This guide contains step-by-step instructions for installing the Intel® Integrated RAID Module RMS25CB080, RMS25CB040, RMT3CB080, and RMS25CB080N and information on using the BIOS setup utility to configure a single logical drive array and install the driver into the operating system.

For more advanced RAID configurations, or to install with other operating systems, please refer to the Hardware Guide for complete Intel® RAID procedures. For more details on Intel® RAID controllers, see: www.intel.com/go/serverbuilder.

Read all cautions and warnings first before starting your RAID Controller installation.

1. Installing the Barrel Standoff

   - Power down the system and disconnect the power cord.
   - Locate the matching holes in the server board and install the barrel standoffs.
   - Insert the barrel standoffs into the matching holes in the server board.

2. Install the RAID Module

   - Power down the system and disconnect the power cord.
   - Remove the server cover.
   - Match the RAID Module to the matching server board connector and install the RAID Module for Intel® Integrated RAID Module RMS25CB080, RMS25CB040, or RMT3CB080 (SAS hard disk drives need to be prepared separately).
   - (This connector is not available on RMS25CB080N)
   - Press down gently but firmly to ensure that the card is properly seated in the connector, and then insert the four pin connectors into the board standoffs, respectively.

3. Connect the RAID Module

   - Connect the wide end of the provided cable to the top juicer connector (ports 0-3).
   - Attach the cable to the bottom silver connector (ports 4-7).
   - Drive power cables (not shown) are required.

Choosing the Right RAID Level

<table>
<thead>
<tr>
<th>RAID</th>
<th>Minimum Physical Drives</th>
<th>Fail Pairs Allowed</th>
<th>Method</th>
<th>Capacity</th>
<th>Read Speed</th>
<th>Write Speed</th>
<th>Good Usage</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>2</td>
<td>NONE</td>
<td>Striping (speed)</td>
<td>100%</td>
<td>Excellent</td>
<td>Excellent</td>
<td>High-throughput workloads</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>Mirroring (redundancy)</td>
<td>50%</td>
<td>Very good</td>
<td>Good</td>
<td>OS, apps entry level</td>
<td></td>
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<tr>
<td>2</td>
<td>1</td>
<td>Stripe and distributed parity (less tolerance)</td>
<td>n-1 (50-88%)</td>
<td>Very good</td>
<td>Good</td>
<td>Data, web/media server</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>2</td>
<td>Striping with dual distributed parity</td>
<td>n-2 (30-58%)</td>
<td>Good</td>
<td>Good</td>
<td>Database, file, mail servers</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>1 per RAID set</td>
<td>Stripping across mirrors</td>
<td>50%</td>
<td>Very good</td>
<td>Good</td>
<td>Database, file, mail servers</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>1 per RAID set</td>
<td>Stripping across RAID arrays</td>
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<td>6</td>
<td>2 per RAID set</td>
<td>Stripping across RAID arrays</td>
<td>n-4 (20-50%)</td>
<td>Very good</td>
<td>Good</td>
<td>Critical data</td>
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If you are not familiar with ESD (Electrostatic Discharge) procedures used for Intel® products, see: www.intel.com/go/serverbuilder.

Drive power cables (not shown) are required.

Notes

- SAS 2.0 or SATA II hard disk drives (backward compatible to support SATA II hard disk drives) for Intel® Integrated RAID Module RMS25CB080, RMS25CB040, and RMT3CB080.
- SAS hard disk drives (backward compatible to support SATA II hard disk drives) for Intel® Integrated RAID Module RMS25CB080, Intel® Integrated RAID Module RMS25CB040, RMS25CB080, or integrated RAID Module RMS25CB080 (SAS hard disk drives need to be prepared separately).
- Intel® Server Board S2600IP is shown for illustrative purposes.

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- Product information, including product data sheets and technical product specifications
- Support information and much more

Audible Alarm Information

For information about the audible alarms and how to silence or disable it, see the reverse side of this document.

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Intel® Integrated RAID Module RMS25CB080, RMS25CB040, RMT3CB080, and RMS25CB080N Reference Diagram

[Diagram of Intel® Integrated RAID Module RMS25CB080, RMS25CB040, RMT3CB080, and RMS25CB080N Reference Diagram]
Use the Intel® RAID BIOS Console Utility to create a RAID Volume

1. Power on the system and press Ctrl + Shift + Esc when the following screen is displayed.

2. When the Intel® RAID BIOS Console starts, it will display the Intel® RAID Manager screen. Install the RAID driver. Click on the Adaptation icon or the icon.

3. After a brief pause, the RAID BIOS Console screen is displayed. Click Configuration Wizard.

4. Select New Configuration and click Next.

5. Add physical drives to the array by pressing the Ctrl + Shift + Key, and click on Physical Drives. Once you have selected all the drives, click Finish.

6. Define further array by clicking on Add To Array. After accepting the RAID configuration, click Next.

7. Select the RAID Level from the drop-down list. Select the RAID Size, and click on Next.

Microsoft Windows®

- Create the installation media (floppy disk required for Windows 2000*, removable media, such as floppy disk, USB device, or CD/DVD-ROM, required for Microsoft Windows* 2003*). See the instructions at the right.
- Insert the floppy disk into the disk drive.
- Select Fast Initialize to do a preliminary initialization of the drives for loading the operating system. A full initialization will occur in
- Select Quick Initialize to do a preliminary initialization of the drives. A full initialization will occur in

Red Hat®

- Install the Operating System Drivers
- Boot the server and start the OS installation.
- Follow the on-screen instructions to complete the installation.

SuSE® Linux Enterprise Server

- Install the Intel® RAID Web Console 2 package from the Resource CD.
- Click Yes.

Install the Operating System Drivers

- Create installation media (floppy disk required for Windows 2000*, removable media, such as floppy disk, USB device, or CD/DVD-ROM, required for Microsoft Windows* 2003*). See the instructions at the right.
- Insert the floppy disk into the disk drive.
- Select Fast Initialize to do a preliminary initialization of the drives. A full initialization will occur in
- Select Quick Initialize to do a preliminary initialization of the drives. A full initialization will occur in

End qualified

- Obtain the drivers either from the resource CD or the Intel® website.
- If you have a custom imaging for your hard drives, copy the appropriate files to a floppy disk (for Microsoft Windows* 2003*) or removable media (for Microsoft Windows* 2008*).
- Copy the matching sys, cat, and disk files to a floppy disk or removable media.

- Install the Intel® RAID Web Console 2 package from the Resource CD.
- Extract the contents of the ZIP file and run Setup.exe from the Disk1 folder. Unpack Linux_rwc2_tarn.gz.

- Choose one of four installation modes: Complete (installs all features), Client (administrative machine only), Server (can be managed remotely), or StandAlone (only manages itself).
- Follow the on-screen instructions to complete the installation. The Intel® RAID Web Console 2 is automatically detected and installed.

Understanding the Audible Alarm

The audible alarm will beep under two conditions: When a drive has failed, and during and following a rebuild. The drive failure alarms are as follows:
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