X12SDV-10C-SP6F

Embedded
Xeon D SoC
Dual 25GbE LAN
Quad 1GbE LAN
IPMI

Key Features

System on Chip

Intel® Xeon® Processor D-1747NTE, CPU TDP 80W, Intel Quick Assist Technology

Up to 256GB Registered ECC RDIMM, DDR4-2933MHz, in 4 DIMM slots

1 PCIe 4.0 x16 or 2 PCIe 4.0 x8

1 M.2 M-Key 2280 (SATA/PCIe 3.0 x4)

1 M.2 B-Key 2280/3042/3052 (USB/SATA/PCIe 3.0 x2)

1 M.2 E-Key 2230 (PCIe 3.0 x1)

2 PCIe 3.0 NVMe x4 SlimSAS Internal Port (4 SATA/PCIe 3.0 x4)

Quad 1G RJ45 with Intel® I350-AM2 and i210-IT

Dual 25G SFP28 with Intel SoC

SoC controller for 10 SATA3 (6 Gbps) ports; RAID 0,1,5,10

12V DC or ATX Power Input

Optimized Servers

Specifications

Product SKUs
MBD-X12SDV-10C-SP6F

Physical Stats
Form Factor
FlexATX
Dimension
9" x 7.25" (22.86cm x 18.42cm)

Processor
CPU
Intel® Xeon® Processor D-1747NTE
Single Socket FCBGA-2227 supported,
CPU TDP supports Up to 80W TDP
Core
Up to 10 cores / 15MB Cache

System Memory
Memory Capacity
4 DIMM slots
Up to 256GB ECC RDIMM, DDR4-2933MHz;
Up to 256GB ECC/non-ECC , DDR4-2933MHz
Memory Type
2933/2666/2400 MT/s ECC/non-ECC DDR4 RDIMM
DIMM Sizes
RDIMM: 8GB, 16GB, 32GB, 64GB
UDIMM: 4GB, 8GB, 16GB, 32GB
Memory Voltage
1.2V
Error Detection
Corrects single-bit errors
Detects double-bit errors (using ECC memory)

On-Board Devices
Chipset
System on Chip
SATA
SoC controller for 10 SATA3 (6 Gbps) ports;
RAID 0,1,5,10
8 SATA ports via SlimSAS (or 2 PCIE3.0 x4 for NVMe)
IPMI
ASPEED AST2600 BMC
Graphics
1 Aspeed AST2600 BMC port(s)
Network Controllers
Dual LAN with 25G SFP28 LAN via SoC
Dual LAN with 1GbE with Intel® I210
Dual LAN with 1GbE LAN via Intel's i350-AM2

Input / Output
SATA
2 SATA3 (6Gbps) port(s)
LAN
4 RJ45 Gigabit Ethernet LAN ports
2 SFP28 25 Gigabit Ethernet LAN ports
USB
4 USB 2 port(s) (4 via header)
2 USB 3 port(s) (2 rear type A)
Video Output
1 VGA D-Sub Connector port(s)
Serial Port
1 COM Port(s) (1 header)
DOM
1 SATA DOM (/SATADOM/) (Disk on Module) power connector support
TPM
1 TPM Header & Chip both

Expansion Slots
PCIe
2 PCIe 3.0 x4 (or 4x SATA), via SlimSAS,
1 PCIe 4.0 x16 slots or 1 PCIe 4.0 x8 (N/A or 8/8)
M.2
M.2 Interface: 1 SATA/PCIe 3.0 x4; 1 USB3.0/SATA3.0/PCIe 3.0 x2; 1 PCIe 3.0 x1
Form Factor: 2280, 2280/3042/3052, 2230
Key: M-Key, B-Key, E-Key

System BIOS
BIOS Type
AMI 32MB SPI Flash EEPROM
BIOS Features
ACPI 6.3
UEFI 2.7
SMBIOS 3.3
Plug and Play (PnP)
PCI FW 3.0

Management
Software
Redfish API (/manuals/other/RedfishRefGuide.pdf), Supermicro Server Manager (SSM) (/solutions/SMS_SSM.cfm), Supermicro Update Manager (SUM) (/solutions/SMS_SUM.cfm), SuperDoctor® 5 (/en/solutions/management-software/superdoctor), Super Diagnostics Offline (/en/solutions/management-software/super-diagnostics-offline), KVM with dedicated LAN (/manuals/other/BMC_IPMI_X13_H13.pdf#page=112), IPMI 2.0 (/solutions/IPMI.cfm)
Power Configurations
ATX Power connector, +12V DC Power Input, CPU thermal trip support for processor protection, Power-on mode for AC power recovery

Security
Hardware
Trusted Platform Module (TPM) 2.0

PC Health Monitoring
Voltage
3.3V standby, +5V standby, +5V, +3.3V, +12V, Memory Voltages, Monitors CPU Core Voltages
LED
UID/Remote UID
BMC/IPMI Heartbeat LED
Overheat/Fan Fail/PWR Fail LED
Power Indicator LED
LAN temperature
Temperature
CPU thermal trip support
peripheral temperature
System temperature
Memory temperature
NVMe temperature
Platform Environment Control Interface (PECI)/TSI
FAN
6x 4-pin fan headers (up to 6 fans)
System level control
PWM fan speed control
Fan speed control
6 fans with tachometer status monitoring
Overheat LED indication

Other Features
UID, RoHS, Node Manager Support, Chassis intrusion header, ATX Power connector, ACPI power management, 8-pin 12v DC power connector, 12V DC or ATX Power Source, Intel® QuickAssist Technology

Operating Environment
Operating Temperature Range
0°C - 60°C (32°F - 140°F)
Non-Operating Temperature Range
-40°C - 85°C (-40°F - 185°F)
Operating Relative Humidity Range
10% - 85% (non-condensing)
Non Operating Relative Humidity Range
10% - 95% (non-condensing)

Parts List

Standard Parts (Bulk Package)

I/O Shield
Part Number	MCP-260-00098-0N • *e*Store (https://store.supermicro.com/mcp-260-00098-0n.html)
Qty	1
Description	Standard I/O Shield

SATA cable
Part Number	CBL-0044L • *e*Store (https://store.supermicro.com/supermicro-sata-flat-straight-straight-57-5cm-cable-cbl-0044l.html)
Qty	2
Description	57.5CM SATA FLAT S-S PBF

Standard Parts (Retail Package)

COM Cable
Part Number	CBL-CDAT-0605
Qty	1
Description	COM Cable 20cm

I/O Shield
Part Number	MCP-260-00098-0N • *e*Store (https://store.supermicro.com/mcp-260-00098-0n.html)
Qty	1
Description	Standard I/O Shield

QRG
Part Number	MNL-2362-QRG
Qty	1
Description	Motherboard Quick Reference Guide

SATA cable
Part Number	CBL-0044L • *e*Store (https://store.supermicro.com/supermicro-sata-flat-straight-straight-57-5cm-cable-cbl-0044l.html)
Qty	2
Description	57.5CM SATA FLAT S-S PBF

Screw Bag
Part Number	FST-SCRW-0010
Qty	1
Description	STAND-OFF, H=3MM, 2PCS/BAG

x4 SlimSAS to U.2 Cable
Part Number	CBL-SAST-1240A-85
Qty	2
Description	40CM Slimline x4 to PCIe SFF-8639

Global SKU (/en/products/SMC_global_skus)