



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

**Key Features**

- System on Chip
- Intel® Xeon® Processor D-1718T, CPU TDP 46W
- 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**

[SYS-510D-4C-FN6P \(/de/products/system/iot/1u/sys-510d-4c-fn6p\)](#) [SYS-E300-12D-4CN6P \(/de/products/system/iot/1u/sys-e300-12d-4cn6p\)](#) [SYS-E302-12D-4C \(/de/products/system/iot/1u/sys-e302-12d-4c\)](#)

**Specifications**

**Product SKUs**  
**MBD-X12SDV-4C-SP6F**

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

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**Processor**  
**CPU**  
 Intel® Xeon® Processor D-1718T  
 Single Socket FCBGA-2227 supported,  
 CPU TDP supports Up to 46W TDP  
**Core**  
 Up to 4 cores / 10MB Cache

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**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

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**DIMM Sizes**  
 RDIMM: 8GB, 16GB, 32GB, 64GB  
 UDIMM: 4GB, 8GB, 16GB, 32GB  
**Memory Voltage**  
 1.2V

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**Error Detection**  
 Corrects single-bit errors  
 Detects double-bit errors (using ECC memory)

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**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

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**Graphics**  
 1 Aspeed AST2600 BMC port(s)

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**Network Controllers**  
 Dual LAN with 25G SFP28 LAN via SoC  
 Dual LAN with 1GbE with Intel® I210  
 Dual LAN with 1GbE LAN via Intel® I350-AM2

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**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 ( /SATA/DOM/ ) (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

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**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

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**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 \(/en/solutions/management-software/superdoctor\)](#), [SuperDiagnostics Offline \(/en/solutions/management-software/super-diagnostics-offline\)](#), [KVM with dedicated LAN \(/manuals/other/BMC\\_IPMI\\_X13\\_H13.pdf#page=112\)](#), [IPMI X13 H13.pdf#page=112](#), [IPMI 2.0 \(/solutions/IPMI.cfm\)](#)

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**Power Configurations**  
 ATX Power connector, +12V DC Power Input, CPU thermal trip support for processor protection, Power-on mode for AC power recovery

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**Security**  
**Hardware**  
 Trusted Platform Module (TPM) 2.0

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**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

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**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

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**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 ( <a href="https://store.supernmicro.com/mcp-260-00098-0n.html">https://store.supernmicro.com/mcp-260-00098-0n.html</a> ).
Qty	1
Description	Standard I/O Shield
SATA cable	
Part Number	CBL-0044L • eStore ( <a href="https://store.supernmicro.com/supernmicro-sata-flat-straight-straight-57-5cm-cable-cbl-0044l.html">https://store.supernmicro.com/supernmicro-sata-flat-straight-straight-57-5cm-cable-cbl-0044l.html</a> ).
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 ( <a href="https://store.supernmicro.com/mcp-260-00098-0n.html">https://store.supernmicro.com/mcp-260-00098-0n.html</a> ).
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 • eStore ( <a href="https://store.supernmicro.com/supernmicro-sata-flat-straight-straight-57-5cm-cable-cbl-0044l.html">https://store.supernmicro.com/supernmicro-sata-flat-straight-straight-57-5cm-cable-cbl-0044l.html</a> ).
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 ([/de/products/SMC\\_global\\_skus](/de/products/SMC_global_skus))