



S2U5



High Performance 2U Rugged Server

Designed for mission-critical applications

2U, 400mm Depth, Dual Xeon® Rugged Server

The S2U5 is the Compact, High performance Dual Processor Server, from APLUS Système Automation's Rugged Servers and Workstations range.

Industry-Leading Performance, Reliable, Rugged

Featuring two last generation Intel scalable Xeon® Processors, the S2U5 provides the user with exceptional processing performance in an ultra-compact form factor. The S2U5 is the ideal choice for all Industrial or embedded applications that require robust computing power necessary to drive sophisticated applications, but also high environmental strength.

Scalable, Versatile

The S2U5 Industrial Server offers the ideal computing solution for Industrial, Heavy Industrial or Military field. The user is able to choose the options which best fit the application's needs. The S2U5 server supports up to seven low profile Add-on cards (4 PCIe 3.0 X16 + 3 PCIe 3.0 X8) or three full height full length PCIe 3.0 X16 cards. Depending of application need, three power supplies are available: Single PSU 36 to 72V DC, Single PSU 90 to 264V AC or Redundant PSU 90 to 264V AC.

Designed for mission-critical applications

APLUS Système Automation S2U5 Rugged Servers are designed to operate reliably in harsh environments. S2U5 server uses support brackets to secure all add-on expansion cards, honeycomb openings, slave and silentblock mounted fans for optimal temperature stability and minimal noise. S2U5 Servers are also designed to mitigate electric and electromagnetic interference, up to Military class.



The High Performance 2U Rugged Server is available in three grades :



Industrial Grade
I S2U5



Rugged Grade
R S2U5



Military Grade
M S2U5

Highlights

Support the latest Intel® Xeon® Scalable Processors	RAID Configurable data storage	Adaptive cooling to Lower Noise
Desktop or 2U Rack Mount Unit	Slim DVDRW	550W, 36-72V DC Power Supply option
Short Depth (400 mm)	Up to 7 Low Profile AddOn cards	550W, 90-264V AC Power Supply option, with PM Bus monitoring
Marine 316L Stainless Steel chassis	Internal Temperature & PSU Monitoring	2x800W, 90-264V AC Redundant Power Supply option, with PMbus monitoring
Up to 9 hot-swappable 2"5 Silicium Disks		

Qualified AddOn Boards on Military grade servers:

- nVidia TESLA P4 GPU card
- Sunhillo Multi Protocol Server card: PCE335

- Intel Ethernet Adapters: i350T4 V2, X710T4...
- LSI Mega Raid cards: MR-SAS9341



The PCE335 is a Multi-Protocol Server card who provides 4 high speed serial lines. A wide range of protocols are available (X.25, HDLC, TA-LIB, L16 etc...).



MR-SAS9341 is a High performance with a throughput of 12 Gbit/s, PCI Express® 3.0 host interface for superior system performance.



	2U Servers & Workstations		
	Industrial grade IS2U5	Rugged grade RS2U5	Military grade MS2U5
Optical drive	Yes	Yes	No
Magnetic disks	No	No	No
Silicon disks	Yes	Yes	Yes
Bonding of all internal connectors	No	Yes	Yes
All screws with low thread brake	No	Option	Yes
Tropicalized electronics	No	Option	Yes
Electronic cards ruggedized against shock & vibration	No	No	Yes
Electronic Core on stiffener	No	No	Yes
Temperature Operation	0 to +50°C	0 to +50°C	-10 to +50°C (MIL-STD-810G, method 502.5, procedure 2, 4 hours, MIL-STD-810G, method 501.5, procedure 2, 12 hours)
Temperature Storage	-20 to +70°C	-20 to +70°C	-40 to +75°C (MIL-STD-810G, method 501.5, procedure 1, 4 hours)
Humidity Operation	5 to 90% RH, non condensing at 35°C	5 to 90% RH, non condensing at 35°C	95% RH at +40°C (EN60068-2-3, test Cab: 40°C (+/-2°C), 95% RH, 10 days)
Humidity Storage	5 to 93% at 45°C	5 to 93% at 45°C	95% RH at 25 to 55°C (EN600682-30, test Db variant 2: 25°C (+/- 3°C) to 55°C (+/- 2°C), 95% (+/- 4%) RH, 6 cycles, 24 hours per cycle)
Pressure (Altitude)	650 to 1100 hPa	650 to 1100 hPa	550 to 1100 hPa
Shocks	15g, 11ms 6 axis (With SSD)	20g, 11ms 6 axis (With SSD)	20g, 18ms 6 axis (With SSD) (MIL-STD-810F, method 516.5, procedure 1)
Vibrations Operation	5-100 Hz : 0.8g	5 - 300 Hz : 0.8g	(MIL-STD-167-1A) No critical frequency under 100 Hz Endurance 33 Hz, 1g, 2 hours.
Random Vibrations	5 - 500 Hz : 0.8g	5 - 500 Hz : 1g	(MIL-STD-810F, method 514.5, procedure 1) Freq Range: 5 to 2000 Hz Max PSD: 2.5 (m/s ²)/Hz RMS value: 18 m/s ² Duration: 8 hours / axis
Acceleration – emergency landing	5g	5g	8g
Acceleration – transportation	3g	3g	4.5g
EMC	CE Mark Class B (EN 61000-6-2, EN55022, EN 55024)	CE Mark Class B (EN 61000-6-2, EN55022, EN 55024)	CE Mark Class B (EN 61000-6-2, EN55022, EN 55024)
Safety	EN 62368-1	EN-62368-1	EN-62368-1
Surge immunity	EN 61000-4-5 STANAG 1008	EN 61000-4-5 STANAG 1008	EN 61000-4-5 STANAG 1008
Radiated Susceptibility	-	-	NRS01, NRS02, NRS04 tests of AECTP-500
Radiated Emissions	-	-	NRE01, NRE02 tests of AECTP-500
Conducted Susceptibility	-	-	NCS01, NCS07, NCS08, NCS09, NCS11, NCS12, NCS13 tests of AECTP-500
Conducted Emission	-	-	NCE01, NCE02, NCE04, NCE05 tests of AECTP-500
Ground continuity - External enclosure	10 mΩ 1A	5 mΩ 5A	5 mΩ 10A
Ground continuity - Internal enclosure	-	-	10 mΩ 10A
Noise at full speed	70 dB(A)	70 dB(A)	70 dB(A)

Technical Specifications	
Processor System	
Processor	Up to two Intel® Xeon® Scalable Processors with up to twenty six cores per socket <ul style="list-style-type: none"> • 2 x Platinum 8160T (2,1 GHz / 24 Cores) • 2 x Gold 6138 (2,0 GHz / 20 Cores) • 2 x Gold 6130 (2,1 GHz / 16 Cores) • 2 x Silver 4110 (2,1 GHz / 8 Cores) • 2 x Bronze 3106 (1,7 GHz / 8 Cores) • 2 x Gold 6230R (2.1 GHz / 26 Cores) • 2 x Gold 6252N (2.3 GHz / 24 Cores) • 2 x Gold 6230T (2.1 GHz / 20 Cores) • 2 x Gold 5218T (2.1 GHz / 16 Cores) • 2 x Silver 4209T (2.2 GHz / 8 Cores)
Memory	6 sockets per processor for Up to 768 GB RDIMM/LRDIMM DDR4-2666 ECC Memory
Chipset	Intel® C621 PCH
Expansion Slot (Option 1)	
PCI Express 3.0 x16	4 Slots for Low Profile Cards
PCI Express 3.0 x8	3 Slots for Low Profile Cards
Expansion Slot (Option 2)	
PCI Express 3.0 x16	3 Slots for Full height Full length Cards
Network	
Ethernet	2 x 1000 Base-T ports (Intel® i350-AM2)
TPM	Optional TPM 1.2 & 2.0 support
Management	
BMC Controller	AST2500 BMC with iKVM, IPMI and Redfish Support
Other features	Watchdog, NMI
Data Storage	
Hard Drive	3 x 3.5 bays for Up to 9 Hot-Swap 2.5 SATA/SAS Sillicium Drives
Optical drive	1 x DVD RW (only for IS2U5)
General I/O	
USB 3.0	2 x USB 3.0 ports in front 4 x USB 3.0 at Rear
Graphic	1 x VGA at Rear Up to 1920x1200
Status LED	4 status LED in Front (Power, Disk activity, Ethernet activity, Redundant PSU Fault)
Switches	3 Switches in Front (Power On/Off, Reset, Redundant PSU Alarm Reset)
Security & Hardware Control	
Monitoring	Redundant or Single AC Power Supply monitoring thru PM Bus
Security	Top cover opening detection switch / Security PIN
Power Supply	
AC	Single 550W or Redundant 2 x 500W, 90-264V AC High Efficiency, Option PMBus monitored
DC 1	Single 550W or Redundant 2 x 500W, 36-72V DC High Efficiency, Option PMBus monitored
DC 2	Single 460W, 18-36V DC High Efficiency
Mechanical	
Material	Marine Grade 316L Stainless Steel
Size	Rackable 2U, 400mm Depth (EN 60297-3-100 Compliant)
Weight	13 kg (IS2U5 & RS2U5) / 14 Kg (MS2U5)
Software	
OS Support	Microsoft Windows Server 2012 R2, 2016 or 2019 1809 / Red Hat (32/64 bits) / VMWare ESXi

CONTACT

Address: 7 rue d'Alembert, ZAC de la Noue Rousseau, Techniparc - 91240 Saint Michel sur Orge - France

Sales contact: sales@aplus-sa.com / Phone: +33 1 69 88 43 00

Internet: <https://www.aplus-defense.com>