

# M2U | 2U HIGH PERFORMANCE COMPUTER



## 2U COMPUTER

The M2U high-performance computing platform delivers rugged durability in a standard 2U rackmount form factor. Like most CP Technologies products, the M2U is built using industry standard COTS componentry and can be customized to meet the performance needs of each and every customer.

Featuring support for standard ATX size motherboards, the M2U is capable of mounting up to 12x 2.5" removeable drives and an array of PCI and/or PCI Express expansion cards.

Utilizing our proprietary SysCool® thermal management system and built to the highest of MIL-grade standards, the M2U is designed to meet modern high-performance computing demands while delivering consistent and reliable performance in the harshest of rackmount environments. Additionally, this is backed by our standard 5-year warranty, revision control and configuration management to ensure that current and future hardware remain supported throughout the life of any program it may be deployed in.



## APPLICATIONS

- Airborne Operations
- Land-based Operations
- Seaborne Operations
- Telemetry
- Diagnostics
- Simulation
- C4ISR
- Communications
- Imaging
- Persistent Surveillance
- UAVs
- Automation
- Severe Environment Operations

## 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**

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# TECH SPECS

## COMPUTER SPECIFICATIONS

<b>CPU OPTIONS</b>	Single or Dual Intel Core or Xeon Processors (up to 24 cores per CPU)
<b>MEMORY CAPACITY</b>	ECC or Non-ECC DDR4 Modules (up to 1TB depending on configuration)
<b>RAID OPTION</b>	JBOD, RAID 0, 1, 5
<b>MOTHERBOARD</b>	ATX Form Factor
<b>REAR I/O</b>	(4x) USB Ports, (1x) DB-9 RS232 serial port, (2x) RJ45 GbE LAN ports, (4x) USB 2.0 ports, (1x) RJ45 dedicated IPMI
<b>LAN</b>	Minimum of (2x) Ethernet ports
<b>FRONT USB PORTS</b>	(2x) ports USB 2.0
<b>SYSTEM COOLING</b>	(5x) 40mm, 18.4 CFM, 100K hour MTBF cooling fans Proprietary SysCool™ intelligent adaptive fan controller and temperature alarm circuit board
<b>POWER SUPPLY</b>	Available in 110-240VAC, 12VDC, 28VDC, 48VDC

## EXPANSION CAPACITY

- (4x) 2.5" Drive Bays, Shock-Isolated  
Expandable up to 12x drive bays
- 1(x) Slim Slot-Fed Optical Drive
- 1(x) Flash Card Reader Bay (optional)

## FRONT DOOR FEATURES

Milled aluminum with four 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



# TECH SPECS

## CHASSIS SPECIFICATIONS

<b>DIMENSIONS</b>	19" X 3.5" X 20" (482.6mm X 88.9mm X 508mm)
<b>WEIGHT</b>	28 lbs (approximate weight. Varies with configuration)
<b>CONSTRUCTION</b>	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
<b>POWDERCOATING</b>	Black per MIL-PRF-24712, Type IV, Class 3, Cardinal C214-BK110 polyester semi-gloss, fine texture
<b>PLATING</b>	Chem-Film per MIL-C-5541F, Class 1A

## HARSH ENVIRONMENTS

Designed to meet or exceed MIL-STD-810G to the below specifications.

<b>ALTITUDE</b>	12,000 ft Operational, 40,000 ft Storage MIL-STD-810, Method 500.5
<b>HIGH TEMPERATURE</b>	60°C Operational, 70°C Storage MIL-STD-810, Method 501.5
<b>LOW TEMPERATURE</b>	-10°C Operational, -40°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

## 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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