CHASSIS PLANS®
Systems Engineered to Perform®

Who We Are

CHASSIS PLANS

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

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

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.

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 9001:2008 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
- 2-year warranty on all integrated systems and LCD monitor products
- Assembled in the USA

**For more information visit
www.chassis-plans.com
or call 858.571.4330**

Chassis Plans
10840 Thornmint Rd · San Diego, CA 92127

M1U20-1013

COTS Rugged Military Grade 1U Rackmount Computer System

CHASSIS PLANS®
Systems Engineered to Perform®

M1U-20

Model M1U2012

*Assembled in the USA
ISO 9001:2008 Certified
ITAR Registered*

Our M1U-20 computing platform is a high-powered system in a small form factor, appropriate for computationally-intense military applications. It has exceptional strength and built-in redundancy, 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
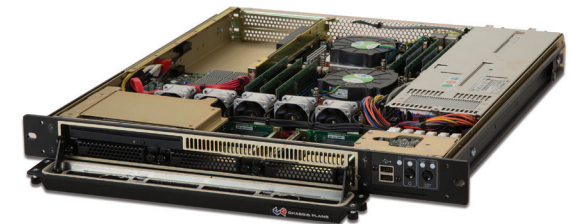
Rapid Prototyping

CPU & Memory Options

- Single or Dual Intel® Xeon® E5 Series
  - CPU options up to 2.1GHz, 8 Cores
  - Memory up to 512GB

Expansion Capacity

- 3(x) 2.5" Drive Bays, Shock-Isolated
- 1(x) Slim Slot-Fed Optical Drive
- 1(x) Flash Card Reader Bay (optional)
- 2(x) PCIe x 16 (3.0) Card Slots

Applications

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

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 500.5

HIGH TEMPERATURE
40°C Operational, 70°C Storage
MIL-STD-810, Method 501.5

LOW TEMPERATURE
0°C Operational, -40°C Storage
MIL-STD-810, Method 502.5

HUMIDITY
5-95%, Non-condensing
MIL-STD-810, Method 507.5

TRANSPORT VIBRATION
US Highway Truck and Air Transport
MIL-STD-810, Method 514.6

BENCH HANDLING SHOCK
Procedure VI, 20G @ 11ms
MIL-STD-810, Method 516.6

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COTS Rugged Military Grade 1U Rackmount Computer System

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Chassis Specifications

DIMENSIONS

19" X 1.75" X 20"   (482.6mm X 44.5mm X 508mm)

WEIGHT

19.6 pounds, weight varies by configuration

ENCLOSURE FEATURES

Construction

Front Panel: 0.187" milled 5052-H32 aircraft-grade aluminum
Enclosure Body: 0.062" 5052-H32 aircraft-grade aluminum
Rear Slot Panel: 18 gauge CRS, zinc plated

Front Door

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

Drive Capacity

3(x) 2.5" shock-isolated drive bays
1(x) slim slot-fed optical drive
1(x) flash card reader bay (optional)

Indicators

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

Switches

Power and alarm reset switches on front panel

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

(5x) 40mm, 18.4 CFM, 100K hour MTBF cooling fans
Proprietary SysCool™ intelligent adaptive fan controller and
temperature alarm circuit board

MOTHER BOARD CAPACITY

Designed for EATX-sized motherboard (12" X 13")

POWER SUPPLY

Redundant 600W 110/220 Volt AC
Other power options available

Computer Specifications

	M1U2012
CPU	Single or Dual Intel® Xeon® Processor E5-2658 (20M, 2.10 GHz, 8.0 GT/s Intel® QPI) OR Single or Dual Intel® Xeon® Processor E5-2648L (20M, 1.80 GHz, 8.0 GT/s Intel® QPI)
CHIP SET	Intel® C606, QPI up to 8.0 GT/s
MAX RAM	(16x) 240-pin DDR3, Max. 512GB
HARD DRIVES	Up to (3x) shock-isolated 2.5" removable drives, standard 500GB, 7200 RPM, 64GB cache. Other rotating media and solid state storage sizes available
RAID OPTION	JBOD, RAID 0, 1, 5
OPTICAL DRIVE	Slim Slot-Fed 8x DVDRW
EXPANSION SLOTS	(2x) PCIe x16 (Gen 3.0), 1(x) 6.7" and 1(x) 10.0" Max Length
REAR I/O	(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
ON BOARD GRAPHICS	G200 (Renesas SH7757 BMC)
AUDIO	NA
LAN	Dual Intel® i350 Gigabit Ethernet ports & (1x) Realtek® RTL8211E PHY (Dedicated IPMI)
O/S	Windows XP® Pro, Windows 7® Pro, 32 & 64-bit Other O/S Available

M1U-20 Photos

20"

19"

17"

1.75"

I/O connectors are representational only.
Please see specifications for details.