Configuring a RAID Set

RAID Levels

	RAID 0	RAID 1	RAID 5	RAID 10
Minimum Number of Hard Drives	≥2	2	≥3	4
Array Capacity	Number of hard drives * Size of the smallest drive	Size of the smallest drive	(Number of hard drives -1) * Size of the smallest drive	(Number of hard drives/2) * Size of the smallest drive
Fault Tolerance	No	Yes	Yes	Yes

To create a RAID set, follow the steps below:
A. Install SATA hard drive(s) or SSDs in your computer.
B. Configure SATA controller mode in BIOS Setup.
C. Configure a RAID array in RAID BIOS. (Note 1)
D. Install the RAID/AHCI driver and operating system.

Before you begin, please prepare the following items:
*   At least two SATA hard drives or SSDs (Note 2) (to ensure optimal performance, it is recommended that you use two hard drives with identical model and capacity). (Note 3)
*   A Windows setup disk.
*   Motherboard driver disk.
*   A USB thumb drive.

Configuring SATA Controllers

A. Installing hard drives
Install the hard drives/SSDs in the Intel® Chipset controlled connectors on the motherboard. Then connect the power connectors from your power supply to the hard drives.

(Note 1) Skip this step if you do not want to create RAID array on the SATA controller.
(Note 2) An M.2 PCIe SSD cannot be used to set up a RAID set either with an M.2 SATA SSD or a SATA hard drive.
(Note 3) Refer to Chapter 1, "Internal Connectors," for the installation notices for the M.2 and SATA connectors.

B. Configuring SATA controller mode in BIOS Setup

Make sure to configure the SATA controller mode correctly in system BIOS Setup.

Step 1:

Turn on your computer and press <Delete> to enter BIOS Setup during the POST (Power-On Self-Test). Go to **Peripherals\SATA And RST Configuration**, make sure **SATA Controller(s)** is enabled. To create RAID, set **SATA Mode Selection** to **Intel RST Premium With Intel Optane System Acceleration** (Figure 1).

Figure 1

Step 2:

To use the EZ RAID feature, follow the steps in "C-1." To configure UEFI RAID, follow the steps in "C-2." To enter the legacy RAID ROM, refer to "C-3" for more information. Finally, save the settings and exit BIOS Setup.

The BIOS Setup menus described in this section may differ from the exact settings for your motherboard. The actual BIOS Setup menu options you will see shall depend on the motherboard you have and the BIOS version.

C-1. Using EZ RAID

GIGABYTE motherboards provide you with the EZ RAID feature, allowing you to quickly configure a RAID array with simplified steps.

Step 1:

After restarting the computer, enter the BIOS Setup and go to **Peripherals**. Press <Enter> on the **EZ RAID** item. Select the type of hard drives you use for RAID in the **Type** tab and then press <Enter>. (Figure 2)

Figure 2

Step 2:

Go to the **Mode** tab to select a RAID level. RAID levels supported include RAID 0, RAID 1, RAID 10, and RAID 5 (the selections available depend on the number of the hard drives being installed). Then press <Enter> to move to the **Create** tab. Click **Proceed** to begin (Figure 3).

Figure 3

After completing, you'll be brought back to the **Intel(R) Rapid Storage Technology** screen. Under **RAID Volumes** you can see the new RAID volume. To see more detailed information, press <Enter> on the volume to check for information on RAID level, stripe block size, array name, and array capacity, etc. (Figure 4).

Figure 4

Delete RAID Volume
To delete a RAID array, press <Enter> on the volume to be deleted on the **Intel(R) Rapid Storage Technology** screen. After entering the **RAID VOLUME INFO** screen, press <Enter> on **Delete** to enter the **Delete** screen. Press <Enter> on **Yes** (Figure 5).

Figure 5

C-2. UEFI RAID Configuration

Step 1:
In BIOS Setup, go to **BIOS** and set **CSM Support** to **Disabled** (Figure 6). Save the changes and exit BIOS Setup.

Figure 6

Step 2:
After the system reboot, enter BIOS Setup again. Then enter the **Peripherals\Intel(R) Rapid Storage Technology** sub-menu (Figure 7).
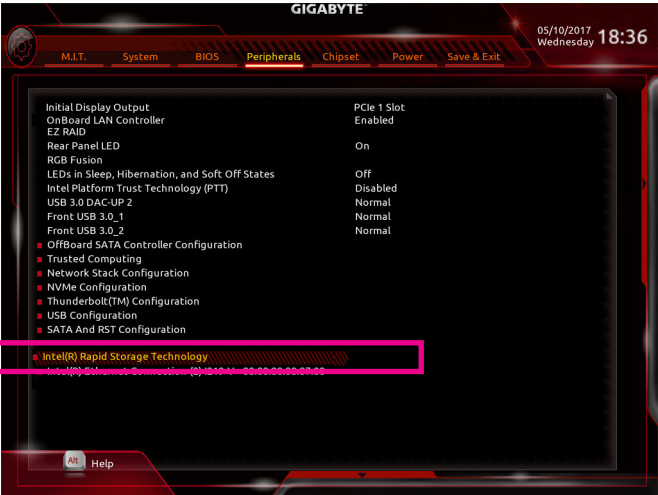
Figure 7

Step 3:
On the **Intel(R) Rapid Storage Technology** menu, press <Enter> on **Create RAID Volume** to enter the **Create RAID Volume** screen. Enter a volume name with 1~16 letters (letters cannot be special characters) under the **Name** item and press <Enter>. Then, select a RAID level (Figure 8). RAID levels supported include RAID 0, RAID 1, RAID 10, and RAID 5 (the selections available depend on the number of the hard drives being installed). Next, use the down arrow key to move to **Select Disks**.

Figure 8

Step 4:
Under **Select Disks** item, select the hard drives to be included in the RAID array. Press the <Space> key on the hard drives to be selected (selected hard drives are marked with "X"). Then set the stripe block size (Figure 9). The stripe block size can be set from 4 KB to 128 KB. Once you have selected the stripe block size, set the volume capacity.

Figure 9

Step 5:
After setting the capacity, move to **Create Volume** and press <Enter> to begin. (Figure 10)

Figure 10

After completing, you'll be brought back to the **Intel(R) Rapid Storage Technology** screen. Under **RAID Volumes** you can see the new RAID volume. To see more detailed information, press <Enter> on the volume to check for information on RAID level, stripe block size, array name, and array capacity, etc. (Figure 11)

Figure 11

Delete RAID Volume

To delete a RAID array, press <Enter> on the volume to be deleted on the **Intel(R) Rapid Storage Technology** screen. After entering the **RAID VOLUME INFO** screen, press <Enter> on **Delete** to enter the **Delete** screen. Press <Enter> on **Yes** (Figure 12).

Figure 12

C-3. Configuring Legacy RAID ROM

Enter the Intel® legacy RAID BIOS setup utility to configure a RAID array. Skip this step and proceed with the installation of Windows operating system for a non-RAID configuration.

Step 1:

In BIOS Setup, go to **BIOS** and set **CSM Support** to **Enabled** and **Storage Boot Option Control** to **Legacy**. Save the changes and exit BIOS Setup. After the POST memory test begins and before the operating system boot begins, look for a message which says "Press <Ctrl-I> to enter Configuration Utility" (Figure 13). Press <Ctrl> + <I> to enter the RAID Configuration Utility.

```
Intel(R) Rapid Storage Technology - Option ROM - 15.7.0.2925
Copyright (C) Intel Corporation.  All Rights Reserved.

RAID Volumes :
None defined.

Physical Devices :
ID      Device Model            Serial #            Size        Type/Status(Vol ID)
1       TOSHIBA  DT01ACA1       763ZLL4FS          931.5GB     Non-RAID Disk
2       TOSHIBA  DT01ACA1       763ZM7MFS          931.5GB     Non-RAID Disk

Press <CTRL - I>  to enter Configuration Utility...
```
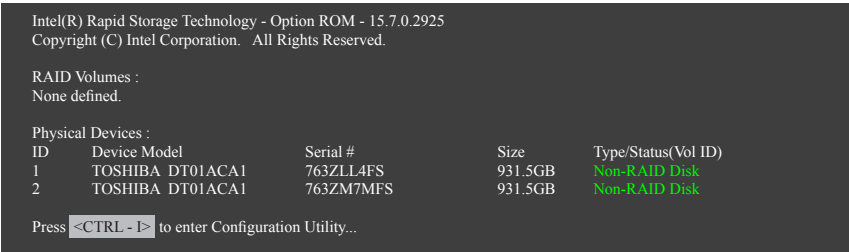
Figure 13

Step 2:

After you press <Ctrl> + <I>, the **MAIN MENU** screen will appear (Figure 14).

Create RAID Volume

If you want to create a RAID array, select **Create RAID Volume** in **MAIN MENU** and press <Enter>.

```
Intel(R) Rapid Storage Technology - Option ROM - 15.7.0.2925
Copyright (C)  Intel Corporation.  All Rights Reserved.
============================[ MAIN MENU ]============================
          1.  Create RAID Volume              4.  Recovery Volume Options
          2.  Delete RAID Volume              5.  Acceleration Options
          3.  Reset Disks to Non-RAID         6.  Exit

====================[ DISK/VOLUME INFORMATION ]====================
RAID Volumes :
None defined.

Physical Deivces :
ID      Device Model            Serial #            Size        Type/Status(Vol ID)
1       TOSHIBA  DT01ACA1       763ZLL4FS          931.5GB     Non-RAID Disk
2       TOSHIBA  DT01ACA1       763ZM7MFS          931.5GB     Non-RAID Disk

        [↑↓]-Select              [ESC]-Exit              [ENTER]-Select Menu
```

Figure 14

Step 3:

After entering the **CREATE VOLUME MENU** screen, enter a volume name with 1~16 letters (letters cannot be special characters) under the **Name** item and press <Enter>. Then, select a RAID level (Figure 15). RAID levels supported include RAID 0, RAID 1, RAID 10, and RAID 5 (the selections available depend on the number of the hard drives being installed). Press <Enter> to proceed.

```
Intel(R) Rapid Storage Technology - Option ROM - 15.7.0.2925
            Copyright (C) Intel Corporation.  All Rights Reserved.
┌─────────────────── [ CREATE VOLUME MENU ] ───────────────────┐
│                      Name :   Volume0                         │
│                RAID Level :   RAID0(Stripe)                   │
│                     Disks :   Select Disks                    │
│                Strip Size :      16KB                         │
│                  Capacity :   1863.0 GB                       │
│                      Sync :   N/A                             │
│                               Create Volume                   │
└───────────────────────────────────────────────────────────────┘
┌───────────────────────────── [ HELP ] ───────────────────────┐
│                                                               │
│                                                               │
│                                                               │
│              RAID 0: Stripes data (performance).              │
│                                                               │
│                                                               │
│                                                               │
└───────────────────────────────────────────────────────────────┘
     [↑↓]-Change        [TAB]-Next       [ESC]-Previous Menu       [ENTER]-Select
```
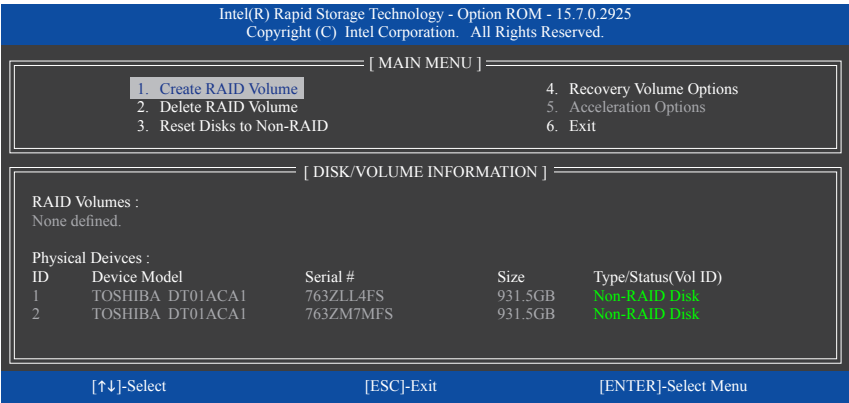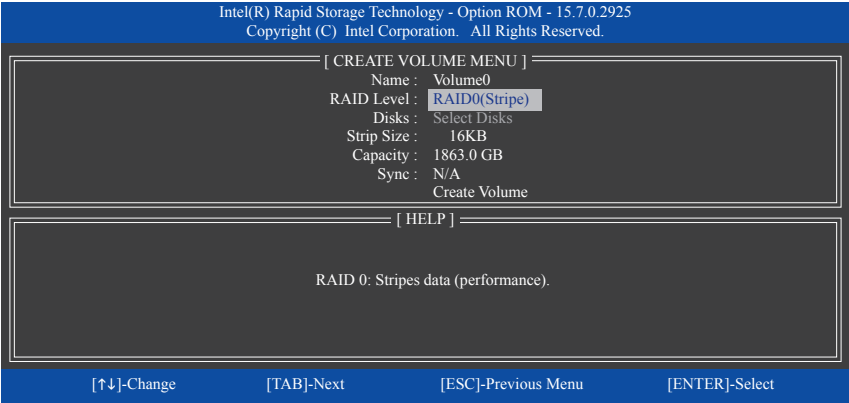
Figure 15

Step 4:

Under **Disks** item, select the hard drives to be included in the RAID array. If only two hard drives are installed, they will be automatically assigned to the array. Set the stripe block size (Figure 16) if necessary. The stripe block size can be set from 4 KB to 128 KB. Once you have selected the stripe block size, press <Enter>.

```
Intel(R) Rapid Storage Technology - Option ROM - 15.7.0.2925
            Copyright (C) Intel Corporation.  All Rights Reserved.
┌─────────────────── [ CREATE VOLUME MENU ] ───────────────────┐
│                      Name :   Volume0                         │
│                RAID Level :   RAID0(Stripe)                   │
│                     Disks :   Select Disks                    │
│                Strip Size :   16KB                            │
│                  Capacity :   1863.0 GB                       │
│                      Sync :   N/A                             │
│                               Create Volume                   │
└───────────────────────────────────────────────────────────────┘
┌───────────────────────────── [ HELP ] ───────────────────────┐
│           The following are typical values:                   │
│                                                               │
│                   RAID0   -  128KB                            │
│                   RAID10  -  64KB                             │
│                   RAID5   -  64KB                             │
│                                                               │
└───────────────────────────────────────────────────────────────┘
     [↑↓]-Change        [TAB]-Next       [ESC]-Previous Menu       [ENTER]-Select
```
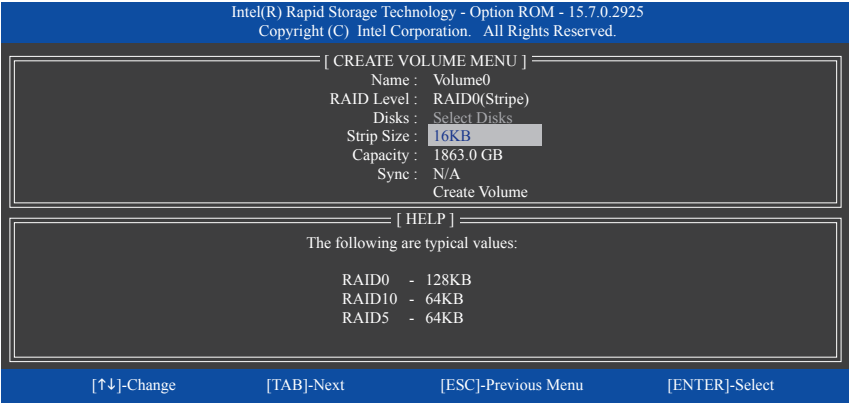
Figure 16

Step 5:
Enter the array capacity and press <Enter>. Finally press <Enter> on the **Create Volume** item to begin creating the RAID array. When prompted to confirm whether to create this volume, press <Y> to confirm or <N> to cancel (Figure 17).
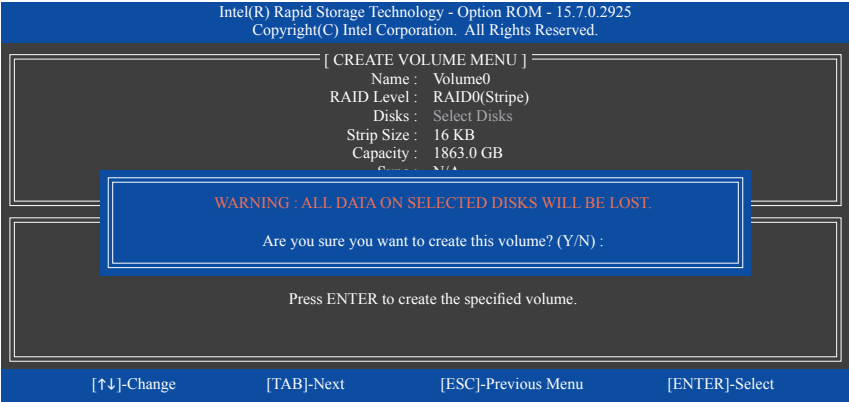
```
           Intel(R) Rapid Storage Technology - Option ROM - 15.7.0.2925
                   Copyright(C) Intel Corporation.  All Rights Reserved.
┌─────────────────────────[ CREATE VOLUME MENU ]─────────────────────────┐
│                            Name :   Volume0                             │
│                      RAID Level :   RAID0(Stripe)                       │
│                           Disks :   Select Disks                        │
│                      Strip Size :   16 KB                               │
│                        Capacity :   1863.0 GB                           │
│    ┌───────────────────────────────────────────────────────────────┐   │
│    │      WARNING : ALL DATA ON SELECTED DISKS WILL BE LOST.         │   │
│    │                                                                 │   │
│    │      Are you sure you want to create this volume? (Y/N) :       │   │
│    └───────────────────────────────────────────────────────────────┘   │
│                                                                         │
│                    Press ENTER to create the specified volume.          │
│                                                                         │
└─────────────────────────────────────────────────────────────────────────┘
      [↑↓]-Change          [TAB]-Next          [ESC]-Previous Menu          [ENTER]-Select
```

Figure 17

When completed, you can see detailed information about the RAID array in the **DISK/VOLUME INFORMATION** section, including the RAID level, stripe block size, array name, and array capacity, etc. (Figure 18)

```
           Intel(R) Rapid Storage Technology - Option ROM - 15.7.0.2925
                   Copyright (C)  Intel Corporation.   All Rights Reserved.
┌──────────────────────────────[ MAIN MENU ]──────────────────────────────┐
│      1.  Create RAID Volume                 4.  Recovery Volume Options   │
│      2.  Delete RAID Volume                 5.  Acceleration Options      │
│      3.  Reset Disks to Non-RAID            6.  Exit                      │
└──────────────────────────────────────────────────────────────────────────┘
┌────────────────────────[ DISK/VOLUME INFORMATION ]────────────────────────┐
│  RAID Volumes :                                                            │
│  ID      Name           Level            Strip      Size     Status    Bootable │
│  0       Volume0        RAID0(Stripe)    16KB       1.8TB    Normal    Yes  │
│                                                                            │
│  Physical Devices :                                                        │
│  ID      Device Model          Serial #          Size       Type/Status(Vol ID) │
│  1       TOSHIBA  DT01ACA1      763ZLL4FS         931.5GB    Non-RAID Disk │
│  2       TOSHIBA  DT01ACA1      763ZM7MFS         931.5GB    Non-RAID Disk │
└────────────────────────────────────────────────────────────────────────────┘
      [↑↓]-Select             [ESC]-Exit              [ENTER]-Select Menu
```
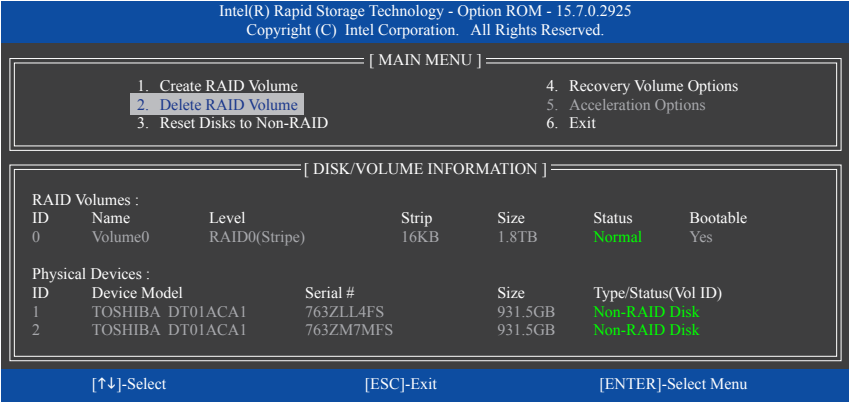
Figure 18

To exit the RAID BIOS utility, press <Esc> or select **6. Exit** in **MAIN MENU**.

Now, you can proceed to install the SATA RAID/AHCI driver and operating system.

Recovery Volume Options

Intel® Rapid Recover Technology provides data protection by allowing users to easily restore data and system operation using a designated recovery drive. With the Rapid Recovery Technology, which employs RAID 1 functionality, users can copy the data from the master drive to the recovery drive; if needed, the data on the recovery drive can be restored back to the master drive.

Before you begin:
- The recovery drive must have equal or greater capacity than the master drive.
- A recovery volume can be created with two hard drives only. A recovery volume and a RAID array cannot co-exist in the system at the same time, that is, if you have already created a recovery volume, you are unable to create a RAID array.
- By default, only the master drive can be viewed in the operating system; the recovery drive is hidden.

Step 1:
Select **Create RAID Volume** in **MAIN MENU** and press <Enter> (Figure 19).
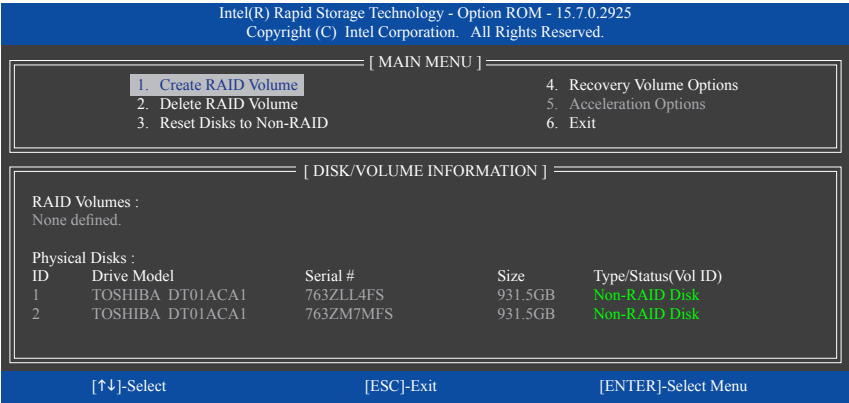
Figure 19

Step 2:
After entering the volume name, select **Recovery** under the **RAID Level** item and press <Enter> (Figure 20).
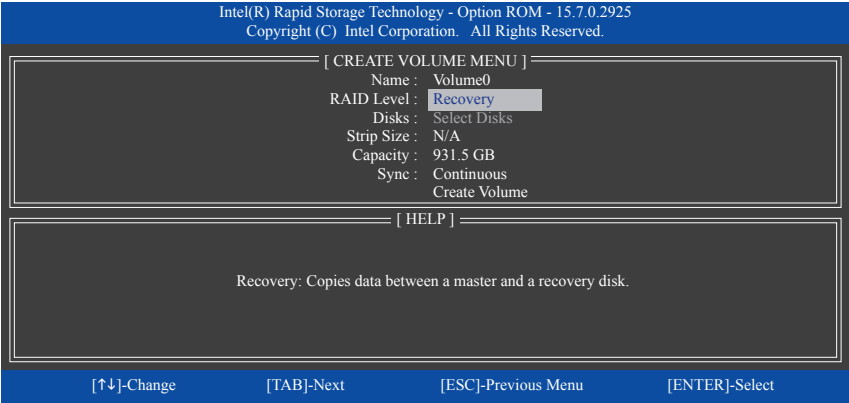
Figure 20

Step 3:

Press <Enter> under the **Select Disks** item. In the **SELECT DISKS** box, press <Tab> on the hard drive you want to use for the master drive and press <Space> on the hard drive you want to use for the recovery drive. (Make sure the recovery drive has equal or larger capacity than the master drive.) Then press <Enter> to confirm (Figure 21).

```
                Intel(R) Rapid Storage Technology - Option ROM - 15.7.0.2925
                       Copyright (C)  Intel Corporation.   All Rights Reserved.
┌─────────────────────────────── [ CREATE VOLUME MENU ] ───────────────────────────────┐
                                    Name :    Volume0
                                 RAID Level :   Recovery
    ┌──────────────────────────────── [ SELECT DISKS ] ────────────────────────────────┐
    │                                                                                    │
    │   ID      Drive Model          Serial #                   Size        Status       │
    │   M1      TOSHIBA  DT01ACA1     763ZM7MFS                 931.5GB     Non-RAID Disk  │
    │   R2      TOSHIBA  DT01ACA1     763ZLL4FS                 931.5GB     Non-RAID Disk  │
    │                                                                                    │
    │                                                                                    │
    │              Select 1 Master and 1 Recovery disk to create volume.                 │
    │                                                                                    │
    └───────── [↑↓]-Prev/Next  [TAB]-(M)aster  [SPACE]-(R)ecovery  [ENTER]-Done ─────────┘

      [↑↓]-Change          [TAB]-Next            [ESC]-Previous Menu       [ENTER]-Select
```

Figure 21

Step 4:

Under **Sync**, select **Continuous** or **On Request** (Figure 22). When set to **Continuous**, changes made to the data on the master drive will be automatically and continuously copied to the recovery drive when both hard drives are installed in the system. **On Request** allows users to update data from the master drive to the recovery drive manually using the Intel® Rapid Storage Technology utility in the operating system. **On Request** also allows users to restore the master drive to a previous state.

```
                Intel(R) Rapid Storage Technology - Option ROM - 15.7.0.2925
                       Copyright (C)  Intel Corporation.   All Rights Reserved.
┌─────────────────────────────── [ CREATE VOLUME MENU ] ───────────────────────────────┐
                                    Name :    Volume0
                                 RAID Level :   Recovery
                                     Disks :   Select Disks
                                 Strip Size :  N/A
                                  Capacity :   0.0 GB
                                     Sync :    Continuous
                                              Create Volume
┌─────────────────────────────────────── [ HELP ] ───────────────────────────────────────┐
│                                                                                          │
│                              Select a sync option:                                       │
│                         On Request: volume is updated manually                           │
│                       Continuous: volume is updated automatically                        │
│                                                                                          │
└──────────────────────────────────────────────────────────────────────────────────────┘

      [↑↓]-Change          [TAB]-Next            [ESC]-Previous Menu       [ENTER]-Select
```

Figure 22

Step 5:

Finally press <Enter> on the **Create Volume** item to begin creating the Recovery Volume and follow the on-screen instructions to complete.

Delete RAID Volume

To delete a RAID array, select **Delete RAID Volume** in **MAIN MENU** and press <Enter>. In the **DELETE VOLUME MENU** section, use the up or down arrow key to select the array to be deleted and press <Delete>. When prompted to confirm your selection (Figure 23), press <Y> to confirm or <N> to abort.
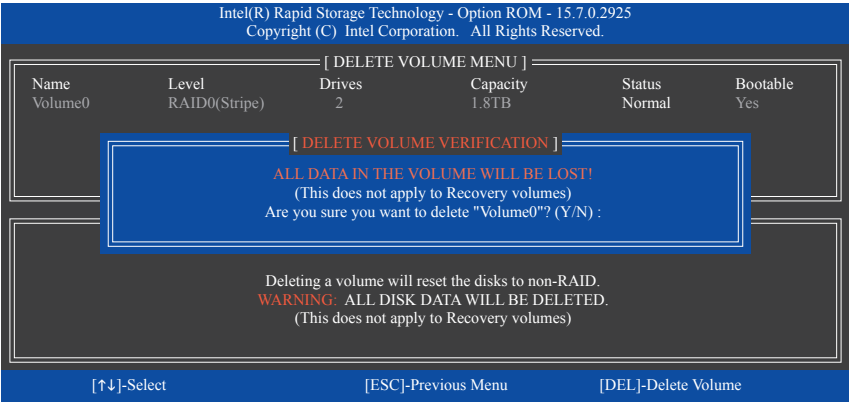


```
        Intel(R) Rapid Storage Technology - Option ROM - 15.7.0.2925
              Copyright (C)  Intel Corporation.   All Rights Reserved.

══════════════════════[ DELETE VOLUME MENU ]══════════════════════
 Name            Level           Drives        Capacity       Status       Bootable
 Volume0         RAID0(Stripe)   2             1.8TB          Normal       Yes

              ══════════[ DELETE VOLUME VERIFICATION ]══════════
                    ALL DATA IN THE VOLUME WILL BE LOST!
                   (This does not apply to Recovery volumes)
                  Are you sure you want to delete "Volume0"? (Y/N) :


                    Deleting a volume will reset the disks to non-RAID.
                    WARNING:  ALL DISK DATA WILL BE DELETED.
                      (This does not apply to Recovery volumes)



        [↑↓]-Select              [ESC]-Previous Menu          [DEL]-Delete Volume
```

Figure 23

Acceleration Options

This option allows you to view the status of your accelerated drive/volume (Figure 24) created using the Intel® IRST utility. In case you are unable to run the Intel® IRST utility due to an application error or operating system issue, you will need to remove acceleration or manually enable synchronization (Maximized mode only) using this option in the RAID ROM utility.

Steps:

Select **Acceleration Options** in **MAIN MENU** and press <Enter>.

To remove the acceleration, select the accelerated drive/volume, press <R>, and press <Y> to confirm.

To synchronize data from the cache device to the accelerated drive/volume, press <S> and press <Y> to confirm.


```
        Intel(R) Rapid Storage Technology - Option ROM - 15.7.0.2925
              Copyright (C)  Intel Corporation.   All Rights Reserved.

══════════════════════[ ACCELERATION OPTIONS ]══════════════════════
   Name           Type            Capacity      Mode          Status
   DISK PORT 3    Non-RAID Disk   931.5GB       Enhanced      In Sync




══════════════════════════════[ HELP ]══════════════════════════════
              Press 's'  to synchronize data from the cache device to
                         the Accelerated Disk/Volume

              Press 'r' to remove the Disk/Volume Acceleration
    WARNING:  IT IS RECOMMENDED THAT YOU PERFORM A SYNCHRONIZATION
                   BEFORE REMOVING ACCELERATION

        [↑↓]-Select                                  [ESC]- Previous Menu
```

Figure 24

Installing the RAID/AHCI Driver and Operating System

With the correct BIOS settings, you are ready to install the operating system.

A. Installing Windows

As some operating systems already include Intel® RAID/AHCI driver, you do not need to install separate RAID/AHCI driver during the Windows installation process. After the operating system is installed, we recommend that you install all required drivers from the motherboard driver disk using "Xpress Install" to ensure system performance and compatibility. If the operating system to be installed requires that you provide additional SATA RAID/AHCI driver during the OS installation process, please refer to the steps below:

Step 1:
Copy the **IRST** folder under **Boot** in the driver disk to your USB thumb drive.

Step 2:
Boot from the Windows setup disk and perform standard OS installation steps. When the screen requesting you to load the driver appears, select **Browse**.

Step 3:
Insert the USB thumb drive and then browse to the location of the driver. The location of the driver is as follows:
\IRST\f6flpy-x64

Step 4:
When a screen as shown in Figure 1 appears, select **Intel Chipset SATA RAID Controller** and click **Next** to load the driver and continue the OS installation.
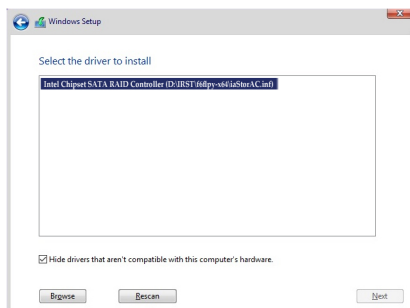
Figure 1

B. Rebuilding an Array

Rebuilding is the process of restoring data to a hard drive from other drives in the array. Rebuilding applies only to fault-tolerant arrays such as RAID 1, RAID 5 or RAID 10 arrays. The procedures below assume a new drive is added to replace a failed drive to rebuild a RAID 1 array. (Note: The new drive must have equal or greater capacity than the old one.)

Turn off your computer and replace the failed hard drive with a new one. Restart your computer.

• Performing the Rebuild in the Operating System

While in the operating system, make sure the chipset driver has been installed from the motherboard driver disk. Then launch the Intel® Rapid Storage Technology utility from the Start menu.
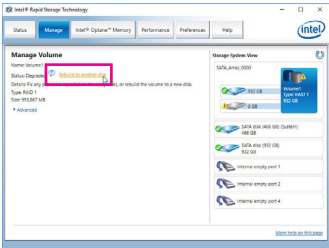
Step 1:
Go to the **Manage** menu and click **Rebuild to another disk** in **Manage Volume**.
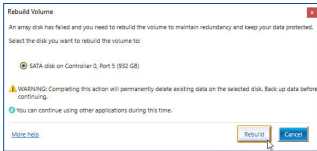
Step 2:
Select a new drive to rebuild the RAID and click **Rebuild**.
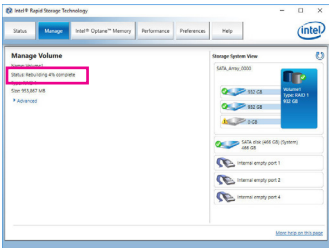
The **Status** item on the left of the screen displays the rebuild progress. After the RAID 1 volume rebuilding, the **Status** will display as **Normal**.

- **Restoring the Master Drive to a Previous State (for Recovery Volume only)**

When two hard drives are set to Recovery Volume in Update on Request mode, you can restore the master drive data to the last backup state when needed. For example, in case the master drive detects a virus, you can restore the recovery drive data to the master drive.

Step 1:

Select **4. Recovery Volume Options** in the **MAIN MENU** of the Intel® RAID Configuration Utility. On the **RECOVERY VOLUMES OPTIONS** menu, select **Enable Only Recovery Disk** to show the recovery drive in the operating system. Follow the on-screen instructions to complete and exit the RAID Configuration Utility.

Intel(R) Rapid Storage Technology - Option ROM - 15.7.0.2925
Copyright (C) Intel Corporation. All Rights Reserved.

[RECOVERY VOLUME OPTIONS]
    1. Enable Only Recovery Disk
    2. Enable Only Master Disk

[SELECT RECOVERY VOLUME]

Name	Level	Capacity	Status	Bootable
Volume0	Recovery(OnReq)	465.7GB	NeedsUpdate	Yes

Select a Recovery volume to do the operation.

[↑↓]-Up/Down [SPACE]-Selects [ENTER]-Done

[↑↓]-select   [ESC]-Previous Menu   [ENTER]-Select

Step 2:

Go to the **Manage** menu of the Intel® Rapid Storage Technology utility and click **Recover data** in **Manage Volume**.
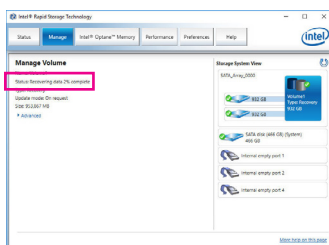
The **Status** item on the left of the screen displays the recovering status. After the recovery volume is completed, the **Status** will display as **Normal**.
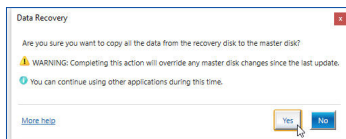
Step 3:
Click **Yes** to begin the data recovery.

Installing an Intel® Optane™ Memory

A. System Requirements

1. Intel® Optane™ memory
2. The Optane™ memory must have at least 16 GB capacity, and it must have equal or smaller capacity than the hard drive/SSD to be accelerated.
3. The Optane™ memory cannot be used to accelerate an existing RAID array; the accelerated hard drive/SSD cannot be included in a RAID array.
4. The hard drive/SSD to be accelerated must be a SATA hard drive or M.2 SATA SSD and must have Windows 10 64-bit (or later version) installed on it. (Must be formatted for GPT partition.)
5. The motherboard driver disk

B. Installation Guidelines

B-1: Installation in AHCI mode

If the SATA controller has been configured in AHCI mode, please install the Optane™ memory in the M2P_32G or M2Q_32G connector and follow the steps below:
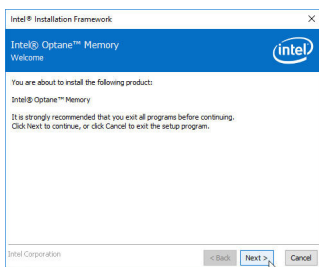
Step 1:

After entering the operating system, insert the motherboard driver disk into your optical drive. On the Xpress Install screen, select **Intel(R) Optane(TM) Memory System Acceleration**(Note) to install. Follow the on-screen instructions to continue. The system will auto-restart.

Step 2:

After re-entering the operating system, the dialog box as shown above will appear. Click **Yes** to continue the installation and then restart the system.

Step 3:

Launch the Intel(R) Optane Memory application from the Start menu. A message which says Intel® Optane™ Memory is disabled will appear on the main screen. Click **Enable** to activate the Intel® Optane™ Memory and restart the system again. (If you install more than one Optane™ memory, please select which one you are going to use).
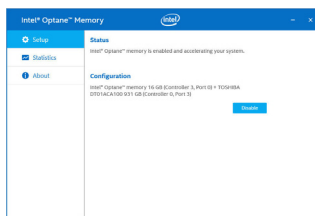
Step 4:

Launch the Intel(R) Optane Memory application from the Start menu and make sure the Intel® Optane™ Memory has been enabled. (The SATA controller mode is changed to Intel RST Premium With Intel Optane System Acceleration from AHCI mode. DO NOT change your SATA controller mode back to AHCI. Doing so will prevent Intel® Optane™ memory from functioning properly.

(Note)   If the system already has Intel® Rapid Storage Technology utility installed, you have to remove it first before installing the Intel(R) Optane Memory application.

B-2: Installation in Intel RST Premium With Intel Optane System Acceleration mode

If the SATA controller has been configured in Intel RST Premium With Intel Optane System Acceleration mode, please install the Optane™ memory in the M2P_32G or M2Q_32G connector first and follow the steps below:
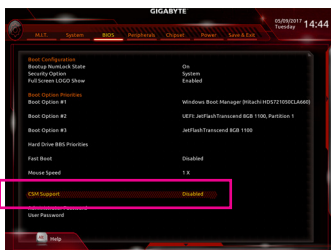

Step 1:
After system restarts, go to the BIOS Setup, make sure **CSM Support** under the **BIOS** menu is disabled.

Step 2:
Go to **Peripherals\SATA And RST Configuration** and make sure **USE RST Legacy ROM** is disabled. If you want to enable the Optane™ memory installed in the M2P_32G connector, set **PCIe Storage Device on Port 9** to **RST Controlled**; to enable the Optane™ memory installed in the M2Q_32G connector, set **PCIe Storage Device on Port 17** to **RST Controlled**.
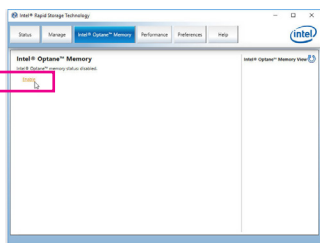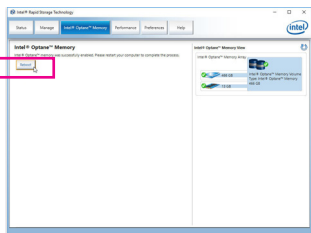

Step 3:
Enter the operating system, launch the Intel® Rapid Storage Technology utility from the Start menu, and then enable Intel® Optane™ Memory on the **Intel® Optane™ Memory** screen.
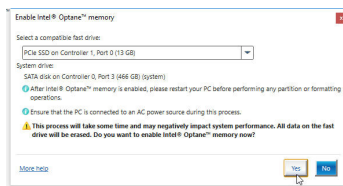
Step 4:
If you install more than one Optane™ memory, please select which one you are going to use.

Step 5:
Follow the on-screen instruction to continue the installation and then restart the system when completed.

- An Optane™ memory cannot be used to accelerate an M.2 PCIe SSD.
- Do not abruptly remove the Optane™ memory. Doing so will cause the operating system to stop functioning correctly.
- If you want to change/remove the Optane™ memory, you must disable it using the Intel® Rapid Storage Technology or Intel(R) Optane Memory application first.
- After enabling the Optane™ memory, the related BIOS settings will remain even after a BIOS update.