

# COTS Rugged Industrial Grade 4U Rackmount Computer System

MILITARY | INDUSTRIAL | COMMERCIAL



# R4U-20

Models R4U2001, R4U2007, R4U2008, R4U2009, R4U2013

Assembled in the USA  
ISO 9001:2008 Certified  
ITAR Registered

Our R4U-20 can be used for many rugged, computationally-intense industrial applications. It has exceptional strength and durability and contains our proprietary SysCool® thermal management system. SysCool® extends the life of the computing system, reduces power consumption, and lowers overall system noise levels.

Specifications for our standard products can always be customized to fit your unique application requirements.

In-house Engineering  
Department

Rapid Prototyping

## CPU Options

- Single Intel® Core i5® or i7®
- Single Intel® Xeon® E3 Series
- Single or Dual Intel® Xeon® E5 Series

## Drive Capacity

- 3(x) 5.25" Drive Bays
- 1(x) Slim Slot-Fed Optical Drive

## Applications

- Airborne Operations
- Land-based Operations
- Seaborne Operations
- Telemetry
- Diagnostics
- Simulation
- Communications
- Imaging
- Persistent Surveillance
- UAVs
- Automation
- Severe Environment Operations



## Harsh Environments

Designed to meet or exceed the below environmental specifications.

### ALTITUDE

12,000 ft Operational, 40,000 ft Storage

### HIGH TEMPERATURE

60°C Operational, 85°C Storage  
R4U2009: 40° Operational, 70°C Storage

### LOW TEMPERATURE

0°C Operational, -20°C Storage  
R4U2009: 0° Operational, -40°C Storage

### HUMIDITY

5-95%, Non-condensing

### VIBRATION

2G RMS 5-500Hz

### BENCH HANDLING SHOCK DROP TEST

20G @ 11ms Duration

Contact us today!  
858.571.4330 or [saleseng@chassisplans.com](mailto:saleseng@chassisplans.com)  
[www.chassis-plans.com](http://www.chassis-plans.com)

# COTS Rugged Industrial Grade 4U Rackmount Computer System

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## Chassis Specifications

### DIMENSIONS

19" X 7" X 20" (482.6mm X 177.8mm X 508mm)

### WEIGHT

40 pounds, weight varies by configuration

### ENCLOSURE FEATURES

#### Construction

Front Panel: 0.250" milled 5052-H32 aircraft-grade aluminum  
Enclosure Body: 0.090" 5052-H32 aircraft-grade aluminum  
Rear Slot Panel: 18 gauge CRS, zinc plated with 10-32 grounding lug

#### Front Door

Aluminum, formed and welded, with three captive closure fasteners  
Milled channel with environmental gasket  
Built in, removable, washable air filter

#### Drive Capacity

3(x) 5.25" drive bays  
1(x) slim slot-fed optical drive

#### Indicators

Power on, disk access, fan failure and over temperature indicators

#### Switches

Power and alarm reset switches behind front door

#### Powdercoating

Black per MIL-PRF-24712, Type IV, Class 3, Cardinal C214-BK110  
polyester semi-gloss, fine texture

#### Plating

Chem-Film per MIL-C-5541F, Class 1A

### FRONT USB PORTS

(2x) ports USB 2.0

### SYSTEM COOLING

(2x) 92mm, 60 CFM, 100K hour MTBF cooling fans  
Proprietary SysCool™ intelligent adaptive fan controller and  
temperature alarm circuit board

### MOTHER BOARD CAPACITY

Designed for ATX-sized motherboard (12" X 10.5")

### POWER SUPPLY

Single or redundant 600-800W 110/220 Volt AC  
Other power options available



### CPU

### CHIP SET

### MAX RAM

### HARD DRIVES

### RAID OPTION

### OPTICAL DRIVE

### EXPANSION SLOTS

### REAR I/O

### ON BOARD GRAPHICS

### AUDIO

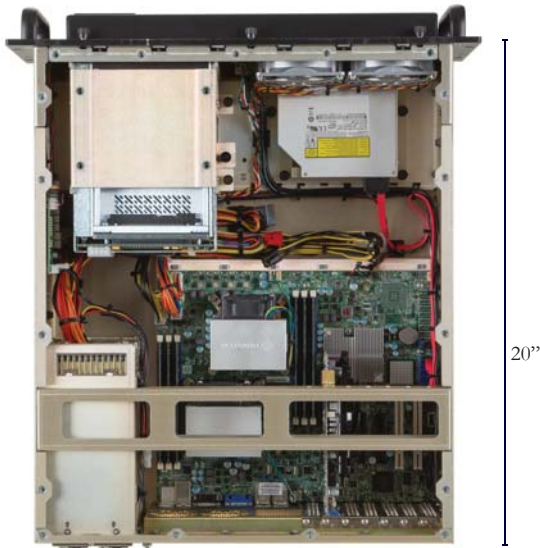
### LAN

### O/S

## Computer Specifications

R4U2001	R4U2007	R4U2008	R4U2009	R4U2013
Single Intel® Core i7®-860, 2.80GHz OR Single Intel® Core i5®-660, 3.33GHz	Single Intel® Core™ i7-3770 (8M Cache, up to 3.9GHz), Intel® Core™ i5-3550S (6M Cache, up to 3.7GHz), Single Intel® Core™ i7-2600 Processor (8M Cache, 3.4GHz) OR Single Intel® Core™ i5-2400 Processor (6M Cache, 3.1GHz)	Single Intel® Xeon® Processor E3-1275 (8M Cache, 3.4GHz) OR Single Intel® Xeon® Processor E3-1225 (6M Cache, 3.1GHz)	Single or Dual Intel® Xeon® Processor E5-2658 (20M, 2.10GHz, 8.0 GT/s Intel® QPI) OR Single or Dual Intel® Xeon® Processor E5-2428L (15M, 1.80GHz, 7.2 GT/s Intel® QPI)	Single Intel® Core i7-4770S 3.9GHz OR Single Intel® Core i5-4570S 3.6GHz
Intel® Q57 Platform Controller Hub (PCH)	Intel® Q67 Platform Controller Hub (PCH)	Intel® C216 Platform Controller Hub (PCH)	Intel® C606 Platform Controller Hub (PCH)	Intel® Q87 Express
(4x) 240-pin DDR3 Max. 16GB	(4x) 240-pin DDR3 Max. 32GB	(4x) 240-pin DDR3 Max. 32GB	(8x) 240-pin DDR3 Max. 256GB ECC	(4x) 240-pin DDR3 Max. 32GB
Up to (3x) 3.5" SATA2, 500GB, 7200 RPM, 64GB cache standard. In fixed or removable configurations. Other rotating media and solid state storage sizes available	Up to (3x) 3.5" SATA2, 500GB, 7200 RPM, 64GB cache standard. In fixed or removable configurations. Other rotating media and solid state storage sizes available	Up to (3x) 3.5" SATA2, 500GB, 7200 RPM, 64GB cache standard. In fixed or removable configurations. Other rotating media and solid state storage sizes available	Up to (3x) 3.5" SATA2, 500GB, 7200 RPM, 64GB cache standard. In fixed or removable configurations. Other rotating media and solid state storage sizes available	Up to (3x) 3.5" SATA2, 500GB, 7200 RPM, 64GB cache standard. In fixed or removable configurations. Other rotating media and solid state storage sizes available
JBOD, RAID 0, 1, 5	JBOD, RAID 0, 1, 5	JBOD, RAID 0, 1, 5	JBOD, RAID 0, 1, 5	JBOD, RAID 0, 1, 5
Slim Slot-Fed 8x DVD RW	Slim Slot-Fed 8x DVD RW	Slim Slot-Fed 8x DVD RW	Slim Slot-Fed 8x DVD RW	Slim Slot-Fed 8x DVD RW
(1x) PCIe x16 (GEN 2.0), (1x) PCIe x4 (GEN 1.0), (2x) PCIe x1 (GEN 1.0) & (3x) PCI (PCI 2.3)	(1x) PCIe x16 (GEN 3.0), (1x) PCIe x4 (GEN 2.0), (1x) PCIe x1 (GEN 2.0) & (4x) PCI (PCI 2.3)	(2x) PCIe x16 (GEN 3.0), (2x) PCIe x4 (GEN 2.0), (1x) Mini PCIe (GEN 2.0) & (3x) PCI (PCI 2.3)	(3x) PCIe x8 (GEN 3.0), (1x) PCIe x4 (GEN 2.0), (1x) PCIe x1 (GEN 2.0), (1x) PCI (PCI 2.3)	(1x) PCIe x16 (GEN 3.0), (1x) PCIe x4 (GEN 2.0), (1x) x1 (GEN 2.0), (3x) PCI (PCI 2.3)
(2x) PS/2 ports, (2x) DB-9 RS232 serial ports, (1x) DVI-I port (DVI-D signal only), (1x) DB-15 VGA port, (2x) RJ45 LAN ports, (4x) USB 2.0/1.1 ports, (1x) Mic-in, (1x) line-in and (1x) line out	(1x) mini-DIN-6 port for PS/2 mouse/keyboard, (2x) DB-9 RS232 serial ports, (1x) DVI-I port (DVI-D signal only), (1x) DB-15 VGA port, (2x) RJ45 LAN ports, (6x) USB 2.0/1.1 ports, (1x) Mic-in, (1x) line-in and (1x) line out	(1x) mini-DIN-6 port for PS/2 mouse/keyboard, (1x) DB-9 RS232 serial port, (2x) DVI-I ports (DVI-D signal only) & (1x) HDMI port, (2x) RJ45 LAN ports, (4x) USB 3.0 ports, (2x) USB 2.0 ports, (1x) Mic-in, (1x) line-in and (1x) line out	(1x) DB-9 RS232 serial port, (2x) RJ45 GbE LAN ports, (4x) USB 2.0 ports, (1x) RJ45 dedicated IPMI, DB-15 VGA port, (1x) UID switch	(1x) PS/2 ports, (2x) DB-9 RS232 serial ports, (1x) DVI-I port (DVI-D signal only), (1x) HDMI Port, (2x) RJ45 LAN ports, (4x) USB 3.0 ports, (2x) USB 2.0 ports, (1x) Mic-in, (1x) line-in and (1x) line out
Intel® HD Graphics	Intel® HD Graphics	Intel® HD Graphics 4000P	Matrox G200eW	Integrated Intel® HD Graphics DVI-I Out (DVI-D only) HDMI
Realtek® ALC262 Stereo ADCs and S/PDIF Interface	Realtek® ALC886 5.1-channel High Definition Audio	Realtek® ALC886 5.1-channel High Definition Audio	N/A	Realtek® ALC886 5.1 High Definition Audio
(1x) Realtek® RTL8111DL PCI Express Gigabit Ethernet controller and (1x) Intel® W82578DM with iAMT6.0 Gigabit Ethernet PHY	(1x) Intel® WG82579LM with iAMT7.0 Gigabit Ethernet Phy & (1x) Intel® WG82574L PCI Express Gigabit Ethernet controller	(1x) Intel® WG82579LM with iAMT8.0 Gigabit Ethernet Phy & (1x) Intel® WG82574L PCI Express Gigabit Ethernet controller	(2x) Intel® 82574L Gigabit Ethernet controllers, (1x) Realtek® RTL8201N PHY dedicated IPMI	Intel I210 PCI Express Gigabit Ethernet controller, Intel I217LM with iAMT9.0 Gigabit Ethernet Phy
Windows XP® Pro, Windows 7® Pro, 32 & 64-bit Other O/S Available	Windows XP® Pro, Windows 7® Pro, 32 & 64-bit Other O/S Available	Windows XP® Pro, Windows 7® Pro, 32 & 64-bit Other O/S Available	Windows XP® Pro, Windows 7® Pro, 32 & 64-bit Other O/S Available	Windows XP® Pro, Windows 7® Pro, 32 & 64-bit Other O/S Available

## R4U-20 Photos



I/O connectors are dependent upon the model selected. See specifications for details.



## LCD Power Alternative

Chassis Plans' 2U-5U rackmount computer systems are designed with a removable back plate that allows a 12V power cord to run from the computer's power supply to a display or keyboard video monitor. This optional feature, the Exterior Power Jack, is available for most Chassis Plans' monitors.

By running the display with the computer systems' power supply, this Exterior Power Jack option can provide many benefits:

- Reduction in the number of required cables
- Elimination of additional equipment, i.e., a power brick
- Reduction in total system weight and cost

To enjoy these benefits, power up your new display with this Chassis Plans' server.

## Who We Are

### CHASSIS PLANS

- Chassis Plans designs, fabricates and integrates standard and customized high-performance computing platforms and LCD monitors for military, industry, and commercial applications.
- Using COTS components, Chassis Plans provides solutions for customers who need reliable systems that will operate in a variety of harsh conditions and who require revision control and hardware consistency for multi-year programs.
- Chassis Plans is an ITAR Registered and SBA-certified small business that has been operating in Southern California for over a decade.

### YOUR CONFIGURATION. ONE PART NUMBER.

- It's our mission to make your life easier. Our Sales Engineers will help you select the right configuration for your project, making sure the details are analyzed and that the system meets your specifications.
- One part number means easier procurement and less paperwork for you.
- Dedicated Sales and Program Managers.
- Last time buy opportunities for end-of-life components.



Contact us today!  
858.571.4330 or [saleseng@chassisplans.com](mailto:saleseng@chassisplans.com)  
[www.chassis-plans.com](http://www.chassis-plans.com)

### Chassis Plans

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