

TECHNICAL DATASHEET

SUPERMICRO · TOWER SERVERS & WORKSTATIONS

Supermicro 5U (Full Tower) UP Workstation Server SYS-551A-T

UP full rackmount tower workstation for product design and engineering simulation

SKU SYS-551A-T

5U

Supermicro



FORM FACTOR

5U

MAX POWER (BASE)

493 W

HEAT OUTPUT

1,682 BTU/h

PRICE

from €4,830

REQUEST A QUOTATION ONLINE

serverinvest.com/product/sys-551a-t

01 Product overview

The Supermicro SYS-551A-T is a 5U (Full Tower) UP Workstation Server built on Single processor(s) Intel Xeon W-3500/W-3400 processors.

UP full rackmount tower workstation for product design and engineering simulation.

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

ServerInvest configures every SYS-551A-T 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

- Single processor(s) Intel Xeon W-3500/W-3400 processors
- Total 6 bays 4 internal fixed 3.5" NVMe*/SATA drive bays
- Up to 1 GPUs
- Power: 1x 2000W
- Networking: 1 RJ45 10GbE with Marvell AQC113

KEY SPECIFICATIONS

Form factor	5U
Processor	Single processor(s) Intel Xeon W-3500/W-3400 processors
Memory	16 DIMM slots
Drive bays	8 (8 NVMe)
GPU	Up to 1 GPUs
Power supply	1x 2000 W
Typical power draw	900 W
Networking	1 RJ45 10GbE with Marvell AQC113
Dimensions (W×H×D)	437 × 222 mm



02 Power & thermal

Calculated for the base configuration

IDLE	TYPICAL	MAXIMUM	HEAT (MAX)	COOLING	PSU LOAD
157 W	321 W	493 W	1,682 BTU/h	0.5 kW	25%

Typical 321 W · max 493 W · single PSU rating 2000 W

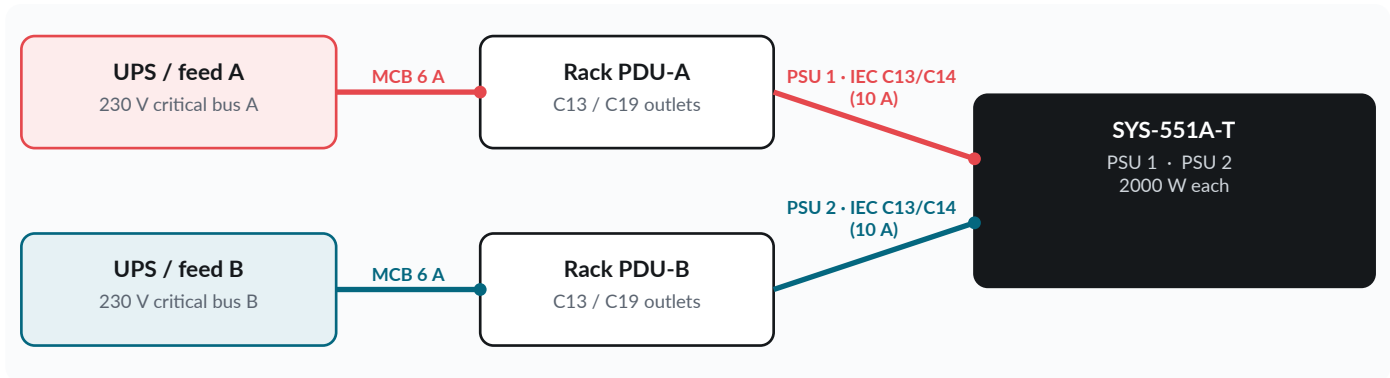
Annual IT energy (24/7)	2,381 kWh
Annual facility energy (PUE 1.5)	3,572 kWh
Annual energy cost	€476 IT · €714 incl. cooling (at 0.20 €/kWh)
CO ₂ emissions / year	0.93 t (grid factor 0.26 kg/kWh)
Power supplies	1x 2000 W

POWER BY COMPONENT	IDLE	TYPICAL	MAX
Chassis, motherboard, fans, BMC	117 W	182 W	260 W
CPU (base configuration)	25 W	110 W	185 W
2x Memory (base configuration)	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.

03 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: 2.3 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: 493 W = 1,682 BTU/h (0.5 kW).

04 Full specifications

MOTHERBOARD

Super X13SWA-TF

PROCESSOR

CPU	Single processor(s) Intel Xeon W-3500/W-3400 processors
Core Count	60C/128T
Note	Supports up to 350W TDP CPUs (Air Cooled)

GPU

Max GPU Count	Up to 1 quad-width or 1 triple-width or 4 double-width or 4 single-width GPUs
Supported GPU	NVIDIA PCIe: NVIDIA RTX PRO 4000 Blackwell, NVIDIA RTX PRO 5000 Blackwell, NVIDIA RTX PRO 6000 Blackwell Max-Q Workstation Edition, NVIDIA RTX PRO 6000 Blackwell Workstation Edition, RTX 4080, RTX 4090, RTX 6000 Ada Generation, RTX A2000, RTX A4000, RTX A4500, RTX A5000, RTX A6000, T1000 NVIDIA: GeForce RTX 5070, GeForce RTX 5080, GeForce RTX 5090 View GPU Options

SYSTEM MEMORY

Memory	Slot Count: 16 DIMM slots Max Memory (2DPC): 2TB 4800MT/s ECC DDR5 RDIMM/LRDIMM View Memory Options
Memory Voltage	1.1V

ON-BOARD DEVICES

SATA	SATA (6Gbps)
Chipset	Intel W790

Network Connectivity	1 RJ45 10GbE with Marvell AQC113 1 RJ45 1GbE with Intel I210-AT View AOC Options
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INPUT / OUTPUT

USB	2 USB 2.0 ports (rear) 2 USB 2.0 Type-A ports (front) 2 Type-A ports (Front)
Video	1 VGA port

SYSTEM BIOS

BIOS Type	AMI 256MB SPI Flash
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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 6.0 Power Management

SECURITY

Hardware	Trusted Platform Module (TPM) 2.0 Silicon Root of Trust (RoT) – NIST 800-193 Compliant
Features	Supply Chain Security: Remote Attestation Runtime BMC Protections

PC HEALTH MONITORING

Voltage	+1.8V, +12V, +3.3V, +5V, +5V standby, 10 -fan status, 3.3V standby, HT, Memory, VBAT
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CERTIFICATIONS

Operating Systems	RHEL 9.0, Windows 11 View all OS Compatibility and Certification Matrix
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CHASSIS

Form Factor	5U (Full Tower) Rackmount
Model	CSE-GS7A-2000B

DIMENSIONS AND WEIGHT

Height	21.06" (535 mm)
Width	8.74" (222 mm)
Depth	22.56" (573 mm)
Package	27.8" (H) x 14.6" (W) x 28.5" (D)
Weight	Gross Weight: 44.09 lbs (20 kg) Net Weight: 39.68 lbs (18 kg)

Available Color	Black
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FRONT PANEL

Buttons	LED light bar ON/OFF Power On/Off button
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LED	Power status LED
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Port	Audio Jacks USB 2.0 USB 3.0 Gen 1-Type-A USB 3.0 Gen 1-Type-c
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EXPANSION SLOTS

PCI-Express (PCIe) Configuration	Default 6 PCIe 5.0 x16 FHFL slots View AOC Options
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DRIVE BAYS / STORAGE

Drive Bays Configuration	Default: Total 6 bays 4 internal fixed 3.5" NVMe*/SATA drive bays 2 front fixed 2.5" SATA drive bays (*NVMe support may require additional storage controller and/or cables, please see the optional parts list for details) View NVMe Options View Drive Options
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M.2	4 M.2 PCIe 5.0 x4 NVMe slots (M-key 2280/22110) View M.2 Options
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Peripheral Bays	2 5.25" bays
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SYSTEM COOLING

Fans	Up to 1x 120mm Fan(s) Up to 2x 120mm Fan(s)
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POWER SUPPLY

1x 2000W
1x 2000W Platinum Level (92%) power supply
Dimension (WxHxL)
150 x 86 x 200 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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05 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.



Interested in this solution?

Request a quotation online or talk to a solutions engineer — we reply within one business day.
office@serverinvest.com

Official manufacturer datasheet: serverinvest.com/product/sys-551a-t/datasheet/manufacturer

