

# Supermicro X7DB8



• Xeon Dual-Core Blackford SCSI / SATA ServerBoard

## Key Features

1. Quad & Dual Core Intel® 64-bit Xeon® Support, 667 / 1066 / 1333MHz FSB
2. Intel® 5000P (Blackford) Chipset
3. Up to 32GB DDR2 667 & 533 SDRAM Fully Buffered DIMM (FB-DIMM)
4. Intel® (ESB2/Gilgal) 82563EB Dual-port Gigabit Ethernet Controller
5. Adaptec AIC-7902 Dual Channel Ultra320 SCSI Controller
6. 6x SATA 3.0Gbps Ports via ESB2 SATA Controller
7. 2 (x8) & 1 (x4) PCI-Express, 2x 64-bit 133MHz PCI-X, 1x 64-bit 100MHz PCI-X
8. Zero-Channel RAID Support
9. ATI ES1000 Graphics with 16MB video memory
10. SIMLP IPMI 2.0

## Product SKUs

- |             |                                |
|-------------|--------------------------------|
| MBD-X7DB8-O | • X7DB8 (Standard Retail Pack) |
| MBD-X7DB8-B | • X7DB8 (Bulk Pack)            |

## Physical Stats

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|-------------|----------------------------------|
| Form Factor | • Extended ATX                   |
| Dimensions  | • 12" x 13.05" (30.5cm x 33.2cm) |

## Processor/Cache

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|-----|--|
| CPU | <ul style="list-style-type: none"> <li>• Dual 771-pin LGA Sockets</li> <li>• Supports up to two Intel® 64-bit Xeon® processor(s) of the same type below: <ul style="list-style-type: none"> <li>○ <b>Quad-Core Intel® Xeon® Processor 5300 sequence (Clovertown processor) up to 2.66 GHz</b></li> <li>○ <b>Dual-Core Intel® Xeon® Processor 5100/5000 sequence (Woodcrest/Dempsey processor) up to 3.73 GHz</b></li> <li>○ <b>NOTE: Motherboard PCB revision 2.0 or above is required to support Xeon® 5100 (Woodcrest) processors</b></li> </ul> </li> </ul> |
|-----|--|

## Chassis ( Optimized for X7DB8 )

- |                         |  |
|-------------------------|--|
| 2U Chassis              | <ul style="list-style-type: none"> <li>• <a href="#">CSE-825S2-R700LPV</a></li> <li>• <a href="#">CSE-825S2-560LPV</a></li> <li>• <a href="#">CSE-825S2-560RCV</a></li> <li>• <a href="#">CSE-825S2-R700RCV</a></li> <li>• <a href="#">CSE-823S-550LP</a></li> </ul>   |
| 3U Chassis              | <ul style="list-style-type: none"> <li>• <a href="#">CSE-836S2-R800V</a></li> <li>• <a href="#">CSE-833S2-R760</a></li> <li>• <a href="#">CSE-833S-R760</a></li> <li>• <a href="#">CSE-833S2-550</a></li> <li>• <a href="#">CSE-833S-550</a></li> <li>• <a href="#">CSE-933S1-R760</a></li> <li>• <a href="#">CSE-933S2-R760</a></li> </ul>                    |
| Tower / 4U Rackmount    | <ul style="list-style-type: none"> <li>• <a href="#">CSE-745S2-R800</a></li> <li>• <a href="#">CSE-745S2-800</a></li> <li>• <a href="#">CSE-743S2-R760</a></li> <li>• <a href="#">CSE-743S1-R760</a></li> <li>• <a href="#">CSE-743S2-650</a></li> <li>• <a href="#">CSE-743S1-650</a></li> <li>• <a href="#">CSE-743S1-645</a> (FAN-0091 Required)</li> </ul> |
| Important Chassis Notes | <ul style="list-style-type: none"> <li>• To ensure system stability, a 500W (minimum) ATX power supply [4-pin (+12V), 8-pin (+12V) and 24-pin are required]</li> </ul>   |

## Expansion Slots

- |             |  |
|-------------|--|
| PCI-Express | <ul style="list-style-type: none"> <li>• 2 (x8) PCI-e slots</li> <li>• 1 (x4) PCI-e (using x8) slot</li> <li>• 1 SEPC (Supermicro PCI-e Power Connector) slot for 2U active riser</li> </ul> |
|-------------|--|

System Bus	<ul style="list-style-type: none"> <li>1333 / 1066 / 667 MHz system bus</li> </ul>	cards with a power extension (i.e. CSE-RR2UE-AX)
Operating System Software	<ul style="list-style-type: none"> <li>Supports 64-bit Operating Systems</li> <li>Supports 32-bit Operating Systems</li> </ul>	<ul style="list-style-type: none"> <li>2x 64-bit 133MHz PCI-X (3.3V) slots</li> <li>1x 64-bit 100MHz PCI-X (3.3V) slot</li> </ul>

### System Memory

Memory Capacity	<ul style="list-style-type: none"> <li>Eight 240-pin DIMM sockets</li> <li>Supports up to 32 GB 667 / 533MHz DDR2 ECC FB-DIMM memory</li> <li>Dual branch memory bus</li> <li>Memory must be populated in pairs</li> <li>Memory Mirroring supported</li> </ul>
Memory Type	<ul style="list-style-type: none"> <li>667 / 533MHz FB-DIMM (Fully Buffered DIMM) ECC DDR2 SDRAM 72-bit, 240-pin gold-plated DIMMs</li> </ul>
DIMM Sizes	<ul style="list-style-type: none"> <li>512 MB, 1GB, 2GB, 4GB</li> </ul>
Memory Voltage	<ul style="list-style-type: none"> <li>1.8 V only</li> <li>1.5V(AMB)</li> </ul>
Error Detection	<ul style="list-style-type: none"> <li>Corrects single-bit errors</li> <li>Detects double-bit errors (using ECC memory)</li> <li>Supports Intel® x4 and x8 Single Device Data Correction (SDDC)</li> </ul>

### On-Board Devices

Chipset	<ul style="list-style-type: none"> <li>Intel® 5000P (Blackford) chipset</li> <li>MCH + PXH + ESB2</li> </ul>
SCSI	<ul style="list-style-type: none"> <li>Adaptec AIC-7902 Controller</li> <li>Dual-Channel Ultra320 SCSI (Host RAID only supports 4 drives)</li> <li>Host RAID 0, 1, &amp; 10 support</li> </ul>
RAID	<ul style="list-style-type: none"> <li>Support for Zero-Channel RAID with Supermicro All-In-One-ZCR Card: <a href="#">AOC-LPZCR1</a> or <a href="#">AOC-LPZCR2</a></li> <li>Optional: (Card not included)</li> <li>RAID 0, 1, 5, 10</li> </ul>
SATA	<ul style="list-style-type: none"> <li>Intel ESB2 SATA 3.0Gbps Controller</li> <li>RAID 0, 1, 5, 10 support</li> </ul>

### System BIOS

BIOS Type	<ul style="list-style-type: none"> <li>8Mb Flash EEPROM with Phoenix® BIOS</li> </ul>
BIOS Features	<ul style="list-style-type: none"> <li>Plug and Play (PnP)</li> <li>SMBIOS 2.3</li> <li>DMI 2.1</li> <li>PCI 2.2</li> <li>ACPI 1.0</li> <li>USB Keyboard support</li> <li>Hardware BIOS Virus protection</li> </ul>

### Management

Software	<ul style="list-style-type: none"> <li>Optional IPMI (Intelligent Platform Management Interface) 2.0</li> <li><a href="#">Super Doctor III</a></li> <li>Watch Dog</li> <li>NMI</li> </ul>
Power Configurations	<ul style="list-style-type: none"> <li>ACPI Power Management</li> <li>Main Switch Override Mechanism</li> <li>Wake-On-Ring (WOR) header</li> <li>Wake-On-LAN (WOL) header</li> <li>Power-on mode for AC power recovery</li> <li>Internal / External modem remote ring-on</li> </ul>

### PC Health Monitoring

CPU	<ul style="list-style-type: none"> <li>Monitors for CPU Cores, +3.3V, +5V, +5V Standby, &amp; ±12V</li> <li>5-Phase-switching voltage regulator with auto-sense from 0.8375V-1.60V</li> </ul>
FAN	<ul style="list-style-type: none"> <li>Total of four 3-pin and four 4-pin fan headers supporting up to 8 fans</li> <li>8x fans with tachometer status monitoring</li> <li>Status monitor for speed control</li> <li>Status monitor for on/off control</li> <li>Low noise fan speed control</li> <li>Pulse Width Modulated (PWM) fan connectors</li> </ul>
Temperature	<ul style="list-style-type: none"> <li>Monitoring for CPU and chassis environment</li> <li>CPU thermal trip support</li> <li>Thermal Control for 8x fan connectors</li> </ul>

IPMI	<ul style="list-style-type: none"> <li>• Support for Intelligent Platform Management Interface v.2.0</li> <li>• 200-pin IPMI slot (SIMLP)</li> <li>• <b>(Optional: AOC-SIMLP)</b></li> </ul>
Network Controllers	<ul style="list-style-type: none"> <li>• Intel® (ESB2/Gilgal) 82563EB Dual-Port Gigabit Ethernet Controller</li> <li>• Supports 10BASE-T, 100BASE-TX, and 1000BASE-T, RJ45 output</li> <li>• Intel® I/OAT support for fast, scalable, and reliable networking</li> </ul>
Graphics	<ul style="list-style-type: none"> <li>• ATI ES1000 controller with 16 MB of video memory</li> </ul>
Super I/O	<ul style="list-style-type: none"> <li>• Winbond 83627HG chip</li> </ul>

LED	<ul style="list-style-type: none"> <li>• PSU I<sup>2</sup>C temperature sensing logic</li> <li>• Thermal Monitor 2 (TM2) support</li> <li>• CPU / System Overheat LED</li> </ul>
Other Features	<ul style="list-style-type: none"> <li>• Chassis intrusion detection</li> <li>• Chassis intrusion header</li> <li>• SDDC Support</li> </ul>

### Operating Environment / Compliance

RoHS	 <ul style="list-style-type: none"> <li>• <a href="#"><u>RoHS Compliant 5/6, Server Exemption</u></a></li> </ul>
Environmental Spec.	<ul style="list-style-type: none"> <li>• Operating Temperature: 10° to 35° C (50° to 95° F)</li> <li>• Non-operating Temperature: -40° to 70° C (-40° to 158° F)</li> <li>• Operating Relative Humidity: 8% to 90% (non-condensing)</li> <li>• Non-operating Relative Humidity: 5 to 95% (non-condensing)</li> </ul>

### Input / Output

Serial ATA	<ul style="list-style-type: none"> <li>• Six Serial ATA ports</li> <li>• Six SATA hard drives supported</li> </ul>
IDE	<ul style="list-style-type: none"> <li>• Single EIDE channel supports up to two UDMA IDE devices (IDE-M, IDE-S) including CF(Compact Flash) Card</li> <li>• Compact Flash (40-pin connector, IDE 1, single channel) slot</li> <li>• Supports UDMA Mode 5, PIO Mode 4, and ATA/100</li> </ul>
Floppy	<ul style="list-style-type: none"> <li>• 1 Floppy controller; 1.44 MB, 2.88 MB</li> </ul>
LAN	<ul style="list-style-type: none"> <li>• 2x RJ45 LAN ports</li> </ul>
USB	<ul style="list-style-type: none"> <li>• 2x USB rear ports</li> <li>• 3x USB internal headers</li> <li>• Total 5 USB 2.0 Compliant / 1.1 Compliant</li> </ul>
VGA	<ul style="list-style-type: none"> <li>• 1x VGA Port</li> </ul>
Keyboard / Mouse	<ul style="list-style-type: none"> <li>• PS/2 keyboard and mouse ports</li> </ul>
Serial Port / Header	<ul style="list-style-type: none"> <li>• 1 Fast UART 16550 serial port</li> <li>• 1 Fast UART 16550 serial header</li> </ul>
Parallel Port	<ul style="list-style-type: none"> <li>• 1 ECP / EEP parallel port</li> </ul>

### OS Compatibility

- Please see our [\*\*OS Compatibility Chart\*\*](#)

## Parts List

### Parts List

	Part Number	Qty	Description
<b>X7DB8</b>	MBD-X7DB8-O	1	X7DB8 Motherboard
<b>Manual(s)</b>	<a href="#">MNL-0832</a>	1	<a href="#">Motherboard Manual for X7DB8</a>
	MNL-0669	1	Ultra 320 SCSI Manual
<b>I/O Cables</b>	CBL-0010L-01	1	9-pin Serial Port Cable
	CBL-0022L	1	ATX Floppy Cable
	CBL-0034L-U320	1	LVD, Ultra320 SCSI Cable
	CBL-0036L-02	1	ATA 66/100 IDE LP Cable
	CBL-0044L	4	2ft. Amphenol, SATA Cable
	CBL-0083L	1	2-Port USB Cable
<b>Driver Disk</b>	CDR-X7 1.02	1	Version 1.02 CD or later
<b>I/O Shield</b>	CSE-PT07L	1	Motherboard I/O Shield