

# MP SuperServer SYS-681E-TR

6U 8-socket system with 128 DIMMs, 24 NVMe/SAS/SATA drive bays, and 24 PCIe slots



## Key Applications

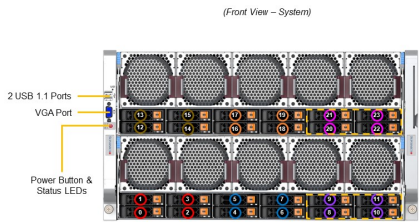
In-Memory Database, Virtualization/ERP/CRM, Research Lab/National Lab,  
Scale-up HPC,

## Key Features

- Octa Socket E (LGA-4677) 4th Generation Intel® Xeon® Scalable processors;
- 128 DIMM Slots; Up to 32TB DDR5-4800MHz ECC RDIMM/RDIMM-3DS;
- Optional PCIe configurations up to 24 PCIe slots with support for 12 double-width GPU/Accelerator cards;
- 24x 2.5" Hot-swap NVMe/SAS3/SATA3 drive bays ; 2x internal M.2 NVMe/SATA; Optional RAID support via storage add-on card;
- 10 heavy duty fans w/ optimal fan speed control;

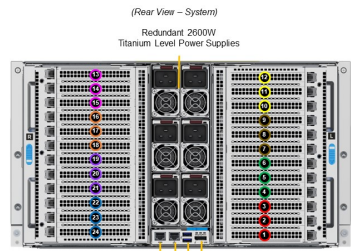


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|--------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Form Factor              | 6U Rackmount<br>Enclosure: 449 x 265 x 841mm (17.68" x 10.4" x 33.1")<br>Package: 720 x 922 x 1080mm (28.34" x 36.3" x 42.5")                                                                                                                                                                                                                                                                                                                |
| Processor                | 8 Socket E (LGA-4677)<br>4th Gen Intel® Xeon® Scalable processors<br>Up to 60C/120T; Up to 112.5MB Cache per CPU                                                                                                                                                                                                                                                                                                                             |
| GPU                      | Up to 12 double-width GPUs                                                                                                                                                                                                                                                                                                                                                                                                                   |
| System Memory            | Slot Count: 128 DIMM slots<br>Max Memory (1DPC): Up to 16TB 4800MT/s ECC DDR5 RDIMM<br>Max Memory (2DPC): Up to 32TB 4400MT/s ECC DDR5 RDIMM                                                                                                                                                                                                                                                                                                 |
| Drive Bays Configuration | Default: Total 8 bays <ul style="list-style-type: none"> <li>• 8 front hot-swap 2.5" SATA drive bays</li> </ul> Option A: Total 24 bays <ul style="list-style-type: none"> <li>• 24 front hot-swap 2.5" NVMe*/SAS*/SATA* drive bays</li> </ul> (*NVMe/SAS/SATA support may require additional storage controller and/or cables, please see the optional parts list for details)<br>M.2: 2 M.2 PCIe 3.0 x4 NVMe/SATA slots (M-key 2280/22110) |
| Expansion Slots          | PCI-Express (PCIe) Configuration: Default <ul style="list-style-type: none"> <li>• 12 PCIe 5.0 x16 FHFL slots</li> <li>• 2 PCIe 5.0 x16 LP slots</li> </ul> Option A* <ul style="list-style-type: none"> <li>• 12 PCIe 5.0 x16 FHFL slots</li> </ul> M.2: 2 M.2 NVMe/SATA slots (M-key 2280/22110)                                                                                                                                           |
| On-Board Devices         | 1 RJ45 1GBASE-T                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Input / Output           | LAN: 1 RJ45 1 GbE Dedicated BMC LAN port<br>1 RJ45 1 GbE LAN port<br>USB: 2 USB 3.0 ports (rear)<br>2 ports (front)<br>Video: 1 VGA port (Front)<br>1 DisplayPort port (Rear)                                                                                                                                                                                                                                                                |



| Drive Bay | Description                                                                      |
|-----------|----------------------------------------------------------------------------------|
| 1 – 12    | Default – 8 Hot-swap 2.5" SATA3 Drive Bays                                       |
| 13 – 24   | 24 Hot-swap 2.5" NVMe/SAS/SATA3 Drive Bays via Optional Cable or RAID Controller |

|      |       |       |       |       |       |       |       |
|------|-------|-------|-------|-------|-------|-------|-------|
| CPU1 | CPU2  | CPU3  | CPU4  | CPU5  | CPU6  | CPU7  | CPU8  |
| CPU9 | CPU10 | CPU11 | CPU12 | CPU13 | CPU14 | CPU15 | CPU16 |



| Slot    | Description                     |
|---------|---------------------------------|
| 1 – 12  | Default – 12 PCIe 5.0 x16 FHFL  |
| 13 – 24 | Optional – 12 PCIe 5.0 x16 FHFL |

|      |       |       |       |       |       |       |       |
|------|-------|-------|-------|-------|-------|-------|-------|
| CPU1 | CPU2  | CPU3  | CPU4  | CPU5  | CPU6  | CPU7  | CPU8  |
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|                       |                                                                                                                                                                                                                                                                                                                           |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| System Cooling        | Fans: Up to 10 Heavy duty counter-rotating 8cm Fan(s)<br>Air Shroud: 1 Air Shroud                                                                                                                                                                                                                                         |
| Power Supply          | 4x 2600W Redundant (2 + 2) Titanium Level (96%) power supplies                                                                                                                                                                                                                                                            |
| System BIOS           | BIOS Type: AMI 32MB SPI Flash EEPROM                                                                                                                                                                                                                                                                                      |
| Management            | 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!                                                                          |
| PC Health Monitoring  | CPU: 4+1 Phase-switching voltage regulator<br>Monitors for CPU Cores, Chipset Voltages, Memory<br>Fan: Fans with tachometer monitoring<br>Pulse Width Modulated (PWM) fan connectors<br>Status monitor for speed control<br>Temperature: Monitoring for CPU and chassis environment<br>Thermal Control for fan connectors |
| Dimensions and Weight | Weight: Gross Weight: 242.5 lbs (110 kg)<br>Net Weight: 176.37 lbs (80 kg)<br>Available Color: Black                                                                                                                                                                                                                      |
| Operating Environment | RoHS Compliant<br>Operating Temperature: 10°C to 35°C (50°F to 95°F)<br>Non-operating Temperature: -40°C to 60°C (-40°F to 140°F)<br>Operating Relative Humidity: 8% to 90% (Non-Condensing)<br>Non-operating Relative Humidity: 5% to 95% (Non-Condensing)                                                               |
| Motherboard           | <a href="#">Super X13OEI-CPU</a>                                                                                                                                                                                                                                                                                          |
| Chassis               | CSE-618TS-R5K26P                                                                                                                                                                                                                                                                                                          |