

Vess A3120

Storage Appliance for Video Surveillance Quick Start Guide

Version 1.0



Warning

This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.



Warning



The electronic components within the enclosure are sensitive to damage from Electro-Static Discharge (ESD). Observe appropriate precautions at all times when handling the Vess A3120 or its subassemblies.



Warning

Turn off the power and disconnect the power cord before servicing this device.

Regulatory Compliance Information

Please go to https://www.promise.com/Promotion/Compliance-Information1

Additional Safety Information

Please go to https://www.promise.com/Promotion/Safety-precautions

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ABOUT THIS GUIDE

This Quick Start Guide provides an introduction to the hardware components of the Vess A3120 Storage Appliance for Video Surveillance, as well as instructions for how to install the device in an equipment rack, and how to connect the power, a keyboard and monitor used for the initial configuration setup. Then power on the system, login as administrator and create a RAID drive for storage video data. When you have completed the instruction in this guide, you need to read the Product Manual, and other user documentation available from Promise, for additional instructions on how to connect the system to the surveillance network, connect to additional network storage if needed, how to install video management software, how to administer, manage and maintain the system, as well as how best to scale the system to suit the requirements of your surveillance and data storage network.

This guide also includes information about:

- Product Registration page 30
- Contacting Technical Support page 35

Introduction

The Vess A3120 Storage Appliance for Video Surveillance, as the name implies, combines an NVR server for video data compression, recording and playback, with built-in RAID storage for saving the video data. All Vess A Series Storage Appliance for Video Surveillance systems are scalable with additional Vess A Series systems for video data and Vess R2000 Series storage subsystem and Vess J2000 JBOD storage.

SETUP TASK LIST

To setup the Vess A3120 system, perform these hardware and configuration tasks in order:

- Task 1: Unpack device
- Task 2: Mount Vess A3120 in a standard rack
- Task 3: Remove front bezel and install hard disk drives
- Task 4: Management connections
- Task 5: Connect the power and power on system
- Task 6: Login to Windows 10
- Task 7: Login to WebPAM PROe
- Task 8: Create Logical Drives



Note

The Product Manual and this Quick Start Guide, in PDF format, are found on the desktop after booting up and logging in

TASK 1: UNPACK

VESS A3120 PACKING LIST

The Vess A3120 box contains the following items:

- Vess A3120
- One 1.8 m (5.9 ft) Power cord
- Front bezel

- Screws for disk drives (20 pieces for 4 bays)
- Sliding rail assembly for rack mounting (optional, available for purchase)*

^{*} The sliding rail assembly is an optional feature available for purchase. Please contact your sales representative if you would like to purchase the sliding rail assembly.

FRONT PANEL OVERVIEW

Vess A3120 front view with bezel security cover



The Vess A3120 is shipped with a lockable front secure cover which must be removed in order to access the hard disk drive carriers. Use the tubular key to lock or unlock this cover.

The left panel contains the power button, various LEDs, USB ports and the tubular lock. See "Power On Vess A3120" on page 2 and "Front Panel LEDs" on page 2 in this guide for more information.

Front with bezel removed





Note

See descriptions for LED indicators on "Front Panel LEDs" on page 18.

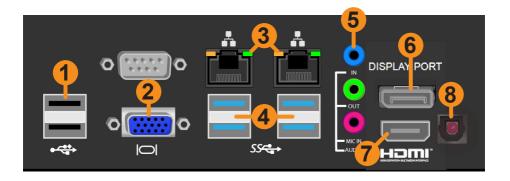
REAR PANEL OVERVIEW

The rear panel of the Vess A3120 provides the network ports for system administration, ports for connection to the IP camera network, and the greater surveillance network and data storage network. This is also where the different video and audio ports are located, USB 2.0 and USB 3.0 ports, and the power insert for the power connection.

Vess A3120 rear panel view



Vess A3120 ports on rear panel



No.	Туре
1	USB 2.0 ports
2	VGA port
3	Gigabit Ethernet ports
4	USB 3.0 ports
5	Audio In/Out
6	Display Port
7	HDMI port
8	S/PDIF out

TASK 2: MOUNTING VESS A3120 IN A RACK

The instructions here apply to the all Vess A3120 Series 1U form factor models.



Cautions

- * Do not lift or move the Vess A3120 unit by the handles on the ear brackets in front. Hold the system itself.
- * Do not install the Vess A3120 unit into a rack without rails to support the system.
- * Only a qualified technician who is familiar with the installation procedure should mount and install the Vess A3120 unit.
- * Mount the rails to the rack using the appropriate screws and flange nuts, fully tightened, at each end of the rail.
- * Do not load the rails unless they are installed with screws as instructed.
- * The rails available for the Vess A3120 unit are designed to safely support that Vess A3120 unit when properly installed. Additional loading on the rails is at the customer's risk.
- * The mounting rails will support your Vess A3120 unit only if installed as instructed.
- * Do not install hard disk drives in the system until after placing the system in the rack.

The Vess A3120 installs in a 19" equipment rack. Please examine the illustrations in this section to make sure you are using the correct type of rack.

In order to place the system in the rack, first attach the ear brackets to the front of the device. Then install the sliding rail system in the rack. Finally place the device on the sliding rails and secure it to the rack. Use only the screws and fasteners included with the shipment of the sliding rail system, or with the Vess A3120. This procedure is described and illustrated in the sections that follow below.

ATTACH EAR BRACKETS TO FRONT

The Vess A3120 ships with two ear brackets, one for the left side, another for the right. These attach at the front sides of the device housing. Once the brackets are securely attached and the unit has been properly installed in the sliding rail system, these handles can be used to pull or push the device out or into the rack system, while the sliding rails support the weight of the device. DO NOT lift or attempt to support the weight of the Vess A3120 using the handles on the ear brackets.

Secure ear brackets to front side of device housing



Attach each ear bracket at the front, on each side of the device housing, and secure with the screws included with the shipment. The handle should protrude in the direction of the front of the device. The example illustration below shows the right side.



Cautions

Do not lift or move the Vess A3120 unit by the handles on the ear brackets in front.

INSTALL THE SLIDING RAILS AND PLACE DEVICE IN RACK

Follow these steps to install the sliding rails in the rack system, then place the Vess A3120 onto the rails and secure the device to the rack.



Note

The sliding rail assembly is required for rack installation. The hardware is available for purchase. Contact your sales representative if you plan to install this system in an equipment rack.

Determine which holes to use on rack

2: Install in rack

Before installing the VTrak enclosure in the rack, first remove the drive carriers with the hard disks installed to reduce the weight of the enclosure.

To install the VTrak J5300/J5320 1U subsystem into a rack with the supplied mounting rails:

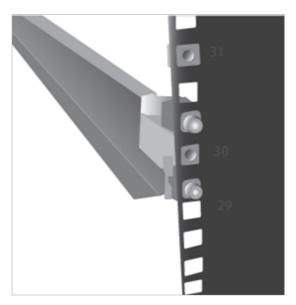
 Determine what height to place the 1U enclosure in the rack, then place the right and left rack rails at the same height on in the right and left rack





position. Choose the mounting holes accordingly for your rack system. Note that three holes are required on each front post, the uppermost of the three



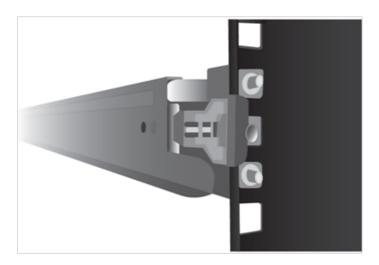


to be used for the flange nuts to anchor the enclosure to the rack posts. Adjust the length of the mounting rails as needed.

Notice that each end of the sliding rails have a lever to operate the lock mechanism that grips the rack post.

- Secure the rails to the rack posts. Make sure the rack rails are properly oriented in the rack.
- 3. To set the rails into the rack posts and secure the rails, follow these steps:
 - a. Press the spring lock then insert the studs into the selected square holes on the rack post.
 - b. Press the spring lock on the other end of the rail and insert the studs into the selected mounting hole on the rack post. If necessary, extend the rail to reach the post.

Back left rail secured to post



- c. Use the rail screws and washers to anchor the rack rail to the post.
- d. Make sure the rack rail is aligned, secure, stable and in the correct place.
- e. Perform steps a through c above for the other rail.
- f. Make sure the rack rails are aligned, secure, stable and in place.
- 4. Use the attaching screws that came with the mounting hardware to secure the enclosure to the rack.

Front view of Vess A3120 secured to rack and placed on rail system



TASK 3: INSTALLING DISK DRIVES

The Vess A3120 system supports:

- SATA hard disks
- 3.5-inch hard disk drives

For a list of supported physical drives, download the latest compatibility list from the PROMISE support website.

REMOVE SECURITY COVER

To remove the security cover:

- Use the tubular key to unlock the cover. Turn clockwise to unlock.
- 2. Slide the cover to the right about 4 mm.
- 3. Pull the cover straight back to remove. Be careful not to drop the cover.

Unlock and remove security cover



INSTALL HARD DISK DRIVES

The instructions below apply to all types of drive carriers intended for use with the Vess A3120 system.

- 1. Remove a disk drive carrier.
- 2. Carefully lay the disk drive into the drive carrier at the front, so that the screw holes on the sides line up.
- 3. Insert the screws through the holes in the drive carrier and into the sides of the disk drive. See illustration on next page.

Install only the counter-sink screws supplied with the drive.

- Install four screws per drive.
- Snug each screw. Be careful not to over-tighten.
- 4. Reinstall the drive carrier into the enclosure.
- 5. Repeat steps 1 through 3 until all of your disk drives are installed.



Push in the center to insert the drive carrier into an empty drive bay.

Pull handle to release the latch, then pull straight out gripping the handle.
Place your free hand underneath when removing or inserting the carrier containing a hard disk drive, so you do not drop it.



Counter sink screws: two screws on each side.

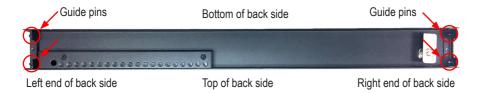
REPLACE SECURITY COVER

Replacement of the security cover is optional during setup. It can be done any time after the disk drives are installed.

To replace the security cover:

- 1. Place the cover in position so the guide pins align properly with the holes on the right side of the front tab of each ear bracket.
- Slide the cover to the left until all four guide pins are firmly seated in the holes.
- 3. Lock the tubular lock. Turn the key counterclockwise to lock.

Front security cover flipped over to reveal guide pins



NUMBER OF DRIVES REQUIRED

The table below shows the number of drives required for each RAID level

Level	Number of drives	Level	Number of drives
RAID 0	1 to 4	RAID 3	3 to 4
RAID 1	2 only	RAID 5	3 to 4
RAID 1E	2 to 4	RAID 6	4
		RAID 10	4

DRIVE SLOT NUMBERING

You can install any suitable disk drive into any slot in the enclosure. The diagram below shows how drive slots are numbered on the Vess A3120.

Slot numbering is reflected in the web manager GUI and CLI/CLU user interfaces.

Drive slot numbering for Vess A3120



TASK 4: MANAGEMENT CONNECTION

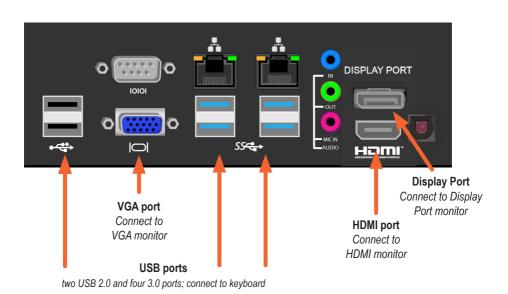
This section describes how to establish a management connection to the Vess A3120 system. There are two methods to establish the physical connection used for management of the device. The Vess A3120 can be remotely managed through the IP network. Alternatively you can attach a monitor to the VGA, HDMI or Display Port, and connect a USB keyboard and manage the initial setup configuration via direct connection to the device. This Quick Start Guide describes only the second option, connecting to the device with a monitor and keyboard. For remote management through the surveillance and data network, please see the Product Manual.

Management Path - on site keyboard and monitor

Use a USB keyboard and a VGA, Display Port, or HDMI monitor to establish a direct out-of-band connection to the management software. The VGA, Display Port, HDMI and USB ports are located on the back of the Vess A3120.. Connect a VGA, Display Port or HDMI monitor to the appropriate video monitor port, and connect a USB keyboard to any USB port on the rear panel.

Management via direct attached keyboard and monitor is done with the command line interface (CLI). Please see the Product Manual for a list of commands, use and login information.

Vess A3120 rear panel video monitor connections and USB ports



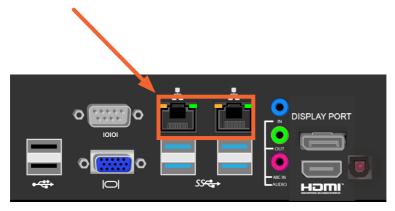
MANAGEMENT PATH - NETWORK CONNECTION

The Gigabit Ethernet RJ-45 ports on the rear panel for the network connection used for device administrator. These ports must be physically and logically connected to the subnet used by the system administrator. These ports are also used for

To establish the management path:

- Attach one end of an Ethernet cable to the network connector or standard NIC in the Host PC.
 - Attach the other end of the Ethernet cable to one of the ports on the standard network switch on the subnet used for system administration.
- 2. Attach one end of an Ethernet cable to one of the ports on the same network switch or subnet used for system administration.
 - Attach the other end of the Ethernet cable to one of the Gigabit ports on the back of the Vess A3120 .
 - If you have multiple Vess A3120 systems, Host PCs or Servers, repeat steps 1 and 2 as required.
- 3. Follow the instructions for connecting to, and configuring the basic settings of the Vess A3120.
 - Please note that you do not need to establish a network connection for the initial setup. The web-based management interface is accessible using a keyboard and monitor directly attached to the device. See the next section for instructions.

Gigabit ports on the rear panel



TASK 5: CONNECTING THE POWER

Insert a power cable into the power receptacle on the power supply.

Power supply on rear panel of Vess A3120



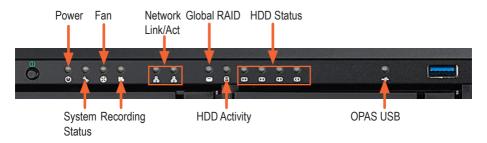
Power On Vess A3120 system

With the power supplies connected, the system can now be powered on.

To power on the Vess A3120 system , press the Power button in the top left corner of the front panel. Observe the LEDs on the front panel to make certain the boot up proceeds smoothly.

FRONT PANEL LEDS

LED indicators on front of Vess A3120



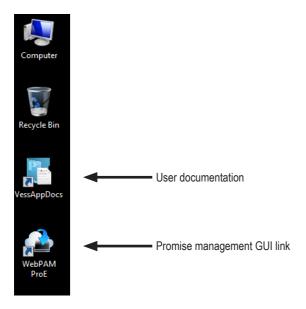
When boot-up is finished, check the LEDs on the front panel to make sure the system is functioning properly.

LED	Description	
Power	Lights BLUE to indicate the system is powered on.	
System Status	Lights GREEN when healthy, RED if there is a critical problem (LD offline, fan malfunction, voltage out of range, system temperature alert), remains dark when not ready.	
Fan Status	Lights GREEN when healthy, RED indicates a fan in the System module is not operating in normal range, ORANGE indicates the CPU fan module is not present.	
Recording	RED indicates application running.	
Network Link/Activity	One LED for each 1000BASE-T LAN port. Lights BLUE to indicate a valid link, blinks BLUE to indicate activity on the port.	
Global RAID Status	19	
Global HDD Activity	z = z = z = z = z = z = z = z = z	
HDD Status	Lights GREEN when healthy, RED if the RAID member is offline or there is a physical disk error, ORANGE indicates the drive is rebuilding, and a dark LED indicates either no drive is installed or the drive is not configured.	
OPAS USB	Lights GREEN if an OPAS device (USB disk) is detected, RED if the OPAS operation has failed, blinks GREEN when an OPAS operation is in progress. Note that the OPAS USB feature requires a USB drive (FAT32 format). Create a folder named "opas" on the drive before inserting it in the USB port.	

TASK 6: Access Operating System GUI

To access the installed operating system graphical user interface on the Vess A3120, insert a USB keyboard into any USB port, and connect a monitor using either the VGA or HDMI port. See "Management Path - on site keyboard and monitor" on page 15 for description on how to connect.

Windows 10 desktop quick links



Log IN TO WINDOWS 10

For Windows 10 installations, once the system has booted up it will be necessary to choose various options to complete the OS setup. You will be prompted to select a default language and other user interface preferences. Follow the instructions on screen to complete your preferences selection and to establish a user name and password for the administrator. After completing these final tasks, the Windows 10 desktop appears. Notice that there are two quick link icons, one for the a web browser connection to WebPAM PROe and one link to a file that contains user documents.

Windows 10 desktop quick links



TASK 7: CREATING LOGICAL DRIVES

Setting up WebPAM PROe consists of the following actions:

- Logging into WebPAM PROe
- Choosing a Language
- Creating Your Logical Drives
- Logging out of WebPAM PROe

LOGGING INTO WEBPAM PROE

Double click the WebPAM PROe link icon on the desktop to launch the default browser and go to the login page.

When the log-in screen appears:

- Type administrator in the User Name field.
- Type password in the Password field.
- Click the Login button.

The User Name and Password are case sensitive

After sign-in, the WebPAM PROe opening screen appears. If there are any unconfigured physical drives in the enclosure, an Array Configuration menu also appears.



Note

Make a Bookmark (Firefox) or set a Favorite (Internet Explorer) of the Login Screen so you can access it easily next time.

CHOOSING A LANGUAGE

WebPAM PROe displays in English, German, French, Italian, Spanish, Russian, Japanese, Korean, Traditional Chinese, and Simplified Chinese. Language preference can be chosen at the login screen or after logging in from the WebPAM PROe menu header.

- 1. Select the **Language** to use for the interface from the menu header in the Login screen.
- 2. Click the language you prefer. The WebPAM PROe user interface displays in the chosen language.

Choose "Language" used for WebPAM PROe interface

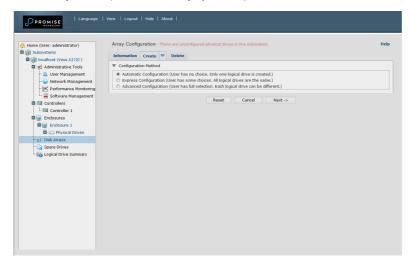


CREATING YOUR LOGICAL DRIVES

On a newly activated Vess A3120 system, there are no disk arrays or logical drives. To create a logical drive:

 Log in to Web PAM PROe. If there are no arrays configured, you will be automatically directed to the **Disk Array Configuration** menu.

Disk Array menu (when no arrays present)



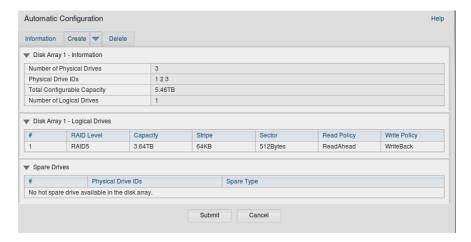
- 2. The Disk Array Configuration menu offers three options for configuration. Choose one of the options:
- Automatic Configuration Creates a new disk array following a default set of parameters. Makes one logical drive automatically. Also makes a hot spare drive for all RAID levels except RAID 0, if at least four unconfigured physical drives are available.
- Express Configuration You choose the parameters for a new disk array by
 specifying the characteristics you want. You can create multiple logical drives at
 the same time, however they will all be identical. You can choose to make a hot
 spare drive for all RAID levels except RAID 0, if at least four unconfigured physical
 drives are available
- Advanced Configuration— You directly specify all parameters for a new disk array. Makes one logical drive automatically. You can create additional logical drives at a later time, if additional configurable capacity is available. Does not make a hot spare drive.
- Click the Next button.

Automatic Configuration

When you choose the Automatic option, the following parameters appear on the screen:

- Disk Arrays The number of physical drives in the disk array, their ID numbers, configurable capacity, and the number of logical drives to be created
- Logical Drives The ID number of the logical drive(s), their RAID level, capacity, and stripe size
- Spare Drives The physical drive slot number of the dedicated hot spare
 assigned to this disk array. A hot spare drive is created for all RAID levels
 except RAID 0, when five or more unconfigured physical drives are available

Automatic Disk Array Configuration menu



If you accept these parameters, click the **Submit** button.

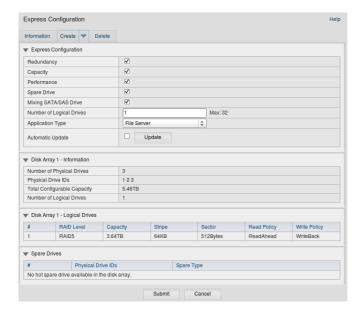
The new disk array appears in the Disk Array List on the Information tab.

If you do NOT accept these parameters, use the Express or Advanced option to create your logical drive.

Express Configuration

When you choose the Express option, a set of characteristics and options appears on the screen.

Express Configuration options menu



- 1. Check the boxes to choose any one or a combination of:
- Redundancy The array will remain available if a physical drive fails
- Capacity The greatest possible amount of data capacity
- Performance The highest possible read/write speed
- Spare Drive A hot spare drive is created when you choose Redundancy,
 Spare Drive, and five or more unconfigured physical drives are available.
- In the Number of Logical Drives field, enter the number of logical drives you want to make from this disk array.

The maximum possible number of logical drives appears to the right of this field.

- 3. From the **Application** Type menu, choose an application that best describes your intended use for this disk array:
- File Server
- Video Stream
- Transaction Data
- Transaction Log
- Other
- 4. Click the **Update** button.

Or check the Automatic Update box and updates will occur automatically.

The following parameters display:

- Disk Arrays The number of physical drives in the disk array, their slot numbers, configurable capacity, and the number of logical drives to be created
- Logical Drives The slot number of the logical drive(s), their RAID level, capacity, and stripe size
- Spare Drives The physical drive slot number of the dedicated hot spare assigned to this disk array (all RAID levels except RAID 0)
 If you accept these parameters, proceed to the next step.

If you do NOT accept these parameters, review and modify your selections in

the previous steps.

5. When you are done, click the **Submit** button.

The new disk array appears in the Disk Array List on the Information tab.

Advanced Configuration

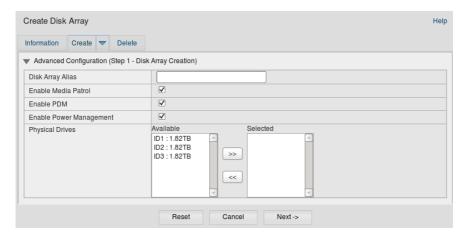


Note

For an explanation of the parameters under the Advanced option, please download the Product Manual at www. promise.com.

When you choose the Advanced option, the Step 1 – Disk Array Creation screen displays.

Advanced Configuration (Step 1 Disk Array Creation)



Step 1 – Disk Array Creation

1. Optional. Enter a name for the disk array in the field provided.

Maximum of 32 characters; letters, numbers, space between characters, and underline.

Uncheck the boxes if you want to disable Media Patrol or PDM.

PROMISE recommends leaving these features enabled.

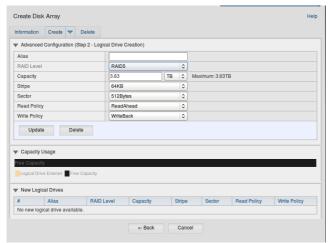
Highlight physical drives you want in the disk array from the Available list and press the >> button to move them to the Selected list.

You can also double-click them to move them.

2. When you are done, click the **Next** button.

Step 2 - Logical Drive Creation

Advanced Configuration (Step 2 Logical Drive Creation)



Optional. Enter an alias for the logical drive in the field provided. Maximum of 32 characters; letters, numbers, space between characters, and underline.

Choose a RAID level for the logical drive from the dropdown menu.

The choice of RAID levels depends the number of physical drives you selected.

RAID 30 and 50 only – Specify the number of axles for your array.

Specify a Capacity and the unit of measure (B, KB, MB, GB, TB).

This value will be the data capacity of the first logical drive in your new disk array. If you specify less than disk array's maximum capacity, the remaining capacity is available for additional logical drives that you can create now or later.

- 3. For the following items, accept the default or choose a new value from the dropdown menu:
- Stripe size. 64 KB is the default.
- 64 KB, 128 KB, 256 KB, 512 KB, and 1 MB are available.
- Sector size. 512 B is the default.
- 512 B, 1 KB, 2 KB, and 4 KB are available.
- Read (cache) Policy. Read Ahead is the default.
- Read Cache, Read Ahead, and No Cache are available.
- Write (cache) Policy. Write Back is the default.
 Write Back and Write Through (Thru) are available.

1. Click the **Update** button.

A new logical drive is displayed under New Logical Drives. If there is free capacity remaining, you can specify another logical drive now or wait until later.

2. When you are done specifying logical drives, click the **Next** button.

Step 3 – Summary

The Summary lists the disk array and logical drive information you specified.

To proceed with disk array and logical drive creation, click the **Submit** button.



Note

This function does not automatically create a hot spare drive. After the disk array is created, you can create a hot spare drive for it.

Please download the Product Manual at : www.promise. com for more information.

Logging out of WebPAM PROe

There are two ways to log out of WebPAM PROe:

- Close your browser window
- Click Logout on the WebPAM PROe banner

Clicking **Logout** brings you back to the Login Screen. After logging out, you must enter your user name and password in order to log in again.

System Shutdown

To shutdown the system, perform the normal shutdown procedure according to the operating system being used.

PRODUCT REGISTRATION

It is good practice to register your Vess A-Series system with PROMISE in order to better support and assist you throughout the life of the product.

If you are not a registered, first create a user account, then proceed to register the product. If you are already registered, log in and go to the Product Registration (see below).

To create a user account:

 Go to http://www.promise.com/Index, find Support in the top menu and move your cursor to select e-Support.

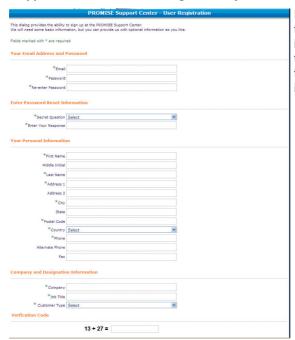


2. Click on New User Registration.



Complete the User Registration form and click the Submit button when finished. (See example form on next page).

Support Center online User Registration form



Fill in all required information (marked with an asterisk * on the menu) and click the **Submit** button to register. You will then be logged in on the Support page.

REGISTER YOUR VESS A-SERIES

To register your Vess A-Series system once you logged in to the Support page, under **Product Registration** select **Register**.



1. Choose the product line and model of the system you want to register.



2. Fill in all required information including Serial Number and Date Purchased, click **Complete Registration** at the bottom of the page to finish. A confirmation message will appear letting you know that you have successfully registered.



Note that the Host Name field is not required, however it is useful to create a name for easy reference when you open a web support case.

OPEN A WEB SUPPORT CASE

It is a good idea to go ahead and open a case now that you are registered and online. This will make it easier for tracking technical support for your product, which can mean faster resolution of issues that might arise in the future.

1. In the e-Support Home page, select Open Web Support.

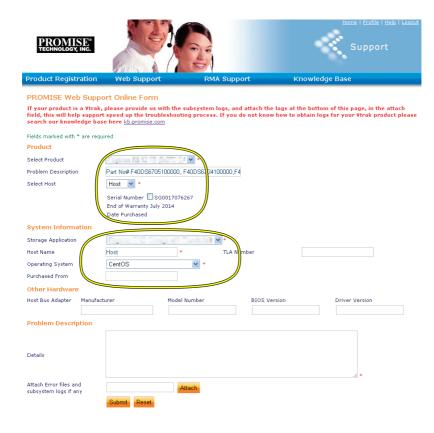


In the Select Product menu, choose your newly registered Vess A-Series device in the list.



Note that if you are adding a new device, choose **Click here to add product** and follow steps 1 and 2 on the previous page.

3. Choose the Host Name (custom Host Names are optional, created in the Product Registration form) and click to check mark the Serial Number box you entered in the Product Registration. Then supply all required information (marked with an asterisk * on the menu) and click on the Submit button to create the new case. If you should need technical support in the future, you can login and choose the existing case from the menu shown under Step 2 previously.



Notice the "Attach Error files and subsystem logs if any" message together with the **Attach** button. This can be used to attach a service report. See the product manual for instructions on generating a service report.

CONTACTING TECHNICAL SUPPORT

PROMISE Technical Support provides several support options for PROMISE users to access information and updates. We encourage you to use one of our electronic services, which provide product information updates for the most efficient service and support.

If you decide to contact us, please have the following information available:

- · Product model and serial number
- BIOS, firmware and driver version numbers
- A description of the problem or situation
- System configuration information, including: motherboard and CPU type, hard drive models, SAS/SATA/ATAPI drives & devices, and other controllers.

TECHNICAL SUPPORT SERVICES

PROMISE Online™ Website	http://www.promise.com/support/support_eng.asp (technical documents, drivers, utilities, etc.)	
E-mail Support	e-Support On-Line	
Phone Support:		
United States	+1 408 228 1400 option 4	
Australia/New Zealand	+61 7 3191 7489	
The Netherlands	+31 0 40 235 2600	
Germany	+49 (0) 2 31 56 76 48 - 0	
Italy	+39 0 6 367 126 26	
Japan	+81-3-6801-8064	
Taiwan	+886 3 578 0002	
Beijing, China	+86 10 8857 8085 or 8095	
Shanghai, China	+86 21 6249 4192, 4193, or 4199	
Singapore	+65-3158-4344	