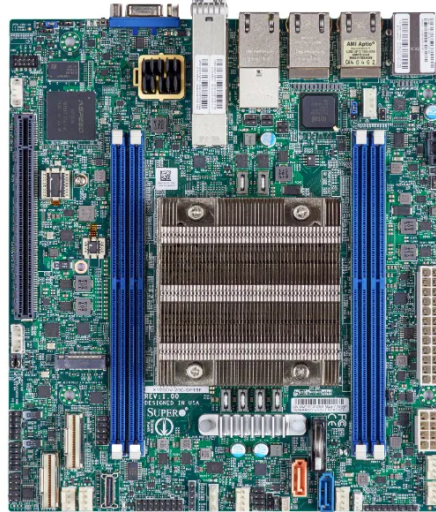


X12SDV-20C-SPT8F



**Embedded
Xeon D SoC
Dual 25GbE LAN
Dual 10Gbase-T LAN
Quad 1GbE LAN
IPMI**

Key Features

System on Chip

Intel® Xeon® Processor D-2796NT, CPU TDP 120W, Intel Quick Assist Technology

Up to 256GB Registered ECC RDIMM, DDR4-2933MHz; Up to 512GB LRDIMM LRDIMM, DDR4-2933MHz, in 4 DIMM slots

1 PCIe 4.0 x16

2 PCIe 4.0 NVMe x8 SlimSAS Internal Port

1 OcuLink Connector (4 SATA/PCIe 3.0 x4)

1 M.2 M-Key 2242/2280 (SATA/PCIe 3.0 x4)

Quad 1G RJ45 with Intel® I350-AM4

Dual 25G SFP28 with Intel SoC

Dual 10Gbase-T RJ-45 with Intel® Ethernet Controller X550-AT2

SoC controller for up to 6 SATA3 (6 Gbps) ports

12V DC or ATX Power Input (Use at least 5Vsb/4A PSU)

Optimized Servers

[SYS-110D-20C-FRAN8TP](#)

[SYS-110D-20C-FRDN8TP](#)

Specifications

Product SKUs**MBD-X12SDV-20C-SPT8F****Physical Stats****Form Factor**

Micro-ATX

Dimension

7.5" x 8.5" (19.05cm x 21.59cm)

Processor**CPU**

Intel® Xeon® Processor D-2796NT

Single Socket FCBGA-2579 supported, CPU TDP supports Up to 120W TDP

Core

Up to 20 cores / 30MB Cache

System Memory**Memory Capacity**

4 DIMM slots

Up to 512GB ECC LRDIMM, DDR4-2933MHz; Up to 256GB ECC RDIMM, DDR4-2933MHz; Up to 512GB ECC/non-ECC , DDR4-2933MHz

Memory Type

2933/2666/2400 MT/s ECC/non-ECC DDR4 LRDIMM, RDIMM

DIMM Sizes

LRDIMM: 64GB, 128GB

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 2 SATA3 (6 Gbps) ports; RAID 0,1

4 SATA ports via OCuLink (or 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 Intel® X550 10GBase-T Ethernet Controller

Quad LAN with Intel® i350 Gigabit Ethernet Controller

Input / Output**SATA**

2 SATA3 (6Gbps) port(s)

LAN

4 RJ45 Gigabit Ethernet LAN ports

2 SFP28 25 Gigabit Ethernet LAN ports

2 RJ45 10GBase-T 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)

Expansion Slots**PCIe**

1 PCIe 4.0 x16,

1 PCIe 3.0 x4 (or 4x SATA), via Oculink,

2 PCIe 4.0 x8, via SlimSAS

M.2

M.2 Interface: 1 SATA/PCIe 3.0 x4

Form Factor: 2242/2280

Key: M-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](#), [Supermicro Server Manager \(SSM\)](#),[Supermicro Update Manager \(SUM\)](#), [SuperDoctor® 5](#),[Super Diagnostics Offline](#), [KVM with dedicated LAN](#),[IPMI 2.0](#)**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, Dual Cooling Zones

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

DOM1 SATA **DOM** (Disk on Module) power connector support**TPM**

1 TPM Header & Chip both

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 •

[eStore](#)

Qty 1

Description Standard I/O Shield

SATA cablePart Number CBL-0044L • [eStore](#)

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 •

[eStore](#)

Qty 1

Description Standard I/O Shield

OCuLink to 4x SATA CablePart Number CBL-SAST-0933 • [eStore](#)

Qty 1

Description 50CM OCuLink to 4x SATA
Cable**OCuLink to U.2 Cable**Part Number CBL-SAST-0956 • [eStore](#)

Qty 1

Description 55CM OCuLink to U.2
Cable with Molex Power
Header**QRG**

Part Number MNL-2440-QRG

Qty 1

Description Motherboard Quick
Reference Guide**SATA cable**Part Number CBL-0044L • [eStore](#)

Qty 2

Description 57.5CM SATA FLAT S-S
PBF
