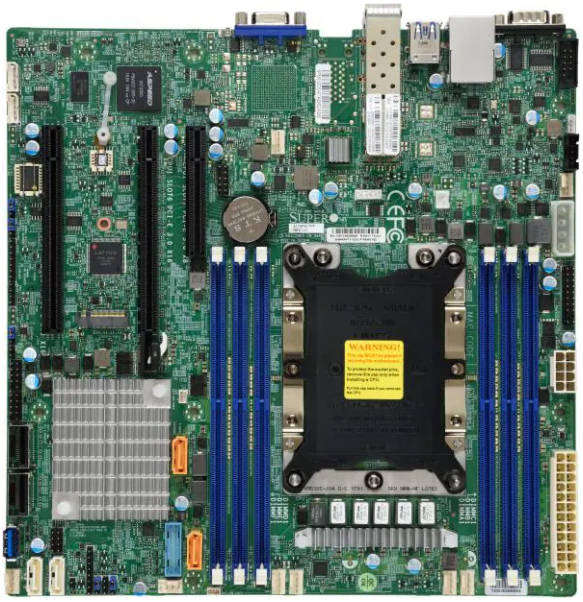
X11SPM-TPF



Embedded Ready
VROC support

Key Features

1. 2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors, , Single Socket LGA-3647 (Socket P) supported, CPU TDP support Up to 165W TDP
2. Intel® C622 chipset
3. Up to 1.5TB 3DS ECC RDIMM, DDR4-2933MHz; Up to 1.5TB 3DS ECC LRDIMM, DDR4-2933MHz, in 6 DIMM slots; Up to 1TB Intel Optane DC Persistent Memory in memory mode (Cascade Lake Only)
4. Expansion slots: 2 PCI-E 3.0 x16, 1 PCI-E 3.0 x8 (in x8)
5. M.2 NGFF connector
   M.2 Interface: PCI-E 3.0 x4
   Form Factor: 2242, 2280
   Key: M-Key
6. 2 10G SFP+
7. 12 SATA3 (6Gbps) via C622
8. Supports 12V DC power input
9. 5 USB 3.0 (2 rear, 1 Type-A, 2 via header), 6 USB 2.0 (2 rear, 4 via headers)
10. I/O: 1 VGA, 2 COM, 1 TPM header

Specifications

Expansion Slots

PCI-E	▪ 2 PCI-E 3.0 x16, ▪ 1 PCI-E 3.0 x8
M.2	▪ M.2 Interface: PCI-E 3.0 x4 ▪ Form Factor: 2280, 2242 ▪ Key: M-Key

System BIOS

BIOS Type	▪ AMI UEFI
BIOS Features	▪ ACPI 6.0 ▪ RTC (Real Time Clock) Wakeup ▪ SMBIOS 3.0 or later

Management

Software	▪ SuperDoctor® 5, NMI, SUM, KVM with dedicated LAN, SPM, Intel® Node Manager, IPMI2.0, Watchdog
Power Configurations	▪ Power-on mode for AC power recovery, ACPI Power Management

PC Health Monitoring

Voltage	▪ VBAT, Supports system management utility, Monitors CPU voltages, Chassis intrusion header, 3.3V standby, +5V standby, +5V, +3.3V, +12V, +1.8V, 8 -fan status
LED	▪ UID/Remote UID ▪ Suspend static indicator LED ▪ CPU / System Overheat LED
Temperature	▪ CPU thermal trip support ▪ PECI
FAN	▪ 8x 4-pin fan headers (up to 8 fans) ▪ System level control ▪ PWM fan speed control ▪ Fan speed control ▪ Overheat LED indication
Other Features	▪ WOL, UID, RoHS, M.2 NGFF connector, CPU thermal trip support for processor protection, Control of power-on for recovery from AC power loss, ACPI power management

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)

Product SKUs

MBD-X11SPM-TPF	▪ X11SPM-TPF

Physical Stats

Form Factor	▪ microATX
Dimension	▪ 9.6" x 9.6" (24.38cm x 24.38cm)

Processor

CPU	▪ 2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors ▪ Single Socket LGA-3647 (Socket P) supported, CPU TDP supports Up to 165W TDP
Core	▪ Up to 28 cores

System Memory

Memory Capacity	▪ 6 DIMM slots ▪ Up to 1.5TB 3DS ECC LRDIMM, DDR4-2933MHz; Up to 1.5TB 3DS ECC RDIMM, DDR4-2933MHz
Memory Type	▪ 2933/2666/2400/2133MHz ECC DDR4 LRDIMM (3DS), RDIMM (3DS)
DIMM Sizes	▪ LRDIMM: 32GB, 64GB, 128GB ▪ RDIMM: 8GB, 16GB, 32GB, 64GB
Memory Voltage	▪ 1.2V
Error Detection	▪ Corrects single-bit errors

On-Board Devices

Chipset	▪ Intel® C622
SATA	▪ Intel® C622 controller for 12 SATA3 (6 Gbps) ports; RAID 0,1,5,10
IPMI	▪ ASPEED AST2500
Graphics	▪ ASPEED AST2500 BMC
Network Controllers	▪ Dual LAN with 10G SFP+ with Intel® X722 + Inphi CS4227

Input / Output

SATA	▪ 12 SATA3 (6Gbps) port(s)
LAN	▪ 2 10G SFP+ LAN ports
USB	▪ 3 USB 3 port(s) (1 Type A; 2 via header) ▪ 6 USB 2.0 port(s) (4 via header; 2 rear) ▪ 2 USB 3.0 port(s) (2 rear)
Video Output	▪ 1 VGA port(s)
Serial Port	▪ 2 COM Port(s) (1 header; 1 rear)
DOM	▪ 2 SATA DOM (Disk on Module) power connector support
TPM	▪ 1 TPM Header

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-X11SPM-TPF	1	X11SPM-TPF Motherboard
I/O Cables	CBL-0044L • eStore	2	57.5 cm SATA FLAT S-S PBF
I/O Shield	MCP-260-00109-0N • eStore	1	STD I/O Shield for X11SPM-TPF with EMI Gasket

Parts List (Retail Package)			
Name	**Part Number**	**Qty**	**Description**
Motherboard	MBD-X11SPM-TPF	1	X11SPM-TPF Motherboard
I/O Cables	CBL-0044L • eStore	4	57.5 cm SATA FLAT S-S PBF
I/O Shield	MCP-260-00109-0N • eStore	1	STD I/O Shield for X11SPM-TPF with EMI Gasket
QRG	MNL-1939-QRG	1	Motherboard Quick Reference Guide

Optional Parts List			
Name	**Part Number**	**Qty**	**Description**
1U I/O Shield	MCP-260-00114-0N	--	1U I/O Shield for X11SPM-TPF with EMI Gasket
TPM security module	AOM-TPM-9671V AOM-TPM-9670V	-- --	SPI capable TPM 1.2 with Infineon 9670 controller with vertical form factor SPI capable TPM 2.0 with Infineon 9670 controller with vertical form factor

Chassis (Optimized for X11SPM-TPF)

Embedded Compact	1U	2U	3U	Mid/Mini-Tower	4U/Tower
	SC113MFAC2-605CB ● SC813MFTQC-R407CB SC515-R407 SC514-R407C SC512F-350B1 ● SC813MFTQC-350CB2 SC515-350 SC113MFAC2-R606CB SC113MFAC2-341CB	SC213LT-600LPB SC823TQ-653LPB SC825TQC-R740LPB SC825MBTQC-R802LPB SC823MTQC-R802LPB SC213A-R740LPB Heatsink:SNK-P0068APS4	SC833T-653B Heatsink:SNK-P0068APS4		SC842TQC-668B

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