



**DATASHEET**

**Rackmount PC and Server  
Model: RPCS-1**

**P/N  
560-00701-000**



The RPCS systems are a family of rugged rackmount computers/servers. designed to support severe environmental conditions. These solutions include:

- Last generation of DP motherboards in Enhanced-Extended ATX (EE-ATX), E-ATX and ATX frame;
- Fixed or Hot-swappable Hard Disk drives;
- Fixed or Hot-swappable full redundant AC/DC power supply;
- COTS modules, such as motherboard, power supply, mass storage device integrated into a rugged mechanical frame;
- IPMI controller;
- Suitable for Virtual Systems like Hyper-V, VMWare ESXi, ProxMox.

**TECHNICAL SPECIFICATIONS**

**ENVIRONMENTAL SPECIFICATIONS**

CPU	: One or two Intel® Xeon® E5-2600 series processors
HARD DISKS	: Up to 3TB of Hot-swappable SAS/SATA 2.5" Storage
Motherboard (MDB)	: X9DRW-3F SuperMicro Motherboard with Riser Card
RAM	: Up to 1TB in 16 modules
Form Factor	: Dimensions: 44mm x 446mm x 635mm
Rack mount	: 19" 1U standard rack installation: by means of Jonathan lateral slides and frontal handhelds
Weight	: Approximately 12Kg ( 25 lbs )
Frontal interface	: 3 slots for Hot Swappable SAS/SATA 2.5" disk, CD/DVD/RW, 2 USB
Fan	: 4 Fan modules with PWM Control
Power Supply	: Dual Redundant AC inlet, Hot Swappable, Power Supply up to 2 x 650W
Front panel, controls and indications	: Frontal cover removable by key lock Main Power, Power Supply, System, Overheat FAN, LAN, HDD
Color	: Gray RAL-7030, Black

Operating Temperature	: -5° to +50°C (with TCS Active), as per MIL-810F methods 501.4 and 502.4
Storage and Non-Op Temperature	: -40°C to +70°C, as per MIL-810F methods 501.4 and 502.4
Operating Altitude	: Up to 10,000 ft. a.s.l., as per MIL-810F method 504
Non-op Altitude	: Up to 40,000 ft. a.s.l., as per MIL-810F method 504
Humidity	: Up to 95% Non-Condensing, 30° to 60°C 48 hours, as per MIL-810F method 507.4
Vibration	: 0,5g RMS 5 to 50Hz, as per MIL STD 167-1A, Type I
Shock	: ±40g, 11 ms half sine, as per MIL STD 810F, method 516.5, proc. I
Roll	: ± 22,5 ° period 10 s, as per AECTP-400-3, method 418
Pitch	: ± 7,5 ° period 5 s, as per AECTP-400-3, method 418
Safety Regulations	: EN 60950, RoHS, REACH, CE
Reliability	: 10 Years Operating Life Maintainability <20 minutes @ Line-Replaceable Unit (LRU) Level

**SOFTWARE SPECIFICATIONS**

**EMC SPECIFICATIONS**

OPERATING SYSTEM	: <ul style="list-style-type: none"> <li>• Windows Server 2008/2012</li> <li>• Windows 7/10 64bit</li> <li>• Red Hat® 6.0+</li> <li>• Ubuntu® 14+</li> <li>• CentOS 6.0+</li> </ul>
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CE102	: Conducted Emissions through Power Leads, 10KHz ÷ 10MHz, as per MIL STD 461F – Sect. 5.5
CS101	: Conducted Susceptibility through Power Leads, 30Hz ÷ 150Hz, as per MIL STD 461F – Sect. 5.7

<b>POWER SUPPLY SPECIFICATIONS</b>		
Tolerances	<ul style="list-style-type: none"> <li>• Voltage: 90 ÷ 264 Vac</li> <li>• Frequency: 47 ÷ 63 Hz</li> <li>• Power: 650 VA Max</li> </ul> as per MIL STD 1399-300B sect. 5.3.1	CS114 : Conducted Susceptibility, bulk cable injection, 10 kHz ÷ 200 MHz, as per MIL STD 461F – Sect. 5.13
Line current	<ul style="list-style-type: none"> <li>• Surge (inrush): 30 Apk @115V; ≤ 15 Apk @ 230V</li> <li>• Operating: ≤ 10 A rms @ 115V; ≤ 5 A rms @ 230V</li> </ul> as per MIL STD 1399-300B sect. 5.3.6	CS115 : Conducted Susceptibility, bulk cable injection, impulse excitation, 30 Hz pulses for 1 min., as per MIL STD 461F – Sect. 5.14, fig. CS-115-1
Current waveform	<ul style="list-style-type: none"> <li>• Percent coeff.: 5000/f<sub>H</sub> @ 50Hz nominal freq.</li> <li>• Percent coeff.: 6000/f<sub>H</sub> @ 60Hz nominal freq.</li> </ul> as per MIL STD 1399-300B sect. 5.3.7	CS116 : Conducted Susceptibility, damped sinusoidal transients, cables and power leads, 10 kHz ÷ 100 MHz, freq: 0,01; 0.1; 1; 10; 30; 100 MHz as per MIL STD 461F – Sect. 5.15, fig. CS-116-1 and -2
Emergency condition (Power supply and Hot swap)	Interruptions: <ul style="list-style-type: none"> <li>• 70 ms (bus transfer)</li> <li>• 2 min (re-configuration)</li> </ul> as per MIL STD 1399-300B sect. 5.3.4	RE101 : Radiated Emissions, magnetic field, 30 Hz ÷ 100 kHz as per MIL STD 461F – Sect. 5.16
Voltage and frequency transient	<ul style="list-style-type: none"> <li>• 230 Vrms ±20% &amp; 50Hz ±5,5% @ 230 V, 50 Hz</li> <li>• 115 Vrms ±20% &amp; 60Hz ±5,5% @ 115 V 60 Hz</li> </ul> as per MIL STD 1399-300B sect. 5.3.2	RE102 : Radiated Emissions, electric field, 10 kHz ÷ 18 GHz as per MIL STD 461F – Sect. 5.17
Leakage current	≤ 2 mA rms, as per MIL STD 1399-300B sect. 5.3.9	RS101 : Radiated Susceptibility, magnetic field, 30 Hz ÷ 100 kHz as per MIL STD 461F – Sect. 5.19, fig. RS 101-1
Insulation resistance	≥ 10 MOhm @1000 Vac, as per MIL STD 1399-300B sect. 5.3.10	RS103 : Radiated Susceptibility, electric field, 2MHz ÷ 18GHz, as per MIL STD 461F – Sect. 5.20
Electrical continuity	≤ 25 mOhm	