

2U DC-MHS Server with Dual Intel® Xeon® 6 Processors

S21

EnGenius S21 is a 2U DC-MHS server powered by Intel® Xeon® 6 processors. Designed for AI, big data, and storage-intensive private cloud deployments, it supports up to 24 x U.2 hot-swappable NVMe SSDs and 8 x PCIe Gen5 expansion slots for GPU and SmartNIC integration. With the P-core/E-core architecture and centralized EDCC management, S21 delivers outstanding compute density and flexibility for modern data centers.



Performance

Scalable Compute

Dual Intel® Xeon® 6 with P-core/E-core architecture handles mixed AI and cloud workloads.

Memory

8TB DDR5 Capacity

Up to 32 x DDR5 ECC RDIMM running at 6400 MT/s across both processors.

DC-MHS

OCP Modular Architecture

DC-MHS design with 2 x OCP 3.0 slots keeps infrastructure serviceable and upgradable.

Management

Centralized EDCC Control

Redfish-based management via the EnGenius Data Center Controller.

GPUs

Supports up to 3 x NVIDIA RTX Pro 4500 SE (GDDR7 96GB)

Full-Node FP16 Inference (TP): Up to 32B parameters

Model Training / Fine-Tuning: Up to 5B parameters

Storage

High-Density NVMe

Up to 24 x 2.5" U.2 NVMe PCIe Gen5 hot-swap bays with Intel VROC premium support.

Scalability

CXL 2.0 Ready

CXL 2.0 support enables future-ready memory and device expansion.

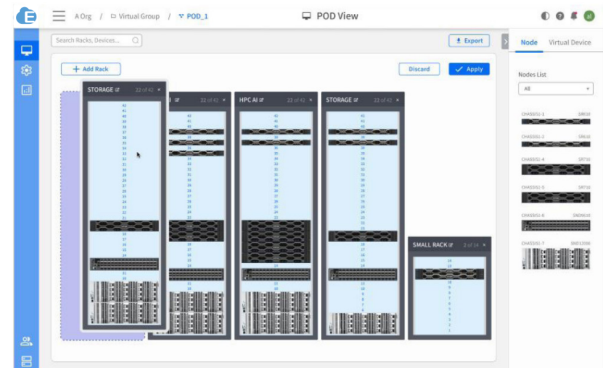
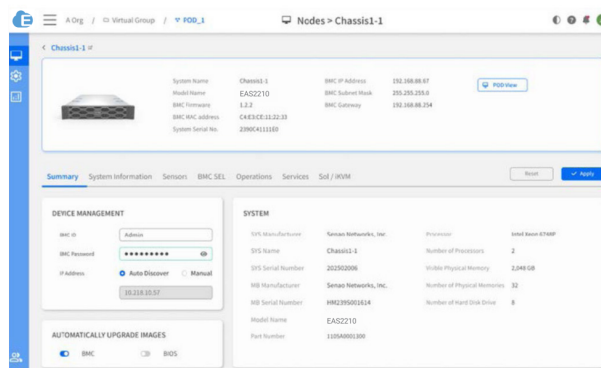
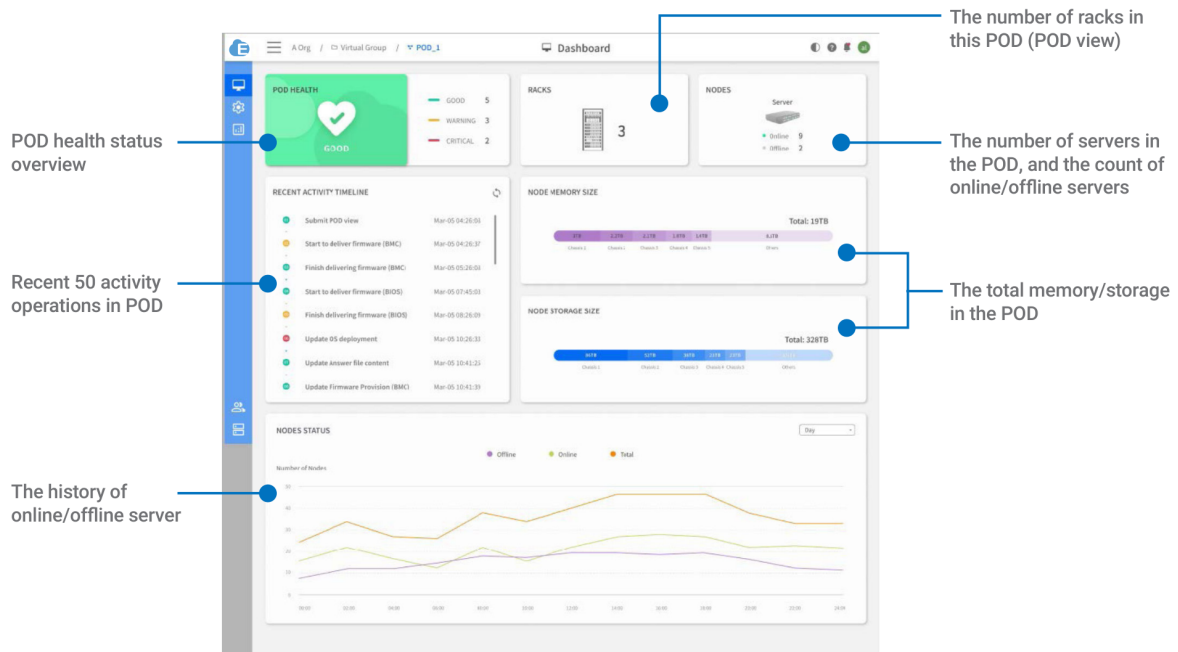
Reliability

Titanium Redundant Power

1+1 M-CRPS 2200W at 96% Titanium efficiency with hot-swap redundancy.

EnGenius Data Center Controller Centralized Management

The EnGenius Data Center Controller (EDCC) is the cornerstone of simplified, efficient management for your EnGenius data center servers. This powerful, license-free platform provides comprehensive out-of-band management capabilities, empowering IT teams with unparalleled control and visibility over their entire server fleet from a single interface.



Simplified Firmware Updates

Push unified firmware updates to multiple servers simultaneously, ensuring consistency and reducing maintenance overhead.

Out-of-Band Control

Manage servers even if the operating system is unresponsive or powered off, ensuring continuous uptime and remote troubleshooting.

Unified Device Management

Centralized control over all EnGenius servers, eliminating the need for individual server access.

Visual POD View

Gain a physical-to-logical view of server groupings with intuitive POD visualization, enabling more efficient resource mapping, configuration, and infrastructure monitoring.

Remote Diagnostics & Troubleshooting

Gain real-time insights into server health, performance metrics, and system logs, enabling proactive issue identification and rapid resolution from anywhere.

Scalable Deployment

Designed to manage a growing number of servers, providing seamless scalability as your data center expands.

Technical Specifications

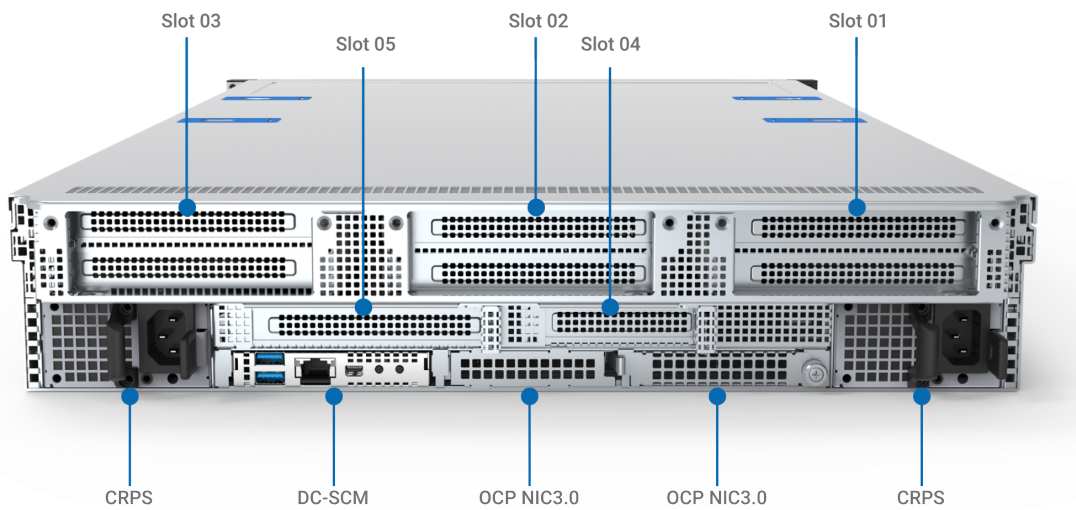
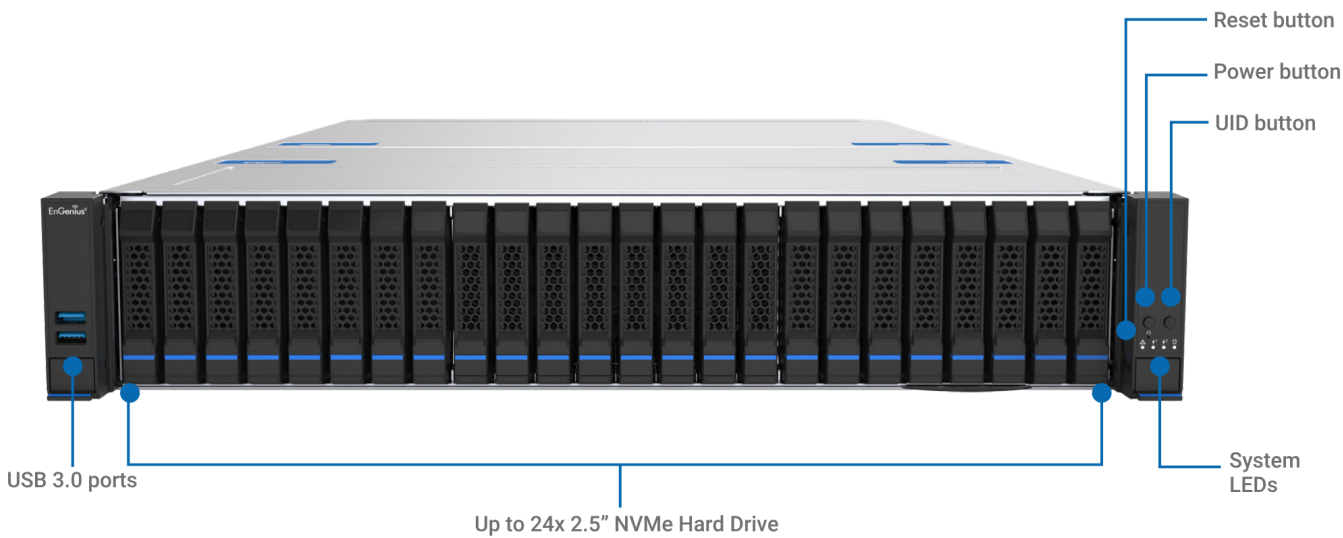
EnGenius AI Server	
General	
Model Name	2U Data Center Server
Model Number	S21
Form Factor	2U Rackmount
Processor	Intel Xeon 6 (6500/6700 Series) P Core: Up to 86 E Core: Up to 144 Dual processor, TDP up to 350W
Socket Type	2 x LGA4710
PCH Chipset	No
Memory	Slot Count: 32 DIMM slots (16 DIMMs per CPU) DDR5 ECC RDIMM 6400MT/s 1DPC 5200MT/s 2DPC Capacity: 8TB with 256 GB DDR5
Drive Bays	Up to 24 x 2.5"NVMe PCIe Gen5 Hot-Swap drive bays Intel VROC Premium Key Header
System Cooling	Air Cooling 6 x Smart FAN (60 x 60 x 56 mm)
Expansion Slot	Rear: 3 x PCIe Gen5x16 FH3/4L with Double Width or 6 x PCIe Gen5 x8 FH3/4L with Single Width 1 x PCIe Gen5x8 HHHL 1 x PCIe Gen5x16 FHHL 2 x OCP3.0x8 SFF
I/O Port	Front: 2 x USB3.0 Type A Rear: 1 x USB3.0 Type A for BMC 1 x Mini Display for BMC 1 x USB3.0 Console for BMC 1 x MGNT GE for BMC
Power Supply	1+1 M-CRPS 2200W, per PSU model 80 Plus Titanium Level (96%) 2 x Hot Swap Redundant AC Input 110V - 240V
Security	Trusted Platform Module(TPM) 2.0 Platform Firmware Resilience (PFR) 2.0 Intrusion Detection (Open Chassis Cover)
Chassis	Dimension (W x D x H):438 x 790 x 88 (mm) Weight: around 25KG

Technical Specifications

Environment	Operating Temperature: 10°C to 35°C Storage Temperature: -20°C ~60°C Relative Humidity: 10%~90% (Non-Condensing)
System Management	IPMI 2.0 Management Redfish Management HTTPS Web Management IPv4/ IPv6 Address Dashboard Hardware Sensor Monitor KVM console Serial over LAN Virtual Media Firmware Upgarde(BMC/BIOS) Event Log & Alert (SMTP/ SNMP/Syslog) LDAP/ Windows AD/ Radius User Account Management System Firewall (IP Access Control) Hardware Root of trust (RoT) Backup & Restore Configuration Protocol support: SNMP, SMTP, DHCP, NTP, DNS, Dynamic DNS Intel Platform Feature: Platform Firmware Resilience (PFR), Autonomous Crash Dump (ACD)
Central Management	EnGenius Data Center Controller
High-Performance AI & Graphics Acceleration	
supports expansion with up to	3 x NVIDIA RTX Pro 4500 SE (GDDR7 96GB)
LLM Workload Capacity	Full-Node FP16 Inference (TP): Up to 32B parameters Model Training / Fine-Tuning: Up to 5B parameters
Target Workloads	Parallel Small-Model Hosting: Ideal for concurrently serving multiple 7B–13B models for dedicated applications (e.g., customer service chatbots, document summarization, text classification), or for use as a dev/test environment and small-scale POC demonstration system.
Recommended System Memory Size	192 GB System RAM

Hardware Overview

S21 (2U Data Center Server)



DC-SCM: 1 x USB Type A (Console) 1 x USB Type A 1 x RJ45 GbE MGMT Port 1 x Mini Display Port	Slot 01~05: Slot01~Slot 03: 2 different config - Config 1: 3 x PCIe 5.0x16 for Double Width, FH 3/4L - Config 2: 6 x PCIe 5.0x 8, FH 3/4L Slot04: PCIe 5.0 x8, HHHH Slot05: PCIe 5.0x16, FHHL
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