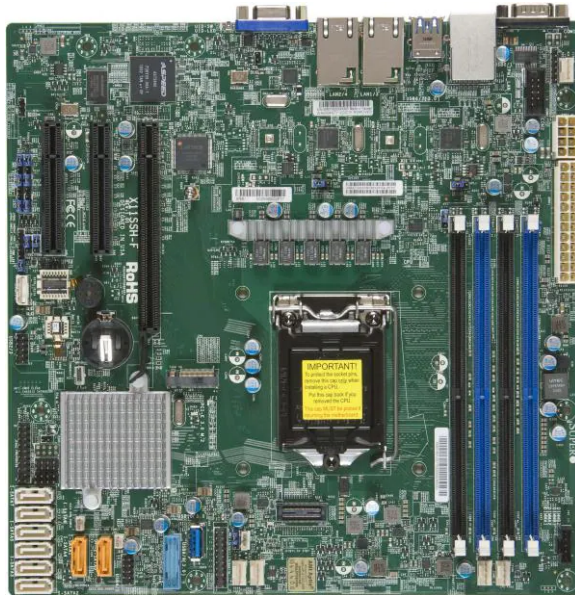


# X11SSH-F

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## Key Features

1. Single socket H4 (LGA 1151) supports Intel® Xeon® processor E3-1200 v6/v5, Intel® 7th/6th Gen. Core™ i3 series, Intel® Celeron® and Intel® Pentium®
2. Intel® C236 chipset
3. Support Intel® VHD with selected CPU
4. Up to 64GB Unbuffered ECC UDIMM DDR4 2400MHz; 4 DIMM slots
5. Expansion slots:
  - 1 PCI-E 3.0 x8 (in x16),
  - 1 PCI-E 3.0 x8,
  - 1 PCI-E 3.0 x4 (in x8)
6. M.2 NGFF connector
  - M.2 Interface:** PCI-E 3.0 x2
  - Form Factor: 2280
  - Key: M-Key
7. Dual GbE LAN with Intel® i210-AT
8. 8 SATA3 (6Gbps) via C236; RAID 0, 1, 5, 10
9. I/O: 1 VGA, 2 COM, TPM header
10. 5 USB 3.0 (2 rear, 2 via header(s), 1 Type A), 6 USB 2.0 (2 rear, 4 via header(s))

## Specifications

### Expansion Slots

<b>PCI-E</b>	<ul style="list-style-type: none"> <li>1 PCI-E 3.0 x8 (in x16 slot),</li> <li>1 PCI-E 3.0 x8,</li> <li>1 PCI-E 3.0 x4 (in x8 slot)</li> </ul>
<b>M.2</b>	<ul style="list-style-type: none"> <li>M.2 Interface: PCI-E 3.0 x2</li> <li>Form Factor: 2280</li> <li>Key: M-Key</li> </ul>

### System BIOS

<b>BIOS Type</b>	<ul style="list-style-type: none"> <li>128MB SPI Flash EEPROM with AMI BIOS</li> </ul>
<b>BIOS Features</b>	<ul style="list-style-type: none"> <li>Plug and Play (PnP)</li> <li>APM 1.2</li> <li>PCI 2.3</li> <li>DMI 2.3</li> <li>ACPI 1.0 / 2.0 / 3.0 / 4.0</li> <li>USB Keyboard support</li> <li>Hardware BIOS Virus protection</li> <li>SMBIOS 2.7.1</li> <li>UEFI 2.3.1</li> </ul>

### Management

<b>Software</b>	<ul style="list-style-type: none"> <li>SuperDoctor® 5, NMI, <a href="#">SUM</a>, <a href="#">SPM</a>, Intel® Node Manager, <a href="#">SSM</a>, <a href="#">IPMI2.0</a>, Watchdog</li> </ul>
<b>Power Configurations</b>	<ul style="list-style-type: none"> <li>Power-on mode for AC power recovery, ACPI Power Management</li> </ul>

### PC Health Monitoring

<b>Voltage</b>	<ul style="list-style-type: none"> <li>VBAT, System level control, Supports system management utility, Monitors CPU voltages, Chassis intrusion header, +5V standby, +5V, +3.3V, +12V</li> </ul>
<b>LED</b>	<ul style="list-style-type: none"> <li>UID/Remote UID</li> <li>CPU / System Overheat LED</li> </ul>
<b>Temperature</b>	<ul style="list-style-type: none"> <li>Monitoring for CPU and chassis environment</li> <li>CPU thermal trip support</li> <li>Thermal Monitor 2 (TM2) support</li> <li>PECI</li> </ul>
<b>FAN</b>	<ul style="list-style-type: none"> <li>5x 4-pin fan headers (up to 5 fans)</li> <li>Thermal control tachometer fan connectors</li> <li>Fan speed control</li> <li>Overheat LED indication</li> </ul>
<b>Other Features</b>	<ul style="list-style-type: none"> <li>WOL</li> <li>M.2 NGFF connector</li> <li>CPU thermal trip support for processor protection</li> <li>Control of power-on for recovery from AC power loss</li> <li>VHD</li> </ul>

## Product SKUs

<b>MBD-X11SSH-F</b>	▪ X11SSH-F
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## Physical Stats

<b>Form Factor</b>	▪ Micro-ATX
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<b>Dimension</b>	▪ 9.6" x 9.6" (24.38cm x 24.38cm)
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## Processor

<b>CPU</b>	<ul style="list-style-type: none"> <li>▪ Intel® Celeron®, Intel® Pentium®, Intel® 7th/6th Generation Core i3 series, Intel® Xeon® processor E3-1200 v6/v5</li> <li>▪ Single Socket LGA-1151 (Socket H4) supported, CPU TDP supports Up to 80W TDP</li> </ul>
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<b>Note</b>	▪ BIOS version 2.0 or above is required to support 7th Generation Intel® Core™ i3 Processors and Intel® Xeon® Processor E3-1200 v6 series
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## System Memory

<b>Memory Capacity</b>	<ul style="list-style-type: none"> <li>▪ 4 DIMM slots</li> <li>▪ 64GB ECC UDIMM, DDR4-2400MHz</li> </ul>
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<b>Memory Type</b>	▪ 2400/2133/1866/1600MHz SDRAM 72-bit, 288-pin gold-plated DIMMs
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<b>DIMM Sizes</b>	▪ 4GB, 8GB, 16GB
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<b>Memory Voltage</b>	▪ 1.2V
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<b>Error Detection</b>	▪ Corrects single-bit errors
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## On-Board Devices

<b>Chipset</b>	▪ Intel® C236
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<b>SATA</b>	▪ Intel® C236 controller for 8 SATA3 (6 Gbps) ports; RAID 0,1,5,10
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<b>IPMI</b>	▪ ASPEED AST2400 BMC
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<b>Graphics</b>	▪ ASPEED AST2400 BMC
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<b>Network Controllers</b>	▪ Dual LAN with Intel® Ethernet Controller I210-AT
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## Input / Output

<b>USB</b>	<ul style="list-style-type: none"> <li>▪ 3 USB 3 port(s) (1 Type A; 2 via header)</li> <li>▪ 6 USB 2.0 port(s) (4 via header; 2 rear)</li> <li>▪ 2 USB 3.0 port(s) (2 rear)</li> </ul>
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<b>Video Output</b>	▪ 1 VGA port(s)
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<b>Serial Port</b>	▪ 2 COM Port(s) (1 header; 1 rear)
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<b>TPM</b>	▪ 1 TPM Header
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## Operating Environment

<b>Operating Temperature Range</b>	▪ 0°C - 50°C (32°F - 122°F)
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<b>Non-Operating Temperature Range</b>	▪ -40°C - 70°C (-40°F - 158°F)
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<b>Operating Relative Humidity Range</b>	▪ 8% - 90% (non-condensing)
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<b>Non Operating Relative Humidity Range</b>	▪ 5% - 95% (non-condensing)
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## Parts List

Parts List (Bulk Package)			
Name	Part Number	Qty	Description
Motherboard	MBD-X11SSH-F	1	X11SSH-F Motherboard
I/O Cables	CBL-0044L • <a href="#">eStore</a>	2	57.5CM SATA FLAT S-S PBF
I/O Shield	MCP-260-00042-0N • <a href="#">eStore</a>	1	STD I/O Shield for X11SSH-F with EMI Gasket

Parts List (Retail Package)			
Name	Part Number	Qty	Description
Motherboard	MBD-X11SSH-F	1	X11SSH-F Motherboard
I/O Cables	CBL-0044L • <a href="#">eStore</a>	6	57.5CM SATA FLAT S-S PBF
I/O Shield	MCP-260-00042-0N • <a href="#">eStore</a>	1	STD I/O Shield for X11SSH-F with EMI Gasket
QRG	MNL-1778-QRG	1	Motherboard Quick Reference Guide

### Chassis (Optimized for X11SSH-F)

Embedded Compact	1U	2U	3U	Mid/Mini-Tower	4U/Tower
	<u>SC813MTQ-350CB</u> ● <u>SC113MFAC2-R606CB</u> ● <u>SC813MFTQ-R400CB</u> <u>SC815TQ-563CB</u> ● <u>SC813MFTQC-350CB</u> ● <u>SC813MFTQC-505CB</u> ● <u>SC113MFAC2-341CB</u> <u>SC512F-350B</u> Heatsink:SNK-P0046P	● <u>SC213LT-600LPB</u> ● <u>SC823TQ-653LPB</u> <u>SC825TQ-R720LPB</u> Heatsink:SNK-P0046A4	● <u>SC833T-653B</u> Heatsink:SNK-P0046A4	● <u>SC731i-300B</u> ● <u>SC731i-403B</u> <u>SC732D3-1200B</u> SC732I-500B <u>SC731D-300B</u> Heatsink:SNK-P0046A4	<u>SC842TQ-665B</u> <u>SC842i-500B</u> <u>SC743AC-1200B-SQ</u> <u>SC745BAC-R1K28B2</u> Heatsink:SNK-P0046A4

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

### Server (Optimized for X11SSH-F)

Server Name
<u>SYS-5019S-M</u>
<u>SYS-5019S-ML</u>
<u>SYS-5019S-MR</u>