

ASRock SPC621D8, 1xSKT LGA4189, 3Gen. Intel Xeon Scalable, C621A, 8xDIMM, SATA, 2xM.2, 2x1GbE, IPMI

Part number: SPC621D8



Category	Server
Form Factor	ATX
Dimensions	12" x 9.6"
CPU Socket	LGA 4189 (Socket P+)
Supported CPU's	Intel Xeon Scalable 3rd Gen
Chipset	C621A
Memory Type	DDR4 ECC RDIMM DDR4 ECC LRDIMM DDR4 ECC 3DS RDIMM DDR4 ECC 3DS LRDIMM
Memory Speed	3200 MHz
# of DIMM's	8
Max Memory Size	2048 GB
Integrated GPU	ASPEED AST2500
# of PCIe x16 4.0	4
# of PCIe x8 4.0	3
# of USB Ports	4 x USB 3.2 (rear) 2x USB 3.2 (header) 2 x 2.0(header) 1 x USB 2.0 (port)
# of SATA Ports	8
# of SATA DOM power	2
# of SAS Ports	1
Integrated RAID	0,1,5,10
# of 1GbE Ports	2 x RJ45
Integrated BMC	IPMI Dedicated RJ45
BMC chip	ASPEED AST2500
TPM	1 x TPM 2.0 17-pin Header

SPC621D8

- ATX (12" x 9.6")
- Supports 3rd Gen Intel® Xeon® Scalable Processors
- 8 DIMM slots (1DPC), supports DDR4 RDIMM, LRDIMM, RDIMM/LRDIMM-3DS, and Intel® Optane™ Persistent Memory
- 4 PCIe4.0 x16, 3 PCIe4.0 x8
- Supports 1 M.2 (PCIe3.0 x4), 1 M.2 (PCIe3.0 x1 or SATA 6Gb/s)
- 13 SATA 6Gb/s (including 1 port from M.2)

- 2 RJ45 (1GbE) by Intel® i210
- Remote management (IPMI)

Specifications

Physical Status

Form Factor	ATX
Dimensions	12" x 9.6"

Processor System

CPU	Supports 3 rd Gen Intel® Xeon® Scalable processors
Socket	Single Socket P+ (LGA 4189)
Chipset	Intel® C621A

System Memory

Supported DIMM Quantity	8 DIMM slots (1DPC)
Supported Type	Supports DDR4 288-pin RDIMM, LRDIMM, RDIMM/LRDIMM-3DS, Intel® Optane™ Persistent Memory 200 series
Max. Capacity per DIMM	RDIMM: up to 64GB RDIMM-3DS: up to 256GB LRDIMM: up to 128GB LRDIMM-3DS: up to 256GB
DIMM Frequency	max. 3200MHz
Voltage	1.2V

PCIe Expansion Slots (SLOT7 close to CPU)

PCIe x 16	SLOT7: PCIe4.0 x16* SLOT5: PCIe4.0 x16* SLOT3: PCIe4.0 x16* SLOT1: PCIe4.0 x16 * SLOT7/5/3 auto-switch to PCIe4.0 x8 when SLOT6/4/2 occupied
PCIe x 8	SLOT6: PCIe4.0 x8 SLOT4: PCIe4.0 x8 SLOT2: PCIe4.0 x8

Other PCIe Expansion Connectors

M.2 slot	1 M-key (PCIe3.0 x4), supports 22110/2280/2242 form factor 1 M-key (PCIe3.0 x1 or SATA 6Gb/s), supports 22110/2280/2242 form factor
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SATA/SAS Storage

PCH Built-in Storage	Intel® C621A (13 SATA 6Gb/s; RAID 0/1/5/10): 1 Mini-SAS HD, 6 SATA 7-pin, 2 SATA DOM, 1 M.2
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Ethernet

Additional GbE Controller	Intel® i210: 2 RJ45 (1GbE)
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Server Management

BMC Controller	ASPEED AST2500
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IPMI Dedicated GLAN	1 x Realtek RTL8211E for dedicated management GLAN
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Graphics

Controller	ASPEED AST2500
VRAM	DDR4 16MB

Rear I/O

UID Button/LED	1
VGA Port	1 DB15
USB 3.2 Gen1 Port	4 Type-A (USB3.2 Gen1)
RJ45	2 RJ45 (1GbE)
Dedicate LAN	1 dedicated IPMI

Internal Connector/Headers

Auxiliary Panel Header	1 (18-pin): chassis intrusion, system fault LED, LAN1/LAN2 activity LED, locate, SMBus
System Panel	1 (9-pin): power switch, reset switch, system power LED, HDD activity LED
COM Header	1
Video output	1
Speaker Header	1
Buzzer	1
Fan Header	5 (6-pin)
Thermal Sensor Header	1
TPM Header	1 (17-pin, LPC), 1 (13-pin, SPI)
VROC header	1
SGPIO Header	1
SMBus header	1
PMB header	1
IPMB Header	1
Clear CMOS	1 (contact pads)
USB 3.2 (Gen1) Header	1 (19-pin, 2 USB3.2 Gen1)
USB 2.0 Header	1 (9-pin, 2 USB2.0)
Type A USB 2.0 Port	1 (Type-A, 1 USB2.0)
NMI Header	Copyright ©2026 www.superstorage.pl Wednesday, 13 May 2026

Power Connector	1 (24-pin, ATX main power), 1 (8-pin, ATX 12V), 1 (4-pin, ATX 12V), 1 (3-pin, SATA power)
ME/SPS Recovery	1
NC-SI	1

LED Indicators

Standby PWR LED 5vsb	1
80 Debug Port LED	1
Fan Fail LED	5

System BIOS

BIOS Type	256Mb SPI Flash ROM
BIOS Features	AMI UEFI BIOS

Hardware Monitor

Temperature	CPU, PCH, MB, Card side Temperature Sensing
Fan	CPU/Rear/Front Fan Tachometer CPU Quiet Fan (Allow Chassis Fan Speed Auto-Adjust by CPU Temperature) CPU/Rear/Front Fan Multi-Speed Control
Voltage	+12V, +5V, +3.3V, CPU Vcore, DRAM, 1.05V_PCH, +BAT, 3.3VSB, 5VSB

Environment

Temperature	Operation temperature: 10°C ~ 35°C / Non operation temperature: -40°C ~ 70°C
Humidity	Non operation humidity: 20% ~ 90% (Non condensing)

The specification is subject to change without notice in advance. The brand and product names are trademarks of their respective companies. Any configuration other than original product specification is not guaranteed.

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