

TECHNICAL DATASHEET

SUPERMICRO • STORAGE SERVERS

Supermicro 4U Storage Server ASG-4116S-NU160R

4U Storage server with 160 hot-swap 2.5" NVMe bays and PCIe 5.0

SKU ASG-4116S-NU160R

4U

SP5

Supermicro



FORM FACTOR

4U

MAX POWER (BASE)

402 W

HEAT OUTPUT

1,372 BTU/h

PRICE

On request**CONFIGURE & QUOTE ONLINE**serverinvest.com/product/asg-4116s-nu160r

01 Product overview

The Supermicro ASG-4116S-NU160R is a 4U Storage Server built on AMD EPYC 9005 with up to 6 TB of memory in 12 DIMM slots.

4U Storage server with 160 hot-swap 2.5" NVMe bays and PCIe 5.0.

ServerInvest configures every ASG-4116S-NU160R to order, updates BIOS and BMC firmware, installs your operating system on request and runs a 48-hour burn-in test before delivery. Every system includes a 3-year warranty.

HIGHLIGHTS

- AMD EPYC 9005
- Up to 6 TB memory · 12 DIMM slots
- Total 164 bays 4 front hot-swap E1.S PCIe 5.0 x4 NVMe drive bays
- Power: 2x 2600W
- Networking: 2 RJ45 10GbE with Broadcom BCM57416

KEY SPECIFICATIONS

Form factor	4U
Processor	AMD EPYC 9005
Socket	SP5
Memory	12 DIMM slots, up to 6 TB
Memory type	DDR5-6400 ECC RDIMM
Drive bays	324 (324 NVMe)
Power supply	2× 2600 W
Typical power draw	450 W
Networking	2 RJ45 10GbE with Broadcom BCM57416
Dimensions (W×H×D)	437 × 178 mm



02 Base configuration

Components included in the listed base price — every part can be changed in the online configurator

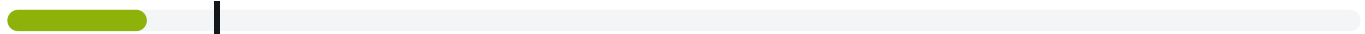
COMPONENT	DESCRIPTION	QTY
Base system	Supermicro 4U Storage Server ASG-4116S-NU160R	1
Processor	AMD EPYC 9135 - 16 Cores, 3.65/4.30GHz, 64MB Cache (200 Watt)	1
Memory	16GB 6400MT/s DDR5 ECC Registered DIMM Module	2
Warranty & support	3-year return-to-base warranty (included)	1

Price on request — contact us for a tailored quotation

03 Power & thermal

Calculated for the base configuration

IDLE	TYPICAL	MAXIMUM	HEAT (MAX)	COOLING	PSU LOAD
115 W	268 W	402 W	1,372 BTU/h	0.4 kW	15%



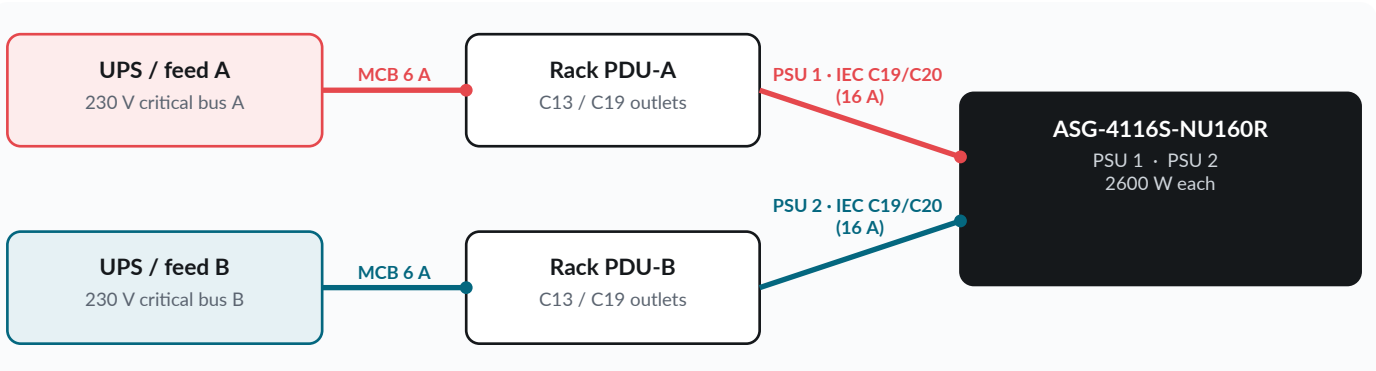
Annual IT energy (24/7)	1,946 kWh
Annual facility energy (PUE 1.5)	2,919 kWh
Annual energy cost	€389 IT · €584 incl. cooling (at 0.20 €/kWh)
CO ₂ emissions / year	0.76 t (grid factor 0.26 kg/kWh)
Power supplies	2× 2600 W redundant (N+1)

POWER BY COMPONENT	IDLE	TYPICAL	MAX
Chassis, motherboard, fans, BMC	72 W	112 W	160 W
CPU — AMD EPYC 9135 - 16 Cores	30 W	130 W	200 W
2× Memory 16 GB DIMM	6 W	10 W	18 W

DC loads converted to wall power at 94% PSU efficiency; typical load assumed 70% of the time. Engineering estimates — confirm with the manufacturer's power calculator for critical designs.

04 Power connection diagram

Dual-feed (A/B) connection for redundant power supplies



- Connect PSU 1 to PDU-A and PSU 2 to PDU-B (independent feeds) using IEC C19/C20 (16 A) power cords.
- Maximum current per feed: 1.8 A at 230 V — each feed must be able to carry the full load if the other fails.
- Recommended protection per PDU circuit: MCB 6 A, curve C; RCD according to local regulations.
- Heat to remove at full load: 402 W = 1,372 BTU/h (0.4 kW).

05 Full specifications

MOTHERBOARD	
	Super H14SSF
PROCESSOR	
CPU	Single processor(s) AMD EPYC 9005 Series Processors
Core Count	Up to 96C/192T; Up to 256MB Cache

Note Supports up to 360W TDP CPUs (Air Cooled)

SYSTEM MEMORY

Memory	Slot Count: 12 DIMM slots Max Memory (1DPC): Up to 6TB 6400MT/s ECC DDR5 RDIMM View Memory Options
Memory Voltage	1.1V

ON-BOARD DEVICES

NVMe	NVMe; RAID 0/1 support(Native) View NVMe Options
Chipset	PCIe switch
Network Connectivity	2 RJ45 10GbE with Broadcom BCM57416 View AOC Options
IPMI	Support for Intelligent Platform Management Interface v.2.0 IPMI 2.0 with virtual media over LAN and KVM-over-LAN support

INPUT / OUTPUT

LAN	1 RJ45 1 GbE Dedicated BMC LAN port (ASPEED AST2600) 2 RJ45 10 GbE LAN ports (Broadcom BCM57416)
USB	2 USB 3.2 Gen1 Type-A ports (front)
Video	1 VGA port
TPM	1 TPM header

SYSTEM BIOS

BIOS Type	AMI 64MB SPI Flash EEPROM
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MANAGEMENT

Software	Redfish API SuperCloud Composer (SCC) Supermicro Server Manager (SSM) Super Diagnostics Offline (SDO) Supermicro Thin-Agent Service (TAS) IPMI (Intelligent Platform Management Interface) v2.0 with KVM support SuperServer Automation Assistant (SAA) New!
Power configurations	Power-on mode for AC power recovery ACPI Power Management

SECURITY

Hardware	Trusted Platform Module (TPM) 2.0 Silicon Root of Trust (RoT) – NIST 800-193 Compliant
Features	Automatic Firmware Recovery Cryptographically Signed Firmware Runtime BMC Protections Secure Boot Secure Firmware Updates Supply Chain Security: Remote Attestation

PC HEALTH MONITORING

CPU	8+4 Phase-switching voltage regulator Monitors for CPU Cores, Chipset Voltages, Memory
Fan	Fans with tachometer monitoring Pulse Width Modulated (PWM) fan connectors Status monitor for speed control
Temperature	Monitoring for CPU and chassis environment Thermal Control for fan connectors

CERTIFICATIONS

Operating Systems	RHEL 10.0 View all OS Compatibility and Certification Matrix
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CHASSIS

Form Factor	4U Rackmount
Model	CSE-SG401U2-R000NDFP

DIMENSIONS AND WEIGHT

Height	6.9" (176 mm)
Width	17.65" (448.4 mm)
Depth	33.2" (845 mm)
Package	26.7" (H) x 28.7" (W) x 50.7" (D)
Weight	Gross Weight: 236 lbs (107 kg) Net Weight: 203 lbs (92 kg)
Available Color	No Paint

FRONT PANEL

Buttons	Power On/Off UID button
LED	HDD activity LAN1 activity LAN2 activity Power status System information

EXPANSION SLOTS

PCI-Express (PCIe) Configuration	Default 3 PCIe 5.0 x16 FHHL slots View AOC Options
M.2	2 M.2 NVMe slots (M-key 22110(default)/2280)

DRIVE BAYS / STORAGE

Drive Bays Configuration	Default: Total 164 bays 4 front hot-swap E1.S PCIe 5.0 x4 NVMe drive bays 160 top-loading hot-swap 2.5" PCIe 4.0 x1 NVMe drive bays View NVMe Options
M.2	2 M.2 NVMe slots (M-key) View M.2 Options

SYSTEM COOLING

Fans	Up to 5 Hot-swappable rear fans with optimal fan speed control 80x80x80mm Fan(s) Up to 6 Hot-swappable rear fans with optimal fan speed control 40x40x56mm Fan(s)
Air Shroud	1 Air Shroud

POWER SUPPLY

2x 2600W
2x 2600W Redundant (1 + 1) Titanium Level (96%) Hot-plug power supplies
Dimension (WxHxL)
73.5 x 40 x 265 mm

OPERATING ENVIRONMENT

Environmental Spec.	Operating Temperature: 10°C to 35°C (50°F to 95°F) Non-operating Temperature: -40°C to 60°C (-40°F to 140°F) Operating Relative Humidity: 8% to 90% (non-condensing) Non-operating Relative Humidity: 5% to 95% (non-condensing)
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06 Built, tested & supported by ServerInvest

Engineered configuration

Every option validated for socket, memory channels, PCIe lanes, power and cooling.

48-hour burn-in

Assembled, firmware-updated and stress-tested before it leaves our workshop.

3-year warranty

Standard on every system, with on-site next-business-day upgrades available.

Rack-ready delivery

Rails, cable management and labelling included — delivered across Europe.



Ready to order or need changes?

Configure this system online or talk to a solutions engineer — we reply within one business day.

office@serverinvest.com

Official manufacturer datasheet: serverinvest.com/product/asg-4116s-nu160r/datasheet/manufacture

