

[How To] Intel Optane Memory

Intel Optane Memory can be seen as a cache memory for the SATA device; by moving frequently used data to the Intel Optane, it helps shorten the data access time for the matching device and accelerates the system performance significantly.

This guide shows you how to configure and check the status of Intel Optane Memory.

Notes:

- MSI Notebooks support 16GB and 32GB Intel Optane Memory module.
- Intel Optane Memory acceleration supports only Windows 10 64-bit system.
- PCIe NVMe devices and any SATA devices which created with the RAID volume are not supported for Intel Optane Memory system acceleration.
- A single SATA device which installed with multiple operating systems is not supported.

Outline

- 1. How to setup Intel Optane Memory?
- 2. How to correctly disable Intel Optane Memory?
- 3. How to check if Intel Optane Memory is configurered properly?

*To know more about <u>Intel Optane Memory</u>, visit Intel website: <u>https://www.intel.com/content/www/us/en/support/articles/000024018/memory-and-</u> storage/intel-optane-memory.html



1. How to setup Intel Optane Memory?

*Note: Notebook which originally bundled with Intel Optane Memory and has the pre-installed system, all settings are already applied and configured. (To check the status, go to <u>3. How to check the status of Intel Optane</u>.)

1.1. Update the latest BIOS released on MSI website.

Find the BIOS update file under product download page for your notebook model; enter the product name of your notebook on upper right search column of MSI website and select "Download" under your notebook model.



1.2. Update the latest Intel Rapid Storage Technology released on <u>MSI website</u> or download the "SetupOptaneMemory" utility released on <u>Intel website</u>. System which has the RAID volume, use the Intel Rapid Storage Technology application for configuring the Intel Optane; otherwise, download and install the SetupOptaneMemory utility for the setups.

*Note: Intel RST driver is included in both tool's installation file, so you can only choose to use one of them installed on the system.

(Ref: <u>https://www.intel.com/content/www/us/en/support/articles/000024385/memory-</u> and-storage.html)

1.3. Install Intel Optane Memory on the M.2 PCIe interface slot.

*Note:

1. Before buying Intel Optane Memory, make sure <u>an additional **empty** M.2</u> <u>PCIe slot</u> is available for the upgrade.

2. If you're not familiar with your system configuration or disassembly, we suggest you contact with the <u>MSI local service center</u> or <u>online support</u> <u>team</u> and let our technicions help you with the upgrade.



1.4. Manually format the Intel Optane Memory to GPT.

*Skip this step if the Optane disk is properly recognized in the system.*Note: Dynamic disk is not supported for Intel Optane.

Right click on the Windows icon and select "Disk Management"; Right click on the unknown disk, select the partition style "GPT (GUID Partition Table)" and click OK to initialize the Optane.

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File Action V	/iew Help									
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Volume	Layout	Туре	File Sy	stem	Status	Capacity	Free Spa	% Free		
🗕 (C:)	Simple	Basic	NTFS		Healthy (B	930.91 GB	902.53 GB	97 %		
- (Disk 1 partition	n 1) Simple	Basic			Healthy (R	499 MB	499 MB	100 %		
💻 (Disk 1 partition	n 2) Simple	Basic			Healthy (E	99 MB	99 MB	100 %		
				Initializ	e Disk				×	
				You mu	ust initialize a disł	k before Logical Di	isk Manager car	n access it.		
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Unknown				Use the	e following partiti	on style for the sele	ected disks:			
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Unallocated	Primary partition									

1.5. Enable the Intel Optane Memory on the system.

1.5.1. Intel[®] Rapid Storage Technology Utility:

*For the system which already has a RAID volume acceleration and wants to configure the Optane acceleration, run the Intel Rapid Storage Technology utility.

Run the Intel(R) Rapid Storage Technology application, select Intel[®] Optane Memory tab and click on "Enable" to create the RAID volume for Intel Optane Memory and the SATA devices.



🔯 Intel® Rapid Storage Technology							
Status	Status Manage Intel® Optane™ Memory			nance Preferences Help			
Intel® Optane™ Memory							
Intel® Optane™ memory status: disabled. Enable							

Select the SATA device (here we use the 1TB hard drive for an example) which you choose to configure with the Intel Optane Memory.

Enable Intel® Optane™ memory	
Select a compatible fast drive:	
PCIe SSD on Controller 2, Port 0 (27 GB)	
Select a compatible data drive:	
SATA disk on Controller 0, Port 3 (932 GB)	
O After Intel® Optane™ memory is enabled, please restart your PC before performing operations.	g any partition or formatting
Ensure that the PC is connected to an AC power source during this process.	
⚠ This process will take some time and may negatively impact system performa drive will be erased. Do you want to enable Intel® Optane™ memory now?	ance. All data on the fast
More help	Yes No

1.5.2. SetupOptaneMemory Utility:

*For the system which doesn't have the RAID volume, run the SetupOptaneMemory to configure the system acceleration.

Run the SetupOptaneMemory utility and under "Setup" page, select the SATA device (here we use the 1TB hard drive for an example) which you choose to configure with the Intel Optane Memory; click "Enable" to start the setups.

(It takes few seconds until the setup is complete)



Intel® Optane™ Me	×	
🔅 Setup	Status	
Statistics	Intel® Optane™ memory is disabled.	
1 About	Select fast Intel® Optane™ memory drive:	
	32 GB Intel® Optane [™] memory (Controller 1, Port 0) ✓	
	Select a compatible drive to be accelerated:	
	HGST HTS721010A9E630 (Controller 0, Port 5) (System)	
	Enable	

1.6. Reboot the system to complete the setup.

Warning

A system **RESTART** is required after the setup completes, do NOT shut down and power on the system after the setup because there is a high risk that the system can be unstabled or not able to boot up without a proper system reboot after the setup.

1.6.1. Intel[®] Rapid Storage Technology Utility:





1.6.2. SetupOptaneMemory Utility:





2. How to correctly disable Intel Optane Memory?

- 2.1. Intel[®] Rapid Storage Technology Utility:
 - 2.1.1. Enter "Intel(R) Rapid Storage Technology" in Windows Search column and run the application.
 - 2.1.2. Click the "Disable" button under Intel Optane Memory page.

🔃 Intel® Rapid Storage Technology							
Status Manage Intel® Optane [™] Memory Performance Preferences Help							
Intel® Optane™ Memory Intel® Optane™ memory status: enabled. Disable							

 $\mathbf{2.1.3.}$ Wait for the setup and follow the on screen instruction to RESTART the

system and complete the changes.

- 2.2. SetupOptaneMemory Utility:
 - 2.2.1. Enter "SetupOptaneMemory" in Windows Search column and run the application.
 - 2.2.2. Click the "Disable" button under Setup page.



2.2.3. Wait for the setup and follow the on screen instruction to **RESTART** the system and complete the changes.



3. How to check if the Intel Optane is configured properly?

3.1. If you have the pre-installed system and Optane, enter "Intel(R) Rapid Storage Technology" in Windows Search column and run the application; click on Intel[®] Optane Memory button to check its current status.



3.2.If the Optane is configured by SetupOptaneMemory utility, enter "SetupOptaneMemory" in Windows Search column and run the application; select the Setup page to check the current status.

