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 PCI-E 4.0 x16
1 PCI-E 4.0 x4 (in x8 slot)
1 PCI-E 3.0 x4 (in x8 slot)
M.2 Interface: PCI-E 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

Product SKUs

MBD-X12STH-LN4F	■ 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 ECC UDIMM, DDR4-3200MHz
Memory Type	■ 3200/2933/2666MHz 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	■ ASPEED AST2600 BMC
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)
DOM	■ 2 SATA DOM (Disk on Module) power connector support
TPM	■ 1 TPM Header

Expansion Slots

PCI-E	■ 1 PCI-E 3.0 x4 (in x8 slot), ■ 1 PCI-E 4.0 x16, ■ 1 PCI-E 4.0 x4 (in x8 slot)
M.2	■ M.2 Interface: 1 PCI-E 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	■ SuperDoctor® 5, NMI, SUM, SPM, Intel® Node Manager, SSM, IPMI2.0, Watchdog
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

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)