ASUS P6X58D-E Technical Updates

This is an information update for the user guide that comes with your motherboard package.

4.4.5   Marvell RAID utility

The onboard Marvell 9128 SATA 6Gb/s controller allows you to create a RAID 0 or RAID 1 array using two SATA hard disk drives. Refer to Chapter 2 of your motherboard user manual for the exact location of the Marvell 9128 SATA 6Gb/s connector.

To enter the Marvell utility, press **<Ctrl>** + **<M>** during POST.

> ⚠ All exisiting data on the hard disk drives will be erased when creating or deleting a RAID array. Ensure that you have back up all your data in your hard disk drives before making any change to the drive status.

```
━━━━━━Marvell BIOS Setup (c) 2009 Marvell Technology Group Ltd.━━━━━━
┌─Topology─────────────────┐  ┌─Information──────────────────────────
│HBA 0: Marvell 0          │  Vendor ID        :   1B4B
│ ├ Virtual Disks          │  Device ID        :   91A3
│ └ Free Physical Disks    │  Revision ID      :   B1
│   ├ PD 0: ST3160812AS    │  BIOS Version     :   0.0.0000
│   └ PD 8: ST3160812AS    │  Firmware Version:    2.1.0.1410
│                          │  PCIe Speed Rate :    5.0Gbps
│                          │  Configure SATA as:   IDE Mode
│                          │
│                          │
│                          │
│                          │
│                   ▶      │                                        ▶
┌─Help─────────────────────┘
 Marvell RAID on chip controller.
 ENTER: Operation   F10: Exit/Save    ESC: Return
```
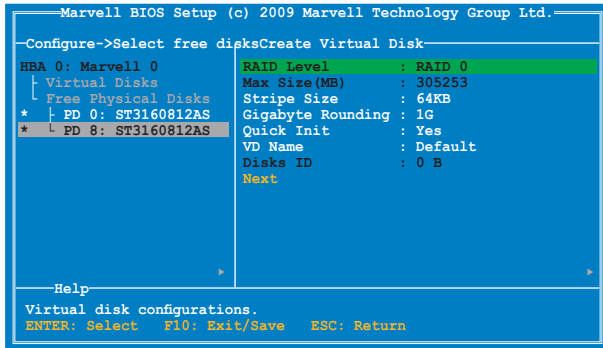
Create a RAID Array

1. Move the selection bar to **HBA 0: Marvell 0** and press <Enter>.
2. Select **Configuration Wizard** and press <Enter>.

```
━━━━━━━Marvell BIOS Setup (c) 2009 Marvell Technology Group Ltd.━━━━━━
┌─Configure->Select free disks─┐
│HBA 0: Marvell 0          │  Port ID          :   0
│ ├ Virtual Disks          │  PD ID            :   0
│ └ Free Physical Disks    │  Type             :   SATA PD
│* ├ PD 0: ST3160812AS     │  Status           :   Unconfigured
│   └ PD 8: ST3160812AS    │  Size             :   152626MB
│                          │  Feature Support :    MCQ 3G 48Bits
│                          │  Current Speed    :   3G
│                          │  Model            :   ST3160812AS
│                          │  Serial           :   9LS0F4HL
│                          │  FW Version       :   3.AAE
│                   ▶      │                                        ▶
┌─Help─────────────────────┘
 Use space bar to select the free disks to be used in the array.
 ENTER: Operation   SPACE: Select   F10: Exit/Save   ESC: Return
```

3. Press <Space> to select the hard drives to be included in the RAID array. An asterisk (*) appears in front of the selected hard drive. After selecting all the drives needed for the RAID array, press <Enter> to continue.

```
═══════Marvell BIOS Setup (c) 2009 Marvell Technology Group Ltd.═══════

─Configure->Select free disksCreate Virtual Disk──────────────────────────

HBA 0: Marvell 0            RAID Level        : RAID 0
 ├ Virtual Disks            Max Size(MB)      : 305253
 └ Free Physical Disks      Stripe Size       : 64KB
*  ├ PD 0: ST3160812AS      Gigabyte Rounding : 1G
*  └ PD 8: ST3160812AS      Quick Init        : Yes
                            VD Name           : Default
                            Disks ID          : 0 B
                            Next



              ▶                                        ▶
      ──Help──────────────────────────────────────────────────
   Virtual disk configurations.
   ENTER: Select   F10: Exit/Save   ESC: Return
```

4.   Use the up or down arrow key to move the selection bar and press <Enter> to configure further RAID settings.

      RAID Level: Select a RAID Level. Configuration options: [RAID 0] [RAID 1]

      Stripe Size: Specifies the size of single data block on the virtual disk. In general, a larger stripe size is recommended for applications requiring large data transfers such as audio, video, and graphics. A smaller stripe size is better for applications with content in much smaller size, such as e-mails and documents.
      Configuration options: [32K] [64K]

      Gigabyte Rounding: In the event of a single physical disk failure in a RAID 1 virtual disk, Gigabyte Rounding allows the replacement physical disk to be of a size slightly smaller than the existing physical disk. The capacity of the rebuilt virtual disk equals to the size of the smaller physical disk included in the RAID 1 array. The configuration options represent the tolerance value of drive capacity difference.
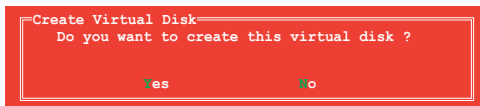   Configuration options: [None] [1G] [10G]

      Quick Init: Enables or disables quick initialization of the virtual disk.
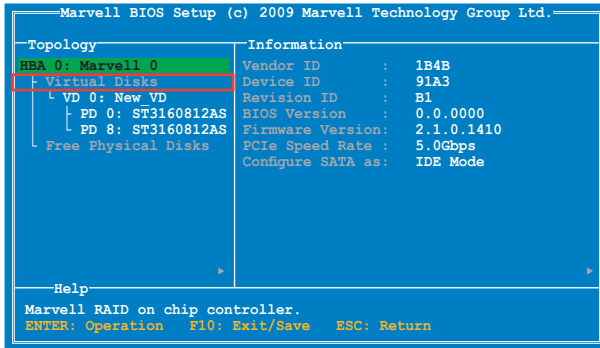   Configuration options: [Yes] [No]

      VD Name: Enter a name with 1–10 letters (no special characters) for the RAID array.

5.   Move the selection bar to **Next** and press <Enter>. The following warning message appears:

```
 ┌Create Virtual Disk═══════════════════════════════════
    Do you want to create this virtual disk ?


              Yes               No
```

      Press <Y> to create the RAID array, or press <N> to cancel. The new RAID array appears under Virtual Disks, as shown in the image below.

```
┌──Marvell BIOS Setup (c) 2009 Marvell Technology Group Ltd.──┐
│┌Topology──────────────┐   ┌Information──────────────────────┐│
│ HBA 0: Marvell 0         Vendor ID      :  1B4B              │
│ ├ Virtual Disks          Device ID      :  91A3              │
│ │  └ VD 0: New_VD        Revision ID    :  B1                │
│ │     ├ PD 0: ST3160812AS BIOS Version   :  0.0.0000         │
│ │     └ PD 8: ST3160812AS Firmware Version:  2.1.0.1410      │
│ └ Free Physical Disks    PCIe Speed Rate :  5.0Gbps          │
│                          Configure SATA as:  IDE Mode        │
│                                                              │
│                                                              │
│                                                              │
│                    ►                                       ► │
│┌Help──────────────────────────────────────────────────────┐│
│ Marvell RAID on chip controller.                           │
│ ENTER: Operation   F10: Exit/Save    ESC: Return           │
└──────────────────────────────────────────────────────────────┘
```
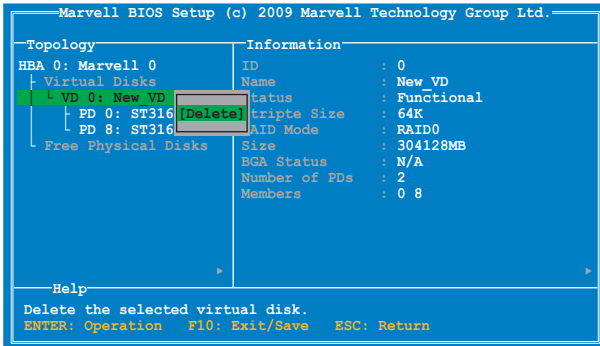
6.   Press <F10>. The following warning message appears:

```
┌Exit─────────────────────────────────────────────┐
│   Do you want to exit from Marvell BIOS Setup?   │
│                                                  │
│              Yes              No                 │
└──────────────────────────────────────────────────┘
```

Press <Y> to save the RAID setting and exit the Marvell RAID utility.

Delete an existing RAID Array

1.   Select the RAID array to delete and press <Enter>. Select **Delete** and press <Enter>.

```
┌──Marvell BIOS Setup (c) 2009 Marvell Technology Group Ltd.──┐
│┌Topology──────────────┐   ┌Information──────────────────────┐│
│ HBA 0: Marvell 0         ID              :  0               │
│ ├ Virtual Disks          Name            :  New_VD          │
│ │  └ VD 0: New_VD        tatus           :  Functional      │
│ │     ├ PD 0: ST316 [Delete] tripte Size :  64K             │
│ │     └ PD 8: ST316      AID Mode        :  RAID0           │
│ └ Free Physical Disks    Size            :  304128MB        │
│                          BGA Status      :  N/A             │
│                          Number of PDs   :  2               │
│                          Members         :  0 8             │
│                                                              │
│                    ►                                       ► │
│┌Help──────────────────────────────────────────────────────┐│
│ Delete the selected virtual disk.                          │
│ ENTER: Operation   F10: Exit/Save    ESC: Return           │
└──────────────────────────────────────────────────────────────┘
```

2. The following warning message appears:

```
┌Delete Virtual Disk─────────────────────────────────────────────────┐
│ Do you want to delete this virtual disk ?                          │
│                                                                     │
│              Yes                    No                              │
└─────────────────────────────────────────────────────────────────────┘
```

Press <Y> to delete the selected RAID array. The following warning message appears:

```
┌Delete MBR──────────────────────────────────────────────────────────┐
│ Do you want to delete MBR from this virtual disk ?                 │
│                                                                     │
│              Yes                    No                              │
└─────────────────────────────────────────────────────────────────────┘
```
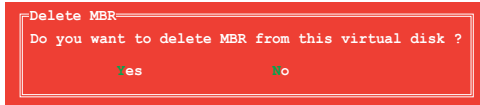
Press <Y> to delete the Master Boot Record (MBR) from the selected RAID array.

3. Press <F10>. The following warning message appears:

```
┌Exit────────────────────────────────────────────────────────────────┐
│      Do you want to exit from Marvell BIOS Setup?                  │
│                                                                     │
│              Yes                    No                              │
└─────────────────────────────────────────────────────────────────────┘
```

Press <Y> to save the RAID setting and exit the Marvell RAID utility.