# GAP-145P-S8

## 1U Rugged Edge Server- Front I/O - Front Power Supply

### Dual Socket 5th/4th Gen Intel® Xeon® Scalable Processors





GAP is a product family of Rugged aluminium Servers and Workstations designed for Edge applications that require a robust MIL-GRADE certified computing platform, suitable for operations in critical environments.

| 1U | 450 MM | 2 | 4TB | UP TO 2 | 2 |
|---|---|---|---|---|---|
| PLATFORM | DEPTH | CPU | RAM | INTERNAL SSD | I/O BOARDS |

GAP-145P-S8 Rugged Edge Servers are powered by dual-socket 5th Gen Intel® Xeon® / 4th Gen Intel® Xeon® Scalable Processors renowned for their robust architecture with enhanced AI acceleration and advanced security capabilities. Offering improved performance and efficiency, these servers are tailored to meet the demanding requirements of modern computing environments at the Edge.
The integrated IPMI services support monitoring, control, and management functions, sending alarm notifications in case of critical events.

GAP-145P-S8 are designed for 19" rackmounting and have a 1U chassis with a depth of 450mm.
The design, featuring front-mounted I/O ports and power supply, strategically positions all I/O interfaces at the front of the chassis, ideal for 'front-only' installations.
The GAP-145P-S8 offers versatile storage options, including support for two on board M.2 NVME SSD. Moreover, this rugged server can accommodate up to two full-height, half lenght PCIe x16 cards.

For enhanced protection against shocks and vibrations, additional boards can be supplied with a dedicated retainer kit, ensuring optimal safety even during transport.

Built to meet MIL-STD-810F standards for temperature and shock resistance, as well as MIL-STD-167-1A standards for vibration tolerance, GAP Rugged Edge Servers ensure reliable operation under the challenging conditions often found at the Edge. Additionally, they can optionally be configured to comply with MIL-STD-461 standards for EMI/EMC, featuring MIL-grade connectors for either the power input or both the I/O connectors and power supply inputs.

All units are shipped with an inventory list to guarantee configuration control and reproducibility over time. Additionally, upon request, all server configurations can undergo specific thermal or mechanical environmental stress tests.

# Technical Specifications

## System

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|---|---|
| **CPU** | 5th Gen Intel® Xeon® / 4th Gen Intel® Xeon® Scalable processors, Dual Socket LGA-4677 (Socket E) supported, CPU TDP Up to 270W TDP |
| **Memory** | Up to 4TB ECC RDIMM, DDR5-4800MT/s in 16 DIMM slots |
| **Chipset** | Intel® C741 |
| **Graphics** | 1 Aspeed AST2600 BMC port |
| **Network Connectivity** | 1 x Dedicated IPMI LAN port |
| **Storage** | Internal:<br>2 x NVMe M.2, M-Key, 2280 |
| **TPM** | 1x TPM Header |
| **Motherboard I/O shield** | 1 x VGA, 2 x USB 3.2, 1 x IPMI; 1 x COM (available on the front panel) |
| **Expansion slots** | 2x PCIe 5.0 x16 FHHL |
| **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

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|---|---|
| **Power Supply** | AC or DC Redundant Power Supply - Optional AC Single |

## Mechanical

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|---|---|
| **Dimensions** | 483 x 44 x 450 mm (W x H x D) |
| **Material** | Aluminum with surface passivation treatment |
| **Colour** | Black / RAL 9005 - Powder Coating |
| **Mounting** | 1U 19" rackmount chassis<br>Optional Telescopic slides |
| **Configuration** | Front I/O - Front Power Supply |
| **Front Panel Leds / Buttons / Connectors** | Power On/Off button with LED<br>Reset button with LED |
| **Fans** | 6 x Hot Swap removable PWM fans |

## Environmental - (Design to meet)

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|---|---|
| **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.