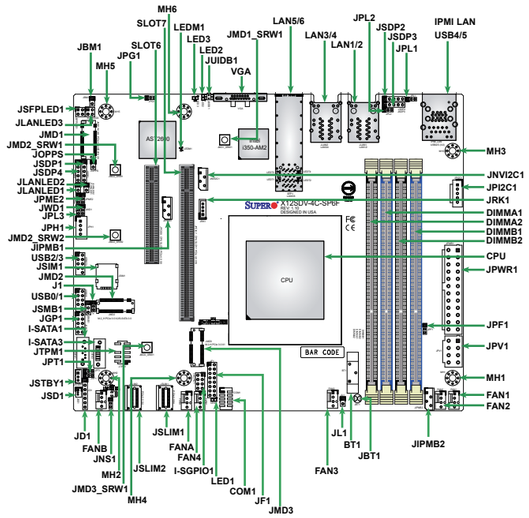
SUPERMICRO® SuperServer E300-12D Series Quick Reference Guide

Board Layout



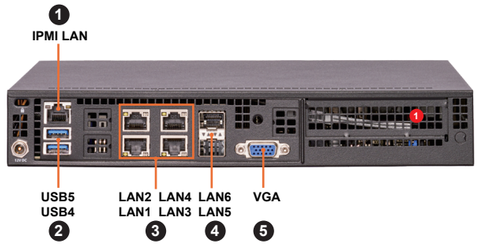
Quick Reference Table

Connector	Description
BT1	Onboard Battery
COM1	COM Header
FAN1 – FAN4, FANA, FANB	CPU/System Fan Headers (FAN1: CPU Fan)
IPMI LAN	Dedicated IPMI LAN Port
I-SATA1 and I-SATA3	SATA 3.0 Ports (I-SATA1: SATA DOM Power)
I-SGPIO1	Serial Link General Purpose I/O Header
JD1	Power LED/Speaker (Pins 1-3: Power LED, Pins 4-7: Speaker)
JF1	Front Control Panel Header
JGP1	General Purpose I/O Header
JIPMB1, JIPMB2	4-pin BMC External I²C Headers
JL1	Chassis Intrusion Header
JLANLED1	LAN1 Activity LED Header
JLANLED2	LAN2 Activity LED Header
JLANLED3	LAN3/4 Activity LED Header
JMD1	M.2 M-Key 2280 PCIe 3.0 x4 or SATA 3.0 Slot
JMD2	M.2 B-Key 2280/3042/3052 PCIe 3.0 x2 or SATA 3.0 or USB 3.0 Slot
JMD3	M.2 E-Key 2230 PCIe 3.0 x1 or USB 2.0 Slot
JMD1_SRW1, JMD2_SRW1, JM2_SRW2, JMD3_SRW1	M.2 Mounting Holes
JNVI2C1	Non-Volatile Memory (NVMe) I²C Headers
JOPPS	Reserved for One Pulse Per Second
JPH1	4-pin HDD Power Connector
JPI2C1	Power System Management (SMB) I²C Headers
JPWR1	24-pin ATX Power Connector
JPV1	8-pin 12V DC Power Connector for CPU (Required) or alternate single power input for when the 24-pin ATX power is not in use
JRK1	Intel RAID Key Header
JSD1	SATA DOM Power Connector
JSDP1 – JSDP4	Reserved for time synchronization
JSFPLED1	LAN5/6 Activity LED header
JSIM1	NANO SIM Slot for M.2 B-key
JSLIM1, JSLIM2	SlimSAS PCIe 3.0 x4 Slots
JSMB1	System Management Bus Header
JSTBY1	Standby Power Header
JTPM1	Trusted Platform Module (TPM)/Port 80 Connector
JUIDB1	Unit Identifier Switch
LAN1/2, LAN3/4	Gigabit Ethernet RJ45 Ports
LAN5/6	25GbE SFP28 LAN Ports
MH1 – MH6	Motherboard Mounting Holes
SLOT6	CPU SLOT6 PCIe 4.0 x8
SLOT7	CPU SLOT7 PCIe 4.0 x16
USB0/1, USB2/3	USB 2.0 Headers
USB4/5	Back Panel USB 3.0 Ports
VGA	VGA Port

System Features

Processors	
Single Intel® Xeon® D-1700 series processor	
Chipset	
SoC (System on a Chip)	
BIOS	
256Mb AMI® UEFI BIOS	
Memory	
Supports up to 256GB of ECC and non-ECC RDIMM/UDIMM DDR4 memory in four DIMM slots **Note:** See the memory section in Chapter 3 for details and our website for updates to supported memory.	
SATA Controller	
SoC controller for four SATA3 (6Gbps) ports	
Drive Bays	
One fixed 2.5" hard drive bay with bracket (when AOC area is unoccupied)	
Expansion Slots	
One PCIe 4.0 x16 Slot (LP)	One M.2 B-Key 2280/3042/3052 slot (PCIe 3.0 x2 / SATA 3.0 / USB 3.0)
One M.2 M-Key 2280 slot (PCIe 3.0 x4 / SATA 3.0)	One M.2 E-Key 2230 slot (PCIe 3.0 x1 / USB 2.0)
Motherboard	
X12SDV-4C/8C/10C-SP6F; FlexATX form factor (9 x 7.25 in. / 228.6 x 184.2 mm.)	
Chassis	
CSE-E300; Mini ITX, Width 10" (254mm), Height 1.7" (43mm), Depth 8.9" (226mm)	
System Cooling	
Two 4-cm PWM fans	
Power Supply	
One external 12Vdc, 15A (180W) DC power adapter	
Weight	
Gross Weight: 7.5 lbs (3.4 kg) Net Weight: 3.45 lbs (1.56 kg)	
Operating Environment	
Operating Temperature: 0°C to 40°C (32°F to 104°F)	Operating Relative Humidity: 8% to 90% (non-condensing)
Non-operating Temperature: -40°C to 70°C (-40°F to 158°F)	Non-operating Relative Humidity: 5% to 95% (non-condensing)

Front View and Features



Item	Description
1	IPMI LAN
2	USB 4/5 ports
3	LAN1-4 ports
4	LAN5-6 ports
5	VGA Port
1	PCIe 4.0 x16 slot: standard low-profile

Control Panel

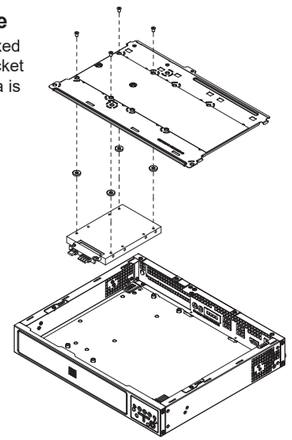
Item	Features	Description
1	Power button	The main power switch applies or removes primary power from the power supply to the server but maintains standby power.
2	Reset Button	System reset button
3	Information LED	Alerts operator to several states, as noted in the table on the next page.
4	NIC LED	Indicates network activity on the LAN when flashing.
5	NIC LED	Indicates network activity on the LAN when flashing.
6	HDD LED	Indicates hard disk drive activity when flashing.
7	Power LED	Indicates power is being supplied to the system power supply units.

Information LED	
Status	**Description**
Blinking red (1Hz)	Fan failure. Check for an inoperative fan.
Blinking red (0.25Hz)	Power failure. Check for a non-operational power

Installing or Replacing the storage drive and M.2 cards

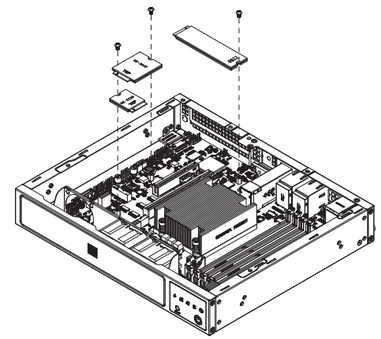
Installing the Storage Drive

The drive can accommodate one fixed 2.5" drive secured to a support bracket (only supported when the AOC area is not occupied).
Use enterprise quality drives only.



Installing the Riser Card

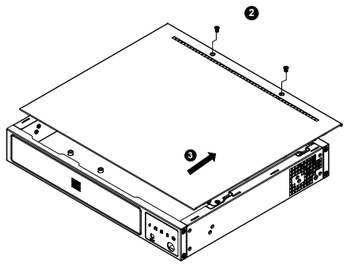
The system can support one PCIe x16 expansion card by means of an optional riser card. The riser card is inserted in the expansion slot on the motherboard. Installation of the riser card and riser card bracket is pictured below.



Installing or Replacing the Riser Cards and Fans

Components of the Expansion Card Module

The drive features a removable top cover to access to the inside of the chassis.
1. Power down the system.
2. Remove the two screws that hold the cover in place.
3. Slide the cover sideways as illustrated above to release the front and rear cover hooks from the chassis.
4. Lift the cover up and off the chassis.



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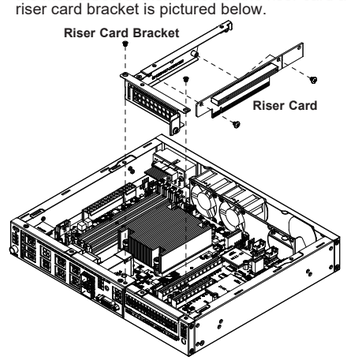
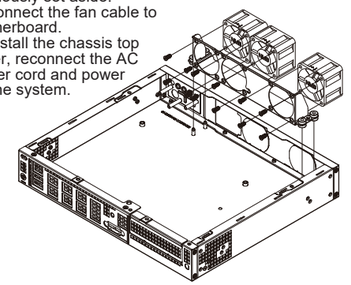


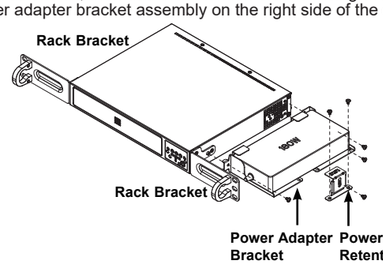
System Cooling

1. Remove power from the system.
2. Remove the failed fan power cable from motherboard.
3. Remove the screws securing the fan to the chassis wall and save them.
4. Lift the fan out of the chassis.
5. Align the replacement fan with the holes in the wall of the chassis.
6. Secure the fan to the chassis wall using the screws previously set aside.
7. Reconnect the fan cable to motherboard.
8. Reinstall the chassis top cover, reconnect the AC power cord and power up the system.



Installing Rack Mounting Brackets

The chassis can be mounted in a rack using two rack brackets and a two-part power adapter shelf bracket (optional).
1. Attach the rack brackets using three screws through the holes in each bracket to secure the bracket to the chassis.
2. Install the handles, using two screws through the bracket and into each handle.
3. If you are using the optional power adapter bracket, install the power adapter on its bracket. Place it as shown, then add the retention bracket using two screws.
4. Mount the power adapter bracket assembly on the right side of the chassis using three screws.



Caution

⚠ SAFETY INFORMATION

IMPORTANT: See installation instructions and safety warning before connecting system to power supply.
http://www.supermicro.com/about/policies/safety_information.cfm

⚠ WARNING:

To reduce risk of electric shock/damage to equipment, disconnect power from server by disconnecting all power cords from electrical outlets.
If any CPU socket empty, install protective plastic CPU cap.

⚠ WARNING:

Always be sure all power supplies for this system have the same power output. If mixed power supplies are installed, the system will not operate.

Please clean the dust filters regularly

For more information go to: http://www.supermicro.com/support