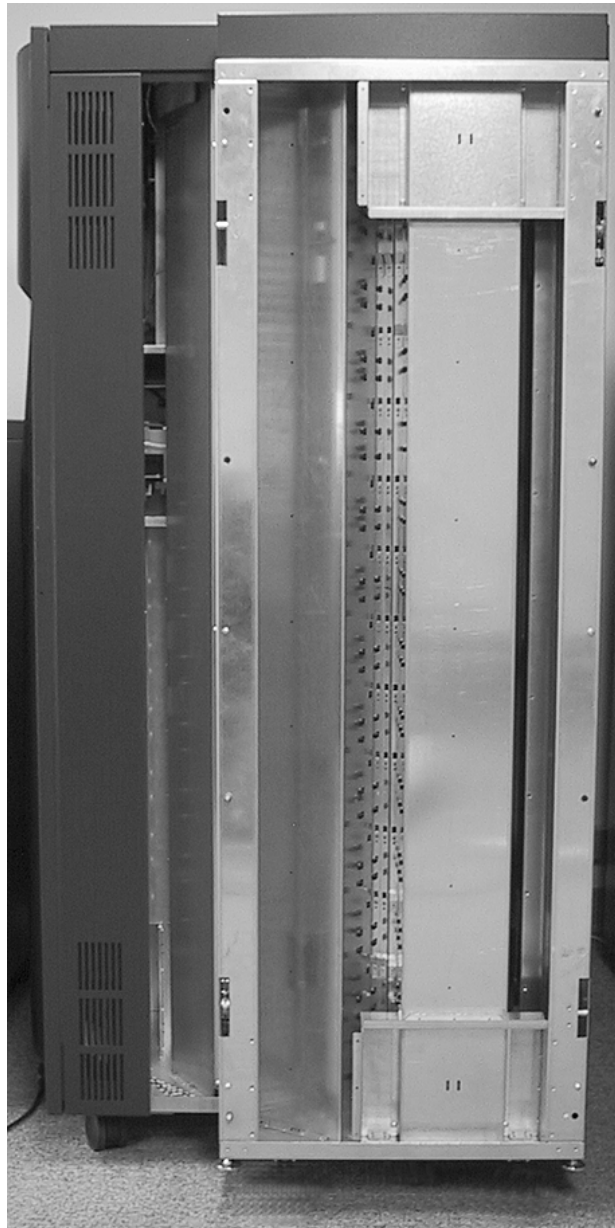
Figure 13. Expansion Bay Installation (b)

3. Using a 5/16" hex wrench, engage the four latch hooks that hold the expansion bays to the library chassis. There are two on each side of the bay.
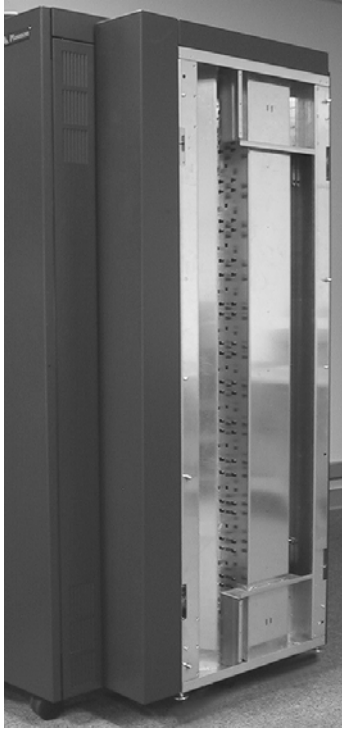

Figure 14. Expansion Bay Installation (c)

4. Using a #1 phillips head screw driver, attach the finish matching cover plate to the back side of the expansion bay with the color coated screws provided.

Figure 15. Expansion Bay Installation (d)

5. Attach the finish matching square column to the front of the bay by hanging it on the screw heads provided.

Figure 16. Expansion Bay Installation (e)

6. Finally, attach the finish matching side panel to the bay by hanging it on the screw heads provided, and lower the leveling feet to the floor to stabilize the library.

Figure 17. Expansion Bay Installation (f)

Packing Instructions (AA238 - AA638)

This section is provided in case it is necessary to ship the library (without expansion bays or NAS unit) to another location or back to Plasmon. For instructions on how to pack the expansion bays and NAS unit, see the next sections in this chapter. These procedures must be followed.

CAUTION

Plasmon libraries, bays, and NAS units must be shipped in the original packaging. Shipping a unit in anything other than the manufacturers packaging voids the warranty.

The library must be parked before packing the system (refer to the *Archive Appliance Administrator Guide*). Remove all media before shipping the library. The storage element detentes are not strong enough to hold the media during shipment.

Follow these steps to pack the library for shipping:

1. Move media transport (MTE) to bottom center of library.

2. Cover MTE with anti-static bag.

3. Clamp foam support over MTE. Make sure foam tabs on support are securely underneath MTE.
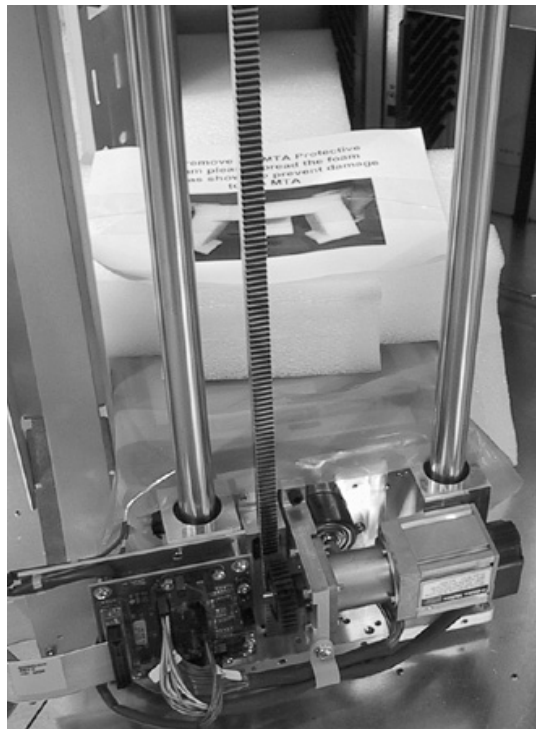

Figure 18. Packing the AA238- AA638 Libraries (a)

4. Place skid ramp on ground in front of packaging skid. Connect velcro on ramp to velcro on packaging skid.

Figure 19. Packing the AA238- AA638 Libraries (b)

5. Using two people, roll library onto packaging skid. Library's front door goes onto skid first. Push on bottom of library when rolling onto packaging skid.

6. Cover library with the ant-static bag, and insert back edge-board of skid into slots with foam protected side toward library.

Figure 20. Packing the AA238- AA638 Libraries (c)

7. Remove ramp from skid and place upright in slot provided behind library. Close velcro fasteners.

Figure 21. Packing the AA238- AA638 Libraries (d)

8. Place top foam over library, and fit in place.

Figure 22. Packing the AA238- AA638 Libraries (e)

9. Place cardboard sleeve over library, and place lid on top.

Figure 23. Packing the AA238- AA638 Libraries (f)

10. Finally, strap box to skid for shipping.

Packing Instructions (AA438 - AA638 Expansion Bays)

This section is provided in case it is necessary to ship the bays to another location, or back to Plasmon. These procedures must be followed.

<u>CAUTION</u>

Plasmon libraries, bays, and NAS units must be shipped in the original packaging. Shipping a unit in anything other than the manufacturers packaging voids the warranty.

Follow these steps to pack the bays for shipping:

1. Lay out the pallet & ramp, wheeled skid, and mounting blocks as shown in the picture below. Ensure the ramp is securely attached to the pallet with the velcro strips.
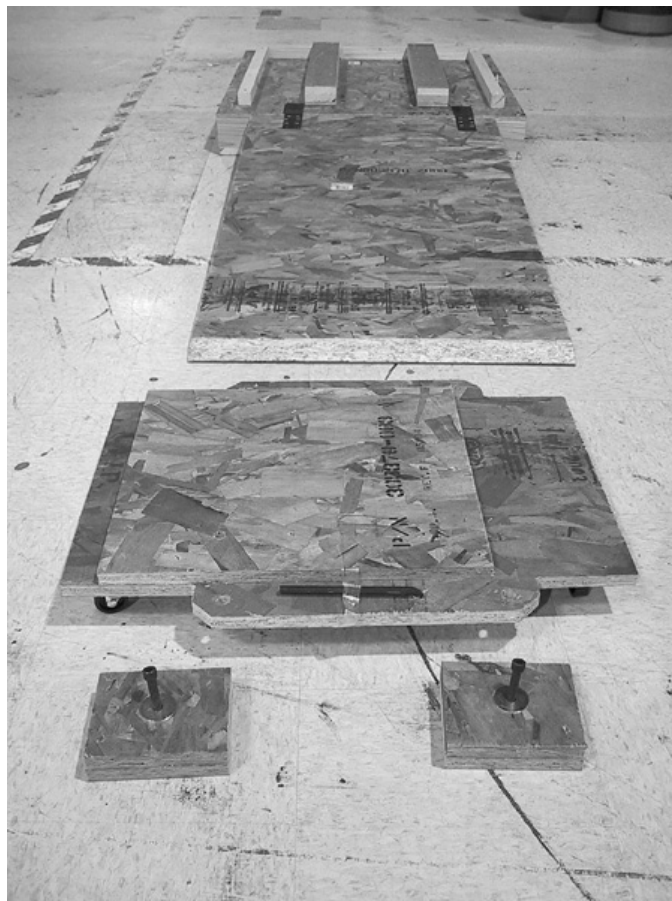
2. Place the first bay on the wheeled skid as shown in the picture below.
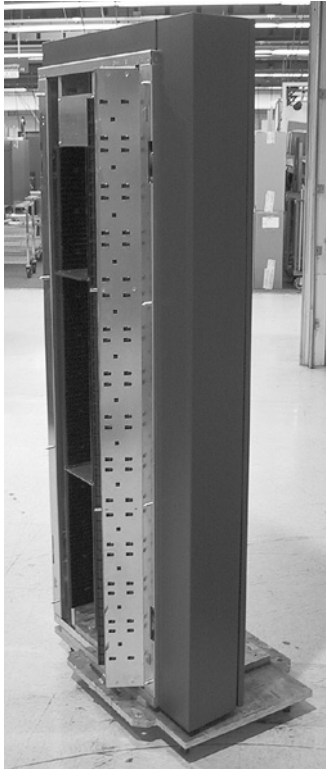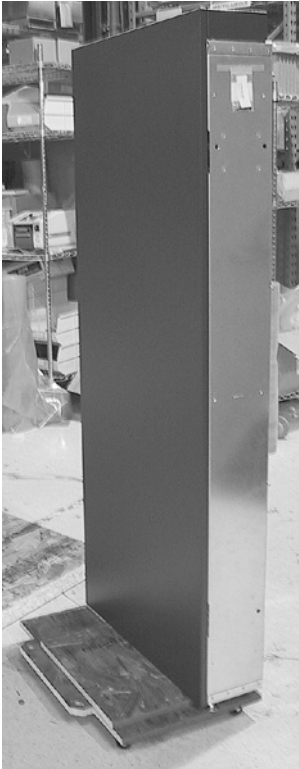

3. Position the bay so the mounting bolt hole lines up as shown below.

4. Use a mounting block and a hex head bolt to secure the bay to the wheeled skid.
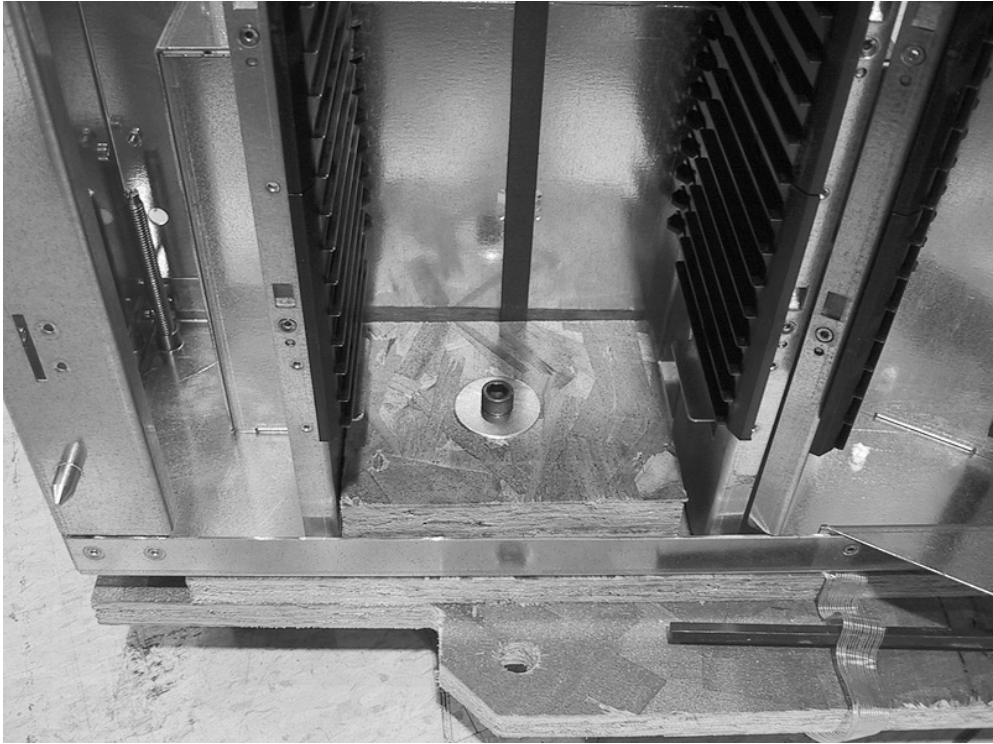
5. Hang the painted skin and spacer column on their mounting screws as shown.

6. Secure a second bay in the same way, but facing the opposite direction.

7. With two people steadying the bays, roll the wheeled skid up the ramp onto the pallet. Push at the bottom to avoid tipping.

8. Secure the wheeled skid to the pallet with four hex head bolts (two on each side).

9. Cover each bay with an anti-static bag, and tape the ramp in an upright position as shown.

10. Place the shaped foam topper on the bays. Make certain the center spacer foam fits down between the bays. Then slid the cardboard box over the bays and tape the top flaps closed.

11. Finally, strap box to skid for shipping.

Packing Instructions (AA238 - AA638 NAS Unit)

This section is provided in case it is necessary to ship the NAS unit to another location, or back to Plasmon. These procedures must be followed.

<u>CAUTION</u>

Plasmon libraries, bays, and NAS units must be shipped in the original packaging. Shipping a unit in anything other than the manufacturers packaging voids the warranty.

The NAS mounting rack and the A8 unit are each packaged and shipped in individual boxes as described below. Refer to the NAS mounting instructions in this chapter to understand how to remove the A8 unit from the rack, and the rack from the library.

Packing the NAS Mounting Rack

1. Lay the mounting rack box out with the accessories box and corner blocks in place as shown below. Line up the slots in the corner blocks front to back.
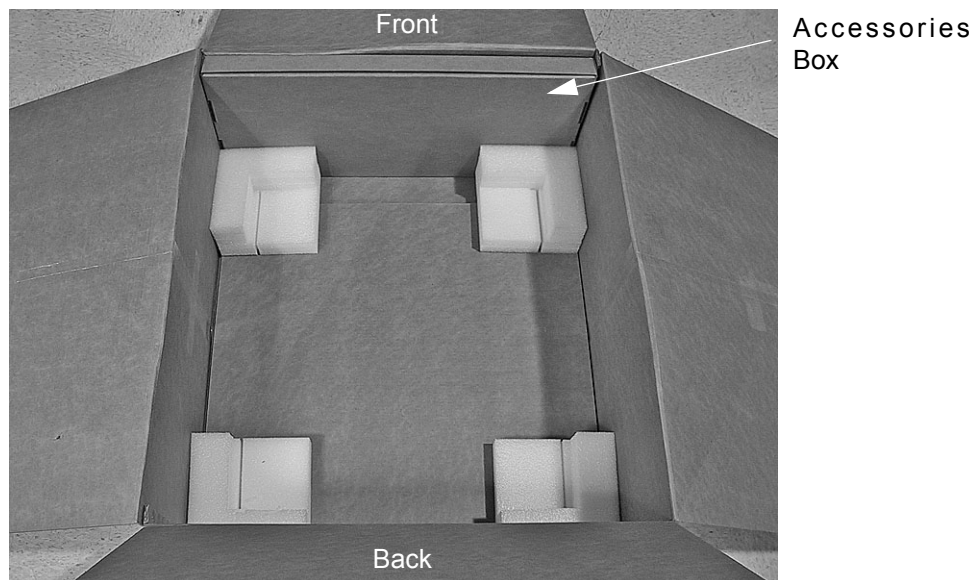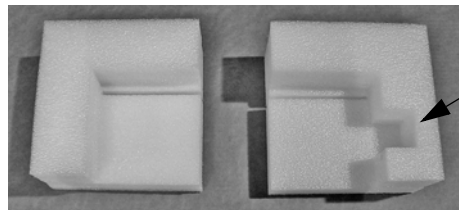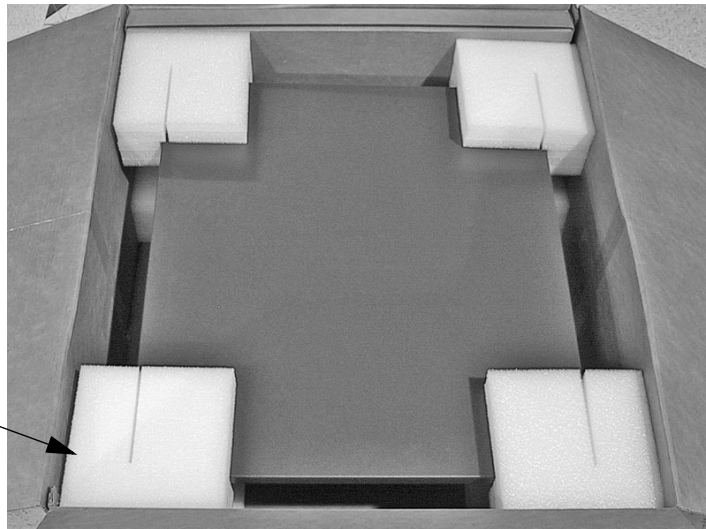
2. Place the mounting rack into the box with the front of the rack facing the accessories box, and the bottom rails fitted in the slots of the corner blocks.

3. Identify the corner block that has a cutout for the power strip, and place corner blocks on top of the mounting rack.

Corner Block with Cutout for Power Strip

Corner Block with Cutout for Power Strip

4. Close and tape the box for shipping.

Packing the A8 Unit

This section is still under construction.

Overall Library Specifications

The following table provides information about the Plasmon AA238 - AA638 libraries. These specifications are subject to change without notice.

Table 3. AA238 - AA638 Library Specifications

Specification	AA238	AA438	AA638
Library Capacity (UDO)	7.1TB	13.1TB	19.1TB
Number of Media Storage Slots	238	438	638
Number of Drives	2, 4	2, 4	2, 4
Drive Types Supported	UDO	UDO	UDO
Library Reliability (MSBF)	>3.8M	>3.8M	>3.8M
Robotics Avg. Exchange Time	6.2 sec.	6.3 sec.	6.4 sec.
Picker Type	dual	dual	dual
Automated Mailslot	single	single	single
Magazine (Not supported in this release.)	ten slot	ten slot	ten slot
Warranty (extended options available)	One Year (on-site 5x9xNBD)		
Library Interface	10/100 Gigabit Ethernet (copper)		
Options	redundant power supply 1or 2 additional buses		
Space Requirements Width (in/cm) Height (in/cm) Depth (in/cm) *Allow 3" airflow behind unit and 2" airflow on both sides*	56/142 77/196 88/224	56/142 77/196 88/224	56/142 77/196 88/224

Specification	AA238	AA438	AA638
Dimensions-Stand Alone			
Width (in/cm)	28/71	34/87	41/104
Height (in/cm)	77/196	77/196	77/196
Depth (in/cm)	36/91	36/91	36/91
Weight (lbs/kg)	586/266	685/311	795/361
Dimensions-Shipping	Library	Expansion Bays shipped separately	
Width (in/cm)	49/125	34/86	
Height (in/cm)	76/193	73/184	
Depth (in/cm)	37/94	34/86	
Weight (lbs/kg)	662/261	335/152	
Dimensions-Shipping	A8 and Mounting Rack shipped separately		
Width (in/cm)	30/76.2		
Height (in/cm)	34/86.4		
Depth (in/cm)	38/96.5		
Weight (lbs/kg)	120/55		
Power Consumption (Watts) - typical -	539 (4 drives + A8)	539 (4 drives + A8)	539 (4 drives + A8)
Power Requirements			
Voltage	100 to 240 VAC (auto-ranging power supply)		
Frequency	50/60 Hz		
Environmental			
Operating Temperature	+10 to +32°C (+50 to +90°F)		
Non-Operating Temperature	-30 to +60°C (-22 to 140°F)		
Gradient Temperature	10°C (50°F)		
Operating Humidity	10 to 80% RH non-condensing		
Non-Operating Humidity	10 to 95% RH non-condensing		

APPENDIX B
SAFETY AGENCY STANDARDS

FCC Notice

This equipment is 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 this 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 is required to correct the interference at his own expense.

Shielded cables are required for this device to comply with FCC rules. Use shielded cables when connecting this device to others.

Industry Canadian Notice per ICES-003

English: This digital apparatus does not exceed the Class A limits for radio noise emissions from digital apparatus set out in the interference-causing equipment standard entitled "Digital Apparatus," ICES-003 of the Industry Canada.

French: Cet appareil numérique respecte les limites de bruits radioélectriques applicables aux appareils numériques de Classe A prescrites dans la norme sur le matériel brouilleur: "Appareils Numériques", NMB-003 édictée par l'Industrie Canada.

European Notice

CE   This product is in conformity with the following directive.

- EN 55022/CISPR 22, Class A

- EN 55024

- EN 61000-3-2

- EN 61000-3-3

This library system is in conformity with the EMC directive and low-voltage directive.

Australia/New Zealand

This equipment has been tested and complies with AS/NZS 3548.

Product Safety Standards

This library complies with the following domestic and international product safety standards:

- UL Standard 60950-1, 1st Edition: 2003 Safety of Information Technology Equipment

- CSA Standard C22.2 No. 60950-1-03, Safety of Information Technology Equipment
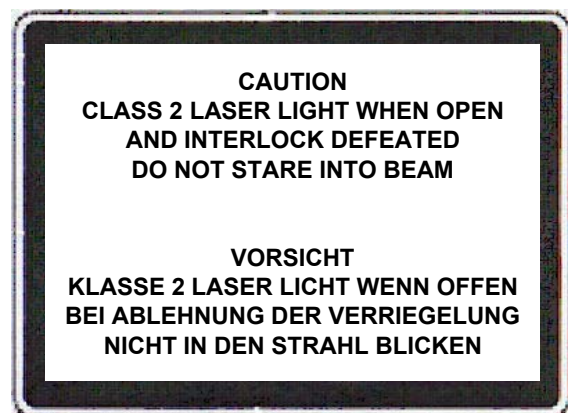
- IEC 60950-1, 1st Edition: 2001

Laser Safety Notice

This library is a Class 1 Laser Product. It has a bar code reader inside the housing and complies with 21 CFR 1010.10, 1040.11, and IEC 60825-1:1993+A1:1997+A2:2001 as a Class 1 Laser product. The maximum radiation power output of the MS-3 bar code reader is 500μW. The maximum radiation power output of the VS-310 bar code reader is 1mW, with a scan rate of 60 scans/sec - high density and 100 scans/sec low density.

The maximum output power and wavelength of the laser in the Plasmon UDO30I drive is 65mW (403-413nm), the maximum output and wavelength of the laser in the Sony SMO-F551-W5 drive is 60mW (675-695 nm), and the maximum output and wavelength of the laser in the Sony SMO-F561 drive is 40mW (655-667nm).

WARNING

Use of controls or adjustments, or performance of procedures other than those specified herein, may result in hazardous radiation exposure.

CLASS 1 LASER PRODUCT

CAUTION
CLASS 2 LASER LIGHT WHEN OPEN
AND INTERLOCK DEFEATED
DO NOT STARE INTO BEAM

VORSICHT
KLASSE 2 LASER LICHT WENN OFFEN
BEI ABLEHNUNG DER VERRIEGELUNG
NICHT IN DEN STRAHL BLICKEN

These laser product labels are placed on the front of the library, inside the front door.

WARNING

The safety interlock on the back door of the library is designed to stop library operation when the door is opened. Defeating this interlock may result in hazardous radiation exposure.

CDRH Regulations

The Center for Devices and Radiological Health (CDRH) of the U.S. Food and Drug Administration implemented regulations for laser products on August 2, 1976. These regulations apply to laser products manufactured from August 1, 1976. Compliance is mandatory for products marketed in the United States.

Lithium Battery

The Main Control Board and the Front Control Panel contain a lithium battery which could explode if incorrectly replaced. Replace only with a qualified replacement battery. Return the old battery to the manufacturer for disposal or dispose of in accordance with local regulations for the disposal of lithium batteries.

"ATTENTION: IL Y A DANGER D'EXPLOSION S'IL Y A REPLACEMENT INCORRECT DE LA BATTERIE. REMPLACER UNIQUEMENT AVEC UNE BATTERIE DU MEME TYPE OU D'UN TYPE RECOMMANDE PAR LE CONSTRUCTEUR. METTRE AU REBUT LES BATTERIES USAGEES CONFORMEMENT AUX INSTRUCTIIONS DU FABRICANT."

Vorsicht! Explosionsgeahr bei unsachgemabem Austausch der batterie. Ersatz nur durch denselbel oder einen vom Hersteller empfolhenen gleichwertigen Typ. Entsorgung gebrauchter Batterien nach Angaben des Herstellers.

Power Cord Set

The voltage rating and the current rating of the power cord set shall be higher than the rated voltage and current of this unit. The voltage of the power cord set shall be higher than the power source.

For the U.S. and Canada:

Library to Power Source

Power cord must be UL listed and CSA labeled. Type SJT, FT2, 3-conductors, No. 18 AWG, rated 125v, 10A.

A8 to Power Strip

Power cord must be UL listed and CSA labeled. Type SJT, FT2, 3-conductors, No. 18 AWG, rated 125v, 10A.

Power Strip to Power Source

Power cord must be UL listed and CSA labeled. Type SJT, FT2, 3-conductors, No. 14 AWG, rated 125v, 15A.

For Germany and Continental Europe:

Library to Power Source

STROMANFNAHME: 100-240 VAC, 50/60 Hz, 6A.

Für eine 230V-Anwendung, ist eine harmonisierte <HAR> konfektionierte Leitungsschnur, Typ H05vvf3G1.00, die für 250V/10A oder die Gleichwertigkeit geeognet ist, zu benutzen.

A8 to Power Strip

STROMANFNAHME: 100-240 VAC, 50/60 Hz, 6A.

Für eine 230V-Anwendung, ist eine harmonisierte <HAR> konfektionierte Leitungsschnur, Typ H05vvf3G1.00, die für 250V/10A oder die Gleichwertigkeit geeognet ist, zu benutzen.

Power Strip to Power Source

STROMANFNAHME: 100-240 VAC, 50/60 Hz, 6A.

Für eine 230V-Anwendung, ist eine harmonisierte <HAR> konfektionierte Leitungsschnur, Typ H05vvf3G1.00, die für 250V/15A oder die Gleichwertigkeit geeognet ist, zu benutzen.

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CONTACTING PLASMON

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Technical Support in Europe, Middle East, and Africa	
Plasmon Technical Support	+44 (0) 1763 262 963
	+44 (0) 1763 264 407 (fax)
e-mail	support@plasmon.co.uk
Internet	www.plasmon.co.uk
Technical Support in Asia/Pacific, South America, and Canada	
International Calls	+1-719-593-4437
	+1-719-593-4192 (fax)

Firmware Updates

Contact Plasmon or your reseller for the latest firmware updates.

Before Placing a Service Call to Plasmon

Register your site on-line at http://www.plasmontech.com/warranty/index.html.

Placing a Service Call

Contact your service provider directly. If Plasmon is your service provider, please have the following information available when calling:

- Serial number
- Description of failure
- System information

    - Computer type and SCSI adapter
    - Software configuration
    - Software and version number