

# NA622TB3

#### Thunderbolt<sup>™</sup> 3 Four-Slot M.2 NVMe SSD Storage



# User Manual

Third edition, Feb. 2022

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# 1. Unpack the NA622TB3

The box contains the following items:

- Netstor NA622TB3 enclosure × 1
- $^{\circ}$  Thunderbolt 3 cable (0.5 m) × 1
- Power cord × 1







## 2. Install M.2 NVMe SSD and the Stand

\* If you intend to set a RAID 0 or RAID 1 volume over the M.2 SSDs within storage, it's recommended the M.2 SSDs are with the same capacity.

#### 2.1 Configuration Options

There are three configuration choices for M.2 SSD in the unit; the available configurations are as below:

- A Each single NVMe SSD can be configured as individual volume
- B Each dual NVMe SSD can be configured as a group volume (as RAID 0 / 1 by O.S.)
- C Four NVMe SSDs can be configured as a group volume (as RAID 0 by O.S.)

**WARNING:** before pulling the aluminum plate out of the enclosure, please make sure that the power cord is unplugged to the NA622TB3 unit.

#### 2.2 Install M.2 SSD Module

1. Loosen the two thumbscrews at rear of storage. Pull out the aluminum plate with backplane completely.



2. Loosen SSD1 location's screw. Insert M.2 NVMe SSD module into the M.2 socket.

Tighten SSD1's screw.



3. When installing subsequent M.2 SSD module, repeat the above point 2 for installation.

4. After the completion of the M.2 SSD modules installation on the backplane, insert the backplane plate back into the NA622TB3 storage, and tighten the two thumbscrews at rear side.



#### 2.3 Install the Stand

The NA622TB3 unit can be put horizontally or vertically for work.

#### 1. Horizontal use:

Place the NA622TB3 enclosure horizontally on a level surface for application. It needs to be noted that the side with the ventilation holes must be facing upwards for the fine airflow dissipation. (see Image 1 below)

#### 2. Vertical use:

Put the included stand at the rear bottom part of the NA622TB3 enclosure, and then tighten the stand's two thumbscrews to fasten the stand to the enclosure. After the stand is fastened to the Netstor unit, you can then place the NA622TB3 enclosure vertically on a level surface for work. (see Image 2 below)



# 3. Operation

#### 3.1 macOS High Sierra 10.13 or later

1. Connect the Thunderbolt 3 four-slot M.2 NVMe SSD storage with power source by power cord. And then connect storage and Mac computer via Thunderbolt 3 cable.



2. Press the front power button to switch on the storage. Power LED turns orange indicating standby mode.



When at standby mode, the Thunderbolt 3 port can provide 15W @ 5V / 3A power charging.

3. Power on Mac computer and NA622TB3 powers on automatically. Power LED turns blue meaning storage is at the powered on status.



4. When at macOS's desktop, click Apple icon at the top menu bar. Select About This Mac, and click System Report. Click Thunderbolt in the left column. As NA622TB3 appears within the information section, the Thunderbolt 3 storage is recognized by Mac computer.

Willesdunge		JATTO .	
mardware	Thunderbolt Device Tree	^	
ATA	Thunderbolt Bus		
Audio	NACOTEO		
Bluetooth	INR022105		
Camera			
Card Reader			
Controller	L		
Diagnostics			
Disc Burning			
Ethernet Cards		0	
Fibre Channel	NA622TB3:		
FireWire			
Graphics/Displays	Vendor Name: NetStor		
Hardware RAID	Vendor ID: 0x58		
Memory	Device ID: 0x622C		
NVMExpress	Device Revision: 0x1		
PCI	UID: 0x00588116E8407	500	
Parallel SCSI	Route String: 1		
Power	Port (Upstream):		
Printers	Status:	Device connected	
SAS	Link Status:	0x2	
SATA/SATA Express	Speed:	Up to 40 Gb/s x1	
SPI	Link Controller Firmware Version:	0.30.0	
Storage	Port:		
Thunderbolt	Status:	No device connected	
USB	Link Status:	0x7	
▼ Network	Speed: Current Link Width:	0x1	
Firewall	Link Controller Firmware Version:	0.30.0	
Locations			
Volumes			
WWAN			
Wi-Fi			
▼ Software			
Accessibility			
Applications			
🔜 Netstor的 MacBook Pro	> Hardware > Thunderbolt > Thunde	rbolt Bus > NA622TB3	

#### 3.1.1 Procedure for setting up a RAID 0 volume

X RAID 0 has no backup feature; it is without fault tolerance.

1. Go to macOS's Disk Utility. The M.2 SSDs in NA622TB3 will appear in the

#### left-hand column.

	Disk Utility			
View Volume	Rest Aid Partition Erase Restore Mount			
Internal           Internal           Image: Container disk3           Image: MAC HDD	Samsu Uninitialize	ung SSD 960	0 PRO 512	512.11 GB
External Samsung SSD  Samsung SSD				
	Location:	External	Canacitu	512 11 CB
		External	capacity:	012.1100
	Connection:	PCI-Express	Child count:	0
	Connection: Partition Map:	PCI-Express Not Supported	Child count: Type:	0 Solid state

2. Click **File** at the top menu bar, and select **RAID Assistant**.

🗰 Disk Utility File Edit Images	View Window	Help				
New Image Open Disk Image Close	N N N N N					
Get Info Show in Finder	201					
Run First Aid						
Rename Mount <b>Eject</b> Enable Journaling Change Password	×E	View Volume	চ ন্থ First Aid Partition	Disk Utility Erase Restore	0 Mount	① Info
RAID Assistant		Internal   APPLE SSD SM05	Samsur	ng SSD 960	0 PRO 512	512.11 GB
		External Samsung SSD  Samsung SSD				
			Location:	External	Capacity:	512.11 GB
			Connection:	PCI-Express	Child count:	0
			Partition Map:	Not Supported	Type:	Solid state
			S.M.A.R.T. status:	Not Supported	Device:	disk0

3. Select **Striped (RAID 0)**, and click Next.

•••	RAID Assistant
	Select RAID type
	Select the type of RAID you would like to create using Disk Utility. Different RAID types can provide different levels of data protection or performance.
	Striped (RAID 0)
	Splits data evenly across two or more disks, without parity of information, with speed as the intended goal.
	Mirrored (RAID 1)
	An exact copy of a set of data on two or more disks. This type is useful when read performance or reliability is more important.
	Concatenated (JBOD)
	Concatenated disks is not a RAID, it is a group of disks connected together for the purpose of creating a larger disk.
?	Cancel Previous Next

4. Put the checks to the M.2 SSDs, and click **Next**.

	RAID Assista	int	
Di	sk selection		
	Add the disks you would like to incl meet the requirements for the set a external disks at this time.	ude in this RAID 0. C ire displayed. You ca	Only the disks that an connect
	Name	Size	Туре
	🗌 📓 APPLE SSD SM0512L Med	500.28 GB	PCI-Express
	🗹 📠 Samsung SSD 960 PRO 51	2 512.11 GB	PCI-Express
	🗹 📠 Samsung SSD 960 PRO 51	2 512.11 GB	PCI-Express
?	Cancel	Prev	rious Next
3	Cancel	Prev	rious Next

5. Confirm the Properties, and click **Next**.

		RAID Assistant
S	et Properties	
	Choose a name, filesy 0 volume.	stem format, and chunk (block) size, for the RAID
	Name:	Drive
	Format:	Mac OS Extended (Journaled)
	Туре:	RAID 0
	Capacity:	1.02 TB
	Chunk size:	32K 🗘
	For best performance, ch accessing. For example, database may access sm	noose a chunk size that matches the size of the data you're video processing may access large chunks of data, but a aller chunks.
?	Cancel	Previous Next

6. The confirmation pane for creating RAID 0 volume will pop up; click **Create** to proceed.

	Create the RAID 0 set "Drive"? Creating this set will delete all data stored on the following disks, and cannot be undono: "Samsung SSD 960 PRO 512GB Media (disk0)" "Samsung SSD 960 PRO 512GB Media (disk2)"
	Cancel Create
	Type: RAID 0
	Chunk size: 32K $\diamond$
	For best performance, choose a chunk size that matches the size of the data you're accessing. For example, video processing may access large chunks of data, but a database may access smaller chunks.
?	Cancel Previous Next

7. When the process is complete, click **Done** to finish.



8. You will see RAID 0 volume is created successfully, and the RAID 0 volume is ready for use.

		Disk Uti	ility			
	98	• F	5			
View Volume	First Aid	Partition Erase	e Restore	Unmount		Info
Internal	Dri Raid	Ve Volume • Mac	OS Extende	d (Journaled)		1.02 TB
External						
▼ Samsung SSD ≜						
RAID Member	Used			Free		
▼ Samsung SSD ≜	664.3 MB			1.02 TB		
RAID Member						
RAID Sets	Striped Set (RAID (	)) Status: Onlin	e			
	Name	Size	Туре	Media	Status	
	disk2s2	511.77 GB	PCI-Expr	Samsung SSD 960 PRO	Online	
	disk1s2	511.77 GB	PCI-Expr	Samsung SSD 960 PRO	Online	
						Delete RAID
	Mount Point:	^	olumes/Drive	Туре:		RAID Volume
	Capacity:		1.02 TB	Owners:		Disabled
	Available:	1.02 TB (Zero )	(B purgeable)	Connection:		PCI-Express
	Used:		664.3 MB	Device:		disk4

#### 3.1.2 Procedure for setting up a RAID 1 volume

\* The M.2 SSDs in Netstor unit must be even numbers (2 or 4)

1. Go to macOS's Disk Utility. The M.2 SSDs in NA622TB3 will appear in the left-hand column.



2. Click **File** at the top menu bar, and select **RAID Assistant**.



3. Select Mirrored (RAID 1), and click Next.



4. Put the checks to the M.2 SSDs, and click **Next**.

• • •	RAID Assista	nt	
Di	isk selection		
	Add the disks you would like to inclu meet the requirements for the set ar external disks at this time.	de in this RAID 1. ( e displayed. You c	Only the disks that an connect
	Name	Size	Туре
	🗌 📕 APPLE SSD SM0512L Medi.	500.28 GB	PCI-Express
	🗹 📕 Samsung SSD 960 PRO 512	2 512.11 GB	PCI-Express
	🗹 📠 Samsung SSD 960 PRO 512	512.11 GB	PCI-Express
ANNAL.			
?	Cancel	Pre	vious Next

5. Confirm the Properties, and click **Next**.

		RAID Assistant
S	et Properties	
	Choose a name, filesy 1 volume.	stem format, and chunk (block) size, for the RAID
	Name:	Drive
	Format:	Mac OS Extended (Journaled)
	Type:	RAID 1
	Capacity:	512.11 GB
	Chunk size:	32K 🗘
		<ul> <li>Automatically rebuild</li> </ul>
	For best performance, ch accessing. For example, database may access sm	noose a chunk size that matches the size of the data you're video processing may access large chunks of data, but a aller chunks.
?	Cancel	Previous Next

6. The confirmation pane for creating RAID 1 volume will pop up; click **Create** to proceed.

	RAID Assistant
	Create the RAID 1 set "Drive"? Creating this set will delete all data stored on the following disks, and cannot be undone: "Samsung SSD 960 PRO 512GB Media (disk0)" "Samsung SSD 960 PRO 512GB Media (disk2)"
	Cancel Create
	Type: RAID 1 Capacity: 512.11 GB Chunk size: 32K C ✓ Automatically rebuild
	For best performance, choose a chunk size that matches the size of the data you're accessing. For example, video processing may access large chunks of data, but a database may access smaller chunks.
?	Cancel Previous Next

7. When the process is complete, click Done to finish.



8. You will see RAID 1 volume is created successfully, and the RAID 1 volume is ready for use.

View	Volume	ଣ୍ଡ First Ai	Disk Ut	ility 5 Restore	() Unmount		(i) Info
Internal C APP C C External	PLE SSD SM05 ontainer disk3 MAC HDD	DI RAI	<b>rive</b> D Volume • Mac	OS Extende	d (Journaled)	511.77 GB	
V Sam	AID Member ≜ AID Member nsung SSD ≜ AID Member	Used 448.5 MB			<b>Free</b> 511.32 GB		
RAID Sets		Mirrored Set (DA)	ID 1) Status Opli				
Driv	e 🔺	Minored Set (RA	Pine	Tune	Mode	Ciptus	
		Thattie	5120	Type DOL Even	Same CCD 060 DDO	Status	
		disk1s2	511.77 GB	PCI-Expr	Samsung SSD 960 PRO	Online	
		+ - Re	pair			Delete RAID	
		Mount Point:	٨	olumes/Driv	a Type:	RAID Volume	e
		Capacity:		511.77 GI	3 Owners:	Disabled	d
		Available:	511.32 GB (Zero )	(B purgeable	) Connection:	PCI-Express	s
		Used:		448.5 M	B Device:	disk4	4

#### 3.2 Thunderbolt 3 Windows PC/laptop (Windows 10 / 8.1)

1. Connect the Thunderbolt 3 four-slot M.2 NVMe SSD storage with power source by power cord, and then connect storage and Windows PC/laptop via Thunderbolt 3 cable.



2. Press the front power button to switch on the storage. Power LED turns orange indicating standby mode.



When at standby mode, the Thunderbolt 3 port can provide 15W @ 5V / 3A power charging.

3. Power on computer and NA622TB3 powers on automatically. Power LED turns blue meaning storage is at the powered on status.



#### 3.2.1 Procedure for setting up a RAID 0 volume

X RAID 0 has no backup feature; it is without fault tolerance.

1. Go to Windows' Disk Management: the M.2 SSDs in storage will appear

in information section.

falsense		Trees	Ella Custom	Chatan	Constitu	free free	St Ever	
- (C:) - 系統保留	Simple	Basic Basic	NTFS NTFS	Healthy (B Healthy (S	111.30 GB 500 MB	76.35 GB 468 MB	69 % 94 %	
• Disk 0 Isic 11.79 GB Inline	★統保留 500 MB NTFS Healthy (System	n, Active, Pri	mary Partition)	(C.) 111.30 GB NTI Healthy (Bool	FS , Page File, Cras	th Dump, Prima	ny Partition)	
Disk 1 asic 32.76 GB Inline	232.76 GB Unallocated							
Disk 2	232.76 GB							

2. Right click first M.2 SSD, and select **New Striped Volume**.

volume	Layout	Туре	File System	Status	Capacity	Free Spa	% Free		
= (C:) = 承統保留	Simple Simple	Basic Basic	NTFS NTFS	Healthy (B., Healthy (S.,	111.30 GB 500 MB	76.35 GB 468 MB	69 % 94 %		
Disk 0 stic 1.79 G8 nline	★統領留 500 MB NTFS Healthy (System	m, Active, Pri	mary Partition)	(C) 111.30 GB NT Healthy (Boo	'PS t, Page File, Crat	th Dump, Prime	ry Partition)		
				p					
Disk 1 lesic 32.76 GB Online	232.76 GB Unallocated		New Sir New Sp	nple Volume anned Volume					

3. Select the subsequent M.2 SSD [Disk 2] in the Available section.



4. Click **Add** button to add Disk 2 to the Selected section, and then click **Next** to proceed.

You can select the disks a	and set the disk size for this	volume.
Select the disks you want	to use, and then click Add.	
Available:		Selected:
	Add >	Disk 1 238346 MB Disk 2 238346 MB
	< Remove	
	< Remove All	]
Total volume size in megal	oytes (MB):	476692
Maximum available space	in MB:	238346
Select the amount of space	e in MB:	238346

5. Click **Finish** button to complete setting up RAID 0 volume.



6. The RAID 0 volume of NA622TB3 will appear at This PC, and it's ready for use.



#### 3.2.2 Procedure for setting up a RAID 1 volume

\* The M.2 SSDs in Netstor unit must be even numbers (2 or 4)

1. Go to Windows' Disk Management: the M.2 SSDs in storage will appear in information section.

Volume		Lavout	Type	File System	Status	Canacity	Free Sea	%.Free	
(C:) ● 兼統傳留	i	Simple	Basic Basic	NTFS NTFS	Healthy (B Healthy (S	111.30 GB 500 MB	76.35 GB 468 MB	60% 94%	
- Disk 0 lasic 11.79 GB Inline	A B 500 Heat	电保留 MB NTFS thy (System,	Active, Pri	mary Partition)	(Cd) 111.30 GB NTI Healthy (Boot	rs Page File, Cras	h Dump, Prima	ny Partition)	
Disk 1 Basic 232.76 GB Dolline	232. Una	76 GB llocated							
	222	76 GB							

2. Right click first M.2 SSD, and select New Mirrored Volume.

• 🔿 🗖 🖥	🖬 🗩 🗹 🛙	2							
olume	Lavout	Type	File System	Status	Capacity	Free Spa	% Free		
- (C:)	Simple	Basic	NTES	Healthy (B	111.30 GB	76.47 GB	69 %	_	
東統保留	Simple	Basic	NTFS	Healthy (S	500 MB	468 MB	94 %		
	-								
Disk 0 asic 11.79 GB Inline	★統保留 500 MB NTFS Healthy (Syster	n, Active, Pri	imary Partitio	(C.) 11.30 GB NTFS lealthy (Boot, Pa	ge File, Crash D	ump, Primary P	artition)		
Disk 0     asic     11.79 GB     Inline     Disk 1     asic	秦綻保留 500 MB NTFS Healthy (Syster	n, Active, Pri	imary Partitio	(C:) 11.30 GB NTFS lealthy (Boot, Pa	ge File, Crash D	ump, Primary P	artition)		
Disk 0 asic 11.79 GB Inline Disk 1 asic 32.76 GB Inline	未統保留 500 MB NTFS Healthy (Syster 232.76 GB Unallocated	n, Active, Pri	imary Partitio	(C;) 11.30 GB NTFS lealthy (Boot, Pa	ge File, Crash D	ump, Primary P	artition)		
Disk 0 ssic 11.79 GB nline Disk 1 ssic 32.76 GB nline	参統保留 500 MB NTFS Healthy (Syster 232,76 GB Unallocated	n, Active, Pri	imary Partitic	(C:) 11.30 GB NTFS lealthy (Boot, Pa New Simple \	ge File, Crash D	ump, Primary P	artition)		
Disk 0     assic     11.79 GB     nline     Disk 1     assic     32.76 GB     nline	未統保留 500 MB NTFS Healthy (Syster 232.76 GB Unallocated	n, Active, Pri	imary Partitic	(C:) 11.30 GB NTFS lealthy (Boot, Pa New Simple \ New Spanner	ge File, Crash D /olume J Volume	ump, Primary P	artition)		
Disk 0 psic psic psic psic psic Disk 1 psic psic psic psic Disk 2 psic psic psic psic psic psic psic psic	★毎日日日 500 MB NTFS Healthy (Syster 232.76 GB Unallocated	n, Active, Pri	imary Partitio	(C.) 11.30 GB NTFS lealthy (Boot, Pa New Simple 1 New Spannes New Striped 1	ge File, Crash D /alume J Volume /olume	ump, Primary P	artition)		
* Disk 0 sic 1.79 GB biline * Disk 1 sic 2.76 GB biline * Disk 2 sic 2.76 GB	未統保留 500 MB NTFS Healthy (Syster 232,76 GB Unallocated	n, Active, Pri	imary Partitio	(c) 11.30 GB NTFS lealthy (Boot, Pa New Simple 1 New Simple 1 New Spannes New Striped 1 New Mirrores	ge File, Crash D Volume J Volume J Volume	ump, Primary P	artition)		
* Disk 0 sic 1.79 GB hline * Disk 1 sic 2.76 GB hline * Disk 2 sic 2.76 GB hline	未統保留 500 MB NTFS Healthy (Syster 232.76 GB Unallocated	n, Active, Pri	imary Partitio	(C;) 11.30 GB NTFS lealthy (Boot, Pa New Simple N New Simple N New Striped T New Striped T New Kitioets New RAID-5 T	ge File, Crash D Volume Volume Volume Volume	ump, Primary P	artition)		
* Disk 0 sic 1.79 GB nline * Disk 1 sic 2.76 GB nline * Disk 2 sic 2.76 GB	★乾保留 500 MB NTFS Healthy (Syster 232.76 GB Unallocated	n, Active, Pri	imary Partitio	(C) 11.30 GB NTFS lealthy (Boot, Pa New Simple 1 New Striped New Mimores New Striped	ge File, Crash D Volume I Volume I Volume I Volume	ump, Primary P	artition)		

3. Select the subsequent M.2 SSD [Disk 2] in the Available section.



4. Click **Add** button to add Disk 2 to the Selected section, and then click **Next** to proceed.

Tou can select the disks a	ind set the disk size for this	volume.
Select the disks you want	to use, and then click Add.	
A <u>v</u> ailable:		<u>S</u> elected:
	<u>A</u> dd >	Disk 1 238346 MB
	< <u>R</u> emove	Disk 2 230340 MD
	< Re <u>m</u> ove All	Ì
Total volume size in megab	ytes (MB):	238346
Maximum available space i	n MB:	238346
Select the amount of space	e in MB:	238346

5. Click **Finish** button to complete setting up RAID 1 volume.

Completing the New Mirrored Volume Wizard	
You have successfully completed the Wizard.	
You selected the following settings:	
Volume type: Mirror Disks selected: Disk 1, Disk 2 Volume size: 233346 MB Drive letter or path: D: File system: NTFS Allocation unit size: Default Volume label: New Volume Quick format: No	< v
To close this wizard, click Finish.	
	C 1

6. The RAID 1 volume of NA622TB3 will appear at This PC, and it's ready for use.



# 4. Power off the System

To power off the system: shut down the computer first; as the computer is powered off, the NA622TB3 will power off automatically. At this time, the unit's front power LED will turn orange to indicate the storage is at the standby mode (the Thunderbolt 3 port's 15W power charging still works and is still effective during the standby status). To completely power off NA622TB3, press the front power button to turn off the unit.



# 5. Internal Fan Speed Adjustment

If heavy workloads are continuously run with M.2 SSD's controller, which will generate more heat than average within the storage, then you can increase the internal two 4.5 cm fans' speed manually to provide more cooling.

#### (The default fan speed is set at the slowest speed)





# 6. Thunderbolt 3 Board LEDs Status

On the Thunderbolt 3 board within the NA622TB3 storage, there are totally five LEDs. From top to bottom, they are: LED 2 (for 3V3), LED 3 (for 5V0\_ATX), LED 4 (for 3V3\_LC), LED 5 (for 0V9\_SVR), and LED 6 (for 0V9\_USB). The following info describes what the LEDs lighting status will be when NA622TB3 is at the standby mode and when the Netstor unit is at the powered on mode.

#### Standby mode:

When NA622TB3 is at the standby mode, only LED 2 and LED 3 will show green light, and the rest LED 4, LED 5, and LED 6 will not show light.



#### **Power-on mode:**

As NA622TB3 is at the powered on mode, LED 2 through LED 5 will show green light. At this time, if a USB device or a monitor is daisy chained to the second Thunderbolt 3 port on the Netstor Thunderbolt 3 board, then LED 6 will show green light. On the other hand, provided the second Thunderbolt 3 port is not connected with any device/monitor, LED 6 will not show light.



If you have any further questions, please contact your regional distributor, or Netstor Technology, Taiwan.



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