APLUS
SYSTEME AUTOMATION

Made in European Union
France

S2U51S
S2U51S.2

intel XEON inside

Low consumption Xeon® D Server

Designed for heavy industrial applications

2U, 400mm Depth, Low consumption

2U server / low power consumption

High environmental performance, low consumption

Equipped with a Xeon® D processor that can accommodate up to 16 cores, the S2U51S series offers the user an exceptional performance/consumption ratio. This in a very compact form factor. The S2U51S series is the ideal choice for all applications that require not only high computing power but also low power consumption.

Scalable, Versatile

The S2U51S series offers an ideal IT solution for harsh environments. It supports up to three full height, full length PCI Express 3.0 cards. The S2U51S series is powered by either DC or AC power. The power supply can be single or redundant.

Designed for mission-critical applications

The S2U51S series is designed to operate reliably in harsh environments. It uses locking devices to secure all expansion cards. The ventilation holes are honeycombed and the use of conductive seals optimizes electromagnetic performance. The fans are mounted on Silentbloc and their number is multiplied to minimise the noise level.

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

Industrial Grade

I S2U51S I S2U51S.2

Rugged Grade

R S2U51S R S2U51S.2

Military Grade

M S2U51S M S2U51S.2

Highlights		
Support Broadwell Xeon® D Processors	RAID Configurable data storage	400W, 36-72V DC Power Supply option
Desktop or 2U Rack Mount Unit	Slim DVDRW	350W, 90-264V AC Power Supply option, with PM Bus monitoring
Short Depth (400 mm)	Up to 3 full height AddOn cards	2x300W, 90-264V AC Redundant
Marine 316L Stainless Steel chassis	Internal Temperature & PSU Monitoring	Power Supply option, with PM bus monitoring
Up to 9 hot-swappable 2''5 Hard Drives or SSD	Adaptive cooling to Lower Noise	

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 IS2U51S / IS2U51S.2	**Rugged grade RS2U51S / RS2U51S.2**	**Military grade MS2U51S / MS2U51S.2**
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 95% at 45°C	5 to 95% 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 at 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 $(m/s^2)^2/Hz$ 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 at 1A	5 mΩ at 5A	5 mΩ at 10A
Ground continuity - Internal enclosure	-	-	10 mΩ at 10A
Noise at full speed	50 dB(A)	50 dB(A)	50 dB(A)

Technical Specifications		
	S2U51S	**S2U51S.2**
Processor System		
Processor	Intel® Xeon® D Processor with up to sixteen cores • Xeon® D-1587 (1.7-2.3 GHz / 16 Cores) • Xeon® D-1557 (1.5-2.1 GHz / 12 Cores) • Xeon® D-1541 (2.1-2.7 GHz / 8 Cores) • Xeon® D-1528 (1.9-2.5 GHz / 6 Cores) • Xeon® D-1521 (2.4-2.7 GHz / 4 Cores)	Intel® Xeon® D Processor with up to twelve cores • Xeon® D-2163IT (2.1-3.0 GHz / 12 Cores) • Xeon® D-2143 (2.2-3.0 GHz / 8 Cores)
Memory	4 sockets for Up to 128 GB RDIMM/UDIMM DDR4-2400 ECC Memory	4 sockets for Up to 256 GB RDIMM/LRDIMM DDR4-2133 ECC Memory
Chipset	System On Chip	
Expansion Slot (Option 1)		
PCI Express 3.0	2 Slots for Full height Full length Cards + 1 Slot for Full height Half length Card	
Network		
Ethernet	2 x 1GbE Base-T ports + 2 x 10GbE Base-T ports (Optional)	2 x RJ45 10GLAN by Intel® X557-AT2
TPM	Optional TPM 1.2 & 2.0 support	
Management		
IPMI	IPMI 2.0 with virtual media over LAN & KVM-over-LAN support with dedicated port	
Other features	Watchdog, NMI	
Data Storage		
Hard Drive	3 x 3.5 bays for Up to 9 Hot-Swap 2.5 SATA/SAS Silicium Drives	
Optical drive	1 x DVDRW	
General I/O		
USB 3.0	2 x USB 3.0 ports in front 2 x USB 3.0 at Rear	
eSATA	1 x eSATA port in Front	
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 (Optional)	
Security	Top cover opening detection switch	
Power		
Single AC	Single 350W, 90-264V AC High Efficiency Single 550W, 90-264V AC High Efficiency, PM Bus monitored	
Redundant AC	Redundant 2 x 350W, 90-264V AC High Efficiency Redundant 2 x 800W or 2 x 500W, 90-264V AC High Efficiency, PM Bus monitored	
Single DC	Single 400W, 36-72V DC High Efficiency	
Consumption	From 80W (4 Cores) to 110W (16 Cores)	
Mechanical		
Material	Marine Grade 316L Stainless Steel	
Size	Rackable 2U, 400mm Depth (EN 60297-3-100 Compliant)	
Weight	14 Kg	
Software		
OS Support	Microsoft Windows 7 SP1, Windows 8.1, Windows 10 (32 & 64 bits) Microsoft Windows Server 2008 R2 SP1, Windows 2012 R2 Red Hat (32/64 bits) / VMWare ESXi	

CONTACT

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2022/05