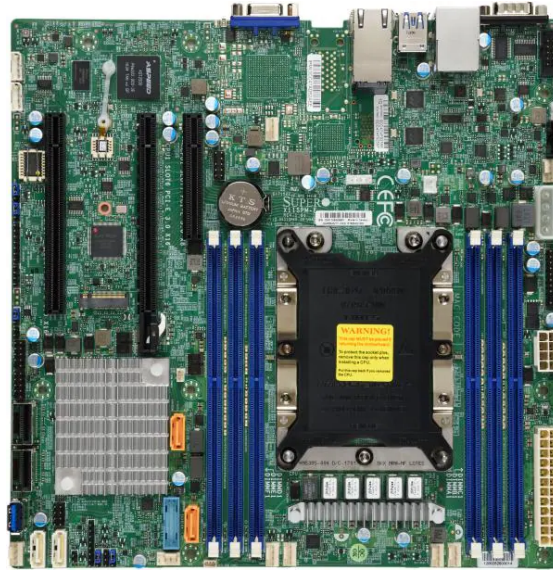


# X11SPM-F

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## Embedded Ready VROC support

### Key Features

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

Intel® C621 Chipset

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)

Expansion slots: 2 PCIe 3.0 x16, 1 PCIe 3.0 x8 (in x8)

M.2 NGFF connector

**M.2 Interface:** PCIe 3.0 x4

Form Factor: 2242, 2280

Key: M-Key

2 GbE LAN ports

12 SATA3 (6Gbps) via C621

Supports 12V DC power input

5 USB 3.0 (2 rear, 1 Type-A, 2 via header), 6 USB 2.0 (2 rear, 4 via headers)

I/O: 1 VGA, 2 COM, TPM header

### Optimized Servers

[SYS-5019P-M](#)

[SYS-5019P-MR](#)

### Specifications

## Product SKUs

### MBD-X11SPM-F

## 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

### Note

BIOS version 3.0a or above is required to support 2nd Generation Intel Xeon Scalable Processors-SP

BIOS version 3.2 or above is required to support 2nd Gen Intel® Xeon® Scalable processors (codenamed Cascade Lake-R)

## 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

Up to 1TB Intel Optane DC Persistent Memory in memory mode (Cascade Lake Only)

### Memory Type

2933/2666/2400/2133 MT/s 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® C621

### SATA

Intel® C621 controller for 12 SATA3 (6 Gbps) ports; RAID 0,1,5,10

### IPMI

ASPEED AST2500

### Graphics

1 ASPEED AST2500 BMC port(s)

### Network Controllers

Dual LAN with 1GbE with Intel® X722 + Marvell 88E1512

## Input / Output

### SATA

12 SATA3 (6Gbps) port(s)

### LAN

2 1GbE 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

## Expansion Slots

### PCIe

2 PCIe 3.0 x16,

1 PCIe 3.0 x8

### M.2

M.2 Interface: PCIe 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)

### Operating Relative Humidity Range

10% - 85% (non-condensing)

### Non Operating Relative Humidity Range

10% - 95% (non-condensing)

**TPM**1 TPM Header

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**Parts List****Standard Parts (Bulk Package)****I/O Cables**

Part Number	CBL-0044L • <a href="#">eStore</a>
Qty	2
Description	57.5 cm SATA FLAT S-S PBF

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**I/O Shield**

Part Number	MCP-260-00109-0N • <a href="#">eStore</a>
Qty	1
Description	STD I/O Shield for X11SPM-F with EMI Gasket

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**Standard Parts (Retail Package)****I/O Cables**

Part Number	CBL-0044L • <a href="#">eStore</a>
Qty	4
Description	57.5 cm SATA FLAT S-S PBF

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**I/O Shield**

Part Number	MCP-260-00109-0N • <a href="#">eStore</a>
Qty	1
Description	STD I/O Shield for X11SPM-F with EMI Gasket

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**QRG**

Part Number	MNL-1939-QRG
Qty	1
Description	Motherboard Quick Reference Guide

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**Optional Parts****1U I/O Shield**

Part Number	MCP-260-00114-0N
Qty	--
Description	1U I/O Shield for X11SPM-F with EMI Gasket

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**TPM security module**

Part Number	AOM-TPM-9671V	AOM-TPM-9670V
Qty	--	--
Description	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

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