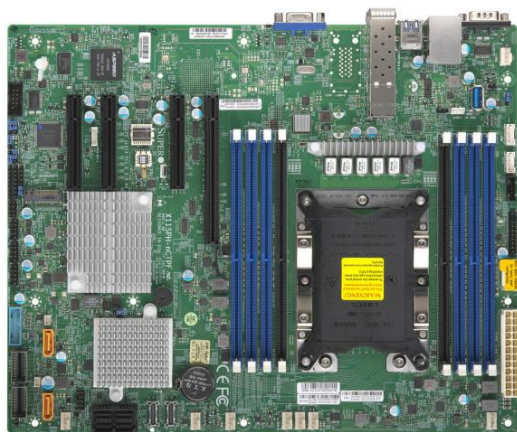




High Performance VROC support

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 205W TDP
2. Up to 2TB 3DS ECC RDIMM, DDR4-2933MHz; Up to 2TB 3DS ECC LRDIMM, DDR4-2933MHz, in 8 DIMM slots
3. Intel® C622 chipset
4. Expansion slots:
 - 1 PCI-E 3.0 x16 (x16 || x8),
 - 1 PCI-E 3.0 x8 (x0 || x8),
 - 1 PCI-E 3.0 x8,
 - 1 PCI-E 3.0 x4 (in x8)
5. 2 10G SFP+
6. 10 SATA3 (6Gbps) via C622
7. 8 SAS3 (12Gbps) via Broadcom® 3008; RAID 0, 1, 10
8. 2x Port NVMe PCI-E 3.0 x4 via OcuLink
9. 5 USB 3.0 (2 rear, 1 Type-A, 2 via header), 8 USB 2.0 (2 rear, 6 via headers)
10. M.2 NGFF connector
 - M.2 Interface: PCI-E 3.0 x4 and SATA
 - Form Factor: 2280
 - Key: M-Key
 - Double Height Connector

Links & Resources

[Tested Memory List](#)

[Tested HDD / SSD List](#)

[Tested M.2 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-X11SPH-nCTPF	■ X11SPH-nCTPF
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Physical Stats

Form Factor	■ ATX
Dimensions	■ 12" x 9.6" (30.48cm x 24.38cm)

Processor/Cache

CPU	■ 2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors, ■ Single Socket LGA-3647 (Socket P) supported, CPU TDP support Up to 205W TDP
Cores / Cache	■ 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	■ Up to 2TB 3DS ECC RDIMM, DDR4-2933MHz; Up to 2TB 3DS ECC LRDIMM, DDR4-2933MHz, in 8 DIMM slots
Memory Type	■ 2933/2666/2400/2133MHz ECC DDR4 RDIMM, LRDIMM
DIMM Sizes	■ RDIMM: 8GB, 16GB, 32GB, 64GB ■ LRDIMM: 32GB, 64GB, 128GB ■ 3DS LRDIMM: 64GB, 128GB, 256GB
Memory Voltage	■ 1.2V
Error Detection	■ Corrects single-bit errors

On-Board Devices

Chipset	■ Intel® C622
SATA	■ Intel® C622 controller for 10 SATA3 (6 Gbps) ports; RAID 0,1,5,10 ■ Broadcom® 3008 SW controller for 8 SAS3 (12Gbs) ports; RAID 0,1,10
IPMI	■ ASPEED AST2500
Network Controllers	■ Dual LAN w ith 10G SFP+ w ith Intel® X722 + Inphi CS4227
Graphics	■ Aspeed AST2500 BMC

Input / Output

SATA	■ 10 SATA3 (6Gbps) port
LAN	■ 2 10G SFP+ LAN ports
USB	■ 8 USB 2.0 ports (2 rear + 6 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)
TPM	■ TPM Header

Expansion Slots

PCI-E	■ 1 PCI-E 3.0 x16 (x16 or x8), ■ 1 PCI-E 3.0 x8 (x0 or x8), ■ 1 PCI-E 3.0 x8, ■ 1 PCI-E 3.0 x4 (in x8 slot)
M.2	■ M.2 Interface: PCI-E 3.0 x4 and SATA ■ Form Factor: 2280 ■ Key: M-Key ■ Double Height Connector

System BIOS

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

Management

Software	■
Power Configurations	■ ACPI Pow er Management ■ Pow er-on mode for AC pow er recovery

PC Health Monitoring

Voltage	■ N/A
FAN	■ 8x 4-pin fan headers (up to 8 fans)
Temperature	■ CPU thermal trip support, PECI
LED	■ CPU / System Overheat LED, UID/Remote UID, Suspend static indicator LED
Other Features	■ N/A

Operating Environment

Operating Temperature Range	■ 0°C ~ 50°C (32°F ~ 122°F)
Non-Operating Temperature Range	■ -40°C - 70°C (-40°F - 158°F)
Operating Relative Humidity Range	■ 8% - 90% (non-condensing)
Non-Operating Relative Humidity Range	■ 5% - 95% (non-condensing)

Parts List

Parts List (Bulk Package)			
Name	Part Number	Qty	Description
Motherboard	MBD-X11SPH-nCTPF	1	X11SPH-nCTPF Motherboard
I/O Cables	CBL-0044L	2	57.5 cm SATA FLAT S-S PBF
I/O Shield	MCP-260-00109-0N	1	STD I/O Shield for X11SPH-nCTPF with EMI Gasket

Parts List (Retail Package)			
Name	Part Number	Qty	Description
Motherboard	MBD-X11SPH-nCTPF	1	X11SPH-nCTPF Motherboard
QRG	MNL-1949-QRG	1	Motherboard Quick Reference Guide
I/O Cables	CBL-0044L	2	57.5 cm SATA FLAT S-S PBF
I/O Shield	MCP-260-00109-0N	1	STD I/O Shield for X11SPH-nCTPF with EMI Gasket

Optional Parts List			
Name	Part Number	Qty	Description
1U I/O Shield	MCP-260-00114-0N	1	1U I/O Shield for X11SPH-nCTPF with EMI Gasket
TPM security module	AOM-TPM-9670H	1	SPI capable TPM 2.0 with Infineon 9670 controller with horizontal form factor
TPM security module	AOM-TPM-9670V	1	SPI capable TPM 2.0 with Infineon 9670 controller with vertical form factor
TPM security module	AOM-TPM-9671H	1	SPI capable TPM 1.2 with Infineon 9670 controller with horizontal form factor
TPM security module	AOM-TPM-9671V	1	SPI capable TPM 1.2 with Infineon 9670 controller with vertical form factor

Chassis (Optimized for X11SPH-nCTPF)

Embedded Compact	1U	2U	3U	Mid/Mini-Tower	4U/Tower
		● 826BE1C-R802LPB 216BE1C4-R1K23LPB823MTQC-R802LPB825MBTQC-R802LPBLA26E1C4-R609LP2U Heatsink:SNK-P0068APS4	SC836BE1C-R1K23B		● SC847BE1C4-R1K23LPB SC846BE1C-R1K23B 2U Heatsink:SNK-P0068APS4

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