

Technical Documentation for EU Regulation 2019/424 laying down ecodesign requirements for servers and data storage product pursuant to Directive 2009/125/EC

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Product Information		
Machine Type(s)	Part Number	Product Type
Rack Mount Server	Supermicro SYS-221H-TNR	Enterprise Class Server

Entity putting product into service (Manufacturer for purposes of regulation) registered trade name and trade address:



Year of Deployment
2023

Power Supply Unit (PSU) efficiency, power factor and rated power output:
Supermicro PWS-2K07A-1R

Rated Output Power - 2000W	PSU Efficiency				Power Factor
	10%	20%	50%	100%	
% of Rated Load	92.80%	94.89%	96.09%	94.53%	50%
Single Output	92.80%	94.89%	96.09%	94.53%	0.99

Idle State Power at high-end configuration (Watts rounded to the first decimal place)
431.9W

Idle State Power at low-end configuration (Watts rounded to the first decimal place)
374.1W

List of components for additional idle power allowances for high-end configuration

- **38W base allowance for 2 sockets**
- **366.7 additional Watts for 8474C performance**
- **10 additional Watts for an additional PSU**
- **10 additional Watts for two Micron 7450 PRO TCG SSDs**
- **367.9 additional Watts for 2048 GB of memory**
- **108 additional Watts for ports 3 and 4 of Intel I350 OCP and 4 total ports of Mellanox CX6-dx**

Total allowed idle power for high-end configuration
900.7W

List of components for additional idle power allowances for low-end configuration

- **38W base allowance for 2 sockets**
- **373.9 additional Watts for 8474C performance**

- **10 additional Watts for an additional PSU**
- **10 additional Watts for two Micron 7450 PRO TCG SSDs**
- **91.4 additional Watts for 512 GB of memory**
- **108 additional Watts for ports 3 and 4 of Intel I350 OCP and 4 total ports of Mellanox CX6-dx**

Total allowed idle power for low-end configuration

631.4W

Maximum power at high-end configuration (Watts rounded to the first decimal place)

1193.5W

Maximum power at low-end configuration (Watts rounded to the first decimal place)

1040.9W

Declared operating condition class (same for high and low-end configurations for any socket population configuration)

A2 (10-35°C)

Idle state power at the higher boundary temperature of the declared operating condition class at high-end configuration

442.1W

Idle state power at the higher boundary temperature of the declared operating condition class at low-end configuration

422.8W

Active state efficiency and performance in active state at high-end configuration

57.0

Active state efficiency and performance in active state at low-end configuration

54.1

Product configurations

The possible configurations for this product family will be the combination of these components that are selected by the individual client when they purchase the server.

Secure data functionality URL:

<https://www.supermicro.com/en/about/policies/>

IBM Cloud will securely sanitize physical media intended for reuse prior to such reuse, and will destroy physical media not intended for reuse, consistent with National Institute of Standards and Technology, United States Department of Commerce (NIST), guidelines for media sanitization.


Data deletion of storage devices installed in IBM Cloud servers is performed via our automation platform. Upon cancellation, the server is moved to a reclaim network for a set hold time. Once the reclaim process begins the server will be loaded into a provisioning OS where data on all installed storage devices is wiped using Department of Defense (DOD) 5220.22-M algorithms. Progress is tracked throughout the process by means of the serial number associated with the storage devices.

Data deletion on active systems will be performed by IBM Cloud only at the customer's request. This typically involves scheduling a maintenance window at which time an IBM Cloud data center technician will power down the system, remove the requested drives and replace them with empty, unformatted

drives of the same make/model. The original drives containing the data to be deleted will be installed into an internal utility server where the same data sanitization process described above will be performed.

The 'end of life' process is initiated when a storage device malfunctions, once the total power-on-hours exceeds the expected life of the device, or when support for a specific model ends. When any of these conditions occur, an offending storage device will be flagged and set to end-of-life. The storage device is wiped using the same data sanitization process described above, after which the device is physically destroyed onsite by breaking, crushing, or shredding the device. The physical destruction process is tracked by the serial number of the storage device.

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**Material efficiency Requirements:
Disassembly for repair or reuse purposes
Weight range of specified critical raw materials**

Product information for return and recycling can be found at:
<https://www.ibm.com/ibm/environment/products/recycling.shtml>

Complete product information for repair or reuse of components can be found at:
<https://www.supermicro.com/en/about/policies/>

No Cobalt content is expected for all the individual battery types used in equipment and thus, the applicable indicative weight range as provided by the EU Regulation 2019/434 is “Less than 5 grams”.

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