# GAP-245PL-S7 Series
## 2U RUGGED SERVER

3rd Gen Intel® Xeon® Scalable Processors

Front I/O and Front Power Supply - Low Profile Boards





| 2U | 450 mm | 2 | 4TB | 3 | 6 |
|---|---|---|---|---|---|
| Platform | Depth | CPU | RAM | Hot Swap SSD | I/O Boards |

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

GAP-245PL-S7 rugged servers feature dual socket 3rd Gen Intel® Xeon® Scalable Processors (Ice Lake), a balanced architecture that delivers built-in AI acceleration and advanced security capabilities, up to 64 lanes PCI Express Gen 4 per socket to enable higher I/O bandwidth per core, and +7% higher socket-to-socket bandwidth. The integrated IPMI services support monitoring, control, and management functions sending alarm notifications in case of critical events.

GAP-245PL-S7 are designed for 19" rackmounting and have a 2U chassis with a depth of 450mm.
The front I/O and front power supply layout includes dual internal M.2 NVMe socket and up to two removable U.2 NVMe SSD or up to three removable 2.5" SAS/ SATA SSD.
GAP-245PL-S7 rugged servers can host six low profile PCIe 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.

### FEATURES

- 2U Rugged Server - 450mm depth
- Dual Socket Motherboard
- 3rd Gen Intel® Xeon® Scalable Processors
- Front I/O connectors and font Power Input
- Redundant AC or DC Power Supply
- Up to 2 x U.2 NVME SSD or 3 x 2.5" SATA / SAS SSD
- Up to 6 Low Profile PCIe boards
- Optional Conformal Coating
- MIL-STD-810G
- Optional MIL-STD-461

# Technical Specifications

## System

| | |
|---|---|
| **CPU** | 3rd Gen Intel® Xeon® Scalable processors Dual Socket LGA-4189 (Socket P+) max 270W TDP |
| **Memory** | Up to 4TB ECC RDIMM, DDR4-3200MHz; 16 DIMM slots |
| **Chipset** | Intel® C621A |
| **Graphics** | ASPEED AST2600 BMC |
| **Network Connectivity** | 1x Dedicated IPMI LAN port<br>2x GbE with RJ45 connectors (2x 10GbE motherboard version available) |
| **Storage** | Internal:<br>2x M.2 NVMe; M-Key, 2280/22110<br>2x Disk on Module<br>Removable:<br>Up to 2x U.2 NVMe SSD or up to 3x 2.5" SATA / SAS SSD |
| **TPM** | 1x TPM Header |
| **Motherboard I/O shield** | Available on the front: 1x VGA, 1x COM, 4x USB 3.0, 2x GbE (10GbE); 1x IPMI |
| **Expansion slots** | 4x PCIe 4.0 x16 + 2x PCIe 4.0 x8 Low Profile cards |
| **Operative Systems** | Windows® 10 IoT Enterprise 64bit, Windows® Server 2016 64bit; Windows® Server 2019 64bit; RHEL 8.4 64bit; Ubuntu 20.04.2 LTS SVR 64bit; CentOS 7.9 64bit |
| **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

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|---|---|
| **Power Supply** | AC Redundant Power Supply - Optional Single<br>DC Redundant Power Supply - Optional Single |

## Mechanical

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|---|---|
| **Dimensions** | 483 x 88 x 450 mm (W x H x D) |
| **Material** | Aluminum with surface passivation treatment |
| **Colour** | Black / RAL 9005 - Powder Coating |
| **Mounting** | 2U 19" rackmount chassis<br>Optional Telescopic slides |
| **Configuration** | Front I/O - Front Power Supply |
| **Front Panel Leds / Buttons** | Power On/Off button with LED<br>Reset button with LED |
| **Drive Bays** | 1x 3.5" |
| **Fans** | 4x removable PWM fans |

## Environmental - (Design to meet)

| | |
|---|---|
| **Operating Temperatures** | 0°C to +50°C<br>MIL-STD-810H, Method 501.7 & 502.7<br>-20°C to +60°C (depending on configuration) |
| **Storage Temperature** | -40°C to +70°C<br>MIL-STD-810H, Method 501.7 & 502.7 |
| **Humidity** | 5% – 95% non-condensing<br>MIL-STD-810H 507.6 |
| **Operating Vibrations** | MIL-STD-167-1A, Type I |
| **Not Operating Vibrations** | 1.17 Grms, 5-500 Hz<br>MIL-STD-810H, Method 514.8 |
| **Operating Shocks** | 20g / 11ms – half sine<br>MIL-STD-810G, Method 516.7 |
| **EMC** | Directive 2014/35/UE-LVD \| Directive 2014/30/UE-EMC \| Directive 2011/65/UE - RoHS<br>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.