ftServer CRU Part Replacement Ordering

Version – 91

Author:
Jim Rivela

UPDATED BY:
John Beechinor:  05/20/2019
## Revision History

<table>
<thead>
<tr>
<th>Rev.</th>
<th>Description</th>
<th>Date</th>
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<tbody>
<tr>
<td>38.0</td>
<td>Updated 2510/4410/6210 links to reference documents</td>
<td>06/05/08</td>
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<tr>
<td>39.0</td>
<td>Added new vendor part numbers for 146, and 500GB disks on 25xx/44xx/62xx systems and new 300GB part on 25xx/44xx/62xx</td>
<td>09/01/08</td>
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<tr>
<td>40.0</td>
<td>Fixed page 49, step information for tools to determine Riser Adapters</td>
<td>09/23/08</td>
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<tr>
<td>41.0</td>
<td>Added new Vendor SPD MFG part numbers for 44xx/62xx 4GB DIMMs (609-01639-000)</td>
<td>10/02/08</td>
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<tr>
<td>42.0</td>
<td>Added new DVD model Teac for 25xx/44xx/62xx, fixed or 260-01651-000 added back in ProductID = ST314685SS. Updated CPU 062-03056-000 to -001 and Disk 260-01649-000 to -001</td>
<td>03/23/09</td>
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<tr>
<td>43.0</td>
<td>CPU 062-0356-001 was not released, ECO modified to class 3B. Added missing MAX3073RC for 260-01650-000</td>
<td>3/30/09</td>
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<tr>
<td>44.0</td>
<td>Added E0 stepping processor and kit information on 2510, 4410 and 6210</td>
<td>4/13/09</td>
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<td>45.0</td>
<td>Added new vendor SPD for 609-01642-000 and 609-01643-000.</td>
<td>4/23/09</td>
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<td>46.0</td>
<td>Added disk drives 260-01690-000, 260-01691-000, 260-01688-000 and 260-01689-000. Update various other 2500, 4400 and 6200 disk drives.</td>
<td>5/20/09</td>
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<td>47.0</td>
<td>Added 2600, 4500 and 6300 products</td>
<td>09/18/09</td>
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<td>48.0</td>
<td>Added new vendor SPD for 609-01658-000</td>
<td>01/10/10</td>
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<td>49.0</td>
<td>Updated CRU determination to use P-Package (P2600, P4500 and P6300) and fixed 500GB disk identifier key name for 2600/4500/6300</td>
<td>01/28/10</td>
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<tr>
<td>50.0</td>
<td>Fixed Note 5 page 50 on 2500 system not supporting 2GB DIMMs. Only 1GB DIMMs max 6GB memory.</td>
<td>06/24/10</td>
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<tr>
<td>51.0</td>
<td>Added 6310, 2600 and 4500 model –C versions. Added note on use of Atlas ftServer Orderable Part Numbers (OPN) disaggregation.</td>
<td>12/27/10</td>
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<td>52.0</td>
<td>Added PCI adapters for 2600, 4500 and 6300 operating ftSSS 7.0.0.x</td>
<td>12/29/10</td>
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<td>53.0</td>
<td>Fixed 6600 1GB AA-M22900 DIMMs vendor part numbers, added VI4CR287224DYHS2 or VI4CR287224DYHS1</td>
<td>02/10/11</td>
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<tr>
<td>54.0</td>
<td>Fixed broken links, added new 300MGB and 1TB disks for Draco. Added new vendor part #s for Draco DIMMs, added 6300 model –C</td>
<td>06/14/11</td>
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<tr>
<td>55.0</td>
<td>Add new vendor SPD for DIMM on 2600, 4500 and 63x0 products.</td>
<td>10/28/11</td>
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<td>56.0</td>
<td>Added specific information for V2302 and V2404 CRU and processor ordering in V2302/V2404 section. Different from Windows/Linux and ESX base systems</td>
<td>01/3/12</td>
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<tr>
<td>57.0</td>
<td>Added specific information for V6408 CRU and processor ordering in V2302/V2404/V6408 section. Add vendor product ID for 146GB disk on 2600, 4500, 6300 and 6310. Included Internal platform codenames.</td>
<td>2/4/12</td>
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<tr>
<td>58.0</td>
<td>Added new 2700, 4700 and 6400 platform section.</td>
<td>10/10/12</td>
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<td>59.0</td>
<td>Corrected Cygnus DIM part numbers</td>
<td>03/22/13</td>
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<tr>
<td>60.0</td>
<td>Add 8GB DIMM M393B1K70CH0-YH9 for 6300</td>
<td>09/30/13</td>
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<tr>
<td>64.0</td>
<td>Added new 2710, 4710 and 6410 platform section. General housekeeping cleanup of other sections</td>
<td>4/14/2014</td>
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<tr>
<td>65.0</td>
<td>Minor updates to section 13</td>
<td>5/2/2014</td>
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<td>66.0</td>
<td>Minor updates to section 13</td>
<td>5/2/2014</td>
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<tr>
<td>67.0</td>
<td>Change Cygnus 16 gb Dimm typo 1765 to 1675 Update Cygnus Mem config to include Cygnus-I mem types</td>
<td>5/7/2014</td>
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<tr>
<td>68.0</td>
<td>Clean up Cygnus approved mem 3ims</td>
<td>5/12/2014</td>
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<tr>
<td>69.0</td>
<td>Update Draco section for Draco prime motherboards</td>
<td>7/10/2014</td>
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<td>70.0</td>
<td>Updated Riser ordering notes for Cygnus and Cygnus-I models</td>
<td>9/23/2014</td>
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<td>71.0</td>
<td>Added Backpanel information for models Draco, Draco’, Cygnus and Cygnus-I models. Added Mem config ordering info for V2404/V6408</td>
<td>3/21/2015</td>
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<tr>
<td>72.0</td>
<td>Added ftserver 2800/4800/6800 Pegasus system info</td>
<td>7/21/2015</td>
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<tr>
<td>73.0</td>
<td>Minor updates and formatting</td>
<td>7/30/2015</td>
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<td>74.0</td>
<td>Drive vendor updates</td>
<td>9/01/2015</td>
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<tr>
<td>75.0</td>
<td>Update TOC to include Pegasus. Add memory warning to Cygnus section</td>
<td>11/18/2015</td>
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<tr>
<td>76.0</td>
<td>Added Mem p/n 609-01683-000 64G dims released by eco-150222 for VMware 1 TB config</td>
<td>02/09/2016</td>
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<tr>
<td>77.0</td>
<td>Add info about V6624 early release modules Update Cygnus-I mem info to include 609-01680-000 D die 32G dimm</td>
<td>01/16/2017</td>
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<tr>
<td>78.0</td>
<td>Add info about Pegasus-memory Dimms 2810/4810/6810</td>
<td>04/06/2017</td>
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<tr>
<td>79.0</td>
<td>Minor changes and updates to Pegasus Memory tables</td>
<td>04/06/2017</td>
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<tr>
<td>80.0</td>
<td>Add Pegasus B information</td>
<td>05/25/2017</td>
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<tr>
<td>81.0</td>
<td>Update TOC , Update U112 U112A fw info</td>
<td>06/27/2017</td>
</tr>
<tr>
<td>82.0</td>
<td>Add CRU power supply part number info</td>
<td>05/08/2018</td>
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<tr>
<td>83.0</td>
<td>Add model 6805 info</td>
<td>07/25/2018</td>
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<tr>
<td>84.0</td>
<td>Add Aquarius info ftServer 2900, 4900, 6900</td>
<td>07/25/2018</td>
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<tr>
<td>85.0</td>
<td>Add V-Pegasus CRU info for V2608/V4612/V6616/V6624</td>
<td>10/30/2018</td>
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<tr>
<td>86.0</td>
<td>More updates to V Pegasus section</td>
<td>11/01/2018</td>
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<td>87.0</td>
<td>More updates to V Pegasus section</td>
<td>11/01/2018</td>
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<tr>
<td>88.0</td>
<td>Add updates to Pegasus Peg B section for eco-190141</td>
<td>11/01/2018</td>
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<tr>
<td>89.0</td>
<td>Correct 6810-1S CRU part number pg 104</td>
<td>05/02/2019</td>
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<tr>
<td>90.0</td>
<td>Correct U117 – U117A part numbers for Pegasus and Aquarius</td>
<td>05/02/2019</td>
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<tr>
<td>91.0</td>
<td>Update Aquarius CPU naming convention, Change processor ‘21’ to ‘41’ Add appendix 1</td>
<td>05/20/2019</td>
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Document Overview

1.1 Introduction

This document details the how to determine the proper CRU configuration for ftServer products when ordering a replacement for Windows based OS systems. The information documented uses ftServer Management Console (ftSMC) to gather information required to determine proper CRU configuration.

Atlas and ASM contain the ability to provide orderable part numbers (OPN) from the system inventory. This tool has been implemented for 3300 and above ftServer platforms and should be used as the PRIMARY source for determining all orderable RUs, including proper CRU configurations.

Click on the following links to get CRU ordering procedures for the specific system type.

- 2300 ftServer - (Encore)
  - CPU and I/O CRU
- 32x0 ftServer - (Tune)
  - CPU CRU
  - I/O CRU
- 2400/4300/4600/5700 ftServer - (Aria)
  - CPU and I/O CRU
- 2500/4400/6200 ftServer (Fusion)
  - CPU and I/O CRU
- 2600/4500/6300 ftServer - (Draco/Draco')
  - CPU and I/O CRU
- 6310 ftServer - (Draco-W)
  - CPU and I/O CRU
- 2700/4700/6400 ftServer - (Cygnus)
  - CPU and I/O CRU
- 2510/4410/6210 ftServer - (Fusion-H)
  - CPU and I/O CRU
- 5200 ftServer - (Melody)
  - CPU CRU
- 5240 ftServer (Hale)
  - CPU CRU
- 6500 ftServer - (Hale)
  - CPU CRU
- 3300 ftServer - (Sonic-P or N)
  - CPU CRU
  - I/O CRU
- 5600 ftServer - (Sonic-P or N)
  - CPU CRU
  - I/O CRU
- 6600 ftServer - (Sonic-G)
  - CPU CRU
  - I/O CRU

Note: Each procedure is unique per CRU, based on system type.

I am interested in your comments regarding the accuracy and effectiveness of this documentation. Your feedback is welcome. Please send all comments via email to Jim.Rivela@stratus.com.

## 2 References

- **Customer Care ftServer illustrated parts lists. (Stratus access only)**
- **Customer Care ftServer Technical Service Guides. (Stratus access only)**
- **ftServer Management Console information**
- **Stratus System Configuration specifications. (ES specs, Stratus access only)**
  [http://websurfer.sw.stratus.com/groups/records.dir/FindDocs/findDocsForm.cgi?Org=stratus&AllowTS=true](http://websurfer.sw.stratus.com/groups/records.dir/FindDocs/findDocsForm.cgi?Org=stratus&AllowTS=true)
- **Stratus Alerts (Stratus access only)**
3 ftServer CPU CRU Configuration

3.1 32x0 ftServer (Tune) CPU CRU

The following are snapshots of the ftServer Management Console on a 32x0 system. Follow the steps below to determine the CPU CRU configuration.

You need the following information to properly order a replacement CPU CRU.

- CPU Enclosure part number
- Memory DIMM part number and quantity.

Steps to determine CRU configuration:

1. Open ftServer Management Console (ftSMC).
2. Expand ftServer CPU Enclosures, then the online CPU 0, or 1.
3. Highlight the “CPU Enclosure X”.
4. In the right pane look for “IDPROM: ModelName” field. The following is a reference between the ModelName field and the CPU CRU assembly part number, which on a 32x0 includes one (uni) or two (twin) processors.

For: 243-630153-X Order Part: 062-01887-000 - CPU Enclosure, w/800MHz CPU, Qty 1 (no memory)
For: 243-630489-X Order Part: 062-01888-000 - CPU Enclosure, w/800MHz CPU, Qty 2 (no memory)

Note: The “-X” denotes the revision of the part and can be ignored when determining the required CPU Enclosure.

ftSMC (Right Pane)                                             ftSMC (Left Pane)

<ftServer CPU Enclosures>
<CPUEnclosure - 0>
  <DIMM - 0>
  <DIMM - 1>
  <DIMM - 2>
  <DIMM - 3>
  <Processor - 20>
  <Processor - 21>
  <Sensors>
  <Sensors>
<CPUEnclosure - 1>

Note: A yellow folder denotes online hardware and when the node is highlighted the left pane will display the Op State: State “Online or Empty”. In the example above the ModelName field is 243-630489-B and both “Processor -20” and “Processor -21” exist, so the CPU enclosure to order would be 062-01888-000. The right pane shown depicts Processor 20 – online and processor 21 would display similar information.
5. Highlight the “DIMM – X”.
6. In the right pane look for “Op State: State” field to determine if DIMM exists. The state will be “Online” if it does.

7. If the State is “Online”, then determine the part to order based on the size shown in the “SizeMb” field. The following is a reference between the SizeMb field and the memory DIMM part number.

   For: SizeMb = 256 Mb Order Part: 609-01531-000 - DIMM 256MB
   For: SizeMb = 512 Mb Order Part: 609-01532-000 - DIMM 512MB

8. For “DIMM 0 thru 3” which are Online, determine the quantity, slot configuration and size of memory DIMMs which are required to be ordered.

   Note: A yellow folder denotes online hardware and when the node is highlighted the left pane will display the Op State: State “Online or Empty”. In the example above both “DIMM – 0” thru “DIMM - 3” exist and they were all verified to be 512MB size, so quantity 4 of 609-01532-000 would be ordered. The right pane shown depicts DIMM - 0 – Online with a size of 512Mb, DIMM – 1 thru DIMM – 3 would display similar information.

9. Once the CPU CRU enclosure part number, memory DIMM part number, slot configuration and quantity is determined a properly configured replacement CPU CRU can be ordered.

   Note: In the example given above the CPU CRU replacement order would include:
   - 1 – 062-01888-000
   - 4 – 609-01532-000

Notes:
1. Memory DIMMs on 32x0 are installed in quantities of 1. Valid configurations are 1 to 4 DIMMs.
2. 1 or 2 processor configurations are valid configurations for 32x0 CPU CRU. Populated as “Processor – 20” and “Processor – 21” in ftSMC.
3. 32x0 part Illustrated list
4. 32x0 Technical Service Guide
5. 32x0 configuration specification ES-000125 - (Stratus access only)
6. The ftSMC Processor “QDFNumber” number field is unique for each Intel processor. The 808-815085-656A (800Mhz) QDFNumber = Not displayed by ftSMC.
Valid Part Numbers:

- The following are valid 32x0 CPU CRU enclosures and DIMM part numbers.

  062-01887-000 - CPU Enclosure, w/800MHz CPU, Qty 1 (no memory)
  243-630153-X - PCB, Motherboard (used in 062-01887-000 CPU Enclosure)

  062-01888-000 - CPU Enclosure, w/800MHz CPU, Qty 2 (no memory)
  243-630489-X - PCB, Motherboard (used in 062-01888-000 CPU Enclosure)

  609-01531-000 - DIMM 256MB (Mfg part# M390S3320CT1-C75)
  609-01532-000 - DIMM 512MB (Mfg part# M390S6450BT1-C75)

### 3.2 5200 ftServer (Melody) CPU CRU

The following are snapshots of the ftServer Management Console on a 5200 system. Follow the steps below to determine the CPU CRU configuration.

You need the following information to properly order a replacement CPU CRU.

- CPU Enclosure part number
- AS processor kit part number and quantity
- Memory DIMM part number and quantity.

Steps to determine CRU configuration:

1. Open ftServer Management Console (ftSMC).
2. Expand ftServer CPU Enclosures, then the online CPU 0, 1 or 2.
3. Highlight the "CPU Enclosure X".
4. In the right pane look for "IDPROM: ModelName" field. The following is a reference between the ModelName field and the CPU CRU assembly part number.

For: G10020 Order Part: AA-G11020 - CPU Enclosure (no memory or processor)
For: G10030 Order Part: AA-G11030 - CPU Enclosure (no memory or processor)
5. The same processor kit is used on both 5200 CPU CRU enclosures.
   For: AA-G11020 or AA-G11030 Order Part: AS-000380 - Processor Assembly: Processor 750Mhz, 256MB cache

6. Determine the quantity of AK processor kits required by the “Processor –xx” shown as online.
   Note: A yellow folder denotes online hardware and when the node is highlighted the left pane will display the Op State: State “Online or Empty”. In the example above both “Processor -20” and “Processor -21” exist, so quantity 2 of AS-000380 would be ordered. The right pane shown depicts Processor 20 – online and processor 21 would display similar information.

7. Highlight the “DIMM – X”.
8. In the right pane look for “Op State: State” field to determine if DIMM exists. The state will be “Online” if it does.
   ftSMC (Right Pane)   ftSMC (Left Pane)
   ![Diagram]

9. If the State is “Online”, then determine the part to order based on the size shown in the “SizeMb” field. If the size is 256MB go to step 10. The following is a reference between the SizeMb field and the memory DIMM part number.
   For: SizeMb = 512 Mb Order Part: AA-M22200 - DIMM 512MB

10. In addition to 256MB size determined in step 9. The 256MB DIMMs require the “SPDData: SDRAMCycleTime” field be used to determine the part number to order. The following is a reference between the SPDData: SDRAMCycleTime field and the memory DIMM part number
   For: SizeMb = 256 Mb and SPDData: SDRAMCycleTime = 10.0ns, 12.0ns, 0.0ns;
   Order Part: AA-M22300 - DIMM 256MB
   For: SizeMb = 256 Mb and SPDData: SDRAMCycleTime = 10.0ns, 10.0ns, 0.0ns;
   Order Part: AA-M22310 - DIMM 256MB
11. For “DIMM 0 thru 3” which are Online, determine the quantity, slot configuration and size of memory DIMMs which are required to be ordered.

    Note: A yellow folder denotes online hardware and when the node is highlighted the left pane will display the Op State: State “Online or Empty”. In the example above both “DIMM – 0” thru “DIMM - 3” exist and they were all verified to be 256MB size and the Cycle Time is “10.0ns”, so quantity 4 of AA-M22310 would be ordered. The right pane shown depicts DIMM - 0 – Online with a size of 256Mb, DIMM – 1 thru DIMM – 3 would display similar information.

12. Once the CPU CRU enclosure part number, AS processor kit part number and quantity and memory DIMM part number, slot configuration and quantity is determined a properly configured replacement CPU CRU can be ordered.

    Note: In the example given above the CPU CRU replacement order would include:
    
    - 1 – AA-G11030
    - 2 – AS-000380
    - 4 – AA-M22310

Notes:

1. Memory DIMMs on 5200 are installed in quantities of 1. Valid configurations are 1 to 4 DIMMs.
2. 1or 2 processor (AS kit) configurations are valid configurations for 5200 CPU CRU. Populated as “Processor – 20” and “Processor – 21” in ftSMC.
3. 5200 part Illustrated list
4. 5200 Technical Service Guide
5. 5200 configuration specification ES-000123 - (Stratus access only)
6. Alert 1933 - (Stratus access only)
7. The ftSMC Processor “QDFNumber” number field is unique for each Intel processor. The AS-000380 QDFNumber = SL4HE.

Valid Part Numbers:

- The following are valid 5200 CPU CRU enclosures, AS processor kit and DIMM part numbers.

  AA-G11020 - CPU Enclosure (no memory or processor)
  AA-G10020 - PCB, Motherboard (used in AA-G11020 CPU Enclosure)
  AS-000380 - Processor Assembly: Processor 750Mhz, 256MB cache

  AA-G11030 - CPU Enclosure (no memory or processor)
  AA-G10030 - PCB, Motherboard (used in AA-G11030 CPU Enclosure)
  AS-000380 - Processor Assembly: Processor 750Mhz, 256MB cache

  AA-M22300 - DIMM 256MB (Mfg part# KMM377S3323T-GL or M377S3323MT0-C1L)
  Not compatible with AA-M22310
  AA-M22310 - DIMM 256MB (Mfg part# M377S3323MT0-C1H) Not compatible with AA-M22300
  AA-M22200 - DIMM 512MB (Mfg part# HB52E649E12-A6B or M377S6450AT3-C1H)
### 3.3 5240 ftServer (Hale) CPU CRU

The following are snapshots of the ftServer Management Console on a 5240 system. Follow the steps below to determine the CPU CRU configuration.

You need the following information to properly order a replacement CPU CRU.

- CPU Enclosure part number
- AK processor kit part number and quantity
- Memory DIMM part number and quantity.

Steps to determine CRU configuration:

1. Open ftServer Management Console (ftSMC).
2. Expand ftServer CPU Enclosures, then the online CPU 0, or 1
3. Highlight the "CPU Enclosure X".
4. In the right pane look for "IDPROM: ModelName" field. The following is a reference between the ModelName field and the CPU CRU assembly part number.

For: G91500 Order Part: AA-G91500 - CPU Enclosure (no memory or processor)
For: G91600 Order Part: AA-G91600 - CPU Enclosure (no memory or processor)

5. Based on CPU CRU part number the processor kit to order can be determined.

For: AA-G91500 Order Part: AK-000418 - Processor Kit: Processor 2.4 GHz CPU, Heatsink, clip and VRM
For: AA-G91600 Order Part: AK-000425 - Processor Kit: Processor 2.8 GHz CPU, Heatsink, clip and VRM
6. Determine the quantity of AK processor kits required by the “Processor –xx” shown as Online.

Note: A yellow folder denotes online hardware and when the node is highlighted the left pane will display the Op State: State “Online or Empty”. In the example above both “Processor -20” and “Processor -23” exist, so quantity 2 of AK-000418 would be ordered. The right pane shown depicts Processor 20 – Online and processor 23 would display similar information.

7. Highlight the “DIMM – X”.
8. In the right pane look for “Op State: State” field to determine if DIMM exists. The state will be “Online” if it does.

9. If the State is “Online”, then determine the part to order based on the size shown in the “SizeMb” field. The following is a reference between the SizeMb field and the memory DIMM part number.

For: SizeMb = 256 Mb Order Part: AA-M86600 - DIMM 256MB
For: SizeMb = 512 Mb Order Part: AA-M86700 - DIMM 512MB
For: SizeMb = 1024 Mb Order Part: AA-M86800 - DIMM 1GB

10. For “DIMM 0 thru 11” which are Online, determine the quantity, slot configuration and size of memory DIMMs which are required to be ordered.

Note: A yellow folder denotes online hardware and when the node is highlighted the left pane will display the Op State: State “Online or Empty”. In the example above “DIMM – 8” thru “DIMM - 11” exist and they were all verified to be 256MB size so quantity 4 of AA-M86600 would be ordered. The right pane shown depicts DIMM - 8 – Online with a size of 256Mb, DIMM – 9 thru DIMM – 11 would display similar information.
11. Once the CPU CRU enclosure part number, AK processor kit part number and quantity and memory DIMM part number, slot configuration and quantity is determined a properly configured replacement CPU CRU can be ordered.

Note: In the example given above the CPU CRU replacement order would include:
- 1 – AA-G91500
- 2 – AK-000418
- 4 – AA-M86600

Notes:
1. Memory DIMMs on 5240 are installed in quantities of 4 of equal size referred to as banks. Valid configurations are 4, 8 or 12 DIMMs.
2. 1or 2 processor (AK kits) configurations are valid configurations for 5240 CPU CRU. Populated as "Processor – 20" and "Processor – 23" in ftSMC.
3. [5240 part Illustrated list](#)
4. [5240 Technical Service Guide](#)
5. [5240 configuration specification ES-000137](#) – (Stratus access only)
6. The ftSMC Processor “QDFNumber” number field is unique for each Intel processor. The AK-000418 QDFNumber = SL6EP, and AK-000425 QDFNumber = SL6M7

Valid Part Numbers:
- The following are valid 5240 CPU CRU enclosures, AK processor kits and DIMM part numbers.

  AA-G91500 - CPU Enclosure (no memory or processor)
  AA-G90000 - PCB, Motherboard (used in AA-G91300 CPU Enclosure)
  AK-000418 - Processor Kit: Processor 2.4 GHz CPU, Heatsink, clip and VRM

  AA-G91600 - Enclosure (no memory or processor)
  AA-G90000 - PCB, Motherboard (used in AA-G91300 CPU Enclosure)
  AK-000425 - Processor Kit: Processor 2.8 GHz CPU, Heatsink, clip and VRM

  AA-M86600 - DIMM 256MB (Mfg part# M383L3310CT1-CA0 or M383L3310DTS-CB0)
  AA-M86700 - DIMM 512MB (Mfg part# DTM63645A)
  AA-M86800 - DIMM 1GB (Mfg part# HB54R1G9F2-B75B)
3.4 6500 ftServer (Hale) CPU CRU

The following are snapshots of the ftServer Management Console on a 6500 system. Follow the steps below to determine the CPU CRU configuration.

You need the following information to properly order a replacement CPU CRU.

- CPU Enclosure part number
- AK processor kit part number and quantity
- Memory DIMM part number and quantity.

Steps to determine CRU configuration:

1. Open ftServer Management Console (ftSMC).
2. Expand ftServer CPU Enclosures, then the online CPU 0, 1 or 2.
3. Highlight the "CPU Enclosure X".
4. In the right pane look for "IDPROM: ModelName" field. The following is a reference between the ModelName field and the CPU CRU assembly part number.

For: G91300 Order Part: AA-G91300 - CPU Enclosure (no memory or processor)
For: G91700 Order Part: AA-G91700 - CPU Enclosure (no memory or processor)

5. Based on CPU CRU part number the processor kit to order can be determined.

For: AA-G91300 Order Part: AK-000388 - Processor Kit: Processor 1.6 GHz CPU, Heatsink, clip and VRM
For: AA-G91700 Order Part: AK-000422 - Processor Kit: Processor 2.0 GHz CPU, Heatsink, clip and VRM
6. Determine the quantity of AK processor kits required by the “Processor –xx” shown as Online.

   Note: A yellow folder denotes online hardware and when the node is highlighted the left pane will display the Op State: State “Online or Empty”. In the example above both “Processor -20”, “Processor -23”, “Processor -21” and “Processor -22” exist, so quantity 4 of AK-000388 would be ordered. The right pane shown depicts Processor 20 – Online and processor 21 thru 23 would display similar information.

7. Highlight the “DIMM – X”.
8. In the right pane look for “Op State: State” field to determine if DIMM exists. The state will be “Online” if it does.

9. If the State is “Online” then determine the part to order based on the size shown in the “SizeMb” field. The following is a reference between the SizeMb field and the memory DIMM part number.

   For: SizeMb = 256 Mb Order Part: AA-M86600 - DIMM 256MB
   For: SizeMb = 512 Mb Order Part: AA-M86700 - DIMM 512MB
   For: SizeMb = 1024 Mb Order Part: AA-M86800 - DIMM 1GB

10. For “DIMM 0 thru 11” which are Online, determine the quantity, slot configuration and size of memory DIMMs which are required to be ordered.

   Note: A yellow folder denotes online hardware and when the node is highlighted the left pane will display the Op State: State “Online or Empty”. In the example above “DIMM – 8” thru “DIMM - 11” exist and they were all verified to be 512MB size so quantity 4 of AA-M86700 would be ordered. The right pane shown depicts DIMM - 8 – Online with a size of 512Mb, DIMM – 9 thru DIMM – 11 would display similar information.
11. Once the CPU CRU enclosure part number, AK processor kit part number and quantity and memory DIMM part number, slot configuration and quantity is determined a properly configured replacement CPU CRU can be ordered.

Note: In the example given above the CPU CRU replacement order would include:

- 1 – AA-G91300
- 4 – AK-000388
- 4 – AA-M86700

Notes:
1. Memory DIMMs on 6500 are installed in quantities of 4 of equal size referred to as banks. Valid configurations are 4, 8 or 12 DIMMs.
2. 2 or 4 processor (AK kits) configurations are valid configurations for 6500 CPU CRU. Populated as “Processor – 20” and “Processor -23” for Twin system and “Processor – 21” and “Processor – 22” are added to make a Quad system.
3. 6500 part Illustrated list
4. 6500 Technical Service Guide
5. 6600 configuration specification ES-000124 – (Stratus access only)
6. The ftSMC Processor “QDFNumber” number field is unique for each Intel processor. The AK-000388 QDFNumber = SL5G8 and AK-000422 QDFNumber = SL66Z

Valid Part Numbers:
- The following are valid 6500 CPU CRU enclosures, AK processor kits and DIMM part numbers.

  AA-G91300 - CPU Enclosure (no memory or processor)
  AA-G90000 - PCB, Motherboard (used in AA-G91300 CPU Enclosure)
  AK-000388 - Processor Kit: Processor 1.6 GHz CPU, Heatsink, clip and VRM

  AA-G91700 - Enclosure (no memory or processor)
  AA-G90000 - PCB, Motherboard (used in AA-G91300 CPU Enclosure)
  AK-000422 - Processor Kit: Processor 2.0 GHz CPU, Heatsink, clip and VRM

  AA-M86600 - DIMM 256MB (Mfg part#)
  AA-M86700 - DIMM 512MB (Mfg part# DTM63645A)
  AA-M86800 - DIMM 1GB (Mfg part# HB54R1G9F2-B75B)
3.5 3300 ftServer (Sonic-P or N) CPU CRU

The following are snapshots of the ftServer Management Console on a 3300 system. Follow the steps below to determine the CPU CRU configuration.

You need the following information to properly order a replacement CPU CRU:

- CPU Enclosure part number
- AK processor kit part number and quantity
- Memory DIMM part number and quantity.

Steps to determine CRU configuration:

1. Open ftServer Management Console (ftSMC).
2. Expand ftServer CPU Enclosures, then the online CPU 0 or 2.
3. Highlight the "CPU Enclosure X".
4. In the right pane look for "IDPROM: ModelName" field. The following is a reference between the ModelName field and the CPU CRU assembly part number.

   - For: G93110 Order Part: AA-G92300 - CPU Enclosure (no memory or processor)
   - For: G93120 Order Part: AA-G92320 - CPU Enclosure with rev. 1.5 CIOB (no memory or processor)
   - For: G93130 Order Part: AA-G92330 - CPU Enclosure with rev. 1.5 CIOB, D-step (no memory or processor)
   - For: G94210 Order Part: AA-G92810 - CPU Enclosure (no memory or processor)
   - For: G94220 Order Part: AA-G92820 - CPU Enclosure (no memory or processor)

5. Based on CPU CRU part number the processor kit to order can be determined.

   - For: AA-G92300
     Order Part: AK-000424 - Processor Kit: Processor 2.4GHz, Heatsink & Adhesive (C-step processor)
   - For: AA-G92320
     Order Part: AK-000424 - Processor Kit: Processor 2.4GHz, Heatsink & Adhesive (C-step processor)
   - For: AA-G92330
     Order Part: AK-000506 - Processor Kit: Processor 2.4GHz, Heatsink & Adhesive (D-step processor)
   - For: AA-G92810
     Order Part: AK-000492 - Processor Kit: Processor 3.06GHz, Heatsink & Adhesive
For: AA-G92820
Order Part: AK-000492 - Processor Kit: Processor 3.06GHz, Heatsink & Adhesive

6. Determine the quantity of AK processor kits required by the “Processor –xx” shown as Online.

Note: A yellow folder denotes online hardware and when the node is highlighted the left pane will display the Op State: State “Online or Empty”. In the example above both “Processor -20” and “Processor -21” exist, so quantity 2 of AK-000424 would be ordered. The right pane shown depicts Processor 20 – Online and processor 21 would display similar information.

7. Highlight the “DIMM – X”.
8. In the right pane look for “Op State: State” field to determine if DIMM exists. The state will be “Online” if it does.

9. If the State is “Online” then determine the part to order based on the size shown in the “SizeMb” field. If the size is 512MB go to step 10. The following is a reference between the SizeMb field and the memory DIMM part number.

For: SizeMb = 256 Mb Order Part: AA-M22708 - DIMM 256MB
For: SizeMb = 512 Mb, go to step 10
For: SizeMb = 1024 Mb and SPDData: MfgPartNr = VI4CR287224DYHS2 or VI4CR287224DYHS1
Order Part: AA-M22900 - DIMM 1GB
For: SizeMb = 1024 Mb and SPDData: MfgPartNr = VR4CR287224DYHS1
Order Part: AA-M23500-LF - DIMM 1GB

10. In addition to 512MB size determined in step 9. The 512MB DIMMs require the “SPDData: SDRAMCycleTime” field be used to determine the part number to order. The following is a reference between the SPDData: SDRAMCycleTime field and the memory DIMM part number.

For: SizeMb = 512 Mb and SPDData: SDRAMCycleTime = 7.5ns 7.5ns 0.0ns
Order Part: AA-M22808 - DIMM 512MB
For: SizeMb = 512 Mb and SPDData: SDRAMCycleTime = 7.5ns 8.0ns 0.0ns
Order Part: AA-M22808 - DIMM 512MB
11. For "DIMM 0 thru 5" which are Online, determine the quantity, slot configuration and size of memory DIMMs which are required to be ordered.

   Note: A yellow folder denotes online hardware and when the node is highlighted the left pane will display the Op State: State “Online or Empty”. In the example above both “DIMM – 0” thru “DIMM - 5” exist and they were all verified to be 512MB size and the Cycle Time is “8.0ns”, so quantity 6 of AA-M22808 would be ordered. The right pane shown depicts DIMM - 0 – Online with a size of 512Mb, DIMM – 1 thru DIMM – 5 would display similar information.

12. Once the CPU CRU enclosure part number, AK processor kit part number and quantity and memory DIMM part number, slot configuration and quantity is determined a properly configured replacement CPU CRU can be ordered.

   Note: In the example given above the CPU CRU replacement order would include:
   1. 1 – AA-G92320
   2. 2 – AK-000424
   3. 6 – AA-M22808

Notes:
1. Memory DIMMs on 3300 are installed in quantities of 2 of equal size referred to as banks. Valid configurations are 2, 4 or 6 DIMMs.
2. 1 or 2 processor (AK kits) configurations are valid configurations for 3300 CPU CRU. Populated as “Processor – 20” and “Processor – 20” in ftSMC.
3. AA-G92820 CPU CRU requires CPU BIOS revision 14.0 and above.
4. AA-M22900 and AA-M23500-LF, 1GB DIMM, 3.06 GHz systems only, minimum of 2GB maximum of 6GB.
5. AA-M23500-LF and AA-M22900 are bank compatible in same CPU CRU and partner CPU CRU.
6. 3300 part Illustrated list
7. 3300 Technical Service Guide
8. 3300 configuration specification ES-000131 – (Stratus access Only)
9. Alert 2080 – (Stratus access Only)
10. The ftSMC Processor “QDFNumber” number field is unique for each Intel processor. The AK-000424 QDFNumber = SL6EP, AK-000506 QDFNumber = SL6W8 and AK-000492 QDFNumber = SL6VP.

Valid Part Numbers:
- The following are valid 3300 CPU CRU enclosures, AK processor kits and DIMM part numbers.

   AA-G92300 - CPU Enclosure (no memory or processor)
   AA-G93110 - PCB, Motherboard (used in AA-G92300 CPU Enclosure)
   AK-000424 - Processor Kit: Processor 2.4Ghz, Heatsink & Adhesive (C-step processor)

   AA-G92320 - CPU Enclosure with rev. 1.5 CIIOB (no memory or processor)
   AA-G93120 - PCB, Motherboard (used in AA-G92320 CPU Enclosure)
   AK-000424 - Processor Kit: Processor 2.4Ghz, Heatsink & Adhesive (C-step processor)

   AA-G92330 - CPU Enclosure with rev. 1.5 CIIOB (no memory or processor)
   AA-G93130 - PCB, Motherboard (used in AA-G92330 CPU Enclosure)
   AK-000506 - Processor Kit: Processor 2.4Ghz, Heatsink & Adhesive (D-step processor)

   AA-G92810 - CPU Enclosure (no memory or processor)
   AA-G94210 - PCB, Motherboard (used in AA-G92810 CPU Enclosure)
   AK-000492 - Processor Kit: Processor 3.06Ghz, Heatsink & Adhesive

   AA-G92820 - CPU Enclosure (no memory or processor)
   AA-G94220 - PCB, Motherboard (used in AA-G92820 CPU Enclosure)
   AK-000492 - Processor Kit: Processor 3.06Ghz, Heatsink & Adhesive
AA-M22708 - DIMM 256MB (Mfg part# DTM63645A)
AA-M22800 - DIMM 512MB (Mfg part# MH64D72ALTG-75A) Not compatible with AA-M22808
AA-M22808 - DIMM 512MB (Mfg part# DTM63631B or DTP63631D or DTP63631G)
   Not compatible with AA-M22800
AA-M22900 - DIMM 1GB (Mfg part# VI4CR287224DYHS2 or VI4CR287224DYHS1) - (See Note 4 above)
AA-M23500-LF - DIMM 1GB, ROHS (Mfg part# VR4CR287224DYHS1) - (See Notes 4 and 5 above)
3.6 5600 ftServer (Sonic-P or N) CPU CRU

The following are snapshots of the ftServer Management Console on a 5600 system. Follow the steps below to determine the CPU CRU configuration.

You need the following information to properly order a replacement CPU CRU.

- CPU Enclosure part number
- AK processor kit part number and quantity
- Memory DIMM part number and quantity.

Steps to determine CRU configuration:

1. Open ftServer Management Console (ftSMC).
2. Expand ftServer CPU Enclosures, then the online CPU 0 or 2.
3. Highlight the "CPU Enclosure X".
4. In the right pane look for "IDPROM: ModelName" field. The following is a reference between the ModelName field and the CPU CRU assembly part number.

For:  G93010 Order Part: AA-G92400 - CPU Enclosure (no memory or processor)
For:  G93020 Order Part: AA-G92420 - CPU Enclosure with rev. 1.5 CIOB (no memory or processor)
For:  G93030 Order Part: AA-G92430 - CPU Enclosure with rev. 1.5 CIOB, D-step (no memory or processor)
For:  G94010 Order Part: AA-G92610 - CPU Enclosure (no memory or processor)
For:  G94020 Order Part: AA-G92620 - CPU Enclosure (no memory or processor)

5. Based on CPU CRU part number the processor kit to order can be determined.

For:  AA-G92400
Order Part: AK-000472 - Processor Kit: Processor 2.8GHz, Heatsink & Adhesive (C-step processor)

For:  AA-G92420
Order Part: AK-000472 - Processor Kit: Processor 2.8GHz, Heatsink & Adhesive (C-step processor)

For:  AA-G92430
Order Part: AK-000507 - Processor Kit: Processor 2.8GHz, Heatsink & Adhesive (D-step processor)

For:  AA-G92610
Order Part: AK-000493 - Processor Kit: Processor 3.2GHz, Heatsink & Adhesive
For: AA-G92620
Order Part: AK-000493 - Processor Kit: Processor 3.2GHz, Heatsink & Adhesive

6. Determine the quantity of AK processor kits required by the "Processor –xx" shown as on-line.

Note: A yellow folder denotes online hardware and when the node is highlighted the left pane will display the Op State: State “Online or Empty”. In the example above both “Processor -20” and “Processor -21” exist, so quantity 2 of AK-0000472 would be ordered. The right pane shown depicts Processor 20 – Online and processor 21 would display similar information.

7. Highlight the “DIMM – X”.
8. In the right pane look for “Op State: State” field to determine if DIMM exists. The state will be “Online” if it does.

9. If the State is “Online” then determine the part to order based on the size shown in the “SizeMb” field. The following is a reference between the SizeMb field and the memory DIMM part number.

   For: SizeMb = 256 Mb Order Part: AA-M22708 - DIMM 256MB
   For: SizeMb = 512 Mb Order Part: AA-M22808 - DIMM 512MB

   For: SizeMb = 1024 Mb and SPDData: MfgPartNr = VI4CR287224DYHS2 or VI4CR287224DYHS1
   Order Part: AA-M22900 - DIMM 1GB

   For: SizeMb = 1024 Mb and SPDData: MfgPartNr = VR4CR287224DYHS1
   Order Part: AA-M23500-LF - DIMM 1GB

   For: SizeMb = 2048 Mb Order Part: AA-M23000 - DIMM 2GB

10. For “DIMM 0 thru 5” which are Online, determine the quantity, slot configuration and size of memory DIMMs which are required to be ordered.

   Note: A yellow folder denotes online hardware and when the node is highlighted the left pane will display the Op State: State “Online or Empty”. In the example above “DIMM – 0” thru “DIMM - 5” exist and they were all verified to be 512MB size so quantity 6 of AA-M22808 would be ordered. The right pane shown depicts DIMM - 0 – Online with a size of 512Mb, DIMM – 1 thru DIMM – 5 would display similar information.

11. Once the CPU CRU enclosure part number, AK processor kit part number and quantity and memory DIMM part number, slot configuration and quantity is determined a properly configured replacement CPU CRU can be ordered.
Note: In the example given above the CPU CRU replacement order would include:

- 1 – AA-G92400
- 2 – AK-000472
- 6 – AA-M22808

Notes:
1. Memory DIMMs on 5600 are installed in quantities of 2 referred to as banks. Valid configurations are 2, 4 or 6 DIMMs.
2. 1or 2 processor (AK kits) configurations are valid configurations for 5600 CPU CRU. Populated as “Processor – 20” and “Processor – 20” in ftSMC.
3. 5600 part Illustrated list
4. 5600 Technical Service Guide
5. 5600 configuration specification ES-000140 – (Stratus access Only)
6. The ftSMC Processor “QDFNumber” number field is unique for each Intel processor. The AK-000472 QDFNumber = SL6M7, AK-000507 QDFNumber = SL6WA and AK-000493 QDFNumber = SL72Y.
7. Supported on ftServer 5600 2.8 GHz systems – Maximum 6GB total memory.
8. Supported on ftServer 5600 3.2 GHz systems – Maximum 12GB total memory. 8GB or above requires W2K3 and ftSSS 3.0 or greater.
9. AA-G92620 CPU CRU requires CPU BIOS revision 14.0 and above.
10. AA-M23000 2GB DIMM requires CPU BIOS revision 18.0 and above
11. AA-M23500-LF and AA-M22900 are bank compatible in same CPU CRU and partner CPU CRU.
12. AA-M23500-LF requires a minimum of revision 21.0 CPU BIOS on 2.8Ghz CPUs. See Alert 2326.

Valid Part Numbers:
- The following are valid 5600 CPU CRU enclosures, AK processor kits and DIMM part numbers.

  AA-G92400 - CPU Enclosure (no memory or processor)
  AA-G93010 - PCB, Motherboard (used in AA-G92400 CPU Enclosure)
  AK-000472 - Processor Kit: Processor 2.8GHz, Heatsink & Adhesive (C-step processor)

  AA-G92420 - CPU Enclosure with rev. 1.5 CIOB (no memory or processor)
  AA-G93020 - PCB, Motherboard (used in AA-G92420 CPU Enclosure)
  AK-000472 - Processor Kit: Processor 2.8GHz, Heatsink & Adhesive (C-step processor)

  AA-G92430 - CPU Enclosure with rev. 1.5 CIOB (no memory or processor)
  AA-G93030 - PCB, Motherboard (used in AA-G92430 CPU Enclosure)
  AK-000507 - Processor Kit: Processor 2.8GHz, Heatsink & Adhesive (D-step processor)

  AA-G92610 - CPU Enclosure (no memory or processor)
  AA-G94010 - PCB, Motherboard (used in AA-G92610 CPU Enclosure)
  AK-000493 - Processor Kit: Processor 3.2GHz, Heatsink & Adhesive

  AA-G92620 - CPU Enclosure (no memory or processor)
  AA-G94020 - PCB, Motherboard (used in AA-G92620 CPU Enclosure)
  AK-000493 - Processor Kit: Processor 3.2GHz, Heatsink & Adhesive

  AA-M22708 - DIMM 256MB (Mfg part# DTM63645) – (See Note 6 above)
  AA-M22808 - DIMM 512MB (Mfg Part# DTM63631B or DTP63631D or DTP63631G) - (See Note 6 above)
  AA-M22900 - DIMM 1GB (Mfg part# VI4CR287224DYHS2 or VI4CR287224DYHS1) - (See Note 7 above)
  AA-M23000 – DIMM 2GB (Mfg part# VI4CR567224EYHS2 or VI4CR567224EYHS7) - (See Note 7 and 10 above)
  AA-M23500-LF - DIMM 1GB, ROHS (Mfg part# VR4CR287224DYHS1) - (See Notes 11 and 12 above)
3.7 6600 ftServer (Sonic-G) CPU CRU

The following are snapshots of the ftServer Management Console on a 6600 system. Follow the steps below to determine the CPU CRU configuration.

You need the following information to properly order a replacement CPU CRU.

- CPU Enclosure part number
- AK processor kit part number and quantity
- Memory DIMM part number and quantity.

Steps to determine CRU configuration:

1. Open ftServer Management Console (ftSMC).
2. Expand ftServer CPU Enclosures, then the online CPU 0, 1 or 2.
3. Highlight the "CPU Enclosure X".
4. In the right pane look for "IDPROM: ModelName" field. The following is a reference between the ModelName field and the CPU CRU assembly part number.

For: G92200 Order Part: AA-G92200 - CPU Enclosure (no memory or processor)
For: G90200 Order Part: AA-G92200 - CPU Enclosure (no memory or processor) (See Note 8)
5. Highlight the “Processor – 20”.
6. In the right pane look for “Brand” field. The following is a reference between the “Brand” field and the AK kit part number.

For: **Brand = Intel(R) Xeon(TM) MP CPU 2.80GHz**
Order Part: **AK-000431 - Processor Kit: Processor 2.8Ghz, 2MB Cache, Heatsink & Adhesive**

For: **Brand = Intel(R) Xeon(TM) MP CPU 2.00GHz**
Order Part: **AK-000440 - Processor Kit: Processor 2.0Ghz, 1MB Cache, Heatsink & Adhesive**

For: **Brand = Intel(R) Xeon(TM) MP CPU 3.00GHz**
Order Part: **AK-000502 - Processor Kit: Processor 3.0Ghz, 4MB Cache, Heatsink & Adhesive**

7. Determine the quantity of AK processor kits required by the “Processor –xx” shown as Online.

*Note: A yellow folder denotes online hardware and when the node is highlighted the left pane will display the Op State: State “Online or Empty”. In the example above both “Processor -20”, “Processor -21”, “Processor -22” and “Processor -23” exist, so quantity 4 of AK-000431 would be ordered. The right pane shown depicts Processor 20 – Online and processor 21 thru 23 would display similar information.*

8. Highlight the “DIMM – X”.
9. In the right pane look for “Op State: State” field to determine if DIMM exists. The state will be “Online” if it does.

10. If the State is “Online” then determine the part to order based on the “SizeMb” and the “SPCData: MfgPartNr fields for DIMMs. The following is a reference between the SizeMb and SPCData: MfgPartNr fields and the memory DIMM part number.

For: **SizeMb = 512 Mb and SPCData: MfgPartNr = M383L6420DTS-CB0**
Order Part: **AA-M86700 - DIMM 512MB**
For: SizeMb = 512 Mb and SPDData: MfgPartNr = M383L6420CT1-CA0
Order Part: AA-M86700 - DIMM 512MB

For: SizeMb = 512 Mb and SPDData: MfgPartNr = DTP63664B
Order Part: AA-M86710 - DIMM 512MB

For: SizeMb = 1024 Mb and SPDData: MfgPartNr = HB54R1G9F2-B75B
Order Part: AA-M86800 - DIMM 1GB

For: SizeMb = 1024 Mb and SPDData: MfgPartNr = <no data displayed in field> or
Order Part: AA-M22900 - DIMM 1GB VI4CR287224DYHS2 or VI4CR287224DYHS1

For: SizeMb = 1024 Mb and SPDData: MfgPartNr = VR4CR287224DYHS1
Order Part: AA-M23500-LF - DIMM 1GB

For: SizeMb = 2048 Mb Order Part: AA-M23000 - DIMM 2GB

11. For “DIMM 0 thru 11” which are Online, determine the quantity, slot configuration and size of memory DIMMs which are required to be ordered.

   Note: A yellow folder denotes online hardware and when the node is highlighted the left pane will display the Op State: State “Online or Empty”. In the example above “DIMM – 0” thru “DIMM - 3” exist and they were all verified to be 1024MB size so quantity 4 of AA-M86800 would be ordered. The right pane shown depicts DIMM - 0 – Online with a size of 1024Mb, DIMM – 1 thru DIMM – 3 would display similar information.

12. Once the CPU CRU enclosure part number, AK processor kit part number and quantity and memory DIMM part number, slot configuration and quantity is determined a properly configured replacement CPU CRU can be ordered.

   Note: In the example given above the CPU CRU replacement order would include:
   - 1 – AA-G92200
   - 4 – AK-000431
   - 4 – AA-M86800

Notes:
1. Memory DIMMs on 6600 are installed in quantities of 4 of equal size referred to as banks. Valid configurations are 4, 8 or 12 DIMMs.
2. AA-M22900, AA-M23000 and AA-M86800 are compatible in same CPU CRU and partner CPU CRU. Can not be mixed within a bank.
3. 2 or 4 processor (AK kits) configurations are valid configurations for 6600 CPU CRU.
4. AA-M86700 and AA-M86710 are compatible in same CPU CRU and partner CPU CRU, but can not be mixed within a bank
5. AA-M22900 and AA-M23500-LF are compatible in same CPU CRU and partner CPU CRU. Can not be mixed within a bank.
6. AA-M23500-LF and AA-M86800 are NOT compatible in same CPU CRU, but are compatible in partner CPU CRU.
7. 6600 part Illustrated list
8. 6600 Technical Service Guide
9. 6600 configuration specification ES-000144 – (Stratus access only)
10. Alert 2088 – (Stratus access only)
11. The ftSMC Processor “QDFNumber” number field is unique for each Intel processor. The AK-000440 QDFNumber = SL6YJ, AK-000431 QDFNumber = SL6YL, and AK-000502 QDFNumber = SL79V.
Valid Part Numbers:
- The following are valid 6600 CPU CRU enclosures, AK processor kits and DIMM part numbers.

AA-G92200 - CPU Enclosure (no memory or processor)
  AA-G90200 - PCB, Motherboard (used in AA-G92200 CPU Enclosure)
  AK-000431 - Processor Kit: Processor 2.8Ghz, 2MB Cache, Heatsink & Adhesive
  AK-000440 - Processor Kit: Processor 2.0Ghz, 1MB Cache, Heatsink & Adhesive
  AK-000502 - Processor Kit: Processor 3.0Ghz, 4MB Cache, Heatsink & Adhesive

AA-G92500 - CPU Enclosure, 2.0GHz, 1MB Cache
  (Obsolete - Order AA-G92200 with AK-000440 CPU Kits)

AA-M86700 - DIMM 512MB (Mfg part# M383L6420DTS-CB0 or M383L6420CT1-CA0) (See Note 4 above)
AA-M86710 - DIMM 512MB (Mfg part# DTM63631B or DTP63631D or DTP63631G) (See Note 4 above)
AA-M86800 - DIMM 1GB (Mfg part# HB54R1G9F2-B75B) (See Note 2 above)
AA-M22900 - DIMM 1GB (Mfg part# V14CR287224DYHS2 or V14CR287224DYHS1) (See Note 2 above)
AA-M23000 – DIMM 2GB (Mfg part# V14CR567224EYHS2 or V14CR567224EYHS7) (See Note 2 above)
AA-M23500-LF - DIMM 1GB, ROHS (Mfg part# VR4CR287224DYHS1) - (See Notes 5 and 6 above)
4 ftServer I/O CRU Configuration

4.1 32x0 ftServer (Tune) I/O CRU

The following are snapshots of the ftServer Management Console on a 32x0 system. Follow the steps below to determine the I/O CRU configuration.

You need the following information to properly order a replacement I/O CRU.

- I/O CRU Enclosure part number

Steps to determine I/O CRU part number:

1. Open ftServer Management Console (ftSMC).
2. Expand ftServer I/O Enclosures.
3. Highlight the “I/O Enclosure - xx” 10 or 11.
4. In the right pane look for “IDPROM: ModelName” field. The following is a reference between the ModelName field and the I/O CRU assembly part number.

For: 243-630154-X Order Part: 062-01886-000 – I/O Enclosure, Rev 2 PCI ASIC (No PCI Adapters)
For: 243-630788-X Order Part: 062-01886-001 – I/O Enclosure, Rev 3 PCI ASIC (No PCI Adapters)

Note: The “-X” denotes the revision of the part and can be ignored when determining the required I/O Enclosure.

5. Once the I/O CRU enclosure part number is determined, a replacement I/O CRU can be ordered.
Note: In the example given above the I/O CRU replacement order would be:

- 1 – 062-01886-000

Notes:

1. 062-01886-000 and 062-01886-001 are NOT compatible due to the different revisions for the PCI ASIC.
2. 32x0 part Illustrated list
3. 32x0 Technical Service Guide
4. 32x0 configuration specification ES-000125 - (Stratus access only)

Valid Part Numbers:

- The following are valid 32x0 I/O CRU enclosure part numbers.

  062-01886-000 – I/O Enclosure, Rev 2 PCI ASIC (No PCI Adapters)
  243-630154-X - PCB, Motherboard Rev 2 PCI ASIC (used in 062-01886-000 I/O Enclosure)

  062-01886-001 – I/O Enclosure, Rev 3 PCI ASIC (No PCI Adapters)
  243-630788-X - PCB, Motherboard Rev 3 PCI ASIC (used in 062-01886-001 I/O Enclosure)
4.2 3300 ftServer (Sonic-P or N) I/O CRU

The following are snapshots of the ftServer Management Console on a 3300 system. Follow the steps below to determine the I/O CRU configuration.

You need the following information to properly order a replacement I/O CRU.

- I/O CRU Enclosure part number

Steps to determine I/O CRU part number:

1. Verify system type by viewing My Computer -> Properties -> General Tab. Under the “Manufactured and supported by” section it will display the ftServer 3300.
2. Open ftServer Management Console (ftSMC).
3. Expand ftServer I/O Enclosures.
4. Highlight the Core "I/O Enclosure – xx", 10 or 11.
5. Determine the Core I/O enclosure part to order based on the CPU enclosure “IDPROM:ModelName” and the I/O enclosure “IDPROM:ModelName” fields. The following is a reference between the CPU enclosure IDPROM:ModelName and I/O enclosure IDPROM:ModelName fields and the Core I/O enclosure part number.

For: CPU IDPROM:ModelName = G93110 or G93120 or G93130 and
Core I/O IDPROM:ModelName = E70000
Order Part: AA-E89800 - Core I/O Assembly, less than 3.0 GHz processors,
NEC BMC Firmware (Silver ejectors, does NOT contain AK-000477, Minimum Load Resister Kit)

or
Core I/O IDPROM:ModelName = E70000
Order Part: AA-E90400 - Core I/O Assembly, less than 3.0 GHz processors,
NEC BMC Firmware (Black ejectors - cosmetic only)

For: CPU IDPROM:ModelName = G94210 or G94220 and
Core I/O IDPROM:ModelName = E70000
Order Part: AA-E90100 - Core I/O Assembly, greater than 3.0 GHz processors,
Stratus BMC Firmware (No PCI Adapters)
Note: A yellow folder denotes online hardware and when the node is highlighted the left pane will display the Op State: State “Online or Empty”. In the examples above the CPU enclosure ModelName field is G93120, and the I/O enclosure ModelName field as E70000, so the Core I/O enclosure to order would be AA-G89800 or AA-G90400.

6. The AA-E89800 and AA-E90400 are not compatible. AA-E89800 has silver or black ejectors and no Minimum Load Resister Kit and AA-E90400 as black ejectors and the Minimum Load Resister Kit. To get the correct part number, than the white part number label on the back of the Core I/O CRU will have to be verified. There is no online way to tell the difference. Go to step 9.

Note: The Minimum Load Resister Kit AK-000477 is required to support Core I/Os with no internal hard disk drives. If an AA-E89800 contains no internal disk drives, the Core I/O may not power on until at least one disk is inserted. An AA-E90400 can be substituted for a AA-E89800 (may have different color ejectors) if necessary, but not vise versa.

7. Once the I/O CRU enclosure part number is determined, a replacement I/O CRU can be ordered.

Note: In the example given above the Core I/O CRU replacement order would be:

- 1 – AA-E89800 or AA-E90400 (See step 7 for additional information)

Notes:

1. AA-E89800, AA-E90400 and AA-E90100 replacements are shipped with NO PCI adapters.
2. AA-E89800 does NOT contain AK-000477, Minimum Load Resister Kit, required for supporting core I/Os with NO internal HDDs.
3. AA-E90400 and AA-E90100 DOES contain AK-000477, Minimum Load Resister Kit and can support core I/Os with NO internal HDDs.
4. AA-E89800 and AA-E90400 used in the ft3300/5600 systems are NOT compatible with the AA-E90100 even thought the ModelName field is the same “E70000”. Each contains different BMC firmware, which can NOT be changed by the on-line or off-line firmware burn tools.
5. AA-E90100 contains Stratus BMC Firmware and is the same Core I/O used in ft6600 system.
6. 3300 part Illustrated list
7. 3300 Technical Service Guide
8. 3300 configuration specification ES-000131 – (Stratus access Only)

Valid Part Numbers:
- The following are valid 3300 Core I/O CRU enclosures part numbers.
  - AA-E89800 – Core I/O Assembly, less than 3.0 GHz processors, NEC BMC Firmware
    (No PCI Adapters, Silver ejectors, does NOT contain AK-000477, Minimum Load Resister Kit)
    AA-E70000 - PCB, Motherboard, NEC BMC Firmware (used in AA-E89800 core I/O Enclosure)
  - AA-E90400 – Core I/O Assembly, less than 3.0 GHz processors, NEC BMC Firmware
    (No PCI Adapters, Black ejectors - cosmetic only)
    AA-E70000 - PCB, Motherboard, NEC BMC Firmware (used in AA-E90400 core I/O Enclosure)
  - AA-E90100 – Core I/O Assembly, greater than 3.0 GHz processors, Stratus BMC Firmware (No PCI Adapters)
    AA-E70000 - PCB, Motherboard, Stratus BMC Firmware (used in AA-E90100 core I/O Enclosure)
4.3 5600 ftServer (Sonic-P or N) I/O CRU

The following are snapshots of the ftServer Management Console on a 5600 system. Follow the steps below to determine the I/O CRU configuration.

You need the following information to properly order a replacement I/O CRU.

- I/O CRU enclosure part number

Steps to determine I/O CRU part number:

1. Verify system type by viewing My Computer -> Properties -> General Tab. Under the “Manufactured and supported by” section it will display the ftServer 5600.
2. Open ftServer Management Console (ftSMC).
3. Expand ftServer I/O Enclosures.
4. Highlight the Core “I/O Enclosure – xx”, 10 or 11, go to step 6.
5. Highlight the Expansion “I/O Enclosure – xx”, 12 or 13, go to step 8.
6. Determine the Core I/O enclosure part to order based on the CPU enclosure “IDPROM:ModelName” and the I/O enclosure “IDPROM:ModelName” fields. The following is a reference between the CPU enclosure IDPROM:ModelName and I/O enclosure IDPROM:ModelName fields and the Core I/O enclosure part number.

For: CPU IDPROM:ModelName = G93010 or G93020 or G93030
   and
   Core I/O IDPROM:ModelName = E70000
   Order Part: AA-E90400 - Core I/O Assembly, less than 3.0 GHz processors,
   NEC BMC Firmware (Black ejectors)

For: CPU IDPROM:ModelName = G94010
   and
   Core I/O IDPROM:ModelName = E70000
   Order Part: AA-E90100 - Core I/O Assembly, greater than 3.0 GHz processors,
   Stratus BMC Firmware (No PCI Adapters)
Core I/O Enclosure

ftSMC (Right Pane)  ftSMC (Left Pane)

Note: A yellow folder denotes online hardware and when the node is highlighted the left pane will display the Op State: State "Online or Empty". In the examples above the CPU enclosure ModelName field is G93010, and the I/O enclosure ModelName field as E70000, so the Core I/O enclosure to order would be AA-E90400.

7. In the right pane look for "IDPROM: ModelName" field. The following is a reference between the ModelName field and the Expansion I/O CRU assembly part number.

For: E71000 Order Part: AA-E89900 - Expansion I/O Assembly, (No PCI Adapters)

8. Once the I/O CRU enclosure part number is determined, a replacement I/O CRU can be ordered.

Note: In the example given above the Core I/O CRU replacement order would be:
   • 1 – AA-E90400

Note: In the example given above the Expansion I/O CRU replacement order would be:
   • 1 – AA-E89900

Notes:
1. AA-E90400 and AA-E90100 replacements are shipped with NO PCI adapters.
2. AA-E90400 and AA-E90100 DOES contain AK-000477, Minimum Load Resister Kit and can support core I/Os with NO internal HDDs.
3. AA-E90400 used in the 5600 systems is NOT compatible with the AA-E90100 even though the ModelName field is the same “E70000”. Each contains different BMC firmware, which can NOT be changed by the on-line firmware burn tools.

4. AA-E90100 contains Stratus BMC Firmware and is the same Core I/O used in 6600 system.

5. **5600 part Illustrated list**

6. **5600 Technical Service Guide**

7. **5600 configuration specification ES-000140** – (Stratus access Only)

Valid Part Numbers:
- The following are valid 5600 I/O CRU enclosures part numbers.

  AA-E90400 – Core I/O Assembly, less than 3.0 GHz processors, NEC BMC Firmware (No PCI Adapters, Black ejectors)
  AA-E70000 - PCB, Motherboard, NEC BMC Firmware (used in AA-E90400 core I/O Enclosure)

  AA-E90100 – Core I/O Assembly, greater than 3.0 GHz processors, Stratus BMC Firmware (No PCI Adapters)
  AA-E70000 - PCB, Motherboard, Stratus BMC Firmware (used in AA-E90100 core I/O Enclosure)

  AA-E89900 – Expansion I/O Assembly, (No PCI Adapters)
  AA-E71000 - PCB, Motherboard, (used in AA-E89900 expansion I/O Enclosure)
4.4 6600 ftServer (Sonic-G) I/O CRU

The following are snapshots of the ftServer Management Console on a 6600 system. Follow the steps below to determine the I/O CRU configuration.

You need the following information to properly order a replacement I/O CRU.

- I/O CRU Enclosure part number

Steps to determine Core or Expansion I/O CRU part number:

1. Verify system type by viewing My Computer -> Properties -> General Tab. Under the “Manufactured and supported by” section it will display the ftServer 6600.
2. Open ftServer Management Console (ftSMC).
3. Expand ftServer I/O Enclosures.
4. Highlight the “I/O Enclosure - xx” Core = 10 or 11 and Expansion = 12 or 13.
5. In the right pane look for “IDPROM: ModelName” field. The following is a reference between the ModelName field and the Core or Expansion I/O CRU assembly part number.

For: E70000 Order Part: AA-E90100 - Core I/O Assembly, Stratus BMC Firmware (No PCI Adapters)
For: E71000 Order Part: AA-E89900 - Expansion I/O Assembly, (No PCI Adapters)

Note: A yellow folder denotes online hardware and when the node is highlighted the left pane will display the Op State: State “Online or Empty”. In the examples above the first ModelName field is E70000, so the Core I/O enclosure to order would be AA-E90100. The second ModelName field is E71000, so the Expansion I/O enclosure to order would be AA-E89900

6. Once the I/O CRU enclosure part number is determined, a replacement I/O CRU can be ordered.
Note: In the example given above the Core I/O CRU replacement order would be:

- 1 – AA-E90100

Notes:

1. AA-E90100 and AA-E89900 replacements are shipped with NO PCI adapters.
2. AA-E89800 and AA-E90400 used in the 3300/5600 systems are NOT compatible with the AA-E90100 even thought the ModelName field is the same “E70000”. Each contains different BMC firmware, which can NOT be changed by the on-line or off-line firmware burn tools.
3. AA-E90100 contains Stratus BMC Firmware and is the same Core I/O used in 3300/5600 systems with CPU CRUs that contain greater than 3.0 GHz processors.
4. 6600 part Illustrated list
5. 6600 Technical Service Guide
6. 6600 configuration specification ES-000144 – (Stratus access only)

Valid Part Numbers:

- The following are valid 6600 I/O CRU enclosure part numbers.

  AA-E90100 – Core I/O Assembly, Stratus BMC Firmware (No PCI Adapters)
  AA-E70000 - PCB, Motherboard, Stratus BMC Firmware (used in AA-E90100 core I/O Enclosure)

  AA-E89900 – Expansion I/O Assembly, (No PCI Adapters)
  AA-E71000 - PCB, Motherboard, (used in AA-E89900 expansion I/O Enclosure)
5 ftServer 2300 System CRU Configuration

5.1 2300 ftServer (Encore) CPU and I/O CRU

The following are snapshots of the ftServer Management Console on a 2300 system. Follow the steps below to determine the system CRU configuration. In a 2300 system, the CPUs (0 and 2) and I/Os (10 and 11), are contained on one motherboard within one CRU enclosure.

You need the following information to properly order a replacement 2300 system CRU.

- System CRU (CPU and I/O) enclosure part number
- Memory DIMM part number and quantity.

Steps to determine CRU configuration:

1. Open ftServer Management Console (ftSMC).
2. Expand ftServer CPU Enclosures, then the online CPU 0 or 2.
3. Highlight the “CPU Enclosure X”.
4. In the right pane look for “IDPROM: ModelName” field. The following is a reference between the ModelName field and the system CRU assembly part number.

Note: The "ModelName" field will display the same value for each CPU (0 and 2) or I/O (10 and 11) since they all reside on the same motherboard.

For: G96000 Order Part: AA-G96100 – ft2300 System CRU Enclosure, w/ 3.06 GHz processors, Qty 2 (no Memory, VTMs, PCI adapters, CD or DVD, or SATA disk drives)

5. Highlight the “DIMM – X”.
6. In the right pane look for “Op State: State” field to determine if DIMM exists. The state will be “Online” if it does.
7. If the State is “Online” then determine the part to order based on the size shown in the “SizeMb” field. The following is a reference between the SizeMb field and the memory DIMM part number.

For: SizeMb = 512 Mb Order Part: AA-M22808 - DIMM 512MB
For: SizeMb = 1024 Mb Order Part: AA-M22900 - DIMM 1GB

8. For “DIMM 0 thru 3” which are Online, determine the quantity, slot configuration and size of memory DIMMs, per CPU side, which are required to be ordered. Add DIMM quantities from both CPU 0 and CPU 2, to get the total DIMMs per size required.

Note: A yellow folder denotes online hardware and when the node is highlighted the left pane will display the Op State: State “Online or Empty”. In the example above both “DIMM – 0” thru “DIMM - 3” exist and they were all verified to be 1024MB size per CPU side, so quantity 8 (4=CPU 0 and 4=CPU 2) of AA-M22900 would be ordered. The right pane shown depicts DIMM - 0 – Online with a size of 1024Mb, DIMM – 1 thru DIMM – 3 would display similar information.

9. Once the System CRU enclosure part number and memory DIMM part number, slot configuration and quantity is determined, a properly configured replacement 2300 system CRU can be ordered.

Note: In the example given above the CPU CRU replacement order would include:

4. 1 – AA-G96100
5. 8 – AA-M22900

Notes:
1. Memory DIMMs on 2300 are installed in quantities of 2 of equal size referred to as banks. Valid configurations are 2 or 4 DIMMs per CPU side and a total of 8 DIMMs per 2300 system CRU.
2. Processors on 2300 are installed in quantities of 2, one per CPU side, is the only valid configuration for 2300 system CRU enclosure. Populated as “Processor – 20” per CPU enclosure in ftSMC.
3. 2300 part Illustrated list
4. 2300 Technical Service Guide
5. 2300 configuration specification ES-000145 – (Stratus access Only)
6. Replacing an ftServer 2300 System (R567)
7. On a 2300 system the QFDNumber is not displayed in ftSMC.

Valid Part Numbers:
• The following are valid 2300 system CRU and DIMM part numbers.

AA-G96100 - CPU Enclosure (no memory or processor)
   AA-G96000 - PCB, Motherboard (used in AA-G96100 System Enclosure)

AA-M22808 - DIMM 512MB (Mfg part# DTM63631B or DTP63631D or DTP63631G)
AA-M22900 - DIMM 1GB (Mfg part# VI4CR287224DYHS2 or VI4CR287224DYHS1)
6 ftServer 2400/4300/4600/5700 CPU & I/O CRU Configuration

6.1 2400/4300/4600/5700 ftServer (Aria) CPU & I/O CRU

The following are snapshots of the ftServer Management Console on a 4300 system. Follow the steps below to determine the CPU & I/O CRU configuration. In a 2400/4300/4600/5700 system, the CPU (0) and I/O (10) are contained on one motherboard, within one CRU enclosure, and the CPU (1) and I/O (11) are contained on one motherboard, within one CRU enclosure.

You need the following information to properly order a replacement CPU & I/O CRU.

- CPU & I/O CRU enclosure part number
- AK processor kit part number and quantity
- Memory DIMM part number and quantity.

Steps to determine CPU & I/O CRU configuration:

1. Open ftServer Management Console (ftSMC).
2. Expand ftServer CPU Enclosures, then the online CPU 0 or 1.
3. Highlight the “CPU Enclosure X”.
4. In the right pane look for “IDPROM: ModelName” field. The following is a reference between the ModelName field and the CPU & I/O CRU assembly part number.

Note: The “ModelName” field will display the same value for each CPU (0 or 1) and I/O (10 and 11) CRU since they all reside on the same motherboard. The CPU (on-line) information is used to order a replacement CPU & I/O CRU when either CPU or I/O is defective and needs replacement.

For: G94330 Order Part: AA-G90730 – 2400/4300/4600 CPU & I/O CRU Enclosure, (No Processors, Memory, VTMs, PCI adapters, PCI Riser, CD or DVD, or SATA disk drives)

For: G94340 Order Part: AA-G90740 – 5700 CPU & I/O CRU Enclosure, (No Processors, Memory, VTMs, PCI adapters, PCI Riser, CD or DVD, or SATA disk drives)

For: G94340-LF Order Part: AA-G97200 – 2400/4300/4600/5700 CPU & I/O CRU Enclosure, ROHS (No Processors, Memory, VTMs, PCI adapters, PCI Riser, CD or DVD, or SATA disk drives)
5. Highlight the “Processor - 20”.
6. In the right pane look for “Stepping” field. The following is a reference between the “Stepping” field and the AK kit part number.

For: Stepping = 1
Order Part: AK-000527 - Processor Kit: Processor 3.2GHz, Heatsink & Adhesive (2400/4300)

For: Stepping = 9
Order Part: AK-000563 - Processor Kit: Processor 3.2GHz, (G-1) Heatsink & Adhesive (2400/4300)

For: Stepping = 3
Order Part: AK-000541 - Processor Kit: Processor 3.6GHz, Heatsink & Adhesive (4600)

For: Stepping = 8
Order Part: AK-000555 - Processor Kit: Dual Core Processor 2.8GHz, Heatsink & Adhesive (5700)

7. Determine the quantity of AK processor kits required by the “Processor –xx” shown as Online.

Note: A yellow folder denotes online hardware and when the node is highlighted the left pane will display the Op State: State “Online or Empty”. In the example above both “Processor -20” and “Processor -23” exist, so quantity 2 of AK-000527 would be ordered. The right pane shown depicts Processor 20 – Online and processor 23 would display similar information.
8. Highlight the “DIMM – X”.
9. In the right pane look for “Op State: State” field to determine if DIMM exists. The state will be “Online” if it does.

10. If the State is “Online” then determine the part to order based on the size shown in the “SizeMb” field. The following is a reference between the SizeMb field and the memory DIMM part number.

For: SizeMb = 1024 Mb and SPDData: MfgPartNr = 18HTF12872Y-40EA2 or 18HTF12872Y-40EB3 or 18HTF12872Y-40ED6 or VR5ER287214EBPS3
Order Part: AA-M23100 - DIMM 1GB or AA-M23200 - DIMM 2GB

For: SizeMb = 2048 Mb and SPDData: MfgPartNr = 18HTF25672Y-40EA2 or 18HTF25672Y-40EE1
Order Part: AA-M23100 - DIMM 1GB or AA-M23200 - DIMM 2GB

11. For “DIMM 0 thru 7” which are Online, determine the quantity, slot configuration and size of memory DIMMs which are required to be ordered.

Note: A yellow folder denotes online hardware and when the node is highlighted the left pane will display the Op State: State “Online or Empty”. In the example above both “DIMM – 0” thru “DIMM - 5” exist and they were all verified to be 1024MB size per CPU side, so quantity 6 of AA-M231000 would be ordered. The right pane shown depicts DIMM - 0 – Online with a size of 1024Mb, DIMM – 1 thru DIMM – 7 would display similar information.

12. Once the CPU & I/O CRU enclosure part number and memory DIMM part number, slot configuration and quantity is determined, a properly configured replacement 2400, 4300, 4600 or 5700 CPU & I/O CRU can be ordered.

Note: In the example given above the CPU CRU replacement order would include:
6. 1 – AA-G90730
7. 2 – AK-000527
8. 6 – AA-M23100

Notes:
1. Replacement AA-G90730 – CPU CRU. Parts expected to be swapped between defective CRU and replacement are: PCI Riser (PCI Adapter Support Bracket Dual-PCI Cover), PCI adapters full and half height, CD or DVD, VTMs and SATA Disks.
2. Memory DIMMs on 4300/4600/5700 are installed in quantities of 2, of equal size referred to as banks. Valid configurations are 2 and 4 DIMMS for 2400 and 2, 4, 6 or 8 DIMMs for 4300/4600/5700 per CPU & I/O CRU.
3. Memory DIMMs on 2400 are installed in quantities of 2 of equal size referred to as banks. Exception being 1, 1GB DIMM can be installed per CPU in Slot 0/B4. Valid configurations are 1, 2 and 4 DIMMS for 2400 per CPU & I/O CRU.

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Valid Part Numbers:

- The following are valid 2400/4300/4600/5700 CPU & I/O CRU enclosures, AK processor kits and DIMM part numbers for Non-ROHS systems.

  AA-G90730 - CPU & I/O Enclosure (no memory or processor)
  AA-G94330 - PCB, Motherboard (used in AA-G90730 CPU & I/O Enclosure).
  AK-000527 - Processor Kit: Processor 3.2GHz, Heatsink & Adhesive (2400/4300)
  AK-000563 - Processor Kit: Processor 3.2GHz (G-1), Heatsink & Adhesive (2400/4300)
  AK-000541 - Processor Kit: Processor 3.6GHz, Heatsink & Adhesive (4600)

  AA-G90740 - CPU & I/O Enclosure (no memory or processor)
  AA-G94340 - PCB, Motherboard (used in AA-G90740 CPU & I/O Enclosure)
  AK-000555 - Processor Kit: Dual Core Processor 2.8GHz, Heatsink & Adhesive (5700)

  AA-M23100 - DIMM 1GB (Mfg part# MT18HTF12872Y-40EA2 or MT18HTF12872Y-40EB3 or MT18HTF12872Y-40ED6 or VR5ER287214EBP3)
  AA-M23200 - DIMM 2GB (Mfg part# MT18HTF25672Y-40EA2 or MT18HTF25672Y-40EE1)

- The following are valid 2400/4300/4600/5700 CPU & I/O CRU enclosures, AK processor kits and DIMM part numbers for ROHS systems.

  AA-G97200 - CPU & I/O Enclosure ROHS (no memory or processor, See Note 19)
  AA-G94340-LF - PCB, Motherboard ROHS (used in AA-G97200 CPU & I/O Enclosure).
  AK-000527 - Processor Kit: Processor 3.2GHz, Heatsink & Adhesive (2400/4300, See Note 18)
  AK-000563 - Processor Kit: Processor 3.2GHz (G-1), Heatsink & Adhesive (2400/4300, See Note 18)
  AK-000541 - Processor Kit: Processor 3.6GHz, Heatsink & Adhesive (4600, See Note 18)
  AK-000555 - Processor Kit: Dual Core Processor 2.8GHz, Heatsink & Adhesive (5700, See Note 18)

  AA-M23100 - DIMM 1GB (Mfg part# part# MT18HTF12872Y-40EA2 or MT18HTF12872Y-40EB3 or MT18HTF12872Y-40ED6 or VR5ER287214EBP3) (See Note 18)
  AA-M23200 - DIMM 2GB (Mfg part# MT18HTF25672Y-40EA2 or MT18HTF25672Y-40EE1) (See Note 18)
7 ftServer 2500/4400/6200 CPU & I/O CRU Configuration

7.1 2500/4400/6200 ftServer (Fusion) CPU & I/O CRU

The following are snapshots of the ftServer Management Console on a 6200 system. Follow the steps below to determine the CPU & I/O CRU configuration. In a 2500/4400/6200 system, the CPU (0) and I/O (10) are contained on one motherboard, within one CRU enclosure, and the CPU (1) and I/O (11) are contained on one motherboard, within one CRU enclosure.

You need the following information to properly order a replacement CPU & I/O CRU.

- CPU & I/O CRU enclosure part number
- AK processor kit part number and quantity
- Memory DIMM part number and quantity.
- PCI riser adapter part number.

Steps to determine CPU & I/O CRU configuration:

1. Open ftServer Management Console (ftSMC).
2. Expand ftServer CPU Enclosures, then the online CPU 0 or 1.
3. Highlight the an Online CPU enclosure.
4. In the right pane look for “ModelName” and “Brand” field. The following is a reference between the motherboard “ModelName and Processor “Brand” field and the CPU & I/O CRU assembly part number.

**Note:** For a specific system the “ModelName” field will display the same on each CPU (0 or 1) and I/O (10 and 11) CRU since they all reside on the same motherboard. The CPU (on-line) information is used to order a replacement CPU & I/O CRU when either CPU or I/O is defective and needs replacement.

For: **ModelName = 160-01650** and **Brand = Intel(R) Xeon(R) CPU 5130 @ 2.00GHZ**  
Order Part: 062-01872-000 – 4400 CPU & I/O CRU Enclosure, (No Processors, Memory, VTM, PCI adapters, PCI Riser, DVD-R/W, or SATA/SAS disk drives)

For: **ModelName = 160-01650** and **Brand = Intel(R) Xeon(R) CPU X5355 @ 2.66GHZ**  
Order Part: 062-01873-000 – 6200 CPU & I/O CRU Enclosure, (No Processors, Memory, VTM, PCI adapters, PCI Riser, DVD-R/W, or SATA/SAS disk drives)

For: **ModelName = 160-01695** and **Brand = Intel(R) Xeon(R) CPU 5130 @ 2.00GHZ**  
Order Part: 062-01742-000 – 2500/4400 CPU & I/O CRU Enclosure, (No Processors, Memory, VTM, PCI adapters, PCI Riser, DVD-R/W, or SATA/SAS disk drives)

For: **ModelName = 160-01695** and **Brand = Intel(R) Xeon(R) CPU X5355 @ 2.66GHZ**  
Order Part: 062-01743-000 – 6200 CPU & I/O CRU Enclosure, (No Processors, Memory, VTM, PCI adapters, PCI Riser, DVD-R/W, or SATA/SAS disk drives)
5. Highlight the “Processor - 20”.
6. In the right pane look for “Stepping” field and “Brand” field. Use the “Brand” field information and the “Stepping field to determine processor kit required. The following is a reference between the “Brand” and “Stepping” field and the Processor kit part number.

For: **Brand** = Intel(R) Xeon(R) CPU 5130 @ 2.00GHZ

   And **Stepping** = 6
   Order Part: 062-01988-000 - Processor Kit: Processor 2.0GHz (B2 Step), Heatsink & Adhesive (2500/4400)

   And **Stepping** = 11
   Order Part: 062-02998-000 - Processor Kit: Processor 2.0GHz (G0 Step), Heatsink & Adhesive (2500/4400)

For: **Brand** = Intel(R) Xeon(R) CPU X5355 @ 2.66GHZ

   And **Stepping** = 7
   Order Part: 062-01987-000 - Processor Kit: Processor 2.66GHz (B3 Step), Heatsink & Adhesive (6200)
And Stepping = 11
Order Part: 062-02997-000 - Processor Kit: Processor 2.66GHz (G0 Step), Heatsink & Adhesive (6200)

7. Determine the quantity of processor kits required by the “Processor –xx” shown as Online.

Note: A yellow folder denotes online hardware and when the node is highlighted the left pane will display the Op State: State “Online or Empty”. In the example above both “Processor -20” and “Processor -23” exist, so quantity 2 of 062-01987-000 would be ordered. The right pane shown depicts Processor 20 – Online and processor 23 would display similar information.

8. Highlight the “DIMM – X”.
9. In the right pane look for “Op State: State” field to determine if DIMM exists. The state will be “Online” if it does.

ftSMC (Left Pane) ftSMC (Right Pane)

10. If the State is “Online” then determine the part to order based on the size shown in the “SizeMb” and “MfgPartNr” fields. The following is a reference between the SizeMb and MfgPartNr fields and orderable part number.

For: SizeMb = 1024 Mb and SPDData: MfgPartNr = M395T2953CZ4-CE61
Order Part: 609-01629-000 – 1GB FB-DIMM

For: SizeMb = 1024 Mb and SPDData: MfgPartNr = M395T2953EZ4-CE66 or M395T2953GZ4-CE66
Order Part: 609-01642-000 – 1GB FB-DIMM

For: SizeMb = 2048 Mb and SPDData: MfgPartNr = M395T5750CZ4-CE61
Order Part: 609-01630-000 – 2GB FB-DIMM

For: SizeMb = 2048 Mb and SPDData: MfgPartNr = M395T5750EZ4-CE66 or M395T5750GZ4-CE66
Order Part: 609-01643-000 – 2GB FB-DIMM

For: SizeMb = 4096 Mb and SPDData: MfgPartNr = M395T5160CZ4-CE66 or M395T5160QZ4-CE66
Order Part: 609-01639-000 – 4GB FB-DIMM

11. For “DIMM 0 thru 5” which are Online, determine the quantity, slot configuration and size of memory DIMMs which are required to be ordered.

Note: A yellow folder denotes online hardware and when the node is highlighted the left pane will display the Op State: State “Online or Empty”. In the example above both “DIMM – 0” thru “DIMM - 5” exist and they were all verified to be 1024MB size and Mfg Part Nr to be M395T2953CZ4-CE61 per CPU side, so quantity 6 of 609-
01629-000 would be ordered. The right pane shown depicts DIMM - 0 – Online with a size of 1024Mb, DIMM – 1 thru DIMM – 5 would display similar information.

12. Once the CPU & I/O CRU enclosure part number and memory DIMM part number, slot configuration and quantity is determined, a properly configured replacement 2500, 4400 and 6200 CPU & I/O CRU can be ordered.

Note: In the example given above the CPU CRU replacement order would include:
   9. 1 – 062-01873-000
   10. 2 – 062-01987-000
   11. 6 – 609-01629-000

13. If operating ftServer System Software 5.1 or above go to step 14, else go to step 16.

14. If a PCI riser adapter needs to be ordered as part of the CPU-I/O CRU use the following procedure to determine part number required.
   a. Open ftServer Management Console (ftSMC).
   b. Expand ftServer I/O Enclosures.
   c. Highlight the "I/O Enclosure - XX", 10 or 11
   d. In the right pane look for “PCIRiserID” field. The following is a reference between the “PCIRiserID” field and the PCI riser adapter part number.

   For: PCIRiserID = 1x PCI-E, 1x PCI-X
   Order Part: 062-01514-000 – PCI Riser Adapter, PCI-X/PCI-E
   For: PCIRiserID = 2x PCI-X
   Order Part: 062-01513-000 – PCI Riser Adapter, PCI-X

15. Go to step 20.

16. If operating ftServer System Software 5.0.0.2 and above go to step 17, else go to step 19.

17. If a PCI riser adapter needs to be ordered as part of the CPU-I/O CRU use the following tool to determine part number required. Note: Riser adapter information is not available thru ftSMC.
   a. Open an explorer window and go to the directory C:\Program Files\FTSYS\CUSTOMERSERVICE\SUPPORTTOOLS
   b. Run the tool IDENTIFY_RISER_CARD.VBE. : Riser adapter part number to order will be displayed as seen in the example below

18. Go to step 20.

19. If a PCI riser adapter needs to be ordered as part of the CPU-I/O CRU use the following DBG command to determine part number required. Note: This utility will work on all ftServer System Software releases.
   a. Open a "cmd" window
   b. C:\>cd "Program Files\FTSYS\CUSTOMERSERVICE\SUPPORTTOOLS"
Run the command “dbg –r funcs”. The following is partial output that automatically gets executed.

RHAPSODY HARDWARE VERSION INFO . . .
- SYSTEM
  ModName P6101-2D
ModDesc ftServer 4400
SerNum 3340564445
OEM OEM_STRATUS
MAC 00 04 fc 02 07 ce
RISER SHADOW <<<<<<<<<<<<< Codename

. .
dbg: virt> Quit (to exit dbg)
c. Close "cmd" window.
d. Use the "RISER" field information from step 12b above to determine PCI Riser required. The following is a reference between the "RISER" field and the Riser part number.

For: RISER = SHADOW
Order Part: 062-01514-000 – PCI Riser Adapter, PCI-X/PCI-E
For: RISER = CAMOUFLAGE
Order Part: 062-01513-000 – PCI Riser Adapter, PCI-X

20. Part order information and configuration for the 2500/4400/6200 CPU-I/O CRU completed.

Notes:
1. The last three digits of the RU part number will change from -000 (initial release) to -0xx due to post release ECOs revisions, but are compatible. LMS will reflect the orderable RU part number.
2. If not specifically requested in LMS CRU part order, the following parts are expected to be swapped between defective CRU and replacement CRU are: PCI adapters full and half height, DVD, VTMs, Internal SAS and SATA Disks and PCI Riser. Note: VTMs are optional on 2500/4400/6200 systems.
3. Memory DIMMs on 2500/4400/6200 are installed in quantities of 2, of equal size referred to as channels. Valid configurations are 2, 4, and 6 DIMMs per CPU & I/O CRU. See specifications for physical location rules.
4. 609-01629-000, 1GB FB-DIMM, on 2500/4400 systems, minimum of 2GB maximum of 6GB.
5. 609-01630-000, 2GB FB-DIMM, on 4400/6200 systems, minimum of 4GB maximum of 12GB.
6. 609-01642-000 and 609-01643-000 1 & 2 GB (C-Step) FB-DIMM require a minimum CPU BIOS or 2.2.56 or above.
7. 609-01639-000, 4GB FB-DIMM, on 6200 systems, minimum of 16GB maximum or 24GB for systems operating CPU BIOS below 2.2.56. Valid configurations are 2, 4, and 6 DIMMs per CPU & I/O CRU. If system is operating CPU BIOS 2.2.56 or above minimum of 8GB maximum or 24GB is supported. Valid configurations are 2, 4, and 6 DIMMs per CPU & I/O CRU.
8. 062-01742-000 and 062-01743-00x CPU-I/O are required to support ftServer System Software and Windows 64-bit.
9. MUST not mix the A1.5 memory (609-01629-000, 1GB FB-DIMM or 609-01630-000, 2GB FB-DIMM) with C-Step memory (609-01642-000 - 1GB FB-DIMM, or 609-01643-000 - 2GB FB-DIMM or 609-01639-000 - 4GB FB-DIMM) with in or between CPU-I/O CRUs.
10. 1 processor (kit) configuration is valid for 2500 CPU & I/O CRU. Populated as "Processor – 20" in ftSMC.
11. 1 or 2 processor (kits) configurations are valid for 4400 CPU & I/O CRU. Populated as "Processor – 20" and "Processor – 23" in ftSMC.
12. 2 processor (kits) configuration is valid for 6200 CPU & I/O CRU. Populated as “Processor – 20” and “Processor – 23" in ftSMC.
13. G0 Step processors (062-02998-000 or 062-02997-000) require 062-01742-00x or 062-01743-00x CPU-I/O CRU and a minimum of 2.2.58 CPU BIOS.
14. A PCI riser adapter is a requirement for 2500/4400/6200 CPU-I/O CRUs to support the internal disk drives. There are two PCI risers available on 2500/4400/6200, one with 2 – PCI slots, the second with 1, PCI-X and 1, PCI-E slot.
15. PCI Slot – 6 in ftSMC, is the low profile slot. PCI slot – 7 and 8 are the riser adapter PCI slots. PCI Slot – 8 is the PCI-E slot, when 062-01514-000 riser adapter is installed.
16. PCI riser adapters are verified during CPU-I/O bring-up. If they are different from the on-line CRU or missing, the replacement I/O CRU will get a hardware compatibility mismatch and will not come into service.

17. On 2500/4400/6200 systems the Boot/System disk MUST be of type SAS.

18. Internal Disk 260-01649-000 (FW SN05) is RDR partner compatible with 260-01649-001 (FW SN06).

19. See Alert 2440 for details.

20. Internal Disk 260-01651-000, 260-01691-000, 260-01693-000 (FW 0004) is RDR partner compatible with 260-01651-001, 260-01691-001, 260-01693-001 (FW 0005).

21. 2500/4400 part Illustrated list
22. 6200 part Illustrated list
23. 2500/4400/6200 Customer Manuals (Windows versions)
24. 2500 configuration specification ES-000160 – (Stratus access Only)
25. 4400 configuration specification ES-000158 – (Stratus access Only)
26. 6600 configuration specification ES-000159 – (Stratus access Only)

Valid Part Numbers:

- The following are valid 2500/4400/6200 CPU & I/O CRU enclosures, processor kits, FB-DIMM and PCI riser adapter part numbers.

  062-01872-000 – 4400 CPU & I/O Enclosure (no memory or processors)
  160-01650 - PCB, Motherboard (used in 062-01872-000 CPU & I/O Enclosure).
  062-01988-000 - Processor Kit: Dual Core Processor 2.0GHz, Heatsink & Adhesive (B2 Step)

  062-01742-000 – 2500/4400 CPU & I/O Enclosure (no memory or processors)
  160-01695 - PCB, Motherboard (used in 062-01742-000 CPU & I/O Enclosure).
  062-01988-000 - Processor Kit: Dual Core Processor 2.0GHz, Heatsink & Adhesive (B2 Step)
  062-02998-000 - Processor Kit: Dual Core Processor 2.0GHz, Heatsink & Adhesive (G0 Step)

  062-01873-000 - 6200 CPU & I/O Enclosure (no memory or processors)
  160-01650 - PCB, Motherboard (used in 062-01873-000 CPU & I/O Enclosure).
  062-01987-000 - Processor Kit: Quad Core Processor 2.66GHz, Heatsink & Adhesive (B3 Step)

  062-01743-000 - 6200 CPU & I/O Enclosure (no memory or processors)
  160-01695 - PCB, Motherboard (used in 062-01743-000 CPU & I/O Enclosure).
  062-01987-000 - Processor Kit: Quad Core Processor 2.66GHz, Heatsink & Adhesive (B3 Step)
  062-02997-000 - Processor Kit: Quad Core Processor 2.66GHz, Heatsink & Adhesive (G0 Step)

  609-01629-000 - 1GB FB-DIMM (Mfg part# M395T2953CZ4-CE61)
  609-01630-000 - 2GB FB-DIMM (Mfg part# M395T5750CZ4-CE61)
  609-01642-000 - 1GB FB-DIMM (C-Step AMB) (Mfg # M395T2953EZ4-CE66 or M395T2953GZ4-CE66)
  609-01643-000 - 2GB FB-DIMM (C-Step AMB) (Mfg # M395T5750EZ4-CE66 or M395T5750GZ4-CE66)
  609-01639-000 - 4GB FB-DIMM (C-Step AMB) (Mfg # M395T5160CZ4-CE66 or M395T5160QZ4-CE66)

  062-01513-000 - ASSY, PCI-X RISER (CAMOUFLAGE)
  062-01514-000 - ASSY, PCI-E/PCI-X RISER (SHADOW)

Note: The last three digits of the RU part number will change from -000 (initial release) to -0xx due to post release ECOs revisions, but are compatible. LMS will reflect the orderable RU part number.
The following are valid RU list parts for 2500/4400/6200. Included is the field in ftSMC that provides the vendor provided key information in determining the RU part number. Note: field name highlighted in blue, field contents highlighted in red.

<table>
<thead>
<tr>
<th>Orderable Part Number</th>
<th>Description</th>
<th>ftServer Management Console key field for determining orderable part</th>
</tr>
</thead>
<tbody>
<tr>
<td>062-01994-000</td>
<td>ASSY, DVD-R/W</td>
<td>Standard System Devices -&gt;MATSHITA DVD-RAM UJ-8405</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PnPDeviceId = IDE:CDROMMATSHITA_DVD-RAM_UJ-840S or</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Standard System Devices -&gt;MATSHITA DVD-RAM UJ-8505</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PnPDeviceId = IDE:CDROMMATSHITA_DVD-RAM_UJ-850S or</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Standard System Devices -&gt;TEAC DV-W28E-R ATA</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PnPDeviceId = IDE:CDROMTEAC_DV-W28E-R</td>
</tr>
<tr>
<td>160-01677-008</td>
<td>VTM ADVANCED SYS MNGMT</td>
<td>Enclosure - 10 or 11 / VTM Adapter - x / VTM - x</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PartNumber = U46300</td>
</tr>
<tr>
<td>260-01650-000</td>
<td>HDD, SAS 73GB, 15K</td>
<td>Storage Enclosure – 40 / Disk –x / Slot –x</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Vendor = ST373455SS</td>
</tr>
<tr>
<td></td>
<td></td>
<td>or ProductID = MAX3073RC</td>
</tr>
<tr>
<td>260-01690-000</td>
<td>HDD, SAS 73GB, 15K</td>
<td>Storage Enclosure – 40 / Disk –x / Slot –x</td>
</tr>
<tr>
<td></td>
<td>See Note 19</td>
<td>Vendor = ST373455SS</td>
</tr>
<tr>
<td></td>
<td></td>
<td>or ProductID = MAX3073RC</td>
</tr>
<tr>
<td></td>
<td></td>
<td>and Capacity = 68.37</td>
</tr>
<tr>
<td>260-01651-001</td>
<td>HDD, SAS 146GB, 15K</td>
<td>Storage Enclosure – 40 / Disk –x / Slot –x</td>
</tr>
<tr>
<td>See Note 20</td>
<td></td>
<td>ProductID = MAX3174RC</td>
</tr>
<tr>
<td></td>
<td></td>
<td>or ProductID = ST3146356SS</td>
</tr>
<tr>
<td></td>
<td></td>
<td>or ProductID = ST3146855SS</td>
</tr>
<tr>
<td>260-01691-001</td>
<td>HDD, SAS 146GB, 15K</td>
<td>Storage Enclosure – 40 / Disk –x / Slot –x</td>
</tr>
<tr>
<td>See Note 19 and 20</td>
<td></td>
<td>ProductID = MAX3174RC</td>
</tr>
<tr>
<td></td>
<td></td>
<td>or ProductID = ST3146356SS</td>
</tr>
<tr>
<td></td>
<td></td>
<td>or ProductID = ST3146855SS</td>
</tr>
<tr>
<td></td>
<td></td>
<td>and Capacity = 136.73</td>
</tr>
<tr>
<td>260-01648-000</td>
<td>HDD, SATA 250GB, 7200</td>
<td>Storage Enclosure – 40 / Disk –x / Slot –x</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Vendor = ST325062</td>
</tr>
<tr>
<td>260-01688-000</td>
<td>HDD, SATA 250GB, 7200</td>
<td>Storage Enclosure – 40 / Disk –x / Slot –x</td>
</tr>
<tr>
<td>See Note 19</td>
<td></td>
<td>Vendor = ST325062</td>
</tr>
<tr>
<td></td>
<td></td>
<td>and Capacity = 233.88</td>
</tr>
<tr>
<td>260-01693-001</td>
<td>HDD, SAS 300GB, 15K</td>
<td>Storage Enclosure – 40 / Disk –x / Slot –x</td>
</tr>
<tr>
<td>See Note 20</td>
<td></td>
<td>ProductID = ST3300656SS</td>
</tr>
<tr>
<td>260-01649-001</td>
<td>HDD, SATA 500GB, 7200</td>
<td>Storage Enclosure – 40 / Disk –x / Slot –x</td>
</tr>
<tr>
<td>See Note 18</td>
<td></td>
<td>Vendor = ST350063</td>
</tr>
<tr>
<td></td>
<td></td>
<td>or Vendor = ST350032</td>
</tr>
<tr>
<td>Part Number</td>
<td>Description</td>
<td>Notes</td>
</tr>
<tr>
<td>-------------</td>
<td>-------------</td>
<td>-------</td>
</tr>
<tr>
<td>260-01689-001</td>
<td>HDD, SATA 500GB, 7200</td>
<td>See Note 18 and 19</td>
</tr>
</tbody>
</table>
| 160-01683-000 | Ultra320 SCSI PCI Adapter (connects to tape drives, U527) | Storage Enclosure – 40 / Disk –x / Slot –x  
Vendor = ST350063  
or  
Vendor = ST350032  
and  
Capacity = 765.76 |
| 160-01599-000 | Emulex LP-1150-F4, PCI-X (fSscalable storage) | Enclosure - 10 or 11 / PCI Slot - x /  
PnPDescription[1] = Adaptec SCSI Card 29320ALP - Ultra320 SCSI  
or  
PnPDeviceId[1] = pci\ven_9005&dev_8017&subsys_00449005 |
| 160-01679-000 | Emulex LP1150-E (EMC) PCI-X | Enclosure - 10 or 11 / PCI Slot - x /  
PnPDescription[1] = Emulex LightPulse LP1150-E  
and  
PnPDeviceId[1] = pci\ven_10df&dev_f0d5&subsys_f0d510df |
| 160-01678-000 | Emulex LPe1150 PCI-E (fSscalable storage) | Enclosure - 10 or 11 / PCI Slot - x /  
PnPDescription[1] = Emulex LightPulse LPe1150  
and  
PnPDeviceId[1] = pci\ven_10df&dev_f0e5&subsys_f0e510df |
| 160-01680-000 | Emulex LPe1150-E (EMC) PCI-E | Enclosure - 10 or 11 / PCI Slot - x /  
PnPDescription[1] = Emulex LightPulse LPe1150-E  
and  
PnPDeviceId[1] = pci\ven_10df&dev_f0e5&subsys_f0e510df |
| 160-01681-000 | Dual-Port Fiber Gigabit Ethernet Adapter, 1000Base-Sx (U574) | Enclosure - 10 or 11 / PCI Slot - x / Ethernet controller – x  
Folder labeled = Stratus U574 Dual Port Fiber Gigabit Adapter  
or  
PnPDeviceId[1] or [2] = pci\ven_8086&dev_107a&subsys_7126159c |
| 160-01682-000 | Dual-Port Copper Gigabit Ethernet Adapter, 1000Base-TX 2-port (U575) | Enclosure - 10 or 11 / PCI Slot - x / Ethernet controller – x  
Folder labeled = Stratus U575 Dual Port Fiber Gigabit Adapter  
or  
PnPDeviceId[1] or [2] = pci\ven_8086&dev_107a&subsys_7126159c |
| 062-01878-000 | ASSY, FAN 80MM, CPU 2500/4400/6200, PS 2500/4400 ONLY | CPU Enclosure – x / Sensors / CPU Fan1#<0 or 1>  
Op State: State = On-Line or (Broken)  
State = Normal or (Threshold errors)  

Physically CPU 0 Fan = CPU Fan1#<0 or 1> in ftSMC and is the right assembly, when viewed from front of CPU-I/O CRU.  
Physically CPU 1 Fan = CPU Fan2#<0 or 1> in ftSMC and is the left assembly, when viewed from front of CPU-I/O CRU.  
Physically Power Supply Fan assembly = PSU Fan#<0 or 1> in  

CPU Enclosure – x / Sensors / CPU Fan2#<0 or 1>  
Op State: State = On-Line or (Broken)  
State = Normal or (Threshold errors)  

CPU Enclosure – x / Sensors / PSU Fan#<0 or 1>  
Op State: State = On-Line or (Broken)  
State = Normal or (Threshold errors)  

Note: The last digit "0 or 1" in the name of the fan sensor is the CPU Enclosure number the fan resides.  

CPU Enclosure – x / Sensors / CPU Fan1#<0 or 1>  
Op State: State = On-Line or (Broken)  
State = Normal or (Threshold errors)  

Note: The last digit "0 or 1" in the name of the fan sensor is the CPU Enclosure number the fan resides.
| ftSMC and is located just behind the power supply | CPU Enclosure – x / Sensors / IO Fan#<0 or 1>  
Op State: State = On-Line or (Broken)  
State = Normal or (Threshold errors)  
Note: The last digit “0 or 1” in the name of the fan sensor is the CPU Enclosure number the fan resides. |
|---|---|
| 062-01877-000 | ASSY, FAN 60MM, HDD  
2500/4400/6200  
Physically HDD / I/O Fan assembly = IO Fan#<0 or 1> in ftSMC and is located just behind the internal disk backplane. |
| 062-01879-000 | ASSY, FAN 60MM, PS 6200 ONLY  
Physically Power Supply Fan assembly = PSU Fan#<0 or 1> in ftSMC and is located just behind the power supply  
CPU Enclosure – x / Sensors / PSU Fan#<0 or 1>  
Op State: State = On-Line or (Broken)  
State = Normal or (Threshold errors)  
Note: The last digit “0 or 1” in the name of the fan sensor is the CPU Enclosure number the fan resides. |
8   ftServer 2510/4410/6210 CPU & I/O CRU Configuration

8.1 2510/4410/6210 ftServer (Fusion-H) CPU & I/O CRU

The following are snapshots of the ftServer Management Console on a 6210 system. Follow the steps below to determine the CPU & I/O CRU configuration. In a 2510/4410/6210 system, the CPU (0) and I/O (10) are contained on one motherboard, within one CRU enclosure, and the CPU (1) and I/O (11) are contained on one motherboard, within one CRU enclosure.

Note: If ordering V2302 V Series CRU enclosure and processor kit, go to “V2302/V2404 V Series CPU & Processor” section for details.

You need the following information to properly order a replacement CPU & I/O CRU.

- CPU & I/O CRU enclosure part number
- AK processor kit part number and quantity
- Memory DIMM part number and quantity.
- PCI riser adapter part number.

Steps to determine CPU & I/O CRU configuration:

1. Open ftServer Management Console (ftSMC).
2. Expand ftServer CPU Enclosures, then the online CPU 0 or 1.
3. Highlight the an Online CPU enclosure
4. In the right pane look for “ModelName”. The following is a reference between the motherboard “ModelName” field and the CPU & I/O CRU assembly part number.

Note: For a specific system the “ModelName” field will display the same on each CPU (0 or 1) and I/O (10 and 11) CRU since they all reside on the same motherboard. The CPU (on-line) information is used to order a replacement CPU & I/O CRU when either CPU or I/O is defective and needs replacement.

For: ModelName = 243-633397
Order Part: 062-03056-000 – 2510, 4410 or 6210 CPU & I/O CRU Enclosure, (No Processors, Memory, VTMIs, PCI adapters, PCI Riser, DVD-R/W, or SATA/SAS disk drives)
See note 14
5. Highlight the “Processor - 20”.
6. In the right pane look for “Stepping” field and “Brand” field. Use the “Brand” field information and the “Stepping field to determine processor kit required. The following is a reference between the “Brand” and “Stepping” field and the Processor kit part number.

For: Brand = Intel(R) Xeon(R) CPU E5405 @ 2.00GHz

And Stepping = 6
Order Part: 062-03054-000 - Processor Kit: Processor 2.0GHz (C0 Step), Heatsink & Adhesive (2510/4410)

And Stepping = 10
Order Part: 062-03084-000 - Processor Kit: Processor 2.0GHz (E0 Step), Heatsink & Adhesive (2510/4410)

For: Brand = Intel(R) Xeon(R) CPU E5450 @ 3.00GHz

And Stepping = 6
Order Part: 062-03053-000 - Processor Kit: Processor 3.00GHz (C0 Step), Heatsink & Adhesive (6210)

And Stepping = 10
Order Part: 062-03083-000 - Processor Kit: Processor 3.00GHz (E0 Step), Heatsink & Adhesive (6210)

7. Determine the quantity of processor kits required by the “Processor –xx” shown as Online.

Note: A yellow folder denotes online hardware and when the node is highlighted the left pane will display the Op State: State “Online or Empty”. In the example above both “Processor -20” and “Processor -23” exist, so quantity 2 of 062-03053-000 would be ordered. The right pane shown depicts Processor 20 – Online and processor 23 would display similar information.
8. Highlight the “DIMM – X”.
9. In the right pane look for “Op State: State” field to determine if DIMM exists. The state will be “Online” if it does.

10. If the State is “Online” then determine the part to order based on the size shown in the “SizeMb” and “MfgPartNr” fields. The following is a reference between the SizeMb and MfgPartNr fields and orderable part number.

For: SizeMb = 1024 Mb and SPDData: MfgPartNr = M395T2953EZ4-CE66 or M395T2953GZ4-CE66
Order Part: 609-01642-000 – 1GB FB-DIMM

For: SizeMb = 2048 Mb and SPDData: MfgPartNr = M395T5750EZ4-CE66 or M395T5750GZ4-CE66
Order Part: 609-01643-000 – 2GB FB-DIMM

For: SizeMb = 4096 Mb and SPDData: MfgPartNr = M395T5160EZ4-CE66 or M395T5160GZ4-CE66
Order Part: 609-01639-000 – 4GB FB-DIMM

For: SizeMb = 8192 Mb and SPDData: MfgPartNr = M395T1K66AZ4-CE66
Order Part: 609-01647-000 – 8GB FB-DIMM

11. For “DIMM 0 thru 5” which are Online, determine the quantity, slot configuration and size of memory DIMMs which are required to be ordered.

Note: A yellow folder denotes online hardware and when the node is highlighted the left pane will display the Op State: State “Online or Empty”. In the example above both “DIMM – 0” thru “DIMM - 5” exist, DIMM - 0 is a 8196MB DIMM which means that DIMM 1 – 5 must also be determined, since they will not be 8196MB DIMMs. In this system, “DIMM - 1 thru DIMM – 5” were 4096MB DIMMs which means the maximum memory configuration of 32GB. The Mfg Part number of M395T1K66AZ4-CE66 for the 8196MB DIMM one per CPU side, and Mfg Part number of M395T5160EZ4-CE66 for the 4096MB DIMM 4 per CPU side so quantity 1 of 609-01647-000 and 5 of 609-01639-000 would be ordered.

12. Once the CPU & I/O CRU enclosure part number and memory DIMM part number, slot configuration and quantity is determined, a properly configured replacement 2510, 4410 and 6210 CPU & I/O CRU can be ordered.

Note: In the example given above the CPU CRU replacement order would include:
12. 1 – 062-03056-000
13. 2 – 062-03053-000
14. 2 – 609-01647-000
15. 4 – 609-01639-000
13. If a PCI riser adapter needs to be ordered as part of the CPU-I/O CRU use the following procedure to determine part number required.
   a. Open ftServer Management Console (ftSMC).
   b. Expand ftServer I/O Enclosures.
   c. Highlight the “I/O Enclosure - XX”, 10 or 11
   d. In the right pane look for “PCIriserID” field. The following is a reference between the “PCIriserID” field and the PCI riser adapter part number.

For: PCIriserID = 2x PCI-X
Order Part: 062-03057-000 – PCI Riser Adapter, PCI-X
For: PCIriserID = 1x PCI-E, 1x PCI-X
Order Part: 062-03058-000 – PCI Riser Adapter, PCI-X/PCI-E

Notes:
1. The last three digits of the RU part number will change from -000 (initial release) to -0xx due to post release ECOs revisions, but are compatible. LMS will reflect the orderable RU part number.
2. If not specifically requested in LMS CRU part order, the following parts are expected to be swapped between defective CRU and replacement CRU are: PCI adapters full and half height, DVD, VTMs, Internal SAS and SATA Disks and PCI Riser. Note: VTMs are optional on 2510/4410/6210 systems.
3. Memory DIMMs on 2510/4410/6210 are installed in quantities of 2, of equal size referred to as channels. Valid configurations are 2, 4, and 6 DIMMs per CPU & I/O CRU. See specifications for physical location rules.
4. 609-01642-000, 1GB FB-DIMM, on 2510 systems ONLY, minimum of 2GB maximum of 6GB.
5. 609-01643-000 - 2GB FB-DIMM and 609-01639-000, 4GB FB-DIMM, and 609-01647-000 - 8GB FB-DIMM on 4410/6200 systems, minimum of 4GB maximum or 32GB. The 32GB configuration requires 2, 8GB DIMMs to be installed in Slot 0 of each channel and 4, 4GB DIMMs in Slot 1 & 2.
6. 1 processor (kit) configuration is valid for 2510 CPU &I/O CRU. Populated as “Processor – 20” in ftSMC.
7. 1or 2 processor (kits) configurations are valid for 4410 CPU &I/O CRU. Populated as “Processor – 20” and “Processor – 23” in ftSMC.
8. 2 processor (kits) configuration is valid for 6210 CPU &I/O CRU. Populated as “Processor – 20” and “Processor – 23” in ftSMC
9. Processor stepping is incompatible and will not allow CPU-I/O to duplex. Order the correct AK processor kit based on “Stepping” value. E0 stepping processors require a minimum of 3.1.16 CPU BIOS.
10. A PCI riser adapter is a requirement for 2510/4410/6210 CPU-I/O CRUs to support the internal disk drives. There are two PCI risers available on 2510/4410/6210, one with 2 – PCI-X slots, the second with 1, PCI-X and 1, PCI-E slot.
11. PCI Slot – 6 in ftSMC, is the low profile slot. PCI slot – 7 and 8 are the riser adapter PCI slots. PCI Slot – 8 is the PCI-E slot, when 062-03058-000 riser adapter is installed.
12. PCI riser adapters are verified during CPU-I/O bring-up. If they are different from the on-line CRU or missing, the replacement I/O CRU will get a hardware compatibility mismatch and will not come into service.
13. On 2510/4410/6210 systems the Boot/System disk MUST be of type SAS.
14. Internal 500GB SATA Disk 260-01649-000 (FW SN05) is RDR partner compatible with 260-01649-001 (FW SN06).
15. 2510, 4410 and 6210 part Illustrated list
16. 2510/4410/6210 Customer Manuals (Windows versions)
17. 2510 configuration specification ES-000163 – (Stratus access Only)
18. 4410 configuration specification ES-000161 – (Stratus access Only)
19. 6610 configuration specification ES-000162 – (Stratus access Only)
Valid Part Numbers:

- The following are valid 2510/4410/6210 CPU & I/O CRU enclosures, processor kits, FB-DIMM and PCI riser adapter part numbers.

062-03056-000 – 2510, 4410 or 6210 CPU & I/O CRU Enclosure, (No Processors, Memory, VTM, PCI adapters, PCI Riser, DVD-R/W, or SATA/SAS disk drives).
243-633397 - PCB, Motherboard (used in 062-03056-000 or -001 CPU & I/O Enclosure).
062-03054-000 - Processor Kit: Dual Core Processor 2.0GHz C0 stepping, Heatsink & Adhesive (2510, 4410)
062-03084-000 - Processor Kit: Dual Core Processor 2.0GHz E0 stepping, Heatsink & Adhesive (2510, 4410)
062-03053-000 - Processor Kit: Dual Core Processor 3.0GHz C0 stepping, Heatsink & Adhesive (6210)
062-03083-000 - Processor Kit: Dual Core Processor 3.0GHz E0 stepping, Heatsink & Adhesive (6210)

609-01642-000 - 1GB FB-DIMM (C-Step AMB) (Mfg part# M395T2953EZ4-CE66 or M395T2953GZ4-CE66) (See note 4)
609-01643-000 - 2GB FB-DIMM (C-Step AMB) (Mfg part# M395T5750EZ4-CE66 or M395T5750GZ4-CE66)
609-01639-000 - 4GB FB-DIMM (C-Step AMB) (Mfg part# M395T5160CZ4-CE66 or M395T5160QZ4-CE66)
609-01647-000 - 8GB FB-DIMM (C-Step AMB) (Mfg part# M395T1K66AZ4-CE66)

062-03057-000 - ASSY, PCI-X RISER
062-03058-000 - ASSY, PCI-E/PCI-X RISER

Note: The last three digits of the RU part number will change from -000 (initial release) to -0xx due to post release ECOs revisions, but are compatible. LMS will reflect the orderable RU part number.
• The following are valid RU list parts for 2510/4410/6210. Included is the field in ftSMC that provides the vendor provided key information in determining the RU part number. Note: field name highlighted in blue, field contents highlighted in red.

<table>
<thead>
<tr>
<th>Orderable Part Number</th>
<th>Description</th>
<th>ftServer Management Console key field for determining orderable part</th>
</tr>
</thead>
</table>
| 062-03052-000         | ASSY, DVD-R/W | Standard System Devices ->MATSHITA DVD-ROM UJ870QJ
PnPDeviceId = IDE:CDROMMATSHITA_DVD-ROM_UJ870QJ
or
Standard System Devices ->TEAC DV-W28E-R ATA
PnPDeviceId = IDE:CDROMTEAC_DV-W28E-R |
| 160-01677-008         | VTM ADVANCED SYS MNGMT | Enclosure - 10 or 11 / VTM Adapter - x / VTM - x
PartNumber = U46300 |
| 260-01651-000         | HDD, SAS 146GB, 15K | Storage Enclosure – 40 / Disk –x / Slot –x
ProductID = MAX3174RC
or
ProductID = ST3146356SS
or
ProductID = ST3146856SS |
| 260-01693-000         | HDD, SAS 300GB, 15K | Storage Enclosure – 40 / Disk –x / Slot –x
ProductID = ST3300656SS |
| 260-01649-001         | HDD, SATA 500GB, 7200 See Note 13 | Storage Enclosure – 40 / Disk –x / Slot –x
Vendor = ST350063
or
Vendor = ST350032 |
| 160-01683-000         | Ultra320 SCSI PCI Adapter (connects to tape drives, U527) | Enclosure - 10 or 11 / PCI Slot - x /
PnPDescription[1] = Adaptec SCSI Card 29320ALP - Ultra320 SCSI
or
PnPDeviceId[1] = pci\ven_9005&dev_8017&subsys_00449005 |
| 160-01679-000         | Emulex LP1150-E PCI-X (External Storage FC HBA) | Enclosure - 10 or 11 / PCI Slot - x /
PnPDescription[1] = Emulex LightPulse LP1150-E
and
PnPDeviceId[1] = pci\ven_10df&dev_f0d5&subsys_f0e510df |
| 160-01680-000         | Emulex LPe1150-E PCI-E (External Storage FC HBA) | Enclosure - 10 or 11 / PCI Slot - x /
PnPDescription[1] = Emulex LightPulse LPe1150-E
and
PnPDeviceId[1] = pci\ven_10df&dev_f0e5&subsys_f0e510df |
| 160-01681-000         | Dual-Port Fiber Gigabit Ethernet Adapter, 1000Base-Sx (U574) | Enclosure - 10 or 11 / PCI Slot - x / Ethernet controller – x
Folder labeled = Stratus U574 Dual Port Fiber Gigabit Adapter
or
PnPDeviceId[1] or [2] = pci\ven_8086&dev_107a&subsys_7126159c |
| 160-01682-000         | Dual-Port Copper Gigabit Ethernet Adapter, 1000Base-TX 2-port (U575) | Enclosure - 10 or 11 / PCI Slot - x / Ethernet controller – x
Folder labeled = Stratus U575 Dual Port Fiber Gigabit Adapter
or
PnPDeviceId[1] or [2] = pci\ven_8086&dev_1079&subsys_7125159c |
| 062-03049-000         | ASSY, FAN 80MM, CPU | CPU Enclosure – x / Sensors / CPU Fan1#<0 or 1>
Op State: State = On-Line or (Broken)
State = Normal or (Threshold errors)
CPU Enclosure – x / Sensors / CPU Fan2#<0 or 1>
<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Location</th>
<th>Status</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>062-01877-000</td>
<td>ASSY, FAN 60MM, HDD</td>
<td>Physically HDD / I/O Fan</td>
<td>CPU Enclosure – x / Sensors / IO Fan#&lt;0 or 1&gt;</td>
<td>Note: The last digit “0 or 1” in the name of the fan sensor is the CPU Enclosure number the fan resides.</td>
</tr>
<tr>
<td>062-03050-000</td>
<td>ASSY, FAN 60MM, PS</td>
<td>Physically Power Supply Fan</td>
<td>CPU Enclosure – x / Sensors / PSU Fan#&lt;0 or 1&gt;</td>
<td>Note: The last digit “0 or 1” in the name of the fan sensor is the CPU Enclosure number the fan resides.</td>
</tr>
</tbody>
</table>
9 ftServer 2600/4500/6300 CPU & I/O CRU Configuration

9.1 2600/4500/6300 ftServer (Draco and Draco Prime) CPU & I/O CRU

The following are snapshots of the ftServer Management Console on a 6300 system. Follow the steps below to determine the CPU & I/O CRU configuration. In a 2600/4500/6300 system, the CPU (0) and I/O (10) are contained on one motherboard, within one CRU enclosure, and the CPU (1) and I/O (11) are contained on one motherboard, within one CRU enclosure. Please read Note 2 which describes how to determine the version of 2600/4500.

Note: If ordering V2404 V Series CRU enclosure and processor kit, go to “V2302/V2404 V Series CPU & Processor” section for details.

You need the following information to properly order a replacement CPU & I/O CRU.

- CPU & I/O CRU enclosure part number
- AK processor kit part number and quantity
- Memory DIMM part number and quantity.
- PCI riser adapter part number.

Steps to determine CPU & I/O CRU configuration:

1. Open ftServer Management Console (ftSMC).
2. Expand ftServer I/O Enclosures or CPU Enclosures.
3. Highlight I/O Enclosure – n or CPU Enclosure - n.
4. In the right pane look for IDPROM: ModelName (This is the motherboard model name and is the same for the I/O display or the CPU display)
5. Expand ftServer CPU Enclosures, then the online CPU 0 or 1
6. Highlight the “Processor - 21”.

7. In the right pane look for “Stepping” field and “Brand” field. Use the “Brand” field information and the “Stepping field to determine processor kit required. The following is a reference between the “Brand” and “Stepping” field and the Processor kit part number.

For: Brand = Intel(R) Xeon(R) CPU E5504 @ 2.00GHz
Order Part: 062-03476-000 - Processor Kit: Processor 2.0GHz (D0 Step), Heatsink & Adhesive (2600/4500 and -C)

For: Brand = Intel(R) Xeon(R) CPU X5570 @ 2.93GHz

Order Part: 062-03477-000 - Processor Kit: Processor 2.93GHz (D0 Step), Heatsink & Adhesive (6300 and -C)

8. Determine the quantity of processor kits required by the “Processor –xx” shown as Online.

   Note: A yellow folder denotes online hardware and when the node is highlighted the left pane will display the Op State: State “Online or Empty”. In the example above both “Processor -21” and “Processor -22” exist, so quantity 2 of 062-03477-000 would be ordered. The right pane shown depicts Processor 21 – Online and processor 22 would display similar information.

9. Highlight the “DIMM – X”.
10. In the right pane look for “Op State: State” field to determine if DIMM exists. The state will be “Online” if it does.

11. If the State is “Online” then determine the part to order based on the size shown in the “SizeMb” and “MfgPartNr” fields. The following is a reference between the SizeMb and MfgPartNr fields and orderable part number.

   For: SizeMb = 4096 Mb and SPDData: MfgPartNr = M393B5170DZ1-CF8 or M393B5170EH1-CF8 or HMT151R7TFR4C-G7
   Order Part: 609-01658-000 – 4GB FB-DIMM

   For: SizeMb = 8192 Mb and SPDData: MfgPartNr = M393B1K70BH1-CF8 or HMT31GR7BFR4C-G7
   Order Part: 609-01659-000 – 8GB FB-DIMM

   For: SizeMb = 4096 Mb and SPDData: MfgPartNr = M393B5170FH0-CH9 or MT36JSZF51272PZ-1G or M393B5170GB0-YH9
   Order Part: 609-01671-000 – 4GB FB-DIMM DDR3 1333MHZ (See Note 9)

   For: SizeMb = 8192 Mb and SPDData: MfgPartNr = M393B1K70CH0-CH9 or MT36JSZF1G72PZ-1G

   For: SizeMb = 16384 Mb and SPDData: MfgPartNr = M393B1K70CH0-CH9 or MT36JSZF1G72PZ-1G
   Order Part: 609-01672-000 – 8GB FB-DIMM DDR3 1333MHZ (See Note 9)
M393B1K70CH0-YH9 or M393B1K70DH0-YH9

Order Part: 609-01672-000– 8GB FB-DIMM DDR3 1333MHz (See Note 9)

12. For “DIMM 1, 2, 3, 5, 7, 8, 9 and 11” which are Online, determine the quantity, slot configuration and size of memory DIMMs which are required to be ordered.

Note: A yellow folder denotes online hardware and when the node is highlighted the left pane will display the Op State: State “Online or Empty”. In the example above DIMM - 1 is a 4096MB DIMM, all “Online” DIMMs in slots 1 – 12 must also be determined, since they may not be all 4096MB DIMMs. In this system, “DIMM - 1, 2, 3, 5, 7, 8, 9 and 11 were determined to be 4096MB DIMMs, which means a memory configuration of 32GB. The Mfg Part number of M393B5170DZ1-CF8 for a 4096MB DIMM is 609-01658-000, quantity of 8.

13. Once the CPU & I/O CRU enclosure part number and memory DIMM part number, slot configuration and quantity is determined, a properly configured replacement 2600, 4500 and 6200 CPU & I/O CRU can be ordered.

Note: In the example given above the CPU – I/O CRU replacement order would include:
   16. 1 – 062-03475-000
   17. 2 – 062-03477-000
   18. 8 – 609-01658-000

14. If a PCI riser adapter needs to be ordered as part of the CPU - I/O CRU, use the following procedure to determine part number required.
   a. Open ftServer Management Console (ftSMC).
   b. Expand ftServer I/O Enclosures.
   c. Highlight the “I/O Enclosure - XX”, 10 or 11
   d. In the right pane look for “PCIRiserID” field. The following is a reference between the “PCIRiserID” field and the PCI riser adapter part number.

   For: PCIRiserID = 2x PCI-E2 (x4)
   Order Part: 062-03483-000 – PCI Riser Adapter, PCI-E
   For: PCIRiserID = 2x PCI-X
   Order Part: 062-03482-000 – PCI Riser Adapter, PCI-X

Notes:
1. The last three digits of the RU part number will change from -000 (initial release) to -0xx due to post release ECOs revisions and in most cases will compatible. LMS will reflect the orderable RU part number and compatibility.
2. There are two versions of the 2600, 4500 and 6300 systems, which have RUs that are not compatible. The following is how to determine the versions. The model name field is displayed when dbg: is entered

   2 examples are shown here.

   DRACO' HARDWARE VERSION INFO ...
   - SYSTEM
     ModName P4500-2S-C ←---------------------
     ModDesc ftServer 4500

   DRACO HARDWARE VERSION INFO ...
   - SYSTEM
     ModName P6300-2S ←---------------------
     ModDesc ftServer 6300

   a. 2600 (Modelname/P-Package=P2600-1S) and 4500 (Modelname/P-Package P4500-1S and -2S) – FCS SEPT-2009, supported on ftSSS 6.0.0.x, 6.0.1.x and 7.0.0.x
b. 2600 (Modelname/P-Package=P2600-1S-C) and 4500 (Modelname/P-Package P4500-1S-C and -2S-C)
   - Cut in 2011, supported on ftSSS 6.0.1.x and 7.0.0.x

   c. 6300 (Modelname/P-Package=P6300-2S) and 6300 (Modelname/P-Package=P6300-2S-C) – Cut in
      2011, supported on ftSSS 6.1.x.x and 7.0.0.x

d. This document will refer to the newer 2600/4500/6300 as “-C” version

3. If not specifically requested in LMS CRU part order, the following parts are expected to be swapped between
defective CRU and replacement CRU are: PCI adapters full and half height, Internal SAS Disks and PCI Riser.

4. 1 processor (kit) configuration is valid for 2600 CPU & I/O CRU. Populated as “Processor – 21” in ftSMC.

5. 1 or 2 processor (kits) configurations are valid for 4500 CPU & I/O CRU. Populated as “Processor – 21” and
   “Processor – 22” in ftSMC.

6. 2 processor (kits) configuration is valid for 6300 CPU & I/O CRU. Populated as “Processor – 21” and “Processor –
   22” in ftSMC.

7. On 2600 and 1 processor 4500 only 6 DIMM slots per CRU, optimal DIMM configuration, populate Odd slots 1, 3
   and 5, than even slots 2, 4 and 6. This should be the default way of DIMM population. DIMM slot location and size
   must match between CRU slots 1-6 or a hardware configuration error will be detected. See ES-000164 for details
   on configuration and max memory supported.

8. On 2 processor 4500/6300 12 DIMM slots per CRU, optimal DIMM configuration, populate Odd slots 1/7, 3/9 and
   5/11 than even slots 2/8, 4/10 and 6/12 and . This should be the default way of DIMM population. DIMM slot
   location and size must match between processor 1 & 2 and CRU DIMM slots or a hardware configuration error
   will be detected. See ES-000164 or 165 for details on configuration and max memory supported.

9. 609-01671-00x and 609-01672-00x DIMMs are only supported on 2600 and 4500 “-C” version.

10. PCI Slot Info – 1 and 2 in ftSMC, are the low profile slots which are PCI-E. PCI Slot Info – 3 and 4 are the riser
    adapter PCI slots. The PCI riser slots are either both, PCI-E or PCI-X depending on the version of riser installed.

11. PCI riser adapters are verified during CPU-I/O bring-up. If they are different from the on-line CRU or missing, the
    replacement I/O CRU will get a hardware compatibility mismatch and will not come into service.

12. 2600, 4500, and 6300 part Illustrated list

13. 2600/4500/6300 Customer Manuals (Windows versions)

14. 2600 configuration specification ES-000164 – (Stratus access Only)

15. 4500 configuration specification ES-000165 – (Stratus access Only)

16. 6300 configuration specification ES-000166 – (Stratus access Only)
Valid Part Numbers:

- The following are valid 2600/4500/6300 CPU & I/O CRU enclosures, processor kits, DIMM and PCI riser adapter part numbers.

  062-03473-000 – 2600 CPU & I/O CRU Enclosure, (No Processors, Memory, PCI adapters, PCI Riser or SAS disk drives)
  062-03630-000 – 2600 (-C) CPU & I/O CRU Enclosure, (No Processors, Memory, PCI adapters, PCI Riser or SAS disk drives) (See Note 2)
  062-03476-000 - Processor Kit: Processor 2.0GHz (D0 Step), Heatsink & Adhesive (2600/4500)

  062-03474-000 – 4500, CPU & I/O CRU Enclosure, (No Processors, Memory, PCI adapters, PCI Riser, or SAS disk drives)
  062-03629-000 – 4500 (-C), CPU & I/O CRU Enclosure, (No Processors, Memory, PCI adapters, PCI Riser, or SAS disk drives) (See Note 2)
  062-03476-000 - Processor Kit: Processor 2.0GHz (D0 Step), Heatsink & Adhesive (2600/4500)

  062-03475-000 – 6300, CPU & I/O CRU Enclosure, (No Processors, Memory, PCI adapters, PCI Riser, or SAS disk drives)
  062-03477-000 - Processor Kit: Processor 2.93GHz (D0 Step), Heatsink & Adhesive (6300)

  062-03646-000 – 6300 (-C), CPU & I/O CRU Enclosure, (No Processors, Memory, PCI adapters, PCI Riser, or SAS disk drives)
  062-03477-000 - Processor Kit: Processor 2.93GHz (D0 Step), Heatsink & Adhesive (6300)

  609-01658-000 - 4GB DIMM (Mfg part# M393B5170DZ1-CF804 or M393B5170EH1-CF804 or HMT151R7TFR4C-G7)
  609-01659-000 - 8GB DIMM (Mfg part# M393B1K70BH1-CF804 or M393B1K70BH1-CF8Q4 or HMT31GR7BFR4C-G7)

  609-01671-000 - 4GB DIMM DDR3 1333MHz (Mfg part# M393B5170FH0-CH9 or MT36JSZF51272PZ-1G4G1 or M393B5170GB0-YH9) (See note 9)
  609-01672-000 - 8GB DIMM DDR3 1333MHz (Mfg part# M393B1K70BH1-CF804 or MT36JSZF1G72PZ-1G4D1 or M393B1K70DH0-YH9) (See note 9)

  062-03482-000 - ASSY, PCI-X RISER
  062-03483-000 - ASSY, PCI-E RISER

Note: The last three digits of the RU part number will change from -000 (initial release) to -0xx due to post release ECOs revisions, and in most cases will be compatible. LMS will reflect the orderable RU part number and compatibility.
- The following are valid RU list parts for 2600/4500/6300. Included is the field in ftSMC that provides the vendor provided key information in determining the RU part number. Note: field name highlighted in blue, field contents highlighted in red.

<table>
<thead>
<tr>
<th>Orderable Part Number</th>
<th>Description</th>
<th>ftServer Management Console key field for determining orderable part</th>
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<td>Storage Enclosure – 40 / Disk –x / Slot –x ProductID = ST973452SS</td>
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<td>Storage Enclosure – 40 / Disk –x / Slot –x ProductID = ST9146852SS or ST9146853SS</td>
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<td>Storage Enclosure – 40 / Disk –x / Slot –x ProductID = ST9146852SS, ST9146853SS, HUC151473CSS600, MBE2147RC, MK1401GRRB</td>
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<td>160-01727-000</td>
<td>U105 - Dual-port Ethernet Server PCIe Adapter 10/100/1000BASE-T (RJ-45 copper) – PCI-E</td>
<td>Enclosure - 10 or 11 / PCI Slot - x / Ethernet controller – x PnPDescription[1] = Stratus 82576 2-Port Copper Gigabit Adapter or PnPDeviceId[1] or [2] = pci:ven_8086&amp;dev_10c9&amp;subsys_712e159c</td>
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<td>U105-C - Dual-port Ethernet Server PCIe Adapter 10/100/1000BASE-T (RJ-45 copper, E1G42ET Retail/OEM) – PCI-E</td>
<td>Enclosure - 10 or 11 / PCI Slot - x / Ethernet controller – x PnPDescription[1] = Stratus 82576 2-Port Copper Gigabit Adapter or PnPDeviceId[1] or [2] =</td>
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<td>Orderable Part Number</td>
<td>Description</td>
<td>ftServer Management Console key field for determining orderable part</td>
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<td>---------------------------------------------------------------------</td>
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<td>160-01729-000</td>
<td>U106 - SAS 8-Port Host Bus PCIe Adapter (connects to SAS tape drives)</td>
<td>Enclosure - 10 or 11 / PCI Slot - x / PnPDescription[1] = FTSYS LSI Adapter, SAS 300 Series, 8-Port with 1068E - StorPort or PnPDeviceId[1] = pci\ven_8086&amp;dev_10c9&amp;subsys_7130159c</td>
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<td>160-01733-000</td>
<td>U107 – 8BG Fibre Channel 1-Port Host Bus PCIe Adapter for EMC and external Storage (QLogic QLE2560) – PCI-E</td>
<td>Enclosure - 10 or 11 / PCI Slot - x / PnPDescription[1] = QLogic Fibre Channel Adapter or PnPDeviceId[1] = pci\ven_1077&amp;dev_2532&amp;subsys_015c1077</td>
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<td>160-01736-000</td>
<td>U108 - Single-port Ethernet PCIe adapter 10 Gigabit (Intel E10G41BFSR) (LC Fiber Optic)</td>
<td>Enclosure - 10 or 11 / PCI Slot - x / Ethernet controller – x PnPDescription[1] = Stratus 82599 Fiber 10 Gigabit Adapter or PnPDeviceId[1] = pci\ven_8086&amp;dev_10fb&amp;subsys_712f159c</td>
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<td>062-03540-000</td>
<td>ASSY, FAN 80MM, x4, w/Bracket</td>
<td>CPU Enclosure – x / Sensors / Baseboard Fan1#&lt;0 or 1&gt; Op State: State = On-Line or (Broken) State = Normal or (Threshold errors)</td>
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<tr>
<td></td>
<td>Physically Baseboard Fan1 thru Baseboard Fan4 is one replaceable unit. The Fans can not be replaced individually. See IPB Item 6</td>
<td>CPU Enclosure – x / Sensors / Baseboard Fan2#&lt;0 or 1&gt; Op State: State = On-Line or (Broken) State = Normal or (Threshold errors)</td>
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<tr>
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<td></td>
<td>CPU Enclosure – x / Sensors / Baseboard Fan3#&lt;0 or 1&gt; Op State: State = On-Line or (Broken) State = Normal or (Threshold errors)</td>
</tr>
<tr>
<td>062-03541-000</td>
<td>ASSY, FAN 40MM, PS, w/Bracket</td>
<td>CPU Enclosure – x / Sensors / Baseboard Fan4#&lt;0 or 1&gt; Op State: State = On-Line or (Broken) State = Normal or (Threshold errors) Note: The last digit “0 or 1” in the name of the fan sensor is the CPU Enclosure number the fan resides.</td>
</tr>
<tr>
<td></td>
<td>Physically located just in front of the Power-BP board. See IPB Item 7</td>
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<tr>
<td>Backpanel Assembly Information</td>
<td>ftServer Configuration &gt; Customer Info &gt; Model Name field also displayed when dbg is entered HARDWARE VERSION INFO ... - SYSTEM ModName P6300-2S</td>
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<td>Backpanel assy Model 2600-1S</td>
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<tr>
<td>062-03617-000</td>
<td>Backpanel assy Model 4500-1S and 4500-2S</td>
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<tr>
<td>062-03545-000</td>
<td>Backpanel assy Model 6300-2S</td>
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<tr>
<td>CRU Part Number</td>
<td>Description</td>
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<td>062-03643-000</td>
<td>Backpanel assy Model 2600-1S-C</td>
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<td>062-03642-000</td>
<td>Backpanel assy Model 4500-1S-C and 4500-2S-C</td>
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<td>062-03647-000</td>
<td>Backpanel assy Model 6300-2S-C</td>
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<tr>
<td>856-851367-101-A</td>
<td>Power Supply, DS850-3-401-01</td>
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</tr>
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</table>

**Table Notes:**

1. PCI adapters are supported on ftSSS 6.0.0.x, 6.0.1.x and 7.0.0.x
2. U539F supported on ftSSS 6.0.0.x and 6.0.1.x only.
3. U105-C (OEM or Retail) supported on 7.0.0.x only.
4. PCI adapters are supported on ftSSS 7.0.0.x only.
The following are snapshots of the ftServer Management Console on a 6310 system. Follow the steps below to determine the CPU & I/O CRU configuration. In a 6310 system, the CPU (0) and I/O (10) are contained on one motherboard, within one CRU enclosure, and the CPU (1) and I/O (11) are contained on one motherboard, within one CRU enclosure.

You need the following information to properly order a replacement CPU & I/O CRU.

- CPU & I/O CRU enclosure part number
- Processor kit part number and quantity
- Memory DIMM part number and quantity.
- PCI riser adapter part number.

Steps to determine CPU & I/O CRU configuration:

1. Open ftServer Management Console (ftSMC).
2. Expand ftServer I/O Enclosures or CPU Enclosures.
3. Highlight I/O Enclosure – n or CPU Enclosure - n.
4. In the right pane look for IDPROM: ModelName (This is the motherboard model name and is the same for the I/O display or the CPU display)
For IDPROM: ModelName 062-03631-000
Order Part: 062-03628-000 – 6310, CPU & I/O CRU Enclosure, (No Processors, Memory, PCI adapters, PCI Riser, or SAS disk drives)

1. Expand ftServer CPU Enclosures, then the online CPU 0 or 1
2. Highlight the “Processor - 21”.

3. In the right pane look for “Brand” field.

   For: Brand = Intel(R) Xeon(R) CPU X5670 @ 2.93GHz

   Order Part: 062-03635-000 - Processor Kit: Processor 2.93GHz (B1 Step), Heatsink & Adhesive (6310)

4. On a 6310 system, the quantity of processor kits required is always going to be “2”.

   Note: In the example above both “Processor -21” and “Processor -22” exist, so quantity 2 of 062-03635-000 would be ordered. The right pane shown depicts Processor 21 – Online and processor 22 would display similar information.
5. Highlight the “DIMM – X”.
6. In the right pane look for “Op State: State” field to determine if DIMM exists. The state will be “Online” if it does.

7. If the State is “Online” then determine the part to order based on the size shown in the “SizeMb” and “MfgPartNr” fields. The following is a reference between the SizeMb and MfgPartNr fields and orderable part number.

   For: SizeMb = 4096 Mb and SPDData: MfgPartNr = M393B5170FH0-CH9 or MT36JSZF51272PZ-1G
   Order Part: 609-01671-000 – 4GB FB-DIMM DDR3 1333MHZ

   For: SizeMb = 8192 Mb and SPDData: MfgPartNr = M393B1K70CH0-CH9 or MT36JSZF1G72PZ-1G or M393B1K70DH0-YH9
   Order Part: 609-01672-000 – 8GB FB-DIMM DDR3 1333MHZ

8. For “DIMM 1 thru 12” which are Online, determine the quantity, slot configuration and size of memory DIMMs which are required to be ordered.

   Note: A yellow folder denotes online hardware and when the node is highlighted the left pane will display the Op State: State “Online or Empty”. In the example above DIMM - 1 is a 8129MB DIMM, all “Online” DIMMs in slots 1 – 12 must also be determined, since they may not be all 4096MB DIMMs. In this system, “DIMM – 1 thru 12 were determined to be 8192MB DIMMs, which means a memory configuration of 96GB. The Mfg Part number of M393B1K70CH0-CH9 for 8129MB DIMM is 609-01659-000, quantity of 12.

9. Once the CPU & I/O CRU enclosure part number and memory DIMM part number, slot configuration and quantity is determined, a properly configured replacement 6310 CPU & I/O CRU can be ordered.

   Note: In the example given above the CPU – I/O CRU replacement order would include:
   19. 1 – 062-03475-000
   20. 2 – 062-03477-000
   21. 12 – 060-01672-000
If a PCI riser adapter needs to be ordered as part of the CPU - I/O CRU, the 6310 supports only one type of PCI Riser, PCI-E.

Order Part: 062-03483-000 – PCI Riser Adapter, PCI-E

Notes:

1. The last three digits of the RU part number will change from -000 (initial release) to -0xx due to post release ECOs revisions and in most cases will compatible. LMS will reflect the orderable RU part number and compatibility.

2. If not specifically requested in LMS CRU part order, the following parts are expected to be swapped between defective CRU and replacement CRU are: PCI adapters full and half height, Internal SAS Disks and PCI Riser.

3. 2 processor (kits) configuration is valid for 6310 CPU & I/O CRU. Populated as “Processor – 21” and “Processor – 22” in ftSMC.

4. On a 6310 12 DIMM slots per CRU, optimal DIMM configuration, populate Odd slots 1/7, 3/9 and 5/11 than even slots 2/8, 4/10 and 6/12 and . This should be the default way of DIMM population. DIMM slot location and size must match between processor 1 & 2 and CRU DIMM slots or a hardware configuration error will be detected. See ES-000167 for details on configuration and max memory supported.

5. PCI Slot Info – 1 and 2 in ftSMC, are the low profile slots which are PCI-E. PCI Slot Info – 3 and 4 are the riser adapter PCI slots and on a 6310 will be PCI-E riser only.

6. PCI riser adapters are verified during CPU-I/O bring-up. If they are different from the on-line CRU or missing, the replacement I/O CRU will get a hardware compatibility mismatch and will not come into service.

7. U105-C and U108 support both the OEM/Retail versions on 6310. The Vendor an Device ID will be mapped by Stratus software to be the same on both Retail and OEM versions.

8. 6310 part Illustrated list

9. 6310 Customer Manuals (Windows versions)

10. 6310 configuration specification ES-000167 – (Stratus access Only)

Valid Part Numbers:

- The following are valid 6310 CPU & I/O CRU enclosures, processor kits, DIMM and PCI riser adapter part numbers.

  062-03628-000 – 6310, CPU & I/O CRU Enclosure, (No Processors, Memory, PCI adapters, PCI Riser, or SAS disk drives)

  062-03635-000 - Processor Kit: Processor 2.93GHz (B1 Step), Heatsink & Adhesive (6310)

  609-01671-000 - 4GB DIMM DDR3 1333MHz (Mfg part# M393B5170FH0-CH9 or MT36JSZF51272PZ-1G4G1 or M393B5170GB0-YH9)

  609-01672-000 - 8GB DIMM DDR3 1333MHz (Mfg part# M393B1K70BH1-CF804 or MT36JSZF1G72PZ-1G4D1 or M393B1K70DH0-YH9)

  062-03483-000 - ASSY, PCI-E RISER

Note: The last three digits of the RU part number will change from -000 (initial release) to -0xx due to post release ECOs revisions and in most cases will compatible. LMS will reflect the orderable RU part number and compatibility.
- The following are valid RU list parts for 6310. Included is the field in ftSMC that provides the vendor provided key information in determining the RU part number. Note: field name highlighted in blue, field contents highlighted in red.

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<th>Orderable Part Number</th>
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<td>ASSY, DVD-R/W</td>
<td>Standard System Devices -&gt; MATSHITA DVD-RAM UJ870BJ</td>
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<td></td>
<td>or</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Standard System Devices -&gt; MATSHITA DVD-RAM UJ8A0AS</td>
</tr>
<tr>
<td></td>
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<td>USB Device</td>
</tr>
<tr>
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<td>PnPDeviceId=</td>
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<td>CDROM\VEN_MATSHITA\PROD_DVD-RAM\UJ8A0AS&amp;REV_1.00 or REV 1.20</td>
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<td>Storage Enclosure – 40 / Disk – x / Slot – x</td>
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<td>ProductID = ST973452SS, HUC151473CSS600</td>
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<td>ProductID = ST9300653SS, ST300MP0005, MK3001GRRB</td>
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</tr>
<tr>
<td></td>
<td>Physically Baseboard Fan1 thru Baseboard Fan4 is one replaceable unit. The Fans</td>
<td>Op State: State = On-Line or (Broken)</td>
</tr>
<tr>
<td></td>
<td>cannot be replaced individually. See IPB Item 6</td>
<td>State = Normal or (Threshold errors)</td>
</tr>
<tr>
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<td>CPU Enclosure – x / Sensors / Baseboard Fan2#&lt;0 or 1&gt;</td>
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<tr>
<td></td>
<td></td>
<td>Op State: State = On-Line or (Broken)</td>
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<tr>
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<td>State = Normal or (Threshold errors)</td>
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<td>CPU Enclosure – x / Sensors / Baseboard Fan3#&lt;0 or 1&gt;</td>
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<tr>
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<td>State = Normal or (Threshold errors)</td>
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<td>Note: The last digit “0 or 1” in the name of the fan sensor is the</td>
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<td>CPU Enclosure number the fan resides.</td>
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<td>CPU Enclosure – x / Sensors / Baseboard Fan5#&lt;0 or 1&gt;</td>
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<td>Op State: State = On-Line or (Broken)</td>
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<td>ftServer Configuration &gt; Customer Info &gt; Model Name field also</td>
</tr>
<tr>
<td></td>
<td></td>
<td>displayed when dbg is entered</td>
</tr>
<tr>
<td></td>
<td></td>
<td>HARDWARE VERSION INFO ...</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- SYSTEM</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ModName P6310-2S</td>
</tr>
</tbody>
</table>

**CRU Power Supply**

| 856-851367-101-A       | Power Supply, DS850-3-401-01                                                 |
11 ftServer 2700/4700/6400 CPU & I/O CRU Configuration

11.1 2700/4700/6400 ftServer (Cygnus) CPU & I/O CRU

The following are snapshots of the ftServer Management Console on a 6400 system. Follow the steps below to determine the CPU & I/O CRU configuration. In a 2700/4700/6400 system, the CPU (0) and I/O (10) are contained on one motherboard, within one CRU enclosure, and the CPU (1) and I/O (11) are contained on one motherboard, within one CRU enclosure.

You need the following information to properly order a replacement CPU & I/O CRU.

- CPU & I/O CRU enclosure part number
- AK processor kit part number and quantity
- Memory DIMM part number and quantity.
- PCI riser adapter part number.

Steps to determine CPU & I/O CRU configuration:

1. Open ftServer Management Console (ftSMC).
2. Expand ftServer Drivers.
3. Highlight System ID Prom – SystemIdProm.
4. In the right pane look for "ModelName".

Note: The "ModelName" field will display the system P-package.

ftSMC (Left Pane) ftSMC (Right Pane)

For System ID Prom – SystemIdProm  ModelName = P2700-1S
Order Part: 062-01205-000 – 2700, CPU & I/O CRU Enclosure, (No Processors, Memory, PCI adapters, or SAS disk drives)

For System ID Prom – SystemIdProm  ModelName = P4700-1S or P4700-2S
Order Part: 062-01204-000 – 4700, CPU & I/O CRU Enclosure, (No Processors, Memory, PCI adapters, PCI Riser, or SAS disk drives)

For System ID Prom – SystemIdProm  ModelName = P6400-2S
Order Part: 062-01203-000 – 6400, CPU & I/O CRU Enclosure, (No Processors, Memory, PCI adapters or SAS disk drives, PCI Riser is included)
SEE NOTES ON RISER ORDERING.

5. Expand ftServer CPU Enclosures, then the online CPU 0 or 1
6. Highlight the “Processor - 21”.
7. In the right pane look for “Stepping” field and “Brand” field. Use the “Brand” field information and the “Stepping” field to determine processor kit required. The following is a reference between the “Brand” and “Stepping” field and the Processor kit part number.

For: **Brand = Intel(R) Xeon(R) CPU E5-2603 0 @ 1.80GHz**

   Order Part: **062-03650-000** - Processor Kit: Processor 1.8GHz, Heatsink & Adhesive (2700/4700)

For: **Brand = Intel(R) Xeon(R) CPU E5-2670 0 @ 2.60GHz**

   Order Part: **062-03649-000** - Processor Kit: Processor 2.6GHz, Heatsink & Adhesive (6400)

8. Determine the quantity of processor kits required by the “Processor –xx” shown as Online.

   **Note:** A yellow folder denotes online hardware and when the node is highlighted the left pane will display the Op State: State “Online or Empty”. In the example above both “Processor -21”and “Processor -22” exist, so quantity 2 of 062-03649-000 would be ordered. The right pane shown depicts Processor 21 – Online and processor 22 would display similar information.

9. Highlight the “DIMM – X”
10. In the right pane look for “Op State: State” field to determine if DIMM exists. The state will be “Online” if it does.
11. If the State is "Online" then determine the part to order based on the size shown in the "SizeMb" and "MfgPartNr" fields. The following is a reference between the SizeMb and MfgPartNr fields and orderable part number.

12. Reference the following table for the size and Mfg Part # that you have.

<table>
<thead>
<tr>
<th>Model</th>
<th>Mktg ID</th>
<th>Part #</th>
<th>Vendor</th>
<th>Mfg Part #</th>
<th>Type</th>
<th>Speed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cygnus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Size GB</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>M251</td>
<td>609-01673-000</td>
<td>Hynix Samsung</td>
<td>HMT351R7CFR4A-PBT8 M393B5270DH0-YK0</td>
<td>DDR3</td>
<td>1333mhz</td>
</tr>
<tr>
<td>8</td>
<td>M252</td>
<td>609-01674-000</td>
<td>Hynix Samsung</td>
<td>HMT31GR7CFR4A-PBT8 M393B1K70DH0-YK0</td>
<td>DDR3</td>
<td>1333mhz</td>
</tr>
<tr>
<td>16</td>
<td>M253</td>
<td>609-01675-000</td>
<td>Hynix Samsung</td>
<td>HMT42GR7MFR4A-PBT8 M393B2G70BH0-YK0</td>
<td>DDR3</td>
<td>1333mhz</td>
</tr>
<tr>
<td>NEW 16</td>
<td>M253</td>
<td>609-01675-000</td>
<td>Hynix Samsung</td>
<td>HMT42GR7BFR4A-PBT8 M393B2G70QH0-YK00 M393B2G70EB0-YK0</td>
<td>DDR3</td>
<td>1600mhz</td>
</tr>
</tbody>
</table>

| 4     | M254    | 609-01676-000 | Hynix Micron | HMT451R7AFR8A-PBT8 MT9KSF51272PZ-1G6E2 | DDR3 | 1600mhz |
| 8     | M255    | 609-01677-000 | Hynix Samsung | HMT41GR7BFR4A-PBT8 M393B1G70QH0-YK008 M393B1G70EB0-YK0 | DDR3 | 1600mhz |

Old and new memory DIMMs may not be intermixed within an ftServer system.

It is not permitted to mix 609-01673-000 (M251) and 609-01676-000 (M254) dims within a system in any way!

It is not permitted to mix 609-01674-000 (M252) and 609-01677-000 (M255) dims within a system in any way!

You must identify and order the dims that the remaining unit already has in order to correctly configure a replacement CRU.

Beginning March 1, 2014, ftServer 2700/4700/6400 system CRUs may be configured with the following memory DIMMS:

13. For: SizeMb = 4096 Mb and SPDData: MfgPartNr = HMT451R7AFR8A-PBxx
   Order Part: 609-01676-000 – 4GB DDR3, 1600MHZ
   For: SizeMb = 8192 Mb and SPDData: MfgPartNr = M393B1G70QH0-YK0xx
   Order Part: 609-01677-000 – 8GB DDR3, 1600MHZ

14. Once the CPU & I/O CRU enclosure part number and memory DIMM part number, slot configuration and quantity is determined, a properly configured replacement 2700, 4700 and 6400 CPU & I/O CRU can be ordered.

   Note: In the example given above the CPU – I/O CRU replacement order would include:
   22. 1 – 062-01203-000
   23. 2 – 062-03649-000
   24. 8 – 609-01675-000

15  PCI riser adapters please read carefully.

15a. PCI riser adapters are excluded from the
     SystemIdProm  ModelName = P2700-1S Part: 062-01205-000– 2700, CPU & I/O CRU Enclosure
     and should not be ordered with the CRU.

15b. PCI riser adapters OPTIONAL components for the
     SystemIdProm  ModelName = P4700-1S or -2S Part: 062-01204-000 4700, CPU & I/O CRU Enclosure
     If you have a model 4700 and you also have a riser card
     Order Part: 062-01207-000 – PCI Riser Adapter, PCI-E.

15c. PCI riser adapters are PRE-CONFIGURED components for the
     SystemIdProm  ModelName = P6400-2S Part: 062-01203-000 – 6400, CPU & I/O CRU Enclosure
     And should not be ordered with the CRU.
Notes:

1. The last three digits of the RU part number will change from -000 (initial release) to -0xx due to post release ECOS revisions and in most cases will be compatible. LMS will reflect the orderable RU part number and compatibility.
2. If not specifically requested in LMS CRU part order, the following parts are expected to be swapped between defective CRU and replacement CRU are: PCI adapters full and half height, Internal SAS Disks and PCI Riser.
3. 1 processor (kit) configuration is valid for 2700 CPU & I/O CRU. Populated as “Processor – 21” in ftSMC.
4. 1 or 2 processor (kits) configurations are valid for 4700 CPU & I/O CRU. Populated as “Processor – 21” and “Processor – 22” in ftSMC.
5. 2 processor (kits) configuration is valid for 6400 CPU & I/O CRU. Populated as “Processor – 21” and “Processor – 22” in ftSMC.
6. On 2700 and 1 processor 4700 only 8 DIMM slots per CRU, optimal DIMM configuration, populate slots 1, 3 then 5, 7 then 2, 4 then 6, 8. This should be the default way of DIMM population. DIMM slot location and size must match between CRU slots 1 - 8 or a hardware configuration error will be detected. See ES-000169 or 169 for details on configuration and max memory supported.
7. On 2 processor 4700/6400 16 DIMM slots per CRU, optimal DIMM configuration, populate slots 1,9 and 3,11 then 5,13 and 7,15 then 2, 10 and 4,12 then 6, 14 and 8, 16. This should be the default way of DIMM population. DIMM slot location and size must match between processor 1 & 2 and CRU DIMM slots or a hardware configuration error will be detected. See ES-000169 or 170 for details on configuration and max memory supported.
8. PCI Slot Info – 1 and 2 in ftSMC, are the low profile slots which are PCI-E. PCI Slot Info – 3 and 4 are the riser adapter PCI slots.
9. PCI riser adapter is verified during CPU-I/O bring-up. If PCI riser configured different per CRU, a hardware compatibility mismatch will be detected and will not come into service.
10. 2700, 4700, and 6400 part Illustrated list
11. 2700/4700/6400 Customer Manuals (Windows versions)
12. 2700 configuration specification ES-000168 – (Stratus access Only)
13. 4700 configuration specification ES-000169 – (Stratus access Only)
14. 6400 configuration specification ES-000170 – (Stratus access Only)

Valid Part Numbers:

- The following are valid 2700/400/6400 CPU & I/O CRU enclosures, processor kits, DIMM and PCI riser adapter part numbers.
  
  062-01205-000 – 2700 CPU & I/O CRU Enclosure, (No Processors, Memory, PCI adapters, or SAS/SSD disk drives)
  062-03650-000 - Processor Kit: Processor 1.8GHz, Heatsink & Adhesive (2700/4700)

  062-01204-000 – 4700, CPU & I/O CRU Enclosure, (No Processors, Memory, PCI adapters, **Optional** PCI Riser, or SAS/SSD disk drives)
  062-03650-000 - Processor Kit: Processor 1.8GHz, Heatsink & Adhesive (2700/4700)

  062-01203-000 – 6400, CPU & I/O CRU Enclosure, (No Processors, Memory, PCI adapters, **included** PCI Riser, or SAS/SSD disk drives)
  062-03649-000 - Processor Kit: Processor 2.6GHz, Heatsink & Adhesive (6400)

  609-01673-000 - 4GB DIMM DDR3 1333MHz (Mfg part# M393B5270DH0-YK0)
  609-01674-000 - 8GB DIMM DDR3 1333MHz (Mfg part# M393B1K70DH0-YK0)
The ftServer 6400 includes a PCI Riser Kit that provides 2 additional high profile slots in addition to the low-profile slots on the motherboard.

Note: The last three digits of the RU part number will change from -000 (initial release) to -0xx due to post release ECOs revisions, and in most cases will be compatible. LMS will reflect the orderable RU part number and compatibility.

- The following are valid RU list parts for 2700/4700/6400. Included is the field in ftSMC that provides the vendor provided key information in determining the RU part number. Note: field name highlighted in blue, field contents highlighted in red.

<table>
<thead>
<tr>
<th>Orderable Part Number</th>
<th>Description</th>
<th>ftServer Management Console key field for determining orderable part</th>
</tr>
</thead>
<tbody>
<tr>
<td>062-03543-000</td>
<td>ASSY, DVD-R/W</td>
<td>Standard System Devices -&gt; MATSHITA DVD-RAM UJ8A0AS USB Device</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PnPDeviceId = CDROM&amp;VEN_MATSHITA&amp;PROD_DVD-RAM_UJ8A0AS&amp;REV_1.20</td>
</tr>
<tr>
<td>062-02805-000</td>
<td>HDD, SAS 146GB, 2.5&quot;,15K</td>
<td>Storage Enclosure – 40 / Disk –x / Slot –x</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ProductID = ST9146853SS</td>
</tr>
<tr>
<td>062-02806-000</td>
<td>HDD, SAS 300GB, 2.5&quot;,15K</td>
<td>Storage Enclosure – 40 / Disk –x / Slot –x</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ProductID = ST9300653SS, ST300MP0005</td>
</tr>
<tr>
<td>062-02886-000</td>
<td>HDD, SSD 200GB, 2.5&quot;</td>
<td>Storage Enclosure – 40 / Disk –x / Slot –x</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ProductID = LB206S</td>
</tr>
<tr>
<td>062-02887-000</td>
<td>HDD, SSD 200GB, 2.5&quot; 24nm</td>
<td>Storage Enclosure – 40 / Disk –x / Slot –x</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ProductID = LB206M</td>
</tr>
<tr>
<td>062-02804-000</td>
<td>HDD, SAS 1TB, 2.5&quot;,7.2K</td>
<td>Storage Enclosure – 40 / Disk –x / Slot –x</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ProductID = ST91000640SS</td>
</tr>
<tr>
<td>062-03729-000</td>
<td>HDD, SSD 400GB, 2.5&quot;</td>
<td>Storage Enclosure – 40 / Disk –x / Slot –x</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ProductID = PX02SMF040</td>
</tr>
<tr>
<td>062-03730-000</td>
<td>HDD, SAS 1.2TB, 2.5&quot;,10K</td>
<td>Storage Enclosure – 40 / Disk –x / Slot –x</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ProductID = ST1200MM0007</td>
</tr>
<tr>
<td>160-01737-000</td>
<td>U105-C - Dual-port Ethernet Server PCIe Adapter 10/100/1000BASE-T (RJ-45 copper, E1G42ET Retail/OEM) – PCI-E</td>
<td>Enclosure - 10 or 11 / PCI Slot - x / Ethernet controller – x</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PnPDescription[1] = Stratus 82576 2-Port Copper Gigabit Adapter</td>
</tr>
<tr>
<td></td>
<td></td>
<td>or PnPDeviceId[1] = pci\ven_8086&amp;dev_10c9&amp;subsys_7130159c</td>
</tr>
<tr>
<td>160-01733-000</td>
<td>U107 – 8BG Fibre Channel 1-Port Host Bus PCIe Adapter for EMC and external Storage (QLogic QLE2560) – PCI-E</td>
<td>Enclosure - 10 or 11 / PCI Slot - x / Ethernet controller – x</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PnPDescription[1] = QLogic Fibre Channel Adapter</td>
</tr>
<tr>
<td></td>
<td></td>
<td>or PnPDeviceId[1] = pci\ven_1077&amp;dev_2532&amp;subsys_015c1077</td>
</tr>
<tr>
<td>160-01739-000</td>
<td>U584 - Dual-port 10 Gigabit Ethernet Server Adapter (LC Fiber Optic INTEL E10G42BFSR) – PCI-E</td>
<td>Enclosure - 10 or 11 / PCI Slot - x / Ethernet controller – x</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PnPDescription[1] = Stratus 82576 2-Port Fiber 10 Gigabit Adapter</td>
</tr>
<tr>
<td></td>
<td></td>
<td>or PnPDeviceId[1] = pci\ven_8086&amp;dev_10fb&amp;subsys_7132159c</td>
</tr>
<tr>
<td>Part Number</td>
<td>Description</td>
<td>Description</td>
</tr>
<tr>
<td>----------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
|                | Backpanel Assembly Infoformation                                             | ftServer Configuration > Customer Info > Model Name field also displayed when dbg is entered HARDWARE VERSION INFO ...
|                |                                                                             | - SYSTEM
|                |                                                                             | ModName
| 062-01202-000  | Backpanel assy Model 2700-1S                                                |                                                                             |
| 062-01201-000  | Backpanel assy Model 4700-2S                                                |                                                                             |
| 062-01200-000  | Backpanel assy Model 6400-2S                                                |                                                                             |
| 856-851445-202-C | POWER SUPPLY, DELTA DPS-800QB                                              |                                                                             |
12 V2302/V2404/V6408 CPU CRU Configuration

12.1 V2302/V2404/V6408 V Series CPU & Processor

V2302 and V2404 low end V Series systems have different motherboards than their ftServer counterparts. Follow the steps below to determine the motherboard and processor (CRU) configuration for V2302, V2404 or V6408. Use sections 7 9 and 10 for determining all other CRU orderable replacement parts.

You need the following unique information to properly order a replacement CPU CRU.

- CPU & I/O CRU enclosure part number
- Processor kit part number and quantity

Steps to determine CPU & Processor CRU configuration for V2302:

1. Use “analyze_system”, “list_boards” to display the appropriate information.

   *Note: For a specific system the “Model Name” field will display the same on each CPU (0 or 1) and I/O (10 and 11) CRU since they all reside on the same motherboard. The CPU (on-line) information is used to order a replacement CPU & I/O CRU when either CPU or I/O is defective and needs replacement.*

2. The following is a reference between the motherboard "Model Name" field and the CPU & I/O CRU assembly part number.

   ```
   as: !list_boards -long -slot 0
   Module: (%acbb6#m1) (ftServer 2510)
   Slot 0: CPU Module
   Model Name: 243-633397
   State: (00180016) STATE_DUPLEX
   Status: Online Partnered
   Diagnostics Status
   ```

   For: Model Name = 243-633397
   Order Part: 062-03056-000 – V2302 CPU & I/O CRU Enclosure, (No Processors, Memory, PCI adapters, PCI Riser, DVD-R/W, or SATA/SAS disk drives)

3. Use the “Brand” field information and the “Stepping field to determine processor kit required. The following is a reference between the “Brand” and “Stepping” field and the Processor kit part number. Determine the quantity of processor kits required “Physical Processors”, should default to “1” always on the V2302.

   ```
   as: !list_boards -long -slot 0
   Module: (%acbb6#m1) (ftServer 2510)
   ```

   ```
   Brand: Intel(R) Xeon(R) CPU 5130 @ 2.00GHz
   Family: 6
   Model: 15
   Stepping: 11
   ```
For: Brand = Intel(R) Xeon(R) CPU 5130 @ 2.00GHz

And Stepping = 11
Order Part: 062-02998-000 - Processor Kit: Processor 2.0GHz (G0 Step), Heatsink & Adhesive (V2302)

4. Return to the “2510/4410/6210 ftServer CPU & I/O CRU” section to complete the CPU & I/O (CRU) configuration required for the replacement.

Steps to determine CPU & Processor CRU configuration for V2404:

1. Use “analyze_system”, “list_boards” to display the appropriate information.

   Note: For a specific system the “Model Name” field will display the same on each CPU (0 or 1) and I/O (10 and 11) CRU since they all reside on the same motherboard. The CPU (on-line) information is used to order a replacement CPU & I/O CRU when either CPU or I/O is defective and needs replacement.

2. The following is a reference between the motherboard “Model Name” field and the CPU & I/O CRU assembly part number.

   as:  lb -long -slot 0
   Module: %s2#ml (ftServer 4500)

   Slot 0:  CPU Module
   Model Name:  062-03632
   State:  (00180016) STATE_DUPLEX
   Status:  Online Partnered
   Diagnostics Status

   For Model Name = 062-03632
   Order Part: 062-03629-000 – V2404 CPU & I/O CRU Enclosure, (No Processors, Memory, PCI adapters, PCI Riser, or SAS disk drives) Note: 4500-xx-C base CRU.

3. Use the “Brand” field to determine processor kit required. The following is a reference between the “Brand” field and the Processor kit part number. Determine the quantity of processor kits required “Physical Processors:”, should default to “1” always on the V2404

   as:  lb -long -slot 0
   Module: %s2#ml (ftServer 4500)

   Brand:
   Intel(R) Xeon(R) CPU E5504 @ 2.00GHz
   Family:  6
   Model:  26
   Stepping:  5

   For: Brand = Intel(R) Xeon(R) CPU E5504 @ 2.00GHz
   Order Part: 062-03476-000 - Processor Kit: Processor 2.0GHz (D0 Step), Heatsink & Adhesive (V2404)
   (Note: Processor used on 2600-xx-x)
4. Determine the number of memory dims installed by using the analyze_system command as: `list_boards -long -board_type cpu`

V2302/V2404/V6408 V Series servers only use some number of the following dimm.

Part #  609-01670-000  DIMM, 2GB DDR3 1333MHZ

**Steps to determine CPU & Processor CRU configuration for V6408:**

1. Use “analyze_system”, “list_boards” to display the appropriate information.

   *Note: For a specific system the “Model Name” field will display the same on each CPU (0 or 1) and I/O (10 and 11) CRU since they all reside on the same motherboard. The CPU (on-line) information is used to order a replacement CPU & I/O CRU when either CPU or I/O is defective and needs replacement.*

2. The following is a reference between the motherboard “Model Name” field and the CPU & I/O CRU assembly part number.

   ```
   as:  lb -long -slot 0
   Module: %s2#m1  (ftServer 6310)
   Slot 0:  CPU Module
   Model Name:  062-03631
   State:  (00180016)  STATE_DUPLEX
   Status:  Online Partnered
   Diagnostics Status
   ```

   For **Model Name = 062-03631**
   Order Part: **062-03628-000** – V6408 CPU & I/O CRU Enclosure, (No Processors, Memory, PCI adapters, PCI Riser, or SAS disk drives) (Note: 6310 base CRU)

3. Use the “Brand” field to determine processor kit required. The following is a reference between the “Brand” field and the Processor kit part number. Determine the quantity of processor kits required “Physical Processors:”, should default to “2” always on the V2404

   ```
   as:  lb -long -slot 0
   Module: %s2#m1  (ftServer 6310)
   Brand:
   Intel(R) Xeon(R) CPU X5570  @ 2.93GHz
   ```

   For: **Brand = Intel(R) Xeon(R) CPU X5570 @ 2.93GHz**
   Order Part: **062-03477-000** - Processor Kit: Processor 2.93GHz (D0 Step), Heatsink & Adhesive (V6408) (Note: Processor used on 6300-xx-x)
4. Determine the number of memory dims installed by using the analyze_system command as:

```
list_boards -long -board_type cpu
```

V2302/V2404/V6408 V Series servers only use some number of the following dimm.

Part #  609-01670-000  DIMM, 2GB DDR3 1333MHZ

13 ftServer 2710/4710/6410 CPU & I/O CRU Configuration

13.1 2710/4710/6410 ftServer (Cygnus-I) CPU & I/O CRU

The following are snapshots of the ftServer Management Console on an 6400 system. Follow the steps below to determine the CPU & I/O CRU configuration. In a 2710/4710/6410 system, the CPU (0) and I/O (10) are contained on one motherboard, within one CRU enclosure, and the CPU (1) and I/O (11) are contained on one motherboard, within one CRU enclosure.

You need the following information to properly order a replacement CPU & I/O CRU.

- CPU & I/O CRU enclosure part number
- AK processor kit part number and quantity
- Memory DIMM part number and quantity.
- PCI riser adapter part number.

Steps to determine CPU & I/O CRU configuration:

1. Open ftServer Management Console (ftSMC).
2. Expand ftServer Drivers.
3. Highlight System ID Prom – SystemIdProm.
4. In the right pane look for "ModelName".

Note: The "ModelName" field will display the system P-package.
For System ID Prom – SystemIdProm ModelName = P2710-1S
Order Part: 062-03704-000 – 2710, CPU & I/O CRU Enclosure, (No Processors, Memory, PCI adapters, or SAS disk drives)

For System ID Prom – SystemIdProm ModelName = P4710-1S
Order Part: 062-03703-000 – 4710, CPU & I/O CRU Enclosure, (No Processors, Memory, PCI adapters, PCI Riser, or SAS disk drives)

For System ID Prom – SystemIdProm ModelName = P6410-2S
Order Part: 062-03710-000 – 6410, CPU & I/O CRU Enclosure, (No Processors, Memory, PCI adapters or SAS disk drives, PCI Riser is included)

ftSMC (Left Pane) ftSMC (Right Pane)

5. Expand ftServer CPU Enclosures, then the online CPU 0 or 1
6. Highlight the “Processor - 21”.
7. In the right pane look for “Stepping” field and “Brand” field. Use the “Brand” field information and the “Stepping” field to determine processor kit required. The following is a reference between the “Brand” and “Stepping” field and the Processor kit part number.
For: **Brand = Intel(R) Xeon(R) CPU E5-2620v2 @ 2.1 GHz**

Order Part: 062-03709-000 - Processor Kit: Processor 2.1GHz Hz, Heatsink & Adhesive (2710) CPU IVYBRIDGE 6-CORE

For: **Brand = Intel(R) Xeon(R) CPU E5-2670v2 @ 2.5 GHz**

Order Part: : 062-03708-000 - Processor Kit: Processor 2.5GHz, Heatsink & Adhesive (6410, 4710) CPU IVYBRIDGE 10-CORE

****Note: 4710 has qty = 1 062-03708-000

8. Processor kits required are

- 2710 = 1 socket @ 2.1GHz 6-CORE
- 4710 = 1 socket @ 2.5GHz 10-CORE
- 6410 = 2 sockets @ 2.5GHz 10-CORE

ftSMC (Left Pane) ftSMC (Right Pane)

- ftServer CPU Enclosures
  - CPU Enclosure - 0
    - DIMM - 1
    - DIMM - 2
    - DIMM - 3
    - DIMM - 4
    - DIMM - 5
    - DIMM - 6
    - DIMM - 7
    - DIMM - 8
    - DIMM - 9
    - DIMM - 10
    - DIMM - 11
    - DIMM - 12
    - DIMM - 13
    - DIMM - 14
    - DIMM - 15
    - DIMM - 16
    - Processor - 21
    - Processor - 22
    - Sensors
If the State is “Online” then determine the part to order based on the size shown in the “SizeMb” and “MfgPartNr” fields. The following is a reference between the SizeMb and MfgPartNr fields and orderable part number. Reference the following table for the size and Mfg Part # that you have.

<table>
<thead>
<tr>
<th>Model</th>
<th>Mktg ID</th>
<th>Part #</th>
<th>Vendor</th>
<th>Mfg Part #</th>
<th>Type</th>
<th>Speed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cygnus-I</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Size GB</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>M254</td>
<td>609-01676-000</td>
<td>Hynix, Micron</td>
<td>HMT451R7AFR8A-PB T8, MT9KSF51272PZ-1G6E2</td>
<td>DDR3</td>
<td>1600mhz</td>
</tr>
<tr>
<td>8</td>
<td>M255</td>
<td>609-01677-000</td>
<td>Hynix, Samsung</td>
<td>HMT41GR7BFR4A-PBT8, M393B1G70QH0-YK008, M393B1G70EB0-YK0</td>
<td>DDR3</td>
<td>1600mhz</td>
</tr>
<tr>
<td>16</td>
<td>M256</td>
<td>609-01678-000</td>
<td>Hynix, Samsung</td>
<td>HMT42GR7BFR4A-PBT8, M393B2G70QH0-YK008, M393B2G70EB0-YK0</td>
<td>DDR3</td>
<td>1600mhz</td>
</tr>
<tr>
<td>32</td>
<td>M257</td>
<td>609-01679-000</td>
<td>Samsung</td>
<td>M386B4G70BM0-YK0</td>
<td>DDR3</td>
<td>1600mhz</td>
</tr>
<tr>
<td>32</td>
<td>M257D</td>
<td>609-01680-000</td>
<td>Samsung</td>
<td>M386B4G70DM0-YK03</td>
<td>DDR3-1600</td>
<td>D-die</td>
</tr>
</tbody>
</table>

**NOTE:** Part: 609-01679-000 and Part: 609-01680-000
Can be mixed within a system but
Can not be mixed within a CRU

9. Once the CPU & I/O CRU enclosure part number and memory DIMM part number, slot configuration and quantity is determined, a properly configured replacement 2710, 4710 and 6410 CPU & I/O CRU can be ordered.

Note: In the example given above the CPU – I/O CRU replacement order would include:
- 1 – 062-03710-000
- 2 – 062-03708-000
- 8 – 609-01678-000

10. **PCI riser adapters please read carefully.**

12a. PCI riser adapters are excluded from the SystemIdProm **ModelName = P2710-1S** Part: 062-03704-000 – 2710, CPU & I/O CRU Enclosure and should not be ordered with the CRU.

12b. PCI riser adapters **OPTIONAL** components for the SystemIdProm **ModelName = P4710-1S** Part: 062-03703-000 – 4710, CPU & I/O CRU Enclosure
If you have a model 4710 and you also have a riser card
Order Part: 062-01207-000 – PCI Riser Adapter, PCI-E.

12c. PCI riser adapters are **PRE-CONFIGURED** components for the SystemIdProm **ModelName = P6410-2S** Part: 062-03710-000 – 6410, CPU & I/O CRU Enclosure
And should not be ordered with the CRU.
Notes:

1. The last three digits of the RU part number will change from -000 (initial release) to -0xx due to post release ECOs revisions and in most cases will compatible. LMS will reflect the orderable RU part number and compatibility.
2. If not specifically requested in LMS CRU part order, the following parts are expected to be swapped between defective CRU and replacement CRU are: PCI adapters full and half height, Internal SAS Disks and PCI Riser.
3. 1 processor (kit) configuration is valid for 2710 and 4710 CPU & I/O CRU. Populated as “Processor – 21” in ftSMC.
4. 2 processor (kits) configuration is valid for 6410 CPU & I/O CRU. Populated as “Processor – 21” and “Processor – 22” in ftSMC.
5. On 2710 and 4710 only 8 DIMM slots per CRU, optimal DIMM configuration, populate slots 1, 3 then 5, 7 then 2, 4 then 6, 8. This should be the default way of DIMM population. DIMM slot location and size must match between CRU slots 1 - 8 or a hardware configuration error will be detected. See ES-000171 or 172 for details on configuration and max memory supported.
6. On 2 processor 6410 16 DIMM slots per CRU, optimal DIMM configuration, populate slots 1,9 and 3,11 then 5,13 and 7,15 then 2, 10 and 4,12 then 6, 14 and 8, 16. This should be the default way of DIMM population. DIMM slot location and size must match between processor 1 & 2 and CRU DIMM slots or a hardware configuration error will be detected. See ES-000173 for details on configuration and max memory supported.
7. PCI Slot Info – 1 and 2 in ftSMC, are the low profile slots which are PCI-E. PCI Slot Info – 3 and 4 are the riser adapter PCI slots.
8. PCI riser adapter is verified during CPU-I/O bring-up. If PCI riser configured different per CRU, a hardware compatibility mismatch will be detected and will not come into service.
9. 2710, 4710, and 6410 part Illustrated list
10. 2710/4710/6410 Customer Manuals (Windows versions)
11. 2710 configuration specification ES-000171 – (Stratus access Only)
12. 4700 configuration specification ES-000172 – (Stratus access Only)
13. 6400 configuration specification ES-000173 – (Stratus access Only)

Valid Part Numbers:

- The following are valid 2710/4710/6410 CPU & I/O CRU enclosures, processor kits, DIMM and PCI riser adapter part numbers.

  062-03704-000 – 2710 CPU & I/O CRU Enclosure, (No Processors, Memory, PCI adapters, or SAS/SSD disk drives)
  062-03709-000 - Processor Kit: Processor 2.1GHz, Heatsink & Adhesive
  (2710) CPU IVYBRIDGE 6-CORE

  062-03703-000 – 4710, CPU & I/O CRU Enclosure, (No Processors, Memory, PCI adapters, Optional PCI Riser, or SAS/SSD disk drives)
  062-03708-000 - Processor Kit: Processor 2.5GHz, Heatsink & Adhesive
  (6410) CPU IVYBRIDGE 10-CORE

  062-03710-000 – 6410, CPU & I/O CRU Enclosure, (No Processors, Memory, PCI adapters, included PCI Riser, or SAS/SSD disk drives)
  062-03708-000 - Processor Kit: Processor 2.5GHz, Heatsink & Adhesive
  (6410) CPU IVYBRIDGE 10-CORE

  609-01676-000 – 4GB DDR3, 1600MHZ,
  609-01677-000 – 8GB DDR3, 1600MHZ
  609-01678-000 – 16GB DDR3, 1600MHZ
  609-01679-000 – 32GB DDR3, Load-Reduced,1600MHz (B-Die)
Note: The ftServer 4710 and 6410 includes a PCI Riser Kit that provides 2 additional high profile slots in addition to the low-profile slots on the motherboard.

System Back Panel:

- 062-03707-000 SYSTEM Back PANEL LOW END 2710 (CYGNUS-I)
- 062-03706-000 SYSTEM Back PANEL MID 4710 (CYGNUS-I)
- 062-03705-000 SYSTEM Back PANEL HIGH END 6410 (CYGNUS-I)

All other board options are the same for Cygnus-I as they are for Cygnus except for the backpanel assemblies.

<table>
<thead>
<tr>
<th>Orderable Part Number</th>
<th>Description</th>
<th>ftServer Management Console key field for determining orderable part</th>
</tr>
</thead>
<tbody>
<tr>
<td>Backpanel Assembly Information</td>
<td>ftServer Configuration &gt; Customer Info &gt; Model Name field also displayed when dbg is entered HARDWARE VERSION INFO ... - SYSTEM ModName</td>
<td></td>
</tr>
<tr>
<td>062-03707-000</td>
<td>Backpanel assy Model 2710-1S</td>
<td></td>
</tr>
<tr>
<td>062-03706-000</td>
<td>Backpanel assy Model 4710-1S</td>
<td></td>
</tr>
<tr>
<td>062-03705-000</td>
<td>Backpanel assy Model 6410-2S</td>
<td></td>
</tr>
<tr>
<td>856-851445-202-D</td>
<td>POWER SUPPLY, DELTA DPS-800QB A</td>
<td></td>
</tr>
</tbody>
</table>
14 ftServer 2800/4800/6800/6805 CPU & I/O CRU Configuration

14.1 2800/4800/6800 ftServer (Pegasus) CPU & I/O CRU

The following are snapshots of the ftServer Management Console on an 6800 system. Follow the steps below to determine the CPU & I/O CRU configuration. In a 2800/4800/6800 system, the CPU (0) and I/O (10) are contained on one motherboard, within one CRU enclosure, and the CPU (1) and I/O (11) are contained on one motherboard, within one CRU enclosure.

You need the following information to properly order a replacement CPU & I/O CRU.

- CPU & I/O CRU enclosure part number
- AK processor kit part number and quantity
- Memory DIMM part number and quantity.
- PCI riser adapter part number.

Steps to determine CPU & I/O CRU configuration:

1. Open ftServer Management Console (ftSMC).
2. Expand ftServer Drivers.
3. Highlight System ID Prom – SystemIdProm.
4. In the right pane look for “ModelName”.

Note: The “ModelName” field will display the system P-package.
For System ID Prom – SystemIdProm  ModelName  =  P2800-1S
Order Part: 062-03716-000 – 2800, CPU & I/O CRU Enclosure, (No Processors, Memory, PCI adapters, or SAS disk drives)

For System ID Prom – SystemIdProm  ModelName  =  P4800-1S
Order Part: 062-03715-000 – 4800, CPU & I/O CRU Enclosure, (No Processors, Memory, PCI adapters, PCI Riser, or SAS disk drives)

For System ID Prom – SystemIdProm  ModelName  =  P6800-2S
Order Part: 062-03714-000 – 6800, CPU & I/O CRU Enclosure, , (No Processors, Memory, PCI adapters or SAS disk drives, **PCI Riser is included**)  

For System ID Prom – SystemIdProm  ModelName  =  P6805-2S
Order Part: 062-03800-000 – 6805, CPU & I/O CRU Enclosure, , (No Processors, Memory, PCI adapters or SAS disk drives, **PCI Riser is included**)  

Verify the Processor model type and memory configuration.

5. Expand ftServer CPU Enclosures, then the online CPU 0 or 1  
6. Highlight the “Processor - 21”.  
7. In the right pane look for “Stepping” field and “Brand” field. Use the “Brand” field information and the “Stepping” field to determine processor kit required. The following is a reference between the “Brand” and “Stepping” field and the Processor kit part number.

Processor kits required are
   1 2800 = 1 socket @ 2.4GHz  8-CORE  062-03725-000  CPU E5-2630v3  CPU 2.4GHZ 8-CORE
   1 4800 = 1 socket @ 2.3GHz  12-CORE 062-03726-000  CPU E5-2670v3  CPU 2.3GHZ 12-CORE
   2 6800 = 2 sockets @ 2.3GHz  12-CORE 062-03726-000  CPU E5-2670v3  CPU 2.3GHZ 12-CORE
      ...2.... 6805 = 2 sockets @ 3.2GHz  8-CORE  062-03803-000  CPU E5-2667v3  CPU 3.2GHZ 8-CORE
For CRU 062-03716-000 – 2800, CPU & I/O CRU Enclosure, ModelName = P2800-1S
Order 1 CPU 062-03725-000 CPU E5-2630v3 2.4GHZ 8-CORE and 1 to 8 of your configured Memory.

For CRU 062-03715-000 – 4800, CPU & I/O CRU Enclosure, ModelName = P4800-1S
Order 1 CPU 062-03726-000 CPU E5-2670v3 CPU 2.3GHZ 12-CORE and 1 to 8 of your configured Memory.

For CRU 062-03714-000 – 6800, CPU & I/O CRU Enclosure, ModelName = P6800-2S
Order 2 CPU 062-03726-000 CPU E5-2670v3 CPU 2.3GHZ 12-CORE and 2 to 16 of your configured Memory.

For CRU 062-03800-000 – 6805, CPU & I/O CRU Enclosure, ModelName = P6805-2S
Order 2 CPU 062-03803-000 CPU E5-2667v3 CPU 3.2GHZ 8-CORE and 2 to 16 of your configured Memory.
NOTE: Size and manufacturing part number (MfgPartNr) must be verified to order the correct DIMMS

Memory options: See below:

<table>
<thead>
<tr>
<th>MfgPartNr</th>
<th>DIMM, 8 GB DDR4 2133MHz</th>
<th>MfgPartNr</th>
<th>DIMM, 8 GB DDR4 2133MHz</th>
</tr>
</thead>
<tbody>
<tr>
<td>M393A1G40DB0-CPB</td>
<td>609-01684-000</td>
<td>ST5721G4STR24KP1SE</td>
<td>609-01681-000</td>
</tr>
<tr>
<td>M393A2G40DB0-CPB</td>
<td>609-01681-000</td>
<td>ST2047RD410472SE</td>
<td>609-01682-000</td>
</tr>
<tr>
<td>ST5721G4STR24KP1SE</td>
<td>609-01684-000</td>
<td>ST2047RD410472SE</td>
<td>609-01681-000</td>
</tr>
<tr>
<td>ST5721G4STR24KP1SE</td>
<td>609-01684-000</td>
<td>ST2047RD410472SE</td>
<td>609-01681-000</td>
</tr>
<tr>
<td>M386A4G40DM0-CPB</td>
<td>609-01682-000</td>
<td>M393A4K40BB1-CRC</td>
<td>609-01683-000</td>
</tr>
<tr>
<td>M386A4G40DM0-CPB</td>
<td>609-01682-000</td>
<td>M393A4K40BB1-CRC</td>
<td>609-01683-000</td>
</tr>
<tr>
<td>M386A4G40DM0-CPB</td>
<td>609-01682-000</td>
<td>M393A4K40BB1-CRC</td>
<td>609-01683-000</td>
</tr>
</tbody>
</table>

SMART Modular Technologies added to AVL eco-190141

609-01682-000 DIMM, 32 GB is not system compatible with 609-01687-000 RDIMM 32 GB.

8. If the State is “Online” then determine the part to order based on the size shown in the “SizeMb” field. The following is a reference between the SizeMb and MfgPartNr fields and orderable part number.
9. For “DIMM 1, 3, 9, and 11” which are Online, determine the quantity, slot configuration and size of memory DIMMs which are required to be ordered.

   Note: A yellow folder denotes online hardware and when the node is highlighted the left pane will display the Op State: State “Online or Empty”. In the example above DIMM - 1 is a 16384MB DIMM. All other “Online” DIMMs must also be determined in order to replicate the configuration of the CRU. In this system, “1, 3, 9, and 11” were determined to be 16384MB DIMMs, which means a memory configuration of 64GB. The Mfg Part number of a 16384MB DIMM M393A2G40DB0-CPB is Stratus part number 609-01681-000, quantity of 4.

10. Once the CPU & I/O CRU enclosure part number and memory DIMM part number, slot configuration and quantity is determined, a properly configured replacement 2800, 4800 and 6800 CPU & I/O CRU can be ordered.

   Note: In the example given above the CPU – I/O CRU replacement order would include:
   - 1 – 062-03714-000
   - 2 – 062-03726-000
   - 4 – 609-01681-000
11. **PCI riser adapters please read carefully.**

   11a. PCI riser adapters are excluded from the
   
   SystemIdProm ModelName = P2800-1S Part: 062-03716-000 – 2800, CPU & I/O CRU Enclosure
   and should not be ordered with the CRU.

   11b. PCI riser adapters **OPTIONAL** components for the
   
   SystemIdProm ModelName = P4800-1S Part: 062-03715-000 – 4800, CPU & I/O CRU Enclosure
   
   If you have a model 4800 and you also have a riser card

   11c. PCI riser adapters **are PRE-CONFIGURED** components for the
   
   SystemIdProm ModelName = P6800-2S Part: 062-03714-000 – 6800, CPU & I/O CRU Enclosure
   And should not be ordered with the CRU.

   11d. PCI riser adapters **are PRE-CONFIGURED** components for the
   
   SystemIdProm ModelName = P6805-2S Part: 062-03800-000 – 6805, CPU & I/O CRU Enclosure
   And should not be ordered with the CRU.

**Notes:**

12. The last three digits of the RU part number will change from -000 (initial release) to -0xx due to post release
ECOs revisions and in most cases will compatible. LMS will reflect the orderable RU part number and compatibility.

13. If not specifically requested in LMS CRU part order, the following parts are expected to be swapped between
defective CRU and replacement CRU: PCI adapters full and half height, Internal SAS Disks and PCI Riser.

14. 1 processor (kit) configuration is valid for 2800 and 4800 CPU & I/O CRU. Populated as “Processor – 21” in
ftSMC.

15. 2 processor (kits) configuration is valid for 6800 CPU & I/O CRU. Populated as “Processor – 21” and “Processor –
22” in ftSMC.

16. On 2800 and 4800 only 8 DIMM slots per CRU, optimal DIMM configuration, populate slots 1, 3 then 5, 7 then 2,
4 then 6, 8. This should be the default way of DIMM population. DIMM slot location and size must match between
CRU slots 1 - 8 or a hardware configuration error will be detected. See ES-000174 or 175 for details on
configuration and max memory supported.

17. On 2 processor 6800 16 DIMM slots per CRU, optimal DIMM configuration, populate slots 1, 9 and 3,11 then 5,13
and 7,15 then 2, 10 and 4,12 then 6, 14 and 8, 16. This should be the default way of DIMM population. DIMM slot
location and size must match between processor 1 & 2 and CRU DIMM slots or a hardware configuration error
will be detected. See ES-000176 for details on configuration and max memory supported.

18. PCI Slot Info – 1 and 2 in ftSMC, are the low profile slots which are PCI-E. PCI Slot Info – 3 and 4 are the riser
adapter PCI slots.

19. PCI riser adapter is verified during CPU-I/O bring-up. If PCI riser configured different per CRU, a hardware
compatibility mismatch will be detected and will not come into service.

20. 2800, 4800, and 6800 part Illustrated list

21. [2800/4800/6800 Customer Manuals](https://www.stratus.com/support/manuals) (Windows versions)

22. [2800 configuration specification ES-000174](https://www.stratus.com/support/manuals) – (Stratus access Only)

23. [4800 configuration specification ES-000175](https://www.stratus.com/support/manuals) – (Stratus access Only)

24. [6800 configuration specification ES-000176](https://www.stratus.com/support/manuals) – (Stratus access Only)
Valid Part Numbers:

- The following are valid 2800/4800/6800/6805 CPU & I/O CRU enclosures, processor kits, DIMM and PCI riser adapter part numbers.

  062-03716-000 – 2800, CPU & I/O CRU Enclosure, \texttt{ModelName = P2800-1S}
  (No Processors, Memory, PCI adapters, or SAS/SSD disk drives)
  062-03725-000  Processor Kit: Processor E5-2630v3 2.4GHZ 8-CORE

  062-03715-000 – 4800, CPU & I/O CRU Enclosure, \texttt{ModelName = P4800-1S}
  (No Processors, Memory, PCI adapters, or SAS/SSD disk drives)
  062-03726-000  Processor Kit: Processor E5-2670v3 CPU 2.3GHZ 12-CORE

  062-03714-000 – 6800, CPU & I/O CRU Enclosure, \texttt{ModelName = P6800-2S}
  062-03726-000  Processor Kit: Processor E5-2670v3 CPU 2.3GHZ 12-CORE
  (No Processors, Memory, PCI adapters, or SAS/SSD disk drives, PCI Riser is \texttt{included})

  062-03800-000 – 6805, CPU & I/O CRU Enclosure, \texttt{ModelName = P6805-2S}
  062-03803-000  Processor Kit: Processor CPU E5-2667v3 CPU 3.2GHZ 8-CORE
  (No Processors, Memory, PCI adapters, or SAS/SSD disk drives, PCI Riser is \texttt{included})

  609-01684-000  DIMM, 8 GB DDR4 2133MHz
  609-01681-000  DIMM, 16 GB DDR4 2133MHz
  609-01682-000  DIMM, 32 GB DDR4 2133MHz
  609-01687-000  RDIMM, 32 GB 2400 MHz

  062-03724-000– PCI Riser Adapter, PCI-E (Pegasus).

\textbf{Note:} The ftServer 4800, 6800, and 6805 \texttt{include} a PCI Riser Kit that provides 2 additional high profile slots in addition to the low-profile slots on the motherboard.

System Back Panel:

  062-03717-000, ASM, SYS BP HI (Pegasus)
  062-03718-000, ASM, SYS BP MID (Pegasus)
  062-03719-000, ASM, SYS BP LO (Pegasus)
  062-03801-000  ASM, SYS BP P6805-2S
## Backpanel assemblies.

<table>
<thead>
<tr>
<th>Orderable Part Number</th>
<th>Description</th>
<th>ftServer Management Console key field for determining orderable part</th>
</tr>
</thead>
</table>
| **Backpanel Assembly Information** | ftServer Configuration > Customer Info > Model Name field also displayed when dbg is entered HARDWARE VERSION INFO ...
- SYSTEM ModName | |
| 062-03719-000 | Backpanel assy Model 2800-1S | |
| 062-03718-000 | Backpanel assy Model 4800-1S | |
| 062-03717-000 | Backpanel assy Model 6800-2S | |
| 062-03801-000 | Backpanel assy Model 6805-2S | |

### Other part Numbers:

<table>
<thead>
<tr>
<th>Orderable Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>062-03724-000</td>
<td>Riser PCI-E (Pegasus)</td>
</tr>
<tr>
<td>062-03164-000</td>
<td>300 GB 15K RPM, SAS 2.5&quot;, 12G Drive</td>
</tr>
<tr>
<td>062-03166-000</td>
<td>600 GB 15K SAS 2.5&quot; Drive</td>
</tr>
<tr>
<td>062-03740-000</td>
<td>400 GB SSD 2.5&quot;, 12G Drive Toshiba Phoenix-M2 Model PX02SMF040</td>
</tr>
<tr>
<td>062-03168-000</td>
<td>1.2TB 10K 2.5&quot; drive</td>
</tr>
<tr>
<td>160-01743-000</td>
<td>U112 Qlogic QLE2670-E Single Port 16 Gb FC HBA w/7.04.01 FW Enclosure - 10 or 11 / PCI Slot - x / PnPDescription[1] = QLogic Fibre Channel Adapter or PnPDeviceId[1] = pci\ven_1077&amp;dev_2031&amp;subsys_024111077</td>
</tr>
<tr>
<td>160-01748-000</td>
<td>U112A Qlogic QLE2670-E Single Port 16 Gb FC HBA w/8.03.06 FW AUL 11 only Enclosure - 10 or 11 / PCI Slot - x / PnPDescription[1] = QLogic Fibre Channel Adapter or PnPDeviceId[1] = pci\ven_1077&amp;dev_2031&amp;subsys_024111077</td>
</tr>
<tr>
<td>160-01741-000</td>
<td>U113 Intel I350T2V2 Dual Port 1 Gbit Copper Ethernet Adapter Enclosure - 10 or 11 / PCI Slot - x / Ethernet controller – x PnPDescription[1] = Stratus I350 2-Port Copper Gigabit Adapter or PnPDeviceId[1] = pci\ven_8086&amp;dev_1521&amp;subsys_7135159c</td>
</tr>
<tr>
<td>160-01744-000</td>
<td>U114 LSI Logic 12Gb SAS 8-Port Host Bus Adapter (9300-4i4e) for tape</td>
</tr>
<tr>
<td>160-01742-000</td>
<td>U115 Intel X540T2 Dual Port 10 Gbit Copper Ethernet Adapter</td>
</tr>
<tr>
<td>CRU Part Replacement Ordering</td>
<td>Stratus Information</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>---------------------</td>
</tr>
<tr>
<td>AA-U11600</td>
<td>U116 10 GbE PCIe Fiber adapter with 2 SFP modules</td>
</tr>
<tr>
<td>160-01747-000</td>
<td>U117 Intel X710 Dual-Port 10 Gbit Fiber Ethernet Adapter with SFPs</td>
</tr>
<tr>
<td>CRU Power Supply</td>
<td>POWER SUPPLY, FPS-800</td>
</tr>
</tbody>
</table>

Table 1: Memory Options for Pegasus

<table>
<thead>
<tr>
<th>Model size</th>
<th>Mktg ID</th>
<th>Part #</th>
<th>Vendor</th>
<th>Mfg Part #</th>
<th>Type</th>
<th>Speed</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>M258</td>
<td>609-01684-000</td>
<td>SAMSUNG</td>
<td>M393A1G40DB0-CPB</td>
<td>LR-DIMM DDR4</td>
<td>2133mhz</td>
</tr>
<tr>
<td>8</td>
<td>M258</td>
<td>609-01684-000</td>
<td>SMART</td>
<td>ST5721G4STR24KP1SE</td>
<td>LR-DIMM DDR4</td>
<td>2133mhz</td>
</tr>
<tr>
<td>16</td>
<td>M259</td>
<td>609-01681-000</td>
<td>SAMSUNG</td>
<td>M393A2G40DB0-CPB</td>
<td>LR-DIMM DDR4</td>
<td>2133mhz</td>
</tr>
<tr>
<td>16</td>
<td>M259</td>
<td>609-01681-000</td>
<td>SMART</td>
<td>ST2047RD410472SE</td>
<td>LR-DIMM DDR4</td>
<td>2133mhz</td>
</tr>
<tr>
<td>32</td>
<td>M260</td>
<td>609-01682-000</td>
<td>SAMSUNG</td>
<td>M386A4G40DM0-CPB</td>
<td>LR-DIMM DDR4</td>
<td>2133mhz</td>
</tr>
<tr>
<td>32</td>
<td>M264</td>
<td>609-01687-000</td>
<td>NEC</td>
<td>M393A4K40BB1-CRC</td>
<td>RDIMM</td>
<td>2400mhz</td>
</tr>
<tr>
<td>64</td>
<td>M261</td>
<td>609-01683-000</td>
<td>NEC</td>
<td>M386A8K40BM1-CPB</td>
<td>LR-DIMM DDR4</td>
<td>2133mhz</td>
</tr>
</tbody>
</table>

NOTE: Size and manufacturing part number (MfgPartNr) must be verified to order the correct DIMMS

NOTE:
Part number: 609-01682-000 is NOT system compatible with
Part number: 609-01687-000
15 V-Series Pegasus Configs

Paymentech V6624 CPU CRU Configuration

V6624 V Series System is released in this specific configuration at Vos release 19.0 for Paymentech.

as: lbl -slot 0
Module: %s8#m1 (ftServer 6800)

Slot 0: CPU Module
  Model Name: 062-03711
  State: 00180016 STATE_DUPLEX
  Status: Online Partnered
  Diagnostics Status
  (...) Physical Processors: 2
  Brand: Intel(R) Xeon(R) CPU E5-2670 v3 @ 2.30GHz
  Family: 6
  Stepping: 2
  DIMM # 1
    Size (MB): 8192
    Part #: M393A1G40DB0-CPB (Samsung)
  DIMM # 3
    Size (MB): 8192
    Part #: M393A1G40DB0-CPB (Samsung)
  DIMM # 5
    Size (MB): 8192
    Part #: M393A1G40DB0-CPB (Samsung)
  DIMM # 7
    Size (MB): 8192
    Part #: M393A1G40DB0-CPB (Samsung)
  Total Memory Present (MB): 32768

This is the only CPU & Processor CRU configuration in place at Paymentech at this time. In all cases replacement units are preconfigured under the following CRU part number. The BOM for the part is shown.

AS-000462 ASM CPU CRU REPLACEMENT V6624 SPECIAL ORDER

Qty
1  062-03714-000 ASM, CPU/IO HI (PEGASUS)
2  062-03726-000 BTO, CPU 2.3GHZ 12-CORE (PEGASUS)
4  609-01684-000 DIMM, 8GB DDR4
2  AA-U59500 4-port 10 Gigabit Ethernet Adapter 10 GBase-SR (LC Fiber Optic)
1  AA-U9600 2-port 16 Gbps FC HBA, V-Series
V Pegasus systems are generally available in the following models.

<table>
<thead>
<tr>
<th>Model</th>
<th>Sockets</th>
<th>Cores</th>
<th>Speed</th>
<th>Processor kit</th>
</tr>
</thead>
<tbody>
<tr>
<td>V2608</td>
<td>1</td>
<td>8</td>
<td>2.4 GHZ</td>
<td>062-03725-000</td>
</tr>
<tr>
<td>V4612</td>
<td>1</td>
<td>12</td>
<td>2.3 GHZ</td>
<td>062-03726-000</td>
</tr>
<tr>
<td>V6616</td>
<td>2</td>
<td>8</td>
<td>2.4 GHZ</td>
<td>062-03725-000</td>
</tr>
<tr>
<td>V6624</td>
<td>2</td>
<td>12</td>
<td>2.3 GHZ</td>
<td>062-03726-000</td>
</tr>
</tbody>
</table>

To complete a (Pegasus) V series CRU order you must order

1 Enclosure – CRU part number 062-03757-000  ASM CPU/IO V-PEGASUS
   (PCI Riser is included)

1 or 2 CPUs
   8 Core 2.4 ghz  062-03725-000  Processor Kit: E5-2630v3  2.4GHZ  8-CORE
or
   12 Core 2.3 ghz 062-03726-000  Processor Kit: E5-2670v3  2.3GHZ 12-CORE

and 1 to 4  609-01684-000  LR-DIMM,  8 GB DDR4  2133MHz Memory Dimms

Notes:
   Vos has a maximum of 16GB addressable memory
   All V series dimm configurations populate CPU socket 0 dimm slots
   V6616 and V6624 have 4X8GB memory in order to populate all four dimm channels.
   The extra memory is used in ECC scrub and CPU duplex operations.

<table>
<thead>
<tr>
<th>Mktg Model</th>
<th>Vos Model name</th>
<th>Qty</th>
<th>Processor p/n</th>
<th>Qty</th>
<th>Dimm p/n</th>
<th>Dimm slots populated</th>
</tr>
</thead>
<tbody>
<tr>
<td>V2608</td>
<td>062-03712-000</td>
<td>1</td>
<td>062-03725-000</td>
<td>1</td>
<td>609-01684-000</td>
<td>1</td>
</tr>
<tr>
<td>V4612</td>
<td>062-03711-000</td>
<td>1</td>
<td>062-03726-000</td>
<td>1 or 2</td>
<td>609-01684-000</td>
<td>1 (3)</td>
</tr>
<tr>
<td>V6616</td>
<td>062-03712-000</td>
<td>2</td>
<td>062-03725-000</td>
<td>4</td>
<td>609-01684-000</td>
<td>1,3,5,7</td>
</tr>
<tr>
<td>V6624</td>
<td>062-03711-000</td>
<td>2</td>
<td>062-03726-000</td>
<td>4</td>
<td>609-01684-000</td>
<td>1,3,5,7</td>
</tr>
</tbody>
</table>

An example of a correct order for a V6624 would be

Qty 1  062-03757-000
Qty 2  062-03726-000
Qty 4  609-01684-000
16 ftServer 2810/4810/6810 CPU & I/O CRU Configuration

16.1 2810/4810/6810 ftServer (Pegasus-B) CPU & I/O CRU

The following are snapshots of the ftServer Management Console on an 6810 system. Follow the steps below to determine the CPU & I/O CRU configuration. In a 2810/4810/6810 system, the CPU (0) and I/O (10) are contained on one motherboard, within one CRU enclosure, and the CPU (1) and I/O (11) are contained on one motherboard, within one CRU enclosure.

You need the following information to properly order a replacement CPU & I/O CRU.

- CPU & I/O CRU enclosure part number
- AK processor kit part number and quantity
- Memory DIMM part number and quantity.
- PCI riser adapter part number.

Steps to determine CPU & I/O CRU configuration:

5. Open ftServer Management Console (ftSMC).
8. In the right pane look for “ModelName”.

Note: The “ModelName” field will display the system P-package.
For System ID Prom – SystemIdProm ModelName = P2810-1S
Order Part: 062-03745-000 – 2810, CPU & I/O CRU Enclosure, (No Processors, Memory, PCI adapters, or SAS disk drives)

For System ID Prom – SystemIdProm ModelName = P4810-2S
Order Part: 062-03744-000 – 4810, CPU & I/O CRU Enclosure, (No Processors, Memory, PCI adapters, or SAS disk drives)

For System ID Prom – SystemIdProm ModelName = P6810-1S
Order Part: 062-03743-000 – 6810, CPU & I/O CRU Enclosure, (No Processors, Memory, PCI adapters, or SAS disk drives) *(PCI Riser is included)*

For System ID Prom – SystemIdProm ModelName = P6810-2S
Order Part: 062-03754-000 – 6810, CPU & I/O CRU Enclosure, (No Processors, Memory, PCI adapters, or SAS disk drives) *(PCI Riser is included)*

Verify the Processor model type and memory configuration.

1. Expand ftServer CPU Enclosures, then the online CPU 0 or 1
2. Highlight the “Processor - 21”.
3. In the right pane look for “Stepping” field and “Brand” field. Use the “Brand” field information and the “Stepping” field to determine processor kit required. The following is a reference between the “Brand” and “Stepping” field and the Processor kit part number.

Processor kits required are

<table>
<thead>
<tr>
<th>Model</th>
<th>Sockets</th>
<th>Frequency</th>
<th>Cores</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>2810</td>
<td>1</td>
<td>2.2GHz</td>
<td>10</td>
<td>E5-2630v4</td>
</tr>
<tr>
<td>4810</td>
<td>2</td>
<td>2.2GHz</td>
<td>10</td>
<td>E5-2630v4</td>
</tr>
<tr>
<td>6810</td>
<td>1</td>
<td>2.3GHz</td>
<td>14</td>
<td>E5-2671v4</td>
</tr>
<tr>
<td>6810</td>
<td>2</td>
<td>2.3GHz</td>
<td>14</td>
<td>E5-2671v4</td>
</tr>
</tbody>
</table>
For CRU 062-03745-000 – 2810, CPU & I/O CRU Enclosure, ModelName = P2810-1S
Order 1 CPU 062-03749-000 CPU E5-2630v4 2.2GHZ 10-CORE
and 1 to 8 of your configured Memory.

For CRU 062-03744-000 – 4810, CPU & I/O CRU Enclosure, ModelName = P4810-2S
Order 2 CPU 062-03749-000 CPU E5-2630v4 CPU 2.2GHZ 10-CORE
and 1 to 8 of your configured Memory.

For CRU 062-03743-000 – 6810-1S, CPU & I/O CRU Enclosure, ModelName = P6810-1S
Order 1 CPU 062-03750-000..CPU E5-2671v4 CPU 2.3GHZ 14-CORE
and 2 to 16 of your configured Memory.

For CRU 062-03754-000 – 6810, CPU & I/O CRU Enclosure, ModelName = P6810-2S
Order 2 CPU 062-03750-000 ..CPU E5-2671v4 CPU 2.3GHZ 14-CORE
and 2 to 16 of your configured Memory.
Memory options:

<table>
<thead>
<tr>
<th>Pegasus-B</th>
<th>Mktg ID</th>
<th>Part #</th>
<th>Vendor</th>
<th>Mfg Part #</th>
<th>Type</th>
<th>Speed</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>M262</td>
<td>609-01685-000</td>
<td>NEC</td>
<td>M393A1G43EB1-CRC</td>
<td>RDIMM</td>
<td>2400mhz</td>
</tr>
<tr>
<td>8</td>
<td>M262</td>
<td>609-01685-000</td>
<td>SMART</td>
<td>ST1027RD4518725654948961</td>
<td>RDIMM</td>
<td>2400mhz</td>
</tr>
<tr>
<td>16</td>
<td>M263</td>
<td>609-01686-000</td>
<td>NEC</td>
<td>M393A2K43BB1-CRC</td>
<td>RDIMM</td>
<td>2400mhz</td>
</tr>
<tr>
<td>32</td>
<td>M264</td>
<td>609-01687-000</td>
<td>NEC</td>
<td>M393A4K40BB1-CRC</td>
<td>RDIMM</td>
<td>2400mhz</td>
</tr>
<tr>
<td>64</td>
<td>M261</td>
<td>609-01683-000</td>
<td>NEC</td>
<td>M386A8K40BM1CPB</td>
<td>LR-DIMM</td>
<td>DDR4</td>
</tr>
</tbody>
</table>

If the State is “Online” then determine the part to order based on the size shown in the “SizeMb” field. The table above is a reference between the SizeMb and MfgPartNr fields and orderable part number.

SMART Modular Technologies added to AVL (eco-190141).
For: SizeMb = 8192 Mb and SPDData: MfgPartNr M393A1G43EB1-CRC or ST1027RD451872SE
Order Part: 609-01685-000 RDIMM, 8 GB DDR4 2400MHz

For: SizeMb = 16384 Mb and SPDData: MfgPartNr M393A2K43BB1-CRC
Order Part: 609-01686-000 DIMM, 16 GB DDR4 2400MHz

For: SizeMb = 32000 Mb and SPDData: MfgPartNr M393A4K40BB1-CRC
Order Part: 609-01687-000 DIMM, 32 GB DDR4 2400MHz

For: SizeMb = 64000 Mb and SPDData: MfgPartNr M386A8K40BM1-CPB
Order Part: 609-01688-000 DIMM, 64 GB DDR4 2133MHz)

For “DIMMs” which are Online, determine the quantity, slot configuration and size of memory DIMMs which are required to be ordered. Note: A yellow folder denotes online hardware and when the node is highlighted the left pane will display the Op State: State “Online or Empty”. In the example above DIMM - 1 is a 16384MB DIMM. All other “Online” DIMMs must also be determined in order to replicate the configuration of the CRU. In this system, “1, and 9” were determined to be 16384MB DIMMs, which means a memory configuration of 32GB. The Mfg Part number of a 16384MB DIMM M393A2K43BB1-CRC is Stratus part number 609-01686-000, quantity of 2.

Once the CPU & I/O CRU enclosure part number and memory DIMM part number, slot configuration and quantity is determined, a properly configured replacement 2810, 4810 and 6810 CPU & I/O CRU can be ordered.

Note: In the example given above the CPU – I/O CRU replacement order would include:
1 – 062-03754-000
2 – 062-03750-000
2 – 609-01686-000

PCI riser adapters please read carefully.

. PCI riser adapters are excluded from the SystemIdProm ModelName = P2810-1S Part: 062-03745-000 2810, CPU & I/O CRU Enclosure and should not be ordered with the CRU.

. PCI riser adapters OPTIONAL components for the SystemIdProm ModelName = P4810-2S Part: 062-03744-000 – 4810, CPU & I/O CRU Enclosure
If you have a model 4810 and you also have a riser card

. PCI riser adapters are PRE-CONFIGURED components for the SystemIdProm ModelName = P6810-2S Part: 062-03754-000 – 6810, CPU & I/O CRU Enclosure
And should not be ordered with the CRU.
Notes:

1. The last three digits of the RU part number will change from -000 (initial release) to -0xx due to post release ECOs revisions and in most cases will compatible. LMS will reflect the orderable RU part number and compatibility.

2. If not specifically requested in LMS CRU part order, the following parts are expected to be swapped between defective CRU and replacement CRU: PCI adapters full and half height, Internal SAS Disks and PCI Riser.

3. 1 processor (kit) configuration is valid for 2810 and 6810-1S CPU & I/O CRU. Populated as “Processor – 21” in ftSMC.

4. 2 processor (kits) configuration is valid for 4810-2S and 6810-2S CPU & I/O CRU. Populated as “Processor – 21” and “Processor – 22” in ftSMC.

5. The DIMMs in the slots must be supplied by Stratus and memory population must conform to a Stratus supported configuration for the platform and model.

   Reference the Config specs noted below.
   DIMM slot location and size must match between processor 1 & 2 and CRU DIMM slots or a hardware configuration error will be detected. See config specs for details on configuration and max memory supported.

6. PCI Slot Info – 1 and 2 in ftSMC, are the low profile slots which are PCI-E. PCI Slot Info – 3 and 4 are the riser adapter PCI slots.

7. PCI riser adapter is verified during CPU-I/O bring-up. If PCI riser configured different per CRU, a hardware compatibility mismatch will be detected and will not come into service.

8. 2810, 4810, and 6810 part Illustrated list

9. 2810/4810/6810 Customer Manuals (StrataDoc)

10. 2810 configuration specification ES-000180 – (Stratus access Only)

11. 4810 configuration specification ES-000181 – (Stratus access Only)

12. 6810 configuration specification ES-000182 – (Stratus access Only)

The latest config spec documents can be found on an internal SharePoint page at

https://stratustechnologies.sharepoint.com/engineering/ftServer/SitePages/Home.aspx?RootFolder=%2Fengineering%2FftServer%2FShared%20Documents%2FConfiguration%20Specifications&FolderCTID=0x012000E23EEDEE93F54F4D9410B74D825F0C44&View=%7B9755A29F-6324-46A2-9C2E-65D64A54F52A%7D
Valid Part Numbers:

For CRU 062-03745-000 – 2810, CPU & I/O CRU Enclosure, ModelName = P2810-1S
Order 1 CPU 062-03749-000 CPU E5-2630v4 2.2GHZ 10-CORE
and 1 to 8 of your configured Memory.

For CRU 062-03744-000 – 4810, CPU & I/O CRU Enclosure, ModelName = P4810-2S
Order 2 CPU 062-03749-000 CPU E5-2630v4 CPU 2.2GHZ 10-CORE
and 1 to 8 of your configured Memory.

For CRU 062-03743-000 – 6810-1S, CPU & I/O CRU Enclosure, ModelName = P6810-1S
Order 1 CPU 062-03750-000 CPU E5-2671v4 CPU 2.3GHZ 14-CORE
and 2 to 16 of your configured Memory.

For CRU 062-03754-000 – 6810-2S, CPU & I/O CRU Enclosure, ModelName = P6810-2S
Order 2 CPU 062-03750-000 CPU E5-2671v4 CPU 2.3GHZ 14-CORE
and 2 to 16 of your configured Memory.

Memory options: See below

609-01685-000 RDIMM, 8 GB DDR4 2400MHz SPDData: MfgPartNr M393A1G43EB1-CRC
609-01685-000 RDIMM, 8 GB DDR4 2400MHz SPDData: MfgPartNr ST1027RD451872SE
609-01686-000 RDIMM, 16 GB DDR4 2400MHz SPDData: MfgPartNr M393A2K43BB1-CRC
609-01687-000 RDIMM, 32 GB DDR4 2400MHz SPDData: MfgPartNr M393A4K40BB1-CRC
609-01683-000 LR DIMM, 64 GB DDR4 2133MHz SPDData: MfgPartNr M386A8K40BM1-CPB

062-03724-000– PCI Riser Adapter, PCI-E (Pegasus).

Note: The ftServer 6810 includes a PCI Riser Kit that provides 2 additional high profile slots in addition to the low-profile slots on the motherboard.

System Back Panel:
062-03755-000, ASM, SYS BP HI (Pegasus-B) 2 socket
062-03746-000 ASM, SYS BP HI (Pegasus-B) 1 socket
062-03747-000, ASM, SYS BP MID (Pegasus-B) 2 socket
062-03748-000, ASM, SYS BP LO (Pegasus-B)
### Orderable Part Number

<table>
<thead>
<tr>
<th>Description</th>
<th>ftServer Management Console key field for determining orderable part</th>
</tr>
</thead>
<tbody>
<tr>
<td>ftServer Configuration &gt; Customer Info &gt; Model Name field also displayed when dbg is entered HARDWARE VERSION INFO ... - SYSTEM ModName</td>
<td>ftServer CRU Part Replacement Ordering Stratus Information May 20 2019 Rev 91 111 0</td>
</tr>
</tbody>
</table>

#### Backpanel Assembly Information

<table>
<thead>
<tr>
<th>Orderable Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>062-03748-000</td>
<td>Backpanel assy Model 2810-1S</td>
</tr>
<tr>
<td>062-03747-000</td>
<td>Backpanel assy Model 4810-2S</td>
</tr>
<tr>
<td>062-03746-000</td>
<td>Backpanel assy Model 6810-1S</td>
</tr>
<tr>
<td>062-03755-000</td>
<td>Backpanel assy Model 6810-2S</td>
</tr>
</tbody>
</table>

#### Other part Numbers:

<table>
<thead>
<tr>
<th>Orderable Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>062-03724-000</td>
<td>Riser PCI-E (Pegasus, Pegasus B)</td>
</tr>
<tr>
<td>062-03164-000</td>
<td>300 GB 15K RPM, SAS 2.5&quot;, 12G Drive</td>
</tr>
<tr>
<td>062-03166-000</td>
<td>600 GB 15K SAS 2.5&quot; Drive</td>
</tr>
<tr>
<td>062-03740-000</td>
<td>400 GB SSD 2.5&quot;, 12G Drive</td>
</tr>
<tr>
<td>062-03742-000</td>
<td>800 GB SSD 2.5&quot;, 12G Drive</td>
</tr>
<tr>
<td>062-03168-000</td>
<td>1.2TB 10K 2.5&quot; drive</td>
</tr>
<tr>
<td>160-01748-000</td>
<td>U112A Qlogic QLE2670-E Single Port 16 Gb FC HBA w/8.03.06 FW</td>
</tr>
<tr>
<td>160-01741-000</td>
<td>U113 Intel I350T2V2 Dual Port 1 Gbit Copper Ethernet Adapter</td>
</tr>
<tr>
<td>160-01744-000</td>
<td>U114 LSI Logic 12Gb SAS 8-Port Host Bus Adapter (9300-4i4e) for tape</td>
</tr>
<tr>
<td>160-01742-000</td>
<td>U115 Intel X540T2 Dual Port 10 Gbit Copper Ethernet Adapter</td>
</tr>
<tr>
<td>160-01747-000</td>
<td>U117 Intel X710 Dual-Port 10 Gbit Fiber Ethernet Adapter with SFPs</td>
</tr>
</tbody>
</table>
Table 1: Memory Options for Pegasus-B

<table>
<thead>
<tr>
<th>Model</th>
<th>Mktg ID</th>
<th>Part #</th>
<th>Vendor</th>
<th>Mfg Part #</th>
<th>Type</th>
<th>Speed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pegasus-B size GB</td>
<td>8</td>
<td>M262 609-01685-000</td>
<td>NEC</td>
<td>M393A1G43EB1-CRC</td>
<td>RDIMM</td>
<td>2400mhz</td>
</tr>
<tr>
<td></td>
<td>8</td>
<td>M262 609-01685-000</td>
<td>SMART</td>
<td>ST1027RD451872SE</td>
<td>RDIMM</td>
<td>2400mhz</td>
</tr>
<tr>
<td></td>
<td>16</td>
<td>M263 609-01686-000</td>
<td>NEC</td>
<td>M393A2K43BB1-CRC</td>
<td>RDIMM</td>
<td>2400mhz</td>
</tr>
<tr>
<td></td>
<td>32</td>
<td>M264 609-01687-000</td>
<td>NEC</td>
<td>M393A4K40BB1-CRC</td>
<td>RDIMM</td>
<td>2400mhz</td>
</tr>
<tr>
<td></td>
<td>64</td>
<td>M261 609-01683-000</td>
<td>NEC</td>
<td>M386A8K40BM1-CPB</td>
<td>LR-DIMM DDR4</td>
<td></td>
</tr>
</tbody>
</table>
17 ftServer 2900/4900/6900 CPU & I/O CRU Configuration

17.1 2900/4900/6900 ftServer (Aquarius) CPU & I/O CRU

The following are snapshots of the ftServer Management Console on an 6900 system. Follow the steps below to determine the CPU & I/O CRU configuration. In a 2900/4900/6900 system, the CPU (0) and I/O (10) are contained on one motherboard, within one CRU enclosure, and the CPU (1) and I/O (11) are contained on one motherboard, within one CRU enclosure.

You need the following information to properly order a replacement CPU & I/O CRU.

- CPU & I/O CRU enclosure part number
- AK processor kit part number and quantity
- Memory DIMM part number and quantity.
- PCI riser adapter part number.

Steps to determine CPU & I/O CRU configuration:

10. Expand ftServer Drivers.
11. Highlight System ID Prom – SystemIdProm.
12. In the right pane look for “ModelName”.

Note: The “ModelName” field will display the system P-package.
For System ID Prom – SystemIdProm  ModelName = P2900-1S  
Order Part: 062-03779-000 – 2900, CPU & I/O CRU Enclosure,  
(No Processors, Memory, PCI adapters, or SAS disk drives)  

For System ID Prom – SystemIdProm  ModelName = P4900-2S  
Order Part: 062-03778-000 – 4900, CPU & I/O CRU Enclosure,  
(No Processors, Memory, PCI adapters, or SAS disk drives)  

For System ID Prom – SystemIdProm  ModelName = P6900-2S  
Order Part: 062-03777-000 – 6900, CPU & I/O CRU Enclosure,  
(No Processors, Memory, PCI adapters, or SAS disk drives)  

PCI Riser is included)  

Verify the Processor model type and memory configuration.

4. Expand ftServer CPU Enclosures, then the online CPU 0 or 1  
5. Highlight the “Processor - 41”.  
6. In the right pane look for “Stepping” field and “Brand” field. Use the “Brand” field information and the “Stepping” field to determine processor kit required. The following is a reference between the “Brand” and “Stepping” field and the Processor kit part number.

Processor kits required are  
2900 = 1 socket @ 2.2GHz 10-CORE  1 CPU 062-03783-000  Silver 4114 2.2GHZ 10-CORE  
4900 = 2 socket @ 2.2GHz 10-CORE  2 CPU 062-03783-000  Silver 4114 2.2GHZ 10-CORE  
6900 = 2 socket @ 2.2GHz 16-CORE  2 CPU 062-03784-000. Gold 6127M 2.2GHZ 16-CORE
For CRU 062-03779-000 – 2900, CPU & I/O CRU Enclosure, ModelName = P2900-1S
  Order 1 CPU 062-03783-000  Silver 4114 2.2GHZ 10-CORE
  and your configured Memory.
  o M265 16gb 609-01688-000
  o M266 32gb 609-01689-000

For CRU 062-03778-000 – 4900, CPU & I/O CRU Enclosure, ModelName = P4900-2S
  Order 2 CPU 062-03783-000  Silver 4114 2.2GHZ 10-CORE
  and your configured Memory.
  o M265 16gb 609-01688-000
  o M266 32gb 609-01689-000

For CRU 062-03777-000 – 6900-2S, CPU & I/O CRU Enclosure, ModelName = 6900-2S
  Order 2 CPU 062-03784-000. Gold 6127M 2.2GHZ 16-CORE
  and your configured Memory.
  M266 32gb 609-01689-000
Memory options:

There are only two dimms on Aquarius 16gb & 32gb.
The high ONLY uses 32gb.

- M265 16gb 609-01688-000
- M266 32gb 609-01689-000
Memory options: See below

<table>
<thead>
<tr>
<th>Pegasus-B</th>
<th>Mktg ID</th>
<th>Part #</th>
<th>Vendor</th>
<th>Mfg Part #</th>
<th>Type</th>
<th>Speed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>M265</td>
<td>609-01688-000</td>
<td>NEC</td>
<td>M393A2K43BB1-CTD</td>
<td>RDIMM</td>
<td>2666MHz</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>M393A2K43CB2-CTD</td>
<td></td>
<td></td>
</tr>
<tr>
<td>32</td>
<td>M266</td>
<td>609-01689-000</td>
<td>NEC</td>
<td>M393A4K40BB2-CTD</td>
<td>RDIMM</td>
<td>2666MHz</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>M393A4K40CB2-CTD</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

If the State is “Online” then determine the part to order based on the size shown in the “SizeMb” field. The table above is a reference between the SizeMb and MfgPartNr fields and orderable part number.

For: SizeMb = 16384 Mb and SPDData: MfgPartNr M393A2K43BB1-CTD, or M393A2K43CB2-CTD
Order Part: 609-01688-000 DIMM, 16 GB DDR4

For: SizeMb = 32000 Mb and SPDData: MfgPartNr M393A4K40BB2-CTD, or M393A4K40CB2-CTD
Order Part: 609-01689-000 DIMM, 32 GB DDR4

For “DIMMs” which are Online, determine the quantity, slot configuration and size of memory DIMMs which are required to be ordered. Note: A yellow folder denotes online hardware and when the node is highlighted the left pane will display the Op State: State “Online or Empty”. In the example above DIMM - 1 is a 16384MB DIMM. All other “Online” DIMMs must also be determined in order to replicate the configuration of the CRU. In this system, “1, and 9” were determined to be 16384MB DIMMs, which means a memory configuration of 32GB. The Mfg Part number of a 16384MB DIMM M393A2K43BB1-CTD is Stratus part number 609-01688-000, quantity of 2.

Once the CPU & I/O CRU enclosure part number and memory DIMM part number, slot configuration and quantity is determined, a properly configured replacement 2810, 4810 and 6810 CPU & I/O CRU can be ordered.

Note: In the example given above the CPU – I/O CRU replacement order would include:

1 – 062-03777-000
2 – 062-03784-000
2 – 609-01688-000
PCI riser adapter (062-03724-000) please read carefully.

A PCI Riser Kit provides 2 additional high profile slots in addition to the low-profile slots on the motherboard.

. PCI riser adapters are excluded from the SystemIdProm ModelName = P2900-1S Part: 062-03779-000 2900, CPU & I/O CRU Enclosure and should not be ordered with the CRU.

. PCI riser adapters OPTIONAL components for the SystemIdProm ModelName = P4900-2S Part: 062-03778-000 – 4900, CPU & I/O CRU Enclosure
If you have a model 4900 and you also have a riser card

. PCI riser adapters are PRE-CONFIGURED components for the SystemIdProm ModelName = P6900-2S Part: 062-03777-000 – 6900, CPU & I/O CRU Enclosure
And should not be ordered with the CRU.

Notes:

13. The last three digits of the RU part number will change from -000 (initial release) to -0xx due to post release ECOs revisions and in most cases will compatible. LMS will reflect the orderable RU part number and compatibility.
14. If not specifically requested in LMS CRU part order, the following parts are expected to be swapped between defective CRU and replacement CRU: PCI adapters full and half height, Internal SAS Disks.
15. 1 processor (kit) configuration is valid for 2900 CPU &I/O CRU.
   Populated as "Processor – 41" in ftSMC.
16. 2 processor (kits) configuration is valid for 4900-2S and 6900-2S CPU &I/O CRU.
   Populated as "Processor – 41" and “Processor – 42” in ftSMC.
17. The DIMMs in the slots must be supplied by Stratus and memory population must conform to a Stratus supported configuration for the platform and model.
   Reference the Config specs noted below.
   DIMM slot location and size must match between processor 1 & 2 and CRU DIMM slots or a hardware configuration error will be detected. See config specs for details on configuration and max memory supported.
18. . PCI Slot Info – 1 and 2 in ftSMC, are the low profile slots which are PCI-E. PCI Slot Info –
   , 3 and 4 are the riser adapter PCI slots.
19. . PCI riser adapter is verified during CPU-I/O bring-up. If PCI riser configured different per CRU, a hardware compatibility mismatch will be detected and will not come into service.
20. . 2900, 4900, and 6900 part Illustrated list
21. . 2900, 4900, and 6900 Customer Manuals (StrataDoc)
22. . 2900/4900/6900 configuration specification ES-000185 – (Stratus access Only)
   https://stratustechnologies.sharepoint.com/f:/r/engineering/ftServer/Shared%20Documents/Configuration%20Specifications/Aquarius?csf=1
<table>
<thead>
<tr>
<th>Orderable Part Number</th>
<th>Description</th>
<th>ftServer Management Console key field for determining orderable part</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Backpanel Assembly Information</strong></td>
<td></td>
<td>ftServer Configuration &gt; Customer Info &gt; Model Name field also displayed when dbg is entered HARDWARE VERSION INFO ... - SYSTEM ModName</td>
</tr>
<tr>
<td>062-03782-000</td>
<td>Backpanel assy Model 2900-1S</td>
<td></td>
</tr>
<tr>
<td>062-03781-000</td>
<td>Backpanel assy Model 4900-2S</td>
<td></td>
</tr>
<tr>
<td>062-03780-000</td>
<td>Backpanel assy Model 6900-2S</td>
<td></td>
</tr>
<tr>
<td><strong>Other part Numbers:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Orderable Part Number</td>
<td>Description</td>
<td></td>
</tr>
<tr>
<td>062-03724-000</td>
<td>Riser PCI-E (Pegasus, Pegasus B, Aquarius)</td>
<td></td>
</tr>
<tr>
<td>062-03815-000</td>
<td>1.2 TB 10K RPM,</td>
<td>Storage Enclosure – 40 / Disk –x / Slot –x ProductID = ST1200MM0009</td>
</tr>
<tr>
<td>062-03819-000</td>
<td>600 GB 15K</td>
<td>Storage Enclosure – 40 / Disk –x / Slot –x ProductID = ST600MP0006</td>
</tr>
<tr>
<td>062-03817-000</td>
<td>800 GB SSD</td>
<td>Storage Enclosure – 40 / Disk –x / Slot –x ProductID = ST800FM0233</td>
</tr>
<tr>
<td>160-01748-000</td>
<td>U112A Qlogic QLE2670-E Single Port 16 Gb FC HBA w/8.03.06 FW</td>
<td>Enclosure - 10 or 11 / PCI Slot - x / PnPDescription[1] = QLogic Fibre Channel Adapter or PnPDeviceId[1] = pci\ven_1077&amp;dev_2031&amp;subsys_024111077</td>
</tr>
<tr>
<td>160-01741-000</td>
<td>U113 Intel I350T2V2 Dual Port 1 Gbit Copper Ethernet Adapter</td>
<td>Enclosure - 10 or 11 / PCI Slot - x / Ethernet controller – x PnPDescription[1] = Stratus I350 2-Port Copper Gigabit Adapter or PnPDeviceId[1] = pci\ven_8086&amp;dev_1521&amp;subsys_7135159c</td>
</tr>
<tr>
<td>160-01744-000</td>
<td>U114 LSI Logic 12Gb SAS 8-Port Host Bus Adapter (9300-4i4e) for tape</td>
<td></td>
</tr>
<tr>
<td>Model</td>
<td>Mktg ID</td>
<td>Part #</td>
</tr>
<tr>
<td>-----------</td>
<td>---------</td>
<td>------------</td>
</tr>
<tr>
<td>Aquarius</td>
<td></td>
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</tr>
<tr>
<td>size GB</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>M265</td>
<td>609-01688-000</td>
</tr>
<tr>
<td></td>
<td></td>
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</tr>
<tr>
<td>32</td>
<td>M266</td>
<td>609-01689-000</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 1: Memory Options for Aquarius
# Appendix 1. Windows to V-Series Conversion chart.

<table>
<thead>
<tr>
<th>Generation</th>
<th>Processor Family</th>
<th>Windows server model numbers</th>
<th>V-Series Server model numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>A</td>
<td>B</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5) Draco</td>
<td>Nehalem-EP</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Draco-W</td>
<td>Westmere</td>
<td>6310</td>
<td>2.63GHz</td>
</tr>
</tbody>
</table>

6) Cygnus  | Sandy Bridge    | 4710    | 2.66GHz |         |         |         |         |         |         |

7) Cygnus-I| Ivy Bridge      | 2710    | 2.55GHz | 6410    |         |         |         |         |         |

8) Pegasus | Haswell         | 2800    | 2.45GHz | 6800    | 2.35GHz | 2.35GHz | 2.35GHz | 2.35GHz | 2.35GHz |

9) Pegasus-B| Broadwell      | 2810    | 2.45GHz | 1.14GHz | 6810    | 2.25GHz | 2.25GHz | 2.25GHz | 2.25GHz |