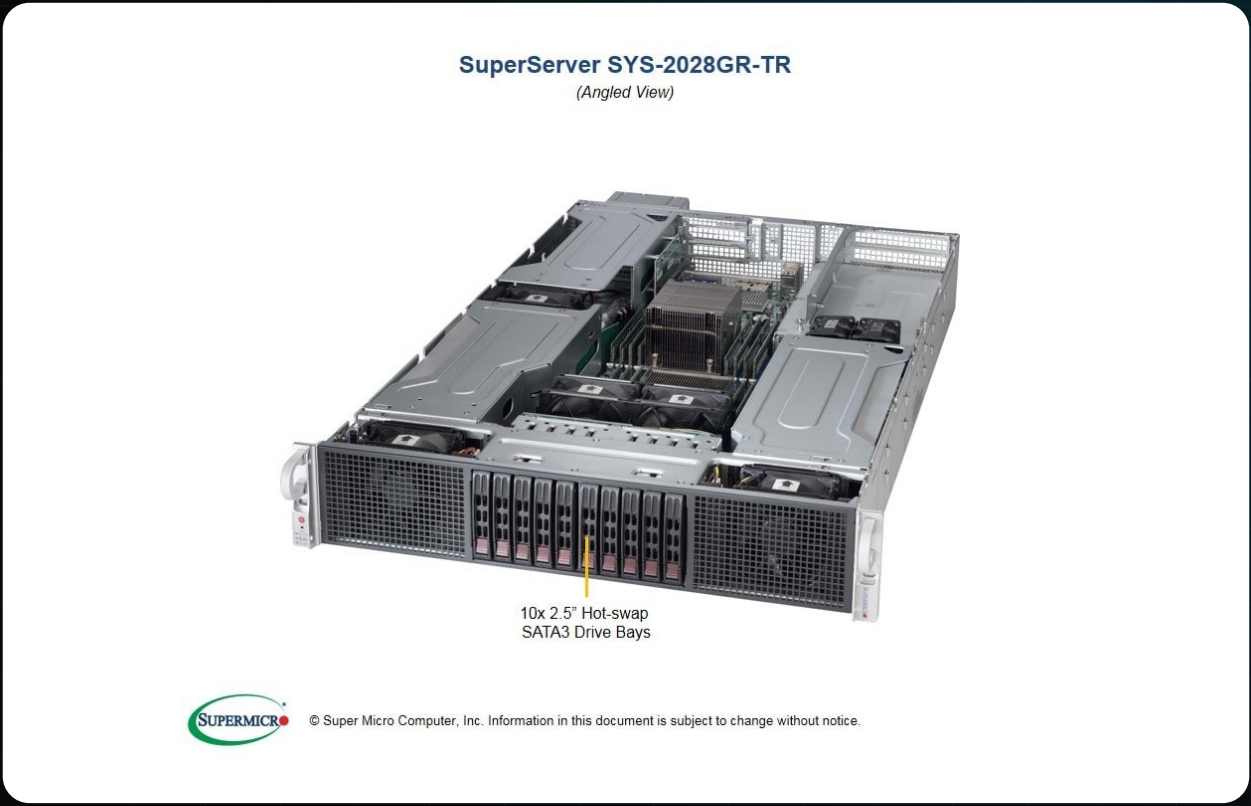
TECHNICAL DATASHEET

SUPERMICRO · RACKMOUNT SERVERS

Supermicro Server SYS-2028GR-TR

SKU SYS-2028GR-TR | 2U | Supermicro



FORM FACTOR	MAX POWER (BASE)	HEAT OUTPUT	PRICE
2U	549 W	1,873 BTU/h	On request

REQUEST A QUOTATION ONLINE
serverinvest.com/product/sys-2028gr-tr

01 Product overview

The Supermicro SYS-2028GR-TR is a server built on dual Intel Xeon processor E5-2600 v4 † / v3 family (up to 145W TD processors with up to 2 TB of memory in 4 DIMM slots.

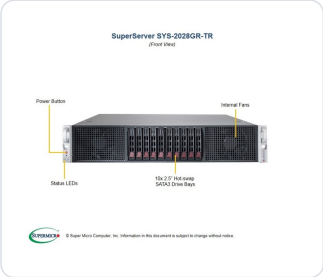
ServerInvest configures every SYS-2028GR-TR to order, updates BIOS and BMC firmware, installs your operating system on request and runs a 48-hour burn-in test before delivery. Every system includes a 3-year warranty.

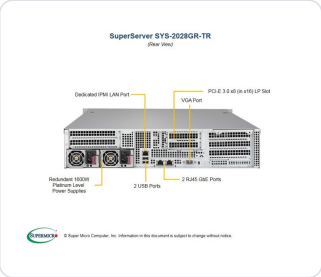
HIGHLIGHTS

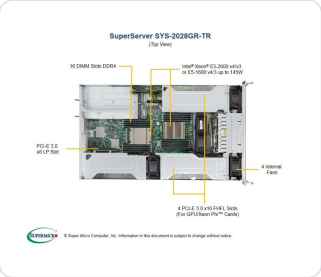
- Dual Intel Xeon processor E5-2600 v4 † / v3 family (up to 145W TD
- Up to 2 TB memory · 4 DIMM slots
- 10 Hot-swap 2.5" drive bays
- Power: 1000W/1800W/1980W/2000W
- Networking: Intel i350 Dual Port Gigabit Ethernet

KEY SPECIFICATIONS

Form factor	**2U**
Processor	**2× Intel Xeon processor E5-2600 v4 † / v3 family (up to 145W TD**
Memory	**4 DIMM slots, up to 2 TB**
Drive bays	**10**
Power supply	**1× 1000 W**
Typical power draw	**750 W**
Networking	**Intel i350 Dual Port Gigabit Ethernet**
Dimensions (W×H×D)	**437 × 89 mm**







02 Power & thermal

Calculated for the base configuration

IDLE	TYPICAL	MAXIMUM	HEAT (MAX)	COOLING	PSU LOAD
119 W	**337 W**	**549 W**	**1,873 BTU/h**	**0.5 kW**	**55%**

Typical 337 W · max 549 W · single PSU rating 1000 W

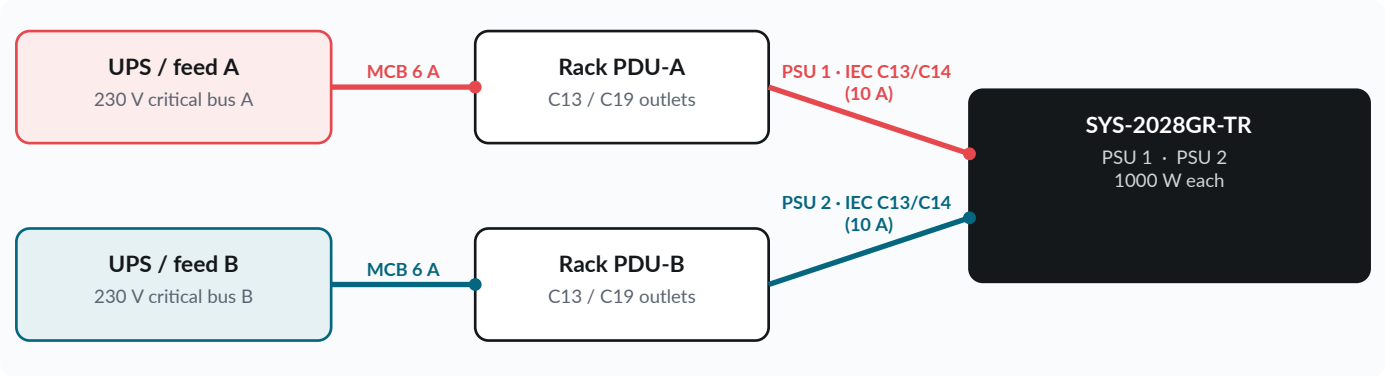
Annual IT energy (24/7)	2,379 kWh
Annual facility energy (PUE 1.5)	3,569 kWh
Annual energy cost	€476 IT · €714 incl. cooling (at 0.20 €/kWh)
CO_2 emissions / year	0.93 t (grid factor 0.26 kg/kWh)
Power supplies	1× 1000 W

POWER BY COMPONENT	IDLE	TYPICAL	MAX
Chassis, motherboard, fans, BMC	50 W	77 W	**110 W**
2× CPU (base configuration)	50 W	220 W	**370 W**
4× Memory (base configuration)	12 W	20 W	**36 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: 2.5 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: 549 W = 1,873 BTU/h (0.5 kW).

04 Full specifications

PROCESSOR/CACHE	
CPU	Intel Xeon processor E5-2600 v4 † / v3 family (up to 145W TDP) * Dual Socket R3 (LGA 2011)
Cores / Cache	Up to 22 Cores † / Up to 55MB † Cache
System Bus	QPI up to 9.6 GT/s
Note	† BIOS version 2.0 or above is required
Note	* Please contact Supermicro Technical Support for additional information about frequency optimized CPUs and specialized system optimization.

SYSTEM MEMORY	
Memory Capacity	16x 288-pin DDR4 DIMM slots Up to 2TB † ECC 3DS LRDIMM, 1TB ECC RDIMM
Memory Type	2400 † /2133/1866/1600MHz ECC DDR4 SDRAM 72-bit
DIMM Sizes	RDIMM: 64GB, 32GB, 16GB, 8GB, 4GB LRDIMM: 64GB, 32GB 3DS LRDIMM: 128GB
Memory Voltage	1.2 V
Error Detection	Corrects single-bit errors

ON-BOARD DEVICES	
Chipset	Intel C612 chipset
SATA	Intel C612 Controller SATA3 (6Gbps) with RAID 0, 1, 5, 10

IPMI	Support for Intelligent Platform Management Interface v.2.0 IPMI 2.0 with virtual media over LAN and KVM-over-LAN support ASPEED AST2400 BMC
Network Controllers	Intel i350 Dual Port Gigabit Ethernet Virtual Machine Device Queues reduce I/O overhead Supports 10BASE-T, 100BASE-TX, and 1000BASE-T, RJ45 output
Graphics	ASPEED AST2400 BMC

INPUT / OUTPUT

SATA	10 SATA3 (6Gbps) ports
LAN	2 RJ45 Gigabit Ethernet LAN ports 1 RJ45 Dedicated IPMI LAN port
USB	4 USB 3.0 ports (2 rear, 2 via header) 2 USB 2.0 ports (2 via headers)
Video	1 VGA Connector
Serial Port	1 Serial header

SYSTEM BIOS

BIOS Type	128Mb SPI Flash EEPROM with AMI BIOS
BIOS Features	Plug and Play (PnP) APM 1.2 DMI 2.3 PCI 2.2 ACPI 1.0 / 2.0 USB Keyboard support Hardware BIOS Virus protection SMBIOS 2.3 UEFI RTC (Real Time Clock) Wakeup

CHASSIS

Form Factor	2U Rackmount
Model	CSE-218GH-R2K03B

DIMENSIONS AND WEIGHT

Height	3.5" (89mm)
Width	17.2" (437mm)
Depth	31" (787mm)
Package	26.5" (H) x 11" (W) x 44.5" (D)
Weight	Net Weight: 39.5 lbs (17.9 kg) Gross Weight: 54 lbs (24.5 kg)
Available Color	Black

FRONT PANEL

Buttons	Power On/Off button System Reset button

LEDs	Power LED Hard drive activity LED 2 Network activity LEDs System Overheat LED / Fan fail LED / UID LED

EXPANSION SLOTS

PCI-Express	4 PCI-E 3.0 x16 slots (support GPU/Xeon Phi cards, option) 1 PCI-E 3.0 x8 (in x16) low-profile slot

DRIVE BAYS

Hot-swap	10 Hot-swap 2.5" drive bays

SYSTEM COOLING

Fans	5 heavy duty 8cm fans with optimal fan speed control

POWER SUPPLY

Total Output Power	1000W/1800W/1980W/2000W
Dimension (W x H x L)	73.5 x 40 x 265 mm
Input	100-120Vac / 12.5-10.5A / 50-60Hz 200-220Vac / 10-9.5A / 50-60Hz 220-230Vac / 10-9.8A / 50-60Hz 230-240Vac / 10-9.8A / 50-60Hz 200-240Vac / 10-9.8A (UL/cUL only) 200-240Vdc / 10-9.1A (CCC only)
+12V	Max: 83.3A / Min: 0.1A (100-120Vac) Max: 150A / Min: 0.1A (200-220Vac) Max: 165A / Min: 0.1A (220-230Vac) Max: 166.7A / Min: 0.1A (230-240Vac) Max: 166.7A / Min: 0.1A (200-240Vac) (UL/cUL only)
12V SB	Max: 3.5A / Min: 0A
Output Type	25 Pairs Gold Finger Connector
Certification	Platinum Level [Test Report]

PC HEALTH MONITORING

CPU	Monitors for CPU Cores,+1.5V, +3.3V, +5V, +12V, +5 Stdby, +3.3 Stdby, VBAT, Memory Voltages. 5 Phase-switching voltage regulator
FAN	Total of five 4-pin PWM fans 5 fans with tachometer monitoring Status monitor for speed control Status monitor for on/off control Low noise fan speed control
Temperature	Monitoring for CPU and chassis environment CPU thermal trip support Thermal Control for 10x Fan Connectors PSU I 2 C temperature sensing logic Thermal Monitor 2 (TM2) support PECI

LED	Power Fail / Overheat LED Suspend-state Indicator LED UID LED
Other Features	SDDC Support

OPERATING ENVIRONMENT / COMPLIANCE

RoHS	RoHS Compliant
Environmental Spec.	Operating Temperature: 10°C to 35°C (50°F to 95°F) Non-operating Temperature: -40°C to 70°C (-40°F to 158°F) Operating Relative Humidity: 8% to 90% (non-condensing) Non-operating Relative Humidity: 5% to 95% (non-condensing)

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.

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Interested in this solution?

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