

Sun Fire™ V20z and Sun Fire™ V40z Servers—Differences Between Server Versions

This document compares the released versions of the Sun Fire™ V20z and Sun Fire V40z servers. This document includes the following sections:

- [“Terms Used in This Document” on page 1](#)
- [“Product Updates, Documentation, Support, and Training” on page 2](#)
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Terms Used in This Document

FRU – Field replaceable units are components that Sun Service must replace.

CRU – Customer replaceable units are components that you can replace.

X-option – an additional (optional) component that you add to a system. X-options might include parts that do not come with a FRU or CRU, such as a CPU heatsink.

Sun Part Number (PN) – a number in the form XXX-XXXX-XX. If the last two digits are greater than -01, Sun updated the part. Abbreviated as XXX-XXXX.

Product Updates, Documentation, Support, and Training

Sun provides updates to documentation, drivers, firmware, and CD-ROM .iso images through the Sun web site. The web site also provides access to technical support and training services. Use the links below to access these Sun services.

TABLE 1 Customer URLs

Sun Function	URL
Documentation	http://www.sun.com/documentation/
Updates, including firmware, drivers, and CD-ROM .iso images	http://www.sun.com/servers/entry/v20z/downloads.jsp http://www.sun.com/servers/entry/v40z/downloads.jsp
Technical support	http://www.sun.com/service/contacting
Training	http://www.sun.com/training/
Solaris™ Operating System documentation	http://docs.sun.com
Warranty	http://www.sun.com/service/support/warranty/index.html

Within this document, either the first seven digits in part numbers are listed, or the part number is shown ending in -xx. The full 10-digit part number is not listed to ensure that you always refer to the latest released version of a part.

To determine whether you have the latest version of a Sun product, compare the last two digits of the product's part number on the web site to the part number on your version of the document. A higher number indicates a more current product.

Versions of the Servers

Sun released different versions of the Sun Fire V20z and Sun Fire V40z servers. Hardware and software components are not fully compatible between versions of each server. See [TABLE 2](#) for a list of hardware components and software to support released component configurations. See [TABLE 3](#) for additional information to identify the version of your server.

For more information on the differences between the servers, see *Sun Fire V20z and Sun Fire V40z Servers—User Guide*, available on the Sun documentation web site.

Note – The chassis FRU PN label is on the front panel of the server, near the DVD-ROM/Diskette Drive assembly.

Important notes regarding [TABLE 2](#):

- Sun recommends upgrading to the latest NSV for your system. See: <http://www.sun.com/downloads>
- Sun supports only the CPU stepping versions listed for each chassis.
- You cannot use CPU stepping versions C0 and CG for Sun Fire V20z systems with chassis FRU PN 380-1194.
- “E” stepping version CPUs require a heatsink revised for these higher wattage processors.

TABLE 2 Compatibility Between Components and Software for Each Server Version

Chassis FRU PN	Motherboard PN	Single or Dual Core	CPU Stepping Version	Required CPU VRM PN	Type of Memory DIMM DDR	Required Memory VRM PN	Minimum Required NSV	Minimum Required BIOS
Sun Fire V20z Server								
380-0979*	370-6730	S	C0	F370-6680	DDR 333	F370-6646	2.1.0.9f	1.27.11
380-1168	370-7691	S	CG	F370-6680	DDR 333	F370-6646	2.1.0.16b	1.30.5
380-1194	370-7788	S	E6, E4,	F370-7746	DDR 333 DDR 400	F370-7747	2.2.0.6h	1.32.7.2
380-1194	370-7788	S, D	E6, E4	F370-7746	DDR 333 DDR 400	F370-7747	2.3.0.11	1.33.5.2
380-1194	370-7788	S, D	E6, E4, E1	F370-7746	DDR 333 DDR 400	F370-7747	2.3.0.11c	1.33.7.2
380-1194	370-7788	S, D	E6, E4, E1	F370-7746	DDR 333 DDR 400	F370-7747	2.4.0.6	1.34.4.2
380-1194	370-7788	S, D	E6, E4, E1	F370-7746	DDR 333 DDR 400	F370-7747	2.4.0.8	1.34.6.2
380-1194	370-7788	S, D	E6, E4, E1	F370-7746	DDR 333 DDR 400	F370-7747	2.4.0.12	1.35.2.2
Sun Fire V40z Server								
380-1010	370-6929	S	CG	F370-6680	DDR 333	F370-6646	2.1.0.16b	2.22.4
380-1206	370-7808	S	E6, E1	F370-7746	DDR 333 DDR 400	F370-7747	2.2.0.6h	2.32.8.2
380-1206†	370-7808	S, D	E1	F370-7746	DDR 333 DDR 400	F370-7747	2.3.0.11	2.33.5.2
380-1206	370-7808	S, D	E4, E1	F370-7746	DDR 333 DDR 400	F370-7747	2.3.0.11c	2.33.7.2
380-1206	370-7808	S, D	E6, E4, E1, CG, C0	F370-7746	DDR 333 DDR 400	F370-7747	2.4.0.6	2.34.4.2
380-1206	370-7808	S, D	E6, E4, E1, CG, C0	F370-7746	DDR 333 DDR 400	F370-7747	2.4.0.8	2.34.6.2
380-1378	375-3438	S, D	E6, E4, E1, CG, C0	F371-1463	DDR 333 DDR 400	F371-1464	2.4.0.12	2.35.2.2

* FRU chassis PN 380-1168 is sent to replace chassis PN 380-0979 and PN 380-1168.

† Dual-core processors with E stepping version CPUs require NSV 1.3.0.1 (V20z) or 2.3.0.1 (V40z) or higher.

TABLE 3 Identifying the Version of Your Sun Fire V20z or Sun Fire V40z Server

Standard Configuration PN:				
Chassis FRU PN	Starts With	Ends With	XATO PN	Chassis Specific Notes
Sun Fire V20z server				
380-1168	A55	L, LDE, L-DE, L-E	A55D-AA	<ul style="list-style-type: none"> • Fan speed modulation enabled. • One BCM5704 dual GBE controller replaces two BCM5703 single GBE controllers.
380-1194	A55	M, MDE, M-DE, M-E, ME	A55E-AA	
Sun Fire V40z server				
380-1010	A57	7	A57A-AA	
380-1206	A57	A	A57B-AA	<ul style="list-style-type: none"> • Fan speed modulation enabled. • One BCM5704 dual GBE controller replaces two BCM5703 single GBE controllers.
380-1378	A57	7	A57C-AA	RoHS-5 compliant

CPU Options

Do not mix CPUs of different stepping versions or speeds in a single server. This includes CPUs installed on the optional Sun Fire V40z server CPU card. For more information, see [“Do Not Mix CPU Stepping Versions”](#) on page 7.

Due to the power requirements and height restrictions, stepping version “E” CPUs work only in the Sun Fire V20z server with chassis FRU PN 380-1194 and Sun Fire V40z server with chassis FRU PN 380-1206 or 380-1378.



Caution – A new heatsink ships for all stepping version “E” CPUs. Ensure that you do not use an older heatsink on a stepping version “E” CPU.

[TABLE 4](#) and [TABLE 5](#) list the CPU stepping versions and the associated CPU part numbers. Please refer to the definition for X-option and CRU in [“Terms Used in This Document”](#) on page 1

TABLE 4 Sun Fire V20z CPU Options and Part Numbers

	X-options	Customer-Replaceable Components PN
Single Core CPU		
Opteron 242, 1.6 GHz, C0 Stepping	No longer available	F370-6695-xx
Opteron 244, 1.8 GHz, C0 Stepping	No longer available	F370-6670-xx
Opteron 248, 2.2 GHz, C0 Stepping	No longer available	F370-6672-xx
Opteron 244, 1.8 GHz, CG Stepping	594-0368-xx	F370-6783-xx
Opteron 248, 2.2 GHz, CG Stepping	594-0369-xx	F370-6785-xx
Opteron 250, 2.4 GHz, CG Stepping	594-7579-xx	F370-6786-xx
Opteron 244, 1.8 GHz, E Stepping	594-0660-xx	F370-7710-xx
Opteron 248, 2.2 GHz, E Stepping	594-0661-xx	F370-7711-xx
Opteron 250, 2.4 GHz, E Stepping	594-0662-xx	F370-7712-xx
Opteron 252, 2.6 GHz, E Stepping	594-0371-xx	F370-7272-xx
Dual Core CPU		
Opteron DC 270, 2.0 GHz, E Stepping	594-1663-xx	F370-7799-xx
Opteron DC 275, 2.2 GHz, E Stepping	594-1664-xx	F370-7800-xx

TABLE 5 Sun Fire V40z CPU Options and Part Numbers

	X-options	Customer-Replaceable Components
Single Core CPU		
Opteron 844, 1.8 GHz, CG Stepping	595-7482-xx	F370-6902-xx
Opteron 848, 2.2 GHz, CG Stepping	595-7483-xx	F370-6904-xx
Opteron 850, 2.4 GHz, CG Stepping	595-7577-xx	F370-6939-xx
Opteron 848, 2.2 GHz, E4 Stepping	594-1099-xx	F370-7704-xx
Opteron 850, 2.4 GHz, E4 Stepping	594-2941-xx	F370-7705-xx
Opteron 852, 2.6 GHz, E4 Stepping	594-2942-xx	F370-7706-xx
Opteron 854, 2.8 GHz, E4 Stepping	594-2943-xx	F370-7961-xx
Opteron 856, 3.0 GHz, E4 Stepping	594-2944-xx	F371-1759-xx
Dual Core CPU		
Opteron DC 870, 2.0 GHz, E6 Stepping	594-1623-xx	F370-7796-xx
Opteron DC 875, 2.2 GHz, E6 Stepping	594-1622-xx	F370-7797-xx
Opteron DC 880, 2.4 GHz, E6 Stepping	594-2532-xx	F371-0291-xx
Opteron DC 885, 2.6 GHz, E6 Stepping	594-2946-xx	F371-1760-xx

Do Not Mix CPU Stepping Versions

The CPUs available for the Sun Fire V20z and Sun Fire V40z servers have different stepping versions and speeds.

Do not mix CPUs with different stepping versions or speeds in a single server, including CPUs installed on the optional Sun Fire V40z CPU card.

If you order a CPU X-option to add or replace a CPU in your server, order a CPU with the same stepping version and speed. Before ordering, verify the stepping version of your CPU(s) as described in:

[“Verifying the Stepping Version In a Local Server” on page 8](#)

[“Verifying the Stepping Version In a Remote Server” on page 9](#)

Verifying the Stepping Version In a Local Server

To verify the stepping version of your CPU(s) in a local server with KVM attached:

1. Power on or reboot your server.

A message similar to the following example displays on the screen, and the memory test begins.

This sample shows the output for a Sun Fire V20z server; the output for a Sun Fire V40z server is similar.

```
PhoenixBIOS 4.0 Release 6.0
Copyright 1985-2002 Phoenix Technologies Ltd.
All Rights Reserved
Production RELEASE: System BIOS Revision = V1.30.5
SP Interface (PRS) Revision = 92
SP - BIOS Interface Active

xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xx  Sun Microsystems  xx
xx    Sun Fire V20z   xx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

CPU = AMD Opteron(tm) Processor 250
2 Processors Detected, CG - CG
PCIX - Slot1: PCIX-66      Slot2: PCIX-133
4031M System RAM Passed
1024K Cache SRAM Passed
ATAPI CD-ROM: CD-224E
Mouse initialized
```

2. During the memory test, press the Pause key.

3. Verify the stepping version of the CPUs in the line, similar to one of the following examples:

```
2 Processors Detected, CG - CG
2 Processors Detected, E4 - E4
```

4. To continue with the reboot, press any key.

Verifying the Stepping Version In a Remote Server

To verify the stepping version of your CPU(s) in a remote server:

1. Enable the Serial-Over-Lan (SOL) feature on the SP.

For more information, refer to the “Serial Over LAN” section of the *Sun Fire V20z and Sun Fire V40z Servers—Server Management Guide*.

2. Start SOL session from a SP command-line interface (CLI) to connect to the platform console remotely.

3. Type the following command.

```
platform set console -s sp -e -S baud rate
```

where *baud rate* is the value that you set in the BIOS settings; the default baud rate in the BIOS settings is 9600.

For example, if the baud rate in your BIOS settings is set to the default value, you would type:

```
platform set console -s sp -e -S 9600
```

Note – This command changes the baud-rate value for the SP so that it matches the baud rate in the BIOS settings. It does not change the baud rate in the BIOS settings.

4. Type the following command:

```
platform get console
```

5. Verify that the correct baud rate displays in the Speed column. Using the example above, the output displays as follows:

Rear Panel	Console	Redirection	Speed	Pruning	Log	Trigger
SP Console	Enabled		9600	No	244	KB

6. Activate the SOL session by typing the following command:

```
platform console
```

7. Create another SP session from the SP prompt.
8. Re-cycle the power on the platform OS by typing the following command:

Note – Before you re-cycle the power, ensure that the platform OS is shut down gracefully, or that the file system has been synchronized using the `sync` command.

```
platform set power state cycle -W -f
```

9. In the SP SOL session that you launched in [Step 2](#), the output of the BIOS CPU step screen displays.

```
PhoenixBIOS 4.0 Release 6.0
Copyright 1985-2002 Phoenix Technologies Ltd.
All Rights Reserved
Production RELEASE: System BIOS Revision = V1.30.5
SP Interface (PRS) Revision = 92
SP - BIOS Interface Active

xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xx  Sun Microsystems   xx
xx    Sun Fire V20z   xx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

CPU = AMD Opteron(tm) Processor 250
2 Processors Detected, CG - CG
PCIX - Slot1: PCIX-66      Slot2: PCIX-133
4031M System RAM Passed
1024K Cache SRAM Passed
ATAPI CD-ROM: CD-224E
Mouse initialized
```

10. During the server's memory self-test, terminate the remote session to pause the screen:
 - a. Press Control-e.
 - b. Press the c key.
 - c. Press the period (.) key.

11. Verify the stepping version of the CPUs in the line, similar to one of the following examples:

```
2 Processors Detected, CG - CG  
2 Processors Detected, E4 - E4
```

Memory Options

Memory options vary between server versions for both the Sun Fire V20z and Sun Fire V40z. The memory options are listed in [TABLE 6](#).

TABLE 6 Memory Options and Part Numbers

Super FRU Chassis Part Number	Memory DIMM Part Number	Memory Description	Memory Type
Sun Fire V20z server			
380-0979	370-6643	1GB (2 x 512MB DDR DIMM)	DDR333/PC2700
	370-6644	2GB (2 x 1GB DDR DIMM)	DDR333/PC2700
	370-6645	4GB (2 x 2GB DDR DIMM)	DDR333/PC2700
380-1168	370-6643	1GB (2 x 512MB DDR DIMM)	DDR333/PC2700
	370-6644	2GB (2 x 1GB DDR DIMM)	DDR333/PC2700
	370-6645	4GB (2 x 2GB DDR DIMM)	DDR333/PC2700
380-1194	370-6643	1GB (2 x 512MB DDR DIMM)	DDR333/PC2700
	370-6644	2GB (2 x 1GB DDR DIMM)	DDR333/PC2700
	370-6645	4GB (2 x 2GB DDR DIMM)	DDR333/PC2700
	370-7804	1GB (2 x 512MB DDR DIMM)	DDR400/PC3200
	370-7805	2GB (2 x 1GB DDR DIMM)	DDR400/PC3200
	370-7806	4GB (2 x 2GB DDR DIMM)	DDR400/PC3200
Sun Fire V40z server			
380-1010	370-6643	1GB (2 x 512MB DDR DIMM)	DDR333/PC2700
	370-6644	2GB (2 x 1GB DDR DIMM)	DDR333/PC2700
	370-7063	4GB (2 x 2GB DDR DIMM)	DDR333/PC2700
380-1206	370-6643	1GB (2 x 512MB DDR DIMM)	DDR333/PC2700
	370-6644	2GB (2 x 1GB DDR DIMM)	DDR333/PC2700
	370-7063	4GB (2 x 2GB DDR DIMM)	DDR333/PC2700
	370-7804	1GB (2 x 512MB DDR DIMM)	DDR400/PC3200
	370-7805	2GB (2 x 1GB DDR DIMM)	DDR400/PC3200
	370-7806	4GB (2 x 2GB DDR DIMM)	DDR400/PC3200
380-1378	371-1457	1GB (2 x 512MB DDR DIMM)	DDR400/PC3200
	371-1458	2GB (2 x 1GB DDR DIMM)	DDR400/PC3200
	371-1459	4GB (2 x 2GB DDR DIMM)	DDR400/PC3200
	371-1460	8GB (2 x 4GB DDR DIMM)	DDR400/PC3200

Part Number: 817-7185-13

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