



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

Key Features

- System on Chip
- Intel® Xeon® Processor D-2766NT, CPU TDP 97W, Intel Quick Assist Technology
- Up to 256GB Registered ECC RDIMM, DDR4-2667MHz; Up to 512GB LRDIMM LRDIMM, DDR4-2667MHz, 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 10GbBase-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-14C-FRAN8TP \(/de/products/system/iot/1u/sys-110d-14c-fran8tp\)](#) [SYS-110D-14C-FRDN8TP \(/de/products/system/iot/1u/sys-110d-14c-frdn8tp\)](#)

Specifications

Product SKUs
MBO-X12SDV-14C-SPT8F

Physical Stats
Form Factor
 Micro-ATX

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

Processor
CPU
 Intel® Xeon® Processor D-2766NT
 Single Socket FCBGA-2579 supported,
 CPU TDP supports Up to 97W TDP

Core
 Up to 14 cores / 20MB 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
 1 Aspeed AST2600 BMC port(s)

Network Controllers
 Dual LAN with 25G SFP28 LAN via SoC
 Dual LAN with Intel® X550 10GbBase-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 10GbBase-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)

DOM
 1 SATA DOM (/SATADOM/) (disk on Module) power connector support

TPM
 1 TPM Header & Chip both

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)
 PCIFW 3.0

Management
Software
[Redfish API](#)

[\(/manuals/other/RedfishRefGuide.pdf\)](#), [Supersmicro Server Manager \(SSM\)](#) [\(/solutions/SMS_SSM.cfm\)](#), [Supersmicro 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
 6x4-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, 12VDC 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 • eStore (https://store.supermicro.com/mcp-260-00098-0n.html).
Qty	1
Description	Standard I/O Shield
SATA cable	
Part Number	CBL-0044L • eStore (https://store.supermicro.com/supermicro-sata-flat-straight-straight-57-5cm-cable-cbl-0044l.html).
Qty	2
Description	57.5CM SATA FLAT S-SPBF

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 (https://store.supermicro.com/mcp-260-00098-0n.html).
Qty	1
Description	Standard I/O Shield
OCuLink to 4x SATA Cable	
Part Number	CBL-SAST-0933 • eStore (https://store.supermicro.com/supermicro-50cm-oculink-to-4-sata-cable-cbl-sast-0933.html).
Qty	1
Description	50CM OcuLink to 4x SATA Cable
OCuLink to U.2 Cable	
Part Number	CBL-SAST-0956 • eStore (https://store.supermicro.com/supermicro-55cm-oculink-to-u-2-pcie-with-power-cable-cbl-sast-0956.html).
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 (https://store.supermicro.com/supermicro-sata-flat-straight-straight-57-5cm-cable-cbl-0044l.html).
Qty	2
Description	57.5CM SATA FLAT S-SPBF

Global SKU (/de/products/SMC_global_skus)