

# GAP-145F-S7-SOLO Series

## 1U RUGGED SERVER



3<sup>rd</sup> Gen Intel® Xeon® Scalable Processors  
Front I/O - Rear Power Supply



**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-145F-S7-SOLO rugged servers feature single socket 3<sup>rd</sup> Gen Intel® Xeon® Scalable Processors (Ice Lake), a balanced architecture that delivers built-in AI acceleration and advanced security capabilities, up to 2TB DDR4-3200 RAM and 64 lane PCIe Gen 4. The integrated IPMI services support monitoring, control, and management functions sending alarm notifications in case of critical events.

GAP-145F-S7-SOLO are designed for 19" rackmounting and have a 1U chassis with a depth of 450mm.

The front I/O and rear power supply layout includes an internal M.2 NVMe sockets and a 3.5" drive bay that can host up to two removable U.2 NVMe SSD or up to three removable 2.5" SAS/ SATA SSD.

GAP-145F-S7-SOLO rugged servers host up to two Full Height Full Length PCIe cards and one Low Profile one.

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

- 1U Rugged Server - 450mm depth
- Single Socket Motherboard
- 3<sup>rd</sup> Gen Intel® Xeon® Scalable Processors
- Front I/O connectors and rear Power Input
- Single AC or DC Power Supply
- Removable Fans
- 2x U.2 NVMe or 3x 2.5" SATA/SAS SSD
- Up to 3 PCIe boards
- Optional Conformal Coating
- MIL-STD-810G
- Optional MIL-STD-461

## Technical Specifications

### System

<b>CPU</b>	3 <sup>rd</sup> Gen Intel® Xeon® Scalable processors Single Socket LGA-4189 (Socket P+) max 205W TDP
<b>Memory</b>	Up to 2TB ECC RDIMM, DDR4-3200MHz; 8 DIMM slots
<b>Chipset</b>	Intel® C621A
<b>Graphics</b>	ASPEED AST2600 BMC
<b>Network Connectivity</b>	1x Dedicated IPMI LAN port 2x 10 GbE ports
<b>Storage</b>	Internal: 1x M.2 NVMe; M-Key, 2280/22110 2x Disk on Module Removable: Up to 2x U.2 NVMe SSD or Up to 3x 2.5" SATA / SAS SSD
<b>TPM</b>	1x TPM Header
<b>Motherboard I/O shield</b>	Available on the front: 1x COM; 1x IPMI LAN; 2x USB 2.0; 2x USB 3.2; 2x GbE; 1x VGA
<b>Expansion slots</b>	2x PCI-E 4.0 x16 slot FHFL 1x PCI-E 4.0 x16 slot (Low profile)
<b>Operative Systems</b>	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
<b>IPMI</b>	IPMI2.0, SPM, Watchdog; SNMP and e-mail alarms and notifications
<b>Remote Monitoring</b>	Monitoring, control, and management functions (fan speed, temperature, voltage, redundant power failure, power consumption, disk health, raid health, and memory health)

### Power Supply

<b>Power Supply</b>	AC single Power Supply DC Single Power Supply
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### Mechanical

<b>Dimensions</b>	483 x 44 x 450 mm (W x H x D)
<b>Material</b>	Aluminum with surface passivation treatment
<b>Colour</b>	Black / RAL 9005 - Powder Coating
<b>Mounting</b>	1U 19" rackmount chassis Optional Telescopic slides
<b>Configuration</b>	Front I/O - Rear Power Supply
<b>Front Panel Leds / Buttons</b>	Power On/Off button with LED Reset button with LED
<b>Drive Bays</b>	1x 3.5"
<b>Fans</b>	6x removable PWM fans

### Environmental - (Design to meet)

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