

GAP-251R-S8-SOLO

2U Rugged Server- Rear I/O & Rear Power supply
Single Socket 5th/4th Gen Intel® Xeon® Scalable Processors



GAP is a product family of rugged aluminum servers and workstations designed for applications that require robust and qualified MIL-GRADE equipment, suitable for operations in critical environments.

2U PLATFORM	510 MM DEPTH	1 CPU	2TB RAM	UP TO 9 HOT SWAP SSD	4 I/O BOARDS
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GAP-251R-S8-SOLO rugged servers are powered by dual-socket 5th Gen Intel® Xeon® / 4th Gen Intel® Xeon® Scalable processors known for their robust architecture with enhanced AI acceleration and advanced security capabilities. Offering improved performance and efficiency, they are tailored to meet the demanding requirements of modern computing environments, making them an ideal choice for mission-critical tasks and high-performance applications.

GAP-251R-S8-SOLO are designed for 19" rackmounting and have a 2U chassis with a total overall length of 540mm. Notably, the 19" front brackets of the chassis are strategically positioned in a backward orientation, reducing the required cabinet space to just 510mm once fully installed. The rear I/O and rear power supply layout offers versatile storage options, including support for an on board M.2 NVME SSD and either up to three 2.5" SAS SSD or six U.2 NVMe SSD or nine 2.5"

SATA removable SSD. An internal tray can host an additional 2.5" NVME / SATA / SAS SSD. Moreover GAP-251R-S7-SOLO can accommodate up to two full-height, double-width, full-length PCIe cards and two low-profile cards.

Additional boards can be provided with a dedicated retainer kit for an optimal protection against shocks and vibrations also during transport.

GAP servers are designed to meet MIL-STD-810F for temperature and shocks, MIL-STD-167-1A for vibrations. Optionally, they can conform to MIL-STD-461 for EMI /EMC.

The I/O connectors and the power supply input can be provided with MIL-GRADE connectors upon request.

All units are delivered with their inventory list to ensure configuration control and reproducibility over time. Upon request, all server configurations can run specific thermal or mechanical environmental stress test.

Technical Specifications



System

CPU	5 th Gen Intel® Xeon® / 4 th Gen Intel® Xeon® Scalable processors, Single Socket LGA-4677 (Socket E) supported, CPU TDP Up to 270W TDP
Memory	Up to 2TB ECC RDIMM, DDR5-4800MT/s in 8 DIMM slots
Chipset	Intel® C741
Graphics	1 Aspeed AST2600 BMC port
Network Connectivity	1x Dedicated IPMI LAN port 2x 10GbE with RJ45 connectors
Storage	On Board: 1x M.2 NVMe; M-Key, 2280/22110 2x SATA Disk on Module Internal: Up to 1x 2.5" NVMe U.2 / SATA / SAS Removable: Up to 3x 2.5" SAS SSD or Up to 6x U.2 NVMe SSD or Up to 9x 2.5" SATA SSD
TPM	1x TPM Header
Motherboard I/O shield	1x VGA, 2x USB 3.0, 2x USB 2.0, 2x 10GbE, 1x IPMI, 1x COM (available on the rear panel)
Expansion slots	2x PCIe 5.0 x16 slots, FHFL 2x PCIe 5.0 x8 slots, LP
Operative Systems	Windows® 11 IoT Enterprise, Windows® 10 IoT Enterprise LTSC, Windows® Server 2022, Windows® Server 2019, Linux
IPMI	IPMI2.0, SPM, Watchdog; SNMP and e-mail alarms and notifications
Remote Monitoring	Monitoring, control, and management functions (fan speed, temperature, voltage, redundant power failure, power consumption, disk health, RAID health, and memory health)
Power Supply	AC or DC Redundant Power Supply - Optional AC Single

Mechanical

Dimensions	483 x 88 x 510 mm 540 mm full depth (W x H x D)
Material	Aluminum with surface passivation treatment
Colour	Black / RAL 9005 - Powder Coating
Mounting	2U 19" rackmount chassis Optional Telescopic slides
Configuration	Rear I/O - Rear Power Supply
Front Panel Leds / Buttons / Connectors	Power On/Off button with LED Reset button with LED 2x USB 3.0
Fans	3x internal PWM fans

Environmental - (Design to meet)

Operating Temperatures	0°C to +50°C MIL-STD-810H, Method 501.7 & 502.7 -20°C to +60°C (depending on configuration)
Storage Temperature	-40°C to +70°C MIL-STD-810H, Method 501.7 & 502.7
Humidity	5% – 95% non-condensing MIL-STD-810H 507.6
Operating Vibrations	MIL-STD-167-1A, Type I
Not Operating Vibrations	1.17 Grms, 5-500 Hz MIL-STD-810H, Method 514.8
Operating Shocks	20g / 11ms – half sine MIL-STD-810G, Method 516.7
EMC	Directive 2014/35/UE-LVD Directive 2014/30/UE-EMC Directive 2011/65/UE - RoHS Regulation EC No 1907/2006 MIL-STD-461G (on request)

GAP servers and workstations are designed in accordance with the environmental specifications indicated. Some parameters depend on the configuration. Equipment may be subjected to dedicated test profiles.