



Motherboards

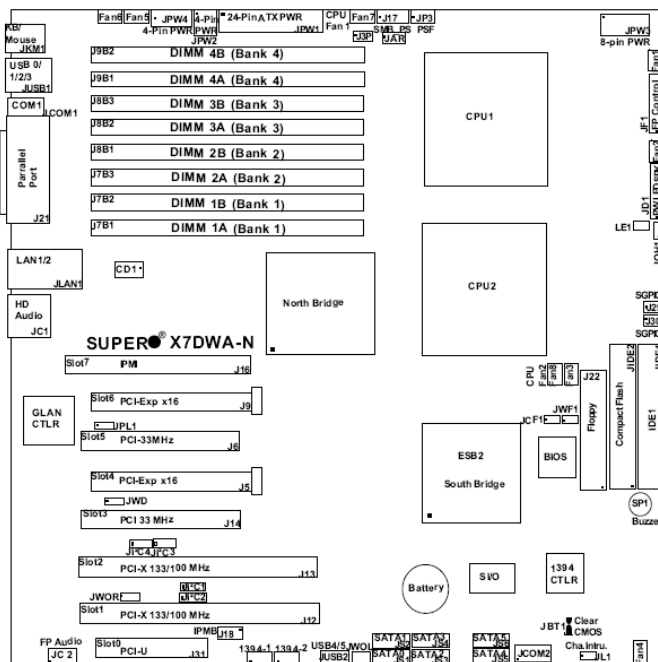
Supermicro X7DWA-N

Manufacture Supermicro

Product X7DWA-N

Link <http://www.supermicro.com/products/motherboard/Xeon1333/5400/X7DWA-N.cfm>

Monday, May 12, 2008 Rev B





Components

The following components were used at the time of testing

| | |
|----------------------|--|
| CPU | 2 x Dual-Core Intel® Xeon® Processors 5160 3.0GHz |
| or | 2 x Quad-Core Intel® Xeon® Processors 5310 1.6GHz |
| Memory | 2 x 1 GB DDR2 667 |
| or | 2 x Quad-Core Intel® Xeon® Processors 5462 2.8GHz |
| Memory | 4 x 2GB DDR2 800 |
| Graphics | Nvidia Quadro FX1700, ATI 2900 XT |
| Operating System | Windows XP SP2 |
| Bluefish444 Hardware | 2K Lust, HD Fury, SD Greed, SD Fidelity, |

Driver versions

| | |
|-----------------------------------|------------------------|
| Bios version | 1.0b |
| Driver package | N/A |
| Adaptec SCSI Controller - 39320A | v 7.0.0.6 |
| Adaptec SAS Controller – ASR 3805 | v 5.2.0.15317 |
| ATTO UL5D | winx86_drv_epci320_308 |
| Nvidia | Force ware 162.95 |
| ATI | 7.1 CATALYST |
| Bluefish444 Driver versions | 5.7.1.7 5.4.26.0 |
| Intel Chipset | 8.6.0.1006 |

DMA benchmarks

The following DMA performance was provided by the Bluefish444 DMA benchmark tool. DMA benchmarks measure a performance of transactions from the System memory to the target Bluefish444 card.

Pixel format tested, RGBA and RGB

| Card | Buss Type | DMA performance, MB per/sec | | | | | |
|-------------|--------------|-----------------------------|----------------|---------------|----------------|---------------|---------------|
| | | PCI-X Slot 1 | PCI-X Slot 2 | PCI-32 Slot 3 | PCI-EX Slot 4 | PCI 32 Slot 5 | PCI-EX Slot 6 |
| | | R= Reads W= Writes | | | | | |
| 2K Lust | PCI 64 66 | R 394 W 342 | R 393 W 341 | N/A | N/A | N/A | GPU |
| HD Fury | PCI 64 66 | R 394 W 342 | R 393 W 342 | N/A | N/A | N/A | GPU |
| SD Greed, | PCI 32 33/66 | R 200 W 201 | R 198 W 201 | R 95 W 101 | N/A | R 95 W 101 | GPU |
| SD Fidelity | PCI e 1 | N/A | N/A | N/A | R 125 W 129 | N/A | GPU |
| SD Prime | PCI e 1 | N/A | N/A | N/A | R 125 W 129 | N/A | GPU |

R = Read in MB per sec
W = Write in MB per sec



Configuration

The following table outlines the configuration types and storage configurations tested with this motherboard.

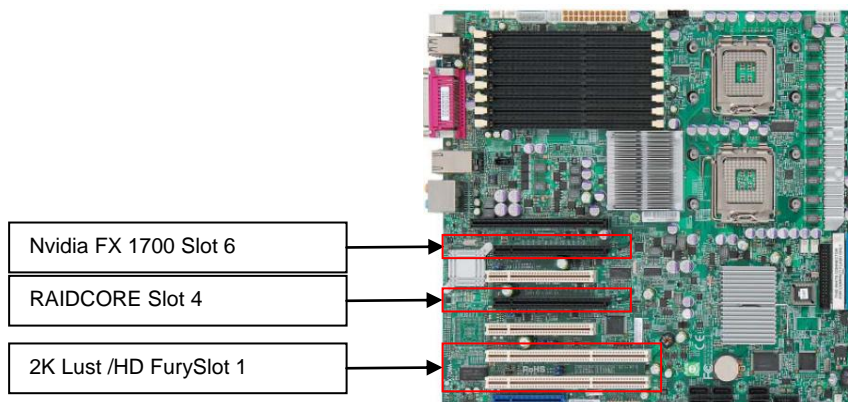
Storage and host controller configurations and applications are not confined to this table,

| | Card | Slot Type | Controller | Storage | Application |
|----------|-----------------|------------------|-------------------|-------------------------|--------------------|
| 1 | 2K LUST/HD FURY | PCI 64 | RAIDCORE | Ciprico MediaVault 5108 | HD, SD |
| 2 | 2K LUST/HD FURY | PCI 64 | ATTO UL5D | SCSI | 2K, HD, SD |
| 3 | 2K LUST/HD FURY | PCI 64 | ARECA (DULCE) | DULCE PRO RX | 2K, HD, SD |
| 4 | 2K LUST/HD FURY | PCI 64 | LSI SAS UIO | SAS | 2K, HD, SD |
| 5 | SD Greed | PCI 32 | LSI SAS UIO | SAS/SATA | SD |
| 6 | SD Greed | PCI 32 | ATTO UL5D | SCSI | SD |
| 7 | SD Greed | PCI 32 | Adaptec RAID 5805 | SAS/SATA | SD |
| 8 | SD Fidelity | PCI e | LSI SAS UIO | SAS/SATA | SD |



Configuration 1

| | | |
|----------------------|-----------------------------|--------|
| Bluefish444 hardware | 2K Lust/ HD Fury | Slot 1 |
| Controller | RAIDCORE | Slot 4 |
| Storage | Ciprico MediaValut 5108 | |
| Settings | Cache Read and Writes = Off | |
| | RAID 0 | |



| Video Resolution | Pixel format/File format | | | | |
|---------------------|---------------------------|--------------------------|---------------------|------------------|--------------------|
| | 10 bit RGB DPX/Cineon* | 10 bit v210 QuickTime | 8bit RGBA TARGA* | 8 bit YUV AVI | 8 bit YUV MPEG2 |
| NTSC | Y | Y | Y | Y | Y |
| PAL | Y | Y | Y | Y | Y |
| 1920 x 1080 @ 23.98 | Y | Y | Y | Y | Y |
| 1920 x 1080 @ 24 | Y | Y | Y | Y | Y |
| 1920 x 1080 @ 25 | Y | Y | Y | Y | Y |
| 1920 x 1080 @ 29.97 | Y | Y | Y | Y | Y |
| 1920 x 1080 @ 30 | Y | Y | Y | Y | Y |
| 1280 x 720 @ 59.94 | Y | Y | Y | Y | Y |
| 1280 x 720 @ 60.00 | Y | Y | Y | Y | Y |
| 2048 x 1080 @ 24 | N | NA | NA | NA | NA |
| HSDL | N | NA | NA | NA | NA |

NA = Not Applicable
N = Not Supported

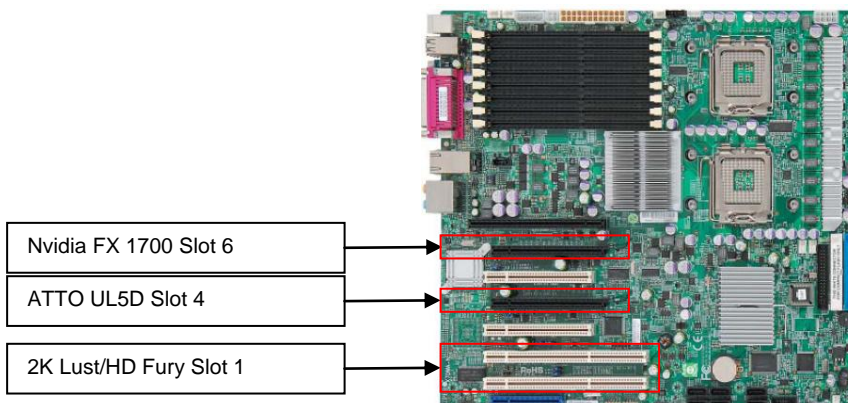


Configuration 2

Bluefish444 hardware
Controller
Storage

2K Lust
ATTO Tech UL5D
Proavio R14HDS

Slot 1
Slot 4



| Video Resolution | Pixel format/File format | | | | |
|---------------------|---------------------------|--------------------------|---------------------|------------------|--------------------|
| | 10 bit RGB DPX/Cineon* | 10 bit v210 QuickTime | 8bit RGBA TARGA* | 8 bit YUV AVI | 8 bit YUV MPEG2 |
| NTSC | Y | Y | Y | Y | Y |
| PAL | Y | Y | Y | Y | Y |
| 1920 x 1080 @ 23.98 | Y | Y | Y | Y | Y |
| 1920 x 1080 @ 24 | Y | Y | Y | Y | Y |
| 1920 x 1080 @ 25 | Y | Y | Y | Y | Y |
| 1920 x 1080 @ 29.97 | Y | Y | Y | Y | Y |
| 1920 x 1080 @ 30 | Y | Y | Y | Y | Y |
| 1280 x 720 @ 59.94 | Y | Y | Y | Y | Y |
| 1280 x 720 @ 60.00 | Y | Y | Y | Y | Y |
| 2048 x 1080 @ 24 | Y | NA | NA | NA | NA |
| HSDL | Y | NA | NA | NA | NA |

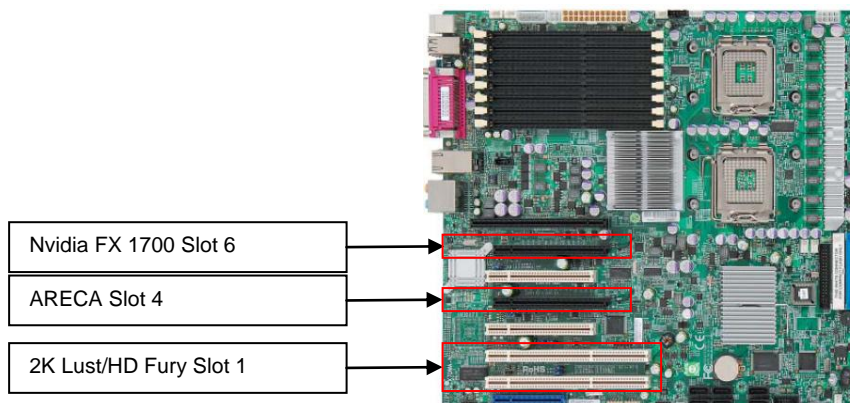
NA = Not Applicable

N = Not Supported



Configuration 3

| | | |
|----------------------|---------------|--------|
| Bluefish444 hardware | 2K Lust | Slot 1 |
| Controller | ARECA (DULCE) | Slot 4 |
| Storage | DULCE PRO RX | |
| Settings | RAID 5/RAID 0 | |



| Video Resolution | Pixel format/File format | | | | |
|---------------------|---------------------------|--------------------------|---------------------|------------------|--------------------|
| | 10 bit RGB DPX/Cineon* | 10 bit v210 QuickTime | 8bit RGBA TARGA* | 8 bit YUV AVI | 8 bit YUV MPEG2 |
| NTSC | Y | Y | Y | Y | Y |
| PAL | Y | Y | Y | Y | Y |
| 1920 x 1080 @ 23.98 | Y | Y | Y | Y | Y |
| 1920 x 1080 @ 24 | Y | Y | Y | Y | Y |
| 1920 x 1080 @ 25 | Y | Y | Y | Y | Y |
| 1920 x 1080 @ 29.97 | Y | Y | Y | Y | Y |
| 1920 x 1080 @ 30 | Y | Y | Y | Y | Y |
| 1280 x 720 @ 59.94 | Y | Y | Y | Y | Y |
| 1280 x 720 @ 60.00 | Y | Y | Y | Y | Y |
| 2048 x 1080 @ 24 | Y | NA | NA | NA | NA |
| HSDL | Y | NA | NA | NA | NA |

NA = Not Applicable

N = Not Supported

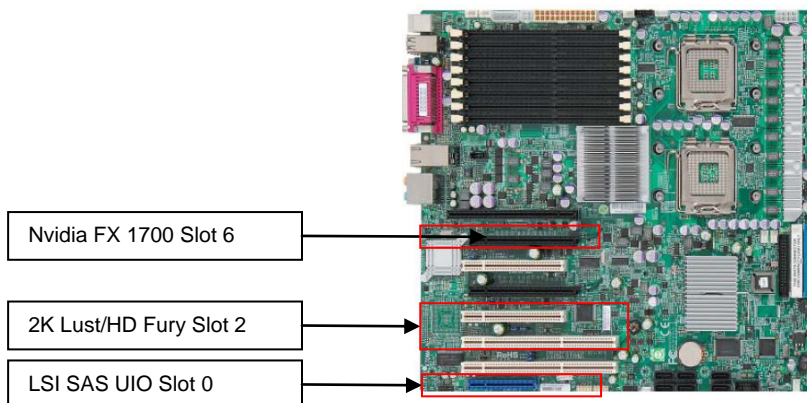


Configuration 4

Bluefish444 hardware
Controller
Storage

2K Lust
LSI SAS UIO
8 X SAS 80 GB SCSI RAID 0

Slot 2
Slot 0

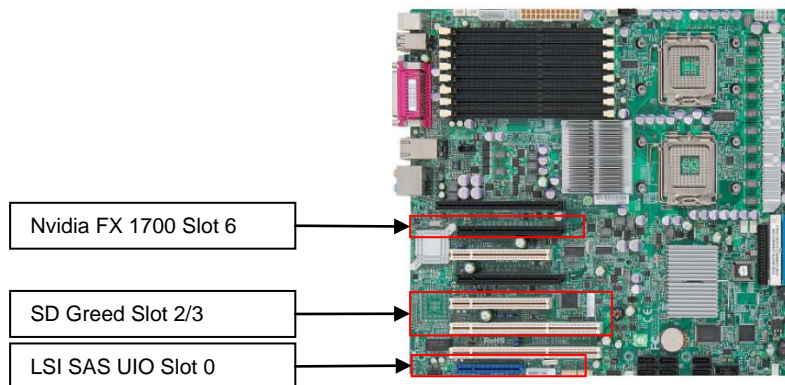


| Single Stream I/O results (Symmetry) Video Resolution | Pixel format/File format | | | | |
|--|--------------------------|-----------------------|------------------|---------------|-----------------|
| | 10 bit RGB DPX/Cineon* | 10 bit v210 QuickTime | 8bit RGBA TARGA* | 8 bit YUV AVI | 8 bit YUV MPEG2 |
| NTSC | Y | Y | Y | Y | Y |
| PAL | Y | Y | Y | Y | Y |
| 1920 x 1080 @ 23.98 | Y | Y | Y | Y | Y |
| 1920 x 1080 @ 24 | Y | Y | Y | Y | Y |
| 1920 x 1080 @ 25 | Y | Y | Y | Y | Y |
| 1920 x 1080 @ 29.97 | Y | Y | Y | Y | Y |
| 1920 x 1080 @ 30 | Y | Y | Y | Y | Y |
| 1280 x 720 @ 59.94 | Y | Y | Y | Y | Y |
| 1280 x 720 @ 60.00 | Y | Y | Y | Y | Y |
| 2048 x 1080 @ 24 | N | NA | NA | NA | NA |
| HSDL | Y | NA | NA | NA | NA |



Configuration 5

| | | |
|----------------------|--------------------------------------|----------|
| Bluefish444 hardware | SD Greed | Slot 2/3 |
| | (applies to all PCI 32 bit products) | |
| Controller | LSI SAS UIO | Slot 0 |
| Storage | 8 X SAS 80 GB SCSI RAID 0 | |



| Single Stream I/O results (Symmetry) Video Resolution | Pixel format/File format | | | | |
|--|---------------------------|--------------------------|---------------------|------------------|--------------------|
| | 10 bit RGB DPX/Cineon* | 10 bit v210 QuickTime | 8bit RGBA TARGA* | 8 bit YUV AVI | 8 bit YUV MPEG2 |
| NTSC | Y | Y | Y | Y | Y |
| PAL | Y | Y | Y | Y | Y |

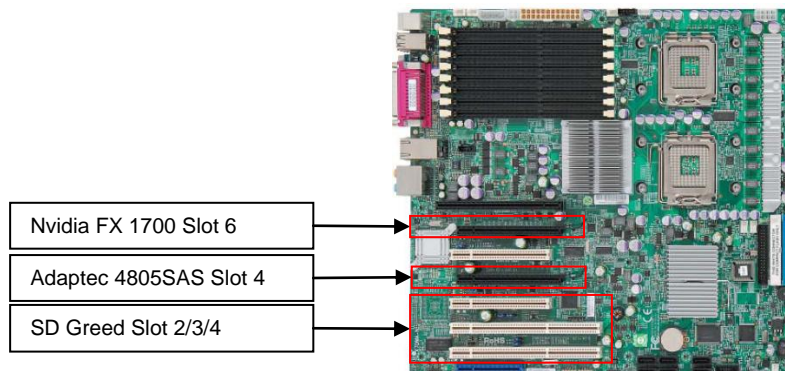
Configuration notes

This configuration can also support multiple SD PCI 32 cards when using ht U I/O slot



Configuration 6

| | | |
|----------------------|--------------------------------------|------------|
| Bluefish444 hardware | SD Greed | Slot 2/3/4 |
| | (applies to all PCI 32 bit products) | |
| Controller | Adaptec 4805SAS | Slot 4 |
| Storage | 8 X SAS 80 GB RAID 0 | |
| | 8 X SATA | |



| Single Stream I/O results (Symmetry) | Pixel format/File format | | | | |
|--------------------------------------|--------------------------|-----------------------|------------------|---------------|-----------------|
| | 10 bit RGB DPX/Cineon* | 10 bit v210 QuickTime | 8bit RGBA TARGA* | 8 bit YUV AVI | 8 bit YUV MPEG2 |
| Video Resolution | | | | | |
| NTSC | Y | Y | Y | Y | Y |
| PAL | Y | Y | Y | Y | Y |

Configuration notes

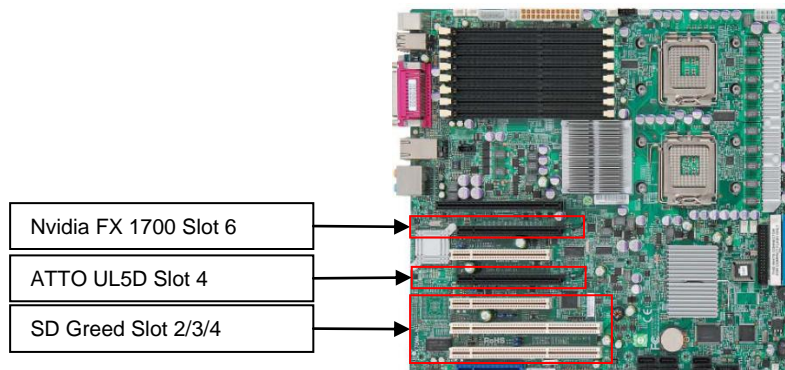
This configuration can also support multiple SD PCI 32 cards when using a PCI e controller.

Support of up to 3 PCI 32 bit cards are achievable



Configuration 7

| | | |
|----------------------|--|------------|
| Bluefish444 hardware | SD Greed (applies to all PCI 32 bit products) | Slot 2/3/4 |
| Controller | ATTO UL5D | Slot 4 |
| Storage | 8 X SAS 80 GB SCSI RAID 0 8 X SATA | |



| Single Stream I/O results (Symmetry) Video Resolution | Pixel format/File format | | | | |
|--|---------------------------|--------------------------|---------------------|------------------|--------------------|
| | 10 bit RGB DPX/Cineon* | 10 bit v210 QuickTime | 8bit RGBA TARGA* | 8 bit YUV AVI | 8 bit YUV MPEG2 |
| NTSC | Y | Y | Y | Y | Y |
| PAL | Y | Y | Y | Y | Y |

Configuration notes

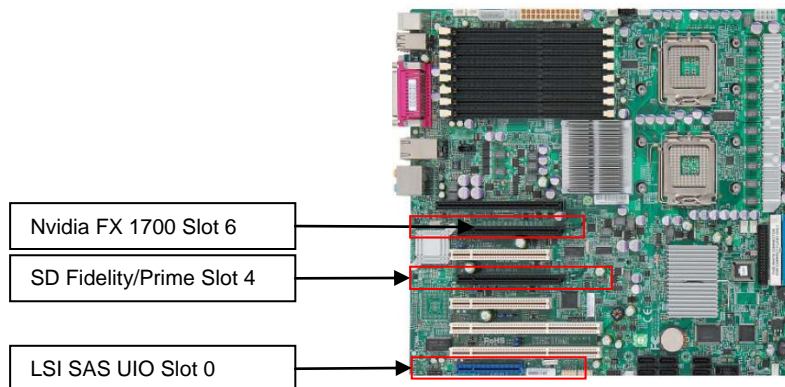
This configuration can also support multiple SD PCI 32 cards when using a PCI e controller.

Support of up to 3 PCI 32 bit cards are achievable



Configuration 8

| | | |
|----------------------|---------------------------|--------|
| Bluefish444 hardware | SD Fidelity | Slot 2 |
| | SD Prime | |
| Controller | LSI SAS UIO | Slot 0 |
| Storage | 8 X SAS 80 GB SCSI RAID 0 | |
| | 8 X SATA 150 GB | |



| Single Stream I/O results (Symmetry) Video Resolution | Pixel format/File format | | | | |
|--|---------------------------|--------------------------|---------------------|------------------|--------------------|
| | 10 bit RGB DPX/Cineon* | 10 bit v210 QuickTime | 8bit RGBA TARGA* | 8 bit YUV AVI | 8 bit YUV MPEG2 |
| NTSC | Y | Y | Y | Y | Y |
| PAL | Y | Y | Y | Y | Y |



Notes

Capture Tests Procedures for Symmetry

For each video mode for each file format

5 X 5 minute captures
5 X 20 minute captures
1 X 45 minute capture

Performance disclaimer

Capture and playback performance will vary between applications due to the way in which applications utilize storage and the effects of fragmentation. Therefore, while we guarantee these performance figures for this configuration we do not guarantee that you will be able to replicate this performance with other applications or systems. These results should be used as a guide to system performance with the above applications at the time of testing.