HP has redesigned the Z400 motherboard. The Z400 system model name / part number will not change. We will refer to the original motherboard as Gen1 Z400 and the new motherboard as Gen2 Z400.

The major differences are:

**Gen 1**
- Has only 4 memory DIMM slots
- No embedded Firewire
- Avid Z400 SKU for the Gen1 Z400 comes with add in 1394a PCI controller in slot #5 (HP NM980AV)

**Gen 2**
- Has 6 memory DIMM slots (2 were added)
- Has embedded Firewire

**How to determine which version Z400 my system is:**

Unfortunately there is no model number change or external identifier on the Z400 to help the end user determine which version they have.

There are three ways to identify Gen1 Z400 vs. Gen2 Z400:

1.) Go into the BIOS - System Information page and look to see how many DIMM slots are available identified by DIMMs (D1 – D4) for Gen 1, (D1 – D6) for Gen 2

2.) Obtain and install the HP Performance Advisor Utility available at the following link: [http://h20331.www2.hp.com/hpsub/cache/285683-0-0-225-121.html](http://h20331.www2.hp.com/hpsub/cache/285683-0-0-225-121.html) 
   Run the utility. Select “Your Computer” icon. Select the Block Diagram tab. See if the block diagram shows 6 DIMM slots (Gen2) or 4 DIMM slots (Gen1).

3.) Remove the cover and look at the motherboard layout label on the inside cover, or physically look at the motherboard to see how many DIMM slots exist (4 or 6). Realizing that removing the cover can be inconvenient or difficult for an end user there is option #1 and option #2.

**See pictures on following pages.**
Gen1 Z400 BIOS shows only 4 DIMM slots

<table>
<thead>
<tr>
<th>DIMM Slots</th>
<th>DIMM count (D1, D2, D3, D4)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Gen2 Z400 BIOS shows 6 DIMM slots

<table>
<thead>
<tr>
<th>DIMM Slots</th>
<th>DIMM count (D1, D2, D3, D4, D5, D6)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Via the HP Performance Advisor utility - Gen1 Z400 block diagram shows only 4 DIMM slots

Via the HP Performance Advisor utility – Gen2 Z400 block diagram shows 6 DIMM slots
Figure 5-1 4-DIMM configuration system board components

Table 5-2 4-DIMM system board components ID

<table>
<thead>
<tr>
<th>Item</th>
<th>Component</th>
<th>Item</th>
<th>Component</th>
<th>Item</th>
<th>Component</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>CPU fan</td>
<td>12</td>
<td>Clear CMOS button</td>
<td>23</td>
<td>PCI 32/33</td>
</tr>
<tr>
<td>2</td>
<td>Rear chassis fan</td>
<td>13</td>
<td>Front power button/LED</td>
<td>24</td>
<td>PCIe 2 x 16</td>
</tr>
<tr>
<td>3</td>
<td>CPU power</td>
<td>14</td>
<td>Crisis recovery jumper</td>
<td>25</td>
<td>PCIe x8(4)</td>
</tr>
<tr>
<td>4</td>
<td>Solenoid hood lock</td>
<td>15</td>
<td>Front chassis fan</td>
<td>26</td>
<td>PCIe 2 x 16</td>
</tr>
<tr>
<td>5</td>
<td>CPU socket</td>
<td>16</td>
<td>HDD LED</td>
<td>27</td>
<td>PCIe x2 x8(4)</td>
</tr>
<tr>
<td>6</td>
<td>Memory sockets</td>
<td>17</td>
<td>Internal USB 1/DASH</td>
<td>28</td>
<td>Audio</td>
</tr>
<tr>
<td>7</td>
<td>Main power</td>
<td>18</td>
<td>SATA ports</td>
<td>29</td>
<td>Network/USB</td>
</tr>
<tr>
<td>8</td>
<td>Battery</td>
<td>19</td>
<td>Internal USB 2</td>
<td>30</td>
<td>USB</td>
</tr>
<tr>
<td>9</td>
<td>Floppy disk drive</td>
<td>20</td>
<td>Front USB</td>
<td>31</td>
<td>Keyboard/mouse</td>
</tr>
<tr>
<td>10</td>
<td>Password jumper</td>
<td>21</td>
<td>Speaker</td>
<td>32</td>
<td>Serial</td>
</tr>
<tr>
<td>11</td>
<td>Chassis intrusion switch</td>
<td>22</td>
<td>Front audio</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

HP Z400 Gen2 design vs. Gen1 design
Impact on Avid users
Joe Conforti  March 4th 2010 Rev 2
The difference between Figure 5-1 Gen 1 and Figure 5-3 Gen2 are the following:

- Reference Item #6 – DIMM slot count
- Reference item #22 (For Gen2 shows additional embedded 1394a connection / header)
Supported Avid Z400 configurations:

**No changes regarding the following as stated in the current Z400 config guide:**
- O.S. choices, Video Card, System Drive, add-in local storage and shared storage HBA’s

1.) **CPU Configs:**

   Gen 1  (2 qualified CPU choices)
   a.) Single Intel® Quad-Core Xeon® W3540 Processor @ 2.93GHz 8MB cache / 1066MHz memory
   b.) Single Intel® Quad-Core Xeon® W3550 Processor @ 3.06GHz 8MB cache / 1066MHz memory

   Gen 2  (1 qualified CPU choices)
   a.) Single Intel® Quad-Core Xeon® W3550 Processor @ 3.06GHz 8MB cache / 1066MHz memory

2.) **Memory Configs:**

   Gen 1  (Only one supported configuration)
   Memory: 6GB (3 x 2GB) DDR3 1333 ECC memory –
   (Requires three 2GB DIMMs, **DIMM sizes cannot be mixed sizes**)
   2GB memory modules must be installed in the following memory slots:
   CPU0-DIMM1, CPU0-DIMM2, CPU0-DIMM3

   Gen 2  (3 possible supported configurations)
   a.) Memory: 6GB (3 x 2GB) DDR3 1333 ECC memory –
       (Requires three 2GB DIMMs, **DIMM sizes cannot be mixed sizes**)
       2GB memory modules must be installed in the following memory slots:
       CPU0-DIMM1, CPU0-DIMM3, CPU0-DIMM5

   b.) Memory: 12GB (6 x 2GB) DDR3 1333 ECC memory –
       (Requires six 2GB DIMMs, **DIMM sizes cannot be mixed sizes**)
       2GB memory modules must be installed in the following memory slots:
       CPU0-DIMM1, CPU0-DIMM2, CPU0-DIMM3, CPU0-DIMM4, CPU0-DIMM5, CPU0-DIMM6

   c.) *** Memory: 6GB (6 x1GB) DDR3 1333 ECC memory –
       (Requires six 1GB DIMMs, **DIMM sizes cannot be mixed sizes**)
       1GB memory modules must be installed in the following memory slots:
       CPU0-DIMM1, CPU0-DIMM2, CPU0-DIMM3, CPU0-DIMM4, CPU0-DIMM5, CPU0-DIMM6

   *** This Config has the disadvantage that it cannot be expanded, the existing 1GB modules would all need to be removed and replaced with 2GB modules
Supported Avid Z400 configurations (continued):

3.) **1394 Firewire connectivity:**

*Regardless of whether the Z400 is Gen1 or Gen2,* it is still mandatory that connection to 1394 Adrenaline DNA and 1394 Mojo-SDI DNA be made via a high performance 8k buffer 1394b HBA installed in slot #1 (StarTech etc, AVID P/N 7030-30029-01)

For 1394 camera’s and decks

**Gen 1**
Primary 1394a connections for camera’s, decks etc are to be made via the HP 3-port PCI 1394a Firewire HBA option in Slot #5 (H.P. option NM980AV) This 1394 HBA option connects to the Z400 front panel HBA port and also has 2 external 1394 ports coming off the back of the card.

**Gen 2**
Has an embedded 1394a Firewire controller which connects only to the Z400 front panel 1394 port, no rear 1394 port(s). 1394a connections for camera’s, decks etc are to be connected here.