

X7DBE+

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■ 16-DIMM Xeon Dual-Core Blackford ServerBoard

Key Features

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

Links & Resources

- ▶ [Tested Memory List](#)
- ▶ [Motherboard Manual](#)
- ▶ [Update Your BIOS](#)
- ▶ [Download the Latest Drivers and Utilities](#)



Specifications

Product SKUs

- MBD-X7DBE+-O** ■ X7DBE+ (Standard Retail Pack)
- MBD-X7DBE+-B** ■ X7DBE+ (Bulk Pack)

Physical Stats

- Form Factor** ■ Enhanced Extended ATX
- Dimensions** ■ 13.68" x 13" (34.7cm x 33cm)

Processor/Cache

- Dual 771-pin LGA Sockets
- Supports up to two **Intel® 64-bit Xeon®** processor(s) of the same type below:
 - **Quad-Core Intel® Xeon® Processor 5400/5300 sequence (Harpertown /Clovertown processor)** up to 3.16 GHz
 - **Dual-Core Intel® Xeon® Processor 5200/5100/5000 sequence (Wolfdale /Woodcrest/Dempsey processor)** up to 3.40 GHz
 - NOTE: Motherboard PCB revision 2.0 or above is required to support Xeon® 5100 (Woodcrest) processors

- System Bus** ■ 1333 / 1066 / 667 MHz system bus

Chassis (Optimized for X7DBE+)

- 2U Chassis**
 - [CSE-825TQ-R700LPV](#)
 - [CSE-825TQ-560RCV](#)
 - [CSE-825TQ-R700RCV](#)
- Tower / 4U Rackmount**
 - [CSE-745TQ-R800](#)
 - [CSE-745TQ-800](#)
- Important Chassis Notes**
 - To ensure system stability, a 700W (minimum) ATX power supply [4-pin (+12V), 8-pin (+12V) and 24-pin are required]

Expansion Slots

- PCI-Express**
 - 2 (x8) PCI-e slots
 - 1 (x4) PCI-e (using x8) slot
 - 1 SEPC (Supermicro PCI-e Power Connector) slot for 2U active riser cards with a power extension (i.e. CSE-RR2UE-AX)
- PCI-X**
 - 2x 64-bit 133MHz PCI-X (3.3V) slots
 - 1x 64-bit 100MHz PCI-X (3.3V) slot

System BIOS

- BIOS Type**
 - 8Mb Flash EEPROM with Phoenix® BIOS
- BIOS Features**
 - Plug and Play (PnP)
 - SMBIOS 2.3
 - DMI 2.1
 - PCI 2.2
 - ACPI 1.0

Operating System Software	<ul style="list-style-type: none"> Supports 64-bit Operating Systems Supports 32-bit Operating Systems
System Memory	
Memory Capacity	<ul style="list-style-type: none"> Sixteen 240-pin DIMM sockets Supports up to 64 GB 667 / 533MHz DDR2 ECC FB-DIMM memory Dual branch memory bus Memory must be populated in pairs Memory Mirroring supported
Memory Type	<ul style="list-style-type: none"> 667 / 533MHz FB-DIMM (Fully Buffered DIMM) ECC DDR2 SDRAM 72-bit, 240-pin gold-plated DIMMs
DIMM Sizes	<ul style="list-style-type: none"> 512 MB, 1GB, 2GB, 4GB
Memory Voltage	<ul style="list-style-type: none"> 1.8V only 1.5V(AMB)
Error Detection	<ul style="list-style-type: none"> Corrects single-bit errors Detects double-bit errors (using ECC memory) Supports Intel® x4 and x8 Single Device Data Correction (SDDC)
On-Board Devices	
Chipset	<ul style="list-style-type: none"> Intel® 5000P (Blackford) chipset MCH + PXH + ESB2
SATA	<ul style="list-style-type: none"> Intel ESB2 SATA 3.0Gbps Controller RAID 0, 1, 5, 10 support (Windows Only) RAID 0, 1, 10 support (Linux)
IPMI	<ul style="list-style-type: none"> Support for Intelligent Platform Management Interface v.2.0 200-pin IPMI slot (SIMLP) (Optional: AOC-SIMLP-B(+)) (Optional: AOC-SIMLP-3(+)) with 3rd LAN support
Network Controllers	<ul style="list-style-type: none"> Intel® (ESB2/Gilgal) 82563EB Dual-Port Gigabit Ethernet Controller Supports 10BASE-T, 100BASE-TX, and 1000BASE-T, RJ45 output Intel® VOAT support for fast, scalable, and reliable networking
Graphics	<ul style="list-style-type: none"> ATI ES1000 controller with 16 MB of video memory
Super I/O	<ul style="list-style-type: none"> Winbond 83627HG chip
Input / Output	
Serial ATA	<ul style="list-style-type: none"> Six Serial ATA ports Six SATA hard drives supported
IDE	<ul style="list-style-type: none"> Single EIDE channel supports up to two UDMA IDE devices (IDE-M, IDE-S) including CF(Compact Flash) Card Compact Flash (40-pin connector, IDE 1, single channel) slot Supports UDMA Mode 5, PIO Mode 4, and ATA/100
Floppy	<ul style="list-style-type: none"> 1 Floppy controller; 1.44 MB, 2.88 MB
LAN	<ul style="list-style-type: none"> 2x RJ45 LAN ports
USB	<ul style="list-style-type: none"> 2x USB rear ports 3x USB internal headers Total 5 USB 2.0 Compliant / 1.1 Compliant
VGA	<ul style="list-style-type: none"> 1x VGA Port
Keyboard / Mouse	<ul style="list-style-type: none"> PS/2 keyboard and mouse ports
Serial Port / Header	<ul style="list-style-type: none"> 1 Fast UART 16550 serial port 1 Fast UART 16550 serial header
Parallel Port	<ul style="list-style-type: none"> 1 ECP / EEP parallel port

- USB Keyboard support
- Hardware BIOS Virus protection

Management

Software

- Optional IPMI (Intelligent Platform Management Interface) 2.0
- [Super Doctor III](#)
- Watch Dog
- NMI

Power Configurations

- ACPI Power Management
- Main Switch Override Mechanism
- Wake-On-Ring (WOR) header
- Wake-On-LAN (WOL) header
- Power-on mode for AC power recovery
- Internal / External modem remote ring-on

PC Health Monitoring

CPU

- Monitors for CPU Cores, +3.3V, +5V, +5V Standby, & ±12V
- 5-Phase-switching voltage regulator with auto-sense from 0.8375V-1.60V

FAN

- Total of four 3-pin and four 4-pin fan headers supporting up to 8 fans
- 8x fans with tachometer status monitoring
- Status monitor for speed control
- Status monitor for on/off control
- Low noise fan speed control
- Pulse Width Modulated (PWM) fan connectors

Temperature

- Monitoring for CPU and chassis environment
- CPU thermal trip support
- Thermal Control for 8x fan connectors
- PSU I²C temperature sensing logic
- Thermal Monitor 2 (TM2) support

LED

- CPU / System Overheat LED

Other Features

- Chassis intrusion detection
- Chassis intrusion header
- SDDC Support

Operating Environment / Compliance

RoHS



- [RoHS Compliant 5/6, Server Exemption](#)

Environmental Spec.

- Operating Temperature: 10° to 35°C (50° to 95°F)
- Non-operating Temperature: -40° to 70°C (-40° to 158°F)
- Operating Relative Humidity: 8% to 90% (non-condensing)
- Non-operating Relative Humidity: 5 to 95% (non-condensing)

OS Compatibility

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

Parts List**Parts List**

	Part Number	Qty	Description
X7DBE+	MBD-X7DBE+-O	1	X7DBE+ Motherboard
Manual(s)	MNL-0830	1	Motherboard Manual for X7DBE+
I/O Cables	CBL-010L-01	1	9-pin Serial Port Cable
	CBL-0022L	1	ATX Floppy Cable
	CBL-0036L-03	1	ATA 66/100 IDE LP Cable
	CBL-0044L	6	2ft. Amphenol, SATA Cable
	CBL-0083L	1	2-Port USB Cable
Driver Disk	CDR-X7 1.01	1	Version 1.01 CD or later
I/O Shield	CSE-PT07L	1	Motherboard I/O Shield

Note: Items in a Standard Retail Package may differ from items in a Standard Bulk Package.

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