**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

**Chassis Plans**
10840 Thornmint Road · San Diego, CA 92127

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

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# COTS Rugged Industrial Grade 1U Rackmount Computer System

**CHASSIS PLANS**
*Systems Engineered to Perform®*

## R1U-20

### Model R1U2012

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

Our R1U-20 computing platform is a high-powered system in a small form factor, appropriate for computationally-intense industrial 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

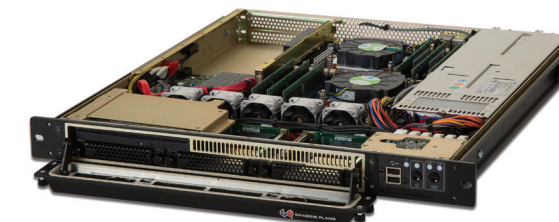Rapid Prototyping

## 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
- Communications
- Imaging
- Persistent Surveillance
- UAVs
- Automation
- Severe Environment Operations

## Harsh Environments

Designed to meet or exceed the below environmental specifications.

### ALTITUDE
12,000 ft Operational, 40,000 ft Storage

### HIGH TEMPERATURE
40°C Operational, 70°C Storage

### LOW TEMPERATURE
0°C Operational, -40°C Storage

### HUMIDITY
5-95%, Non-condensing

### VIBRATION
2G RMS 5-500Hz

### BENCH HANDLING SHOCK DROP TEST
20G @ 11ms Duration

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# COTS Rugged Industrial Grade 1U Rackmount Computer System

CHASSIS PLANS®
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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 environmental gasket
Built in, removable, washable air filter

#### 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

| | R1U2012 |
|---|---|
| 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 |

## R1U-20 Photos



20"

19"

17"

1.75"

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