



**16-Core
Xeon D SoC
Broadwell-DE
Dual 10GbE**

Key Features

1. [Intel® Xeon® processor D-1587, Single socket FCBGA 1667; 16-Core, 32 Threads, 65W](#)
2. [System on Chip](#)
3. [Up to 128GB ECC RDIMM DDR4 2133MHz or 64GB ECC/non-ECC UDIMM in 4 sockets](#)
4. [1 PCIe 3.0 x16, M.2 PCIe 3.0 x4 \(SATA support\), M Key 2242/2280](#)
5. [2 10GbE and 2 GbE LAN ports](#)
6. [6 SATA3 \(6Gbps\) ports via SoC](#)
7. [2 USB 3.0 ports \(rear\) 4 USB 2.0 ports \(via headers\)](#)
8. [1 SuperDOM, 1 COM, TPM header, GPIO and SMBus headers](#)
9. [12V DC Input and ATX Power Source](#)

Links & Resources

[Tested Memory List](#)

[Tested HDD / SSD List](#)

[Tested AOC List](#)

[Motherboard Manual](#)

[Quick Reference Guide](#)

[Update Your BIOS](#)

[BMC/IPMI Firmware](#)

[Download the Latest Drivers and Utilities](#)

[Download Driver CD](#)

[OS Compatibility](#)

[Optimization](#)

Specifications

Product SKUs

- MBD-X10SDV-16C-TLN4F
- X10SDV-16C-TLN4F

Physical Stats

- **Form Factor** Mini-ITX
- **Dimensions** 6.7" x 6.7" (17.02cm x 17.02cm)

Processor/Cache

- **CPU** Intel® Xeon® Processor D-1587.
 - Single Socket FCBGA 1667 supported, CPU TDP support 65W
- **Cores / Cache** 16 cores, 32 threads / 24MB cache

System Memory

- **Memory Capacity** Up to 128GB Registered ECC RDIMM
 - Up to 64GB Unbuffered ECC/non-ECC UDIMM, in 4 DIMM slots
- **Memory Type** 2133/1866/1600MHz ECC DDR4 ECC RDIMM and ECC/Non-ECC UDIMM
- **DIMM Sizes** 4GB, 8GB, 16GB, 32GB
- **Memory Voltage** 1.2V
- **Error Detection** Corrects single-bit errors
 - Detects double-bit errors (using ECC memory)

On-Board Devices

- **Chipset** System on Chip
- **SATA** SoC controller for 6 SATA3 (6 Gbps) ports; RAID 0,1,5,10
 - RSTe
- **IPMI** Support for Intelligent Platform Management Interface v.2.0
 - IPMI 2.0 with virtual media over LAN and KVM-over-LAN support
- **Network Controllers** Dual LAN with Intel® Ethernet Controller I350-AM2
 - Dual LAN with 10Gbase-T
 - Built in with D-1500 SoC
 - Single LAN with Virtual Machine Device Queues reduce I/O overhead
 - Single LAN with Supports 10Base-T, 100BASE-TX, and 1000BASE-T, RJ45 output
 - Single LAN with 1 Realtek RTL8211E PHY (dedicated IPMI)
- **Graphics** Aspeed AST2400 BMC

Input / Output

- **SATA** 6 SATA3 (6Gbps) port
- **LAN** 2 RJ45 10GBase-T ports
 - 2 RJ45 Gigabit Ethernet LAN ports
 - 1 RJ45 Dedicated IPMI LAN port
- **USB** 4 USB 2.0 ports (4 headers, Type A))
 - 2 USB 3.0 ports (2 rear)
- **Video Output** 1 VGA port
- **Serial Port / Header** 1 COM Port (1 header)
- **TPM** TPM Header

Expansion Slots

- **PCI-E** 1 PCI-E 3.0 x16
 - Support for SATA devices
- **M.2** 1 M.2 M-Key SATA/PCI-E 3.0 x4, 2242/2280

System BIOS

- **BIOS Type** 128Mb SPI Flash EEPROM with AMI BIOS
- **BIOS Features** PCI 3.0
 - ACPI 5.0
 - USB Keyboard support
 - Hardware BIOS Virus protection
 - RTC (Real Time Clock) Wakeup
 - UEFI 2.4
 - SMBIOS 2.8

Management

- **Software** Intel® Node Manager, IPMI (Intelligent Platform Management Interface) v2.0 with KVM support, IPMI2.0, KVM with dedicated LAN, NMI, SUM, SuperDoctor® 5, Watchdog
- **System Management Software** SUM
- **Power Configurations** ACPI Power Management
 - CPU Fan auto-off in sleep mode
 - Power-on mode for AC power recovery

PC Health Monitoring

- **Voltage** +1.8V, +12V, +3.3V, +5V, Chassis intrusion header, HT, Memory, Memory Voltages, Monitors for CPU Cores, Supports system management utility, System level control, System temperature
- **FAN** 4x 4-pin fan headers (up to 4 fans), 4 fans with tachometer monitoring, Dual Cooling Zone, Fan speed control, Low noise fan speed control, Overheat LED indication, Pulse Width Modulated (PWM) fan connectors, PWM fan speed control, Status monitoring for on/off control, Status monitoring for speed control, System level control, Thermal control tachometer fan connectors
- **Temperature** Monitoring for CPU and chassis environment, CPU thermal trip support, PECL, Thermal Monitor 2 (TM2) support
- **LED** CPU / System Overheat LED, UID/Remote UID
- **Other Features** 12V DC or ATX Power Source, 4-pin 12v DC power connector, ACPI power management, ATX Power connector, Chassis intrusion detection, Chassis intrusion header, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, Dual Cooling Zones, Hyper-Speed Technology hardware acceleration, M.2 NGFF connector, Node Manager Support, RoHS, SDDC, System level control, UID, WOL

Operating Environment

- **Operating Temperature Range** 0°C ~ 60°C (32°F ~ 140°F)
- **Non-Operating Temperature Range** -20°C ~ 60°C (-4°F ~ 140°F)
- **Operating Relative Humidity Range** 8% - 90% (non-condensing)
- **Non-Operating Relative Humidity Range** 10% ~ 95% (non-condensing)

Parts List

Parts List (Bulk Package)			
Name	Part Number	Qty	Description
Motherboard	MBD-X10SDV-16C-TLN4F	1	X10SDV-16C-TLN4F Motherboard
I/O Cables	CBL-0044L	2	57.5CM SATA FLAT S-S PBF
I/O Shield	MCP-260-00084-0N	1	X10SDV-F/TLN4F STD I/O SHIELD

Optional Parts List			
Name	Part Number	Qty	Description
1U I/O Shield	MCP-260-00085-0B	1	1U I/O Shield for X10SDV-F/TLN4F in CSE-510/505/504
1U I/O Shield	MCP-260-00079-0N	1	1U I/O shield for X10SDV-F/TLN4F in SC813/SC512 chassis

Chassis (Optimized for X10SDV-16C-TLN4F)

Embedded Compact	1U	2U	3U	Mid/Mini-Tower	4U/Tower
	● SC505-203B				
	● SC504-203B				

● = Most optimized Chassis for SuperServer Configuration
 Blue color = Compatible
 Green color = Global SKU & Compatible
 Red dot & green color = Optimized + Global SKU