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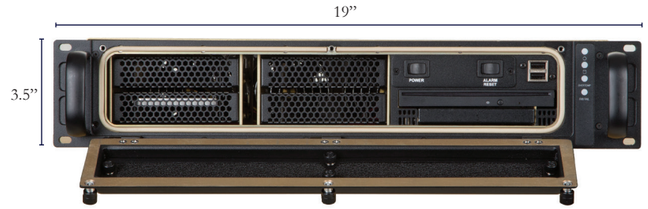
R2U-20 Photos

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



Who We Are

CP Technologies

- CP Technologies designs, fabricates and integrates standard and customized high-performance computing platforms and LCD monitors for military, industry, and commercial applications.
- CP Technologies is an ITAR Registered and SBA-certified small business that has been operating in Southern California for over a decade.
- Using COTS components, CP Technologies 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.

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.

Company Website:
combatproven.tech

Product Page: https://combatproven.tech/rug-ged-servers/industrial/2u/

CP Technologies
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R2U20-1018

Contact us today!
858.571.4330
combatproven.tech

COTS Rugged Industrial Grade 2U Rackmount Computer System

MILITARY | INDUSTRIAL | COMMERCIAL

Assembled in the USA
ISO 9001:2015 Certified
ITAR Registered

Our R2U-20 computing platform can be used for many rugged, computationally-intense industrial applications, while taking limited rack space. It has exceptional strength, is low weight, 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

CPU Options

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

Drive Capacity

- 4(x) 3.5” Drive Bays, Shock-Isolated
- 1(x) Slim Slot-Fed Optical Drive

Applications

- Oil & Gas Exploration
- Factory Automation
- Simulation and Control
- Medical
- Diagnostics
- Data Acquisition
- Robotics
- Communications
- Imaging
- Power Distribution
- UAVs
- Mining
- Railway/Transit

Harsh Environments

Designed to meet or exceed the below specifications.

ALTITUDE

12,000 ft Operational, 40,000 ft Storage

HIGH TEMPERATURE

60°C Operational, 85°C Storage
R2U2009: 40° Operational, 70°C Storage

LOW TEMPERATURE

0°C Operational, -20°C Storage
R2U2009: 0° Operational, -40°C Storage

HUMIDITY

5-95%, Non-condensing

VIBRATION

2G RMS 5-50Hz

BENCH HANDLING SHOCK

20G @ 11ms Duration

Contact us today!
858.571.4330
combatproven.tech

COTS Rugged Industrial Grade 2U Rackmount Computer Systems

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Chassis Specifications

DIMENSIONS

19" X 3.5" X 20" (482.6mm X 88.9mm X 508mm)

WEIGHT

24 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 RF/EMI/environmental gasket
Attenuating EMI honeycomb filter with 45 PPI (washable) air filter rated to UL 94 HF-1

Drive Capacity

4(x) 3.5" shock-isolated drive bays
1(x) slim slot-fed optical drive

Indicators

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

Switches

Power, system 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

(3x) 80mm, 42 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 (9.6" X 12")

POWER SUPPLY

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

Computer Specifications

	R2U2001	R2U2007	R2U2008	R2U2009	R2U2013
CPU	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
CHIP SET	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
MAX RAM	(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
HARD DRIVES	Up to (4x) shock-isolated 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 (4x) shock-isolated 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 (4x) shock-isolated 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 (4x) shock-isolated 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 (4x) shock-isolated 3.5" SATA2, 500GB, 7200 RPM, 64GB cache standard. In fixed or removable configurations. Other rotating media and solid state storage sizes available
RAID OPTION	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
OPTICAL DRIVE	Slim Slot-Fed 8x DVDRW	Slim Slot-Fed 8x DVDRW	Slim Slot-Fed 8x DVDRW	Slim Slot-Fed 8x DVDRW	Slim Slot-Fed 8x DVDRW
EXPANSION SLOTS					
Horizontal Configuration Full-size Cards	(1x) PCIe x16 (GEN 2.0), (1x) PCIe x4 & (1x) PCI (PCI 2.3)	(1x) PCIe x16 (GEN 3.0), (1x) PCIe x4 (GEN 2.0) & (1x) PCI (PCI 2.3)	(2x) PCIe x16 (GEN 3.0), (1x) PCIe x4 (GEN 2.0)	(3x) PCIe x8 (GEN 3.0)	(1x) PCIe x16 (GEN 3.0), (1x) PCIe x4 (GEN 1.0) (1x) PCI (PCI 2.3)
Vertical Configuration Half-height Cards	(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)
REAR I/O	(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
ON BOARD GRAPHICS	Intel® HD Graphics	Intel® HD Graphics	Intel® HD Graphics 4000P	Matrox G200eW	Integrated Intel® HD Grahics DVI-I Out (DVI-D only) HDMI
AUDIO	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
LAN	(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
O/S	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