DA-820E Series Win11 LTSC 24H2 User Manual

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www.moxa.com/products



DA-820E Series Win11 LTSC 24H2 User Manual

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This Windows 11IoT Enterprise LTSC 2024(24H2) user manual is applicable to Moxa's x86-based computers listed below and covers the complete set of instructions for these series. Detailed instructions on configuring advanced settings are covered in the following chapters of the manual. Before referring to sections in these chapters, confirm that the hardware specification of your computer model supports the functions/settings covered therein.

Moxa Computers and Windows

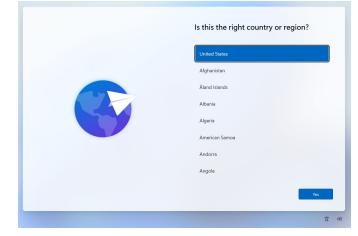
Moxa computers are integrated with Windows drivers and I/O controller utilities based on the Microsoft Windows up-to-date version so that you can use the most compatible hardware-software combinations in your application field.

In this chapter, we describe how to initialize the system settings when you boot up the computer for the first time. When you turn on the computer, you will see the Windows Out of Box Experience (OOBE) wizard. OOBE consists of a series of screens that require customers to accept the license agreement, connect to the internet, log in with or sign up for a Microsoft Account, and share information with the OEM.

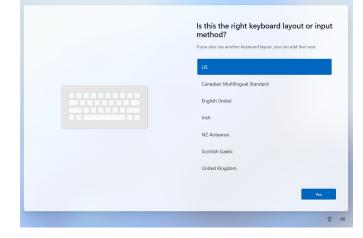
Initializing User Settings

The following is a non-exhaustive list of OOBE screens that you will see in the order that they are listed here:

1. Select a region.



2. Select a keyboard.



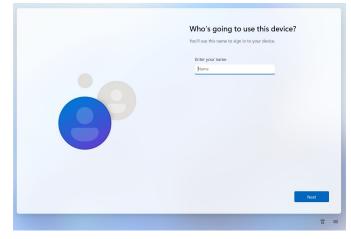
3. Select a second keyboard.



4. Connect to a network or continue with limited setup.



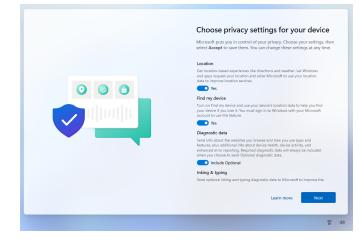
5. Sign in to or create a local account or a Microsoft account (MSA).



6. Set a password.

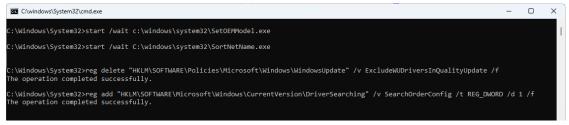
<u> </u>	
	Create a super memorable password
	Make sure to pick something you'll absolutely remember.
	Enter a password
	Password
	Next
	Ŕ

7. Choose your privacy settings.



Initializing System

• After the OOBE settings, you will be redirected to the device desktop. Wait until the process is complete.



• The device will now reboot, and the new settings will take effect after the system restarts.

Bitlocker is a Windows disk encryption feature, designed to protect data by providing encryption for entire volumes. BitLocker addresses the threats of data theft or exposure from lost, stolen, or inappropriately decommissioned devices.

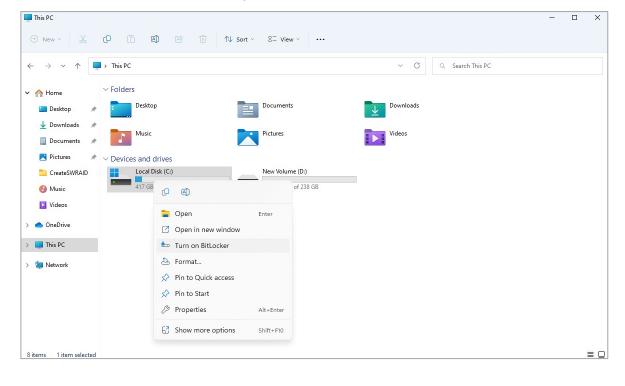
For more information about BitLocker :

https://learn.microsoft.com/en-us/windows/security/operating-system-security/data-protection/bitlocker/

This chapter describes the BitLocker setup process.

Enabling the BitLocker

In the Windows Devices and drives, right-click on the drive and select Turn on BitLocker.



1. Select an option to back up the recovery key. For example, select **Save to a file**.

		×	
\leftarrow	RitLocker Drive Encryption (C:)		
	How do you want to back up your recovery key?		
	 Some settings are managed by your system administrator. 		
	A recovery key can be used to access your files and folders if you're having problems unlocking your PC. It's a good idea to have more than one and keep each in a safe place other than your PC.		
	\rightarrow Save to your <u>M</u> icrosoft account		
	\rightarrow Save to a <u>file</u>		
	\rightarrow Print the recovery key		
	How can I find my recovery key later?		
	<u>N</u> ext Cancel		

2. Select the path to store the file in.

Save BitLocker reco	overy key as						×
$\leftarrow \rightarrow \checkmark \uparrow$	\implies This PC \rightarrow N	ew Volume (D:)		~	C	Search New Volume (D:)	Q
Organize 🔻 Nev	v folder					≣ •	- ()
🚽 Downloads 🤉	Name	^	Date modified	Туре	Size		
Documents ;	•		No items match y	our search.			
Pictures 🤉	•						
CreateSWRAI	D						
Ø Music							
🚺 Videos							
> 🌰 OneDrive							
> 📃 This PC							
Notwork							
File <u>n</u> ame:	BitLocker Recovery Key	B41DB368-BF9C-462D-85	58-E74C1EC3776C				~
Save as <u>t</u> ype:	Text Files (*.txt)						~
∧ Hide Folders						<u>S</u> ave Ca	ncel

3. Follow the onscreen instructions to specify the drive encryption options.

		\times
~	Re BitLocker Drive Encryption (C:)	
	Choose how much of your drive to encrypt	
	If you're setting up BitLocker on a new drive or a new PC, you only need to encrypt the part of the drive that's currently being used. BitLocker encrypts new data automatically as you add it.	
	If you're enabling BitLocker on a PC or drive that's already in use, consider encrypting the entire drive. Encrypting the entire drive ensures that all data is protected—even data that you deleted but that might sti contain retrievable info.	II
	Encrypt used disk space only (faster and best for new PCs and drives)	
	○ Encrypt entire drive (slower but best for PCs and drives already in use)	
	Next Cancel	
		Х
÷	Re BitLocker Drive Encryption (C:)	×
÷		×
÷	BitLocker Drive Encryption (C:) Choose which encryption mode to use	×
÷		×
÷	Choose which encryption mode to use Windows 10 (Version 1511) introduces a new disk encryption mode (XTS-AES). This mode provides	×
~	Choose which encryption mode to use Windows 10 (Version 1511) introduces a new disk encryption mode (XTS-AES). This mode provides additional integrity support, but it is not compatible with older versions of Windows. If this is a removable drive that you're going to use on older version of Windows, you should choose	×
÷	Choose which encryption mode to use Windows 10 (Version 1511) introduces a new disk encryption mode (XTS-AES). This mode provides additional integrity support, but it is not compatible with older versions of Windows. If this is a removable drive that you're going to use on older version of Windows, you should choose Compatible mode. If this is a fixed drive or if this drive will only be used on devices running at least Windows 10 (Version	×
÷	Choose which encryption mode to use Windows 10 (Version 1511) introduces a new disk encryption mode (XTS-AES). This mode provides additional integrity support, but it is not compatible with older versions of Windows. If this is a removable drive that you're going to use on older version of Windows, you should choose Compatible mode. If this is a fixed drive or if this drive will only be used on devices running at least Windows 10 (Version 1511) or later, you should choose the new encryption mode	×
÷	 Choose which encryption mode to use Windows 10 (Version 1511) introduces a new disk encryption mode (XTS-AES). This mode provides additional integrity support, but it is not compatible with older versions of Windows. If this is a removable drive that you're going to use on older version of Windows, you should choose Compatible mode. If this is a fixed drive or if this drive will only be used on devices running at least Windows 10 (Version 1511) or later, you should choose the new encryption mode New encryption mode (best for fixed drives on this device) 	×
÷	 Choose which encryption mode to use Windows 10 (Version 1511) introduces a new disk encryption mode (XTS-AES). This mode provides additional integrity support, but it is not compatible with older versions of Windows. If this is a removable drive that you're going to use on older version of Windows, you should choose Compatible mode. If this is a fixed drive or if this drive will only be used on devices running at least Windows 10 (Version 1511) or later, you should choose the new encryption mode New encryption mode (best for fixed drives on this device) 	×
÷	 Choose which encryption mode to use Windows 10 (Version 1511) introduces a new disk encryption mode (XTS-AES). This mode provides additional integrity support, but it is not compatible with older versions of Windows. If this is a removable drive that you're going to use on older version of Windows, you should choose Compatible mode. If this is a fixed drive or if this drive will only be used on devices running at least Windows 10 (Version 1511) or later, you should choose the new encryption mode New encryption mode (best for fixed drives on this device) 	×
~	 Choose which encryption mode to use Windows 10 (Version 1511) introduces a new disk encryption mode (XTS-AES). This mode provides additional integrity support, but it is not compatible with older versions of Windows. If this is a removable drive that you're going to use on older version of Windows, you should choose Compatible mode. If this is a fixed drive or if this drive will only be used on devices running at least Windows 10 (Version 1511) or later, you should choose the new encryption mode New encryption mode (best for fixed drives on this device) 	×
÷	 Choose which encryption mode to use Windows 10 (Version 1511) introduces a new disk encryption mode (XTS-AES). This mode provides additional integrity support, but it is not compatible with older versions of Windows. If this is a removable drive that you're going to use on older version of Windows, you should choose Compatible mode. If this is a fixed drive or if this drive will only be used on devices running at least Windows 10 (Version 1511) or later, you should choose the new encryption mode New encryption mode (best for fixed drives on this device) 	×

4. Click **Continue**.

		\times
←	Real BitLocker Drive Encryption (C:)	
	Are you ready to encrypt this drive?	
	Encryption might take a while depending on the size of the drive.	
	You can keep working while the drive is being encrypted, although your PC might run more slowly.	
	✓ <u>R</u> un BitLocker system check	
	The system check ensures that BitLocker can read the recovery and encryption keys correctly before encrypting the drive.	
	BitLocker will restart your computer before encrypting.	
	Note: This check might take a while, but is recommended to ensure that your selected unlock method works without requiring the recovery key.	ł
	<u>C</u> ontinue Cancel	

5. Restart the computer.

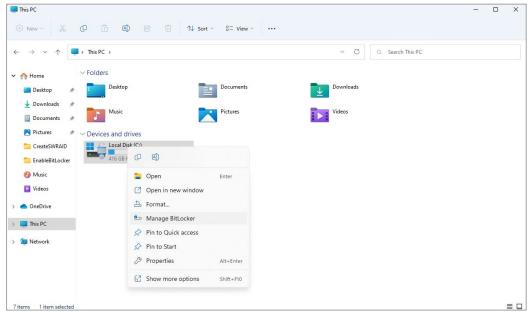
RitLocker Drive Encryption	×		
The computer must be restarted Restart now Restart later Manage BitLocker Manage BitLocker			

6. Wait for the encryption process to complete and then click Close.

RitLocker Drive Encryption					
R	Encrypting				
-	Drive C: 56.9% Completed				
		<u>C</u> lose			
Manag	e BitLocker				

Disabling the BitLocker

1. In the Windows Devices and drives, right-click on the drive and select Manage BitLocker.



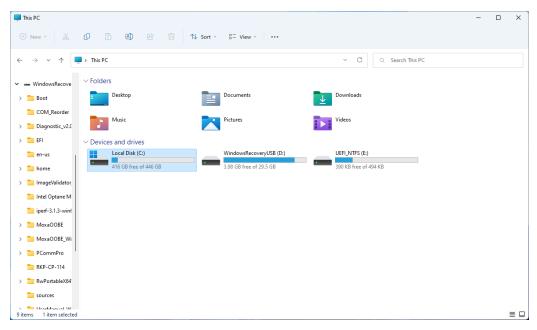
2. Click on Turn off BitLocker.

BitLocker Drive Encryption		-	
$\leftarrow \rightarrow \ \cdot \ \uparrow $	Control Panel > System and Security > BitLocker Drive Encryption ~ C		م
Control Panel Home	BitLocker Drive Encryption Help protect your files and folders from unauthorized access by protecting your drives with BitLocker.		
	For your security, some settings are managed by your system administrator.		
	Operating system drive		
	C: BitLocker on	^	
	Suspend protection Back up your recovery key Turn off BitLocker		
	Fixed data drives		
	Removable data drives - BitLocker To Go		
	WindowsRecoveryUSB (D:) BitLocker off	~	
See also			
TPM Administration			
Disk Management Privacy statement			

3. 1	Wait for the	e decryption	process to	complete and	click Close to	o exit the program.
------	--------------	--------------	------------	--------------	----------------	---------------------

BitLocker Drive Encry	ption	- 🗆 X
$\leftarrow \rightarrow \checkmark \uparrow$	> Control Panel > System and Security > BitLocker Drive Encryption	م
Control Panel Home	BitLocker Drive Encryption Help protect your files and folders from unauthorized access by protecting your drives with BitLocker.	0
	() For your security, some settings are managed by your system administrator.	
	Operating system drive	
	C: BitLocker on BitLocker Drive Encryption X Turn off BitLocker Your drive will be decrypted. This might take a long time, but you can keep using your PC during the decryption process.	^
	Fixed data drives	
	Removable data drives - BitLocker To Go	
	WindowsRecoveryUSB (D:) BitLocker off	~
See also		
🔶 Disk Management		
Privacy statement		
BitLocker Drive Encryp	otion	- 🗆 X
← → ~ ↑ 📕 >	Control Panel > System and Security > BitLocker Drive Encryption	Search Control Panel
Control Panel Home	Ditt a class Drive Forestein	0
	BitLocker Drive Encryption Help protect your files and folders from unauthorized access by protecting your drives with BitLocker.	
	Operating system	
	Windows (C:) Bit 🔫 Decryption of C: is complete.	$\overline{\bigcirc}$
	Close Manage BitLocker	
	Fixed data drives	
	Removable data drives - BitLocker To Go	
	D: BitLocker off	\odot
See also		
 IPM Administration Disk Management 		
Privacy statement		

4. Check the disk status after the decryption process is completed.



RAID is the acronym for **Redundant Array of Independent Disk** which indicates the use of combining multiple disks into one or more logical units for data redundancy, performance improvement, or both. This chapter describes the setup process for Intel® RAID (Intel® RST) and SW RAID.

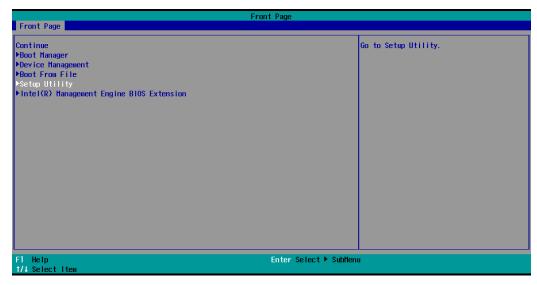


NOTE

Use hard disks of the same brand, same model, and same capacity to create a RAID for best performance.

Intel® RAID: Changing the RAID Mode

- 1. Power on the computer and press **F2** to enter the BIOS menu.
- 2. Select the **Setup Utility** option.



3. Select the **Chipset Configuration** option.

	Ins	ydeH20 Setup Utility	Rev. 5.
Main Advanced Secu	rity Power Boot Exit		
▶Boot Configuration ▶SATA Configuration ▶CPU Configuration >Chipset Configuration PCH-FW Configuration PCH-FW Configuration PCOnsole Redirection (▶S10 118786E		Enable/Di	sable Misc. Features
F1 Help Esc Exit	1/1 Select Item +/→ Select Item		Setup Defaults O Save and Exit

4. Select the $\ensuremath{\text{Map}}$ SATA Root Port under VMD and Enable this option.

Advanced	InsydeH20 Setup Utility	Rev. 5.0
Chipset Configuration		Map/UnMap this Root Port to VMD
Power ON after Power Failure Load Default After Cleaning RTC Battery	<0N> <enabled></enabled>	
Map this Root Port under VMD Root Port BDF details	<disabled> SATA Controller</disabled>	
DO-O Level DO-1 Level	<tigh> <tigh></tigh></tigh>	
	Map this Root Port under VMD Disabled Enabled	
F1 Help 1/1 Selec Esc Exit +/+ Selec		

5. Press F10 to save the settings and Exit, and then select Yes to save the settings.



Intel® RAID: Creating a RAID Disk in BIOS

NOTE

Only Disk storage 1 and storage 2 can create RAID in BIOS.

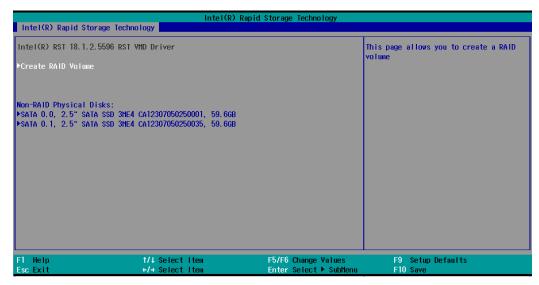
- 1. Power on the computer and press **F2** to enter the BIOS menu.
- 2. Select the **Device Management** option.

Fron	t Page
Front Page	
Continue ▶Boot Hanager ▶Device Hanagement ▶Boot From File ▶Setup Utility ▶Intel(R) Management Engine BlOS Extension	This selection will take you to the Device Manager
F1 Help 1/J Select Item	Enter Select 🕨 SubHenu

3. Select Intel® Rapid Storage Technology.

	Device Manager
Devices List ⊁Intel(R) Rapid Storage Technology	This formset allows the user to manage RAID volumes on the Intel(R) RAID Controller
Press ESC to exit.	
F1 Help Esc Exit	t/↓ Select Item Enter Select ⊨ SubHenu

4. Select Create RAID Volume.



5. Select the **RAID Level** option and then press **Enter** to select the raid level; for example, **RAID1 (Mirror)**.

Intel(R) Rapid Storage Technology				
Intel(R) Rapid Storage Techno				
Create RAID Volume			Select RAID Level	
Name: RAID Level:	<mark>Volume1</mark> <raido (str<="" th=""><th>ipe)></th><th></th></raido>	ipe)>		
Select Disks: SATA 0.0, 2.5" SATA SSD 3HE4 CA12307050250001, 59.66B SATA 0.1, 2.5" SATA SSD 3HE4 CA12307050250035, 59.66B	<>	RAID Level :		
Strip Size: Capacity (HB):	<16KB> [0]	RAIDO (Stripe) RAIDI (Mirror)		
▶Create Volume				
Select at least two disks				
F1 Help Esc Exit	1/↓ Select Item +/→ Select Item	F5/F6 Change Values Enter Select ► SubMenu	F9 Setup Defaults F10 Save	

Intel(R) Rapid Storage Technology				
Intel(R) Rapid Storage Techno	ology			
Create RAID Volume				Select RAID Level
Name: RAID Level:		Volume1 <raid1 (mirror)=""></raid1>		
Select Disks: SATA 0.0, 2.5" SATA SSD 3HE4 CA12307050250001, 59.66B SATA 0.1, 2.5" SATA SSD 3HE4 CA12307050250035, 59.66B		< >		
Capacity (MB):	1	[0]		
▶Create Volume				
Select two disks				
F1 Help Esc Exit	1/↓ Select I +/+ Select I		5/F6 Change Values inter Select ► SubMenu	F9 Setup Defaults F10 Save

6. Select the target disk.

Intel(R) Rapid Storage Technology				
				X - to Select Disk
Create KAID VOTUME				x - to select bisk
Name: RAID Level:		Volume1 <raid1 (mirror)=""></raid1>		
Select Disks:				
SATA 0.0, 2.5" SATA SSD 3ME4 CA12307050250001, 59.6GB				
SATA 0.1, 2.5" SATA SSD 3ME4 CA12307050250035, 59.6GB		<>		
Capacity (MB):		[0]		
▶Create Volume				
Select two disks				
	ALL 0-1+	14		
F1 Help Esc Exit	1/↓ Select +/→ Select		F5/F6 Change Values Enter Select ► SubMenu	F9 Setup Defaults F10 Save

7. Enter **X** and then press **Enter**.

	Intel(R)	Rapid Storage Technology	
Intel(R) Rapid Storage Techn	ology		
Create RAID Volume			X - to Select Disk
Name: RAID Level:	Volume1 <raid1 (mirr<="" td=""><td>ror)></td><td></td></raid1>	ror)>	
Select Disks: SATA 0.0, 2.5" SATA SSD 3HE4 CA12307050250001, 59.668 SATA 0.1, 2.5" SATA SSD 3HE4 CA12307050250035, 59.668			
Capacity (MB):	SATA U. U, 2.5 SATA	A SSD 3ME4 CA12307050250001, 59.	
▶Create Volume			
Select two disks			
F1 Help	1/↓ Select Item	F5/F6 Change Values	F9 Setup Defaults
Esc Exit	+/→ Select Item	Enter Select ▶ SubMenu	F10 Save

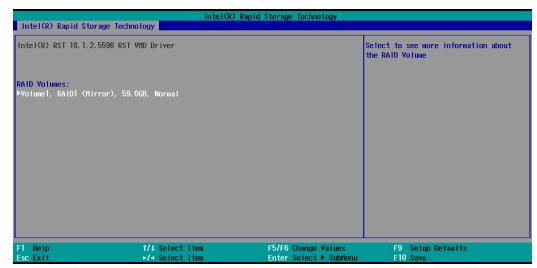
8. The disk is now marked with an \mathbf{X} next to it to indicate the selection.

		Intel(R) Rapid	Storage Technology	
Intel(R) Rapid Storage Techno	ology			
Create RAID Volume				X - to Select Disk
Name: RAID Level:		Volume1 <raid1 (mirror)=""></raid1>		
Select Disks: SATA 0.0, 2.5" SATA SSD 3HE4 CA12307050250001, 59.66B SATA 0.1, 2.5" SATA SSD 3HE4 CA12307050250035, 59.66B		<x></x>		
Capacity (MB):		[61055]		
⊧Create Volume				
F1 Help Esc Exit	1/↓ Select +/+ Select		F5/F6 Change Values Enter Select ► SubMenu	F9 Setup Defaults F10 Save

9. Select the **Create Volume** option.

Intel(R) Rapid Storage Technology				
Intel(R) Rapid Storage Techno	ology			
Create RAID Volume				Create a volume with the settings specified above
Name: RAID Level:		Volume1 <raid1 (mirror)=""></raid1>		
Select Disks:				
SATA 0.0, 2.5" SATA SSD 3ME4 CA12307050250001, 59.6GB		<x></x>		
SATA 0.1, 2.5" SATA SSD 3ME4 CA12307050250035, 59.66B		<x></x>		
Capacity (MB):		[61055]		
▶Create Volume				
F1 Help Esc Exit	1/1 Select +/+ Select		F5/F6 Change Values Enter Select ► SubMenu	F9 Setup Defaults F10 Save

10. A RAID volume is created based on the settings specified.



11. Press **F10** to save the settings.

Intel® RAID: Removing a RAID Volume From the BIOS

- 1. Power on the computer and press **F2** to enter the BIOS menu.
- 2. Select Device Management.

From	t Page
Front Page	
Continue +Boot Manager +Device Management +Boot From File +Administer Secure Boot +Setup Utility +Intel(R) Management Engine BlOS Extension	This selection will take you to the Device Manager
F1 Help 1/4 Select Item	Enter Select 🕨 SubMenu

3. Select the Intel® Rapid Storage Technology option.

Devic	e Hanager
Devices List ⊧Intel(R) Rapid Storage Technology	This formset allows the user to manage RAID volumes on the Intel(R) RAID Controller
Press ESC to exit.	
F1 Help Esc Exit	1/1 - Select Item Enter Select ⊨ SubMenu

4. Select the RAID volume that you want to remove.

	Intel(R)	Rapid Storage Technology	
Intel(R) Rapid Sto	rage Technology		
Intel(R) RST 18.1.2.	5596 RST VHD Driver		Select to see more information about the RAID Volume
RAID Volumes: ⊁Volume1, RAID1 (Hin	rror), 59.668, Normal		
F1 Help Esc Exit	1/1 Select Item +/+ Select Item	F5/F6 Change Values Enter Select ▶ SubMenu	F9 Setup Defaults F10 Save

5. Select **Delete** and then press **Enter**.

	Intel(R) Rapid	Storage Technology	
Intel(R) Rapid Storage Technology			
RAID VOLUME INFO			
Volume Actions ▶Delete			
Name: RAID Level: Strip Size: Size: Status: Bootable:	Volume1 RAID1 (Hirror) N/A 59.6GB Norma1 Yes		
▶SATA 0.0, 2.5" SATA SSD 3HE4 CA12 ▶SATA 0.1, 2.5" SATA SSD 3HE4 CA12			
	Select Item Select Item	F5/F6 Change Values Enter Select ► SubMenu	F9 Setup Defaults F10 Save

6. Select **Yes** to confirm and then press **Enter**.

Intel(R) Rapid Stor		Rapid Storage Technology	
IntelCR2 Rapid Stor Delete Delete the RAID volu ALL DATA ON VOLUME W >Yes >No			eleting a volume will reset the disks o non-RAID.
F1 Help Esc Exit	1/↓ Select Item +/→ Select Item	F5/F6 Change Values Enter Select ► SubHenu	F9 Setup Defaults F10 Save

7. Press **F10** to save the settings.

SW RAID: Creating the RAID 0 or RAID 1 From Disk Management

NOTE

Use hard disks of the same brand, same model, and same capacity to create a RAID for best performance.

1. Run **Disk Management**. Connecting the new disks and checking all the disk status are **Unallocated**. If the disk status is not **Unallocated**, you can right-click the target disk and select **Delete Volume**.

📅 Disk Managen	nent										-	×
Eile Action Vi	iew <u>H</u> elp											
🗢 🄿 📰 🛛	🖬 🗩 🖾											
Volume	Layout			atus	Capacity	Free Spa	% Free					
= (C:)		Basic NTF		ealthy (B		418.10 GB						
(Disk 0 partition (Disk 0 partition	n 1) Simple n 4) Simple	Basic Basic		ealthy (E ealthy (R		100 MB 625 MB	100 % 100 %					
- (Disk o partition	i 4) Simple	busic		contriy (run	0231010	0251010	100 /0					
- Disk 0												
Basic 447.12 GB	100.140		(C:) 446.41 GB N	TTC								
	100 MB											
Online	Healthy (EFI System	n Partition)	Healthy (Bo	virs oot, Page Fil	e, Crash Dump, I	Basic Data Par	tition)		625 MB Healthy	(Recovery Partit	ion)	
Online	Healthy (EFI Systen	n Partition)	Healthy (Bo	oot, Page Fil	e, Crash Dump, I	Basic Data Par	tition)		625 MB Healthy	(Recovery Partit	ion)	
	Healthy (EFI System	n Partition)	Healthy (Bo	oot, Page Fil	e, Crash Dump, I	Basic Data Par	tition)		625 MB Healthy	(Recovery Partit	ion)	
- Disk 1 Basic		n Partition)	Healthy (Bo	oot, Page Fil	e, Crash Dump, I	Basic Data Par	tition)		625 MB Healthy	(Recovery Partit	ion)	
Disk 1 Basic 238.46 GB	238.46 GB	n Partition)	Healthy (Bo	oot, Page Fil	e, Crash Dump, I	Basic Data Par	tition)	 	625 MB Healthy	(Recovery Partit	ion)	
- Disk 1 Basic		n Partition)	Healthy (Bo	virs oot, Page Fil	e, Crash Dump, I	Basic Data Par	tition)	 	625 MB Healthy	(Recovery Partit	ion)	
Disk 1 Basic 238.46 GB Online	238.46 GB	n Partition)	Healthy (Bo	virs pot, Page Fil	e, Crash Dump, I	Basic Data Par	tition)		625 MB Healthy	(Recovery Partit	ion)	
Disk 1 Basic 238.46 GB Online	238.46 GB	n Partition)	Healthy (Bo	virs bot, Page Fil	e, Crash Dump, I	Basic Data Par	tition)		625 MB Healthy	(Recovery Partit	ion)	
Disk 1 Basic 238.46 GB Online Disk 2 Basic 238.46 GB	238.46 GB Unallocated	n Partition)	Healthy (Bo	virs pot, Page Fil	e, Crash Dump, I	Basic Data Par	lition)		625 MB Healthy	(Recovery Partit	ion)	
Disk 1 Basic 238.46 GB Online Disk 2 Basic	238.46 GB Unallocated	n Partition)	Healthy (Bc	virs pot, Page Fil	e, Crash Dump, I	Basic Data Par	iition)		625 MB Healthy	(Recovery Partit	ion)	
Disk 1 Basic 238.46 GB Online Disk 2 Basic 238.46 GB	238.46 GB Unallocated	n Partition)	Healthy (Bc	VIFS bot, Page Fil	e, Crash Dump, I	Basic Data Par	ition)		625 MB Healthy	(Recovery Partit	ion)	
Disk 1 Basic 238.46 GB Online Disk 2 Basic 238.46 GB	238.46 GB Unallocated	n Partition)	Healthy (Bc	VIFS bot, Page Fil	e, Crash Dump, I	Basic Data Par	lition)		625 MB Healthy	(Recovery Partit	ion)	
Disk 1 Basic 238.46 GB Online Disk 2 Basic 238.46 GB	238.46 GB Unallocated	n Partition)	Healthy (Bo	VIFS bot, Page Fil	e, Crash Dump, I	Basic Data Par	lition)		625 MB Healthy	(Recovery Partit	ion)	
Disk 1 Basic 238.46 GB Online Disk 2 Basic 238.46 GB	238.46 GB Unallocated	n Partition)	Healthy (Bc	VIFS Soot, Page Fil	e, Crash Dump, I	Basic Data Par	lition)		625 MB Healthy	(Recovery Partit	ion)	
Disk 1 Basic 238.46 GB Online Disk 2 Basic 238.46 GB	238.46 GB Unallocated	n Partition)	Healthy (Bc	VIFS Soot, Page Fil	e, Crash Dump, I	Basic Data Par	ition)		625 MB Healthy	(Recovery Partit	ion)	
Disk 1 Basic 238,46 GB Online Disk 2 Basic 238,46 GB Online	238.46 GB Unallocated 238.46 GB Unallocated	n Partition)	Healthy (Bc	VIFS Doot, Page Fil	e, Cresh Dump, I	Basic Data Par	lition)		625 MB Healthy	(Recovery Partit	ion)	
Disk 1 Basic 238.46 GB Online Disk 2 Basic 238.46 GB	238.46 GB Unallocated 238.46 GB Unallocated	n Partition)	Healthy (Bc	Virs Page Fil	e, Cresh Dump, I	Basic Data Par	ittion)		625 MB Healthy	(Recovery Partit	ion)	

2. Right-click the target disk. Select the target volume type. For example: **RAID1(Mirror)**.

📅 Disk Managem	nent									-	×
File Action Vi	ew Help										
(= -) 📰 🛛	📷 🗩 🗹 🗉	1									
Volume	Layout	Туре	File System	Status	Capacity	Free Spa	% Free				
= (C:)	Simple		NTFS	Healthy (B		418.10 GB	94 %				
 (Disk 0 partition (Disk 0 partition) 		Basic Basic		Healthy (E Healthy (R		100 MB 625 MB	100 % 100 %				
Disk 0 Basic			(6)								_
447.12 GB	100 MB			GB NTFS					625 MB		
Online	Healthy (EFI Syst	em Partition)	Health	y (Boot, Page Fi	e, Crash Dump, B	asic Data Par	tition)		Healthy (Recovery Partition))	
- Disk 1 Basic	2-27/17/17/17/17/17/17/17/17/17/17/17/17/17										
238.46 GB Online	238.46 GB Unallocated										
					New Simple	Volume					
- Disk 2					New Spanne						
Basic					New Striped	Volume					
238.46 GB	238.46 GB				New Mirrore	d Volume					
					New RAID-5	Volume					
Online	Unallocated										
Online	Unallocated				Properties						
Online	Unallocated				Properties Help		_				
Online	Unallocated						_				
Online	Unallocated						_				
Unallocated											

3. To continue, click **Next**

File Action Vie						- 0) ×
(m 🔿 📰 🛛	w Help						
Volume (C:) (Disk 0 partition (Disk 0 partition)	Layout Ty Simple Ba D Simple Ba	pe File System isic NTFS isic	h Status Capacity Healthy (B 446.41 GB Healthy (E 100 MB Healthy (R 625 MB	Free Spa % Free 418.10 GB 94 % 100 MB 100 % 625 MB 100 %			
			New Mirrored Volume	Welcome to the New Mirrored Volume Wizard This wizard helps you create mirrored volumes on di	ks.		
— Disk 0 Basic 447.12 GB Online	100 MB Healthy (EFI System F	Partition)		A mimored volume duplicate your data on two diaks mimored volume fyou want to keep two separate co your information to prevent data loss. To continue, click Next.	. Create a pies of all	625 MB Healthy (Recovery Partition)	
Disk 1 Basic 238.46 GB Online	238.46 GB Unallocated						
Disk 2 Basic 238.46 GB Online	238.46 GB Unallocated			< Back Next >	Cancel		
Unallocated 📕	rimary partition						

4. Select the disks you want to use, and then click **Add**.

🖶 Disk Managen	nent										-	
File Action Vi												
		3 =1										
Volume	Layout	Туре	File System	Status	Capacity	Free Spa	9/ Eree	1				
(C:) (Disk 0 partition	Simple	Basic Basic	NTFS	Healthy (B Healthy (E	446.41 GB	418.10 GB 100 MB						
= (Disk 0 partition	4) Simple	Basic		Healthy (R	625 MB	625 MB	100 %					
				New Mirrored Vo	olume					×		
				Select Disks You can se	elect the disks and	I set the disk size	for this volum	e.				
				Select the	disks you want to	use, and then clic	sk Add.					
— Disk 0 Basic 447.12 GB Online	100 MB Healthy (EFI Sy	stem Partition	(C: 446 Hea	Available: Disk 2 2	44181 MB	Add > < Remov	/e	lected: sk 1 244181 M	B		625 MB Healthy (Recovery Partition)	
Disk 1 Basic 238.46 GB Online	238.46 GB Unallocated			Maximum a	e size in megabyt vailable space in l amount of space ir	MB:		4181				
Disk 2 Basic 238.46 GB Online	238.46 GB Unallocated					(< Back	Next >	Cancel			
Unallocated	Primary partition	n										

5. Click Next.

= 🐟 📰 👔	Layout	Type	File System	Status	Capacity	Free Spa	% Free	1				
(C:) (Disk 0 partition (Disk 0 partition	Simple I 1) Simple I	Basic Basic Basic Basic	NTFS	Healthy (B Healthy (E Healthy (R	446.41 GB 100 MB	418.10 GB 100 MB 625 MB						
				New Mirrored Vo Select Disks You can se	lume lect the disks and	set the disk size	for this volu	ıe.	:	<		
				Select the c	lisks you want to i	use, and then clic	k Add.					
Disk 0 Basic 147.12 GB Dnline	100 MB Healthy (EFI System	n Partition)	(C: 446 Hea	Available:		Add > < Remov	re	elected: isk 1 244181 ME isk 2 244181 ME			625 MB Healthy (Recovery Partition)	
Disk 1 Basic 238.46 GB Online	238.46 GB Unallocated			Maximum av	e size in megabyte railable space in N mount of space in	MB:	2	44181 44181 44181				
Disk 2 Basic 238.46 GB Dnline	238.46 GB Unallocated					(< Back	Next >	Cancel			

6. Assign the drive letter, click **Next**.

File Action File Action Volume (C:) (Disk 0 partit (Disk 0 partit	View Help View Help Image:	n Status Capacity Free Spa % Free Healthy (B 446.41 CB 418.10 CB 94 % Healthy (E 100 MB 100 % Healthy (R 625 MB 625 MB 100 %	×
		New Mirrored Volume X Assign Drive Letter or Path For easier access, you can assign a drive letter or drive path to your volume.	
Disk 0 Basic 447.12 GB Online	100 MB 44 Healthy (EFI System Partition)		625 MB Healthy (Recovery Partition)
Disk 1 Basic 238.46 GB Online	238.46 GB Unallocated		
Disk 2 Basic 238.46 GB Online	238.46 GB Unallocated	< Back Next > Cancel	
	<u>p</u>		

7. Format the volume using **Quick Format**, click **Next**.

New Mirrored Volume X Format Volume X Format Volume X To store data on this volume, you must format if net. Choose whether you want to format this volume, and if so, what settings you want to use. Basic Do not format this volume with the following settings: File Format this volume with the following settings: File File system: NTFS Volume Allocation unt size: Default Volume Perform a quick format State G66 Unallocated	Volume (C:) (Disk 0 partition (Disk 0 partition	Simple Basic NTF n 1) Simple Basic	System S	Status Capacity Free Span % Free Healthy (E 464.1 GB 413.10 GB 94 % Healthy (E 100 MB 100 MS 100 % Healthy (R 625 MB 625 MB 100 %		
Disk 0 Basic 447.12 cB Online Dotsk 1 Basic 238.46 GB 233.45 GB 233.45 GB 233.45 GB C C C C C File system NTFS C Alocation unit size: Default Volume label: New Volume C				Format Volume To store data on this volume, you must format it first.	×	
Disk 1 Basic 238.45 GB 238.45 GB Perform a quick format	Basic 447.12 GB Online		446	Format this volume with the following settings: File system: NTFS Allocation unit size: Default		
	Basic 238.46 GB			Perform a quick format		
→ Disk 2 Basic 232.46 GB Unallocated	Basic 238.46 GB			< Back Next > Cancel		

8. Checking the RAID1(Mirror) information. Click **Finish** to create the RAID1 volume.

☐ Disk Managen File Action ✓ → ✓ →		52									-	
Volume (C:) (Disk 0 partition (Disk 0 partition		Type Basic Basic Basic	File System NTFS	Status Healthy (B Healthy (E Healthy (R	100 MB	Free Spa 418.10 GB 100 MB 625 MB	% Free 94 % 100 % 100 %					
Disk 0 Basic 447.12 GB Online Disk 1 Basic 238.46 GB Online Disk 2	100 MB Healthy (EFI Sy 238.46 GB Unallocated	stem Partition	n) (C	New Mirrored V	olume	Completing Volume Wi You have success You selected the f Volume type: Min Dokin selected: D Drive letter or pat File system: NTF Allocation unit siz Volume label: the Cauck format: Yet	Zard sfully completed 1 following settings or Jisk 1, Disk 2 181 MB h. D: S se: Default w Volume s	he Wizard.	×	625 MB Healthy (Recove	ry Partition)	
Basic 238.46 GB Online	238.46 GB Unallocated					(< Back	Finish	Cancel			
Unallocated	Primary partition	n										

9. System will show the warning message about SW RAID volume, click ${\bf Yes}$ to continue.

📅 Disk Managen	nent											_	\times
File Action Vi	iew Help												
(= =) 🖬 🛛	🗖 🗩 🗹 🛛	8											
Volume	Layout	Туре	File System	Status	Capacity	Free Spa	% Free						
= (C:)	Simple	Basic	NTFS		446.41 GB	418.10 GB	94 %						_
 (Disk 0 partition (Disk 0 partition 		Basic Basic		Healthy (E. Healthy (R.		100 MB 625 MB	100 % 100 %						
- Disk 0 Basic 447.12 GB		Dasic		Disk	Management	in you selected	will convert the	selected basic disk(s) to dynar	× nic,				
447.12 GB Online	Healthy (EFI Sys	tem Partition	i) Health	GB NTF	any volume o	be able to star on the disk(s) (e you want to co	xcept the current	ting systems fro nt boot volume).	m	625 MB Healthy (Re	covery Partition)		
Basic 238.46 GB Online	238,46 GB Unallocated						Ves	No					
Disk 2 Basic 238.46 GB Online	238.46 GB Unallocated												
Unallocated	Primary partition												

10. Checking the RAID1(Mirror) information from disk management.

📅 Disk Management	- 0	×
Eile Action View Help		
Volume Layout Type File System Status Capacity Free Spa % Free (C:) Simple Basic NTF5 Healthy (B 446.41 GB 418.10 GB 94 % (Dick 0 partition 1) Simple Basic Healthy (B 100 MB 100 % (Dick 0 partition 4) Simple Basic Healthy (B 100 MB 100 % (Dick 0 partition 4) Simple Basic Healthy (B 100 MB 100 % (Dick 0 partition 4) Simple Basic Healthy (B 100 MB 100 % (Dick 0 partition 4) Simple Basic Healthy (B 238.46 GB 238.36 GB 100 %		
Disk 0 Basic Basic (C.) 447.12 GB 100 MB Healthy (EFI System Partition) Healthy (Boot, Page File, Crash Dump, Basic Data Partition)		
Disk 1 Dev Volume (D) 238.46 GB 238.46 GB NTFS Peak 1 Peak 2		
Disk 2 Dynamic 238.46 GB NTFS Online Healthy		1
Unallocated Primary partition Mirrored volume		

SW RAID: Creating the RAID 5 From Storage Spaces

1. Open Control Panel > System and Security, run Storage Spaces.

System and Security			_	\times
\leftarrow \rightarrow \checkmark \uparrow 📢 \diamond Control Panel \diamond S	vstem and Security >	~ ℃	Search Control Panel	P
Control Panel Home • System and Security Network and Internet	Security and Maintenance Review your computer's status and resolve issues Change User Account Control settings Troubleshoot common computer problems			^
Hardware and Sound	Windows Defender Firewall Check firewall status Allow an app through Windows Firewall			
User Accounts	System View amount of RAM and processor speed SAllow remote access Launch remote assistance See the name of this computer			
Clock and Region	Power Options Change battery settings Change what the power buttons do Change when the computer sleeps			
	File History Save backup copies of your files with File History Restore your files with File History			
Ä	Backup and Restore (Windows 7) Backup and Restore (Windows 7)			
	BitLocker Drive Encryption Manage BitLocker			
	Storage Spaces Manage Storage Spaces			
	Work Folders Manage Work Folders			
	Administrative Tools Free up disk space Defragment and optimize your drives Create and format hard disk partitions View event logs Schedule tasks			~

2. Click Create a new pool and storage space.

Storage Spaces			-	\times
$\leftarrow \ \ \rightarrow \ \ \circ \ \ \uparrow \ $ \bigotimes > Control Pan	el > System and Security > Storage Spaces	ٽ ~	Search Control Panel	P
Control Panel Home	Manage Storage Spaces			G
Create a new pool and storage space	Use Storage Spaces to save files to two or more drives to help protect you from a drive failure. Storage Spaces also lets you easily add more drives if you run low on capacity. If you don't see task links, click Change settings.			
	Create a new pool and storage space			
See also File History				
BitLocker Drive Encryption				

3. Select target drives to create a storage pool. RAID 5 requires at least three disks. Click **Create pool**.

😻 Create a storage pool		-	×
\leftarrow \rightarrow \checkmark \Uparrow Souther the second security \Rightarrow Storage Spaces \Rightarrow Create a storage pool	~ Ū	Search Control Panel	P
Select drives to create a storage pool			
Unformatted drives 📀			
256GB SATA Flash Drive Disk 3 Attached via RAID 238 GB			
256GB SATA Flash Drive Disk 2 Attached via RAID 238 GB			
256GB SATA Flash Drive Disk 1 Attached via RAID 238 GB			
INTEL SSDSC28B240G6 Disk 4			
Create pool Cancel			

4.	Changing the	Resiliency	type to	Parity. Cli	ick Create :	storage space.
----	--------------	-------------------	---------	-------------	---------------------	----------------

Section 2 Create a storage space		-	×
\leftarrow \rightarrow \checkmark \uparrow \circledast > Control Panel > System and Security > Storage Spaces > Create a storage space	ٽ ×	Search Control Panel	Q
Enter a name, resiliency type, and size for the storage space			^
Name: Storage space			
Drive letter: D: ~			
File system: NTF5 ~			
Resiliency			
Resiliency type: Parity ~			
 A parity storage space writes your data with parity information, helping to protect you from a single drive failure. A parity storage space requires at least three drives. 			
Size			
Total pool capacity: 713 GB			
Available pool capacity: 713 GB			
Size (maximum): 470 GE ~			
Including resiliency: 705 GB			~
Create storage space Cancel			

5. Checking the RAID 5 volume status.

ontrol Panel Home	✓ Storage spaces				
ontrol Panel Home reate a new pool and storage pace	Storage space (D:) Parity 470 GB Using 2.25 GB pool capacity	🥑 ок	View files Change Delete		
	Physical drives				
	256GB SATA Flash Drive SN: D011923210000000012 Attached via RAID 1.37% used Providing 238 GB pool capacity	🥑 ОК	Rename		
	256GB SATA Flash Drive SN: DO11923560000000018 Attached via RAID 0.53% used Providing 238 GB pool capacity	🔮 ок	Rename		
ee also	256GB SATA Flash Drive SN: D01192634000000006C Attached via RAID 1.37% used	🕑 ОК	Rename		
ile History itLocker Drive Encryption	Providing 238 GB pool capacity				

6. Checking the storage space from disk management.

	ement <u>V</u> iew <u>H</u> elp							_	×
		3 🔒 📴 🗉							
Volume	Layout	Туре	File System	Status	Capacity	Free Sp	% Free		
- (Disk 0 partitio	on 2) Simple	Basic		Healthy (E	100 MB	100 MB	100 %		
- Recovery	Simple	Basic	NTFS	Healthy (500 MB	179 MB	36 %		
 Storage space 		Basic	NTFS	Healthy (P		469.75 GB			
Windows (C:)	Simple	Basic	NTFS	Healthy (B	29.21 GB	14.00 GB	48 %		
Disk 0 Basic 29.80 GB Online	Recovery 500 MB NTFS	Partition)	100 MB Healthy (EFI	29.2	ndows (C:) 21 GB NTFS althy (Boot, Page	File Crack Dur	on Primany Pa		
	Healthy (OEM I				attiy (boot, rage	File, Clasif Dui	np, rinnary ra		
Disk 4 Basic 223.56 GB Online	Healthy (OEM I 223.56 GB Unallocated				inny (boot, rage		ny, rimary ra		
Disk 4 Basic 223.56 GB	223.56 GB	(D :)		,	iniy (000, rage				

SW RAID: Creating the RAID 10 From Storage Spaces

1. Run the **Disk Management**. Connecting the new disks and checking all the disk status are **Unallocated**. If the disk status is not **Unallocated**, you can right-click the target disk and select **Delete Volume**.

📅 Disk Manageme	ent											-	-	\times
<u>File</u> <u>Action</u> <u>Vie</u>	w <u>H</u> elp													
(n 🔿 👘 🖗	🖬 🏓 🗹	5												
Volume	Layout	Type	File System	Status	Capacity	Free Sp.	. % Free							
- (Disk 0 partition		Basic		Healthy (E		100 MB	100 %							
 Recovery Windows (C:) 	Simple Simple	Basic Basic	NTFS NTFS	Healthy (Healthy (B	500 MB	179 MB 13.94 G	36 % 48 %							
- mindows (c.)	Simple	busic	i i i i	recurry (o	23.21 00	15.54 0	40 /0							
- Disk 0														
Basic	Recovery						indows (C:)							
29.80 GB Online	500 MB NTFS Healthy (OEM			100 MB Healthy (F	FI System Partitio		9.21 GB NTFS	age File, Crash Du	ump Priman	Partition)				
	ficanti (och	in a dialony		incurry (c	ar system rurtur	511)	curry (boot, in	age rite, crash be	amp, rinnary	runnony				
				- P		P								_
Disk 1 Basic														
238.46 GB	238.46 GB													
Online	Unallocated													
Tisk 2														
Basic 238.46 GB	238.46 GB													
Online	Unallocated													
- Disk 3														
Basic														
238.46 GB	238.46 GB													
Online	Unallocated													
Tisk 4	-													
Basic 238.46 GB	238.46 GB													
Online	Unallocated													
]													
Unallocated	Primary partition	n												

2. Open Control Panel > System and Security, run Storage Spaces.

System and Security			_	\times
← → ∽ ↑ 🔦 > Control Panel >	System and Security >	ٽ ×	Search Control Panel	P
Appearance and Personalization Clock and Region Ease of Access	 Security and Maintenance Review your computer's status and resolve issues Change User Account Control settings Troubleshoot common computer problems Windows Defender Firewall Check firewall status Allow an app through Windows Firewall System View amount of RAM and processor speed Allow remote access Launch remote assistance See the name of this computer Power Options Change battery settings Change what the power buttons do Change when the computer sleeps File History Save backup copies of your files with File History Restore your files with File History Backup and Restore (Windows 7) Restore files from backup Bitlcocker Drive Encryption Manage Bittocker Storage Spaces Work Folders Manage Storage Spaces Work Folders Administrative Tools Free up dis space Defragment and optimize your drives Create and format hard disk partitions 			
_	View event logs Schedule tasks			~

3. Click Create a new pool and storage space.

Storage Spaces			_	×
→ * ↑ 🗊 > Control Pan	el > System and Security > Storage Spaces	ٽ ~	Search Control Panel	P
Control Panel Home	Manage Storage Spaces			(
Create a new pool and storage space	Use Storage Spaces to save files to two or more drives to help protect you from a drive failure. Storage Spaces also lets you easily add more drives if you run low on capacity. If you don't see task links, click Change settings.			
	Create a new pool and storage space			
- I				
See also				
File History				

4. RAID 10 requires at least four disks. Select **Disk 1** and **Disk 2** to create a storage pool. Click **Create a pool**.

😵 Create a storage pool		-	×
\leftarrow \rightarrow \checkmark \uparrow \circledast > Control Panel > System and Security > Storage Spaces > Create a storage pool	~ Ū	Search Control Panel	P
Select drives to create a storage pool			
Unformatted drives 📀			
256GB SATA Flash Drive Disk 3 Attached via RAID 238 GB			
256GB SATA Flash Drive Disk 2 Attached via RAID 238 GB			
256GB SATA Flash Drive Disk 1 Attached via RAID 238 GB			
256GB SATA Flash Drive Disk 4 Attached via RAID 238 GB			
Create pool Cancel			

5. Changing the **Resiliency type** to **Two-way mirror**. Click **Create storage space**. Follow the step 4 to run the same steps on **Disk 3** and **Disk 4**.

Freate a storage space		-	×
\leftarrow \rightarrow \checkmark \uparrow \circledast > Control Panel > System and Security > Storage Spaces > Create a storage space	v ت	Search Control Panel	,o
Enter a name, resiliency type, and size for the storage space			^
Name and drive letter			
Name: Storage space			
Drive letter: D: ~			
File system: NTFS ~			
Resiliency			
Resiliency type: Two-way mirror V			
A two-way mirror storage space writes two copies of your data, helping to protect you from a single drive failure. A two-way mirror storage space requires at least two drives.			
Size			
Total pool capacity: 475 GB			
Available pool capacity: 475 GB			
Size (maximum): 235 GE ~			
Including resiliency: 470 GB			~
Create storage space Cancel			

6. Checking the storage space status.

→ * ↑ I > Control Pane	I ➤ System and Security ➤ Storage Spaces			ٽ ~	Search Control Panel	
Control Panel Home						
Create a new pool and storage space	Using 6.00 GB of 475 GB pool capacity		Create a storage space Add drives Rename pool Optimize drive usage			
	✤ Storage spaces					
	Storage space (D:) Two-way mirror 235 GB Using 1.50 GB pool capacity	🕑 ОК	View files Change Delete			
	Physical drives					
	256GB SATA Flash Drive SN: D011923560000000018 Attached via RAID 1.37% used Providing 238 GB pool capacity	🥑 ок	Rename			
iee also	256GB SATA Flash Drive SN: D01192634000000006C Attached via RAID 1.37% used	🕑 ОК	Rename			
File History	Providing 238 GB pool capacity					

7. After the creating steps, the **Storage space (D:)** and **Storage space (E:)** will be shown on **Disk Management**.

File Action View Belp Volume Layout Type File System Status Capacity Free Sp. % Free (Disk 0 partition 2) Simple Basic Simple Basic NTFS Healthy (E. 100 MB 100 % Storage space (E.) Simple Basic NTFS Healthy (B. 234.87 GB 100 % Storage space (E.) Simple Basic NTFS Healthy (B. 234.87 GB 234.76 GB 100 % Storage space (E.) Simple Basic NTFS Healthy (B. 232.1 GB 13.94 GB 48 % To Disk 0 Network 100 MB 100 MB 100 MB 100 % Basic NTFS Healthy (EFI System Partition) 234.87 GB 100 MB To Disk 5 Storage space (D.) 234.87 GB 100 MB 100 MB 234.80 GB Storage space (D.) 234.87 GB 100 MB 100 MB To Disk 5 Healthy (PEI System Partition) Healthy (Boot, Page File, Crash Dump, Primary Partition)		
Jolume Layout Type File System Status Capacity Free Sp. % Free Oikk Oparition 2) Simple Basic Healthy (E. 100 MB 100 MB 100 % Elecovery Simple Basic NTFS Healthy (P. 234.87 GB 234.76 GB 100 % Storage space (L) Simple Basic NTFS Healthy (P. 234.87 GB 234.76 GB 100 % = Storage space (L) Simple Basic NTFS Healthy (P. 234.87 GB 234.76 GB 100 % = Windows (C) Simple Basic NTFS Healthy (P. 234.87 GB 234.76 GB 100 % = Basic NTFS Healthy (P. 234.87 GB 234.76 GB 100 % = Windows (C) Simple Basic NTFS Healthy (B. 292.1 GB 13.94 GB 48 % = Windows (C) Simple Basic NTFS Healthy (EFI System Partition) 29.21 GB NTFS Healthy (D2M Partition) I00 MB Healthy (EFI System Partition) 29.21 GB NTFS Healthy (Boot, Page File, Crash Dump, Primary Partition) = Disk S Storage space (D) 234.87 GB NTFS Healthy (Pimary Partition) Healthy (Pimary Partition)		
Obsk O Basic Healthy (E. 100 MB 100 MB 100 % • Recovery Simple Basic NTFS Healthy (P. 234.87 GB 234.76 GB 100 % • Storage space (L) Simple Basic NTFS Healthy (P. 234.87 GB 234.76 GB 100 % • Storage space (E) Simple Basic NTFS Healthy (P. 234.87 GB 234.76 GB 100 % • Windows (C) Simple Basic NTFS Healthy (P. 234.87 GB 234.76 GB 100 % • Windows (C) Simple Basic NTFS Healthy (P. 234.87 GB 234.76 GB 100 % • Windows (C) Simple Basic NTFS Healthy (P. 234.87 GB 234.76 GB 100 % • Basic NTFS Healthy (FEI System Partition) Windows (C) 29.21 GB NTFS Healthy (Boot, Page File, Crash Dump, Primary Partition) • Disk S Storage space (D) Starge space (D) Starge space (D) Starge space (D) 234.87 GB NTFS Healthy (Primary Partition) V V V V • Disk S Starge space (D) Starge space (D) Starge space (D) V <t< th=""><th></th><th></th></t<>		
[Diak O partition 2) Simple Basic Healthy (E. 100 MB 100 MB 100 %. Recovery Simple Basic NTFS Healthy (P. 234.87 GB 234.76 GB 100 %. Storage space (C) Simple Basic NTFS Healthy (P. 234.87 GB 234.76 GB 100 %. Storage space (C) Simple Basic NTFS Healthy (P. 234.87 GB 234.76 GB 100 %. Windows (C) Simple Basic NTFS Healthy (P. 234.87 GB 234.76 GB 100 %. Basic NTFS Healthy (P. 234.87 GB 234.76 GB 100 %. Windows (C) Simple Basic NTFS Healthy (B. 292.11 GB 13.94 GB 48 % Basic NTFS Healthy (EFI System Partition) Yindows (C) 29.21 G B NTFS Healthy (Boot, Page File, Crash Dump, Primary Partition) Flask 5 Basic Storage space (D) 224.87 GB NTFS Healthy (FI System Partition) Yindows (C) 224.88 GB Online Storage space (D) 244.87 GB NTFS Healthy (Pinary Partition) Healthy (EVI System Partition)		
Storage space (
Storage space (E) Simple Basic NTFS Healthy (P. 234.87 GB 234.76 GB 100 % Windows (C) Simple Basic NTFS Healthy (B. 292.1 GB 13.94 GB 48 % Basic 236.0 GB Source 100 MB Unidows (C.) 29.21 GB 13.94 GB 48 % Source Source NTFS Healthy (EFI System Partition) Windows (C.) 29.21 GB NTFS Polick 5 Healthy (OEM Partition) 100 MB Healthy (EFI System Partition) Windows (C.) 236 GB Storage space (D:) 23.487 GB NTFS Healthy (EFI System Partition) Windows (C.) 234.88 GB Storage space (D:) 23.487 GB NTFS Healthy (EFI System Partition) Windows (C.) 234.88 GB Storage space (D:) 23.487 GB NTFS Healthy (EFI System Partition) Windows (C.) 234.88 GB Contine Storage space (D:) 23.487 GB NTFS Healthy (EFI System Partition)		_
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Disk 0 Basic 2920 GB Windows (C:) 29.21 GB NTFS Online 100 MB Healthy (CEM Partition) Disk 5 Basic 234.87 GB NTFS Online Storage space (D:) 234.87 GB NTFS Online		
Basic Recovey 2980 GB 500 MB NTF5 Online 100 MB Healthy (EFI System Partition) 29.21 GB NTF5 Healthy (EFI System Partition) Healthy (Bot, Page File, Crash Dump, Primary Partition)		
Basic Recovey 2980 GB 500 MB NTF5 Online 100 MB Healthy (EFI System Partition) 29.21 GB NTF5 Healthy (EFI System Partition) Healthy (Bot, Page File, Crash Dump, Primary Partition)		
29.80 GB Son M8 NTFS Healthy (OEM Partition) 100 M8 Healthy (EFI System Partition) 29.21 GB NTFS Healthy (Boot, Page File, Crash Dump, Primary Partition) Disk 5 Basic 29.488 GB Online Storage space (D): 29.487 GB NTFS Healthy (Primary Partition)		
Online Healthy (OEM Partition) Healthy (EFI System Partition) Healthy (Boot, Page File, Crash Dump, Primary Partition) - Disk 5 Basic 234.87 GB NTFS Healthy (Primary Partition) Storage space (Dc) 234.87 GB NTFS Healthy (Primary Partition)		
Disk 5 Storage space (D-) 224.87 GB Storage space (D-) Pealthy (Primary Partition) Pealthy (Primary Partition)		
Basic Storage space (D) 23488 GB 22487 GB MTFS Online Healthy (Primary Partition)		
Online Healthy (Primary Partition)		
Disk 6		
Basic Storage space (E:)		
234.88 GB 234.87 GB NTFS		
Online Healthy (Primary Partition)		

8. Right-click the **Storage space (D:)**, select **Delete Volume**.

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File Action Vie	ew Help		(F-1)									
									1		 	
Volume	Layout	Type	File System	Status	Capacity	Free		% Free			 	
 (Disk 0 partition Recovery 	2) Simple Simple	Basic Basic	NTFS	Healthy (E Healthy (100 MB 500 MB	100 M		100 % 36 %				
- Storage space (.		Basic	NTFS	Healthy (P				100 %				
- Storage space (B		Basic	NTFS	Healthy (P				100 %				
- Windows (C:)	Simple	Basic	NTFS	Healthy (B	29.21 GB	13.94	GB	48 %				
- Disk 0	1											
Basic	Recovery							dows (C:)				
29.80 GB Online	500 MB NTFS			100 MB				GB NTFS		N N		
Offinite	Healthy (OEM	Partition)		Healthy (FI System Partit	ion)	Hear	thy (BOOt,	Page File, Crash Dump, Primary Parti	tion)		
Tisk 5												
Basic	Storage space							<u>Milana</u>				
234.88 GB Online	234.87 GB NT								Open			
Online	Healthy (Prim	ary Partition)							Explore			
									Mark Partition as Active			
Tisk 6									Change Drive Letter and Paths			_
Basic 234.88 GB	Storage space								Format			
234.88 GB Online	234.87 GB NT Healthy (Prim								Extend Volume			
	ricularly (rini	ary ruradon,							Shrink Volume			
								_	Add Mirror			
									Delete Volume			
									Properties			
									Help			
Unallocated	Primary partition	n										_

9. The warning messages will show on screen, click **Yes** to delete the volume.

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Eile Action View	Help											
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Volume	Layout	Type	File System	Status	Capacity	Free Sp	% Free					
- (Disk 0 partition 2)		Basic		Healthy (E		100 MB	100 %					
- Recovery	Simple	Basic	NTFS	Healthy (500 MB	179 MB	36 %					
- Storage space (Basic	NTFS	Healthy (P		234.76 G						
 Storage space (E:) Windows (C:) 	Simple Simple	Basic Basic	NTFS NTFS	Healthy (P Healthy (B		234.76 GI 13.94 GB						
- Windows (C:)	Simple	Dasic	INTES .	Healthy (b	29.21 00	15.94 GB	40 70					
- Disk 0											1	
	Recovery					W	ndows (C:)				1	
29.80 GB	500 MB NTFS			100 MB			21 GB NTFS					
Online	Healthy (OEM	Partition)		Healthy (EFI System Partitio	on) He	althy (Boot, Page	File, Crash Dum	p, Primary P	Partition)		
				ļ								
234.88 GB	Storage space 234.87 GB NTF Healthy (Prima	s		E	Delete simple volu	this volume wil	erase all data on it. leting. Do you want	Back up any data y	× ou			
- Disk 6					want to k	eep belore de	ieurig. Do you warn	to continue:				
	Storage space											
	234.87 GB NTF Healthy (Prima							Yes	No			
Oninte	Healthy (Prima	iry Partition)										
F												
Unallocated Pri	mary partition											

10. The storage space status will change to **Unallocated**, run the same steps on **Storage space (E:)**.

Volume La (Disk 0 partition 2) Si Recovery Si Storage space (Si	elp 🔀 📝 🔒										
Volume La (Disk 0 partition 2) Si Recovery Si Storage space (Si	🧯 🗙 🕑 🔒										
(Disk 0 partition 2) Si Recovery Si Storage space (Si		<u>,</u>									
Recovery Si Storage space (Si	Layout Type	e File System	Status C	apacity	Free Sp	% Free					
- Storage space (Si	Simple Basi				100 MB	100 %					
	Simple Basi				179 MB	36 %					
	Simple Basi		Healthy (P 2		234.76 GB						
Windows (C:) Si	Simple Basi	c NTFS	Healthy (B 29).21 GB	13.94 GB	48 %					
Disk 0 Basic	overy				Win	dows (C:)					
29.80 GB 500 I	MB NTFS Ithy (OEM Partitio	n)	100 MB Healthy (EFI S	ystem Partition)	29.2	1 GB NTFS	File, Crash Dump	Primary Partition)		
	.87 GB Illocated										
	mocated										
234.88 GB 234.8	rage space (E:) 87 GB NTFS Ilthy (Primary Parti	tion)									

11. All the storage space status are **Unallocated**.

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<u>File</u> <u>Action</u> <u>View</u>										
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Volume	Layout	Type	File System	Status	Capacity	Free Sp	% Free			
- (Disk 0 partition 2		Basic Basic	NTFS	Healthy (E	100 MB 500 MB	100 MB 179 MB	100 % 36 %			
 Recovery Windows (C:) 	Simple Simple	Basic	NTFS	Healthy (Healthy (B		179 MB 13.94 GB	36 % 48 %			
				, , , ,						
= Disk 0										
Basic	Recovery						ndows (C:)			
	500 MB NTF Healthy (OEM			100 MB Healthy (I	EFI System Partitio		21 GB NTFS althy (Boot, Page File, Crash Dump, Primary Par	tition)		
	, .				,		,,			
= Disk 5										_
Basic										_
	234.87 GB Unallocated									
	onanocated									
= Disk 6										
Basic										
	234.87 GB									
Online	Unallocated									
£										
Unallocated Pr	imany partitic	n								
	mary partitio									

12. Right-click on the **Disk 5**, select **New Striped Volume**.

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File Action View	Help														
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Volume	Layout	Type	File System	Status	Capacity	Free S	n	% Free	T				 	 	
- (Disk 0 partition 2		Basic	The system	Healthy (E		100 M		100 %					 	 	
- Recovery	Simple	Basic	NTFS	Healthy (500 MB	179 M		36 %							
Windows (C:)	Simple	Basic	NTFS	Healthy (B	29.21 GB	14.01	GB	48 %							
Disk 0 Basic 29.80 GB Online	Recovery 500 MB NTF Healthy (OEI			100 MB Healthy (I	EFI System Parti		29.21	ows (C:) GB NTFS hy (Boot, Page	File, Cr	rash Dump,	Primary P	artition)			
Disk 5 Basic 234.88 GB Online Disk 6	234.87 GB Unallocated					New S	panne	Volume d Volume Volume							
Basic						New N	lirrore	d Volume							
234.88 GB	234.87 GB					New R	AID-5	Volume							
Online	Unallocated					Proper	tion								
							ues								
						Help									
Unallocated P	rimary partitio	n													

13. To continue, click **Next**.

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File Action Vie												
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Volume	Layout	Type	File System	Status	Capacity	Free Sp	% Free					
- (Disk 0 partition		Basic		Healthy (E		100 MB	100 %					
 Recovery Windows (C:) 	Simple Simple	Basic Basic	NTFS NTFS	Healthy (Healthy (B	500 MB	179 MB 13.94 GB	36 % 48 %					
Windows (c.)	Jinple	busic	NIIJ	riculty (b.	23.21 00	13.54 60	40 /0					
			[New Striped Vo	lume				×]		
						Welcome	o the New	Striped Volume				
						Wizard						
Disk 0 Basic	Recovery					This wizard helps	you create stripe	d volumes on disks.				
29.80 GB Online	500 MB NTFS Healthy (OEM					A striped volume	stores data in stri ves you faster ao	oes on two or more disks. A ess to your data than a		tition)		
- Disk 5												
Basic 234.88 GB Online	234.87 GB Unallocated					To continue, click	Next.					
Tisk 6												
Basic 234.88 GB Online	234.87 GB Unallocated											
							< Back	Next > Cano	N	-	 	
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Unallocated	rimary partition	n										

14. Select the disks you want to use, and then click $\boldsymbol{\mathsf{Add}}.$

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File Action View														
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Volume	Layout	Type	File System	Status	Capacity	Free Sp	% Free							
- (Disk 0 partition 2		Basic		Healthy (E		100 MB	100 %							
 Recovery Windows (C:) 	Simple Simple	Basic Basic	NTFS NTFS	Healthy (Healthy (B	500 MB	179 MB 13.94 GB	36 % 48 %							
				,										
				New Striped Vo	lume					<				
				Select Disks You can s	select the disks and	d set the disk si	ze for this volu	ne.			1			
Disk 0 Basic	Recovery									_				
29.80 GB	500 MB NTR			Select the	disks you want to	use, and then (click Add.			1				
Online	Healthy (OE	M Partition)		Available:				Selected:		tition)				
					240509 MB	Ad		Disk 5 240509	MB					
Disk 5 Basic 234.88 GB Online	234.87 GB Unallocated					< <u>R</u> er < Re <u>m</u>	nove							
=				Total volur	me size in megabyl	tes (MB):		240509				,		
Disk 6 Basic				Maximum	available space in	MB:		240509						_
234.88 GB Online	234.87 GB Unallocated		_	Select the	amount of space i	n MB:		240509	•					
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Unallocated P	riman, partiti	on.												
	ninary partiti	on												

15. Click Next.

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Volume	Layout	Type	File System	Status	Capacity	Free Sp	% Free							
- (Disk 0 partition 2		Basic		Healthy (E		100 MB	100 %							
- Recovery	Simple	Basic	NTFS	Healthy (500 MB	179 MB	36 %							
Windows (C:)	Simple	Basic	NTFS	Healthy (B	29.21 GB	13.94 GB	48 %							
			_								-			
				New Striped Vo	lume					\times				
				Select Disks										
					elect the disks and :	set the disk size	o for this volu	me.						
= Disk 0														
Basic 29.80 GB	Recovery			Select the	disks you want to u	se, and then cl	ick Add.							
Online	500 MB NTFS Healthy (OEM P	Partition)									tition)			
				Available:				Selected:						
						Add			240509 MB					
Disk 5								Disk 6	240509 MB					
Basic 234.88 GB	234.87 GB					< <u>R</u> em	ove							
Online	Unallocated					< Remo	ve All							
						1								
- Disk 6				Total volur	ne size in megabyte	s (MB):		480298						
Basic				Maximum	available space in M	B:		240509						
234.88 GB	234.87 GB			Select the	amount of space in	MB:		240509		:				
Online	Unallocated													
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							< Back	N	ext >	Cancel				
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Unallocated P	rimary partition													
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16. Assign the drive letter, click **Next**.

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File Action View Help							
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Volume Layout	Type File System	Status Capacity	Free Sp % Free				
- (Disk 0 partition 2) Simple	Basic	Healthy (E 100 MB	100 MB 100 %				
Recovery Simple	Basic NTFS	Healthy (500 MB	179 MB 36 %				
- Windows (C:) Simple	Basic NTFS	Healthy (B 29.21 GB	13.94 GB 48 %				
		New Striped Volume			<		
					`		
		Assign Drive Letter or Path For easier access, you can a	ssign a drive letter or drive path to	your volume.			
- Disk 0			-	•			
Basic Recovery							
29.80 GB 500 MB NTFS Online Healthy (OEN					tition)		
		 Assign the following drive 	letter: D				
		O Mount in the following em	pty NTFS folder:				
Disk 5 Basic			Browse	**			
234.88 GB 234.87 GB		○ Do not assign a drive lette	er or drive path				
Online Unallocated							
- Disk 6							
Basic 234.88 GB 234.87 GB							
Online Unallocated							
					1		
			< <u>B</u> ack	Next > Cancel			
					1		
Unallocated Primary partitio	n						

17. Format the volume using the **Quick Format**, click **Next**.

File Action View Help	-															
Velume Velume Lawout Disk 0 particular Basic New Stiped Volume Velume New Stiped Volume Velume <th>📅 Disk Managemer</th> <th>nt</th> <th></th> <th>_</th> <th>×</th>	📅 Disk Managemer	nt													_	×
Volume Layout Type Field System Status Capacity Free Sp. % free Obt Opartion 2, Simple Batic NTFS Healthy (E. 100 MB 100 MB 100 % Mindown (C) Simple Batic NTFS Healthy (E. 2521 GB 13.94 GB 48 55 Outcome New Striped Volume Format Volume To Sae data on this volume, you must format it first. New Striped Volume New Striped Volume New Striped Volume Status Recomp To Sae data on this volume, you must format it first. New Striped Volume New Striped Volume New Striped Volume Status Recomp Coloses whether you want to format this volume, and first, what settings you want to use. New Striped Volume New Striped Volume New Striped Volume 294 OB Recomp Coloses whether you want to format this volume, and first, what settings you want to use. New Striped Volume New Striped Volume 294 OB Recomp Striped New You want to the Storing stripe: New You want to the Volume New You want to the Volume New You want to the Volume Striped S Read	File Action View	/ Help														
Diek of Simple Basic NTTS Healthy (E. 100 MB 100 MB 100 MS 100 MS excovery Simple Basic NTTS Healthy (E. 100 MB 100 MB 100 MS Windows (C) Simple Basic NTTS Healthy (E. 100 MB 100 MB 100 MS Windows (C) Simple Basic NTTS Healthy (E. 100 MB 100 MB 100 MS Windows (C) Simple Basic NTTS Healthy (E. 100 MB 100 MB 100 MS Posto Recovery Format Volume Year Stripped Volume Year Stripped Volume Year Stripped Volume Format Volume Format Volume To store date on the volume, you must format if feat. To store date on the volume volume is storing: Image: Store date on the volume volume is store with the following stating: Posto S Son B8 NTTS Healthy (CE M Parisition) Image: Store date on the volume volume is store with the following stating: Image: Store date on the volume is store with the following stating: Posto S Son B8 NTTS Paristion and store miter Image: Store date on the volume is store with the following stating: Image: Store date on the volume is store with the following stating: Posto S Son B8 NTTS Paristion and store miter Image: Store date on the volume is store with the following stating: Image: State GB Online 2548 GB Sone date on the volume is store with the following stating: Image: State GB Online 2548 GB Sone date on the volume is store with the following state on the volume is store with	(+ +) 🖬 👔	TT 🗩 🖌 🛙	2													
Diek of Simple Basic NTTS Healthy (E. 100 MB 100 MB 100 MS 100 MS excovery Simple Basic NTTS Healthy (E. 100 MB 100 MB 100 MS Windows (C) Simple Basic NTTS Healthy (E. 100 MB 100 MB 100 MS Windows (C) Simple Basic NTTS Healthy (E. 100 MB 100 MB 100 MS Windows (C) Simple Basic NTTS Healthy (E. 100 MB 100 MB 100 MS Posto Recovery Format Volume Year Stripped Volume Year Stripped Volume Year Stripped Volume Format Volume Format Volume To store date on the volume, you must format if feat. To store date on the volume volume is storing: Image: Store date on the volume volume is store with the following stating: Posto S Son B8 NTTS Healthy (CE M Parisition) Image: Store date on the volume volume is store with the following stating: Image: Store date on the volume is store with the following stating: Posto S Son B8 NTTS Paristion and store miter Image: Store date on the volume is store with the following stating: Image: Store date on the volume is store with the following stating: Posto S Son B8 NTTS Paristion and store miter Image: Store date on the volume is store with the following stating: Image: State GB Online 2548 GB Sone date on the volume is store with the following stating: Image: State GB Online 2548 GB Sone date on the volume is store with the following state on the volume is store with	Valuese	Launut	Tune	File Sustem	Chature	Canasity	Erec Co	0% Free	1							
Baccovery Simple Baic NTFS Healthy (File System												
Windows (C) Simple Baix NTS Healthy (B. 22.1 GB 13.94 GB 48 %				NTES												
Disk 0 Recovery 280 G8 Cohone whether you want to format it is volume, you must format it is volume. Disk 5 Cohone whether you want to format this volume, and if so, what settings you want to use. Disk 5 Cohone whether you want to format this volume. 23.48 G8 Call Disk 5 Cohone with the following settings: Value Format this volume Value Format this volume Value Value Z3.48 G8 Call Disk 5 Call Disk 6 Call Z3.48 G8 Call Disk 6 Call Disk 6 Call Disk 6 Call Z3.48 G8 Call Disk 6 Call <td></td>																
Format Volume To store data on this volume, you must format it fext. Basic 29.00 (BB NTF5 SOUTHER Artition) Choose whether you want to format this volume, and if so, what settings you want to use. Image: Point S Basic 23.487 GB Unallocated Choose whether you must format this volume is bei: New Volume Image: Point S 23.487 GB Unallocated 23.487 GB Unallocated Unallocated South and the following settings: Detault Image: Point S 23.487 GB Unallocated Perform a quick format! Image: Point S 23.487 GB Unallocated Perform a quick format! Image: Point S 23.487 GB Unallocated Perform a quick format! Image: Point S 23.487 GB Unallocated Perform a quick format! Image: Point S 23.487 GB Unallocated Perform a quick format! Image: Point S 23.487 GB Unallocated Perform a quick format! Image: Point S 23.487 GB Unallocated Perform a quick format! Image: Point S 23.487 GB Unallocated Perform a quick format! Image: Point S 23.487 GB Unallocated Perform a quick format! Image: Point S 23.487 GB Unallocated Perform a quick format! Image: Point S 23.487 GB Unallocated Perform a quick format! Image: Point S 23.487 GB Unallocated Perform a quick format! Image: Point S 23.487 GB Unallocate																
Image: Solution of the solution				[New Striped Vo	lume					×					
Disk 0 Basic 230. GB Online Disk 5 Basic 234.87 GB Unallocated																
Basic Online Choose whether you want to format this volume, and if so, what settings you want to use. Disk S 234.87 GB Unallocated Choose whether you want to format this volume, and if so, what settings you want to use. Disk S 234.87 GB Unallocated Choose whether you want to format this volume, and if so, what settings you want to use. Disk S 234.87 GB Unallocated Choose whether you want to format this volume, and if so, what settings you want to use. Disk S 234.87 GB Unallocated Choose whether you want to format this volume, and if so, what settings you want to use. Disk S 234.87 GB Unallocated Choose whether you want to format this volume, and folder compression Choose whether you want to format this volume Disk S 234.87 GB Unallocated Choose whether you want to folder compression Choose whether you want to folder compression Choose whether you want to get whether you want to folder compression Choose whether you want to folder compression Choose whether you want to get 					To store of	lata on this volume	, you must for	nat it first.								 _
25.80 GB S00 MB NTFS Healthy (OEM Parition) Image: Choose works to bomat the yourne, and # So, what settings you want to bose. Ition) Disk 5 Basic Online 234.87 GB Unallocated 234.87 GB Unallocated 234.87 GB Unallocated 234.87 GB Unallocated 234.87 GB Unallocated So Meas Settings: So Meas Setings: So Meas Setings: So Meas Set		-												_		
Online Healthy (OEM Partition)					Choose v	hether you want to	o format this vo	lume, and if so,	what settings yo	u want to use.						
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Disk 5 Basic 234.87 GB Unallocated Disk 5 Unallocated Volume label: Volume label: <tr< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr<>																
Basic Online					● For	mat this volume wit	h the following	settings:			=					
234.88 GB Online 234.87 GB Unallocated Ablocation unit size: Default Volume • Disk G Basic Online 234.87 GB Unallocated • New Volume • New Volume • Default • New Volume • New Volume • Unallocated • New Volume • New Volume • New Volume • New Volume • New Volume • New Volume • New Volume • New Volume • New Volume • New Volume • New Volume • New Volume • New Volume • New Volume • New Volume • New Volume • New Volume • New Volume • New Volume • New Volume		******				File system:	NTF	S	~		-		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
Online Unallocated Volume label: New Volume Baic 234.87 GB Image: Comparison Image: Comparison Sector Sector Sector Sector Sector Sector Sector Sector Sector Sector Sector Sector Sector		224 97 CP				Allocation unit size:	Defe		~							
Disk Basic 234,87 GB Unallocated Cancel Cancel																
Dick Back 234,87 GB Unallocated Enable file and folder compression Colline Colline Colline Colline Colline Colline Colline Colline Colline Colline Colline Colline Colline Colline Colline Colline Colline Colline Colline Colline Colline Colline						Volume label:	New	Volume								
Basic 234.87 GB Unallocated 	-					Perform a quick	format									provide sea
234.87 GB Unallocated < Reck Next> Cancel						Enable file and f	folder compress	sion								_
Online Unallocated CBack Next> Cancel		234.87 GB														
	Online															
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18. Checking the volume information. Click **Finish** to create the striped volume.

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File Action Vie															
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Volume	Layout	Type	File System	Status	Capacity	Free Sp	% Free								
- (Disk 0 partition		Basic		Healthy (E		100 MB	100 %								
- Recovery	Simple	Basic	NTFS	Healthy (500 MB	179 MB	36 %								
Windows (C:)	Simple	Basic	NTFS	Healthy (B	29.21 GB	13.94 GB	48 %								
				New Striped Vo	lume					×					
- Disk 0						Completin Wizard	g the New	Striped V	olume						
Basic	Recovery					You have succes	sfully completed	the Wizard.							
29.80 GB Online	500 MB NTF Healthy (OE)										tition)				
Onine	Healthy (OEr	M Partition)				You selected the Volume type: S		js:			ution)				
						Disks selected:	Disk 5, Disk 6		^						
- Disk 5						Volume size: 48 Drive letter or p	ath: D:					 			
Basic 234.88 GB	234.87 GB					File system: NT Allocation unit s	FS								
Online	Unallocated					Volume label: N Quick format: Y	lew Volume		~						
						To close this wize			· ·						
- Disk 6						TO CLOSE LITS WIZE	ilu, alak Fillish.			- 3					
Basic															
234.88 GB	234.87 GB														
Online	Unallocated														
	<u> </u>						< Back	Finish	Cancel						
							< Dack	Fillish	Cander						
Unallocated	Primary partitic	n													

19. System will show the warning messages about SW RAID volume, click **Yes** to continue.

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File Action View											
(* *) 🖬 👔	51 🗩 🗙				1		,				
Volume	Layout	Type	File System	Status	Capacity	Free Sp	% Free				
 (Disk 0 partition 2 Recovery) Simple Simple	Basic Basic	NTFS	Healthy (E Healthy (100 MB 500 MB	100 MB 179 MB	100 % 36 %				
Windows (C:)	Simple	Basic	NTFS	Healthy (13.94 GB	48 %				
Basic	Recovery					Wir	dows (C:)				
29.80 GB Online	500 MB NTFS Healthy (OEN			1 H Disk M	anagement					nary Partition)	
Disk 5 Basic 234.88 GB Online	234.87 GB Unallocated			4	dynamic disk(s). able to start insta	If you convert the alled operating s	convert the selected the disk(s) to dynamic, ystems from any volu e). Are you sure you	you will not me on the d	be		
= Disk 6							Yes		.		
Basic 234.88 GB Online	234.87 GB Unallocated										
Unallocated P	rimary partitio	n									

20. Checking the striped volume information from disk management.

📅 Disk Manageme	ent							_	×
File Action Vie	w <u>H</u> elp								
(+ +) 📰 👔	🖬 🗩 🖌 🖾	1							
Volume	Layout	Type	File System	Status	Capacity	Free Sp	% Free	 	
- (Disk 0 partition		Basic		Healthy (E	100 MB	100 MB	100 %		
- New Volume (D:		Dynamic	NTFS	Healthy	439.74 GB	439.62 G			
 Recovery Windows (C:) 	Simple Simple	Basic Basic	NTFS NTFS	Healthy (Healthy (B	500 MB	179 MB 13.94 GB	36 % 48 %		
- windows (C:)	Simple	Dasic	NIPS	Healthy (b	29.21 GB	15.94 GB	40 70		
- Disk 0	1								
Basic	Recovery					wi	ndows (C:)		
29.80 GB	500 MB NTFS			100 MB		29	21 GB NTFS		
Online	Healthy (OEM P	Partition)		Healthy (E	FI System Partitio	on) He	althy (Boot, Page File, Crash Dump, Primary Partition)		
Tisk 5									
	namic New Volume (D:)								
Dynamic 234.88 GB									
Dynamic 234.88 GB Online	New Volume (234.87 GB NTFS Healthy								
234.88 GB	234.87 GB NTFS								
234.88 GB Online	234.87 GB NTFS								
234.88 GB	234.87 GB NTFS Healthy	5							
234.88 GB Online Disk 6 Dynamic 234.88 GB	234.87 GB NTFS Healthy New Volume (234.87 GB NTFS	(D:)							
234.88 GB Online Disk 6 Dynamic	234.87 GB NTFS Healthy	(D:)							
234.88 GB Online Disk 6 Dynamic 234.88 GB	234.87 GB NTFS Healthy New Volume (234.87 GB NTFS	(D:)							
234.88 GB Online Disk 6 Dynamic 234.88 GB	234.87 GB NTFS Healthy New Volume (234.87 GB NTFS	(D:)							
234.88 GB Online Disk 6 Dynamic 234.88 GB	234.87 GB NTFS Healthy New Volume (234.87 GB NTFS	(D:)							
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234.88 GB Online Disk 6 Dynamic 234.88 GB	234.87 GB NTFS Healthy New Volume (234.87 GB NTFS	(D:)							
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234.88 GB Online Disk 6 Dynamic 234.88 GB	23487 GB NTFS Healthy New Yolume (23487 GB NTFS Healthy	(D-;) S	Jume						

5. Intel® Active Management Technology

Intel® AMT is part of the Intel vPro technology offering. Platforms equipped with Intel® AMT can be managed remotely, regardless of its power state or if it has a functioning OS or not. The Intel® Converged Security and Management Engine (Intel® CSME) powers the Intel® AMT system. As a component of the Intel vPro platform, Intel® AMT uses a number of elements in the Intel vPro platform architecture.

This chapter describes the setup process for the Intel® Active Management Technology. For more information about Intel® Active Management Technology:

https://www.intel.com/content/www/us/en/developer/articles/guide/getting-started-withactivemanagement-technology.html?wapkw=AMT

NOTE

Intel® AMT is not supported in models with Intel® Celeron® and Intel® Core™ i3 processors.

Turning on Intel® AMT on PC

- 1. Power on the computer and press **F2** to enter the BIOS menu.
- 2. Select Intel(R) Management Engine BIOS Extension.

Front Page				
Front Page				
Continue ⊨Boot Hanager ⊨Device Hanagement ⊨Boot From File ⊨Setup Utlity ⊨Intel(R) Hanagement Engine BlOS Extension	Go to Intel(R) Hanagement Engine B10S Extension (HEBx).			
F1 Help 1/1 Select Item	Enter Select 🕨 SubMenu			

3. Select MEBx Login.

	MEBx	
Intel(R) ME Password		MEBx Login
F10 Save and Exit F1 Help	Esc Exit 1/4 Select Item	Enter Select ► SubMenu

4. Type the Intel \mbox{ME} default password: "admin".

	MEBx	
Intel(R) ME Password		MEBx Login
	-	
	Intel(R) ME Password Enter Old Password:	
F10 Save and Exit	Esc Exit	Enter Select⊧SubMenu
F1 Help	t/↓ Select Item	

- 5. Type the new password. The new Intel® MEBX password must meet the following requirements for strong passwords:
 - a. Password Length: At least 8 characters, and no more than 32.
 - b. Password Complexity: Password must include the following:
 - i. At least one digit character ('0', '1', ... '9')
 - ii. At least one 7-bit ASCII non alphanumeric character (e.g., '!', '\$', ';'), but excluding ':', ',' and '''' characters.
 - iii. At least one lower-case letter ('a', 'b'...'z') and at least one upper case letter ('A','B'...'Z').

	Н	MEBx
Intel(R) ME Password		MEBx Login
	Intel(R)	HE Password
	Enter New Password: Enter New Password Again:	
F10 Save and Exit F1 Help	Esc Exit 1/4 Select Item	Enter Select ► SubHenu

6. Select **OK** to save and exit.

НЕВх				
Intel(R) ME Password		MEBx Login		
	Changes have been saved after p	press "Save and Exit"		
F10 Save and Exit F1 Help	Esc Exit 1/1 Select Item	Enter Select ⊨ SubHenu		

7. Select Intel(R) AMT Configuration.

	MEBx	
Intel(R) AMT ▶Intel(R) AMT Configuration Change ME Password	<enabled></enabled>	
F10 Save and Exit F1 Help	Esc Exit 1/4 Select Item	Enter Select ⊧ SubHenu

8. Select Network Setup.

MEBx				
▶Redirection features ▶User Consent Password Policy ▶Network Setup Network Access State ▶Remote Setup And Configuration ▶Power Control	<anytime> <network inactive=""></network></anytime>			
F10 Save and Exit F1 Help	Esc Exit 1/4 Select Item	Enter Select ⊨ SubHenu		

9. Select **TCP/IP Settings**.

	MEBx	
▶Intel(R) HE Network Name Settings ▶TCP/IP Settings		
F10 Save and Exit F1 Help	Esc Exit 1/1 Select Item	Enter Select ► SubHenu

10. Select Wired LAN IPV4 Configuration.

	MEBx	
▶₩ired LAN IPV4 Configuration		
F10 Save and Exit F1 Help	Esc Exit ↑/↓ Select Item	Enter Select ► SubHenu

11. Select **DHCP Mode** and **Disable** DHCP mode.

	MEBx	
DHCP Mode	<enabled></enabled>	Enable/Disable IPV4 DHCP Mode
	DHCP Hode Disabled Enabled	
F10 Save and Exit F1 Help	Esc Exit †/1 Select Item	Enter Select ⊨ SubHenu

12. Type the network settings for $\ensuremath{\mathsf{Intel}}\xspace$ Active Management Technology.

	MEBx	
DHCP Hode IPV4 Address Subnet Hask Address Default Gateway Address Preferred DNS Address Alternate DNS Address	C) i sab led> 0,0,0,0 255,255,255,0 0,0,0,0 0,0,0,0 0,0,0,0	IP address (e.g. 123.123.123.100)
F10 Save and Exit F1 Help	Esc Exit 1/4 Select Item	Enter Select ► SubHenu

13. Go back to the Intel(R) AMT Configuration page and select Network Activate Access > Network Active. Enter Y to continue.

	МЕВх	
▶Redirection features ▶User Consent Password Policy ▶Network Setup Network Access State ▶Remote Setup And Configuration ▶Power Control	< <mark>Anytime></mark> <network inactive=""></network>	Changes network state of ME. When disabling, it will also clear some other settings.
	Network Access State Network Active Network Inactive Full Unprovision	
F10 Save and Exit F1 Help	Esc Exit ↑/↓Select Item	Enter Select ⊨ SubMenu

14. Press F10 to Save and Exit.

Access the Intel® AMT From Website

1. Open the web browser and type the URL: **Intel® AMT IP Address:16993** (ex: 192.168.111.10:16993)

2. The browser would show the sign in message box. Type the **Username** and **Password** of Intel® AMT. The default username is **admin**.

-	access this site on required by https://192.168.111.10:16993	
Username	admin	
Password	······	
	Sign in Cancel	

3. After signing in, you can check the system status and hardware information of your managed device.

🗶 🗖 🗋 Intel®	Active Management Techr 🗲	+				-	- 0	>
← C 🛛 😣 No	ot secure https://192.	168.111.10:16993/index.htm?	Aø	☆ O	€]	Ē	~~ ···	
ntel [®] Active Mai	nagement Techno	logy				ir	ntel.	
vstem Status	System Status							
ardware Information System	Power	On						
Processor Memory	IP address	192.168.111.10						1
Disk	IPv6 address	Disabled						Ι.
Battery rent Log	System ID	Unknown						
emote Control	Date Time	0:09 am						
ower Policies etwork Settings		0.09 am						11
v6 Network Settings ystem Name Settings	Refresh							١.
ser Accounts leb Applications Links	Copyright €	2005-2023 Intel Corporation. All Rights Reserved. Intel® Acti	ve Management Technolog	y firmware version: '	16.1.30-build :	2361		-
								0
								ع 🚽

4. The Intel® AMT website provides the basic remote power control feature for the managed device. The advanced remote power control and the remote KVM feature please reference to next chapter.

🗶 🗖 🗋 Intel®	Active Management Techr × +
← C 😣 №	t secure https://192.168.111.10:16993/remote.htm
Intel [®] Active Man Computer:	nagement Technology
System Status Hardware Information System Processor Memory Disk Battery Event Log Remote Control Power Policies Network Settings IPv6 Network Settings System Name Settings User Accounts Web Applications Links	Remote Control Power state: On Send a command to this computer: Turn power off* Cycle power off and on* Reset* Select a boot option: Normal boot Boot from local CD/DVD drive Boot from local hard drive *Caution: These commands may cause user application data loss. *Caution: These commands may cause user application data loss.

5. The Event Manager deals with internal alerts that occur in both the host platform and the Intel® AMT device, regardless of the power state.

ి 🗖 🗋 Intel® A	Active Management Tech	- × +						-	0	×
	ot secure https://19	92.168.111.10	:16993/events.htm	A ₀	☆ CD	ζ'≡	Ē	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		Q
Intel [®] Active Man Computer:	nagement Tech	nology						inte	el.	Q
System Status	Event Log								- 1	-
Hardware Information System Processor Memory Disk Battery Event Log Remore Composition	Event Time 1 11/5/2024 0:07 am 11/5/2024 0:06 am 11/5/2024 0:03 am 11/5/2024	Source BIOS BIOS BIOS	Description Entering BIOS setup. Entering BIOS setup. Entering BIOS setup.							11 ()
Power Policies Network Settings IPv6 Network Settings System Name Settings User Accounts Web Applications Links	Options	lear Log								0
										+
										Ø
									-	\$ <u>3</u>

6. You can configure the managed device network settings from the website.

🗶 🗖 🗋 Intel® A	Active Management Techr 🗙 🕂					-		×
← C 😣 №	t secure https://192.168.111.10:16993/ip.htm	A»	☆	D 7	È (⊕	~~		Q
Intel [®] Active Man Computer:	agement Technology					inte	el. Î	Q
System Status Hardware Information	Network Settings						- 1	-
Hardware information System Processor Memory Disk Battery Event Log Remote Control Power Policies Network Settings IPv6 Network Settings User Accounts Web Applications Links	Configure the managed device network settings for this computer. Configure the managed device network settings for this computer. CPI/IP settings for wired connection Obtain IP settings automatically © Use the following IP settings: IP address: I92.168.111.10 Subnet mask: 255.255.255.0 Gateway address: Preferred DNS address: Alternate DNS address:							±ĭ © 0 √ √ +
	Submit							\$ \$

NOTE

You can also use AMT management tool to remotely manage devices.

6. Unified Write Filter

Unified Write Filter (UWF) is an optional feature that helps to protect your drives by intercepting and redirecting any writes to the drive (app installations, settings changes, saved data) to a virtual overlay. The virtual overlay is a temporary location that is usually cleared during a reboot or when a guest user logs off.

UWF provides a clean experience for thin clients and workspaces that have frequent guests, like school, library, or hotel computers. Guests can work, change settings, and install software. After the device reboots, the next guest receives a clean experience. It increases security and reliability for kiosks, IoT-embedded devices, or other devices where new apps are not expected to be frequently added.

This chapter describes how to use the Unified the Write Filter (UWF).

To use the UWF, you must first install the feature and enable it; the default is disable.

The first time you enable UWF on your device, UWF makes the following changes to your system to improve its performance:

- Paging files are disabled.
- System restore is disabled.
- SuperFetch is disabled.
- File indexing service is turned off.
- Fast boot is disabled.
- Defragmentation service is turned off.
- BCD setting bootstatuspolicy is set to ignoreallfailures.

After UWF is enabled, you can select a drive that you want to protect and start using UWF. UWF can help you manage PCs and devices remotely using WMI.

Turning on UWF on a Running PC

- Install UWF.
 - a. In the Windows Start window, type Turn Windows features on or off.
 - b. Open the Windows Features window and expand the Device Lockdown node.
 - c. Select **Unified Write Filter** and click **OK**.
 - d. Windows searches for the required files and displays a progress bar.

Once the files are found, Windows applies the changes. When the changes are complete, a message to this effect is displayed.

e. Click Close.

\overline Windows Features	-		×
Turn Windows features on or off			?
To turn a feature on, select its check box. To turn check box. A filled box means that only part of th			
🖃 🔳 🔂 Device Lockdown			^
Custom Logon			
Keyboard Filter			
Shell Launcher			
Unbranded Boot			
🗹 📊 Unified Write Filter			
Guarded Host			
🕀 🔲 Hyper-V			
Internet Explorer 11			
🗄 🔲 📕 Internet Information Services			
Internet Information Services Hostable	Web Core		
I Legacy Components			~
	ОК	Can	cel

• Enable the following filter as an Administrator:

 cmd uwfmgr filter enable

 Administrator: Command Prompt

 C:\Windows\system32>uwfmgr filter enable

 Unified Write Filter Configuration Utility version 10.0.17763

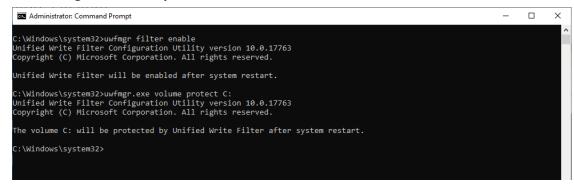
 Copyright (C) Microsoft Corporation. All rights reserved.

 Unified Write Filter will be enabled after system restart.

 C:\Windows\system32>_

• Enable write protection for a drive:

cmd uwfmgr.exe volume protect C:



- Restart your computer.
- Confirm that UWF is running:

cmd uwfmgr.exe get-config

an Administrator: Command Prompt	_	×
C:\windows\system32>uwfmgr.exe get-config Unified Write Filter Configuration Utility version 10.0.17763 Copyright (C) Microsoft Corporation. All rights reserved.		^
Current Session Settings		
FILTER SETTINGS		
Filter state: ON		
Pending commit: N/A		
Shutdown pending:No		
SERVICING SETTINGS		
Servicing State: OFF		
OVERLAY SETTINGS		
Type: RAM		
Maximum size: 1024 MB		
Warning Threshold: 512 MB		
Critical Threshold: 1024 MB		
Freespace Passthrough: OFF		
Persistent: OFF		
Reset Mode: N/A		
		~
		~

Installing UWF Using WMI

If you have already installed Windows on your computer and you do not want to use a provisioning package, you can configure UWF by using Windows Management Instrumentation (WMI) providers.

To turn on UWF using WMI, use the **UWF_Filter** function, specifically the **UWF_Filter.Enable** method in one of the following ways:

- Use the WMI providers directly in a PowerShell script
- Use the WMI providers directly in an application
- Use the command line tool, uwfmgr.exe

NOTE

You must restart your computer after you turn on or turn off UWF for the changes to take effect.

You can also change the settings after you turn on UWF. For example, you can move the page file location to an unprotected volume and re-enable paging files.



IMPORTANT!

If you add UWF to your image by using SMI settings in the unattend.xml file, turning on UWF only sets the bootstatuspolicy BCD setting and turns off the defragmentation service. You must manually turn off the other features and services if you want to increase the performance of UWF.

After the device is restarted, UWF maintains configuration settings for the current session in a registry. UWF automatically excludes these registry entries from its filter. Static configuration changes do not take effect until after a device restarts; the changes are saved in registry entries for use in the next session. Dynamic configuration changes occur immediately and persist after a device restarts. Moxa provide verified drivers for each device on official website. Please access the Moxa support page(<u>https://www.moxa.com/en/support</u>) and search for the device from the searching window (For Example: DA-820C).

		오 🖞
Home > Support		
Support		
Find product resources, request su	upport, or send in your product fo	r repair.
Select a Product Seri	es	
Select		
Q DA-820C		
DA-820C Series	Narranty	Resources
DA-820C-Ethernet Series Expansio	p <mark>air</mark>	Literature Library
Documentation		Moxa offers a wealth
Easily find drivers, software, and	Moxa's product repair service	of resources to help you find in-depth
documentation for a	centers provide	information on our
specific product.	quick, quality service with complete	products and solutions as well as
	with complete	solutions as well as

Form the **Software & Documentation** page filtered by **Driver** and download the driver package. The driver packages are categorized by OS version, with separate sections for **Peripheral** and **Expansion modules**.

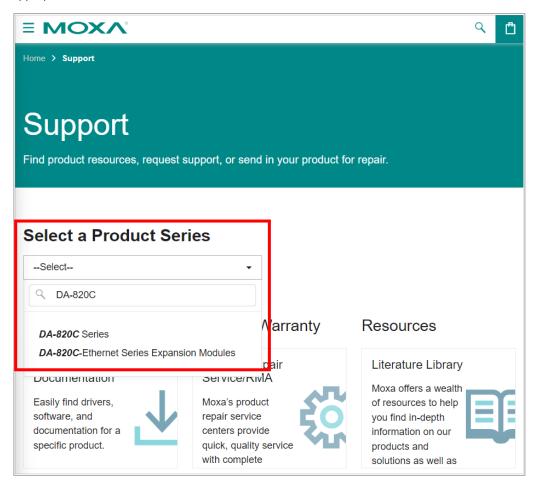
ited Software, Firmwar	e. an	d Drivers	1			
ILTER Operating System	-,		- All Driver(6)	Firmware(2) S	Software Package(7) Utility(6)	
NAME		TYPE	CHECKSUM	VERSION ~	OPERATING SYSTEM	RELEASE DATE ~
Driver for DA-820C Series Windows 10 IoT Enterprise LTSC 2019 and Windows Server 2019 peripherals) 1.2 GB	₹	Driver	SHA-512 🗎	v1.2	- Windows 10 IoT Enterprise LTSC 2019 - Windows Server 2019	Jul 18, 2024 Release notes
Driver for DA-820C Series Windows 10 IoT Enterprise TSC 2021 peripherals) I.9 GB	⊥	Driver	SHA-512 🗎	v1.1	- Windows 10 IoT Enterprise LTSC 2021	Jul 18, 2024 Release notes
Driver for DA-820C Series Windows 10 IoT Enterprise LTSC 2021 for DA-IRIG-B module) 3.2 MB	⊥	Driver	SHA-512 🚖	v1.0	- Windows 10 IoT Enterprise LTSC 2021	Apr 13, 2022 Release notes
Driver for DA-820C Series (Linux for DA-IRIG-B module) 10.8 KB	⊥	Driver	SHA-512 🗎	v1.3	- Debian 9.x	Jul 27, 2021 Release notes
Driver for DA-820C Series Windows 10 IoT Enterprise .TSC 2019/2021 and Mindows Server 2019 for DN- SP08 module) 2.5 MB	⊻	Driver	SHA-512 🗎	v1.0	- Windows 10 IoT Enterprise LTSC 2019 - Windows 10 IoT Enterprise LTSC 2021 - Windows Server 2019	Sep 02, 2019 Release notes
Driver for DA-820C Series Windows 10 IoT Enterprise LTSC 2019 and Windows Server 2019 for DN-LN04 module) 276.4 KB	⊥	Driver	SHA-512 🗎	v1.0	- Windows 10 IoT Enterprise LTSC 2019 - Windows Server 2019	Sep 02, 2019 Release notes

This chapter describes the usage of the following:

- Moxa IO Controller Utility
- Serial Interface Utility
- Moxa Sort Net Name Utility
- Moxa Power Temperature Detect Utility

Where to Find Windows Utility

The utilities will be preinstalled on the device if Moxa provides the Windows 11 OS. However, if you install Windows 11 independently, visit Moxa's support page (<u>https://www.moxa.com/en/support</u>) to download the required utilities. Simply search for your device model (e.g., DA-820C) on the support page to find the appropriate files.



From the Software & Documentation page. filter by Utility and download the installation *.zip file.

		ers			
ILTER Operating System		 All Driver(6) 	Firmware(2)	Software Package(7) Utility(6)	
NAME	TYPE	CHECKSUM	VERSION ~	OPERATING SYSTEM	RELEASE DATE ~
Utility for DA-820C Series (Windows 10 IoT Enterprise LTSC 2019 and Windows Server 2019) 3.3 MB	. Utility	SHA-512 🗎	v1.1	- Windows 10 IoT Enterprise LTSC 2019 - Windows Server 2019	Jul 18, 2024 Release notes
Utility for DA-820C Series (Windows 10 IoT Enterprise LTSC 2021) 3.3 MB	.↓. Utility	SHA-512 🗎	v1.1	- Windows 10 IoT Enterprise LTSC 2021	Jul 18, 2024 Release notes
Utility for DA-820C Series (Windows 10 IoT Enterprise LTSC 2021 for DA-PRP-HSR- I210 module) 2.3 MB	. Utility	SHA-512 📄	v1.5	- Windows 10 IoT Enterprise LTSC 2021	Feb 16, 2023 Release notes
Utility for DA-820C Series (DN-PRP-HSR-I210 module) 2.3 MB	. ⊥ Utility	SHA-512 🗎	v1.5	- Windows 10 IoT Enterprise LTSC 2021	Feb 16, 2023 Release notes
Utility for DA-820C Series (Linux for DA-PRP-HSR-I210 module) 15.6 KB	. Utility	SHA-512 🗎	v1.0	- Debian 9.x	Mar 22, 2021 Release notes
Utility for DA-820C Series (Linux for DA-IRIG-B module) 38.9 KB	.⊥ Utility	SHA-512 📄	v1.0	- Debian 9.x	Sep 02, 2019 Release notes

Dependent Packages

After completing the installation of Windows 11 LTSC 24H2 and the necessary drivers, you must install the required dependency packages to ensure the utility functions correctly. Use the following link to download and install the packages:

- Microsoft Visual C++ Redistributable: <u>https://learn.microsoft.com/en-us/cpp/windows/latest-supported-vc-redist?view=msvc-170</u>
- Microsoft .NET Framework 4.8: <u>https://support.microsoft.com/en-us/topic/microsoft-net-framework-4-8-offline-installer-for-windows-9d23f658-3b97-68ab-d013-aa3c3e7495e0</u>

Moxa IO Controller Utility

The Moxa IO Controller Utility is designed to manage the device's peripheral I/O and expansion module interfaces. This section provides an overview of how to use the utility, covering the following topics:

- Setting the DIO Status
- Setting the UART Mode
- Setting the Relay Status
- Setting the LED Status

Use the pre-installed utility or install the **MoxaIOControllerSetup utility** from the Moxa support page. To use the Moxa IO Controller utility, first install the utility and enable the utility to configure the DIO, UART, Relay and LED mode. After the installation process is complete, run the Windows command prompt as an Administrator and change the path to C:\Program Files\Moxa\Moxa IO Controller.



Setting the DIO Status

Run the **mx-dio-ctl --help** command to view instructions for using this utility. Follow the displayed guidelines to get or set the DIO status.

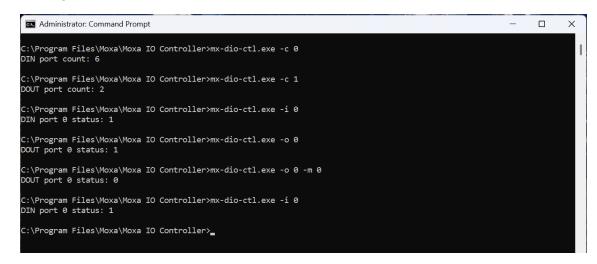


IMPORTANT!

The DIN and DOUT indices start at 0. Even though the console output starts at 1, the indices still start at 0.

Administrate	yr: Command Prompt	-		×			
mx-dio-ctl 2.	C:\Program Files\Moxa\Moxa IO Controller>mx-dio-ctl.exehelp mx-dio-ctl 2.0.2307.10000 Copyright (C) 2019 Moxa Inc. All rights reserved.						
-i	-i <#DIN index> (Start from 0)						
-0	-o <#DOUT index> (Start from 0)						
-m	-m <status> 0> LOW 1> HIGH</status>						
-c	-c <#DIN:0 /DOUT:1>						
help	Display this help screen.						
version	Display version information.						
C:\Program Files\Moxa\Moxa IO Controller>							

Example:



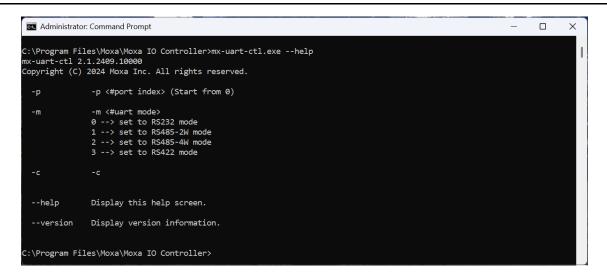
Setting the UART Mode

Run the **mx-uart-ctl** --**help** command to view instructions for using this utility. Follow the displayed guidelines to get or set the UART status.



IMPORTANT!

The UART index starts from 0. Even though the console output starts at 1, the index still starts at 0.



Example:



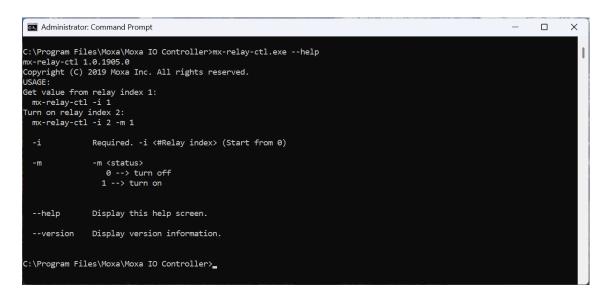
Setting the Relay Status

Run the **mx-relay-ctl --help** command to view instructions for using this utility. Follow the displayed guidelines to get or set the Relay status.



IMPORTANT!

The Relay index starts from 0. Even though the console output starts at 1, the index still starts at 0.



Example:



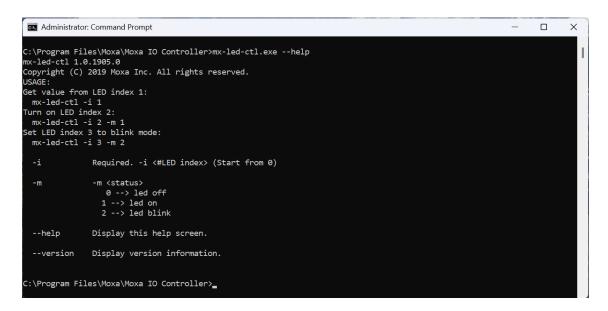
Setting the LED Status

Run the **mx-led-ctl --help** command to view instructions for using this utility. Follow the displayed guidelines to get or set the LED status.

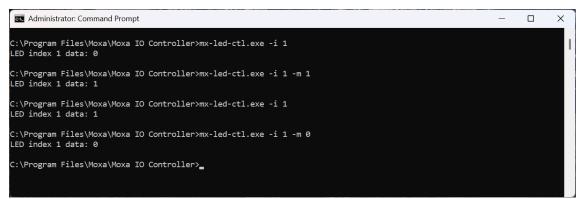


IMPORTANT!

The LED index starts from 0. Even though the console output starts at 1, the index still starts at 0.



Example:



Moxa Serial Interface Utility

This section explains how to use the Moxa Serial Interface Utility to configure the UART mode on your computer's serial interface.

Setting the Serial Port Mode

- 1. Use the preinstalled **SerialInterfaceSetup** utility or install it from the Moxa support page.
- 2. From the Windows Start menu, run the **Moxa Serial Interface utility**.

All ap	ps	< Back
D	Media Player	
C	Microsoft Edge	
	Microsoft News	
	Microsoft Store	
•	Microsoft To Do	
5	Movies & TV	
888	Moxa Serial Interface New	
Ν		
	Notepad	
0		
0	Office	
•	OneDrive	
Ρ		
•		
	moxa	Ċ

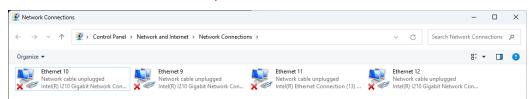
3. Select the target COM port and UART mode and click **Apply** to save the settings.

OM Port —		Status
COM	Mode	
COM1	RS-232	RS-232
COM2	RS-232	RS-485-2W
		RS-485-4W/ RS422
		no icc

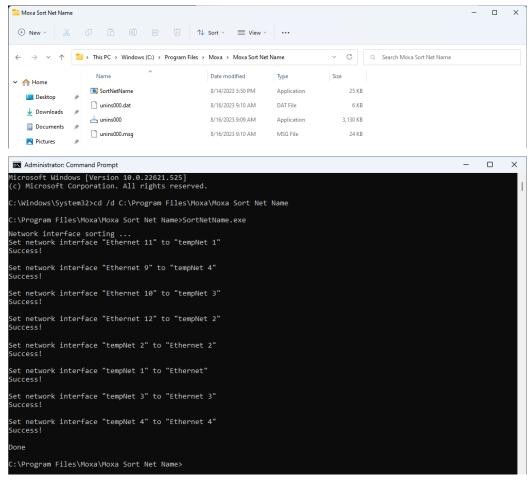
Moxa Sort Net Name Utility

This section explains how to use the **Moxa Sort Net Name** utility to rename Ethernet adapters. This utility helps map the physical LAN port order on the chassis to the corresponding adapter names in the system.

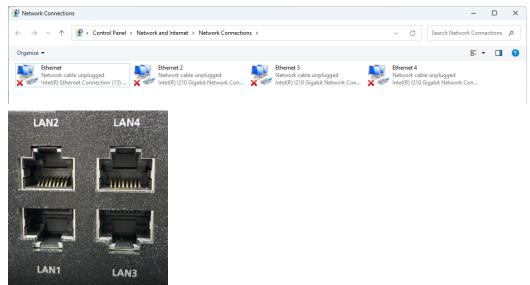
- 1. Use the pre-installed utility or install the MoxaSortNetName utility from the Moxa support page.
- 2. The initial order of network names may be random.



 Run the SortNetName.exe from C:\Program Files\Moxa\Moxa Sort Net Name as an Administrator.



4. Wait for the process to complete to rename Ethernet adapter. The order of the Ethernet adapter will correspond to the order of label (e.g., LAN 2 on chassis is mapping to Ethernet 2 in Windows).



Moxa Power Temperature Detect Utility

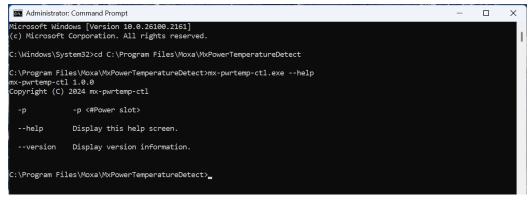
Moxa Power Temperature Detect Utility is developed to detect power temperature as a monitoring tool.

This section describes how to use the Moxa Power Temperature Detect Utility

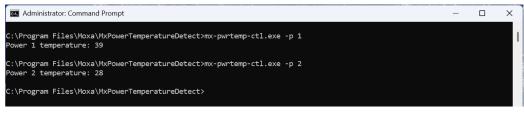
- 1. Use the pre-installed utility or install the **MxPowerTemperatureDetect** utility from the Moxa support page.
- 2. Run the **mx-pwrtemp-ctl.exe** from C:\Program Files\Moxa\MxPowerTemperatureDetect\ as an Administrator.

MxPowerTemperate	ureDetect × +				- 0	×
$\leftarrow \rightarrow \uparrow$	C 🖵 > … Program Files >	Moxa > MxPowerTempera	tureDetect >		Search MxPowerTemperatureDete	۹
🕀 New 🐇	0 🗂 🖉 🖻 🕅 🖴	Sort - View - ····			📑 Deta	ails
Home	Name	Date modified	Туре	Size		
Gallery	MxPowerTemperatureProfile	10/23/2024 1:35 AM	File folder			
	🚞 runtimes	10/23/2024 1:35 AM	File folder			
	🗟 CommandLine.dll	5/17/2022 4:11 PM	Application extension	220 KB		
🔄 Desktop 🛛 🖈	🗟 I2cQueryTool.dll	9/24/2024 2:41 PM	Application extension	235 KB		
🛓 Downloads 🖈	mx-pwrtemp-ctl.deps.json	9/24/2024 1:40 PM	JSON File	3 KB		
📔 Documents 🖈	🗟 mx-pwrtemp-ctl.dll	9/24/2024 1:40 PM	Application extension	11 KB		
🔀 Pictures 🛛 🖈	mx-pwrtemp-ctl	9/24/2024 2:41 PM	Application	146 KB		
🚱 Music 🔹 🖈	🗋 mx-pwrtemp-ctl.runtimeconfig.json	9/24/2024 1:40 PM	JSON File	1 KB		
🛂 Videos 🛛 🖈	Newtonsoft.Json.dll	3/8/2023 2:09 PM	Application extension	696 KB		
DA-820E	🗋 unins000.dat	10/23/2024 1:35 AM	DAT File	7 KB		
iperf3.9 64	പ്പം unins000	10/23/2024 1:35 AM	Application	3,130 KB		
0er355_04	🗋 unins000.msg	10/23/2024 1:35 AM	MSG File	24 KB		
12 items						

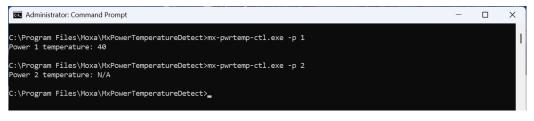
3. Type the **mx-pwrtemp-ctl.exe --help** command to see instructions on using this utility and follow the onscreen instructions to get the power temperature.



4. Example (two power installed):



Example (only one power installed, display N/A for empty power slot):



This chapter describes how to use the IO Control API.

Downloading the API

- 1. Access the Moxa support page: <u>https://www.moxa.com/en/support</u>
- 2. Select the product series (example: DA-820).

ΜΟΧΛ	Products	Solutions	Support	Contact How to Buy	t Us Partner Zone My Moxa About Us	Sign In
Home > Support						
Support Find product resources, reque	est support, or send	d in your product f	or repair.			
Select a Product S	Series]			
Q DA-β20						
DA-820 Series DA-820-Ethernet Series Expan	nsion Modules		anty ervice/RMA	Resourc	e Library	
Easily find drivers, software, an documentation for a specific product.	d J	Moxa's product rep. centers provide qui service with comple of your product.	sk, quality	to help yo informatio solutions	rs a wealth of resources u find in-depth n on our products and as well as the ies that drive them.	

3. Download the related files.

	DA-820 Series	
ALCORA DA. 553	3U 19-inch IEC 61850 native PRP/HSR computer with Intel® Celeron®, Core™ i3 or i7 CPU	
á <u>1 11 11 11 1</u>	GO TO PRODUCT PAGE	
Software & Documentation Product FAQs Security Advisories	5	
Related Software, Firmware, and Drivers		
FILTER Operating System - Al Driver	8) Firmware(2) Library(4) Utility(7)	
ХАМЕ ТҮГ	E VERSION V OPERATING SYSTEM	RELEASE DATE Y
Library for DA-820 Series (Windows 7 Example) July Libr	ary v1.0	Jan 29, 2015
Driver for DA-820 Series (Peripheral for Linux) Uriv 661.6 KB	er v1.0	Jan 22, 2015
Driver for DA-820 Series (Linux) Jriv 318.5 KB	er v1.0	Jan 22, 2015
	SHOW ALL 🗸	

mxdgio

The mxdgio library operates on the digital I/Os and consists of the following:

- GetDinCount
- GetDoutCount
- GetDinStatus
- GetDoutStatus
- SetDoutStatus

GetDinCount

<u>Syntax</u>

int GetDinCount();

Description

Get the numbers of a digital input port.

Parameters

N/A.

Return Value

The numbers of the digital input port.

Error codes

The following error codes can be retrieved using the **DIO_STATUS** function.

Name	Value	Meaning
LIB_INITIALIZE_FAIL	-1	The mxdgio library initialization failed. Cannot open json profile.

Name	Items
Header	mxdgio.h
Library	mxdgio.lib
DLL	mxdgio.dll
Profile	MxdgioProfile[ModelName].json

GetDoutCount

<u>Syntax</u>

int GetDoutCount();

Description

Get the numbers of a digital output port.

Parameters

N/A.

Return Value

The numbers of the digital output port.

Error codes

The following error codes can be retrieved using the **DIO_STATUS** function.

Name	Value	Meaning
LIB_INITIALIZE_FAIL	-1	The mxdgio library initialization failed. Cannot open json profile.

Requirements

Name	Items
Header	mxdgio.h
Library	mxdgio.lib
DLL	mxdgio.dll
Profile	MxdgioProfile[ModelName].json

GetDinStatus

<u>Syntax</u>

int GetDinStatus(int port);

Description

Gets the status of a digital input port.

Parameters

port: The index of the digital input port; starts at 0.

Return Value

The status of the digital input port; 0 for low and 1 for high.

Error codes

The following error codes can be retrieved using the **DIO_STATUS** function.

Name	Value	Meaning
LIB_INITIALIZE_FAIL	-1	The mxdgio library initialization failed. Cannot open json profile.
PORT_OUTOF_INDEX	-2	Target port index is out of range.

Name	Items
Header	mxdgio.h
Library	mxdgio.lib
DLL	mxdgio.dll
Profile	MxdgioProfile[ModelName].json

GetDoutStatus

<u>Syntax</u>

int GetDoutStatus(int port);

Description

Gets the status of a digital output port.

Parameters

port: The index of the digital output port; starts at 0.

Return Value

The status of the digital output port; 0 for low and 1 for high.

Error codes

The following error codes can be retrieved using the **DIO_STATUS** function.

Name	Value	Meaning
LIB_INITIALIZE_FAIL	-1	The mxdgio library initialization failed. Cannot open json profile.
PORT_OUTOF_INDEX	-2	Target port index is out of range.

Requirements

Name	Items
Header	mxdgio.h
Library	mxdgio.lib
DLL	mxdgio.dll
Profile	MxdgioProfile[ModelName].json

SetDoutStatus

<u>Syntax</u>

int SetDoutStatus(int port, int status);

Description

Sets the status of a digital output port.

Parameters

port: The index of the digital output port; starts at 0.

status: The status of the digital output port; 0 for low and 1 for high.

Return Value

Returns the value 0 if the digital output status is successfully set.

Error codes

The following error codes can be retrieved using the **DIO_STATUS** function.

Name	Value	Meaning
LIB_INITIALIZE_FAIL	-1	The mxdgio library initialization failed. Cannot open json profile.
PORT_OUTOF_INDEX	-2	Target port index is out of range.
SET_STATUS_ERR	-3	Status setting failed or is defined with a bad format.

Name	Items
Header	mxdgio.h
Library	mxdgio.lib
DLL	mxdgio.dll
Profile	MxdgioProfile[ModelName].json

mxsp

The mxsp library operates on the serial port and consists of the following:

- GetUartCount
- GetUartMode
- SetUartMode

GetUartCount

<u>Syntax</u>

int GetUartCount();

Description

Gets the numbers of the UART port.

Parameters

N/A

<u>Return Value</u>

The numbers of the UART port.

Error codes

The following error codes can be retrieved using the **UART_STATUS** function.

Name	Value	Meaning
LIB_INITIALIZE_FAIL	-1	The mxsp library initialization failed. Cannot open json profile.

Name	Items
Header	mxsp.h
Library	mxsp.lib
DLL	mxsp.dll
Profile	MxspProfile[ModelName].json

GetUartMode

<u>Syntax</u>

int GetUartMode(int port);

Description

Gets the status of the UART port.

Parameters

port: The index of the UART port; starts at 0.

Return Value

The mode of a UART interface; 0 for RS-232, 1 for RS-485-2W, 2 for RS-485-4W and 3 for RS-422.

Error codes

The following error codes can be retrieved using the **UART_STATUS** function.

Name	Value	Meaning
LIB_INITIALIZE_FAIL	-1	The mxsp library initialization failed. Cannot open json profile.
PORT_OUTOF_INDEX	-2	Target port index is out of range.

Requirements

Name	Items
Header	mxsp.h
Library	mxsp.lib
DLL	mxsp.dll
Profile	MxspProfile[ModelName].json

SetUartMode

<u>Syntax</u>

int SetUartMode(int port, int mode);

Description

Sets the status of the UART port.

Parameters

port: The index of the UART port; starts at 0.

mode: The mode of a UART interface; 0 for RS-232, 1 for RS-485-2W, 2 for RS-485-4W and 3 for RS-422.

Return Value

Returns 0 if the UART mode is successfully set.

Error codes

The following error codes can be retrieved using the **UART_STATUS** function.

Name	Value	Meaning
LIB_INITIALIZE_FAIL	-1	The mxsp library initialization failed. Cannot open json profile.
PORT_OUTOF_INDEX	-2	Target port index is out of range.
SET_STATUS_ERR	-3	Status setting failed or is defined with a bad format.
NOT_SUPPORT_MODE	-4	Target mode is not supported for this port.

Name	Items
Header	mxsp.h
Library	mxsp.lib
DLL	mxsp.dll
Profile	MxspProfile[ModelName].json

mxrelay

The mxrelay library operates on the relay output and consists of the following:

- GetRelayData
- SetRelayData

GetRelayData

<u>Syntax</u>

int GetRelayData(int port);

Description

Gets the status of the relay output port.

Parameters

port: The index of the relay output port; starts at 0.

Return Value

The status of a relay output port; 0 for OFF, 1 for ON.

Error codes

The following error codes can be retrieved by the **RELAY_STATUS** function.

Name	Value	Meaning
LIB_INITIALIZE_FAIL	-1	The mxrelay library initialization failed. Cannot open json profile.
PORT_OUTOF_INDEX	-2	Target port index is out of range.

Name	Items
Header	mxrelay.h
Library	mxrelay.lib
DLL	mxrelay.dll
Profile	MxrelayProfile[ModelName].json

SetRelayData

<u>Syntax</u>

int SetRelayData(int port, int status);

Description

Sets the status of the relay output port.

Parameters

port: The index of the relay output port; starts at 0.

status: The status of a relay output; 0 for OFF, 1 for ON.

Return Value

Returns 0 if the status of the relay output is successfully set.

Error codes

The following error codes can be retrieved by the **RELAY_STATUS** function.

Name	Value	Meaning
LIB_INITIALIZE_FAIL	-1	The mxrelay library initialization failed. Cannot open json profile.
PORT_OUTOF_INDEX	-2	Target port index is out of range.
SET_STATUS_ERR	-3	Status setting failed or is defined with a bad format.

Name	Items
Header	mxrelay.h
Library	mxrelay.lib
DLL	mxrelay.dll
Profile	MxrelayProfile[ModelName].json

mxled

The mxled library operates on the relay output and consists of the following:

- GetLedData
- SetLedData

GetLedData

<u>Syntax</u>

int GetLedData(int port);

Description

Gets the status of the LED port.

Parameters

port: The index of the LED port; starts at 0.

Return Value

The status of a LED port; 0 for OFF, 1 for ON.

Error codes

The following error codes can be retrieved by the **LED_STATUS** function.

Name	Value	Meaning
LIB_INITIALIZE_FAIL	-1	The mxled library initialization failed. Cannot open json profile.
PORT_OUTOF_INDEX	-2	Target port index is out of range.

Name	Items
Header	mxled.h
Library	mxled.lib
DLL	mxled.dll
Profile	MxledProfile[ModelName].json

SetLedData

<u>Syntax</u>

int SetLedData(int port, int status);

Description

Sets the status of the LED port.

Parameters

port: The index of the LED port; starts at 0.

status: The status of the LED; 0 for OFF, 1 for ON, and 2 for blinking.

Return Value

Returns 0 if the LED status is set successfully.

Error codes

The following error codes can be retrieved by the **LED_STATUS** function.

Name	Value	Meaning
LIB_INITIALIZE_FAIL	-1	The mxled library initialization failed. Cannot open json profile.
PORT_OUTOF_INDEX	-2	Target port index is out of range.
SET_STATUS_ERR	-3	Status setting failed or is defined with a bad format.

Name	Items
Header	mxled.h
Library	mxled.lib
DLL	mxled.dll
Profile	MxledProfile[ModelName].json

mxwdg

The mxwdg library operates on the watchdog and consists of the following:

- mxwdg_open
- mxwdg_refresh
- mxwdg_close

mxwdg_open

<u>Syntax</u>

PVOID mxwdg open(unsigned long time);

Description

Initializes the watchdog timer.

Parameters

time: The interval at which the watchdog timer is refreshed; the unit is seconds.

Return Value

Returns the pointer to the watchdog handle; returns -1 on failure to initialize the watchdog timer.

<u>Requirements</u>				
Name	Items			
Header	mxwdg.h			
Library	mxwdg.lib			
DLL	mxwdg.dll			

mxwdg_refresh

<u>Syntax</u>

int mxwdg_refresh(PVOID fd);

Description

Refreshes the watchdog timer.

Parameters

fd: The handle of the watchdog timer.

<u>Return Value</u>

Returns 0 on success; otherwise, the function has failed.

Name	Items
Header	mxwdg.h
Library	mxwdg.lib
DLL	mxwdg.dll

mxwdg_close

<u>Syntax</u>

void mxwdg_close(PVOID fd);

Description

Disables the watchdog timer.

Parameters

fd: The handle of the watchdog timer.

<u>Return Value</u>

This function does not return a value.

Name	Items
Header	mxwdg.h
Library	mxwdg.lib
DLL	mxwdg.dll

This chapter describes the usage of the following for system backup and restoration.

WindowsRecovery

WindowsRecovery

WindowsRecovery is an OS image backup and restore program for system deployment, backup, and recovery. You will first need to create a WindowsRecovery USB disk. This WindowsRecovery disk can only be used to boot a **UEFI BIOS** machine. This chapter describes the setup process of the Windows Recovery function.

Preparing the USB device

1. Contact a Moxa technical staff and get the required file.

WindowsRecoveryUtility_V1.2 ×	+				
\leftarrow \rightarrow \uparrow C \square	> D\	/D_ROM (D:) > WindowsRecoveryUtility_V1.	2		
⊕ New - → □ □	(Ā)	🖻 🗎 🏷 Sort -> 🗮 View ->			
A Home		Name	Date modified	Туре	Size
R Gallery		BuildWindowsRecoveryUSB_V1.2	11/15/2023 2:33 PM	Application	66 KB
,		S Microsoft.Wim.dll	4/10/2019 3:31 PM	Application extension	37 KB
Desktop	*	S mxUsbFormatLib.dll	11/15/2023 2:33 PM	Application extension	2,661 KB
Desktop	7	👜 WindowsRecovery	12/22/2020 11:16 AM	Microsoft Edge PDF	2,218 KB
🛓 Downloads	*	WindowsRecovery_V1.7_Build_24041217.wim	10/18/2024 4:56 PM	WIM File	1,376,007 KB
Documents	*				
Z Pictures	*				

2. Run the BuildWindowsRecoveryUSB_V1.2.0.exe.

Select USB and	WinPE image			
USB Drive:				
SanDisk Cruzer	Glide 3.0 USB Devic	e (E:) [32 GB]		~
Windows Docovo	ny Filo:			
Windows Recove	ry File:			
Windows Recove	ry File:			

3. Select the USB drive to format.

🖳 BuildRecoveryUSB	_	×
Select USB and WinPE image		
USB Drive:		
SanDisk Cruzer Glide 3.0 USB Device (E:) [32 GB]		~
TOSHIBA TransMemory USB Device (D:) [16 GB] SanDisk Cruzer Glide 3.0 USB Device (E:) [32 GB]		
Start Cancel		

4. Click ... to select .wim file from the folder.

Select USB and WinPE USB Drive: SanDisk Cruzer Glide 3 Windows Recovery File	3.0 USB Device (E:) [32 GB]		~	
SanDisk Cruzer Glide 3			~	
			~	
Windows Recovery File				
	Start Cancel			
ose the WindowsRecovery file				
→ < ↑ [□] · [VVD_ROM (D:) > WindowsRecoveryUtility_V	/1.2 ~ (Search Windo	wsRecoveryU ,
rganize 🔻 New folder				≣ • □ (
A Home	Name	Date modified	Туре	Size
C Gallery	WindowsRecovery_V1.7_Build_24041217	10/18/2024 4:56 PM	WIM File	1,376,007 KB

5. Click **Start** and make sure the selected USB can be formatted. Click **Yes** to start creating the recovery USB.

🖶 BuildRecoveryUSB	-	×
Select USB and WinPE image		
USB Drive:		
SanDisk Cruzer Glide 3.0 USB Device (E:) [32 GB]		\sim
Windows Recovery File:		
veryUtility_V1.2\WindowsRecovery_V1.7_Build_24041217	7.wim	
Start Cancel		

6. Wait for the process to finish. The program will format the USB device and create a UEFI bootable volume and a WinPE volume. You may see additional windows about folder information; do not close these. You can close the windows after the process finishes.

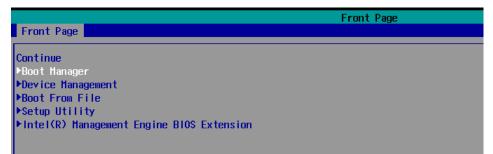
_		
	-	- 0

7. To create a recovery USB disk with the Windows 11 image, copy the **os_image_ModelName** directory to the **\home\partimag** folder in the USB drive.

👝 🖓 <mark> ,</mark> 🖵		Manage	WindowsRecoveryUSB (F:)					- 0	×
	View	Drive Tools							~ 🕐
		veryUSB (F:) >				√ ē	Search Window	/sRecoveryUSB	
SnmpWalk	^	Name	^	Date modified	Туре		Size		
System32		Boot		12/11/2020 3:28 PM	File folder				
> 💻 This PC		EFI		12/11/2020 3:32 PM	File folder				
V UEFI_NTFS (G:)	н.	en-us		11/13/2020 2:49 PM 11/10/2020 11:30	File folder File folder				
> 📙 EFI		sources		11/10/2020 9:35 AM	File folder				
✓ → WindowsRecoveryUSB (F:)		📄 bootmgr.efi		3/18/2019 3:47 PM	EFI File		1,475 KB		
> Boot									
> EFI									
en-us	\sim								
6 items									
									~
Image: Image								- 🗆	×
	(i.e								
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		eryUSB (F:) > hor	me > partimag >			~ Ū	Search partima	ag	~ ? ,0
		eryUSB (F:) > hor Name	me > partimag >	Date modified	Туре	ٽ ~	Search partima	ag	
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 ← → ✓ ↑ → Window This PC UEFLNTFS (G:) EFI WindowsRecoveryUSB (F:) Boot EFI en-us 		Name	^					ng	

Booting From the USB Disk

1. Turn on the computer and press **F2** when you hear the beep sound to enter the BIOS setup menu, select **Boot Manager** and press **Enter** to continue.



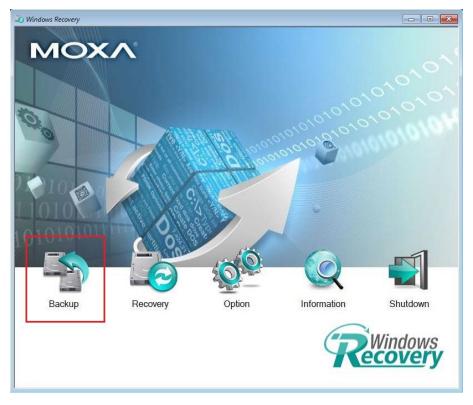
2. Select the EFI USB Device on the computer and press Enter to continue to boot from the USB device.



System Image Backup

To back up the image from the USB disk, run **Windows Preinstallation Environment(WinPE)** and the **Windows Recovery utility** will display. Follow these steps.

1. Click Backup.



2. Select the **Source disk** to backup and **Destination USB** to store the OS image, also give an image name and description. Click **Start to backup**.

MOX	Windows Backup		
	Source		
	Disk - 0	×	
0.0	Model: MRSAJAA064GTW25C00 Used Space: 19.3 GB (20,719,68 Free Space: 36.59 GB (39,284,02	5,632) Bytes	
	Destination		
1	E:	~	
10	Patriot Memory USB Device, Part Used Space: 12.09 GB (12,985,7 Free Space: 42,97 GB (46,136,13	(24,928) Bytes	
010101011	Image Information Build ID:		
	Image Description:		
Backup	R	pn	Shutdown
	os_image_yyyyMMddHHmmss		Windows ecovery
	Start to backup		ocoverv

3. Click **Yes** to continue.

ib Windows Recovery		
ΜΟΧΛ	Windows Backup	
	Source	
	Disk - 0	101 010 I
C. C.	Model: MRSAJAA064GTW25C00 Used Space: 19.3 GB (20,719,685,632) Bytes Free Space: 36.59 GB (39,284,023,296) Bytes	101010101 0101010101
	Destination	10101010
	E: ~	
Backup	Patriot Memory USB Device, Partition#0 Used Space: 12.09 GB (12.985,724,928) Bytes Free Sp Question 23 Image In 25 Start Backup Process? Windows Image Da Yes No DA-8200 20190325 Test Image	on Shutdown
Dackup		Shatdown
	os_image_Windows_Image_01	Windows
	Start to backup	Recovery

4. Wait for the backup process to complete.

ows_Image_01.wim" /	ndowsRecovery>Dism /Cap /CaptureDir:C:\ /Name:" ervicing and Management		e\partimag\os_image_Windows	
Saving image [=	3.0%			
		k	Loading	Capturing
		Backup	R os_image_Windows_In	n Shutdown

5. When the process is done, click **OK**.



6. Click **OK**, the computer will shut down.



7. The OS image will be saved in USB disk at **home\partimag**.

🛃 🚽 = partimag			-		×
File Home Share View	v				\sim
> · 🛧 📙 > This PC >	WindowsRecoveryUSB (D:) > home > partimag	· √ 2	Search partimag		م ر
📃 Desktop	^ Name	Date modified	Туре	Size	
Documents	os_image_Windows_Image_01	7/20/2020 3:49 PM	File folder		
🕂 Downloads					
👌 Music					
Pictures					
🚪 Videos					
🏪 Windows (C:)					
🕳 WindowsRecoveryUSB (D:)					
	~				
item					855

8. In the **os_image** folder you can view the backup information and the image files.

📙 💆 📙 🖛 os_image_Windo	ws_Image_01		_	
File Home Share Vi	W			~ 🕜
$\leftarrow \ \ \rightarrow \ \ \checkmark \ \ \uparrow \ \ \fbox{\ \ } \ \ \bullet \ \ \bullet$ home \rightarrow	partimag > os_image_Windows_Image_01	ٽ ~	Search os_image_Wi	ndows_l 🔎
📃 Desktop	^ Name	Date modified	Туре	Size
Documents	a comm	11/29/2019 9:53 AM	Configuration sett	1 KB
🖶 Downloads	os_image_Windows_Image_01.win	n 11/29/2019 10:03	WIM File	5,438,672 KB
👌 Music	Windows_Image_01	11/29/2019 9:53 AM	Configuration sett	1 KB
Pictures	Windows_Image_01	3/3/2020 11:08 AM	Text Document	1 KB
Videos				
🏪 Windows (C:)				
🕳 WindowsRecoveryUSB (D:)				
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4 items				

Restoring the System From a Backup

To restore the image, run the **Windows Preinstallation Environment(WinPE)** and the **Windows Recovery utility** will display. Follow these steps.

1. Click Recovery.



2. Select the **Source USB Device**, Image Folder File and check the image information, select the **Destination Drive** to restore. Click **Apply**.

3 Windows Recovery		
ΜΟΧΛ		
	Windows Recovery	
	Source	
300	Device	
	E: (Patriot Memory USB Device)	
	Select Folder File	
	os_image_Windows_Image_01	
010101011	Build ID:Windows_Image_01 Image Size:6.51 GB Image Description: V2406C 20190325 Test Image	
	I	
in and in the second se	Destination	
	Disk - 0 (MRSAJAA064GTW25C00)	
Backup R	Model: MRSAJAA064GTW25C00 DN Sh Used Space: 55.9 GB (60,019,868,160) Bytes	utdown
		dows verv

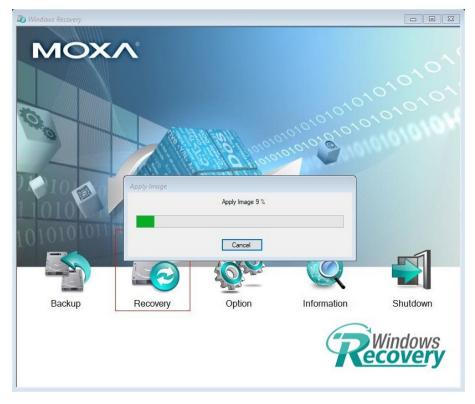
3. Click **Yes** to continue the process.

Dindows Recovery		
MOXA		-
	Windows Recovery	
700 mar N	Source	10101010101 1010101010101
	Device	10, 10,
6 8	E: (Patriot Memory USB Device)	10,010
1	Select Folder File	0/0/0/0/0
	os_image_Windows_Image_01 v	Allow
	Build ID:Windows_Image_01	
2010	In Quarter	
1010		
	Recovery the system now?	
10101010101		
	Yes No Cancel	
	Disk - 0 (MRSAJAA064GTW25C00)	
	Model: MRSAJAA064GTW25C00	
Backup	Used Space: 55.9 GB (60,019,868,160) Bytes	ation Shutdown
		Windows
		Windows

4. Click **Yes** to overwrite the destination drive.

1010	Build ID-Windows_Image_01 Image_Size6.51.08 Im Apply Image 23 D4 20	
	Te Destination drive will be overwritten !!! Do you want to continue? Yes No Disk - 0 (MRSAJAA064GTW25C00)	
Backup R	Model: MRSAJAA064GTW25C00 Used Space: 55.9 GB (60.019.868,160) Bytes	Shutdown

5. Wait for the process to complete.



6. Click **OK**.

NOTE

When you restart the computer, you will need to wait about 5 minutes for the computer to go through two cycles of the reboot process. The system configuration files will be initiated during the first boot- up process. Do not turn off or shut down the computer while the system is restarting.