



The TWO2 Rugged Rackmount Server

The TWO2 rugged rack mount server was specifically designed for battle space deployment. We conducted an extensive development program involving engineers, OEM component manufacturers, program managers, and end-users to tailor the most rugged versatile system on the market.

Unlimited Versatility

- **The Evolution of Concept:** Our Electrical, Mechanical, and Thermal Engineers scrutinized over every aspect of the design. As a result, TWO2 contains several patent-pending design elements such as the variable PCI-Card retention system. No matter the form factor of the card, the retention bracket can quickly be adjusted to accommodate and secure it in place.
- **TWO2 for the Road:** Whether it's the 18" short-rack chassis that is suited for submarine and tacked vehicle racks, the advanced thermal design for operations in hot or restricted airflow environments, or the redundant hot swappable AC/DC power supplies that is ideal for adaptability in aircraft, command shelters, and all shipboard vessels; TWO2 can serve a multitude of functions in virtually any platform.
- **TWO2 Rugged:** NCS has engineered TWO2 to withstand the rigors of battle space deployment: shock, vibration, temperature extremes, humidity, and altitude have all been factored in to the core design.
- **Features You Need:** TWO2 may only be 1U in height, but its high density, rugged chassis has all the necessary peripherals and an adaptable design to suit your exact needs. TWO2 is designed for quick and easy maintenance in the field.
- **Under the Hood:** The computing power of TWO2 stems from the dual socket Intel® Xeon™ Processors and 96GB of memory.
- **Adaptable Power:** TWO2's unique power supplies make it one of the most versatile systems on the market. The redundant, hot swap modules can be fitted for AC or DC input power. The advantage is commonality. The same power system can be deployed in land, air, and sea operations with just the switch of a power supply module.
- **Enterprise Storage on the Go:** Four 2.5" Enterprise-Class SAS/SATA drives are secured in hot-swap drive carriers, giving TWO2 increased drive redundancy as well as additional security options.

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Processor	Supports Dual Intel® Xeon® 5500 or 5600 Series Quad Core CPUs, Up to 6.4GT/s Supports 80W CPUs and Low-Voltage CPUs for High Temperature Environments
Chipset	Intel® 5520 Chipset with ICH10R
System Memory	Twelve 240-pin Dual Channel DIMM Sockets supporting Non-ECC 1333 MHz, 1066 MHz or 800 MHz DDR3 SDRAM Memory; Maximum Memory Capacity of 48 GB
Storage	Four Hot-Swap SAS/SATA/SSD 2.5" Hard Disk Drives; SAS Support with Add-in SAS Controller
System Management	Monitoring for CPU, Cooling Fans, Environment
BIOS	32Mb SPI Flash EEPROM with AMI® BIOS
I/O Ports	One Fast UART 16550 Serial Port One VGA Port Two RJ-45 10/100/1000 Base-T Ports One RJ-45 Dedicated IPMI Lan Port Four USB 2.0 Ports (two in the rear and two onboard headers) Stacked PS/2 Keyboard and Mouse Ports
Communication	Intel® 82576 Dual-Port Gigabit Ethernet Controller
Video Controller	Integrated Matrox G200eW Graphics
Integrated SATA Controller	Intel® ICH10R SATA Controller, 3.0 Gbps
Expansion Slots	Two PCI-Express Full-Height x8 Slots; One Electrically x16 With Single Add-in Card or Two x8 With Dual Cards; 4-Point Support for PCI-Card Cage
Reliability Features	Four Hot-Swap 2.5" Hard Drive Carriers - SAS/SATA/SSD Front Bezel with Filter Option Corporate Branding Option 1U Rackmount Slide Rail Kit CPU Heatsink Mounting Plates on Chassis
Form Factor	1U Rack Mountable
Dimensions	430 x 506.7 x 43.9 mm / 16.93 x 18.3 x 1.73 in
Weight	40 lbs / 18.14 kg
Power Supply	750 Watt AC Hot-Swap/Redundant Standard Power Supply Optional Non-Redundant 1KW for CPU Configurations Optional Redundant and Non-Redundant DC Power Supply DC Input Frequency: 50-60 Hz DC Voltage: 100-240 VAC Switching/Auto-Sensing
Regulatory, Product Certifications & Standards	Temperature: 0° to 55°C (32° to 131°F) (Standard Operating) -40° to 70°C (-40° to 158°F) (Non-Operating) Humidity: 95% Non-Condensing (Operating Relative Humidity) 95% at 35° C (Non-Operating Relative Humidity) Altitude: -45 to 10,000 ft (Operating) -45 to 25,000 ft (Non-Operating) Shock & Vibration: Designed to Meet: MIL-STD-810G (Vibration and Shock, Wheeled Vehicles) MIL-S-901D (Shipboard Shock) MIL-STD-167 (Shipboard Vibration) *Note Environmental Specifications are Configuration Dependent



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