



## PROCELERANT RMS420-5000XI

Quad Core 4U Rack Mount Server

### FEATURE SUMMARY

- Compact 4U x 20" chassis
- 2 X Quad-Core Intel® Xeon® CPU
- Intel 5000X Chipset
- PCIe x16 slot to support high-performance graphics
- Up to 32 GB DDR2-667 FB-DIMM Memory
- Two PCIe I/O slots (x8, x4)
- Two PCI-X 100 Slot
- Dual Gigabit Ethernet ports
- Up to 3 SATA hard drives
- CD-ROM/DVD-RW drive
- 1 front USB 2.0 port
- 4 rear USB 2.0 ports

### PRELIMINARY

#### Product Description

The Procelerant RMS420-5000XI Rack Mount Server combines very high compute performance with PCI-Express (PCIe) x16 connectivity for high performance graphics cards. This combination is ideally suited for applications such as medical and military imaging, signal processing, 3D and 4D graphics display and test and measurement systems. These applications generally require extensive signal processing and results are often presented on one or more high resolution graphic displays. Customers can use the RMS420-5000XI server as a high performance compute platform, a high performance display platform, or both. The RMS420-5000XI chassis is 4U (7 inches) tall and 20 inches deep and provides sufficient space, power and cooling for high performance graphics cards in a minimal footprint.

#### Processing Power

The quad-core version of the RMS420-5000XI server includes two Intel® Quad-Core Xeon® processors at either 2.0 or 2.33 GHz with 8MB of L2 cache and a front side bus (FSB) speed of 1333 MHz. These processors incorporate the latest Intel Core® Architecture for maximum processing speed with reduced power consumption. Core architecture processors are particularly well suited for SIMD (single-instruction, multiple-data) parallel processing which is commonly used for high performance image and signal processing applications. The combination of two processors with quad cores results in a total of eight processing engines in a single server. Customers can use this powerful combination to deliver very high processing performance and/or consolidate functions that were previously handled by multiple servers and achieve considerable cost savings.

The bi-directional, high-speed PCIe x16 connectivity on the RMS420-5000XI also allows a portion of the signal processing tasks to be offloaded to a graphics processing unit (GPU). Customers are using this hardware acceleration technique in some applications for additional performance gains.

#### Stable Platform

The RMS420-5000XI is designed to be an embedded server. Embedded servers are usually integrated into larger systems rather than used as a general purpose servers in a data center. A critical requirement for embedded systems is product stability. Since many subsystems have to work together in the larger system, even seemingly minor component changes can result major problems if they result in incompatibilities within or between subsystems. RadiSys addresses this by carefully selecting only long-life components with sufficient design margin to assure robust long-term performance.

Even with the best selection criteria, it is inevitable that a few components will become obsolete over the typical 5 year life time of an embedded server such as the RMS420-5000XI. RadiSys employs strict engineering change control procedures that ensure customers are given advance notice of any potential changes, as well as options for replacement parts or life-time buys of essential components.

# Procelerant RMS420-5000XI Specifications

Physical	Dimensions	7" (H) x 17" (W) x 19.6" (D) (177.8 mm x 431.8 mm x 497.8 mm)
	Weight	Approx 44 lbs (20kg)
Power Supply	Input	100 - 240V VAC 50/60 Hz PFC, auto switching
Cooling		Two 120 mm front accessible fans
		One fan mounted in power supply
		One internal fan
Processor System	CPU	2 X Intel Xeon quad-core (E5335@ 2.0 GHz or E5345@ 2.33 GHz) with 8MB L2 cache, 1333 MHz FSB
	Chipset	Intel 5000X
	Memory	4 channel - 8 Slots, DDR2-667 Fully Buffered DIMM => Up to 32 GB
Video Output		One VGA, One DVI-I
Front I/O	Switches	Power
	LEDs	Power on, Hard Disk Activity, Ethernet Activity
	USB	One front-mount USB 2.0
Rear I/O	Keyboard	PS/2
	Mouse	PS/2
	Serial	Two 9-pin D-SUB Connectors
	Parallel	None
	USB 2.0	One front, four rear
	Audio	AC 97 three 3.5mm stereo connectors
	Ethernet	2 x Gbe (RJ45)
Drives	5.25"	1 - populated with CD-ROM/DVD-RW IDE Drive, front accessible
	3.5"	3 bays for SATA2, front accessible
I/O Slots	PCIe x16	1
	PCIe x8	1
	PCIe x4	1
	PCI-X 100	2
Environment	Temperature	Operating: +5° C to +45° C ambient temperature, Derated by 2° C per 1000 feet (300 meters) over 6600 ft (2000 meters) with sufficient airflow to keep within the temperature specifications. Operation above +30° C reduces the maximum operational relative humidity. Non-Operating: -30° C to +70° C, 5° C per minute maximum excursion gradient
	Relative humidity	Operating: 20% to 95% at maximum 29.4° C wet bulb (non-condensing) Non-operating: 5% to 95% at maximum 29.4° C wet bulb (non-condensing)

Packaged: 5% to 95% at maximum 40° C wet bulb (non-condensing)

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Altitude	-30 to +4000m
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Acoustic Noise	Operating: 48dBA at 1m, +25° C, sea-level, full workload
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Shock	Operating: 1G, 11ms, half-sine
	Non-Operating: 30G, 11 ms, square wave

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Vibration	Operating: 0.2g, 5-500Hz, sine 0.27 grms 5-500Hz, sine
	Non-Operating: 2.2 grms, 5-500 Hz, random

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Regulatory Emissions	Radiated emissions (EMC) 1 Operating CISPR 22: 1998, Class A, with no testing on the power port
	Conducted emissions Operating IEC 1000-4-6/EN61000-4-6:1995, performance criteria B

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Safety	UL/cUL UL60950
	EN60950 (CB REPORT)
	CE Mark

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## Ordering Information

**Toll-Free:** 800-950-0044

**Phone:** 503-615-1100

**Support:** 866-385-6167

### ORDER INFORMATION

Call for pricing and availability. Refer to the order codes below.

4U Rackmount Server  
2X Quad-Core Intel Xeon 2.0 GHz Processor (E5335)  
2GB (4 x 512MB) DDR2-667 FB-DIMM memory  
160 GB SATA (7200 RPM) hard drive  
CD-ROM/DVD-RW drive  
VGA/DVI-I Video output card

**Order Code: RMS420-5000XI-006**

4U Rackmount Server  
2X Quad-Core Intel Xeon 2.33 GHz Processor (E5345)  
2GB (4 x 512MB) DDR2-667 FB-DIMM memory  
160 GB SATA (7200 RPM) hard drive  
CD-ROM/DVD-RW drive  
VGA/DVI-I Video output card

**Order Code: RMS420-5000XI-007**



## Contact Information

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