PROMISE

Promise Utility Pro

Software Manual

Pegasus32 R4/R6/R8, Pegasus R4i/J2i, Pegasus

Version 1.0

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PROMISE UTILITY PRO

This chapter contains the following topics:

- "Installing the Software on your Mac"
- "Desktop menu bar"
- "Promise Utility Pro Toolbar"
 - "Dashboard"
 - "Disk Arrays"
 - "PassThru Drive tab in Controls menu"
 - "Spare Drive tab in Controls menu"
 - "Unconfigured Drive tab in Controls menu"
 - "Lock tab on the Controls page"



Note

This guide describes how to install and use Promise Utility Pro (PUP) on the following devices:

- Pegasus32 R4, Pegasus32 R6, Pegasus32 R8
- Pegasus R4i, Pegasus J2i
- Pegasus M4

Installing the Software on your Mac

Pegasus ships ready to use without configuration or set-up; however, it is a good idea to install the PROMISE Utility Pro software even if you do not plan to make any changes to the device's configuration. The utility is useful for monitoring the system and getting firmware updates. The utility is necessary if you plan to change the default RAID configuration (Pegasus is shipped with a RAID 5) or if you will swap out any of the hard drives shipped with the device.

The software utility installation package is located on Pegasus. Follow the instructions below to install the utility.

- 1. Double-click on the Pegasus icon on your desktop to view the device's contents.
- 2. Find the file R_PROMISE_Utility_Pro_*version number*.dmg and double-click on it to mount the virtual drive containing the installation software package.

Note that the version number of the .dmg file and .pkg file will change as it is updated. The version number used in this example is just for illustration.

3. Double-click on the R_PROMISE_Utility_Pro.pkg* file to begin the software installation.

	PROMISE Utility Pro.pkg
PROMISE_Utility_Pro.pkg	

4. The Welcome menu explains that software will be installed on the computer. Click Continue to proceed with the installation.

hrough the steps necessary to install this

5. Administrator permission is required to install the software. Type the administrator password of your computer for permission to install the software.

	Installer
Installer is	trying to install new software.
Enter y	our password to allow this.
GUI	
Password	
	Install Software
	Canaal

6. You can change the location on your system for the installation if desired by clicking the Change Install Location button. Otherwise, click on Install to continue the installation in the default location.

	· · · · · · · · · · · · · · · · · · ·			
	Standard Install on "Big Sur"			
Introduction	This will take 239.3 MB of space on your computer.			
Destination Select	Click Install to perform a standard installation of this software on the disk "Big Sur".			
Installation Type				
	Change Install Location			
	Go Back Install			

7. It takes a few seconds for the software to be installed. When the installation has been completed, a message informs you that the installation was successful.

• • •	Install PROMISE_Utility_Pro The installation was completed successfully.
 Introduction Destination Select Installation Type Installation Summary 	The installation was successful. The software was installed.
	Go Back Close

The PROMISE Utility Pro is now available to be used for the management of the Pegasus series. Use this if you need to change a hard drive, change the default array configuration, or update the device firmware. This is also useful for monitoring the status of the system and for troubleshooting.

Desktop menu bar

After opening the PROMISE Utility Pro there are some settings on the desktop menu bar. Users can change it to meet their needs.



Promise Utility Pro - Preference and actions for the PROMISE Utility Pro

Window - Layout and actions for display of the window. The options include moving the window to the left or right side of the monitor screen, close and minimize.

Help - Guide users to the official website for further help options.

Check for update

It is important to make sure the Promise Utility Pro software is up to date. The software version is automatically checked whenever the PROMISE Utility Pro app opens. If Promise Utility Pro is not up-to-date, it will prompt the latest version for the user. Either choose Update now or Remind me tomorrow.

	Software Update
ρ	New version of PROMISE Utility Pro is available! PROMISE Utility Pro 22.2.2 released-you have 22.0.370 Release Note:
	Release note Bug Fixes: - General bug fixes and improvements. This update is recommended for all users.
	Remind Me Tomorrow Update Now

Users can also click on the Promise Utility Pro menu tab, and choose to Check for Updates in the dropdown menu to manually check the update.



Choose Update Now to start the software update

1. After clicking on the Update now button. PROMISE Utility Pro will automatically download the newest version.



2. Administrator permission is required to install the software. Type the administrator password of your computer for permission to install the software.

PROM	IISE Utility Pro
PROMISE Ut	ility Pro wants to mal changes.
Enter your p	bassword to allow this
GUI	
•••••	
	01

3. It takes a few seconds for the Utility software to be installed. When the installation has been completed, a message informs you that the installation was successful. Restart PROMISE Utility Pro to run the new version.



Preference

- Auto Startup It will open PROMISE Utility Pro automatically every time you log into the computer.
- **Privacy** Share analytics to PROMISE Utility Pro to improve the service.



Download Service report

A service report can be used by tech support staff for troubleshooting or diagnosing issues on the device. To download a service report to your computer desktop, click on the "Promise Utility Pro" tab, and choose Download Service Report in the drop-down menu. It will automatically download to the user's desktop.



Promise Utility Pro Toolbar

Device list

The PROMISE Utility Pro automatically discovers all Pegasus units that are connected via daisy chained Thunderbolt cable and powered up.

(🔴 🔴 🖤									
		ا ر	ROMISE						
	Select one of y Those are your devices con	OUT Pegasus				Select one of you Those are your devices connec	IT Pegasus Ited via Thunderbolt / USB / PCIe		
	Name ↓ VM_143145	Model ↓ Pegasus3 R6	Connection ↓ Thunderbolt 3				Locate this device with LED		
	GUI Team 202211	Pegasus32 R8	Thunderbolt 3	Warning	te this device with LED				
	VM_143abc	Pegasus R4i	PCle			VM_143145	GUI Team 202211	VM_143abc	
	VM_18902780doc38	Pegasus32 R4				Pegasus3 R6 Thunderbolt 3	Pegasus32 R8 Thunderbolt 3	Pegasus R4i PCle	
	VM_202211221106	Pegasus32 R8	Thunderbolt 3						
	VM 143	Penasus32 B8	Thunderholt 3	Good					

- To view a list of the Pegasus units, click the List menu.
- To view the Pegasus units image, click the Grid menu.

And then choose the Pegasus unit you want to see.

Note: Pegasus units are listed by the order in which they are recognized, not by the sequence in the daisy chain.

Dashboard

Displays the Physical Drive, Disk Array, Volume (includes Logical Drive and PassThru Drive), Spare Drive, Fail (failed drives), Temperature, Fan, Power Supply Unit and Voltage status indicators, Physical Capacity and Logical Capacity overview.

< Device Lis	st	Dashboard Controls		⊘ ¢ …
	4 Drive	2 Array S Volume	Spare 0 Spare Fail	
	GUI Team Pegasus M4	Physical capacity < >	Performance	
		 DA 1 DA 2 100.45 GB DA 3 Others 	Read Throughput 40,000 MB/sec Write Throughput 30,000 MB/sec IO Rate 10,240 IO/sec	
	 よ、 ・ <l< th=""><th>89.98 GB 410.37 GB</th><th>Latency (Average) 100.01 msec</th><th></th></l<>	89.98 GB 410.37 GB	Latency (Average) 100.01 msec	

Controls

Display Pegasus series information, settings, and functions. Details will be introduced in the chapters below. There is a navigation bar in the Controls page. The tabs sections are:

- Device Display this Pegasus series unit information
- Disk Arrays List all disk arrays
- **Other Drives** List PassThru Drives, Spare Drives, Unconfigured Drives, Failed Drives
- Lock To lock or unlock certain actions to prevent unauthorized changes

< Device List	Dashboard Controls	÷ ب ف
Device My Pegasus M4 Disk Arrays Disk Array Alias Other Drives PassThru Drive Spare Drive	My Pegasus M4 Pegasus M4 • Thunderbolt 3 • Good	Sound ¥ …

Background Activity

Background activities perform a variety of preventive and remedial functions on your Physical Drives, Disk Arrays, Logical Drives, and other components. If the user wants to change each activity settings they can find it listed in the Settings menu.

< Device Lis	st	Dashbo	ard Controls	\odot	¢	
	GUI Team Pegasus M4	2 Array Physical capacity 15.0	Background Activities Clear Synchronization "Logical Drive 2" Inactive 15% Rebuild "Disk Array 1" Running 34% Create "Snare Drive 3"		Ţ	
	 ■ ● ●	 DA 1 100.45 GB DA 3 89.98 GB Unconfigu 89.98 GB 	Paused 28% Redundancy Check "Logical Drive 1" Stop Transition "Disk Array 6" Paused 28%	-		

Critical Event s menu

PROMISE Utility Pro filters out the most urgent level of the event and lists it in the Critical Event. Users can click on See all Events as well to see every level of events.



More

Information for users to navigate to the official website for further help options and product registration

- PROMISE download center Website for downloading the product manual, latest firmware, etc...
- Get support 24/7 PROMISE eSupport Portal (support.promise.com), optional 24/7 phone and email support available.

••			
< Devices	List	Dashboard Control:	ols 🥺 🎝 💮
	B Disk	2 Array 2 Volume	PROMISE Download Center Get Support
	1 step left! Only 25 TB con	figured. 4 TB Setup > Usable	Performance
	Pegasus3 R8	Physical capacity < >	Read Throughput O MB/sec Write Throughput O MB/sec IO Rate O IO/sec
	8 ∳ (∪ / ⊙ ⊙ ⊙ ⊙	5 TB 4 TB Unconfigured Others 4 TB 16 TB	

Device tab on the Controls page

Shows the device alias, model, connection type, and Status. The front view has the ability to indicate which carriers contain:

- Unconfigured Physical Drives shaded gray
- Configured Physical Drives shaded sky blue
- Spare Drives shaded green
- PassThru Drives shaded cerulean blue
- Failed Drives shaded orange or red

< Device List	Dashboard Controls	÷ ب ف
< Device List Device My Pegasus M4 Disk Arrays Disk Array Alias Other Drives PassThru Drive Spare Drive	Dashboard Controls My Pegasus M4 Pegasus M4 • Thunderbolt 3 • Good	Slot 2 SMART Info Drive Model TOSHIBA DT01ACJS01 Serial Number 83DX09JKS Firmaware Version AIC4 Drive Type SATA SSD Protocaol Version SCSI 6.0 Physical Capacity 3 TB
∎ [°] Unlocked		Command Queueing Support Yes Queue Depth 32 TRIM Type Non-deterministic TRIM

Mouse over the drive carrier to display the information of the installed physical drive, including the model name, drive type, physical capacity, ID, and operational status. Click on the drive to bring up further drives information and SMART info. To save this logged information to a text file, click the **Save Log** button and save the file to your preferred location.

< Device List	Dashboard Controls	0 ¢ …
Device My Pegasus M4	SMART Info	
Disk Arrays Disk Array Alias Other Drives PassThru Drive Spare Drive	ID Description 231 Life Remaining 194 Temperature 242 Data Units Read 241 Data Units Written 122 Power Cycles 9 Power On Hours 196 Media Errors	Value SMART Info 80 % tve: Model 35C OSHIBA DT01ACJS01 Bytes(CB) 33DX09JKS 2762 maware Version 2762 maware Version 2763 VIC4 0 SATA SSD otoccall Version SC 6.0 yrsical Capacity 3 TB brimmand Queueing Support res Save Log Lege Depth 32 Mid Type
🖬 Unlocked		



Alert Sound

When the disk array is rebuilding and the buzzer is enabled, the Pegasus unit emits two quick beeps every five seconds. The beeps stop when the rebuild is done. Users can mute the noise with the sound / mute button. You can also use the buzzer to locate the device.

LED light locate

Use LED light to locate the device. Click on the light icon and the front LEDs will blink for 60 seconds.

About

Select the About option to display basic information about the M4.

< Device List			Controls		Э¢	
Device My Pegasus M4	My Pe	gasus N	14	* •		
Disk Arrays 🗊 Disk Array Alias	C M Peg	y Storag _{Jasus M4}	je			
Other Drives F	Firmware Version 5.04.0000.36 nterface		WWN 2000-0001-5557-39e6 Serial Number			
Spare Drive	Fhunderbolt CBSN M92D13909700011		PG52AY561232			
	Copyrught © 2020–2022 PROMI	SE Technology, I	nc. All rights reserved.			
🖬 Unlocked						

Settings

Device name

Users can change the device name used for display reference in the user interface. Note that the example below is a Pegasus3 since PegasusPro utility can be used for any Pegasus device in a daisy chain.

Controller

- **Alert Sound** When the disk array is rebuilding and the alert sound is enabled, the Pegasus unit emits two quick beeps every five seconds. The beeps stop when the rebuild is done.
- **Low Power Mode** The Pegasus includes a power-saving feature that spins down the hard disk drives if the logical drive is idle. The idle time can be changed.
- **Auto Rebuild** Toggle on to allow system to reconstruct data automatically when users swap out the failed drive with a new one.

Deserve 2 DQ Cot	tings
regasuss ko set	tings
DEVICE NAME	
P3R8	
CONTROLLER	
Alert Sound	Sound
Status : Silent	
Low Power Mode	30 minutes 👻
Enter sleep mode after 30 minutes	
Auto Rebuild	
Toggle on to allow system to reconstruct dat	a automatically when users swap out the failed drive with a

Background Activities

Use this to adjust settings of the items below, there are three rate settings:

- Low Fewer system resources to the action, more to data read/write operations
- Medium Balances system resources between the action and data read/write operations.
- High More system resources to the action, fewer to data read/write operations.

<pre> Back </pre>			Settings		
	Pegasus M4	Setting	5		Save
	Background activity				
	Rebuild Rate	Low	•	High	
	Migration Rate	Low	•	High	
	Transition Rate	Low	•	High	
	Synchronization Rate	Low	•	High	
	Initialization Rate	Low	•	High	
	Redundancy Check Rate	Low	•	High	
	Restore factory default	:			

- 1. **Rebuild Rate** When you rebuild a disk array, you are actually rebuilding the data on one physical drive.
- When a physical drive in a disk array fails and a spare drive of adequate capacity is available, the disk array begins to rebuild automatically using the spare drive.
- If there is no spare drive of adequate capacity, but the Auto Rebuild function is ENABLED, the disk array begins to rebuild automatically as soon as you remove the failed physical drive and install an unconfigured physical drive in the same slot.
- If there is no spare drive of adequate capacity and the Auto Rebuild function is DISABLED, you must replace the failed drive with an unconfigured physical drive, then perform a Manual Rebuild
- **2. Transition Rate** Transition is the process of replacing a revertible spare drive that is currently part of a disk array with an unconfigured physical drive or a non-revertible spare drive.
- 3. Synchronization Rate Synchronization is automatically applied to logical drives when they are created. Synchronization recalculates the redundancy data to ensure that the working data on the physical drives are properly in sync. Mouse over on the logical drive, click the View button and look under Logical Drive Information beside the line that says Synchronized. A Yes means the logical drive was synchronized.

- 4. Initialization Rate Technically speaking, Initialization is a foreground activity, as you cannot access a logical drive while it is Initializing. Initialization is normally done to logical drives after they are created from a disk array. Initialization sets all data bits in the logical drive to zero. The action is useful because there may be residual data on the logical drives left behind from earlier configurations. For this reason, Initialization is recommended whenever you create a logical drive.
- **5. Redundancy Check** Redundancy Check is a routine maintenance procedure for fault-tolerant disk arrays (those with redundancy) that ensures all the data matches exactly. A redundancy check can also correct inconsistencies
- 6. Predictive Data Migration Rate Predictive Data Migration (PDM) is the migration of data from the suspect disk drive to a spare disk drive, similar to Rebuilding a Logical Drive. But unlike Rebuilding, PDM constantly monitors your disk drives and automatically copies your data to a spare disk drive before the disk drive fails and your Logical Drive goes Critical. After the data is copied from the suspect disk drive, the controller marks it with a Stale configuration and a PFA error.

Restore Factory Default

This feature restores settings to their default values. To restore all settings to their default values:

Settings				
Pegasus3 R8 Settings				
Synchronization Rate Low High				
Initialization Ra				
Redundancy CF				
Predictive Data Cancel Restore				
RESTORE FACTORY DEFAULT				
Reset above settings to the default values without deleting disk arrays Reset and drives data.				
Hide Advanced Settings				

1. Go to settings find the Restore Factory Default at the bottom, and click Reset

2. Confirm that you want to restore to default settings by clicking on Restore.

All the settings will turn to the default value.

Firmware update

To update firmware on the Pegasus, open PROMISE Utility Pro, select Firmware Update. Firmware can be updated manually or automatically online.

Select the Pegasus system to connect to	Firmware Update
Those are your devices connected via Thunderbolt / USB / PCIe	PROMISE Download Center Get Support
E Grid E List	
P3R8 Pegasus3 R8 Thunderbolt 3	

Update Firmware Online

1. In the Firmware Update menu, use the Online option to automatically check the installed firmware version. If the Pegasus firmware is not up-to-date, the user is prompted to Update. Click **Update** to start the firmware update process.



- 2. PROMISE Utility Pro will start to download the newest version. After the download is completed, next it will start to update the firmware.
- 3. The process will take several seconds to complete. Once the process has been completed, it is necessary to restart the computer. *Mac users connecting to Pegasus via USB need to shut down the host system, wait a few seconds for it to completely shut down, then start it again to apply the new firmware.* Once the computer is powered on and booted up, you may continue to use the Pegasus.

• • •			
Firmware Up	date		
Make sure your system dos update process. If unsure, Perferences Online Manu	e not go to sleep check the "Energy	o or get turned off during the y Saver" setting in System Firmware updated! Please restart your computer	
You're up-to-date		You must restart your computer with the Pegasus	
Learn More >		attached to apply these changes.	

Manual Firmware Update

- 1. Download the latest firmware from the PROMISE website at www.PROMISE.com/support/ download and place the .img file on your computer.
- 2. Open the PROMISE Utility Pro to the Firmware Update page. Drag the file into the PROMISE Utility Pro menu.

< Back	Firmware U	pdate		
Firmware Update				
Make sure your system does not go update process. If unsure, check the Preferences	to sleep or get turned o "Energy Saver" setting i	ff during the n System		
Online Manual	DEVICE NAME			
Choose a file or drop it here to upload your firmware image	P3R8	Pegasus3 R8	6.06.0000.45	

- 3. PROMISE Utility Pro will start to upload the .img file from your computer. After the upload is completed, next it will start to update the firmware.
- 4. The process will take several seconds to complete. Once the process has been completed, it is necessary to restart the computer. It is the same as the previous Online Firmware update.

Device Service Report

A dialog prompt will ask you where you want to save the HTML file containing the service report. Choose a location and click the Save button. A technical support representative might ask you to email this file for system analysis.

< Device List	Dashboard C<u>ontrols</u>	0	¢	
Device				
🚆 My Pegasus M4	My Pegasus M4	∦ - •••		
Disk Arrays				
Disk Array Alias				
5 A. 200				
Other Drives	Save As: ServiceReport_02_07_2023_14_02			
🖨 PassThru Drive	Tags:			
Spare Drive	Where: EDesktop 😮 🗸			
	Cancel			
0				
Unlocked				

Shutdown

To shut down the Pegasus on PROMISE Utility Pro:

- 1. Open PROMISE Utility Pro and click on the Pegasus series. Click on the More button in the up right-hand corner.
- 2. Select Shutdown.
- 3. To prevent accidental shutdown, and the daisy chain will shut down all the Pegasus, a warning dialog pop-up will appear.
- 4. A message appears informing you that the shutdown process will take a few minutes. If you want to move the device, wait until the system is completely powered off before disconnecting the power cord.

Disk Arrays

C Device List		Dashboard	Controls			0	¢	•••
Device My Pegasus M4	G50 GB Disk Array Alias + € ID 0 • 1 TB used • Good							
Disk Arrays	Logica	l Drive						
Blisk Allay Allas		Name I	evel	Capacity	Status			
Disk Array Alias 1		Custom 0 I	RAID 0	50 GB	Good, Synchronizing			
		Custom 1	RAID 5	150 GB	Good			
PassThru Drive		Custom 3	RAID 1	250 GB	Good			
Spare Drive		Custom 4	AID 0	350 GB	Good			
Unconfigured Drive	Spare	Drive						
		Туре І	Revertible	Capacity	Status			
		Dedicated	/es	50 GB	Good			
		Global	(es	350 GB	Good			
🖬 Unlocked								

Disk Array information including the assigned Alias are displayed in the Disk Array status display menu.

Information of the selected Disk Array displayed in the right panel include Capacity, ID, Status, Logical Drives, and Spare Drives.

Adding a Logical Drive/Spare Drive

Use the Disk Array menu to add a Logical Drive or Spare Drive.

< Device List		Dashboard	Controls		୍	¢	
Device 🚆 My Pegasus M4	650 GB	(Add Logical Driv	re			
Disk Arrays	Logica	l Drive		,	Add Spare Drive		
Disk Array Alias		Name Le	vel Capacity	Status			
Other Drives	0 0	Custom 0 RA	AID 0 50 GB	Good, Synchronizin	ıg		
📮 PassThru Drive	1 (Custom 1 RA	AID 5 150 GB	Good			
Spare Drive	3 (Custom 3 RA	AID 1 250 GB	Good			
Unconfigured Drive	4 (Custom 4 RA	AID 0 350 GB	Good			
	Spare	Drive					
		Type Re	evertible Capacity	Status			
	1 1	Dedicated Ye	es 50 GB	Good			
	2	Global Ye	es 350 GB	Good			
Dullocked							

If you have an unconfigured drive installed, click on the Add button and select the Add Logical Drive or Add Spare Drive option.

< Device List		Dashboard Con	trols	\odot	¢
Device			A 1		
🧱 My Pegasus M4					
Disk Arrays	Aa	a spare Drive for Di	SK AFRAY Allas		
Disk Array Alias	ID	Revertible			
	✓ 1			nizina	
Other Drives	2				
📮 PassThru Drive					
Spare Drive		•	Unconfigured		
Unconfigured Drive					
			Cancel Add (2)		
🖬 Unlocked					

Spare Drive

Select the Unconfigured Drive to use as Spare Drive, accept the default, or change the settings as required. Toggle the Revertible switch to enable the drive to be revertible. A revertible spare drive returns to its spare drive assignment after you replace the failed Physical Drive in the Disk Array and run the Transition function.

Logical Drive

< Device List			hboard C	ontrols				0 ¢ …
Device								
📟 My Pegasus M4				A 1.			+ =	
		Add Logical	Drive for	Disk Arr	ay Alias			
Disk Arrays	Logical Dr							
Disk Array Alias	Logical Dr	ve						
	Name	Level	Capacity	Unit	Format			
Other Drives	LD	RAID 5 🝷	6	ТВ -	APFS ·	·		
📮 PassThru Drive			This Logic	al Drive max	imum capaci	y is <mark>6</mark> TB		
	LD	RAID 5 🝷	6	ТВ -	APFS ·			
Spare Drive	LD	RAID 5 -	6	ТВ •	APFS ·			
Unconfigured Drive	LD	RAID 5 -	6	ТВ •	APFS ·	· –		
				Car	ncel 🛛	dd		
					350 GB God			
Olliockeu								

Up to four Logical Drives can be added. Enter a Logical Drive name, choose a RAID configuration type, capacity, and file system format. Click on the minus icon will delete the Logical Drive from the list.

Note that the RAID will consist of the Logical Drives in this list. The options available for type of RAID configuration is dependent upon the number of drives in the RAID. See below.

View Physical Drive Status

The sidebar can view the status of Physical Drive in this Disk Array. Not including Spare Drive.

Device List		Dashboard C	ontrols	ΘĻ	
Device	650	Disk Arrav Alia	ıs + ⊜"	Details	×
Disk Arrays	GB	ID 0 • 1 TB used • Good			
Disk Array Alias	ID	Name	Level	Physical Drive 3, Cood	
Other Drives		Custom 0	RAID 0	PD 3 • Good	1 TB
🖨 PassThru Drive		Custom 1	RAID 0	Drive Model TOSHIBA DT01ACIS45	;
Spare Drive		Custom 4	RAID 0		
Onconfigurea Drive	Spare I	Drive			
		Туре	Revertible		
		Dedicated	Yes		
		Global	Yes		
ា Unlocked					

More button

Click the 'More' options link and choose the actions on the Disk Array.

< Device List	Dashboard Controls					
Device My Pegasus M4 Disk Arrays	GB Disk Array Alias D 0 • 1 TB used • Good	; + € ⊡ Rename				
Disk Arrays	Logical Drive	Transport				
Disk Array Alias	ID Name Level	Click this before you move the physical drives to the new location				
Other Drives	0 Custom 0 RAID 0	Rebuild				
	1 Custom 1 RAID 5	Reconstruct data of the disk array when physical drive is offline or needs to be				
	3 Custom 3 RAID 1	replaced				
🖴 Spare Drive	S Custon S Maid I	Transition				
Unconfigured Drive	4 Custom 4 RAID 0	Returns a revertible spare drive to its original status by replacing it with an un- configured physical drive.				
	Spare Drive	compared physical arrel				
		Accept the incomplete space				
	ID Type Revertible	To continue accessing this disk array, there is a risk of data loss				
	1 Dedicated Yes					
	2 Global Yes	Delete				
🖬 Unlocked						

Rename Disk Array

	Dashboard Controls	÷ ب ف
	Rename Disk Array Alias	+ 9
	Cancel Rename	
Spare Drive		
	Spare Drive	
Unlocked		

To rename a Disk Array, click the 'More' options link and choose the Rename option.

Type the new Disk Array name and click the Rename button.

Delete Disk Array

To delete a Disk Array, click the 'More' options link and choose the Delete option. You will need to confirm that you want to remove the disk array by typing 'confirm' and clicking on the Confirm button.

< Device List	Dashboard Controls	<u>ې ب</u>
Device 🧱 My Pegasus M4	GB Disk Array Alias	+ 🛢 …
Disk Arrays Disk Array Alias	Are you sure to delete Disk Array 0	
1.5 M	"Project2022" ?	
Other Drives	Once the Disk Array is deleted, all logical drives are	
🖨 PassThru Drive	removed and all data on the Disk Array will be lost	
	To continue, please type confirm below.	
Spare Drive	con	
Unconfigured Drive	Cancel Confirm	
Unlocked		

More button in separate logical drive

< Device List		Dashboa	rd Controls			\odot	¢	•••
Device 🚆 My Pegasus M4	650 GB) Disk	Array Alia TB used • Goo	Rename	+ 2			
Disk Arrays	Logic	al Drive		Redunda	ancy check			
Disk Array Alias	209.0	ai biire		protected	l.			
		Name	Level	Initializa	ation			
Other Drives		Custom 0	RAID 0	This will e Drive	erase everything on this Logical			
🖨 PassThru Drive		Custom 1	RAID 5					
		Custom 3	RAID 1	Delete				
Spare Drive		Custom 4	RAID 0	350 GB	Good			
Unconfigured Drive								
	Spare	e Drive						
		Туре	Revertible	Capacity	Status			
		Dedicated	Yes	50 GB	Good			
		Global	Yes	350 GB	Good			
🕤 Unlocked								

Click the 'More' options link for a logical drive and choose the Actions on the Logical Drive.

Rename Logical Drive

To rename a Logical Drive, click the 'More' options link for a logical drive and choose the Rename option. In the new menu that appears, type the new name for the Logical Drive and click the Rename button.

 Oevice List 	Dashboard Controls							
Device 📑 My Pegasus M4 Disk Arrays	Rename Logical Drive				+ 9			
Disk Array Alias		c	Cancel Ren	ame				
Other Drives								
🖨 PassThru Drive								
Spare Drive								
Unconfigured Drive								
	Spar	e Drive						
🖬 Unlocked								

Redundancy check the Logical Drive

To perform a redundancy check on a Logical Drive, click the 'More' options link for a logical drive and choose the Redundancy Check. This includes the option to Pause on Error, i.e. stop the redundancy check if an error is detected.



Logical Drive Initialization

WARNING: Initialization of the a logical drive will erase all data on the drive.

Before initializing a logical drive, backup data you want to keep since the drive will be erased.

If you want to enable Quick Initialization, select this option. Click Start to begin initialization.



Delete Logical Drive

To delete a Logical Drive, click the 'More' options link for a logical drive and choose the Delete option. You will need to confirm that you want to remove the logical drive by typing 'confirm' and clicking on the Confirm button.

< Device List	Dashboard C<u>ontro</u>ls	÷ ب ب
Device 🚆 My Pegasus M4	GB Disk Array Alias	+ 🤶 …
Disk Arrays 📮 Disk Array Alias	Are you sure to delete Logical Drive 4 "Custom 4" ?	
Other Drives PassThru Drive Spare Drive 	Once the Logical Drive is deleted, it will be no possibility of recovery. To continue, please type <u>confirm</u> below. con	
Unconfigured Drive	Cancel Confirm	
Unlocked		

PassThru Drive tab in Controls menu

A Pass Thru Drive (pass through drive) is a physical drive that will not be part of the RAID configuration. Using a Pass Thru Drive (i.e. JBOD drive) reduces the options for RAID configuration of the remaining three physical drives. Go to the PassThru Drive menu in the Controls menu to add, delete or view PassThru Drives.

< Device List	Dashboard Controls	0 ¢ …
Device 🚍 My Pegasus M4	PassThru Drive These drives are configured as individual drives.	+ 9
Disk Arrays	ID Type Capacity Status	
Disk Array Alias	1 SATA HDD 350 GB Good	
Other Drives	3 SATA HDD 350 GB Good	
📮 PassThru Drive	4 SATA HDD 350 GB Good	
Spare Drive		
Unconfigured Drive		
🖬 Unlocked		

Add PassThru Drive

Users can add PassThru Drives as needed. Click the Add (+) option and select the PD (physical drives) to be designated as PassThru Drives and click the Add button.

< Device List		Controls	÷ ب ب
Device			
🧱 My Pegasus M4			
	Add Pass	Thru Drive	
Disk Arrays	Select Physical Drive		
UISK AFFAY Allas	✓ PD 1 ✓ PD 2		
Other Drives			
🖨 PassThru Drive			
Spare Drive		Unconfigured	
Unconfigured Drive			
		Cancel Add (2)	
unlocked			

View PassThru Drives

Click the PassThru Drive tab in Controls to view the Physical Drive as PassThru Drive status.

< Device List		Dashboard	Controls	Ø Ģ	
Device				Details	×
📕 My Pegasus M4	Pass	Thru Drive	+ 😪		
	These dr	rives are configured as inc	lividual drives.		
Disk Arrays		Туре	Capacity		
UISK AITAY Allas		SATA HDD	350 GB	Physical Drive 3, Good	
Other Drives		SATA HDD	350 GB	PD 1 • Good	1 TB
🖨 PassThru Drive		SATA HDD	350 GB	Drive Model	
Spare Drive				TOSHIBA DT01ACJS0	n
Unconfigured Drive				PD 2 • Good	1 TB
				Drive Model TOSHIBA DT01ACJS3	12
				PD 3 • Good	1 TB
				Drive Model TOSHIBA DT01ACJS4	15
🖬 Unlocked					

Delete PassThru Drive

To delete a PassThru drive, choose the Delete option and type 'confirm' to confirm you want to delete it.



Spare Drive tab in Controls menu

Click the Spare Drive tab to view status, add or delete a spare drive. Mouse over the Spare Drive to view the current status.



Add Spare Drive

To add a Spare Drive, select am unconfigured drive and change the settings as required. Spare drives serve as global or dedicated to a specified Disk Array. Swipe the Revertible switch. A revertible spare drive returns to its spare drive assignment after you replace the failed Physical Drive in the Disk Array and run the Transition function.

< Device List				ard Cont	ols			\odot	Ļ	
Device Image: My Pegasus M4								9		
			Add	Spare Dri	ve					
Disk Arrays	—									
Disk Array Alias		Global	Dedicate	Revertible		$ \longrightarrow $				
	□ 1					°				
Other Drives	2									
🖨 PassThru Drive										
Spare Drive					Unconfig	gured				
🖨 Unconfigured Driv										
					Can	ncel A				
🖬 Unlocked										

View Spare Drive

Use this button to open the sidebar to display the Spare Drive as a physical drive. The Spare Drive is the highlighted physical drive.



More button for Spare Drives

Click the More button to change settings or delete a Spare Drive.



Change Spare Drive Settings

Choose the options for a selected spare drive. Use the slider to toggle Global and/or Revertible settings. For Non-global Spare Drives, an additional option allows the spare to be dedicated to a specific drive to function as the dedicated spare for the chosen array. Swipe the Global or Revertible switch to toggle these states on or off. Click the Edit button to apply the new settings.

< Device List	Dashboard C<u>ontrol</u>s	0 ¢ …
Device		
📰 My Pegasus M4		
	Spare Drive setting	
Disk Arrays Disk Array Alias	A Revertible spare drive will return to spare drive status after the failed drive is replaced with an unconfigured physical drive and the TRANSITION procedure is completed to restore the array.	
Other Drives		
🖨 PassThru Drive		
Spare Drive		
Unconfigured Driv		
	Cancel Edit	
D Unlocked		

Delete Spare Drive

To delete the Spare Drive (i.e. to remove Spare Drive status from a designated Spare Drive), choose the Delete option in the More button options list. A menu will pop up asking you to confirm your decision by typing "confirm" and clicking on the Confirm button. When the Spare Drive status is removed, the drive displays as an unconfigured physical drive.

	Dashboard Controls	÷ ب
	Spare Drive	+ 🗑
	Are you sure to delete Spare Drive 4 ?	
	Once the Spare Drive is deleted, it will be no possibility of	
	Tecovery.	
Pass i nru Drive	To continue, please type confirm below.	
	con	
	Cancel	
🖬 Unlocked		

Unconfigured Drive tab in Controls menu

The Pegasus is shipped with physical drives installed and RAID array configured, so it is not necessary to do this yourself. However, if you want to change the disk drives or configure a different RAID, you will need to create a disk array and logical drive to use the storage. If you are installing new drives, use the Wizard to create a disk array and logical drive.

To create a Disk Array and Logical Drive click on the Wizard button. There are 2 configuration methods: Smart Wizard and Advanced Wizard. If you are not familiar with RAID systems, it is recommended to use the Smart Wizard.

< Device List	Dashboard	Controls	÷ ب ف
Device My Pegasus M4 Disk Arrays Dick Array Alias	Unconfigured Attention! These unused o but can be used in a disk through as individual driv	Drives irives are not visible to your computer array, as a spare drive or for pass- es.	Wizard 🗲 Smart Wizard Advance Wizard
	ID Type	Capacity Status	
Other Drives	1 SATA HDD	350 GB Good	
🖨 PassThru Drive	2 SATA HDD	350 GB Good	
Spare Drive	3 SATA HDD	350 GB Good	
Unconfigured Drive	4 SATA HDD	350 GB Good	
D Unlocked			

Choose your preference from the drop-down Wizard menu options. See the table below.

Method	User options	Suggested for users who are
Smart Wizard	No options, just use default	Users with little or no experience with
	settings.	digital storage systems.
Advanced Wizard	Options to change storage	Users with high level of knowledge
	parameters.	about digital storage systems.

Smart Wizard (2 steps)

1. There are four questions presented: Do you want data redundancy? How many Logical Drives? What File System do you want to use? Do you need a Spare Drive? Provide answers and click Next to continue.

< Device List	¢ د.	
Device	Quick questions	
🧱 My Pegasus M4	Need data loss prevention? i Data redundancy can prevent data loss due to drive failure, but it at the price of some storage being used for this purpose.	
Disk Arrays	Yes No Logical drives : you will see the volume labeled as Promise RAID on your computer	
Disk Array Alias	How many Logical Drives do you want? 👔	
Other Drives	1 2 3 4 SSD drives suggest use APFS. HDD drives suggest use HFS+	
🖨 PassThru Drive	What kind of File system format? 👔	
Spare Drive	APFS HFS+ Spare drive : automatically replaces the failed drive without	
🖨 Unconfigured Drive	requiring a physical swap	
	Need a spare drive? (i	
	Yes No	
	Cancel Next	
🖬 Unlocked		

2. In Step 2 an overview of the proposed configuration appears. Click Create the Wizard to create the disk array, logical drive, and spare drive based on the answer from Step 1.

< Device List				9 ¢ …
Device	÷	Overvi	ew	
🧱 My Pegasus M4	La 4	e 4 Volume		
Disk Arrays	0 1			
Disk Array Alias	Arra	y Spare		
	Total configure	d capacity: 40 TB	 Conligured Drives 	
Other Drives	LD Storage us	age	 Capacity Pa 	ity
🖨 PassThru Drive	Name	Level Distril	oution Format	
🖴 Spare Drive	LD	RAID 5 8 TB	2 TB APFS	
Unconfigured Drive	LD	RAID 5 8 TB	2 TB APFS	
	LD	RAID 5 8 TB	2 TB APFS	
	LD	RAID 5 8 TB	2 TB APFS	
	· —		Cancel Cr	eate
🖬 Unlocked				

Advanced Wizard (3 steps)

1. Choose which Physical Drives will be included in the array. If there is an unconfigured drive remaining, the spare drive settings will appear automatically.



2. Enter a name for the Disk Array and Logical Drive. Choose settings for each logical drive, including the RAID level, the capacity to use (default settings apply all available capacity) and the file system. Click Next to continue.

< Device List		··· ب
Device	← Disk Array and Logocal Drive Settings	
🧱 My Pegasus M4	Disk Array name	rd
	Disk Array	
Disk Arrays	Total configured capacity: 40 TB	
📮 Disk Array Alias	Logical Drive +	
	Name Level Capacity Unit Format	
Other Drives		
🖨 PassThru Drive	This Logical Drive maximum capacity is 6 TB	
Spare Drive	LD RAID 5 • 6 TB • APFS • -	
Unconfigured Drive	LD RAID 5 • 6 TB • APFS • -	
	LD RAID 5 • 6 TB • APFS • -	
	_	
	Cancel Next	
🖬 Unlocked		

3. An overview of the RAID setup appears. Double-check the storage configuration settings to make sure this is what you want. Click Create to create the new logical drive (and new spare drive if that is an option in the chosen settings).

< Device List						\odot	¢	
Device	÷		Overview			_		
🧱 My Pegasus M4		2 Drive	2 Volume					
Disk Arrays		1 _	1					
📮 Disk Array Alias		Array	⊥ Spare	Configure	ed Drives			
	Total con	figured capacity: 40	ТВ	Spare Dri	ives			
Other Drives	LD Storad	ie usage		• Capa	city 😐 Parity			
🖨 PassThru Drive	Name	l evel	Distribut	ion	Format			
Spare Drive			Distribut					
	LD	RAID 5	8 TB	2 TB	APFS			
Unconfigured Drive	LD	RAID 5	8 TB	2 TB	APFS			
	LD	RAID 5	8 TB	2 TB	APFS			
	LD	RAID 5	8 TB	2 TB	APFS			
				Canc	el Create			
🖬 Unlocked								

Lock tab on the Controls page

By default, the PROMISE Utility Pro is locked to prevent unauthorized changes to your RAID system. When it is locked, you cannot create logical drives or change settings on the Pegasus series unit. PROMISE Utility Pro will automatically display a pop-up menu asking for the administrator password.

	PROMISE Utility Pro
	PROMISE Utility Pro wants to make changes.
	Enter your password to allow this.
	GUI
	••••••
ľ	Cancel OK

Users can also unlock manually by clicking the closed lock icon at the lower left screen of the Controls page. The password authorizing dialog will pop up to let the user type in the password.

< Device List	Dashboard C <u>ontrol</u> s		0	¢	•••
Device My Pegasus M4 Disk Arrays Disk Array Alias	My Pegasus M4 Pegasus M4 • Thunderbolt 3 • Good	Sound 🛊 ·			
Other Drives PassThru Drive Spare Drive Unlocked					

Once is unlocked all the Pegasus series that is auto-discovered by the PROMISE Utility Pro are also at unlock status.