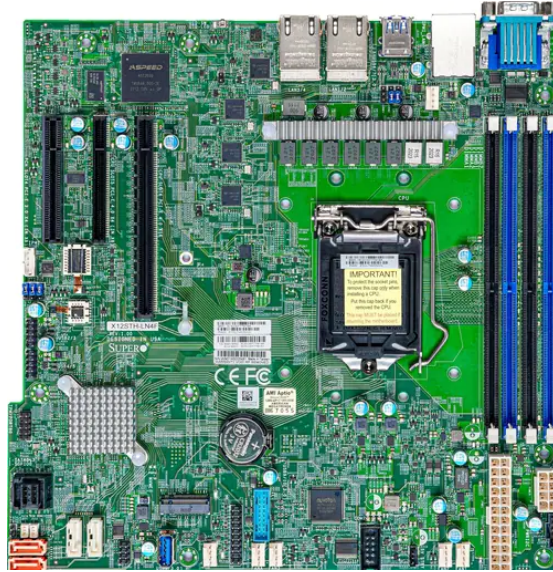


X12STH-LN4F



Quad 1GbE LAN

Key Features

Intel® Xeon® E-2300 Processor, 10th Generation Intel® Pentium® Processor, Single Socket LGA-1200 (Socket H5) supported, CPU supports Up to 95W TDP

Intel® C256

Up to 128GB ECC UDIMM, DDR4-3200MHz, in 4 DIMM slots

1 PCIe 4.0 x16

1 PCIe 4.0 x4 (in x8 slot)

1 PCIe 3.0 x4 (in x8 slot)

M.2 Interface: PCIe 3.0 x4

M.2 Form Factor: 2280, 22110

M.2 Key: M-Key

Quad LAN with Intel® Ethernet Controller I210

Intel® C256 controller for 8 SATA3 (6 Gbps) ports; RAID 0,1,5,10

2 SuperDOM with built-in power

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

5x USB 3.2 Gen1 (2 rear, 1 Type-A, 2 via header), 6x USB 2.0 (2 rear, 4 via headers)

Gen12 iGPU support

Specifications

Product SKUs**MBD-X12STH-LN4F****Physical Stats****Form Factor**

Micro-ATX

Dimension

9.6" x 9.6" (24.38cm x 24.38cm)

Processor**CPU**

10th Generation Intel® Pentium® Processor, Intel® Xeon® E-2300 Processor

Single Socket LGA-1200 (Socket H5) supported, CPU TDP supports Up to 95W TDP

Core

Up to 8 cores, 16 threads

System Memory**Memory Capacity**

4 DIMM slots

Up to 128GB Unbuffered ECC UDIMM, DDR4-3200MHz

Memory Type

3200/2933/2666 MT/s SDRAM

DIMM Sizes

4GB, 8GB, 16GB, 32GB

Memory Voltage

1.2V

Error Detection

Corrects single-bit errors

On-Board Devices**Chipset**

Intel® C256

SATA

Intel® C256 controller for 8 SATA3 (6 Gbps) ports; RAID 0,1,5,10

IPMI

ASPEED AST2600 BMC

Graphics

1 ASPEED AST2600 BMC port(s)

Network Controllers

Quad LAN with Intel® Ethernet Controller I210

Input / Output**SATA**

8 SATA3 (6Gbps) port(s)

LAN

4 RJ45 Gigabit Ethernet LAN ports

USB

6 USB 2.0 port(s) (4 via header; 2 rear)

5 USB 3.2 Gen1 port(s) (2 via header; 2 rear; 1 type A)

Video Output

1 VGA port(s)

Serial Port

2 COM Port(s) (1 header; 1 rear)

DOM2 SATA DOM (Disk on Module) power connector support**TPM**

1 TPM Header

Expansion Slots**PCIe**

1 PCIe 3.0 x4 (in x8 slot),

1 PCIe 4.0 x16,

1 PCIe 4.0 x4 (in x8 slot)

M.2

M.2 Interface: 1 PCIe 3.0 x4

Form Factor: 2280/22110

Key: M-Key

System BIOS**BIOS Type**

256MB UEFI

BIOS Features

ACPI 6.0

SMBIOS 2.7

Plug and Play (PnP)

RTC (Real Time Clock) Wakeup

UEFI 2.7

USB Keyboard support

PCI 3.0

Management**Software**[Redfish API](#), [Supermicro Server Manager \(SSM\)](#),[Supermicro Update Manager \(SUM\)](#), [SuperDoctor® 5](#),[Super Diagnostics Offline](#), [KVM with dedicated LAN](#), [IPMI](#)[2.0](#)**System Management Software**

IPMI (Intelligent Platform Management Interface) v1.5 / 2.0 with KVM support

Power Configurations

Power-on mode for AC power recovery, ACPI Power Management

Security**Hardware**

Trusted Platform Module (TPM) 2.0

PC Health Monitoring**Voltage**

VBAT, System level control, Supports system management utility, Monitors CPU voltages, Chipset Voltage, Chassis intrusion header, 6 -fan status, +5V standby, +5V, +3.3V, +12V, Memory Voltages

LED

UID/Remote UID

CPU / System Overheat LED

Temperature

Monitoring for CPU and chassis environment

CPU thermal trip support

Thermal Monitor 2 (TM2) support

PECI

FAN

6x 4-pin fan headers (up to 6 fans)

Thermal control tachometer fan connectors

Fan speed control

6 fans with tachometer status monitoring

Overheat LED indication

Other Features

WOL, UID, Node Manager Support, M.2 NGFF connector, Dual Cooling Zones, CPU thermal trip support for processor protection, Control of power-on for recovery from AC power loss, Chassis intrusion header, Chassis intrusion detection, ACPI power management

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

Standard Parts (Bulk Package)

I/O Cables

Part Number	CBL-0044L • eStore
Qty	2
Description	57.5CM SATA FLAT S-S PBF

I/O Shield

Part Number	MCP-260-00164-0N
Qty	1
Description	STD I/O Shield for X12STH-LN4F with EMI Gasket

Standard Parts (Retail Package)

I/O Cables

Part Number	CBL-0044L • eStore
Qty	4
Description	57.5CM SATA FLAT S-S PBF

I/O Shield

Part Number	MCP-260-00164-0N
Qty	1
Description	STD I/O Shield for X12STH-LN4F with EMI Gasket

QRG

Part Number	MNL-2367-QRG
Qty	1
Description	Motherboard Quick Reference Guide

Optional Parts

1U I/O Shield

Part Number	MCP-260-00165-0N
Qty	--
Description	Standard 1U I/O Shield with EMI Gasket

TPM security module

Part Number	AOM-TPM-9671H	AOM-TPM-9670H	AOM-TPM-9671V	AOM-TPM-9670V
Qty	--	--	--	--
Description	SPI capable TPM 1.2 with Infineon 9670 controller with horizontal form factor	SPI capable TPM 2.0 with Infineon 9670 controller with horizontal form factor	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