

TECHNICAL DATASHEET

SUPERMICRO · EDGE & EMBEDDED

Supermicro 1U IoT Server SYS-111AD-WN2R

1U 14th Gen intel Core edge server with 6 external 2.5" drive bays and PCIe 5.0

SKU SYS-111AD-WN2R

1U

Supermicro



FORM FACTOR

1U

MAX POWER (BASE)

306 W

HEAT OUTPUT

1,044 BTU/h

PRICE

On request

REQUEST A QUOTATION ONLINE

serverinvest.com/product/sys-111ad-wn2r

01 Product overview

The Supremicro SYS-111AD-WN2R is a 1U IoT Server built on Intel Core with up to 192 GB of memory in 4 DIMM slots.

1U 14th Gen intel Core edge server with 6 external 2.5" drive bays and PCIe 5.0.

ServerInvest configures every SYS-111AD-WN2R 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 Core
- Up to 192 GB memory · 4 DIMM slots
- Total 6 bays 2 front fixed 2.5" NVMe drive bays
- Power: 1x 600W
- Networking: 2 RJ45 2.5GbE with Intel I226

KEY SPECIFICATIONS

Form factor	1U
Processor	Intel Core
Memory	4 DIMM slots, up to 192 GB
Drive bays	10 (10 NVMe)
Power supply	1× 600 W
Typical power draw	450 W
Networking	2 RJ45 2.5GbE with Intel I226
Dimensions (W×H×D)	437 × 44 mm



02 Power & thermal

Calculated for the base configuration

IDLE	TYPICAL	MAXIMUM	HEAT (MAX)	COOLING	PSU LOAD
73 W	190 W	306 W	1,044 BTU/h	0.3 kW	51%

Typical 190 W · max 306 W · single PSU rating 600 W

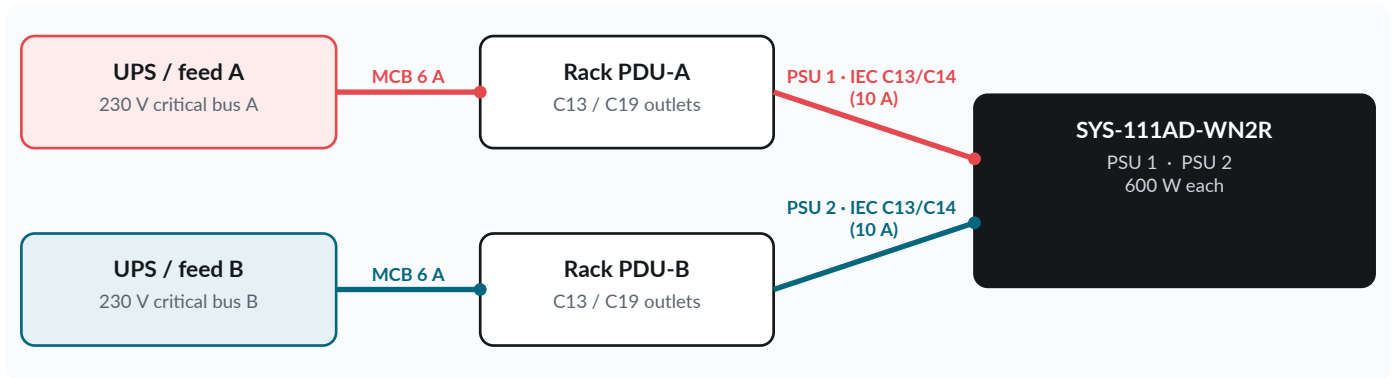
Annual IT energy (24/7)	1,357 kWh
Annual facility energy (PUE 1.5)	2,036 kWh
Annual energy cost	€271 IT · €407 incl. cooling (at 0.20 €/kWh)
CO ₂ emissions / year	0.53 t (grid factor 0.26 kg/kWh)
Power supplies	1× 600 W

POWER BY COMPONENT	IDLE	TYPICAL	MAX
Chassis, motherboard, fans, BMC	38 W	59 W	85 W
CPU (base configuration)	25 W	110 W	185 W
2× 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: 1.4 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: 306 W = 1,044 BTU/h (0.3 kW).

04 Full specifications

MOTHERBOARD

Super X13SAW-F

PROCESSOR

CPU	Single LGA-1700 14th/13th/12th Gen Intel Core i9/i7/i5/i3 Processors
Note	Supports up to 80W TDP CPUs (Air Cooled)

GPU

Max GPU Count	1 double-width or 1 single-width GPU
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SYSTEM MEMORY

Memory	Slot Count: 4 DIMM slots Max Memory (2DPC): Up to 192GB 4400MT/s ECC/non-ECC DDR5 UDIMM View Memory Options
Memory Voltage	1.1V

ON-BOARD DEVICES

Network Connectivity	2 RJ45 2.5GbE with Intel I226 View AOC Options
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INPUT / OUTPUT

LAN	1 RJ45 1 GbE Dedicated BMC LAN port 2 RJ45 2.5 GbE LAN ports (Intel I226)
USB	2 USB 3.2 Gen1 Type-A ports (rear) 2 USB 3.2 Gen1 Type-A ports (front)

Video	1 VGA port
	2 DisplayPort 1.4a ports

SYSTEM BIOS

BIOS Type	AMI 32MB SPI Flash
BIOS Features	Plug and Play (PnP) ACPI 6.5 SMBIOS 3.6 or later UEFI 2.8 USB Keyboard support

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!
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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

Temperature	Platform Environment Control Interface (PECI) 3.0 support SuperDoctor 5 System resource alert via SuperDoctor5
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CERTIFICATIONS

Operating Systems	Windows 10 View all OS Compatibility and Certification Matrix
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CHASSIS

Form Factor	1U Rackmount
Model	CSE-112TS-R000RWNP

DIMENSIONS AND WEIGHT

Height	1.7" (43 mm)
Width	17.2" (437 mm)
Depth	22" (559 mm)
Package	8" (H) x 27" (W) x 24" (D)

Weight	Gross Weight: 29 lbs (13.15 kg) Net Weight: 17.6 lbs (8 kg)
Available Color	Black

FRONT PANEL

Buttons	Power On/Off UID button
LED	Device Activity LAN 1 Activity LAN 2 Activity Power status System information

EXPANSION SLOTS

PCI-Express (PCIe) Configuration	Default 2 PCIe 5.0 x8 FHFL slots 1 PCIe 4.0 x4 LP slot Option A 1 PCIe 5.0 x16 (in x16) FHFL double-width slot 1 PCIe 4.0 x4 (in x8) HHHHL slot View AOC Options
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DRIVE BAYS / STORAGE

Drive Bays Configuration	Default: Total 6 bays 2 front fixed 2.5" NVMe drive bays 4 front fixed 2.5" SATA drive bays
M.2	1 M.2 PCIe 3.0 x4 NVMe slot (M-key 2280) 1 M.2 PCIe 4.0 x4 NVMe slot (M-key 2280/22110) View M.2 Options

SYSTEM COOLING

Fans	Up to 5 Heavy duty counter-rotating Fan(s)
Air Shroud	1 Air Shroud

POWER SUPPLY

	1x 600W 1x 800W 1x 600W 1x 600W Redundant Titanium Level (96%) power supply Dimension (WxHxL) 54.5 x 40.25 x 220 mm
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OPERATING ENVIRONMENT

Environmental Spec.	Name: A3 Operating Temperature: 5°C to 40°C (41°F to 104°F) Non-operating Temperature: -30°C to 60°C (-40°F to 140°F) Operating Relative Humidity: 8% to 85% (max 24° DP; non-condensing) Non-operating Relative Humidity: 8% to 90% (max 38° DP; 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-111ad-wn2r/datasheet/manufacture

