



Embedded Key Features

1. Single socket R3 (LGA 2011) supports Intel® Xeon® processor E5-2600 v4†/ v3 and E5-1600 v4†/ v3 family
2. Intel® C612 chipset
3. Up to 512GB† ECC 3DS LRDIMM, up to DDR4- 2400†MHz; 4 DIMM slots
4. 1 PCI-E 3.0 x16, 2 PCI-E 3.0 x8
5. Intel® X550 Dual 10GBase-T LAN ports
6. 10 SATA3 (6Gbps) via C612
7. 1 VGA, 2 COM, 1 TPM
8. 5 USB 3.0 ports, 6 USB 2.0 ports
9. 2 SuperDOM with built-in power

Links & Resources

- [Tested Memory List](#)
- [Tested HDD / SSD List](#)
- [Motherboard Manual](#)
- [Quick Reference Guide](#)
- [Update Your BIOS](#)
- [BMC/IPMI Firmware](#)
- [Download the Latest Drivers and Utilities](#)
- [Download Drivers CD](#)
- [Heat Sink Compatibility](#)
- [OS Compatibility](#)
- [Tested M.2 List](#)
- [Optimization](#)

Specifications

Product SKUs

- MBD-X10SRM-TF
- X10SRM-TF

Physical Stats

- **Form Factor** microATX
- **Dimensions** 9.6" x 9.6" (24.38cm x 24.38cm)

Processor/Cache

- **CPU** Intel® Xeon® Processor E5-1600 v3, Intel® Xeon® Processor E5-1600 v4, Intel® Xeon® processor E5-2600 v3, Intel® Xeon® processor E5-2600 v4.
 - Single Socket LGA-2011-3 (Socket R3) supported, CPU TDP support Up to 145W TDP
- **Cores / Cache** Up to 22 cores † / Up to 55MB† cache
- **Note** † BIOS version 2.0 or above is required
- **Note** ** Motherboard supports this maximum TDP. Please verify your system can thermally support.

System Memory

- **Memory Capacity** Up to 128GB Registered ECC RDIMM, DDR4-2400MHz; Up to 256GB Registered ECC LRDIMM, DDR4-2400MHz, in 4 DIMM slotsUp to 512GB ECC 3DS LRDIMM
- **Memory Type** 2400□/2133/1866/1600MHz ECC DDR4 SDRAM 72-bit
- **DIMM Sizes**
 - RDIMM: 4GB, 8GB, 16GB, 32GB
 - LRDIMM: 32GB, 64GB
 - 3DS LRDIMM: 128GB
- **Memory Voltage** 1.2V
- **Error Detection**
 - Corrects single-bit errors
 - Detects double-bit errors (using ECC memory)

On-Board Devices

- **Chipset** Intel® C612
- **SATA** Intel® C612 controller for 10 SATA3 (6 Gbps) ports; RAID 0,1,10
- **IPMI**
 - Support for Intelligent Platform Management Interface v.2.0
 - IPMI 2.0 with virtual media over LAN and KVM-over-LAN support
 - ASPEED AST2400 BMC
- **Network Controllers**
 - Dual LAN with Intel® X550 10GBase-T Ethernet ControllerSupports 10Base-T, 100BASE-TX, and 1000BASE-T, RJ45 output
- **Graphics** Aspeed AST2400 BMC

Input / Output

- **SATA** 10 SATA3 (6Gbps) port
- **LAN**
 - 2 RJ45 10GBase-T ports
 - 1 RJ45 Dedicated IPMI LAN port
- **USB**
 - 6 USB 2.0 ports (2 rear + 4 via headers)
 - 5 USB 3.0 ports (2 rear + 2 via headers + 1 Type A)
- **Video Output** 1 VGA port
- **Serial Port / Header**
 - 2 COM Ports (1 rear, 1 header)
 - 2 fast UART 16550 serial
- **TPM** TPM Header

Expansion Slots

- **PCI-E**
 - 1 PCI-E 3.0 x16,
 - 2 PCI-E 3.0 x8
- **M.2**
 - M.2 Interface: 1 SATA/PCI-E 3.0 x4
 - Form Factor: 2242, 2280, 22110

System BIOS

- **BIOS Type** 128Mb SPI Flash EEPROM with AMI BIOS
- **BIOS Features**
 - Plug and Play (PhP)
 - APM 1.2
 - DMI 2.3
 - PCI 2.3
 - ACPI 1.0 / 2.0 / 3.0 / 4.0
 - USB Keyboard support
 - SMBIOS 2.7.1
 - UEFI 2.3.1
 - RTC (Real Time Clock) Wakeup

Management

- **Software** Intel® Node Manager, IPMI2.0, KVM with dedicated LAN, NMI, SPM, SUM, SuperDoctor® 5, Watchdog
- **Power Configurations**
 - ACPI Power Management
 - Keyboard Wakeup from Soft-Off
 - CPU Fan auto-off in sleep mode
 - Power-on mode for AC power recovery

PC Health Monitoring

- **Voltage** +12V, +3.3V, +5V, +5V standby, 6 -fan status, Chassis intrusion header, Monitors CPU voltages, Supports system management utility
- **FAN**
 - 6x 4-pin fan headers (up to 6 fans), 6 fans with tachometer status monitoring, 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
- **Temperature**
 - Monitoring for CPU and chassis environment, CPU thermal trip support, Thermal Monitor 2 (TM2) support, PECL, I2C temperature sensing logic
- **LED**
 - CPU / System Overheat LED, Suspend static indicator LED, UID/Remote UID
- **Other Features**
 - ACPI power management, Chassis intrusion detection, Chassis intrusion header, Chipkill support, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, Intel Smart Response Technology, M.2 NGFF connector, Node Manager Support, RoHS, SDDC, Support 12v (only) DC input and 2x 4-pin HDD power connectors, 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** 10% ~ 85% (non-condensing)
- **Non-Operating Relative Humidity Range** 10% ~ 95% (non-condensing)

Parts List

Parts List (Bulk Package)			
Name	Part Number	Qty	Description
Motherboard	MBD-X10SRM-TF	1	X10SRM-TF Motherboard
I/O Cables	CBL-0044L	2	57.5CM SATA FLAT S-S PBF
I/O Shield	MCP-260-00042-0N	1	STD I/O shield for X9 socket R server MB with Gasket

Chassis (Optimized for X10SRM-TF)

Embedded Compact	1U	2U	3U	Mid/Mini-Tower	4U/Tower
1U Heatsink:SNK-P0047PS (CPU1) 1U Heatsink:SNK-P0057PS (CPU1)	<ul style="list-style-type: none"> ● SC514-R400C ● SC514-505 ● SC515-R407 ● SC515-505 ● SC515-350 ● SC113MFAC2-605CB ● SC113MFAC2-R606CB ● SC813MFTQC-R407CB ● SC813MFTQC-350CB 1U Heatsink:SNK-P0047PS (CPU1) 1U Heatsink:SNK-P0057PS (CPU1)	<ul style="list-style-type: none"> SC825TQC-R740LPB SC825MTQ-R700LPB SC213LT-600LPB SC823TQ-653LPB 	SC833T-653B	SC731i-300B	4U Heatsink:SNK-P0050AP4 (CPU1)

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