

TECHNICAL DATASHEET

SUPERMICRO · EDGE & EMBEDDED

Supermicro UP SuperServer SYS-511E-WR

1U UP WIO with 4 hot-swap 3.5" SAS/SATA bays and 3 PCIe 5.0 slots

SKU SYS-511E-WR

1U

LGA4677

Supermicro



FORM FACTOR

1U

MAX POWER (BASE)

243 W

HEAT OUTPUT

829 BTU/h

PRICE

from €3,750**CONFIGURE & QUOTE ONLINE**serverinvest.com/product/sys-511e-wr

01 Product overview

The Supermicro SYS-511E-WR is a 1U UP Server built on Intel Xeon Scalable 4th/5th Gen with up to 2 TB of memory in 8 DIMM slots.

1U UP WIO with 4 hot-swap 3.5" SAS/SATA bays and 3 PCIe 5.0 slots.

The chassis accepts up to 1 GPU accelerators for AI, rendering and HPC workloads.

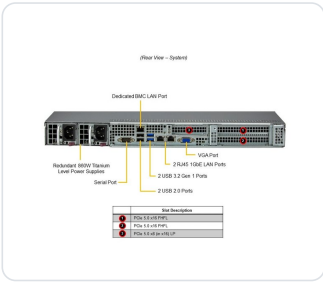
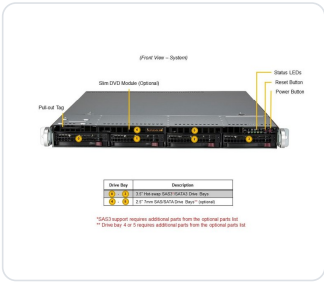
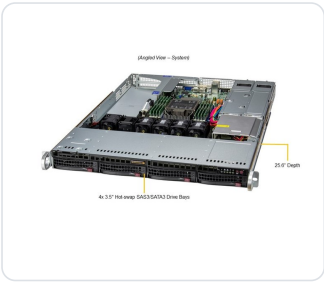
ServerInvest configures every Gold Series SYS-511E-WR to order, updates BIOS and BMC firmware, installs your operating system on request and runs a 48-hour burn-in test before delivery. Every system includes a 3-year warranty.

HIGHLIGHTS

- Intel Xeon Scalable 4th/5th Gen
- Up to 2 TB memory · 8 DIMM slots
- Total 4 bays 4 front hot-swap 3.5" SAS*/SATA drive bays
- Up to 1 GPUs
- Power: 2x 860W
- Networking: 2 RJ45 1GbE with Intel I210

KEY SPECIFICATIONS

Form factor	1U
Processor	Intel Xeon Scalable 4th/5th Gen
Socket	LGA4677
Memory	8 DIMM slots, up to 2 TB
Memory type	DDR5-5600 ECC RDIMM
GPU	Up to 1 GPUs
Power supply	2× 860 W
Typical power draw	490 W
Networking	2 RJ45 1GbE with Intel I210
Dimensions (W×H×D)	437 × 44 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 UP SuperServer SYS-511E-WR	1
Processor	Intel Xeon Bronze 3408U Processor 8 Cores (22.5M Cache, 1.80/1.90 GHz) 125W	1
Memory	16GB 5600MT/s DDR5 ECC Registered DIMM Module	2
Warranty & support	3-year return-to-base warranty (included)	1

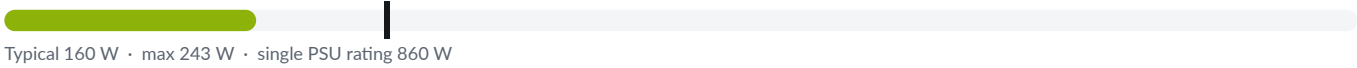
Base configuration from

€3,750
excl. VAT

03 Power & thermal

Calculated for the base configuration

IDLE	TYPICAL	MAXIMUM	HEAT (MAX)	COOLING	PSU LOAD
67 W	160 W	243 W	829 BTU/h	0.2 kW	28%



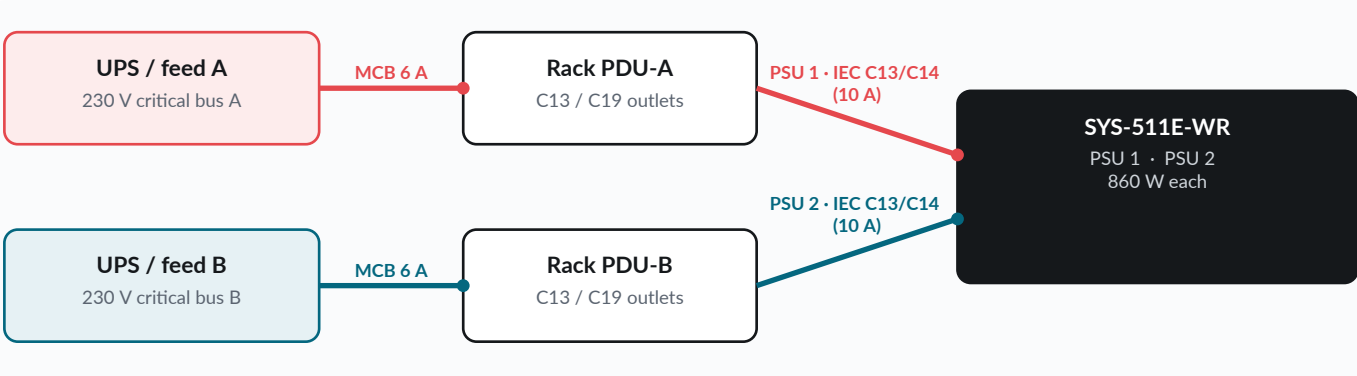
Annual IT energy (24/7)	1,157 kWh
Annual facility energy (PUE 1.5)	1,736 kWh
Annual energy cost	€231 IT · €347 incl. cooling (at 0.20 €/kWh)
CO ₂ emissions / year	0.45 t (grid factor 0.26 kg/kWh)
Power supplies	2× 860 W redundant (N+1)

POWER BY COMPONENT	IDLE	TYPICAL	MAX
Chassis, motherboard, fans, BMC	38 W	59 W	85 W
CPU — Intel Xeon Bronze 3408U Processor 8 Cores	19 W	81 W	125 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 C13/C14 (10 A) power cords.
- Maximum current per feed: 1.1 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: 243 W = 829 BTU/h (0.2 kW).

05 Full specifications

MOTHERBOARD	
	Super X13SEW-F
PROCESSOR	
CPU	Single Socket E (LGA-4677) 5th Gen Intel Xeon / 4th Gen Intel Xeon Scalable processors
Core Count	Up to 52C/104T; Up to 300MB Cache

Note Supports up to 300W TDP CPUs (Air Cooled)

GPU

Max GPU Count	Up to 1 double-width or 2 single-width GPUs
Supported GPU	NVIDIA PCIe: A1000, L4, NVIDIA RTX PRO 4000 Blackwell, RTX 4000 Ada Generation NVIDIA: RTX A400 View GPU Options
CPU-GPU Interconnect	PCIe 5.0 x16 CPU-to-GPU Interconnect

SYSTEM MEMORY

Memory	Slot Count: 8 DIMM slots/8 Channels Max Memory (1DPC): Up to 2TB 5600MT/s ECC DDR5 RDIMM View Memory Options
Memory Voltage	1.1V

ON-BOARD DEVICES

SATA	SATA (6Gbps) ; RAID 0/1/5/10 support
Chipset	Intel C741
Network Connectivity	2 RJ45 1GbE with Intel I210 View AOC Options

INPUT / OUTPUT

LAN	2 RJ45 1 GbE LAN ports 1 RJ45 1 GbE Dedicated BMC LAN port (IPMI shared on LAN port 1)
USB	2 USB 3.2 Gen1 Type-A ports (rear) 2 USB 2.0 Type-A ports (rear) 2 USB 3.2 Gen1 ports (Header) 1 USB 2.0 Type-A port (Header)
Video	1 VGA port
Serial	1 COM port (header) 1 COM port (rear)
TPM	1 TPM header

SYSTEM BIOS

BIOS Type	AMI 32MB SPI Flash EEPROM
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MANAGEMENT

Software	SuperCloud Composer (SCC) Supermicro Server Manager (SSM) Supermicro Update Manager (SUM) Supermicro SuperDoctor 5 (SD5) Super Diagnostics Offline (SDO) Supermicro Thin-Agent Service (TAS) SuperServer Automation Assistant (SAA) New!
Power configurations	ACPI/APM Power Management

SECURITY

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

PC HEALTH MONITORING

CPU	8 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	ESXi 7.0 U3, ESXi 8.0, Oracle Linux 9.0, RHEL 9.0, Windows Server 2022, Windows Server 2025 View all OS Compatibility and Certification Matrix
Enterprise Solutions	Microsoft Azure Local

CHASSIS

Form Factor	1U
Model	CSE-815BTS-R000WNP

DIMENSIONS AND WEIGHT

Height	1.7" (43 mm)
Width	17.2" (437 mm)
Depth	25.6" (650 mm)
Package	8.5" (H) x 23.5" (W) x 33.7" (D)
Weight	Gross Weight: 34.5 lbs (15.46 kg) Net Weight: 21.5 lbs (9.75 kg)
Available Color	Black

FRONT PANEL

Buttons	Power On/Off button System Reset button Unit Identification (UID) button
LED	Fan Fail/System Over Heat LED HDD activity LED Network Activity LEDs Power status LED Unit Identification (UID) LED

EXPANSION SLOTS

PCI-Express (PCIe) Configuration	Default 2 PCIe 5.0 x16 FHFL slots 1 PCIe 5.0 x8 (in x16) LP slot View AOC Options
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DRIVE BAYS / STORAGE

Drive Bays Configuration	Default: Total 4 bays 4 front hot-swap 3.5" SAS*/SATA drive bays (*SAS support may require additional storage controller and/or cables, please see the optional parts list for details) View Drive Options
M.2	1 M.2 PCIe 3.0 x2 NVMe slot (M-key 2280/22110) View M.2 Options
Peripheral Bays	2 2.5" peripheral bays (optional)

SYSTEM COOLING

Fans	Up to 5 middle cooling PWM 40x40x56mm Fan(s) Up to 1 AOC cooling Fan(s) (optional)
Air Shroud	1 Air Shroud

POWER SUPPLY

2x 860W
2x 860W Redundant (1 + 1) Titanium Level (96%) power supplies
Dimension (WxHxL)
54.5 x 40.25 x 322 mm

OPERATING ENVIRONMENT

Environmental Spec.	Operating Temperature: 10°C to 35°C (50°F to 95°F) Non-operating Temperature: -30°C to 60°C (-22°F to 140°F) Operating Relative Humidity: 8% to 80% (non-condensing) Non-operating Relative Humidity: 8% to 90% (non-condensing)
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ENVIRONMENTAL / RECYCLING

Recycle	Return Server-End of Life Product
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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/sys-511e-wr/datasheet/manufacturerr

