



**Pentium D SoC
Dual Core
Broadwell-DE
Dual 10GbE
Key Features**

Links & Resources

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1. Intel® Pentium® processor D1508, Single socket FCBGA 1667; 2-Core, 4 Threads, 25W
2. System on Chip
3. Up to 128GB ECC RDIMM DDR4 1866MHz or 64GB ECC/non-ECC UDIMM in 4 sockets
4. 1 PCI-E 3.0 x16, M.2 PCI-E 3.0 x4 (SATA support), M Key 2242/2280
5. 2 10GbE LAN ports
6. 6 SATA3 (6Gbps) ports via SoC
7. 2 USB 3.0 ports (rear), 4 USB 2.0 ports (via headers)
8. 1 SuperDOM, 1 COM, TPM header, GPIO and SMBus header(s)
9. 12V DC Input and ATX Power Source

Specifications

Product SKUs

- MBD-X10SDV-2C-TLN2F
- X10SDV-2C-TLN2F

Physical Stats

- **Form Factor** Mini-ITX
- **Dimensions** 6.7" x 6.7" (17.02cm x 17.02cm)

Processor/Cache

- **CPU** Intel® Pentium® Processor D1508.
Socket FCBGA1667 supported, CPU TDP support 25W
- **Cores / Cache** 2 cores, 4 threads / 3MB cache

System Memory

- **Memory Capacity** Up to 128GB Registered ECC RDIMM, DDR4-1866MHz
Up to 64GB Unbuffered ECC/non-ECC UDIMM, DDR4-1866MHz, in 4 DIMM slots
- **Memory Type** 2133/1866/1600MHz ECC DDR4 ECC RDIMM and ECC/Non-ECC UDIMM (Operating speed up to 1866MHz)
- **DIMM Sizes** 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 6 SATA3 (6 Gbps) ports; RAID 0,1,5,10
RSTe
- **IPMI** Support for Intelligent Platform Management Interface v.2.0
IPMI 2.0 with virtual media over LAN and KVM-over-LAN support
- **Network Controllers** Dual LAN with 10Gbase-T
Single LAN with Virtual Machine Device Queues reduce I/O overhead
Single LAN with Supports 10Base-T, 100BASE-TX, and 1000BASE-T, RJ45 output
Single LAN with 1 Realtek RTL8211E PHY (dedicated IPMI)
- **Graphics** Aspeed AST2400 BMC

Input / Output

- **SATA** 6 SATA3 (6Gbps) port
- **LAN** 2 RJ45 10GBase-T ports
1 RJ45 Dedicated IPMI LAN port
- **USB** 4 USB 2.0 ports (4 headers, Type A))
2 USB 3.0 ports (2 rear)
- **Video Output** 1 VGA port
- **Serial Port / Header** 1 COM Port (1 header)
- **TPM** TPM Header

Expansion Slots

- **PCI-E** 1 PCI-E 3.0 x16
- **M.2** M.2 Interface: 1 SATA/PCI-E 3.0 x4
Form Factor: 2242, 2280
Key: M-Key

System BIOS

- **BIOS Type** 128Mb SPI Flash w with AMI BIOS
- **BIOS Features** PCI 3.0
ACPI 3.0 / 4.0
USB Keyboard support
Hardware BIOS Virus protection
RTC (Real Time Clock) Wakeup
SMBIOS 2.8
UEFI 2.4

Management

- **Software** Intel® Node Manager, IPMI2.0, KVM with dedicated LAN, NMI, SUM, SuperDoctor® 5, Watchdog
- **Power Configurations** ACPI Power Management
CPU Fan auto-off in sleep mode
Power-on mode for AC power recovery

PC Health Monitoring

- **Voltage** +12V, +3.3V, +5V, Chassis intrusion header, Monitors for CPU Cores, System level control, VBAT
- **FAN** 4x 4-pin fan headers (up to 4 fans), 4 fans with tachometer monitoring, Dual Cooling Zone, Low noise fan speed control, Pulse Width Modulated (PWM) fan connectors, Status monitoring for on/off control, Status monitoring for speed control
- **Temperature** Monitoring for CPU and chassis environment, CPU thermal trip support, Thermal Monitor 2 (TM2) support, PECI
- **LED** CPU / System Overheat LED
- **Other Features** 12V DC or ATX Power Source, Chassis intrusion detection, Chassis intrusion header, RoHS

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

Parts List (Bulk Package)			
Name	Part Number	Qty	Description
Motherboard	MBD-X10SDV-2C-TLN2F	1	X10SDV-2C-TLN2F Motherboard
I/O Cables	CBL-0044L	2	57.5CM SATA FLAT S-S PBF
I/O Shield	MCP-260-00084-0N	1	STD I/O SHIELD

Optional Parts List			
Name	Part Number	Qty	Description
1U I/O Shield	MCP-260-00085-0B	1	1U I/O Shield for X10SDV-F/TLN4F in CSE-510/505/504
1U I/O Shield	MCP-260-00079-0N	1	1U I/O Shield for X10SDV-F/TLN4F in SC813

Chassis (Optimized for X10SDV-2C-TLN2F)

Embedded Compact	1U	2U	3U	Mid/Mini-Tower	4U/Tower
	● SC505-203B				
	● SC504-203B				

● = Most optimized Chassis for SuperServer Configuration
 Blue color = Compatible
 Green color = Global SKU & Compatible
 Red dot & green color = Optimized + Global SKU