F35-MTU1

RAID Installation Guide

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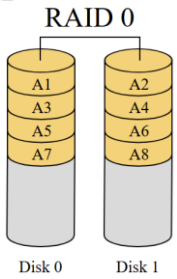
1. Introduction

RAID (Redundant Array of Independent Disks) is a technology that enhances performance and data security by combining multiple hard drives. Depending on different needs, RAID offers various configurations, each with its specific advantages and disadvantages. This manual provides a detailed overview of the characteristics, operational processes, and setup methods of different RAID types.

2. Overview of RAID Types

2.1 RAID 0

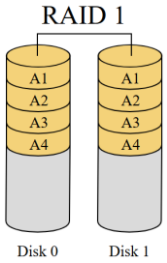
RAID 0 improves performance by distributing data across multiple hard drives but does not provide data redundancy, making it a higher risk option. Since data is split and stored across different drives, the system can access multiple disks simultaneously, increasing read and write speeds. This configuration is ideal for applications that require high performance but do not need data security.



- Required Number of Drives: At least 2

2.2 RAID 1

RAID 1 ensures data security through mirroring technology. All data is written to two or more hard drives, so even if one drive fails, the data remains intact on the other. While RAID 1 provides high data security, its storage efficiency is low since only half of the total disk capacity is usable.



- Required Number of Drives: At least 2

2.3 Comparison of RAID Types

RAID Type	Advantages	Disadvantages
RAID 0	- High performance	- No data redundancy, high risk
RAID 1	- High data security	- Low storage efficiency, high cost

3. RAID Installation Guide

Step 1: Hardware Preparation

Ensure you have enough hard drives based on the selected RAID type:

- **RAID 0**: Requires at least 2 hard drives.
- **RAID 1**: Requires at least 2 hard drives.

Make sure all hard drives are functioning properly and have the same or similar capacities to achieve optimal RAID performance and stability.

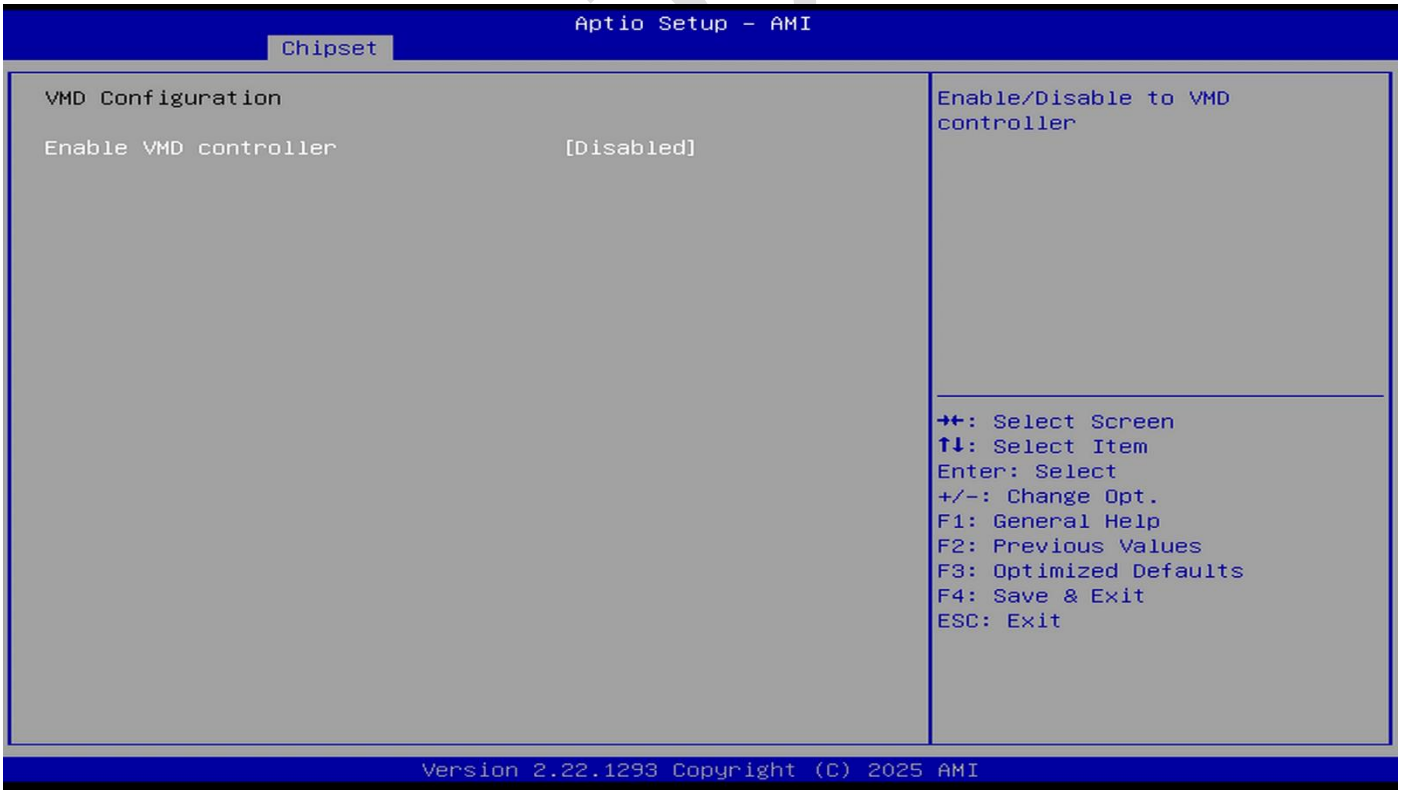
Step 2: Access BIOS Settings

- Press the designated key < Del > during startup to enter the BIOS settings interface.

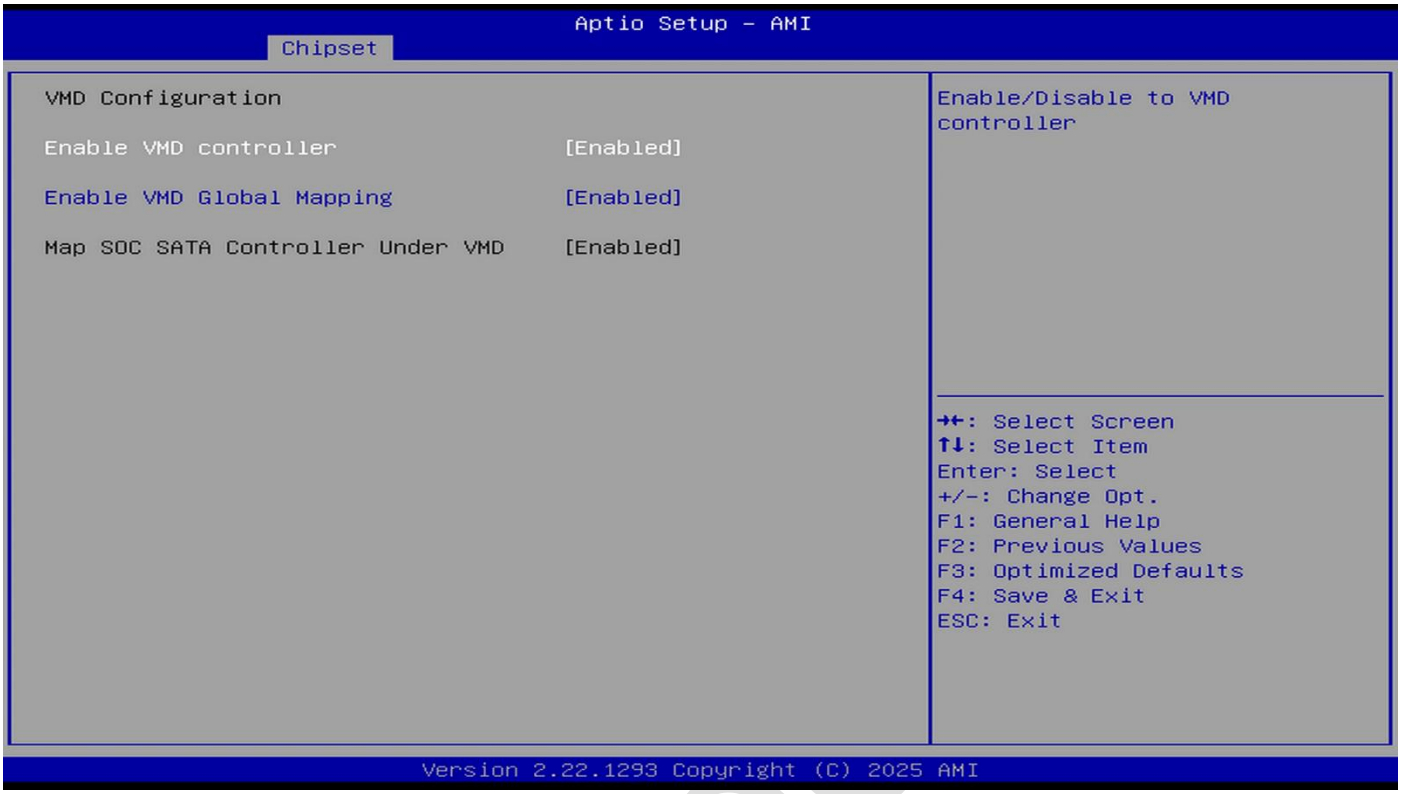
Step 3: Configuration Method

3-1. BIOS Navigation:

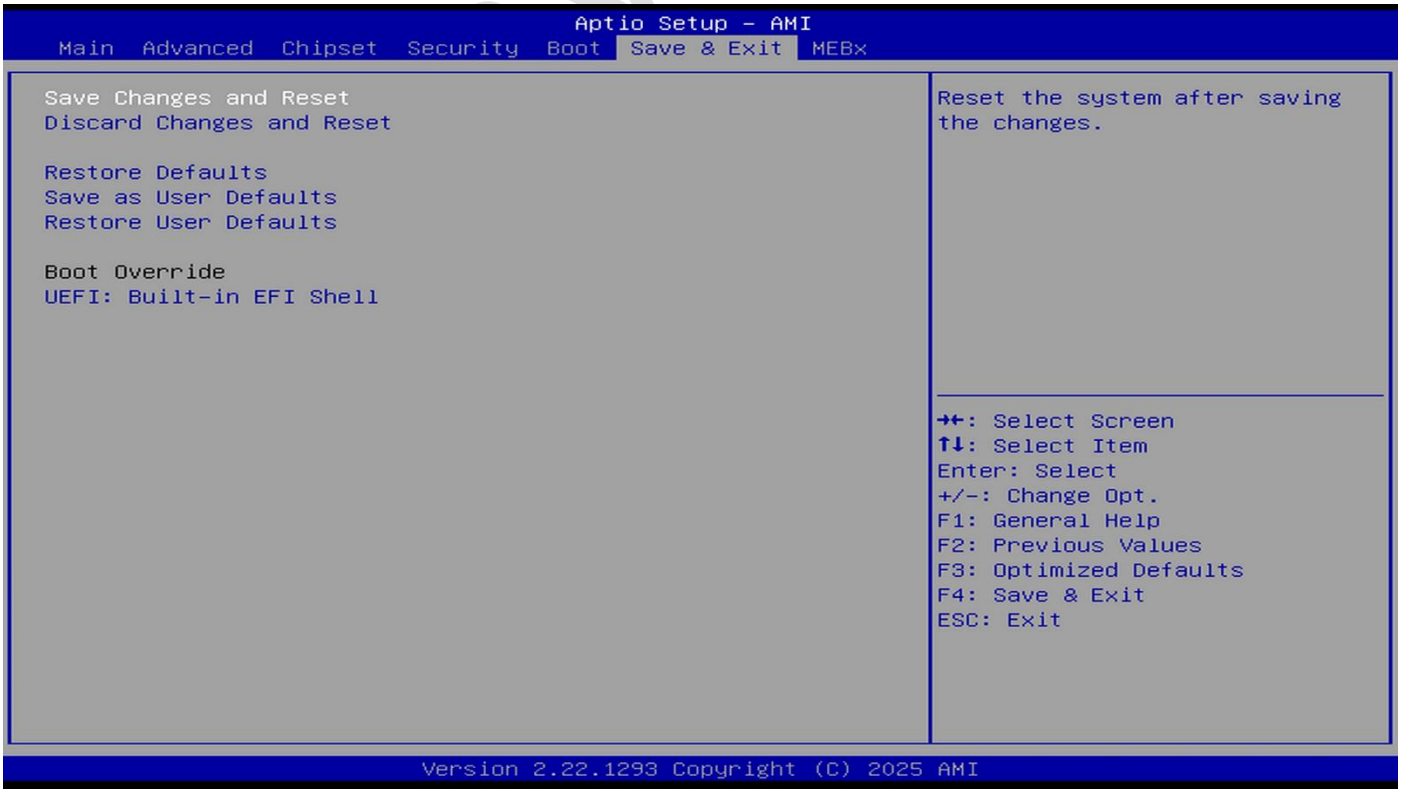
- Go to BIOS > Chipset > System Agent (SA) Configuration > VMD setup menu.



Change Enable VMD Controller and Enable VMD Global Mapping from [Disabled] to **[Enabled]**.

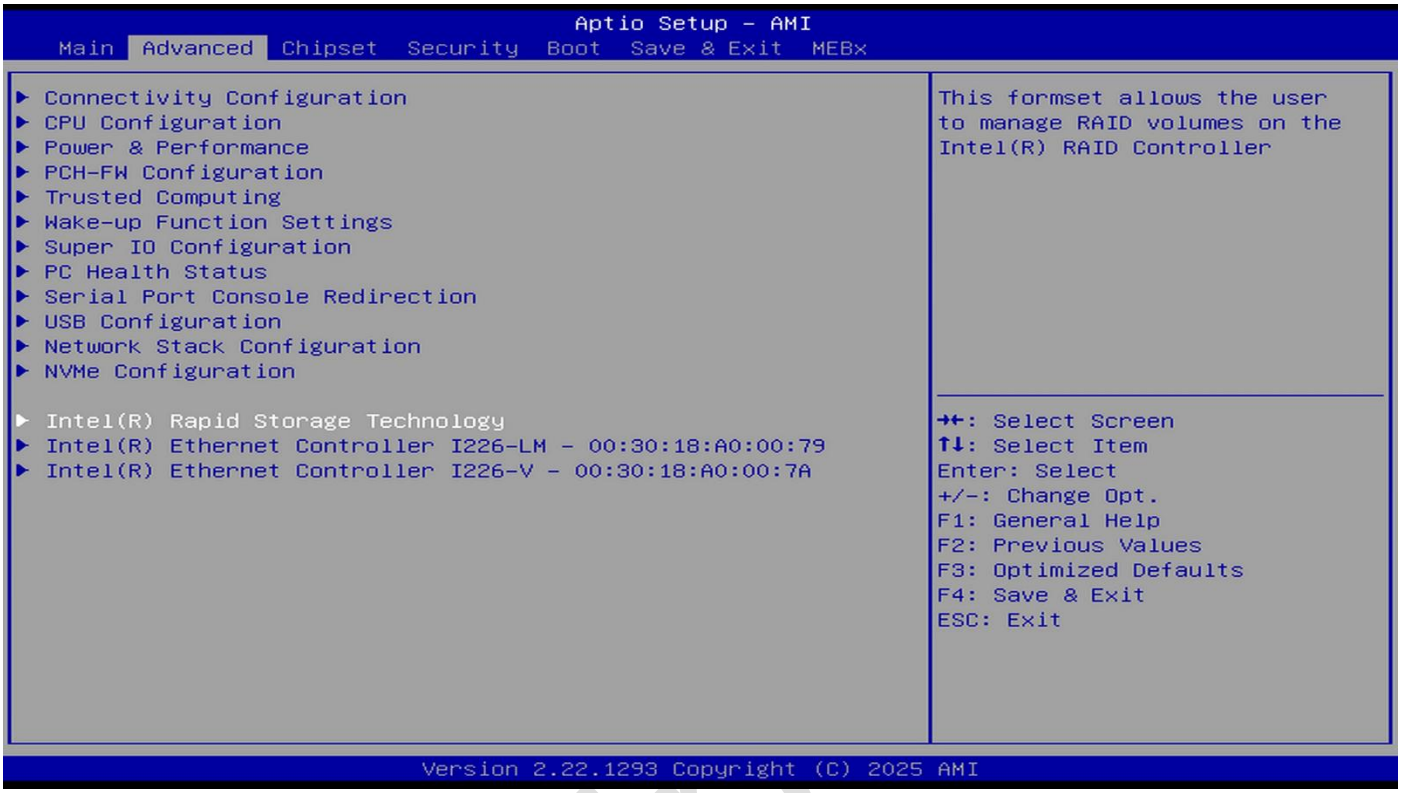


- Save Changes and Reset to allow the system to restart.

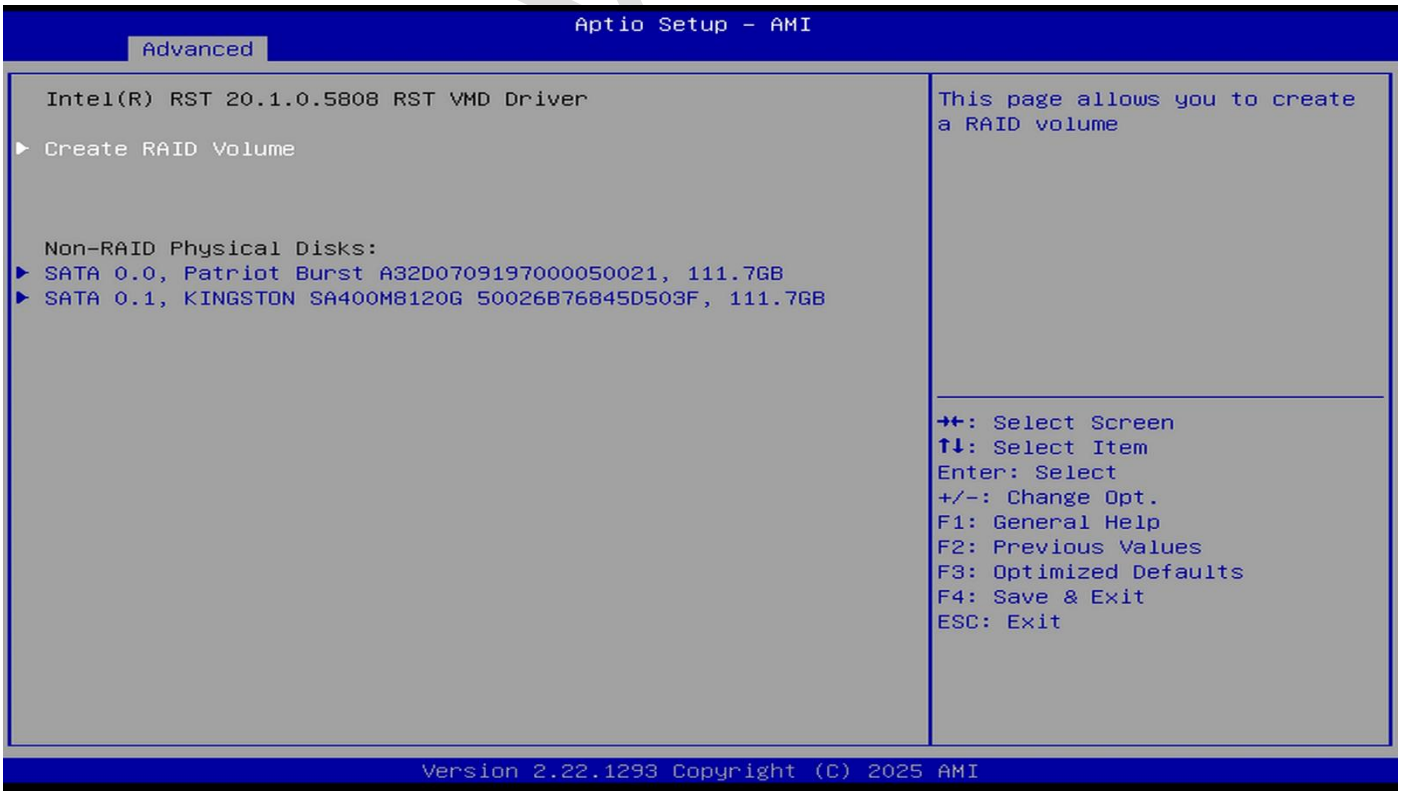


3-2. Create RAID Volume:

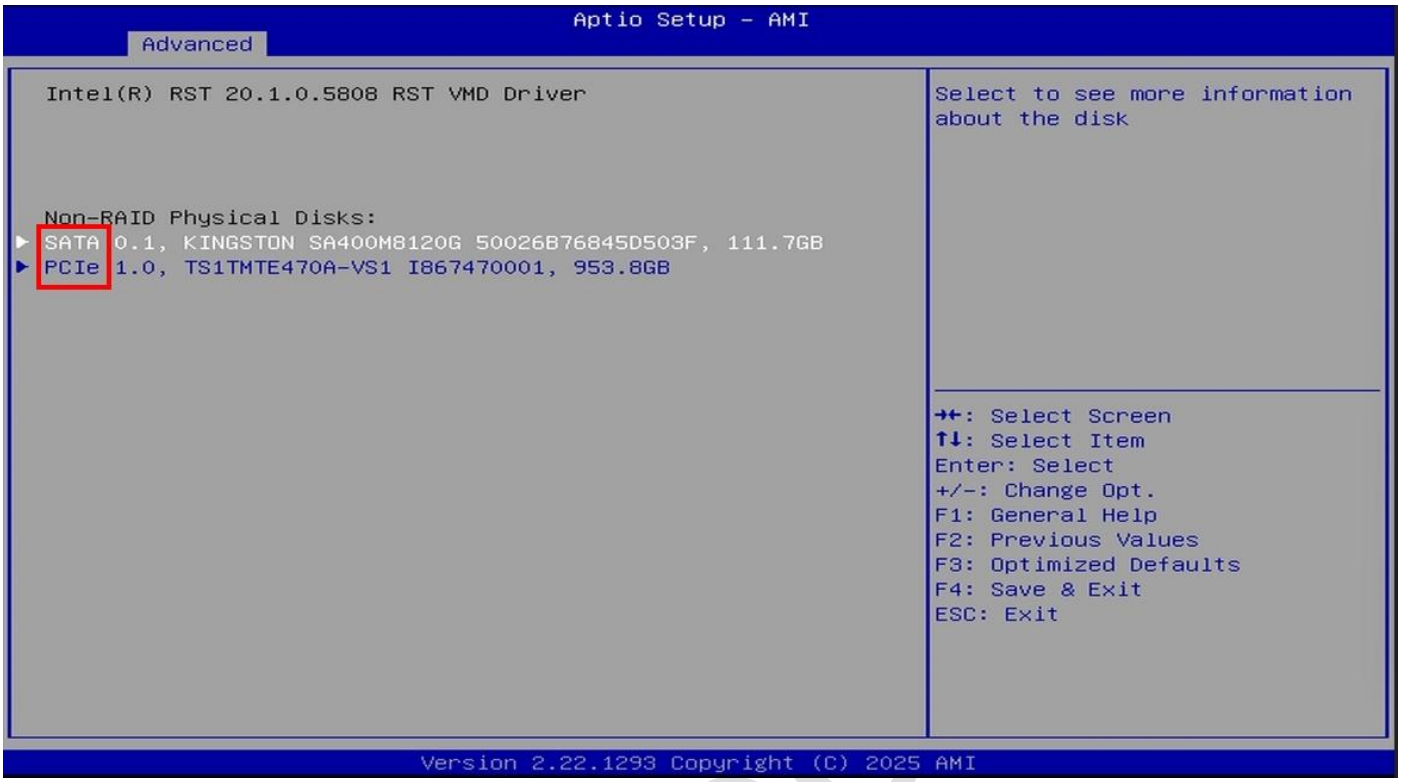
- Navigate to BIOS > Advanced > Intel(R) Rapid Storage Technology.



3-3. Supported M.2 SATA + SATA port

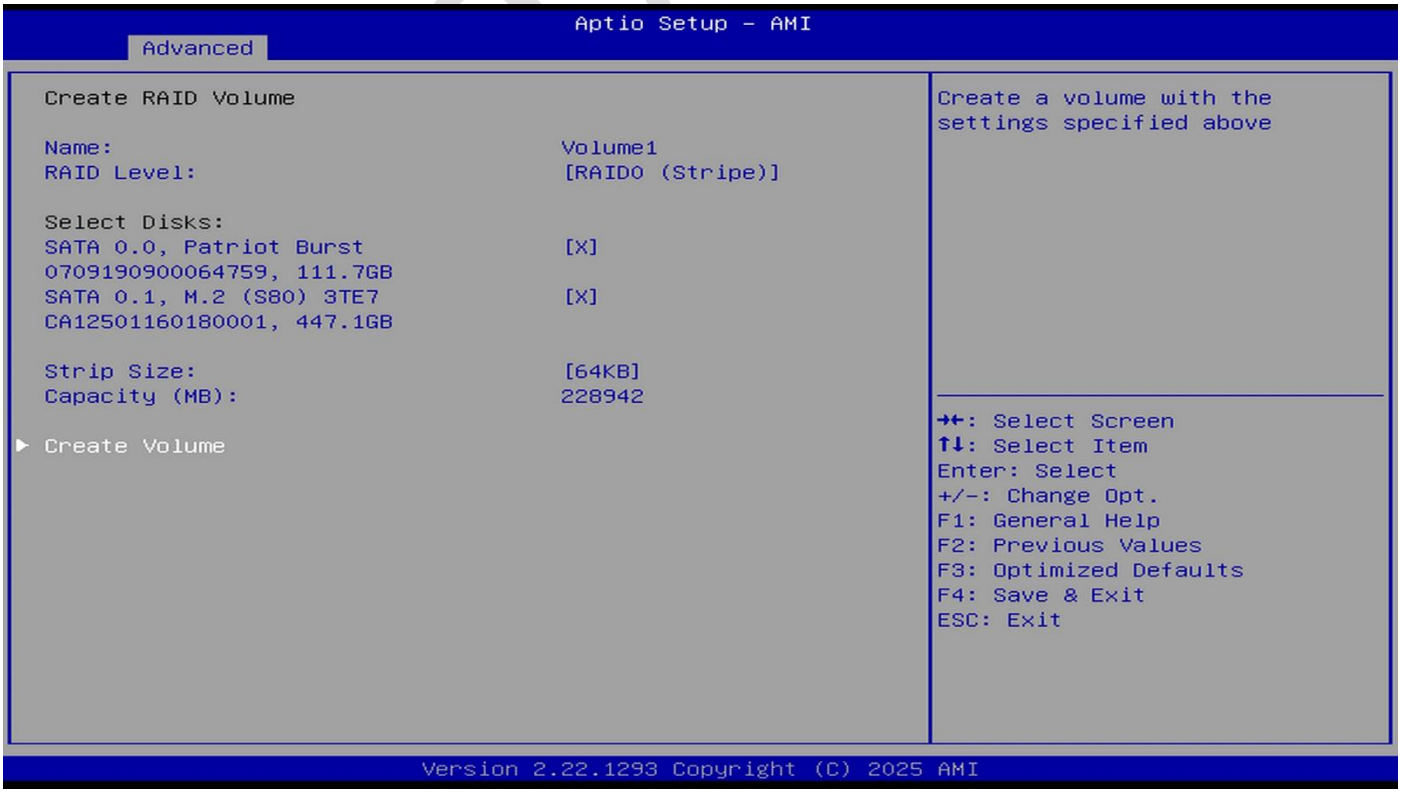


3-5. Note: M.2 PCIe + SATA port combinations cannot create RAID.

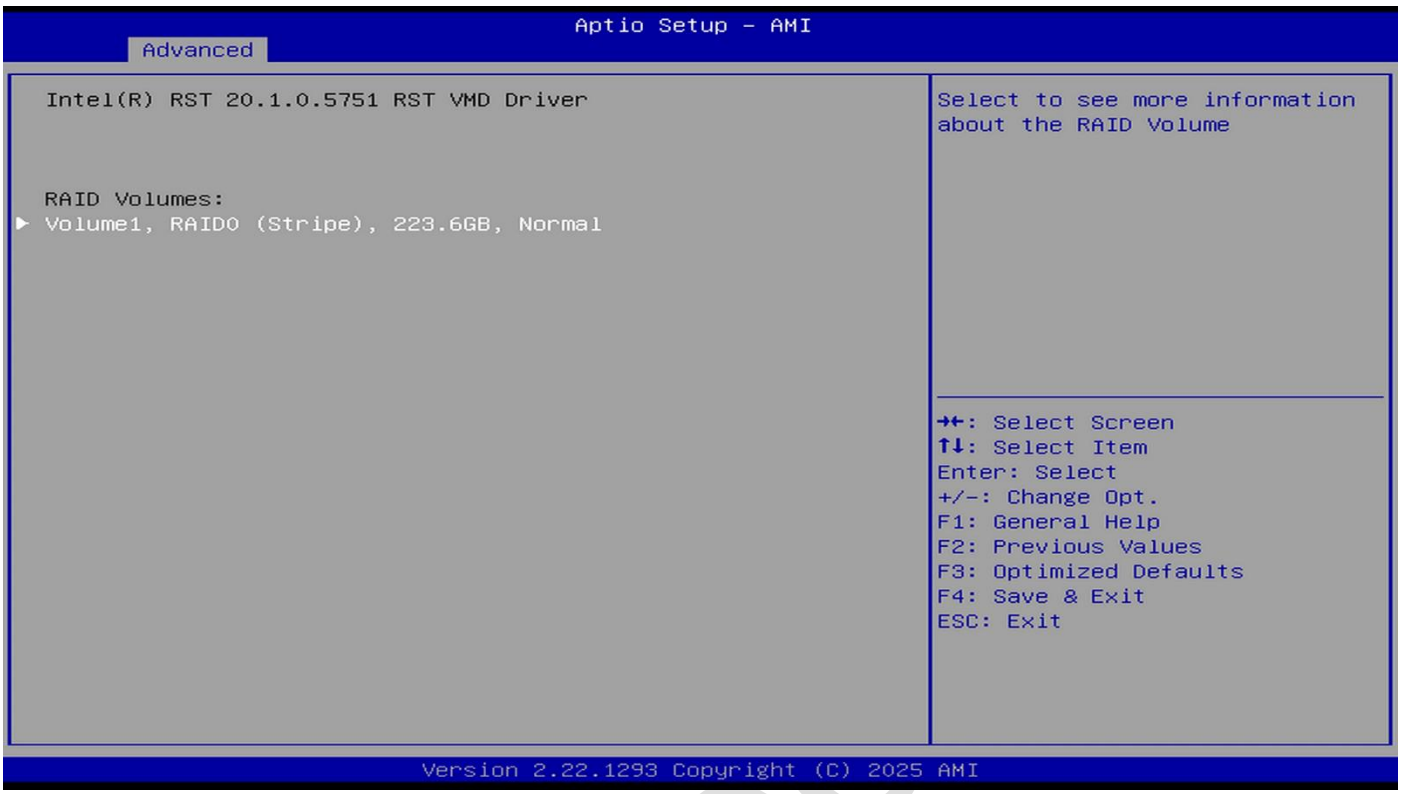


3-6. Fill in the details for Create RAID Volume:

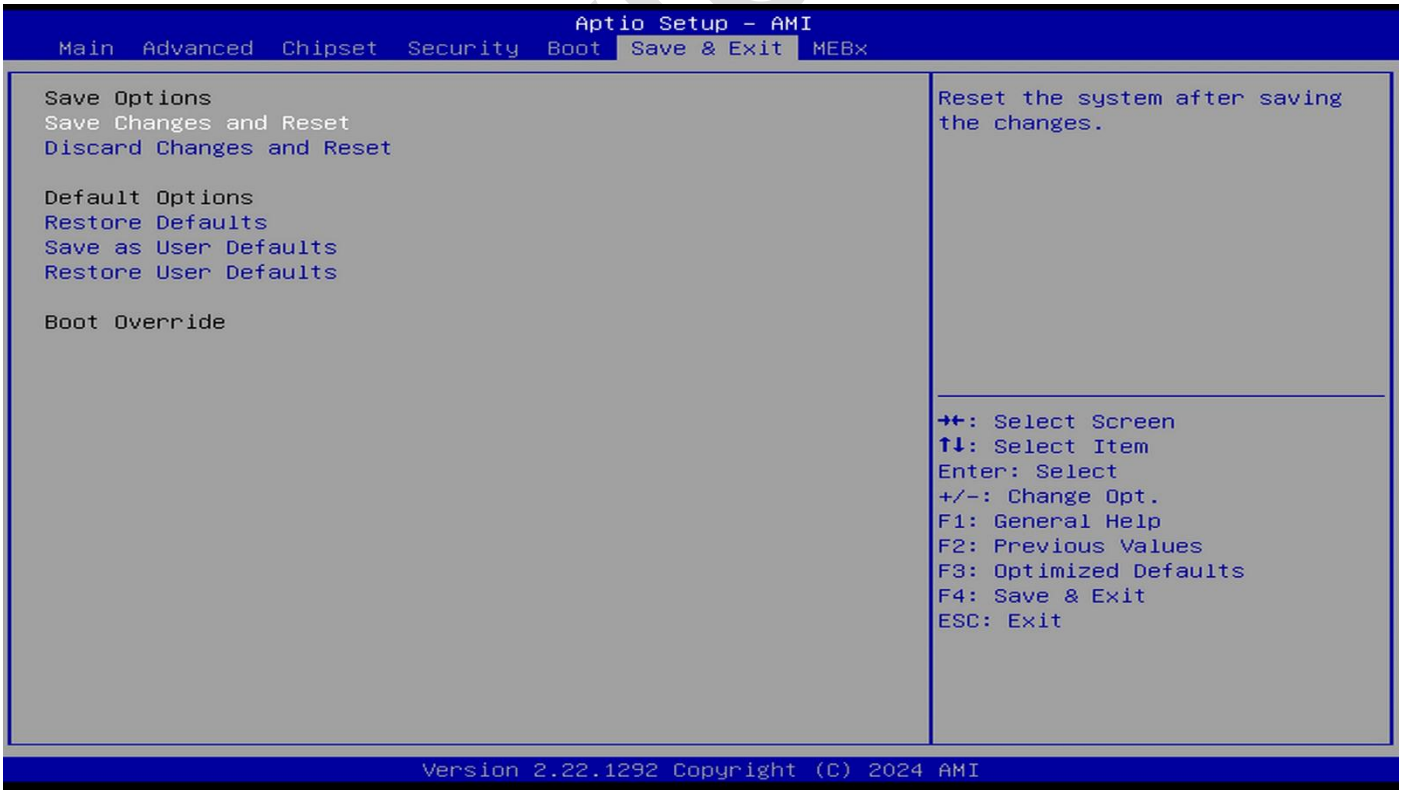
1. Name
2. RAID Level (RAID 0 and 1)
3. Select Disks.



3-7. Confirm the RAID Volume.

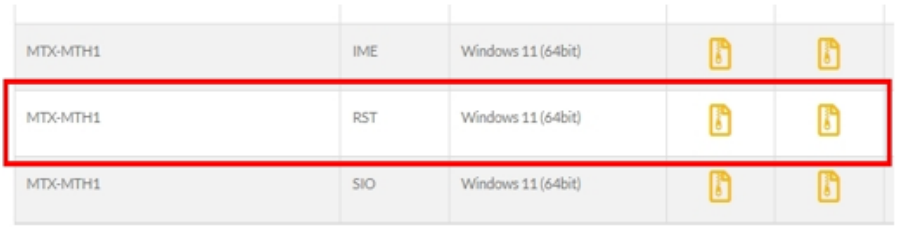


3-8. Save Changes and Reset to allow the system to restart.

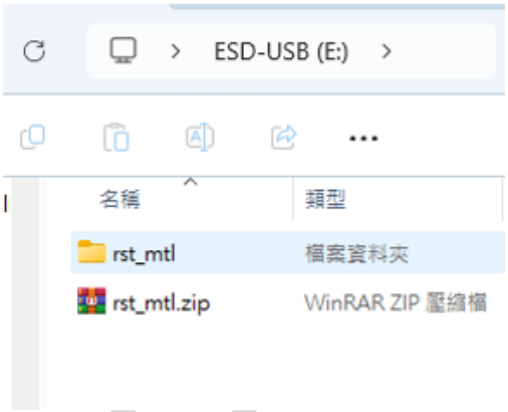


Step 4: Driver Preparation

- Download the RAID controller driver in advance and place it on a USB flash drive.
- Download the RST Driver from [Jetway IPC], then unzip the file and place it in the USB.

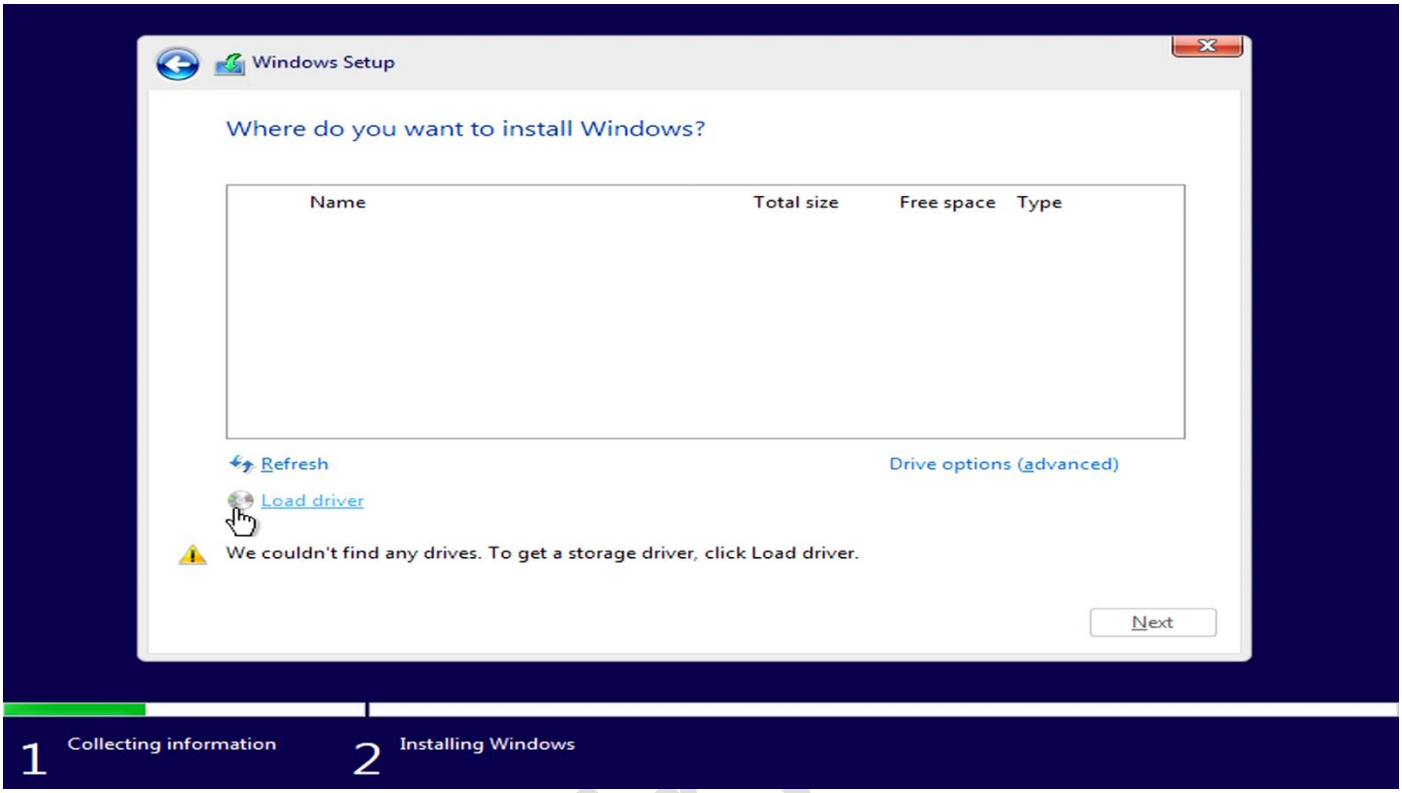


MTX-MTH1	IME	Windows 11 (64bit)		
MTX-MTH1	RST	Windows 11 (64bit)		
MTX-MTH1	SIO	Windows 11 (64bit)		

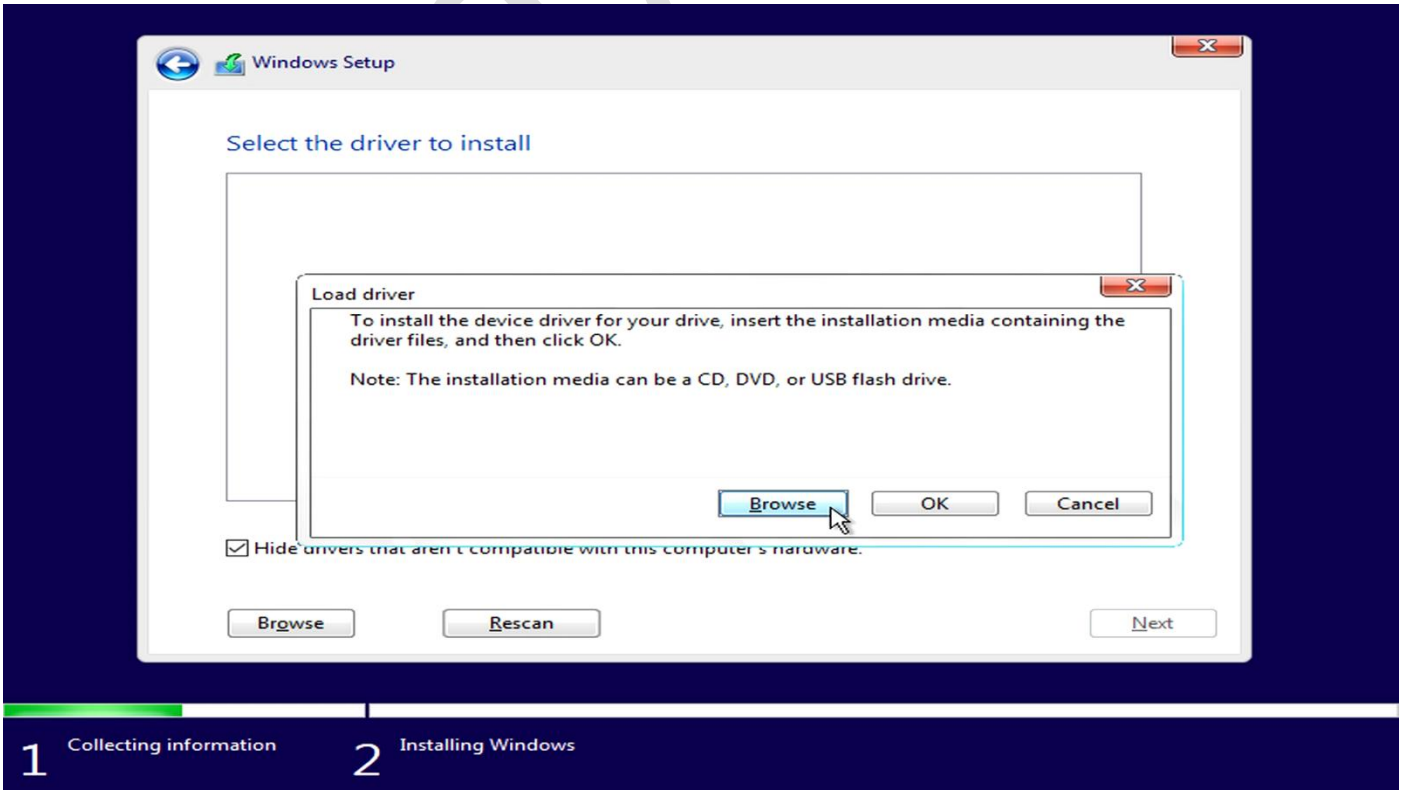


Step 5: Operating System Installation

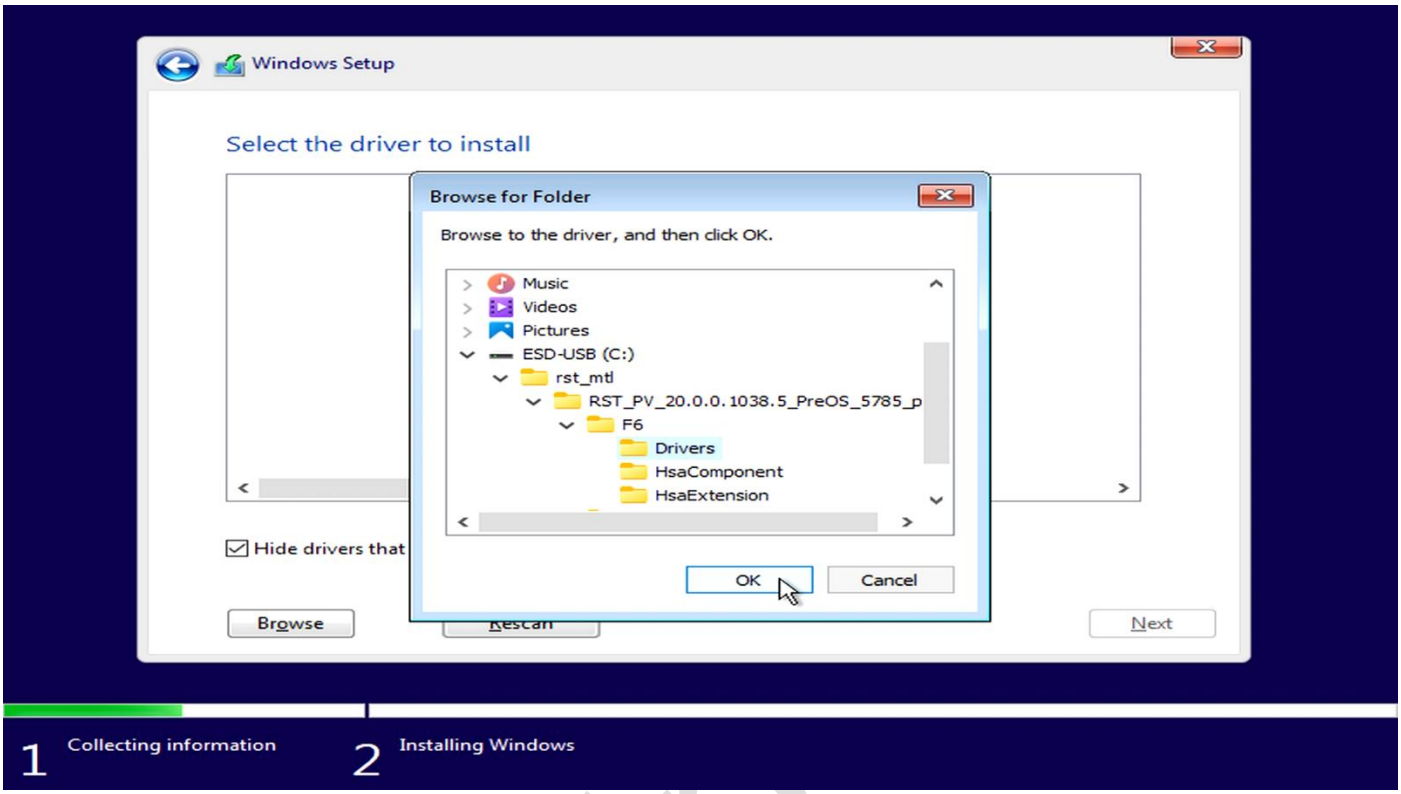
- On the operating system installation screen, click "Load driver."



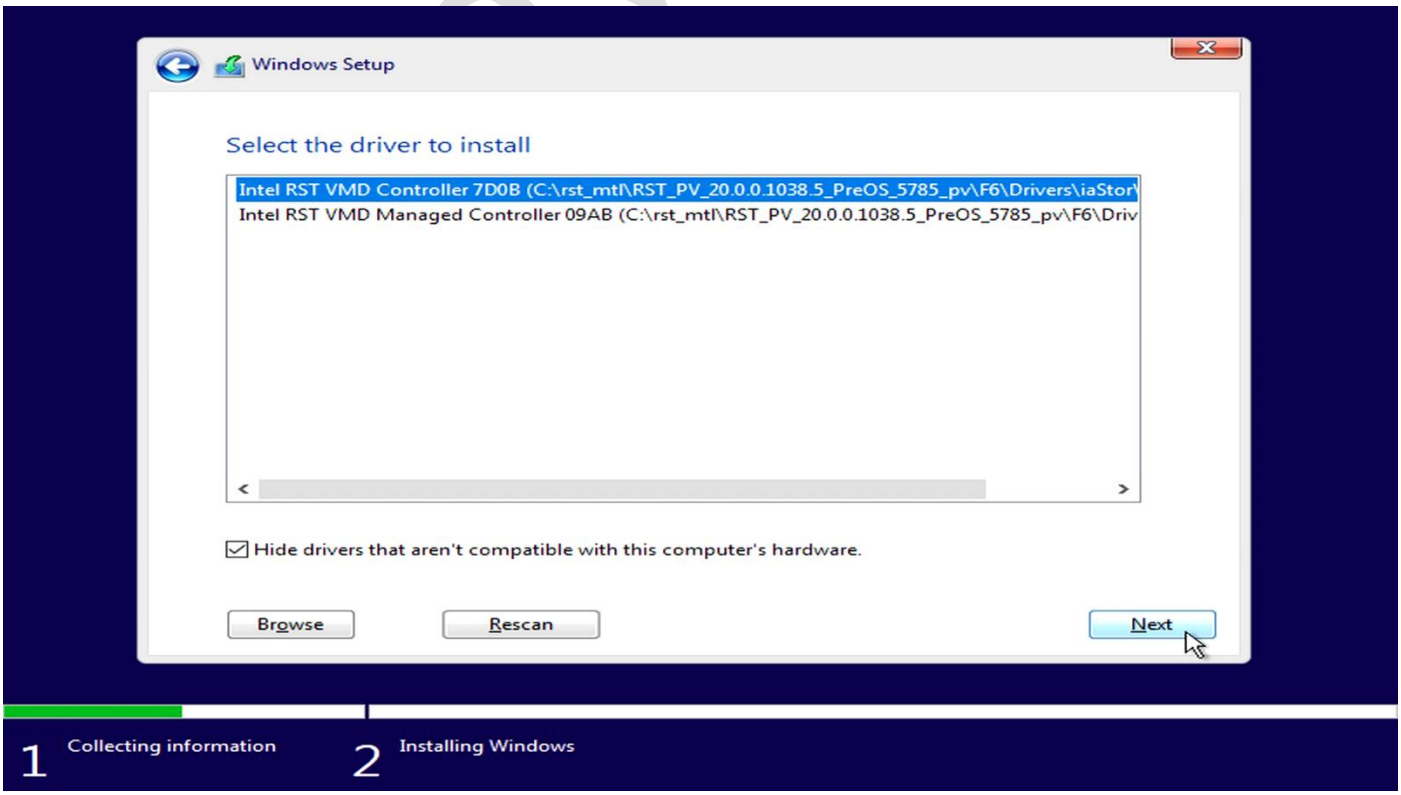
- Click "Browse."



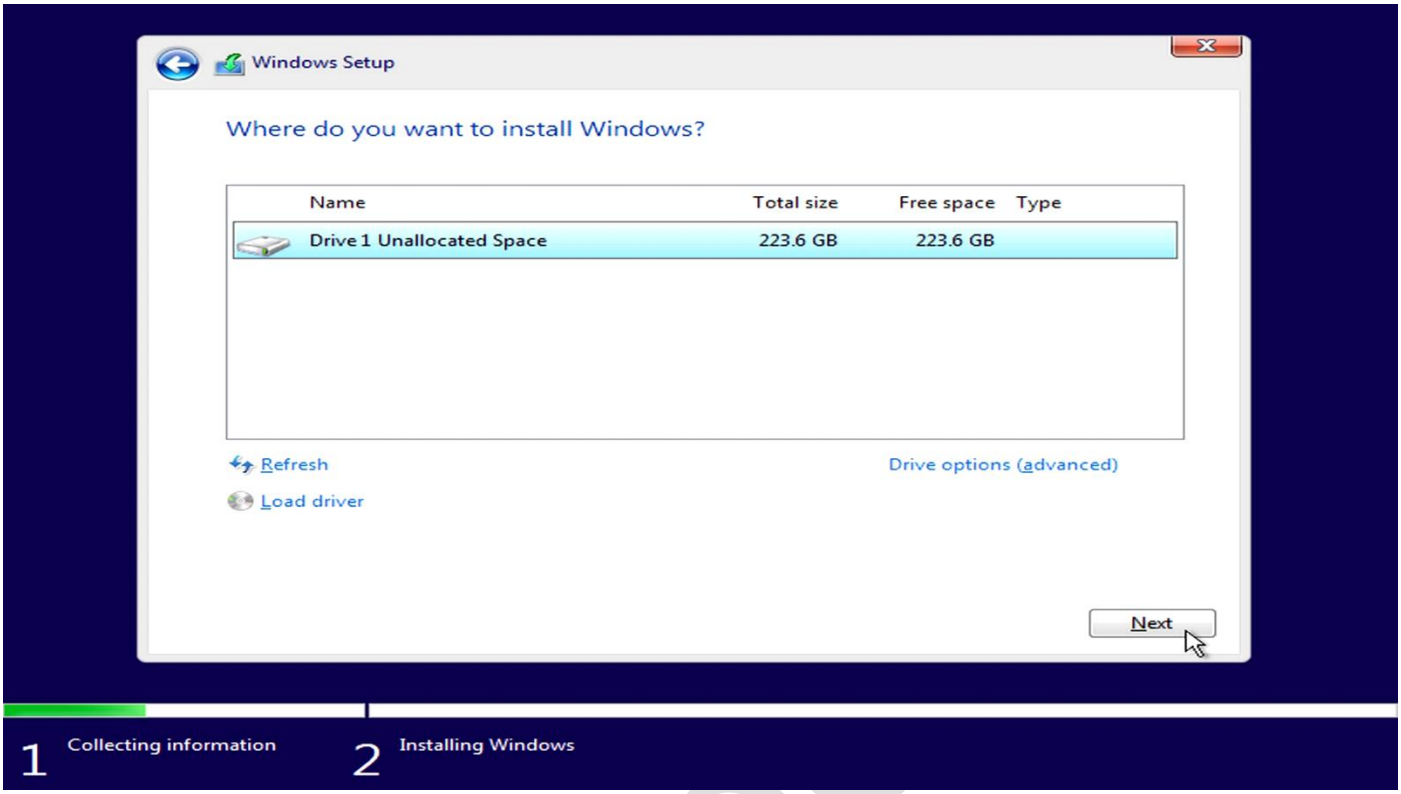
- Select USB: rst_mtl\RST_PV_20.0.0.1038.5_PreOS_5785_pv\F6\Drivers, then click "OK."

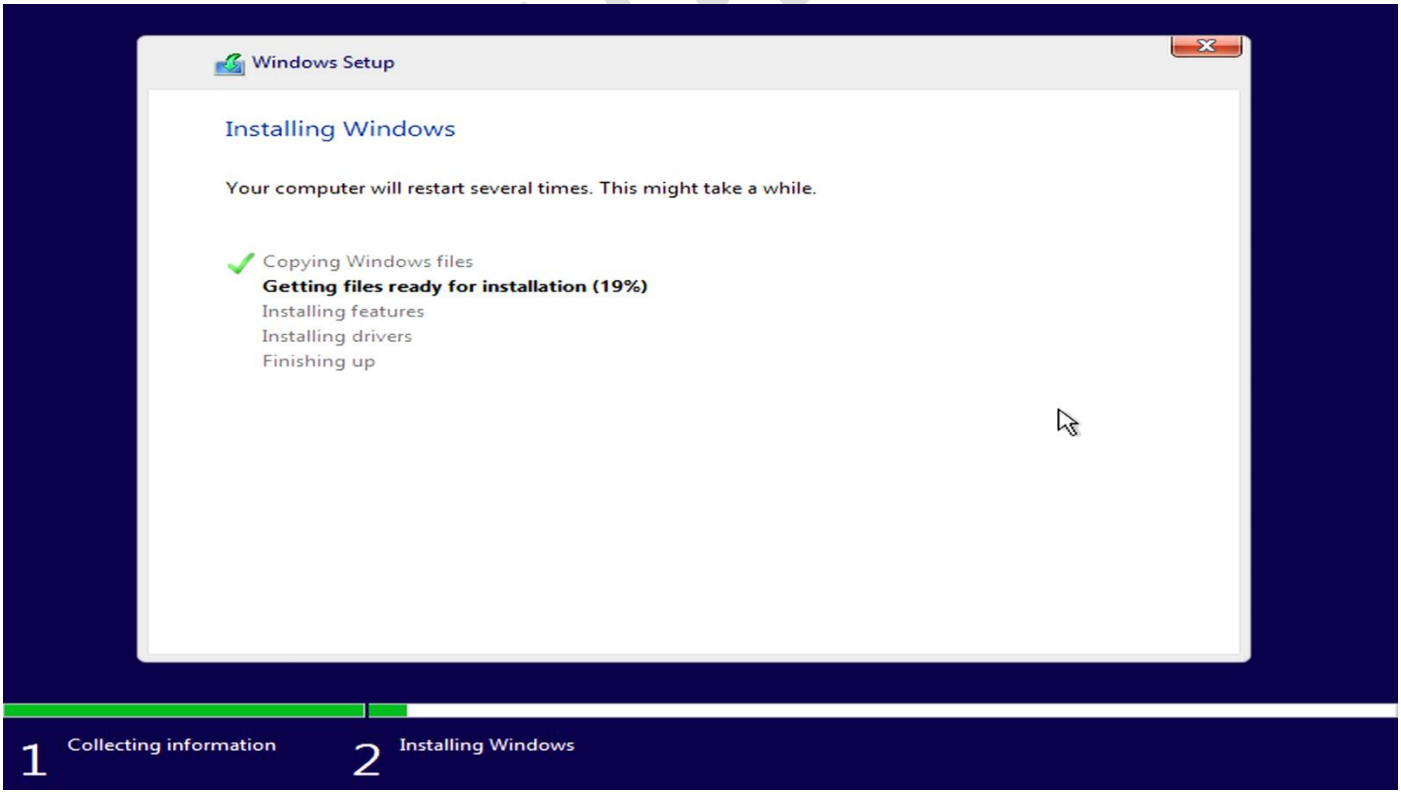


- Load the Intel RST VMD Controller, then click "Next."



- You can now install the operating system.





Step 6: Post-Installation

- After Windows installation is complete, please install the drivers from our website: [Jetway IPC](#).