M3U | 3U HIGH PERFORMANCE COMPUTER

3U COMPUTER

The M3U high-performance computing platform delivers rugged durability in a standard 3U rackmount form factor. Like most CP Technologies products, the M3U 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 M3U 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 M3U 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

Assembled in the USA
ISO 9001:2015 Certified
ITAR Registered

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.

CP Technologies
10840 Thornmint Road
San Diego, CA 92127
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TECH SPECS

COMPUTER SPECIFICATIONS

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

EXPANSION CAPACITY

- (4x) 3.5” Drive Bays, Shock-Isolated
- (14x) 2.5” Drive Bays, Shock-Isolated

  Expandable up to 16x 2.5” drive bays
- 1(x) Slim Slot-Fed Optical Drive
- 1(x) Flash Card Reader Bay (optional)

FRONT DOOR FEATURES

- Formed and welded aluminum with four captive closure fasteners.
- Milled channel with RF/EMI/environmental gasket
- Attenuating EMI honeycomb fi lter with 45 PPI (washable) air filter rated to UL 94 HF-1

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TECH SPECS

CHASSIS SPECIFICATIONS

DIMENSIONS	19" X 5.25" X 20" (482.6mm X 133.35mm X 508mm) or
WEIGHT	32 lbs (approximate weight. Varies with configuration)
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
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

HARSH ENVIRONMENTS

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

ALTITUDE	12,000 ft Operational, 40,000 ft Storage MIL-STD-810, Method 500.6
HIGH TEMPERATURE	60°C Operational, 70°C Storage MIL-STD-810, Method 501.6
LOW TEMPERATURE	-10°C Operational, -40°C Storage MIL-STD-810, Method 502.6
HUMIDITY	5-95%, Non-condensing MIL-STD-810, Method 507.6
BLOWING SAND AND DUST	MIL-STD-810, Method 510.6
TRANSPORT VIBRATION	MIL-STD-810, Method 514.7
BENCH HANDLING SHOCK	MIL-STD-810, Method 516.7 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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