



# M5U-HPC | 5U HIGH PERFORMANCE COMPUTER

## 5U COMPUTER

The M5U-HPC computer is an open platform that allows for hardware and software expansion by the customer. Giving the customer the ability to tailor the system to their specific requirements. The M5U-HPC offers a high power redundant power and RAID options for enhanced hard drive performance and data redundancy. The heart of this system is designed around a long-life system board using the new Intel Xeon Scalable CPUs and supports on board system memory over 1TB.

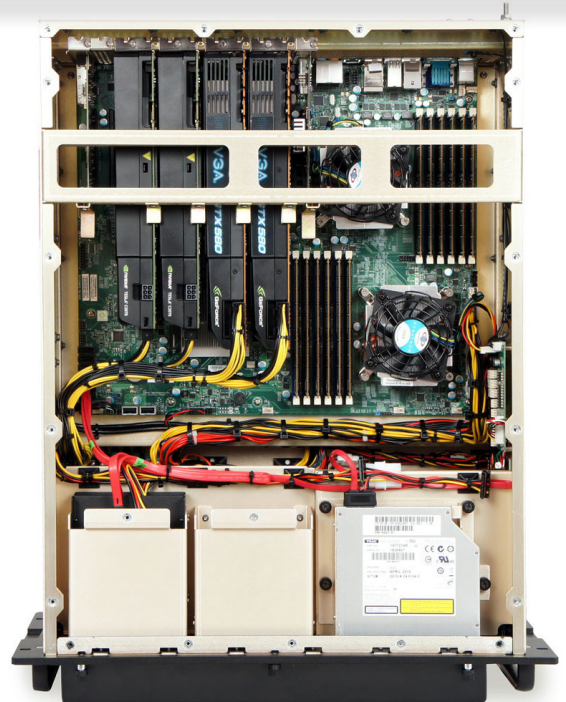
The M5U-HPC system has the capability to support up to 4x NVIDIA Tesla GPU's in a single package. The Tesla P100 GPU enables mixed-workload HPC data processing to realize a dramatic jump in throughput while saving on space, weight and power (SWaP). As example, a single GPU-accelerated node powered by four Tesla P100s interconnected with PCIe replaces up to 32x standard CPU based systems for a variety of applications. When comparing size, weight and power advantages, an HPC configuration is the clear winner!

## APPLICATIONS

- Operations Simulation
- Mission Planning
- Image and Video Processing
- Surveillance & Reconnaissance
- Real Time Data Acquisition
- C4/C5ISR

## DEPLOYMENTS

- Airborne
- Land-based
- Vehicle Mounted
- Seaborne



## Who We Are

CP Technologies designs, fabricates and integrates standard and customized high-performance computing platforms and LCD monitors for military, industry, and commercial applications.

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.

CP Technologies is an ITAR Registered and SBA-certified small business that has been operating in Southern California for over a twenty years.

**Assembled in the USA**  
**ISO 9001:2015 Certified**  
**ITAR Registered**

**CP Technologies**  
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# TECH SPECS

## CHASSIS SPECIFICATIONS

<b>DIMENSIONS</b>	19" w X 8.75" h X 22" d (482.6 x 222.25 x 558.8 mm)
<b>SHIPPING WEIGHT</b>	62 lbs
<b>CONSTRUCTION</b>	Front Panel: 0.25" milled 6061-T5 aircraft-grade aluminum Enclosure Body: 0.093" 5052-H32 aircraft-grade aluminum Rear Slot Panel: 16 gauge CRS, zinc plated with 10-32 grounding stud
<b>SYSTEM COOLING</b>	(3x) 120mm, 137 CFM, 80,000 hours MTBF cooling fans. Proprietary SysCool™ intelligent adaptive fan controller and temperature alarm circuit board

## HARSH ENVIRONMENTS

<b>ALTITUDE</b>	12,000 ft Operational, 40,000 ft Storage MIL-STD-810, Method 500.5
<b>HIGH TEMPERATURE</b>	50°C Operational, 70°C Storage MIL-STD-810, Method 501.5
<b>LOW TEMPERATURE</b>	0°C Operational, -20°C Storage MIL-STD-810, Method 502.5
<b>HUMIDITY</b>	5-95%, Non-condensing MIL-STD-810, Method 507.5
<b>BLOWING SAND AND DUST</b>	MIL-STD-810, Method 510.5
<b>TRANSPORT VIBRATION</b>	MIL-STD-810, Method 514.6
<b>BENCH HANDLING SHOCK</b>	MIL-STD-810, Method 516.6 Procedure VI

## PRODUCT FEATURES

- 3x Long Life Cooling Fans
- 4x Shock isolated hard drive bays
- Up to 4x Full Height GPU boards
- Tailored Card Hold-Down System
- Aluminum Construction
- Single or Dual Intel Xeon "Scaleable" CPU's
- 12V Power Port, for powering CP LCD displays
- N+1 Redundant Power Supply
- 22" Depth
- Up to 1TB of on-board memory
- Optical Drive
- 0.25" Aluminum front panel
- EMI/Environment sealing gasket
- Formed Welded Door w/EMI & Air Filter

## ENGINEERED TO YOUR SPECIFICATIONS

- In-house engineering department
- Design and build of rapid prototypes. Experience with solving difficult customer application problems through knowledge of the industry and custom system design and manufacturing capability
- Our Engineers use Solid Works 3D CAD modeling software for mechanical design and thermal simulation
- Design experience with MIL-STD-167, MIL-STD-461, MIL-STD-810, and MIL-S-901, in addition to FCC, UL, CE, and country specific agency requirements

## REVISION CONTROL & CONFIGURATION MANAGEMENT

- Our Program Managers will assure your products are revision controlled for the life of the program
- Configuration Management to assure TAA Compliance and system compatibility
- One part number for life of the program
- Counterfeit and obsolescence management

## FACILITY AND TEST

- All integration work is performed in a state-of-the-art, ESD-controlled facility
- Our facility has 23,000 sqft and has dedicated 12,000 sqft to manufacturing and 3,000 sqft to engineering
- Operate to anti-static standard ANSI/ESD S20.20-2007 and electronics assembly standard IPC-A-610, Revision E-2010

## QUALITY COUNTS

- ISO 9001:2015 Certified
- 100% system inspection before shipment
- All integrated systems undergo a minimum 24-hour system test and burn-in before shipment to the customer
- Assistance with 3rd party verification of system specifications
- 5-year warranty on all servers and 3-year warranty on LCD monitor products
- TAA compliant
- Built in the USA

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