CHASSIS PLANS®
Systems Engineered to Perform®

MILITARY SOLUTIONS
RUGGED SERVERS, COMPUTERS & LCD DISPLAYS

FOR MORE INFORMATION VISIT
CHASSIS-PLANS.COM



SOLUTIONS

- Custom Design Solutions
- Transit Case and Rack Integration Systems
- Military Computer Systems
- Commercial Computer Systems
- Portable Computer Systems
- Rugged LCDs and Keyboards
- RAID Disk Storage

CHASSIS PLANS®
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COMPANY OVERVIEW

Chassis Plans domestically designs, manufactures, and integrates standard and custom high-performance computing platforms, LCD displays, storage arrays and networking hardware for military, industrial, and commercial markets.
Our product focus centers around ruggedizing systems for harsh environments and maintaining revision control over COTS components and multi-year programs requiring hardware consistency. Chassis Plans is an ITAR registered and ISO 9001:2008 certified company that has been in operation in Southern California for over a decade.
With an in-house engineering department utilizing SolidWorks modeling software, Chassis Plans offers standard ruggedized products (COTS) and can design and build rapid prototype products that meet a client's unique environmental requirements in areas such as shock and vibration, storage and operating temperatures, and air filtration.

CAPABILITIES

Chassis Plans has a large selection of standard products that can serve as the basis for your specific design. By utilizing off-the-shelf hardware, coupled with application-specific modifications, a client can realize significant cost savings and quicker deployment time. Modifications can include something as simple as custom paint and/or logos or front panel modifications for product identification. Rear panel modifications are available to accommodate specific I/O cards, connectors, or a doghouse for an all-circular mil connector interface. Virtually any component in a standard product is eligible for modification.
Sometimes, an application mandates a custom solution. Chassis Plans' team of engineers can help you to define these custom requirements and bring the design to fruition. The Chassis Plans team has been responsible for more custom rugged computer systems and enclosures than anybody else in the field.

FIVE YEAR LIMITED WARRANTY

Chassis Plans' servers are all covered by our standard 5-year warranty and covers all parts and labor caused by component failure. Our warranty covers return to factory repair and the cost of the return of the product to you. Enhanced service policies are also available upon request. All LCDs, keyboards and other accessory products are protected by a 3-year limited warranty. This warranty policy covers replacement or repair of the original product at Chassis Plans' option and is made solely to the purchaser. It also assumes that the product has not been modified or subjected to unusual physical or electrical stress. This warranty is void for any product damaged due to improper packaging when returned for RMA purposes

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CUSTOM COMPUTER SYSTEM DESIGN AND MANUFACTURE

Chassis Plans' design philosophy is to provide you ruggedly engineered, cost-effective, and highly customized military-grade computers and LCD displays. Chassis Plans efficiently collaborates with clients to design the highest quality solutions that meet 100% of your requirements. Chassis Plans' engineers have provided custom solutions to a wide variety of military and defense customers since 1985. With an extensive database of off-the-shelf designs to draw upon, we'll be able to quickly create you a custom system that meets your application and environmental requirements.

HARSH ENVIRONMENTS

These systems are designed to meet or exceed the requirements of MIL-S-901D and MIL-STD-810G as required by the application. Other environmental requirements can be accommodated on request.

ALTITUDE
- MIL-STD-810, Method 500.5

HIGH TEMPERATURE
- MIL-STD-810, Method 501.5

LOW TEMPERATURE
- MIL-STD-810, Method 502.5

HUMIDITY
- MIL-STD-810, Method 507.5

TRANSPORT VIBRATION
- MIL-STD-810, Method 514.6

SHOCK
- MIL-STD-810, Method 516.6

CUSTOM DESIGN SOLUTIONS

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***PRODUCT**: CUSTOM PORTABLE COMPUTER*

***MARKET**: MARINE CORPS*

***SEGMENT**: AUTOMATED TEST EQUIPMENT*

Chassis Plans is providing rugged custom portable computer systems in support of the US Marine Corps VIPER/T program. The Virtual Instrument Portable Equipment Repair/Tester (VIPER/T) is a rugged, man-portable automated test system. This is the USMC's primary functional test gear used to test and diagnose electronic, electro-mechanical and electro-optical systems in communication and weapons systems. It is currently used to test components of weapons systems (e.g. Avenger, TOW2 Missile, LAV-25, and LAV-AD, M1A1), radar systems (TPS-59, TPS-63, and TPQ-46A), and communications gear (TRC-170 and Unit Level Circuit Switch).

***PRODUCT:** FULLY INTEGRATED TRANSIT CASE SYSTEM*

***MARKET**: US AIR FORCE*

***SEGMENT:** SURVEILLANCE*

Chassis Plans has provided a quantity of fully integrated transit case systems for Operation Peace Dragon. Included in the system is a semi-custom M3U rackmount computer providing 10 front mounted hot-swap raid drives and 2 rear mounted system drives, also hot swap, all in a rugged aluminum 3U enclosure. A server-class ATX motherboard supports 2 XEON processors and 512GB of RAM. The M3U is manufactured using aircraft grade 5052-H32 aluminum with a milled front panel for exceptional strength. A front door provides both an air filter and a honeycomb EMI filter. Included is a Syscool adaptive fan controller to modulate the speed of the long-life aluminum body fans for quiet reliable operation.

The systems includes the TFX1-19 rackmount display which provides three 19-inch 1280x1024 LCD displays. This is a rugged rackmount LCD display system specifically designed for transit case installation and provides exceptional display real-estate in a compact portable package.

Also included is a CKX 1U waterproof rackmount keyboard. This unit provides a sealed full-travel keyboard and a 38mm sealed trackball. The display and keyboard are specifically mounted with friction slides to prevent motion while in use which is especially critical in airborne installations.

Each of the components in this system has been designed to meet or tested to MIL-STD-810G for assured reliability in the harshest conditions.

***PRODUCT**: RUGGED TRANSPORTABLE STORAGE ARRAY*

***MARKET**: US AIR FORCE*

***SEGMENT**: UAV (UNMANNED AERIAL VEHICLE) SUPPORT*

Working closely with the customer, Chassis Plans provided a very complex custom solution to provide the ground crew a rugged portable intelligent data transportation system. The system, easily carried by one person, is carried to the aircraft and used to download the flight data. High-speed communications to the aircraft is provided by a 10 gigabit fiber link. Sufficient high-speed RAID disk storage with in-system intelligence for management allows an entire flight's image data to be stored in the system. The transit case system has to be sealed and rugged enough to survive flight line conditions in Afghanistan which can be very hot, very cold, very dusty and wet. Chassis Plans packaged the electronics and disc storage in a small transit case. The small size makes this raw post-flight data easily transported to the central command or even back to the United States for inclusion in the overall theater database for near real-time analysis using super computers.

***PRODUCT:** ULTRA-RUGGED LCD FOR VEHICLE INSTALLATION*

***MARKET**: MILITARY - ARMY / MARINES*

***SEGMENT:** MOBILE MOUNTED WAR FIGHTER PROTECTION*

Our client had developed a 360° camera and motion detection system to detect sniper threats to mounted troops in Humvees. They required an ultra-rugged daylight readable display for remote viewing and control of camera and sensor data. Chassis Plans developed a sealed display system milled from two solid aluminum billets and equipped with appropriate mounting hardware, allowing the display to be attached to a seat back as well as carried outside of the vehicle. Daylight readability was achieved by incorporating a high bright display with a bonded 3mm (chemically strengthened) safety glass overlay that incorporated a circular polarizer and other proprietary display enhancements. A touch screen was provided for system control

TRANSIT CASE AND RACK INTEGRATION SERVICES

Chassis Plans offers a comprehensive Integration Service that allows us to offer the Computer, LCD Display, Storage, Keyboard, Network Switches, Routers and power management devices including UPS and PDU's in either a Transit Case or 19" Rack. This allows the customer to have a system ready solution with one part number and system revision control. We manage the entire system integration with suppliers and our internal design and manufacturing team to allow you to have a single source of supply. The system will come fully tested and be ready to load your operating system. Systems are designed to meet Mil-STD's and Industrial standards to be able to perform in adverse environments.

INTEGRATION SERVICES MANAGEMENT INCLUDES

- Clarify the Application and Environment
- Define Processing Needs, Memory Requirements, Drives, I/O Requirements
- Select an Appropriate Computer, Display and Keyboard
- Select the Appropriate Motherboard or Single Board Computer/Backplane
- Select the Right Power Supply
- Select Appropriate Drives
- Define and Select Other I/O (Video, Communications, Analog/Digital, Etc.)
- Specify Operating System and Application Software
- Define Environmental and Safety Certifications
- Complete System Documentation: BOM, Drawings, Assembly Instructions, Source Control
- Complete Revision Control for Components, BIOS, OS, Golden Disks
- Complete Turnkey Solutions Meeting Your Application Requirements
- All Rack Hardware Including Breakout Panels, Cabling, Shelves, UPSs
- Partnered With Several Case and Rack Manufacturers
- Integration and Management of third Party or Customer Supplied Equipment and Software
- Primary Customer Support for All Third Party Hardware & Software
- Cooling Optimized Solutions
- Feature Rich Designs
- Multiple Power Supply Options
- Appropriately Engineered Shipping Crates / Pallets
- Components Assembled in the USA
- Systems Engineered To Perform®

TCS6U FAMILY

6U MILITARY-GRADE INTEGRATED TRANSIT CASE SYSTEMS

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ASSEMBLED IN THE USA

EASY CUSTOMIZATION

MIL-STD 810

REVISION CONTROL

The TCS6U family is a pre-configured transit case system offering state of the art display technology with a tri-fold LCD supporting 1280 x 1024 resolution for each panel, the latest long-life motherboards, processors and chip sets in a 2U military-grade computer with a variety of slot configurations, a rugged sealed keyboard with a 38mm trackball, and a mil-grade UPS to ensure filtered, clean power. Order as a turn-key, pre-tested system ready to run your application software. Your Configuration – One Part Number™ for ease of acquisition.

Please contact your Sales Engineer for current configuration information and pricing.

ELECTRICAL FEATURES

- All components are Revision Controlled for Long Availability
- Components Designed and Built to Meet or Exceed MIL-STD-810G
- Option for MIL-STD-461 Compliance
- Tri-fold LCD with 1280 x 1024 Each Panel
- LED Backlights on LCD panels
- Latest Military-Grade LCD Controller
- Extended Temperature Option for System
- Option for Bonded Anti-Reflective, EMI on LCDs
- Sealed Military-Grade Keyboard & 38mm Trackball
- Latest Long-Availability Motherboard Selection
- Options for Core 2 Duo/Quad, Core i5/i7 and XEON E5 Processors
- Four 3-½" Hard Drives (rotating media or SSD)
- Variety of Slot Configurations Including Multiple PCIe x16
- Three Horizontal Full-Height or Seven Vertical Low-Profile Plug-in Cards

MECHANICAL FEATURES

- Transit Case to Meet Customer Specifications
- Watertight End Caps
- Shock-Isolated Components
- Easily Removable Shock-Isolated Inner Rack
- Mil-Grade 5052-H32 Aluminum Construction for Computer, LCD and Keyboard
- Computer and LCD Front Panels are Milled Aluminum Billet for Strength
- Self-Locking Stainless Steel Hardware
- Captive Fasteners Where Appropriate
- Computer Provides Three High-Flow, High-MTBF Aluminum Body Fans
- SysCool® Adaptive Fan Controller in Computer
- Front Door on Computer Provides Air Filter and Honeycomb EMI Filter
- System Designed, Assembled and Supported in the USA

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OFF-THE-SHELF RUGGEDIZED

MILITARY-GRADE RACKMOUNT SYSTEMS

Chassis Plans' rugged military-grade systems are available in 1U through 5U. These systems were designed from the ground up to ensure reliable operation when installed in your harshest environments. The different sizes all share a common design theme and all offer unparalleled performance.

CHASSIS FEATURES

- Rugged 5052-H32 Aircraft Grade Aluminum
- Milled Solid Billet Front Panel
- EMI / Environmental Gasket on Front Panel
- Formed Welded Front Door
- Shock-Mounted Hard Drive Bays
- High-Reliability, Long-Life, High-Velocity Fans
- SysCool® Intelligent Fan Controller/Alarm Board
- 45PPI Air Filter with Optional Honeycomb EMI Filter
- ANSI/VITA 40-2003 Compliant Alarm LEDs
- Stainless Steel Self-Locking Hardware

ELECTRONICS FEATURES

- High-Performance Long-Availability Motherboards
- Intel® Core® i5, i7 Options
- XEON® E3/E5 Processor
- Multiple Chipset Options
- Multiple Slot Options Including Four PCIe x16 Slots
- Multiple Hard Drive Options—Fixed & Removable
- High Performance Graphics
- Intel® Roadmap Components for Long Term Availability
- Single & Redundant Power Supplies to 1500W

LCD POWER ALTERNATIVE

Chassis Plans' 2U-5U military grade computer systems offer an optional Exterior Power Jack to provide power to connected Chassis Plans LCD displays. By running the display with the computer system's power supply, this Exterior Power Jack option can provide many benefits:

- Reduction in the number of required cables
- Elimination of additional equipment, i.e., a power brick
- Reduction in total system weight and cost

To enjoy these benefits, power up your new display with a Chassis Plans server.

CHASSIS CONSTRUCTION

The enclosures in the Chassis Plans military product lineup are ruggedly built specifically to survive harsh environments typical of military applications. We start with lightweight but strong aircraft grade 5052-H32 aluminum alloy. We install a large number of stainless steel self-locking fasteners to secure the chassis and not loosen in high-vibration environments. The lid is held with captive screws to prevent losing hardware in the field.

The front panel is formed from a solid ¼-inch thick aluminum billet. Into that we install an environmental and EMI gasket. The front door is welded and machined for a tight seal and held closed with multiple captive screws. We install a washable 45PPI air filter and an optional honeycomb EMI filter into the door to keep dirt out and EMI in.

HARSH ENVIRONMENTS

These systems are designed to meet or exceed the requirements of MIL-S-901D and MIL-STD-810G to the following. Other environmental requirements can be accommodated on request.

ALTITUDE
- 12,000 ft. Operational
  40,000 ft. Storage
- Method 500.5

HIGH TEMPERATURE
- 60˚C Operational, 85˚C Storage
- Method 501.5

LOW TEMPERATURE
- 0˚C Operational, -20˚C Storage
- Method 502.5

HUMIDITY
- 5–95%, Non-condensing
- Method 507.5

TRANSPORT VIBRATION
- US Highway Truck and
  Air Transport
- Method 514.6

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

(Depends on Installed Components)

COOLING

These systems are equipped with ultra-high MTBF fans providing positive chassis pressure and more than enough air flow for cooling these high power systems. A SysCool® Intelligent Adaptive Fan Control Board runs the fans at the optimum speed to ensure reliable operation with minimum fan noise. The front panel LED indicators follow the ANSI/VITA 40-2003 standard for unambiguous alarm notification.

MOTHERBOARDS

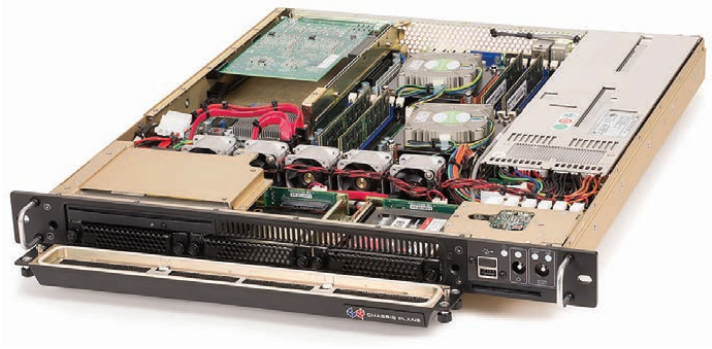
We offer you these systems with a selection of high-quality long-life motherboards providing a selection of chip sets and processors including Core i5/i7 and dual XEON. Chip sets and processors are on Intel's Road Map for ensured future availability for multi-year program deployment. A variety of slot configurations allow installation of virtually any plug-in card. One example is a motherboard offering four PCIe x16 slots on double-wide spacing, which is perfect for constructing a four card GPU server. These are full bandwidth x16 slots and are not switched as on a backplane.

DISK DRIVES

Enterprise-grade drives are offered for superior performance and reliability. The drives are shock mounted and can be fixed or removable. Rotating media or SSDs can be installed depending on your mission requirements.

M1U-20 FAMILY

1U MILITARY-GRADE RACKMOUNT SYSTEMS



FEATURES

- Only 20" Deep
- Single or Dual XEON E5 CPU's
- 2x PCIe x16 (Gen 3.0) Card Slots
- Up to 3x 2-½" Shock-Isolated Removable Drives, and 1x Slim DVD
- 5x Fans with SysCool® Intelligent Fan Controller
- Front Panel Smart Card Reader (Optional)
- Redundant Power Supply

MIL-STD 810

REVISION CONTROL

MIL-STD 461

ASSEMBLED IN THE USA

MIL-S 901D

The M1U-20 system is ideal for those seeking a rugged rackmount 1U system designed to perform in confined spaces. A unit with high computational speed for military applications, the M1U-20 offers Intel® E5 processing power. Provision is made for (2x) PCI-e x16 (Gen 3.0) add-in cards secured with Delrin® blocks for high shock/vibration environments. Uniquely offered with an attached front door with installed air filter and optional EMI filter, this feature serves to protect the drive bays and other components from dust and dirt, as well as shielding compliant with MIL-STD-461F EMI.

CHASSIS SPECIFICATIONS

PHYSICAL DIMENSIONS

- 1.75" (H) x 19.0" (W) x 20.0" (D)
- 20 lbs. Fully Configured, Varies by Configuration

POWER SUPPLY

- Output Power 600W
- Redundant configuration
- Input 100 to 240Vac, 50/60Hz Auto Switching High Efficiency
- Other Options Available

COOLING

- 5X 40mm Fans, 18CFM Each, Mounted Mid-Chassis
- Fans Are Aluminum Body 100,000 Hour MTBF
- Air Filter Mounted In Front Door
- SysCool® Intelligent Fan Control and Alarm Board

FRONT PANEL DETAILS

- Power On/Off Momentary Switch, Alarm Reset Switch
- 2x USB
- LEDs - Power On, HDD Activity, Fan Fail, Over Temperature Alarm
- Single Front Door With 4 Thumbscrews, 45PPI Air Filter In Door
- Optional Honeycomb EMI Filter in Front Door

HARSH ENVIRONMENTS

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

ALTITUDE

- 12,000 ft. Operational 40,000 ft. Storage
- Method 500.5

HIGH TEMPERATURE

- 45˚C Operational, 70˚C Storage
- Method 501.5

LOW TEMPERATURE

- 0˚C Operational, -40˚C Storage
- Method 502.5

HUMIDITY

- 5–95%, Non-condensing
- Method 507.5

TRANSPORT VIBRATION

- US Highway Truck and Air Transport
- Method 514.6

DRIVE BAYS

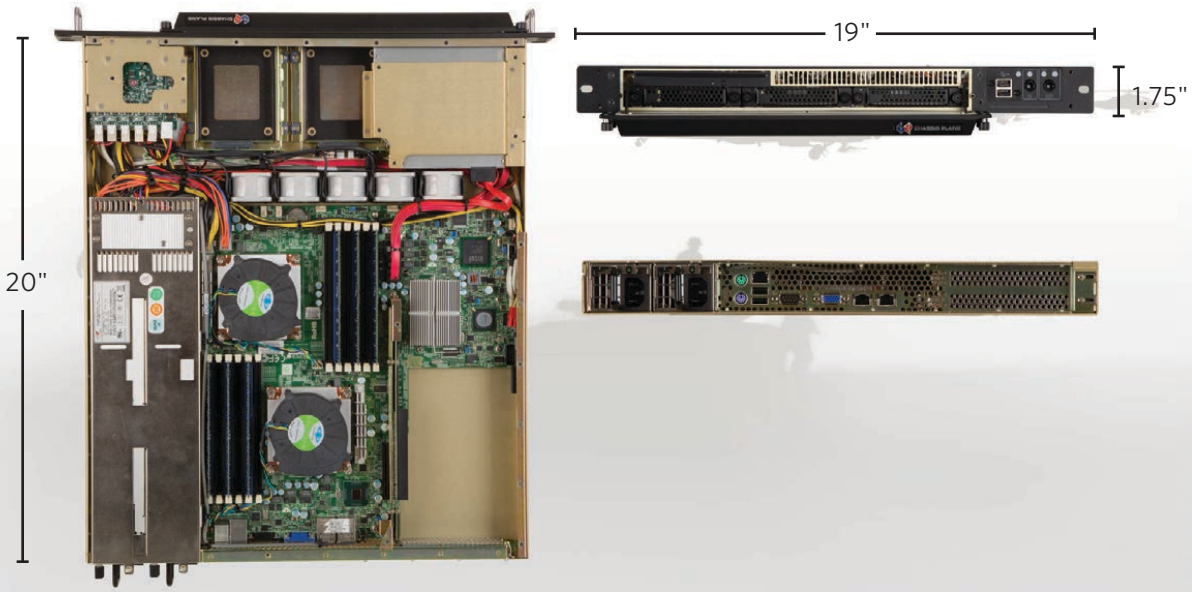
- 3x 2-½" Hard Drive Bays
- Drives are Shock Mounted
- Slim DVDRW Installed Standard

EXPANSION SLOTS

- 2x PCIe x16 (Gen 3.0)

ENVIRONMENT

- Operating Temperature: 0° to 45°C (32° to 113°F)
- Storage Temperature: -40° to 70°C (-40° to 158°F)
- Humidity: 5 to 95% RH Non-condensing



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M2U-SE FAMILY

2U MILITARY-GRADE RACKMOUNT SYSTEMS

FEATURES

- Only 20" Deep
- Core-i5/i7 Options
- XEON E3/E5, Single and Dual Options
- 3x Horizontal or Seven Vertical Plug-in Card Slots
- 4x 2-½", Expandable to 12x 2-½" Shock Isolated Removable Hard Drive Bays
- 3x High Performance Fans with SysCool® Fan Controller
- Redundant Power Supply

MIL-STD 810

REVISION CONTROL

MIL-STD 461

ASSEMBLED IN THE USA

MIL-S 901D

The M2U-SE system offers high performance with a variety of processor and chipset options including the latest Intel® Core and Xeon CPUs. Two configurations offer three side-mounted full-height or seven vertical low-profile plug-in cards. The heavier horizontal full-height cards are secured in place with Delrin® blocks for high vibration and shock environments. The system is exceptionally well cooled with three 80mm high-velocity, high-reliability fans for high-power CPUs in hot environments.

CHASSIS SPECIFICATIONS

PHYSICAL DIMENSIONS

- 3.5" (H) x 19.0" (W) x 20.0" (D)
- 27 lbs. Fully Configured, Varies by Configuration

POWER SUPPLY

- Redundant 600W Power
- Input 100 to 240Vac, 50/60Hz Auto Switching High Efficiency
- Other Options Available

COOLING

- 3x 80mm Long-Life Fans, 42CFM Each, Mounted Mid-Chassis
- Fans Are Aluminum Body 100,000 Hour MTBF
- Air Filter Mounted In Front Door
- SysCool® Intelligent Fan Control and Alarm Board

FRONT PANEL DETAILS

- Power On/Off Momentary switch, Alarm Reset Switch
- 2x 2.0 & 1x 3.0 Front USB
- LEDs - Power On, HDD Activity
- Single Front Door with 3 Thumbscrews
- 45PPI Washable Air Filter Mounted in Front Door
- Optional Honeycomb EMI Filter in Front Door

HARSH ENVIRONMENTS

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

ALTITUDE

- 12,000 ft. Operational 40,000 ft. Storage
- Method 500.5

HIGH TEMPERATURE

- 60˚C Operational, 85˚C Storage
- Method 501.5

LOW TEMPERATURE

- 0˚C Operational, -20˚C Storage
- Method 502.5

HUMIDITY

- 5-95%, Non-condensing
- Method 507.5

TRANSPORT VIBRATION

- US Highway Truck and Air Transport
- Method 514.6

BENCH HANDLING SHOCK

- Procedure VI, 20G @ 11ms
- Method 516.6

DRIVE BAYS

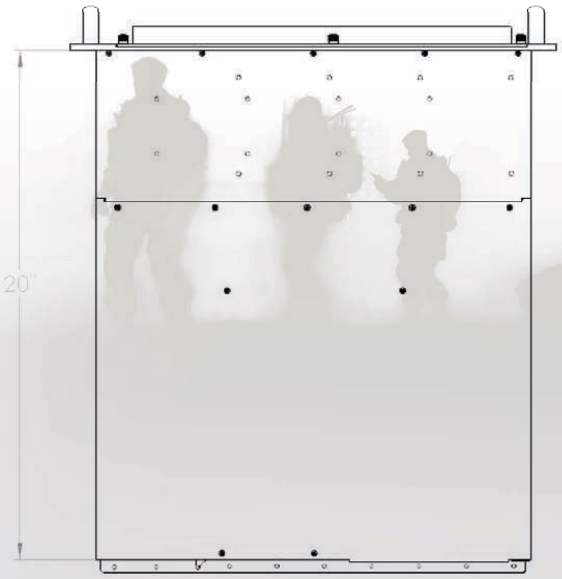
- 4x 2-½", Expandable to 12x 2-½" Drive Bays
- Drives are Shock Isolated
- Slim DVDRW Installed Standard

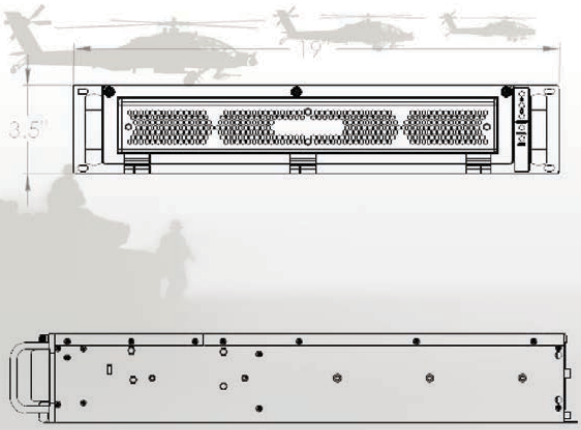
EXPANSION SLOTS

- Systems can be configured with 3x Horizontal Slots with Riser Card or with 7x Vertical Slots for Low-profile Cards.

ENVIRONMENT

- Operating Temperature: 0° to 60°C (32° to 140°F)
- Storage Temperature: -20° to 85°C (-40° to 185°F)
- Humidity: 5 to 95% RH Non-condensing





CHASSIS PLANS
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M4U-20 FAMILY

4U MILITARY-GRADE RACKMOUNT SYSTEMS

FEATURES

- Only 20" Deep
- Core-i5/i7 Options
- XEON E3/E5, Single and Dual Options
- Motherboard with Seven Plug-in Card Slots
- Up to 3x 5-¼" Drive Bays, Fixed or Removable, with Slim DVD
- 2x High Performance Fans with SysCool® Fan Controller
- Redundant Power Supply

MIL-STD 810

REVISION CONTROL

MIL-STD 461

ASSEMBLED IN THE USA

MIL-S 901D

The M4U-20 system is a short 20" and is perfect for transit case installation with its rugged construction. The system offers the highest performance with a variety of processor and chipset options including the latest Intel® i7 and E5 series. A card hold-down system secures plug-in cards in high vibration and shock environments to ensure reliable operation. The system is well cooled with two 92mm high-velocity, high-reliability fans for high-power CPUs in hot environments.

CHASSIS SPECIFICATIONS

PHYSICAL DIMENSIONS

- 7.0" (H) x 19.0" (W) x 20.0" (D)
- 45 lbs. Fully Configured, Varies by Configuration

POWER SUPPLY

- 600W Redundant Power Supply
- Input 100 to 240Vac, 50/60Hz Auto Switching High Efficiency
- Other Options Available

COOLING

- 2 x 92mm Long-Life Fans, 60CFM Each, Mounted Front Panel
- Fans Are Aluminum Body 100,000 Hour MTBF
- Air Filter Mounted In Front Door
- SysCool® Intelligent Fan Control and Alarm Board

FRONT PANEL DETAILS

- Power On/Off Momentary Switch, Alarm Reset Switch
- 2x USB
- LEDs - Power On, HDD Activity, Over Temperature, Fan Failure
- Single Front Door with 3 Thumbscrews
- 45PPI Washable Air Filter in Door
- Optional Honeycomb EMI Filter in Door

HARSH ENVIRONMENTS

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

ALTITUDE

- 12,000 ft. Operational 40,000 ft. Storage
- Method 500.5

HIGH TEMPERATURE

- 60˚C Operational, 85˚C Storage
- Method 501.5

LOW TEMPERATURE

- 0˚C Operational, -20˚C Storage
- Method 502.5

HUMIDITY

- 5-95%, Non-condensing
- Method 507.5

TRANSPORT VIBRATION

- US Highway Truck and Air Transport
- Method 514.6

BENCH HANDLING SHOCK

- Procedure VI, 20G @ 11ms
- Method 516.6

DRIVE BAYS

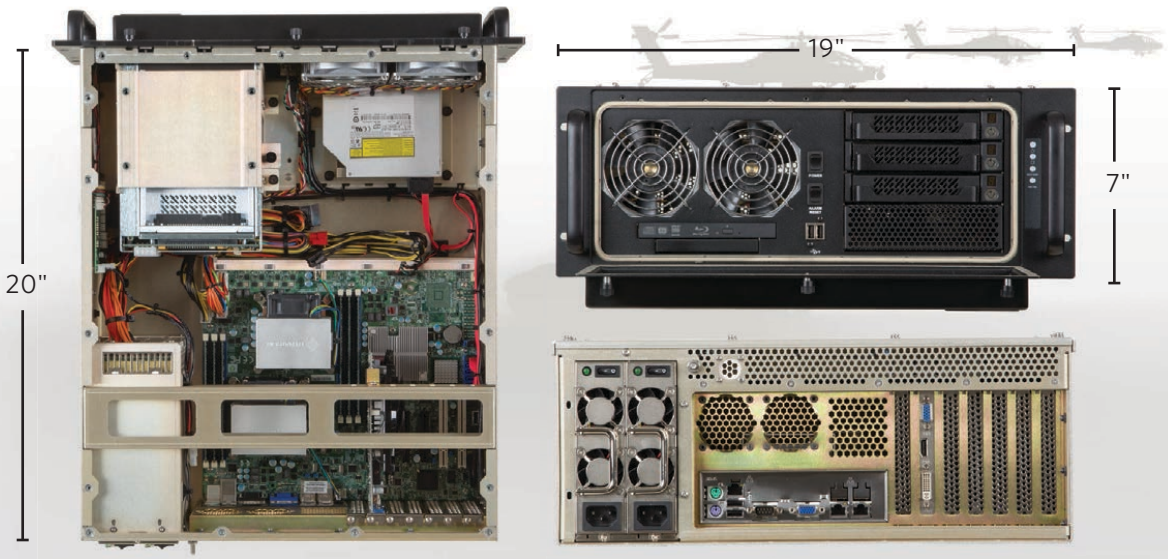
- 3x Horizontal 5-¼" Reduced-Height Drive Bays
- Multiple Options for Hot Swap Drives
- Slim DVD

EXPANSION SLOTS

- 7x Card Slots With Card Hold Down Bracket

ENVIRONMENT

- Operating Temperature: 0° to 60°C (32° to 140°F)
- Storage Temperature: -20° to 85°C (-4° to 185°F)
- Humidity: 5 to 95% RH Non-condensing



CHASSIS PLANS
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M4U-26 FAMILY

4U MILITARY-GRADE RACKMOUNT SYSTEMS

FEATURES

- 26.4" Deep
- Support for 11-Slot 13.2" x 15.2" Motherboards
- Support for Up To 20-Slot Passive Backplanes
- XEON E3/E5, Single and Dual Options
- 3x 5-¼" Drive Bays
- 3x High Performance Fans with SysCool® Fan Controller
- Redundant Power Supply

MILITARY COMPUTER SYSTEMS

MIL-STD 810

REVISION CONTROL

MIL-STD 461

ASSEMBLED IN THE USA

MIL-S 901D

The M4U-26 system is optimized for high-performance 11-slot motherboards (13.2 x 15.2") offering either four x16 PCIe slots on double width spacing or ten x8 slots. The double-wide x16 slots allow the installation of such boards as GPU processors for ultimate performance. A card hold-down secures the plug-in cards in high vibration and shock environments to ensure reliable operation. Outstanding cooling is provided by the three 120mm high-performance fans to cool the highest power system in high-temperature environments.

CHASSIS SPECIFICATIONS

PHYSICAL DIMENSIONS

- 7.0" (H) x 19.0" (W) x 26.4" (D)
- 47 lbs. Fully Configured, Varies by Configuration

POWER SUPPLY

- 600W Redundant Power Supply
- Input 100 to 240Vac, 50/60Hz Auto Switching High Efficiency
- Other Options Available

COOLING

- 3x 120mm Long-Life Fans, 120CFM Each, Mounted Mid Chassis
- Fans Are Aluminum Body 200,000 Hour MTBF
- Air Filter Mounted In Front Door
- SysCool® Intelligent Fan Control and Alarm Board

FRONT PANEL DETAILS

- Power On/Off Momentary switch, Alarm Reset Switch
- 2x USB
- LEDs - Power On, HDD Activity, Over Temperature, Fan Failure
- Single Front Door with 3x Thumbscrews
- 45PPI Washable Air Filter in Door
- Optional Honeycomb EMI Filter in Door

HARSH ENVIRONMENTS

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

ALTITUDE

- 12,000 ft. Operational 40,000 ft. Storage
- Method 500.5

HIGH TEMPERATURE

- 60˚C Operational, 70˚C Storage
- Method 501.5

LOW TEMPERATURE

- 0˚C Operational, -40˚C Storage
- Method 502.5

HUMIDITY

- 5-95%, Non-condensing
- Method 507.5

TRANSPORT VIBRATION

- US Highway Truck and Air Transport
- Method 514.6

BENCH HANDLING SHOCK

- Procedure VI, 20G @ 11ms
- Method 516.6

DRIVE BAYS

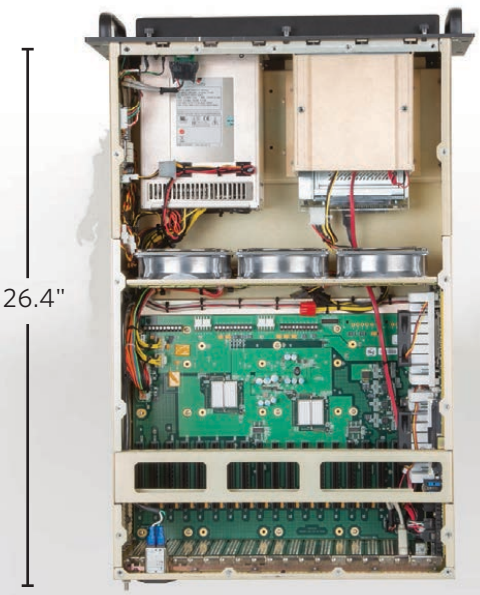
- 3x Horizontal 5-¼" Half-Height Drive Bays
- Multiple Options for Hot Swap Drives
- Slim DVD

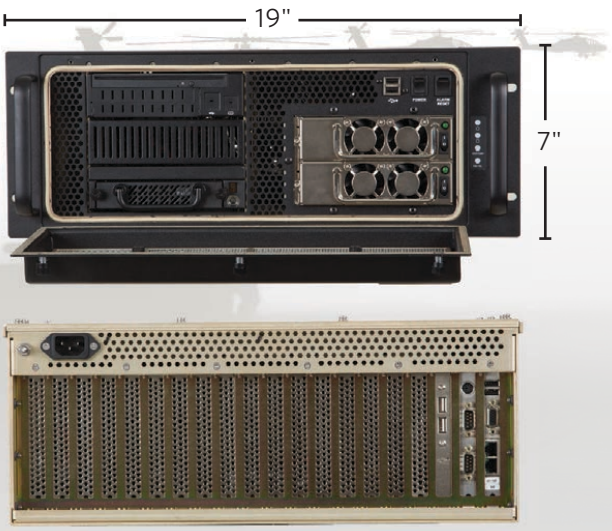
EXPANSION SLOTS

- 7, 11, or 20x Card Slots With Card Hold-Down Bracket

ENVIRONMENT

- Operating Temperature: 0° to 60°C (32° to 140°F)
- Storage Temperature: -40° to 70°C (-40° to 158°F)
- Humidity: 5 to 95% RH Non-condensing





CHASSIS PLANS
Systems Engineered to Perform

M5U-22 FAMILY

5U MILITARY-GRADE RACKMOUNT SYSTEMS

FEATURES

- Only 22" Deep
- Support for 11-Slot 13.2" x 15.2" Motherboards
- Support for Up To 20-Slot Passive Backplane
- XEON E3/E5, Single and Dual Options
- Up To 4x 3-½" Drive Bays
- 3x High Performance Fans with SysCool® Fan Controller
- 3+1 Redundant Power Supply

MIL-STD 810

REVISION CONTROL

MIL-STD 461

ASSEMBLED IN THE USA

The M5U-22 system is optimized for large, high-performance, power hungry 11-slot motherboards with systems offered providing four double-wide x16 PCIe slots or ten x8 PCIe slots. The short 22" depth allows installation in areas that require a minimum depth chassis such as a transit case or submarine. The M5U-22 system is ideal for high power applications such as a GPU server platform powered by a reliable 3+1 redundant 1500W power supply. The system is cooled by three high-velocity, 200K hrs. MTBF 120mm fans.

CHASSIS SPECIFICATIONS

PHYSICAL DIMENSIONS

- 8.75" (H) x 19.0" (W) x 22" (D)
- 62 lbs. Fully Configured Varies by Configuration

POWER SUPPLY

- Output Power 1500W
- 3+1 Redundant Configuration
- Input 100 to 240Vac, 50/60Hz Auto Switching High Efficiency
- Other Options Available

COOLING

- 3x 120mm Long-Life Fans, 120CFM Each, Mounted Front Panel
- Fans Are Aluminum Body 200,000 Hour MTBF
- Air Filter Mounted in Front Door
- SysCool® Intelligent Fan Control and Alarm Board

FRONT PANEL DETAILS

- Power On/Off Momentary switch, Alarm Reset Switch
- 2x USB
- LEDs - Power On, HDD Activity, Over Temperature, Fan Failure
- Single Front Door with 3x Thumbscrews
- 45PPI Washable Air Filter in Door
- Optional Honeycomb EMI Filter in Door

DRIVE BAYS

- 4x 3-½" Hard Drive Bays
- Multiple Options for Hot Swap Drives
- Slim DVD

EXPANSION SLOTS

- 7, 11 or 20x Card Slots With Card Hold Down Bracket

TRANSPORT

- Operating Temperature: 0° to 50°C (32° to 122°F)
- Storage Temperature: -20° to 70°C (-4° to 158°F)
- Humidity: 5 to 95% RH Non-condensing

HARSH ENVIRONMENTS

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

ALTITUDE

- 12,000 ft. Operational 40,000 ft. Storage
- Method 500.5

HIGH TEMPERATURE

- 50˚C Operational, 70˚C Storage
- Method 501.5

LOW TEMPERATURE

- 0˚C Operational, -20˚C Storage
- Method 502.5

HUMIDITY

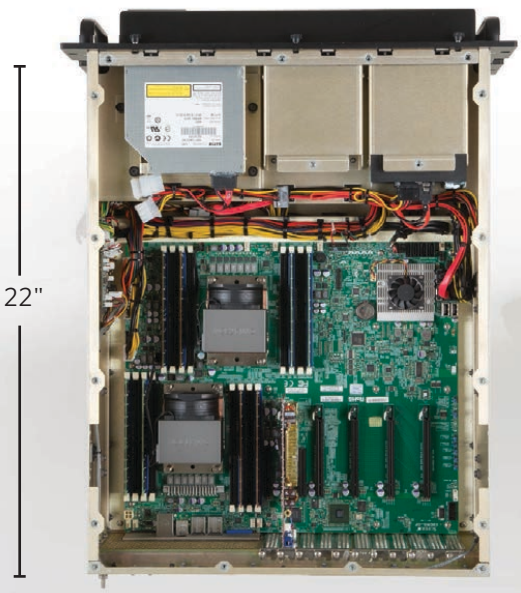
- 5-95%, Non-condensing
- Method 507.5

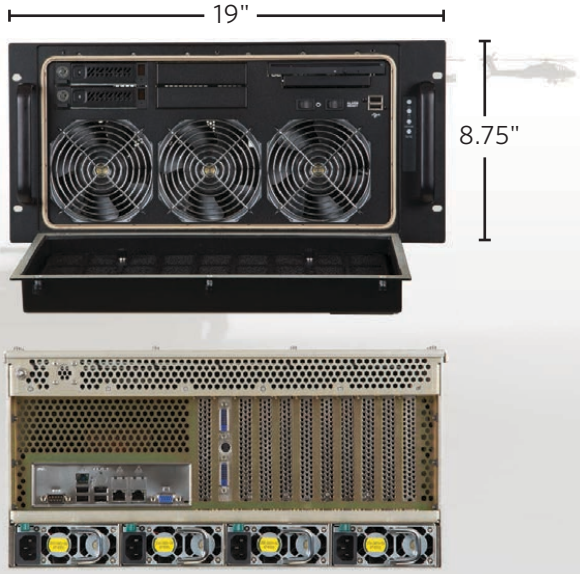
TRANSPORT

- US Highway Truck and Air Transport
- Method 514.6

BENCH HANDLING SHOCK

- Procedure VI, 20G @ 11ms
- Method 516.6





MTB-7 TABLET

MILITARY-GRADE RUGGED TABLET

MIL-STD 810

REVISION CONTROL

ASSEMBLED IN THE USA

FEATURES

- Durable, chemical- and shock-resistant design
- Lightweight and ergonomic design
- Easy-to-grip, impact-absorbing, overmolded bumpers
- Quad-core Intel® Atom™ Z37453x Processor
- 4 GB RAM (LPDDR3) Memory
- 64 GB or 128 GB Flash Storage Options
- Intel® HD Graphics

In a sleek package with the highest-rated protection against water and dust, the Rugged Tablet can go with you into the harshest environments out there. Running either Windows 10 or Android operating systems, the new MTB-7 brings powerful functionality to your mobile data collection, featuring a large, 7-inch, extra-bright display for easily viewing maps or images, all-day battery power lasting up to 15 hours, and of course, the unmatched ruggedness that Chassis Plans is known for.

TABLET SPECIFICATIONS

PHYSICAL DIMENSIONS

- 5.40" (W) x 8.48" (L) x 1.36" (D)
- 1.5–2 lbs; Varies by Configuration

TOUCH SCREEN

- Projected Capacitive Multi-Touch Interface for Use with Gloves, Small Tip Stylus, and in Wet Conditions
- Optically Bonded for Increased Visibility and Strength
- Chemically-Strengthened Dragontrail™ High Ion-Exchange (HIE™) Coverglass for Excellent Impact and Scratch Resistance

DISPLAY

- Display Active Area: 7" (178 mm)
- Resolution: WXGA (1280 x 800)
- High-Visibility Backlit LCD for Best-In-Class Sunlight Viewability
- Portrait or Landscape Orientation with Automatic Screen Rotation

BATTERY

- Removable Li-Ion battery, 39 Whr
- Operates 8–10 Hours on one Charge
- Battery Easily Changeable in Field
- Optimized for Strong Performance in Cold Temperatures
- Excellent Lifecycle Performance

PORTS

- Peripheral(s): USB 3.0 x 1
- Aux Power Input: 12 VDC
- Docking Port Connections (Pwr, USB 2.0, & HDMI)
- Loud Output Speaker for Noisy Environments
- Dual Digital Microphone Input for Improved Clarity

KEYBOARD

- Adjustable LED Backlit Keys
- Four-Way Directional Navpad
- Windows/Home Key
- Power Key
- Enter Key
- Three User-Programmable Function Keys
- OEM Configurable/Customizable

OPTIONS

- Optional Built-in 19-Whr Battery Provides Additional 4–5 hours Runtime and Hot-Swap Capability
- Wireless Connectivity
- Optional RS-232 9-Pin D-Sub Connector with 5VDC Power Output
- Camera (Rear: 8 MP, Front: 2 MP)
- GPS/GNSS (2-5 Meter Typical Accuracy)
- Barcode 1D/2D Imager
- UH RFID

HARSH ENVIRONMENTS

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

ALTITUDE

- Method 500.5

HIGH TEMPERATURE

- 50˚C Operational, 70˚C Storage
- Method 501.5

LOW TEMPERATURE

- -20˚C Operational, -30˚C Storage
- Method 502.5

HUMIDITY

- Method 507.5

TRANSPORT

- Method 514.6

BENCH HANDLING SHOCK

- Multiple Drops from 4' (1.2-1.5m) onto Concrete
- Method 516.6

BLOWING SAND AND DUST

- Method 510.5

RAIN

- IP68 Waterproof and Dustproof
- Method 506.5

CHASSIS PLANS
Systems Engineered to Perform

MTP FAMILY

RUGGEDIZED TRIFOLD PORTABLE COMPUTER

MILITARY COMPUTER SYSTEMS

ASSEMBLED IN THE USA

REVISION CONTROL

EASY CUSTOMIZATION

MIL-STD 810

FEATURES

- 3x 18.5" 1920 x 1080 LCD panels
- Intel Core or Xeon CPU Options
- (4x) 2.5" Removable Hard Drive Bays
- (2x) MINI-PCIe 3.0 Slots
- (2x) PCIe 3.0 x8 XMC Slots
- Detachable Keyboard
- A/C and D/C Power Options

The MTP ruggedized trifold computer offers three 18.5" (1920 x 1080) resolution LCD displays in a small form factor rugged-portable configuration. The combined displays total effective viewing area is 5760 x 1080. The portable system includes support for Intel Core and Xeon CPU's with up to 32GB of ECC system memory. System expansion slots include (2x) MINI-PCIe 3.0 x1 and (2x) PCIE 3.0 x8 XMC expansion slots. (4x) removable 2/5" drive bays provide for JBOD or RAID 0/1/5 hard drive array configurations that can support both rotating and SSD hard drives. The portable comes with a detachable IP67 sealed USB backlit keyboard and touch input device.

SYSTEM SPECIFICATIONS

LCD FEATURES

- Three 18.5" FHD LCD Displays
- 1920 x 1080 (5760 x 1080 Effective)
- 400cd/m² Brightness
- 700:1 Contrast Ratio
- 176˚ Viewing Angle
- 25ms Response Time
- Optional screen enhancements: bonded 3mm cover glass, EMI shielding

ENVIRONMENT

- Operating Temperature: -20˚ to 70˚C (-4˚ to 158˚F)
- Storage Temperature: -20˚ to 60˚C (-4˚ to 140˚F)
- Humidity: 0 to 95% RG Non-condensing
- Altitude: 10,000' Operational, 40,000' Storage
- Shock: 10G, 11msec Duration, 3 Test in Both directions per axis
- Vibration: MIL-STD-810, Method 516.6, Procedure IV, 20G @ 11ms

CHASSIS DETAILS

- 5052-H32 Aluminum Construction
- (4x) Removable 2.5" Hard Drive Bays
- Fan-less System Cooling
- Detachable IP67 Sealed 97 Keyboard

SYSTEM DETAILS

- Intel® Core™ i3/i5/i7 Processor with PCH QM170/CM236
- DDR4 SODIMM x 2, up to 32 GB, ECC
- (2x) 3.0, (2x) 2.0 USB Ports
- (2x) MINI-PCIe Expansion Slots
- (2x) Gbe Ports

CHASSIS PLANS®
Systems Engineered to Perform®

OFF-THE-SHELF

COMMERCIAL GRADE COMPUTERS

Chassis Plans' commercial grade systems are available in 1U through 5U. These systems provide cost-effective solutions with quick delivery fit for use where your environment is harsher than an office IT space but less severe than where our fully rugged military-grade systems should be used. These systems offer revision control, for consistent long-term program deployment, and easy customization for when an off-the-shelf solution does not quite fit your requirements. Assembled in the USA for great quality and support.

CHASSIS FEATURES

- Steel Construction
- Cost-Effective Solutions
- Revision Control for Long-Term Consistency
- Easy Customization to Your Requirements
- Variety of Drive Configurations
- Variety of Slot Configurations
- Front Door On Some Models
- Short Chassis Depths with Some Models
- Custom Paint and/or Logo Available
- Fit 19" Rack Systems

ELECTRONICS FEATURES

- High-Performance, Long-Availability Motherboards
- Intel® Core® i5, i7 Options
- XEON® E3/E5 Processor, Single/Dual
- Multiple Chipset Options
- Multiple Slot Options Including Four PCIe x16 Slots
- Multiple Hard Drive Options—Fixed & Removable
- High-Performance Graphics
- Intel® Roadmap Components for Future Availability
- Single & Redundant Power Supplies to 1500W

C112 FAMILY

1U COTS CONFIGURED RACKMOUNT SYSTEM

CHASSIS PLANS®
Systems Engineered to Perform®

FEATURES

- Only 16" Deep
- Core-i5/i7 Options
- XEON E3/E5, Single and Dual Options
- 1x PCIe x16 Plug-In Card Slot
- 1x Internal Hard Drive, 1x Slim DVD
- 3x Cooling Fans
- 400W Power Supply

ASSEMBLED IN THE USA

REVISION CONTROL

EASY CUSTOMIZATION

The C112 Series is a very short 1U system at only 16" deep. This is a perfect system for space constrained applications. Three motherboard options provide i5/i7 or XEON E3 performance. A single horizontal card slot provides for a single PCIe x16 card. Mounted in the front panel are a slim DVDRW drive and a single internal 3-½" hard drive is provided. The system is cooled by three 40mm fans mounted mid-chassis and a 400W power supply provides ample power. A front door protects the system.

CHASSIS PLANS
Systems Engineered to Perform

C105 FAMILY

1U COTS CONFIGURED RACKMOUNT SYSTEM

FEATURES

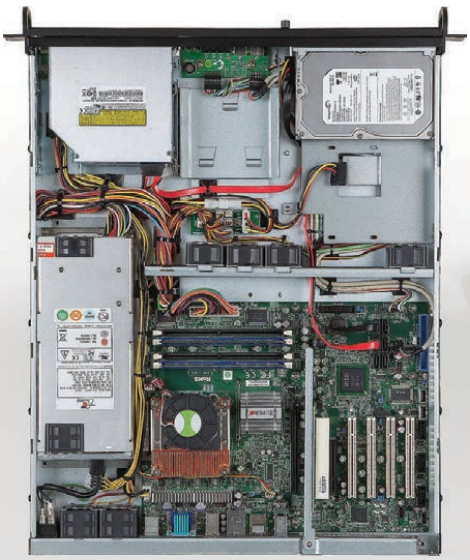
- Only 21.3" Deep
- Core-i5/i7 Options
- XEON E3 Option
- 1x PCIe x16 Plug-In Card Slot
- 1x Internal Hard Drive, 1x Slim DVD
- 5x Cooling Fans
- 400W Power Supply

ASSEMBLED IN THE USA

REVISION CONTROL

EASY CUSTOMIZATION

The C105 Series is 1U by 21.3" and offers four motherboard choices providing Core-i5/i7 or XEON E3 performance. These systems provide a good balance of size versus performance. A single horizontal card slot supports a PCIe x16 plug-in card. Mounted in the front panel is a slim DVDRW, and two internal fixed 3-½" hard drives can be fitted. Cooling is provided by four 40mm fans mounted mid-chassis and two 40mm fans mounted on the rear panel. The power supply is rated at 400W. The front door protects the system.



C213 FAMILY

2U COTS CONFIGURED RACKMOUNT SYSTEM

CHASSIS PLANS®
Systems Engineered to Perform®

FEATURES

- Only 17.7" Deep
- Core-i5/i7 Options
- XEON E3 Option
- 3x Plug-In Card Slots
- 1x 5-¼" and 1x 3-½" External, 3x 3-½" Internal Drive Bays
- 3x Cooling Fans
- 400W Power Supply

ASSEMBLED IN THE USA

REVISION CONTROL

EASY CUSTOMIZATION

The C213 Series is an ultra-short 17.7" deep and is perfect for your space constrained application. Four choices of motherboards offer Core-i5 / i7 or XEON E3 performance. Three horizontal plug-in card slots are provided offering a PCIe x16 option. A 5-¼" drive bay is populated with a DVDRW, and three internal 3-½" drives can be configured as a RAID array. Cooling is provided by three 80mm fans. A 500W power supply is standard. A front door protects the system.

CHASSIS PLANS
Systems Engineered to Perform

C220 FAMILY

2U COTS CONFIGURED RACKMOUNT SYSTEM

FEATURES

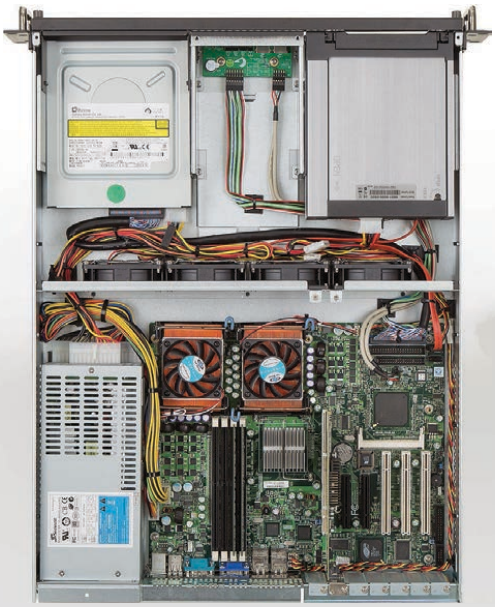
- Only 22.4" Deep
- Core-i5/i7 Options
- XEON E3 Option
- 3x Horizontal or Seven Vertical Plug-in Card Slots
- 4x 5-¼", 1x 3-1/2", 2x Internal 3-1/2" Drive Bays
- 4x Cooling Fans
- 500W Power Supply

ASSEMBLED IN THE USA

REVISION CONTROL

EASY CUSTOMIZATION

The C220 Series provide Core i5/i7 or XEON E3 performance in a short 2U 22.4" deep chassis. Three horizontal or seven vertical card slots are provided. A wide variety of card slot options allow you to install your choice of plug-in cards. Four 5-¼" drives are offered, one populated with a DVDRW drive. Two internal 3-1/2" drives are available. A high quality 500W power supply is provided. This system is ideal for your small area installation.



C221 FAMILY

2U COTS CONFIGURED RACKMOUNT SYSTEM

CHASSIS PLANS®
Systems Engineered to Perform®

FEATURES

- 25.6" Deep
- Core-i5/i7 Options
- XEON E3/E5, Single and Dual Options
- 3x Plug-In Card Slots
- 4x 5-¼", 1x 3-1/2", 2x Internal 3-1/2" Drive Bays
- 4x Cooling Fans
- 600W Power Supply

ASSEMBLED IN THE USA

REVISION CONTROL

EASY CUSTOMIZATION

The C221 Series provide server-class performance in only 2U high supporting EATX motherboards. Three horizontal plug-in card slots are provided supporting full-length cards. A wide variety of slot configurations allows you to install your choice of plug-in cards. Four 5-¼" drives can be configured for fixed or removable operation and support a RAID array. Two additional internal 3-½" drives can be fitted. Cooling is provided by four mid-chassis 80mm fans. A single or redundant 600W power supply provides ample power for your high-performance system.

CHASSIS PLANS
Systems Engineered to Perform

C313 FAMILY

3U COTS CONFIGURED RACKMOUNT SYSTEM

FEATURES

- Only 20.7" Deep
- Core-i5/i7 Options
- XEON E3/E5, Single and Dual Options
- 7x Plug-In Card Slots
- 2x 5-¼" and 1x 3-½" Drive Bays, 7x Internal 3-½" Drives
- Four Cooling Fans
- 600W Power Supply, Single or Redundant

ASSEMBLED IN THE USA

REVISION CONTROL

EASY CUSTOMIZATION

The C313 Series is a short 20" deep and only 3U high, allowing installation in your space-constrained spaces. The selection of high-performance motherboards offer Core-i5/i7 and XEON E3/E5 power for your application and cost-effective pricing. Two 5-¼" drive bays can be configured as fixed or removable, and seven internal 3-½" drives can be configured as RAID. Two 92mm and two 60mm fans provide ample cooling. A front door with air filter protects the system.

C346 FAMILY

3U COTS CONFIGURED RACKMOUNT SYSTEM

CHASSIS PLANS®
Systems Engineered to Perform®

FEATURES

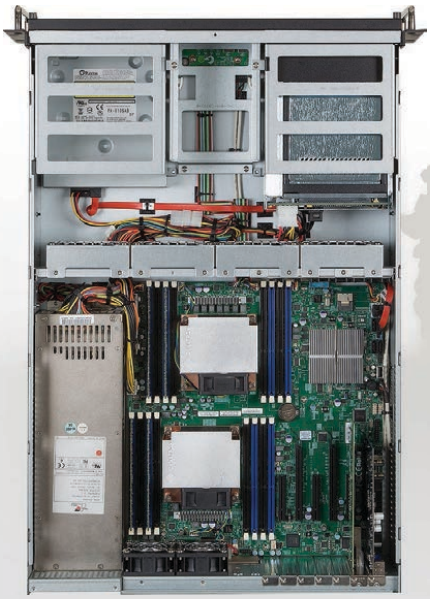
- 25.6" Deep
- Core-i5/i7 Options
- XEON E3/E5, Single and Dual Options
- 7x Plug-In Card Slots
- 6x 5-¼" Drive Bays, Fixed or Removable
- 2x Internal Fixed Drives, 1x 3-1/2" Drive Bay
- 4x Cooling Fans
- 600W Power Supply, Single or Redundant

ASSEMBLED IN THE USA

REVISION CONTROL

EASY CUSTOMIZATION

The C346 Series systems offer superb performance choices in a low 3U package. EATX motherboards offer server- class operation supporting single and dual high-performance XEON processors. Six 5-¼" drives can be configured as fixed or removable and support RAID arrays. Seven vertical plug-in slots and a wide selection of slot configurations will support your choice of plug-in cards. Ample cooling for power hungry systems is provided by four mid-chassis fans. A 600W single or redundant power supply is offered.



C402 FAMILY

4U COTS CONFIGURED RACKMOUNT SYSTEM

FEATURES

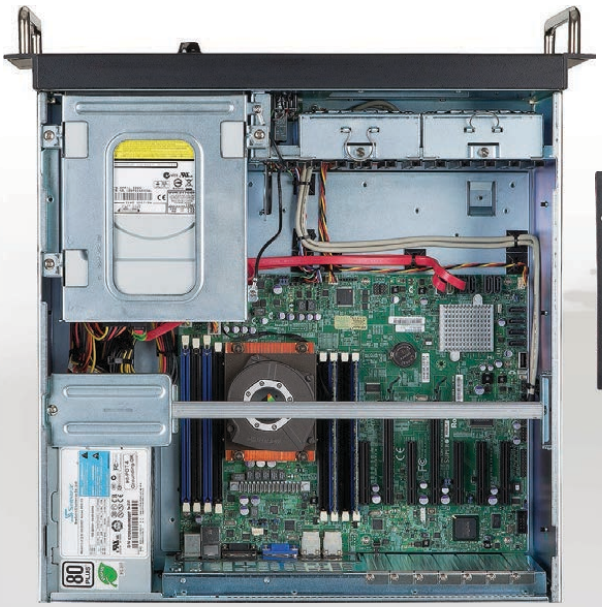
- Only 17.8" Deep
- Core-i5/i7 Options
- XEON E3/E5, Single and Dual Options
- 7x Plug-In Card Slots
- 3x 5-¼" Drive Bays, Fixed or Removable
- 1x 3-1/2" Drive Bay
- 2x Cooling Fans with Filter
- 600W Power Supply, Single or Redundant

ASSEMBLED IN THE USA

REVISION CONTROL

EASY CUSTOMIZATION

The C402 Series systems are the ideal solution for space-constrained applications. At only 17.8" deep, they will easily fit any short-depth rack. They offer superb performance with Core i5/i7 and XEON E3/E5 processor options. Three 5-¼" drives can be configured as fixed or removable in a RAID array. Cooling is ample with two 92mm fans. A selection of plug-in card slot choices allow you to fit your choice of boards. A hold-down bar secures the plug-in cards.



C414 FAMILY

4U COTS CONFIGURED RACKMOUNT SYSTEM

FEATURES

- Only 20.1" Deep
- Core-i5/i7 Options
- XEON E3/E5, Single and Dual Options
- 7x Plug-In Card Slots
- 3x 5-¼" Drive Bays, Fixed or Removable
- 1x 3-1/2" -Drive Bay
- 2x Cooling Fans with Filter
- 600W Power Supply, Single or Redundant

ASSEMBLED IN THE USA

REVISION CONTROL

EASY CUSTOMIZATION

The C414 Series systems are our number-one seller for a variety of reasons. They are competitively priced with a good feature set and great value. The ATX motherboard offers Core i5/i7 and XEON E3/E5 processors to hit your performance point. A variety of plug-in card slot configurations are available. Three 5-¼" drives can be configured as fixed or removable drives. Two huge 120mm fans cool the system. A card-hold down bar secures the plug-in cards.

CHASSIS PLANS
Systems Engineered to Perform

C431 FAMILY

4U COTS CONFIGURED RACKMOUNT SYSTEM

FEATURES

- 26.4" Deep
- Core-i5/i7 Options
- XEON E3/E5, Single and Dual Options
- 7x Plug-In Card Slots
- 6x 5-¼" Drives Bays Fixed or Removable
- 1x 3-1/2" Drive Bay
- 4x Cooling Fans with a Filter in the Door
- 700W Power Supply, Single or Redundant

ASSEMBLED IN THE USA

REVISION CONTROL

EASY CUSTOMIZATION

The C431 Series provide server-class operation in a 4U system. Dual processor EATX motherboards and a variety of PCI Express slot configurations allow for installation of a wide variety of plug-in cards. XEON processors will power your application. Six 5-¼" drive bays can be configured with fixed or removable drives and set up in a RAID configuration. A 700W power supply can be single or redundant. A card hold-down bar secures the plug-in cards.

C528 FAMILY

5U COTS CONFIGURED RACKMOUNT SYSTEM

CHASSIS PLANS®
Systems Engineered to Perform™

FEATURES

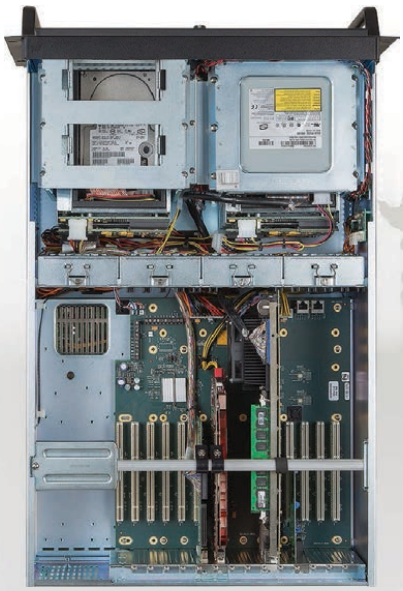
- 26.4" Deep
- XEON E5
- 4x PCIe x16 Double-Wide or 10x PCIe x8 Card Slot Options
- 8x 5-¼" Drives, Fixed or Removable
- 1x 3-1/2" Drive Bay
- 4x Cooling Fans with a Filter in the Door
- 1350W Redundant Power Supply

ASSEMBLED IN THE USA

REVISION CONTROL

EASY CUSTOMIZATION

The C528 Series systems offer server-class performance with XEON processors. High-speed RAM can be populated for memory intensive applications. Eight 5-¼" drive bays allow a wide variety of drive configurations with fixed or removable carriers and a selection of RAID setups. The 1550W N+1 redundant power supply provides more than enough power for anything you can configure in this system. And the selection of PCI Express slot counts allow you to install a wide variety of plug-in cards including up to four double-wide x16 cards.



OFF-THE-SHELF RUGGEDIZED

PORTABLE COMPUTERS

Many mobile applications require the functionality of a full-size computer with multiple drives and plug-in cards for which a laptop or tablet will not suffice. Chassis Plans offers two models of high-quality portable computers with the features you require. These systems offer the same functionality of a desktop computer with the advantage of all necessary peripherals built in. These rugged portable PCs are designed for applications such as computer forensics, UAV flight control systems, remote GIS and mapping, and flight line data acquisition, analysis, and control.

CHASSIS FEATURES

- Rugged Aluminum Alloy Construction
- 17" 1280 x 1024 and 21.5" 1920 x 1080 TFT LCDs
- Fits ATX Motherboard
- Seven Full Height Card Slots
- Variety of Drive Configurations
- High Flow Cooling Fans
- Various Power Supply Options
- Detachable Full Feature Keyboard
- Padded Wheeled Transit Case Included

ELECTRONICS FEATURES

- High-Performance, Long-Availability Motherboards
- Core i5 and i7 Processor Options
- XEON E3/E5 Multiple Chipset Options
- Multiple Card Slot Options
- Multiple Hard Drive Options—Fixed & Removable
- High-Performance Graphics
- Intel Roadmap Components for Future Availability
- Single and Redundant Power Supplies

P321 FAMILY

PORTABLE COMPUTER

CHASSIS PLANS®
Systems Engineered to Perform™

FEATURES

- 3x 21.5" SXGA 1920 x 1080 LCDs
- Core i5/i7 Processor Options
- XEON E3 Option
- 6x 3-1/2" Hot Swap Drive Carriers
- 3x 5-1/4" Drive Bays
- 7x Plug-In Card Slots with 1x PCIe x16
- Detachable Keyboard
- 1000W Power Supply

ASSEMBLED IN THE USA

REVISION CONTROL

EASY CUSTOMIZATION

MIL-STD 810

The P321 is unique in offering three 21.5" 1920 x 1080 resolution LCD displays with LED backlights in a portable computer system. Effective viewing area is 5760 x 1080. The displays in the P321 system are connected to high-performance Graphics Processor offering outstanding video performance. The motherboard choices provide ample processing power. Six hot swap drive carriers provide up to 24TB of RAID storage. Three 5-1/4" drive bays offer expansion. Seven plug-in cards are accommodated and held in place with a card hold-down bar. A full feature detachable keyboard is included. Also included is a wheeled padded transit case.

SYSTEM SPECIFICATIONS

PHYSICAL DIMENSIONS

- 15.3" (H) x21.1" (W) x 11.7" (D) (Closed)
- 15.3" (H) x 59.1" (W) x 11.7" (D) (Open)
- 55 lbs (Varies by Configuration)

LCD FEATURES

- Three 21.5" TFT Displays
- 1920 x 1080 Each (5760 x 1080 Effective)
- 250cd/m^2 Brightness
- 1000:1 Contrast
- 160˚ Viewing Angle
- 5ms Response Time
- Anti-Glare Hard Coat Standard

COOLING

- 1x 120mm External Fan
- Positive Chassis Pressure

CHASSIS DETAILS

- Rugged Aluminum Construction
- Accommodates an ATX Motherboard
- 7x Full Height Card Slots
- Rubber Corner Bumpers
- Detachable Full-Feature Keyboard

DRIVE BAYS

- 6x 3-½" Hot Swap Hard Drive Bays
- 3x 5-¼" Drive Bays
- RAID 0, 1, and 5 Supported
- Slim DVDRW Installed Standard

ENVIRONMENT

- Operating Temperature: 0˚ to 50˚C (32˚ to 122˚F)
- Storage Temperature: -20˚ to 60˚C (-4˚ to 140˚F)
- Humidity: 5 to 95% RH Non-condensing

POWER SUPPLY

- Output Power 1000W
- Single or Redundant options
- Input 90 To 260Vac, 50/60Hz Auto Switching High Efficiency
- Other Options Available

CHASSIS PLANS
Systems Engineered to Perform

P370 FAMILY

PORTABLE COMPUTER

FEATURES

- 17" SXGA 1280 x 1024 TFT LCDs
- Core i5/i7 Processor Options
- XEON E3 Option
- 2x 5-¼" and 1x 3-½" Drive Slots
- 7x Plug-In Card Slots with 1x PCIe x16
- Detachable Keyboard
- 600W ATX Power Supply

ASSEMBLED IN THE USA

REVISION CONTROL

EASY CUSTOMIZATION

MIL-STD 810

The P370 offers one 17" 1280 x 1024 resolution LCD display in a portable computer system. A touch screen can be fitted and optional enhancement filters can be provided for improved viewing. Pre-configured systems provide a choice of Core i5/i7 or XEON E3 high-performance processors. Memory can be installed in the Core i5 and i7 systems. A full feature detachable keyboard is included. Also included is a wheeled padded transit case.

SYSTEM SPECIFICATIONS

PHYSICAL DIMENSIONS

- 14.1" (H) x 17.1" (W) x 9.0" (D)
- 29 lbs (Varies by Configuration)

LCD FEATURES

- One 17" TFT Display
- 1280 x 1024 Each (3840 x 1024 Effective)
- 300cd/m² Brightness
- 800:1 Contrast
- 160˚ Viewing Angle
- 5ms Response Time
- Anti-Glare Hard Coat Standard

COOLING

- 2x 120mm External Fans
- Positive Chassis Pressure

CHASSIS DETAILS

- Rugged Aluminum Construction
- Accommodates an ATX Motherboard
- 7x Full Height Card Slots
- Rubber Corner Bumpers
- Detachable Full Feature Keyboard

DRIVE BAYS

- 2x 5-¼" and 1x 3-½" Hard Drive Bays, 1x 3-1/2" Drive Bay
- RAID 0, 1, and 5 Supported
- Slim DVDRW Installed Standard

ENVIRONMENT

- Operating Temperature: 0˚ to 50˚C (32˚ to 122˚F)
- Storage Temperature: -20˚ to 60˚C (-4˚ to 140˚F)
- Humidity: 5 to 95% RH Non-condensing

POWER SUPPLY

- Output Power 650W
- Single or Redundant options
- Input 90 To 260Vac, 50/60Hz Auto Switching High Efficiency
- Other Options Available

RUGGED MILITARY GRADE

RACKMOUNT AND PANELMOUNT LCD DISPLAYS

CHASSIS PLANS®
Systems Engineered to Perform®

Utilizing the highest quality LCD displays and keyboards, Chassis Plans' rackmount keyboards, rackmount LCD monitors, and monitors with keyboards are assembled in the USA. All share a rugged military-grade design philosophy to provide systems that will reliably perform in the harshest military environments. The LCD panels are enterprise grade for high performance and extended availability. LCD enhancements include bonded anti-reflective oleophobic and EMI overlays. Hi-bright panels for direct sunlight use are available. The LCD controllers are mil-grade providing the inputs and features you need to meet your mission objectives.

CHASSIS FEATURES

- Lightweight Rugged 5052-H32 Aircraft-Grade Aluminum
- Milled Solid Billet Front Panel (1U and 2U Displays)
- Extended Availability Enterprise-Grade LCD Panels
- Standard Temperature Range: -20°C to +70°C Operating
- Bonded EMI Filter Option for MIL-STD-461 Compliance
- Bonded EMI Glass
- Variety of LCD Resolutions
- Variety of Keyboards
- 12VDC, 110/220VAC, 28VDC
- Designed to Meet MIL-S-901D and Tested to MIL-STD-810G

CONTROLLER FEATURES

- High Performance Military Grade LCD Controllers
- aRGB, DVI-D, HDMI, Composite Video Inputs
- Optional HD & SD Component and HD-SDI Inputs
- Picture-In-Picture / Picture-By-Picture
- Image Up / Down Scaling
- Variable Aspect
- Freeze and Zoom Function
- Auto Setup and Wide Screen Detection
- RS232 and Ethernet Remote Command Protocol
- Text Overlay Function
- Custom Display Scaling

CHASSIS PLANS®
Systems Engineered to Perform®

TFX TRI-FOLD

2U RACKMOUNT MILITARY-GRADE LCD DISPLAY

FEATURES

- Only Tri-Fold Rugged Military Display with Height of 2U
- Long Life 17.3" or 19"LCD Display Options
- 19" LCD 1280 x 1024, 17.3" 1920 x 1080 Native Resolution Per Panel
- Military-Grade LCD Video Controller with VGA, DVI, HDMI, Composite Video Inputs
- LCD Enhancements Include Optically Bonded Vandal and EMI Shielding

ASSEMBLED IN THE USA

MIL-S 901D

EXTENDED TEMPERATURE

MIL-STD 810

The TFX is a rugged military-grade high performance 2U rackmount LCD display offering either three 17.3" or 19" TFT LCD displays. Display enhancement options include optically bonded vandal and EMI shielding. The system is built to military standards and includes a military-grade wide temperature range LCD controller and other rugged components. The military grade LCD controller can accept VGA, DVI-D, S-Video, Composite and HDMI inputs. The TFX also includes an audio amplifier with speakers.

DISPLAY SPECIFICATIONS

PHYSICAL DIMENSIONS

- 3.5" (H) x 24.0" (D) x 19.0" (W) Closed
- 19.2" (H) x 24.0" (D) x 50.0" (W) Open
- 37 lbs

DISPLAY ENHANCEMENTS

- Optically Bonded EMI Shielding & A/R Coating
- Optically Bonded Vandal Shield with A/R Coating

VIDEO CONTROLLER FEATURES

H1 VIDEO CONTROLLER:

- VGA, DVI-D, HDMI video inputs
- Image Flip, Picture in/by Picture (18 sizes)
- Text Overlay
- Ethernet OSD control (RJ45)
- Extended Temperature, conformal coated
- High MTBF

J1 VIDEO CONTROLLER:

- VGA, DVI-D, S-Video, Composite video inputs
- Image Flip, Picture in Picture (18 sizes)
- Extended Temperature, conformal coated
- High MTBF

LCD FEATURES

SCREEN SIZE	17.3"	17.3 HIGH BRIGHT	19"	19" HIGH BRIGHT
Native Resolution:	1920 x 1080	1920 x 1080	1280 x 1024	1280 x 1024
Brightness:	400 cd/m^2	1,000 cd/m^2	350 cd/m^2	1,000 cd/m^2
Contrast Ratio	600:1	600:1	1500:1	1500:1
Reponse Time:	40ms	40ms	35ms	35ms
Viewing Angle	R/L: 160˚ U/D: 140˚	R/L: 160˚ U/D: 140˚	R/L: 170˚ U/D: 170˚	R/L: 170˚ U/D: 170˚
Backlight:	LED	LED	LED	LED
Operating Temp:	0˚ to 70˚	0˚ to 70˚	-20˚ to +70˚	-20˚ to +70˚
Storage Temp:	-20˚ to 70˚	-20˚ to 70˚	-25˚ to +70˚	-25˚ to +70˚

CONFIGURATOR

FAMILY	MONITOR	VIDEO CONTROLLER OPTIONS	POWER INPUT
TFX1= Trifold Extreme	1731A = 17.3" LCD (Bonded EMI Shield & A/R Coating)	H1= VGA, DVI=D & HDMI VIDEO Inputs	A= Universal AC Input Adapter
	1731B = 17.3" LCD display (No Cover Glass)	J1= VGA, DVI-D, COMPOSITE & S-VIDEO Inputs	B= 12 VDC
	1731C = 17.3" LCD (Bonded Vandal Shield & A/R Coating)		C= 28 VCD (MIL-STD-704/1275)
	1732A = 17.3" High Bright LCD (Bonded EMI Shield & A/R Coating)		D= 12 VDC to Chassis Plans Workstation
	1732B = 17.3" High Bright LCD (No Cover Glass)		
	1732C = 17.3" High Bright LCD (Bonded Vandal Shield & A/R Coating)		
	191A = 19" LCD (Bonded EMI Shield & A/R Coating)		
	191B = 19" LCD display (No Cover Glass)		
	191C = 19" LCD (Bonded Vandal Shield & A/R Coating)		
	192A = 19" High Bright LCD (Bonded EMI Shield & A/R Coating)		
	192B = 19" High Bright LCD (No Cover Glass)		
	192C = 19" High Bright LCD (Bonded Vandal Shield & A/R Coating)		

CHASSIS PLANS
Systems Engineered to Perform

CCX-19 DISPLAYS

1U RACKMOUNT MILITARY-GRADE LCD KEYBOARD

FEATURES

- 1U High Rugged Military Design
- Short 24.4" Deep Clamshell Design
- Rigorously Tested to MIL-STD-810G
- Long Life 17.3" or 19" LCD Display Options
- Sealed Keyboard with Hula Point or Glide Point Mouse Pointer
- LCD Enhancements Include Optically Bonded Vandal and EMI Shielding
- Two Mil-Grade LCD Controller Options

ASSEMBLED IN THE USA

MIL-S 901D

EXTENDED TEMPERATURE

MIL-STD 810

REVISION CONTROL

The CCX rackmount LCD keyboard drawers offer all the features you need for your harsh environment application. This extremely rugged, military-grade design has passed a rigorous set of MIL-STD-810G tests. The LCDs are best in class offering LED backlights and long product availability. A variety of sophisticated military-grade LCD controllers are offered to accommodate virtually any input signal including DVI-D, HDMI, VGA, Video and even HD Component. Rugged 5052-H32 aluminum construction and sealed, NEMA4 spill-proof keyboards are standard features.

CONFIGURATOR

FAMILY	KEYBOARD	MONITOR	VIDEO CONTROLLER OPTIONS	POWER INPUT
CCXI= CP Clamshell Military	A= NEMA 4/IP65 113(key) Keyboard "Hula-Point"	191A= 19" LCD (Bonded EMI Shield & A/R Coating)	C1= VGA & DVI-D Video Inputs	A= Universal AC Input Adapter
	B= NEMA 4/IP65 Touch Pad Keyboard w/97 keys	191B= 19" LCD (No Bonding)	H1= VGA, DVI-D & HDMI Video Inputs	B= 12 VDC (Unterminated Cable)
		191C= 19" LCD (Bonded Vandal Shield & A/R Coating)	J1= VGA, DVI-D, COMPOSITE & S-VIDEO Inputs	C= 28VCD (MIL-STD-704/1275)
		192A= 19" High Bright LCD (Bonded EMI Shield & A/R Coating)		D= 12 VDC to Chassis Plans Workstation
		192B= 19" High Bright LCD (No Bonding)		E= 48 VDC
		192C= 19" HIgh Bright LCD (Bonded Vandal Shield & A/R Coating)		

DISPLAY SPECIFICATIONS

PHYSICAL DIMENSIONS

- 1.75" (H) x 24.4" (D) x 19.0" (W)
- 21 lbs

DISPLAY ENHANCEMENTS

- Optically bonded EMI shielding & A/R coating
- Optically bonded vandal shield with A/R coating

VIDEO CONTROLLER FEATURES

C1 VIDEO CONTROLLER

- VGA, DVI-D video inputs
- Extended Temperature, conformal coated
- High MTBF

H1 VIDEO CONTROLLER:

- VGA, DVI-D, HDMI video inputs
- Image Flip, Picture in/by Picture (18 sizes)
- Text Overlay
- Ethernet OSD control (RJ45)
- Extended Temperature, conformal coated
- High MTBF

J1 VIDEO CONTROLLER:

- VGA, DVI-D, S-Video, Composite video inputs
- Image Flip, Picture in Picture (18 sizes)
- Extended Temperature, conformal coated
- High MTBF

LCD FEATURES

SCREEN SIZE	17.3"	17.3 HIGH BRIGHT	19"	19" HIGH BRIGHT
Native Resolution:	1920 x 1080	1920 x 1080	1280 x 1024	1280 x 1024
Brightness:	400 cd/m²	1,000 cd/m²	350 cd/m²	1,000 cd/m²
Contrast Ratio	600:1	600:1	1000:1	1000:1
Reponse Time:	40ms	40ms	5ms	35ms
Viewing Angle	R/L: 160° U/D: 140°	R/L: 160° U/D: 140°	R/L: 170° U/D: 160°	R/L: 170° U/D: 170°
Backlight:	LED	LED	LED	LED
Operating Temp:	0° to 70°	0° to 70°	0° to +50°	-20° to +70°
Storage Temp:	-20° to 70°	-20° to 70°	-20° to +60°	-25° to +70°

HARSH ENVIRONMENTS

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

ALTITUDE

- 10,000 ft. Operational, 30,000 ft. Storage
- MIL-STD-810, Method 500.5

HIGH TEMPERATURE

- 50°C Operational, 60°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

BLOWING SAND AND DUST

- Procedures I and II
- MIL-STD-810, Method 510.5

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

CHASSIS PLANS
Systems Engineered to Perform

CCXR-17 DISPLAY

1U SIDE ACCESS LCD KEYBOARD

FEATURES

- 1U High Rugged Military Design
- Unique Short-Depth Side-Access (Patent Pending)
- Long Life 17" LCD with LED Backlight
- 1280 x 1024 Max Resolution Per Panel
- Extended Temperature (-20° to +70°C) Operation
- Built-in 4-Port KVM
- Models for Right or Left Access

ASSEMBLED IN THE USA

MIL-S 901D

EXTENDED TEMPERATURE

MIL-STD 810

REVISION CONTROL

The CCXR-17 is a side-access, space efficient, military-grade, high-performance 1U rackmount clamshell LCD keyboard offering an extended-temperature 17" TFT display. The unique patent-pending side-access feature minimizes required aisle space by placing the operator next to the rack instead of sitting or standing in the aisle. There is no other 1U LCD keyboard which offers this space saving feature. Included are a single DVI-D port and a 4-port VGA KVM. Optional LCD enhancements include a bonded MIL-STD-461 EMI shield and/or bonded oleophobic anti-reflective glass overlay.

CONFIGURATOR

FAMILY	KEYBOARD	MONITOR	VIDEO CONTROLLER OPTIONS	POWER INPUT
CCXR= RT Side Access LCD Military	A= NEMA 4/IP65 113(key) Keyboard "Hula-Point"	171A= 17" LCD (Bonded EMI Shield & A/R Coating)	C1= VGA & DVI-D Video Inputs	A= Universal AC INPUT Adapter
		171B= 17" LCD (No Bonding)		B= 12 VDC (Unterminated Cable)
		171C= 17" LCD (Bonded Vandal Shield & A/R Coating)		C= 28 VDC (MIL-STD-704/1275)
				D= 12 VDC to Chassis Plans Workstation

DISPLAY SPECIFICATIONS

PHYSICAL DIMENSIONS

- 1.75" (H) x 24.4" (D) x 19.0" (W)
- 20 lbs with KVM

VIDEO CONTROLLER FEATURES

- VGA, DVI-D video inputs
- Extended Temperature, conformal coated
- High MTBF

DISPLAY ENHANCEMENTS

- Optically bonded EMI shielding & A/R coating
- Optically bonded vandal shield with A/R coating

KVM FEATURES

- 4 Ports
- VGA Video Inputs
- USB Keyboard/Mouse Signals
- Hotkey Operation
- Auto Scan Option

KEYBOARD FEATURES

- 113 Keys Sealed Silicone Rubber Keyboard with Hula Point
- Sealed Spill-Proof Design
- Full-Travel Keyboard Feel
- Tactile Keystroke

LCD FEATURES

SCREEN SIZE	17"
Native Resolution:	1280 x 1024
Brightness:	350 cd/m²
Contrast Ratio	800:1
Reponse Time:	30ms
Viewing Angle	R/L: 160˚ U/D: 140˚
Backlight:	LED
Operating Temp:	-20˚ to 70˚
Storage Temp:	-30˚ to 85˚

HARSH ENVIRONMENTS

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

ALTITUDE
- 10,000 ft. Operational, 30,000 ft. Storage
- MIL-STD-810, Method 500.5

HIGH TEMPERATURE
- 70°C Operational, 80°C Storage
- MIL-STD-810, Method 501.5

LOW TEMPERATURE
- -20°C Operational,-40°C Storage
- MIL-STD-810, Method 502.5

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

BLOWING SAND AND DUST
- Procedures I and II
- MIL-STD-810, Method 510.5

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

CHASSIS PLANS®
Systems Engineered to Perform®

CLX-173/19 DISPLAY

1U MILITARY GRADE RACKMOUNT DISPLAY

FEATURES

- Industrial Grade LCD Panels in 17.3" HD and 19" Screen Sizes in Both Standard and High Bright Configurations.
- Screen Enhancements Include Bonded 3mm Cover Glass and EMI Shielding
- Controller Features Include Picture in Picture, Image Scaling and Control, Ethernet Control for Remote Management
- Rackmount Design for Multiple Rack Depths

ASSEMBLED IN THE USA

MIL-STD 810

EXTENDED TEMPERATURE

REVISION CONTROL

The 1U CLX military grade rackmount display is designed to perform and engineered to last. Meeting military standards such as 901D and 810G, its 5052-H32 aluminum construction and locking stainless steel hardware make the display inherently rugged and reliable. The CLX offers two LCD screen sizes and multiple LCD screen enhancement options. The unit offers two keyboard choices, a 83-key full travel or splash proof 82-key full travel keyboard with input in either touchpad or trackball formats.

RUGGEDIZED ENHANCEMENTS

- Milled 0.375" 6061-T6 Aluminum Front Panel with Integrated Front USB 3.0 Port, and Fold Down Pull Handle
- Ruggedized Lightweight 5052-H32 Aluminum Enclosure, Locking Hardware
- Optional Bonding of Soda Lime Cover Glass Not Only Ruggedized the LCD, But to Also Enhance the Mechanical,Optical and EMI Properties
- Video Controller Featuring Wide-Tolerance Power Supplies (+/-25%), Low Mass Tantalum Capacitors for Maximum Vibration and Shock Tolerance, Conformal Coating, Operating Temperature Range from -20°C to +70°C, Plus Calculated MTBF in Excess of 200K hours.
- Integrated Cable Management Arm

DISPLAY SPECIFICATIONS

VIDEO CONTROLLER FEATURES

C1 VIDEO CONTROLLER:

- VGA, DVI-D video inputs
- Extended Temperature, conformal coated
- High MTBF

H1 VIDEO CONTROLLER:

- VGA, DVI-D, HDMI video inputs
- Image Flip, Picture in/by Picture (18 sizes)
- Text Overlay
- Ethernet OSD control (RJ45)
- Extended Temperature, conformal coated
- High MTBF

J1 VIDEO CONTROLLER:

- VGA, DVI-D, S-Video, Composite video inputs
- Image Flip, Picture in Picture (18 sizes)
- Extended Temperature, conformal coated
- High MTBF

DISPLAY ENHANCEMENTS

- Optically bonded EMI shielding & A/R coating
- Optically bonded vandal shield with A/R coating

KEYBOARD OPTIONS

- Standard Full Travel 83-Key with Either Integrated Optical Trackball or Touchpad and Two Mouse Buttons
- Splash Proof 82-Key, with Red Backlit Keys, with Optional 38mm Sealed Trackball or Multi-Gesture Trackpad and Two Mouse Buttons

LCD FEATURES

SCREEN SIZE	17.3"	17.3 HIGH BRIGHT	19"	19" HIGH BRIGHT
Native Resolution:	1920 x 1080	1920 x 1080	1280 x 1024	1280 x 1024
Brightness:	400 cd/m²	1,000 cd/m²	350 cd/m²	1,000 cd/m²
Contrast Ratio	600:1	600:1	1000:1	1500:1
Reponse Time:	40ms	40ms	5ms	35ms
Viewing Angle	R/L: 160° U/D: 140°	R/L: 160° U/D: 140°	R/L: 170° U/D: 160°	R/L: 170° U/D: 170°
Backlight:	LED	LED	LED	LED
Operating Temp:	0° to 70°	0° to 70°	0° to +50°	-20° to +70°
Storage Temp:	-20° to 70°	-20° to 70°	-20° to +60°	-25° to +70°

CONFIGURATOR

FAMILY	KEYBOARD	MONITOR	VIDEO CONTROLLER OPTIONS	POWER INPUT
CLX= CP 1U Layflat	C= Cherry/TG3 Trackball USB	1731A= 17.3" LCD (Bonded EMI Shield & A/R Coating	C1= VGA & DVI-D Video Inputs (*Not for use with 17.3*)	A= Universal AC Input Adapter
	D= Cherry/TG3 Glide Pad USB	1732B=17.3" LCD (No Bonding)	H1= VGA,, DVI-D & HDMI Video Inputs	B= 12 VDC (Unterminated Cable)
	G= Full Travel & Trackball USB	1731C= 17.3" LCD (Bonded Vandal Shield & A/R Coating)	J1= VGA, DVI-D, COMPOS-ITE & S-VIDEO Video Inputs	C= 28 VCD (MIL-STD-704/1275)
	H= Full Travel & Glide Pad USB	1732A= 17.3" High Bright LCD (Bonded EMI Shield & A/R Coating)		D= 12 VDC to Chassis Plans Workstation
		1732B= 17.3" High Bright LCD (No Bonding)		E= 48 VDC
		1732C= 17.3" High Bright LCD (Bonded Vandal Shield & A/R Coating)		
		191A= 19" LCD (Bonded EMI Shield & A/R Coating)		
		191B= 19" LCD (No Bonding)		
		191C= 19" LCD (Bonded Vandal Shield & A/R Coating)		
		192A= 19" High Bright LCD (Bonded EMI Shield & A/R Coating)		
		192B= 19" High Bright LCD (No Bonding)		
		192C= 19" High Bright LCD (Bonded Vandal Shield & A/R Coating)		

CHASSIS PLANS
Systems Engineered to Perform

CPX-241 DISPLAY

9U 24" RACKMOUNT LCD DISPLAY

FEATURES

- 9U High Rugged Military Design
- Designed to Meet MIL-S-901D and MIL-STD-810G
- Long Life 24" LCD with LED Backlight
- 1920 x 1200 Max LCD Resolution
- Bonded Oleophobic Anti-Reflective and/or MIL-STD-461 EMI Overlay
- Optional Infrared Multi-Touch Touch Screen
- Advanced Mil-Grade LCD Controller
- Supports Virtually Any Input Signal

ASSEMBLED IN THE USA

MIL-S 901D

REVISION CONTROL

MIL-STD 810

The CPX1-241 mount-on-rack display is ideal for many rugged military applications, particularly ones that require extensive screen space, e.g., HD video plus a dashboard with gauges. The display has an InfraRed Touch Screen and supports Multi Touch Gesture technology (Windows 7/8/10). A bonded oleophobic anti-reflective glass overlay is standard and an optional micromesh EMI Filter is available. The advanced military grade LCD controller accepts virtually any video signal with optional HD-SDI. The controller provides advanced features such as picture-in-picture, picture-by-picture and text overlay. An amplifier and speakers are included.

DISPLAY SPECIFICATIONS

PHYSICAL DIMENSIONS

- 15.47" (H) x 3.2" (D) x 23" (W)
- 26 lbs

DISPLAY ENHANCEMENTS

- Bonded EMI Shield Option
- Multi-Touch Touch Screen Option

VIDEO CONTROLLER FEATURES

H1 VIDEO CONTROLLER:

- VGA, DVI-D, HDMI video inputs
- Image Flip, Picture in/by Picture (18 sizes)
- Text Overlay
- Ethernet OSD control (RJ45)
- Extended Temperature, conformal coated
- High MTBF

H2 VIDEO CONTROLLER:

- Includes all the H1 features
- Adds 3G HD-SDI video inputs

J1 VIDEO CONTROLLER:

- VGA, DVI-D, S-Video, Composite video inputs
- Image Flip, Picture in Picture (18 sizes)
- Extended Temperature, conformal coated
- High MTBF

J2 VIDEO CONTROLLER:

- Includes all the J1 features
- Adds 3G HD-SDI video inputs

LCD FEATURES

SCREEN SIZE	24"
Native Resolution:	1920 x 1200
Brightness:	300 cd/m^2
Contrast Ratio	1000:1
Reponse Time:	14ms
Viewing Angle	R/L: 178° U/D: 178°
Backlight:	LED
Operating Temp:	0° to 50°
Storage Temp:	-25° to 60°

HARSH ENVIRONMENTS

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

ALTITUDE

- 10,000 ft. Operational, 30,000 ft. Storage
- MIL-STD-810, Method 500.5

HIGH TEMPERATURE

- 50°C Operational, 60°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

BLOWING SAND AND DUST

- Procedures I and II
- MIL-STD-810, Method 510.5

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

CONFIGURATOR

FAMILY	MONITOR	VIDEO CONTROLLER OPTIONS	POWER INPUT	MOUNTING OPTIONS
CPX1 = CP PANEL MOUNT EXTREME	241A = 24" LCD (Bonded EMI Shield & A/R Coating)	H1 = VGA, DVI & HDMI	A= Universal AC Input Adapter	A= 19" Rack Fixed/Flush Mount
	241C = 24" LCD (Bonded Vandal Shield & A/R Coating)	H2 = VGA, DVI, HDMI & 3G HD-SDI 1-Ch	B= 12 VDC (CUSTOMER)	B= Articulated Arm Mount
	241D = 24" w/IR TOUCH, BONDED A/R, EMI SHIELD	H3 = VGA, DVI, HDMI & 3G HD-SDI 2-Ch	C= 28 VCD (MIL-STD-704/1275)	
	241E = 24" w/IR TOUCH, BONDED A/R Coating	J1 = VGA, DVI-D, COMPOSITE & S-VIDEO	D = CABLE, 12 VDC (TO CP Workstation)	
		J2 = VGA, DVI-D, COMPOSITE & S-VIDEO W/1.5G HD-SDI 1-Ch	E = 48 VDC (MIL-STD-704/1275)	
		J3 = VGA, DVI-D, COMPOSITE & S-VIDEO W/1.5G HD-SDI 2-Ch	F = 400 Hz AC	

CHASSIS PLANS
Systems Engineered to Perform

CPX-19/201 DISPLAY

8U RACKMOUNT LCD

REVISION CONTROL

ASSEMBLED IN THE USA

MIL-S 901D

EXTENDED TEMPERATURE

MIL-STD 810

FEATURES

- 8U High Rugged Military Design
- Designed to Meet MIL-S-901D and MIL-STD-810G
- Long Life 20.1" LCD (1600 x 1200) or 19" LCD (1280 x 1024)
- Bonded Oleophobic Anti-Reflective and/or MIL-STD-461 EMI Overlay
- Multiple Mil-Grade LCD Controller Options

The CPX -19 and -201 rackmount LCD displays offer all the features you need for your harsh environment application. These extremely rugged, military-grade displays are engineered to meet MIL-S-901A and MIL-STD-810G. The LCDs are best in class offering LED backlights and revision controlled long product availability. Sophisticated military-grade LCD controllers are offered to accommodate virtually any input signal including DVI-D, HDMI, VGA, Video, HD Component and even HD-SDI. Rugged 5052-H32 aluminum construction is a standard feature. An optional RhinoTouch® multi-touch touch screen is available.

CONFIGURATOR

Family	Monitor	Video Controller Options	Power Input
CPX1= 8U Panel Mount Military	191A = 19" LCD (Bonded EMI Shield & A/R Coating)	C1= VGA AND DVI-D STD Inputs	A= Universal AC Input Adapater
	191B = 19" LCD display (No Cover Glass)	H1= VGA, DVI-D AND HDMI Video Inputs	B= 12 VDC
	191C = 19" LCD (Bonded Vandal Shield & A/R Coating)	H2= VGA, DVI-D, HDMI & 3G HD-SDI Video Inputs *(NOT FOR USE WITH "E" TOUCHSCREEN)*	C= 28 VDC (MIL-STD-704/1275)
	191E = 19" Rhino Touch Bonded Resistive Touch Screen USB)	J1= VGA, DVI-D, COMPOSITE & S-VID-EO Video Inputs	D= 12 VDC to Chassis Plans Workstation
	192A = 19" High Bright LCD (Bonded EMI Shield & A/R Coating)	J2= VGA, DVI-D, COMPOSITE, S-VIDEO & HD-SDI Video Inputs *(NOT FOR USE WITH "E" TOUCHSCREEN)*	E= 48 VDC
	192B = 19" High Bright LCD (No Cover Glass)		
	192C = 19" High Bright LCD (Bonded Vandal Shield & A/R Coating)		
	201A = 20.1" LCD (Bonded EMI Shield & A/R Coating)		
	201B = 20.1" LCD display (No Cover Glass)		
	201C = 20.1" LCD (Bonded Vandal Shield & A/R Coating)		
	201E = 20.1" LCD (Rhino Touch Bonded Resistive Touch Screen USB)		

DISPLAY SPECIFICATIONS

PHYSICAL DIMENSIONS

- 14.00" (H) x 3.15" (D) x 19.0(W)
- 20 lbs

DISPLAY ENHANCEMENTS

- Option for optically bonded EMI shielding & A/R coating
- Option for optically bonded vandal shield with A/R coating
- Option for RinoTouch Resistive touch screen (USB)

VIDEO CONTROLLER FEATURES

C1 VIDEO CONTROLLER:

- VGA, DVI-D video inputs
- Extended Temperature, conformal coated
- High MTBF

H1 VIDEO CONTROLLER:

- VGA, DVI-D, HDMI video inputs
- Image Flip, Picture in/by Picture (18 sizes)
- Text Overlay
- Ethernet OSD control (RJ45)
- Extended Temperature, conformal coated
- High MTBF

H2 VIDEO CONTROLLER:

- Includes all the H1 features
- Adds 3G HD-SDI video inputs

J1 VIDEO CONTROLLER:

- VGA, DVI-D, S-Video, Composite video inputs
- Image Flip, Picture in Picture (18 sizes)
- Extended Temperature, conformal coated
- High MTBF

J2 VIDEO CONTROLLER:

- Includes all the J1 features
- Adds 3G HD-SDI video inputs

LCD FEATURES

SCREEN SIZE	19"	19" HIGH BRIGHT	20.1"
Native Resolution:	1280 x 1024	1280 x 1024	1600 x 1200
Brightness:	350 cd/m^2	1,000 cd/m^2	330 cd/m^2
Contrast Ratio	1000:1	1500:1	1400:1
Reponse Time:	5ms	35ms	30ms
Viewing Angle	R/L: 170˚ U/D: 160˚	R/L: 170˚ U/D: 170˚	R/L: 170˚ U/D: 170˚
Backlight:	LED	LED	LED
Operating Temp:	0˚ to +50˚	-20˚ to +70˚	0˚ to +60C˚
Storage Temp:	-20˚ to +60˚	-25˚ to +70˚	-25˚ to +60˚

HARSH ENVIRONMENTS

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

ALTITUDE

- 10,000 ft. Operational, 30,000 ft. Storage
- MIL-STD-810, Method 500.5

HIGH TEMPERATURE

- 19" 50C° 19" HB 70C°, 20.1" 60C° Operational
- 19" 60C°, 19" HB 70C°, 20.1" 60C° Storage
- MIL-STD-810, Method 501.5

LOW TEMPERATURE

- 19" 0C° 19" HB -20C°, 20.1" 0C° Operational
- 19" -20C°, 19" HB -25C°, 20.1" -25C° Storage
- MIL-STD-810, Method 502.5

HUMIDITY

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

BLOWING SAND AND DUST

- Procedures I and II
- MIL-STD-810, Method 510.5

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

CPX-27 DISPLAY

RACKMOUNT LCD

FEATURES

- Rugged Military Design
- Designed to Meet MIL-S-901D and MIL-STD-810G
- Long Life 27" LCD with 1920 x 1920 Resolution
- Bonded Cover Glass Standard with Options for Oleophobic Anti-Reflective and/or MIL-STD-461 EMI Overlay
- Picture-in-Picture and Split Screen
- Optional Multi-Touch Touch Screen

REVISION CONTROL

ASSEMBLED IN THE USA

MIL-S 901D

EXTENDED TEMPERATURE

MIL-STD 810

The CPX1 -27 square rackmount LCD displays offer all the features you need for your harsh environment application. This extremely rugged, military-grade display is engineered to meet MIL-S-901A and MIL-STD-810G. The LCD is best in class offering revision controlled long product availability. It can be driven from multiple video sources including VGA, DVI-D, HDMI, DisplayPort or optionally 3G HD-SDI. It supports Picture-In-Picture or Picture-By-Picture to allow multiple video streams to be viewed at once. It is designed for the harshest of environments constructed off aircraft grade aluminum, optically bonded LCD glass and stainless steel hardware.

CONFIGURATOR

FAMILY	MONITOR	VIDEO CONTROLLER OPTIONS	POWER INPUT	MOUNTING OPTIONS
CPX1= CP Panel Military	271A= 27" LCD (A/R Coated Cover Glass w/EMI Shield & Dura-Block Coat)	K1= VGA, DVI-D, HDMI & Display Port	A= Universal AC Input Adapter	A= 19" Rack Fixed/Flush Mount
	271C= 27" LCD (A/R Coated Cover Glass w/ Dura-Block Coat)		B= 12 VDC	
	271D= 27" LCD (IR Touch, A/R Coated Cover Glass w/EMI Shield & Dura-Block Coat)		C= 28 VCD (MIL-STD-704/1275)	
	271E= 27" LCD (IR Touch, A/R Coated Cover Glass w/Dura-Block Coat)		D= 12 VDC to Chassis Plans Workstation	

DISPLAY SPECIFICATIONS

PHYSICAL DIMENSIONS

- 22.7"(H) x 23.0" (W) x 3.2" (D)
- 34 lbs (Standard Configuration)

DISPLAY ENHANCEMENTS

- Option for optically bonded EMI shielding & A/R coating
- Option for optically IR multi-touch screen (USB)
- Option for optically bonded EMI shielding IR multi-touch screen (USB)

VIDEO CONTROLLER FEATURES

K1 VIDEO CONTROLLER:

- VGA, Dual Link DVI, HDMI & Display Port video inputs
- Image Flip, Picture in/by Picture (18 sizes)
- Text Overlay
- Ethernet (RJ-45) & RS-232 OSD control
- Extended Temperature, conformal coated
- High MTBF

POWER OPTIONS

- 85-260VAC, 47-63Hz
- Mil-Std-704/1275A 28VDC
- 12VDC
- 48VDC

LCD FEATURES

SCREEN SIZE	26.5"
Native Resolution:	1920 x 1920
Brightness:	300 cd/m^2
Contrast Ratio	1000:1
Reponse Time:	14ms
Viewing Angle	R/L: 178˚ U/D: 178˚
Backlight:	LED
Operating Temp:	0˚ to 50˚
Storage Temp:	-20˚ to 60C˚

CHASSIS PLANS
Systems Engineered to Perform

CPX-173 DISPLAY

6U HI-BRIGHT WIDE-SCREEN RACKMOUNT LCD

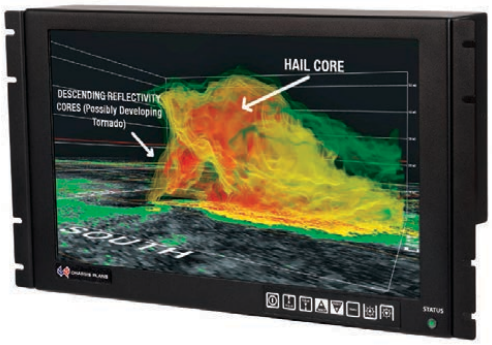
ASSEMBLED IN THE USA

MIL-S 901D

EXTENDED TEMPERATURE

MIL-STD 810

REVISION CONTROL



FEATURES

- 6U High Rugged Military Design
- Designed to Meet MIL-S-901D and MIL-STD-810G
- Long Life Wide-Screen 17.3" LCD with LED Backlight
- 1920 x 1080 Max LCD Resolution
- Extended Temperature (0° to +70°C) Operation
- Hi-Bright Daylight Readable Option
- Bonded Oleophobic Anti-Reflective and/or MIL-STD-461 EMI Overlay
- Two Mil-Grade LCD Controller Options Supporting HD-SDI

DISPLAY SPECIFICATIONS

PHYSICAL DIMENSIONS

- 10.47" (H) x 3.2" (D) x 19.0" (W)
- 9.7 lbs

LCD FEATURES

- 17.3" 1920 x 1080 Display (Wide-Screen High Definition)
- LED Backlight
- 0° to 70°C Operating Temperature
- 400cd/m^2 (Standard) or 1000cd/m^2 (Hi-Bright) Brightness
- 600:1 Contrast Ratio
- 40ms Response
- 160° Viewing Angle

DISPLAY ENHANCEMENTS

- Option for optically bonded EMI shielding & A/R coating
- Option for optically bonded vandal shield with A/R coating
- Option for RinoTouch Resistive touch screen (USB)

The CPX2-173 is a rugged military-grade, high-performance 6U rackmount LCD display offering a wide-screen 1920 x 1080 17.3-inch display with LED backlighting. Optional bonded oleophobic anti-reflective cover glass, ITO EMI filter and other LCD enhancements are available. An enhanced hi-bright display is available for daylight viewability. The CPX2-173 is designed to meet MIL-S-901D and MIL-STD-810G with lightweight 5052-H32 aluminum construction and locking stainless hardware throughout. Electrical components are selected for their inherent ruggedness and mounted to enhance that. An optional RhinoTouch® touch screen is available.

VIDEO CONTROLLER FEATURES

G1 VIDEO CONTROLLER:

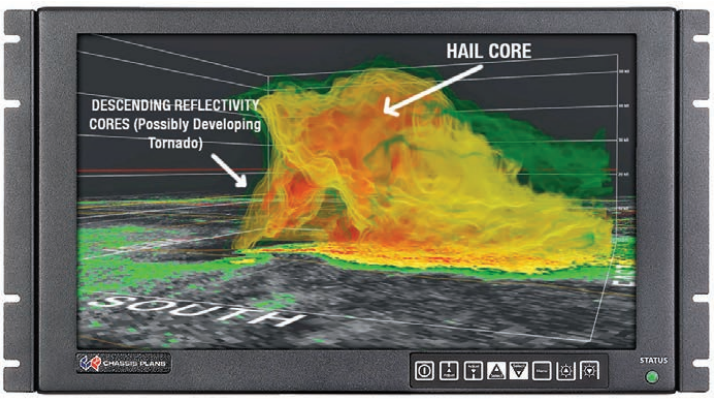
- VGA, HDMI, DisplayPort & HD-SDI video inputs
- Image scaling

H1 VIDEO CONTROLLER:

- VGA, DVI-D, HDMI video inputs
- Image Flip, Picture in/by Picture (18 sizes)
- Text Overlay
- Ethernet OSD control (RJ45)
- Extended Temperature, conformal coated
- High MTBF

J1 VIDEO CONTROLLER:

- VGA, DVI-D, S-Video, Composite video inputs
- Image Flip, Picture in Picture (18 sizes)
- Extended Temperature, conformal coated
- High MTBF



LCD FEATURES

SCREEN SIZE	17.3"	17.3"
Native Resolution:	1920 x 1080	1920 x 1080
Brightness:	400 cd/m²	1,000 cd/m²
Contrast Ratio	600:1	600:1
Reponse Time:	40ms	40ms
Viewing Angle	R/L: 160˚ U/D: 140˚	R/L: 160˚ U/D: 140˚
Backlight:	LED	LED
Operating Temp:	0C˚ to 70C˚	0C˚ to 70C˚
Storage Temp:	-20C˚ to 70C˚	-20C˚ to 70C˚

CONFIGURATOR

FAMILY	MONITOR	VIDEO CONTROLLER OPTIONS	POWER INPUT
CPX2 = 6U Panel Mount Military	1731A = 17.3" LCD (Bonded EMI Shield & A/R Coating)	G1 = VGA, DISPLAY PORT, HDMI & HD-SDI	A = Universal AC Input Adapter
	1731B = 17.3" LCD display (No Cover Glass)	H1 = VGA, DVI=D & HDMI VIDEO Inputs	B = 12 VDC
	1731C = 17.3" LCD (Bonded Vandal Shield & A/R Coating)	J1 = VGA, DVI-D, COMPOSITE & S-VIDEO Inputs	C = 28 VCD (MIL-STD-704/1275)
	1732A = 17.3" High Bright LCD (Bonded EMI Shield & A/R Coating)		D = 12 VDC to Chassis Plans Workstation
	1732B = 17.3" High Bright LCD (No Cover Glass)		
	1732C = 17.3" High Bright LCD (Bonded Vandal Shield & A/R Coating)		

CHASSIS PLANS
Systems Engineered to Perform

CPZ-156T ZERO CLIENT

15.6" RUGGED ZERO CLIENT

ASSEMBLED IN THE USA

MIL-S 901D

EXTENDED TEMPERATURE

MIL-STD 810

REVISION CONTROL

FEATURES

- Processor: Teradici TERA2321 PCoIP
- Memory: 32MB Flash (Firmware), 512MB DDR3
- Certifications: VMware Ready
- Power over Ethernet – Single Cable Operation
- Peripheral(s): (2) USB 2.0 for HID
- Networking: 10/100/1000 Base-T
- IEEE 802.3at Compliant
- Ethernet: 12 Pin Push/Pull
- Peripherals: 6 Pin Push/Pull

DISPLAY SPECIFICATIONS

PHYSICAL DIMENSIONS

- 9.5" (H) x 1.5" (D) x 15" (W)
- 6.0 lbs / 15.0 lbs in Protective Case

LCD FEATURES

- 15.6" LED Backlit TFT LCD w/ Antiglare Hard Coating
- -10° to 60°C Operating Temperature
- 300cd/m^2 (Standard)
- 700:1 Contrast Ratio
- 6ms/3ms (Tr/Tf) Response
- 80/80/70/70deg (L/R/T/B) Viewing Angle

DISPLAY ENHANCEMENTS

- Durable Antiglare Hard Coating
- Borosilicate Strengthened Cover Glass
- Oleophobic Coating

TOUCH PANEL

- 10 Point Multi-Touch Projected Capacitive
- Display Active Area: 13.5" x 7.6"
- 0G Operating Force
- 1920 x 1080 Resolution
- < 25 ms Response Time
- < + / - 1% Accuracy

Designed to be a state-of-the-art secure information device, the CPZ-156T is designed from the beginning for security, first and foremost. Utilizing the industry standard PCoIP Protocol (Teradici Chipset), Chassis Plans' Zero Clients are designed to be compliant with currently available Desktop Zero Clients but in a rugged form factor for deployment abroad. To further ensure security, the Chassis Plans' CPZ-156T is powered through the IEEE-802.3at Power over Ethernet connection. This means a single push-pull connector is all that is required to lose all display information on the Ruggedized Client. As in all true Zero Client Architectures, no information is ever contained on the Client, it is just an encrypted rendering of the actual Virtualized Desktop (VDI) on the server.

POWER CONSUMPTION

- 20W
- IEEE 802.3at Compliant
- 12VDC + / - 5%

ZERO CLIENT SPEC

- Teradici TERA2321 PCoIP
- 32MB Flash (Firmware)
- 512MB DDR3
- VMware Ready
- PCoIP Connected
- (2) USB 2.0 for HID
- 10/100/1000 Base-T
- IEEE 802.3at Compliant
- 12 Pin Push/Pull
- 6 Pin Push/Pull

CKX RACKMOUNT KEYBOARD

FEATURES

- Rackmount - Utilizes 1RU (1.75")
- Waterproof / Dustproof Assembly
- High Quality NEMA4 Sealed 83-Key Keyboard
- Sealed Optical 38mm Trackball
- Ergonomic Wrist Rest
- Lightweight Aluminum Construction
- Solid Bearing Slides
- Captive Thumb Screws

MIL-S 901D

EXTENDED TEMPERATURE

ASSEMBLED IN THE USA

MIL-STD 810

REVISION CONTROL

CKC RACKMOUNT KEYBOARD

FEATURES

- Rackmount - Utilizes 1RU (1.75")
- High Quality 83-Key Keyboard
- Optical Track Ball or Touch Pad
- Ergonomic Wrist Rest
- Lightweight Aluminum Construction
- Solid Bearing Slides
- Captive Thumb Screws

REVISION CONTROL

ASSEMBLED IN THE USA

MIL-STD 810

CHASSIS PLANS
Systems Engineered to Perform

RUGGED MILITARY-GRADE

HIGH PERFORMANCE STORAGE

High-performance, high-speed, enterprise-grade disk storage delivering a fast response and the right intelligence to battlefield decision makers is what today's command and control infrastructure is all about. Today's C4ISR infrastructure is an incredibly complex system of hardware, software and networks – all working together to Find, Fix, Track, Target, Engage and Assess the enemy in as short a time as possible. Intelligence fused from multiple input sources such as SIGINT, IMINT and MOVINT create a complete and integrated picture of the battlefield which requires large amounts of reliable data storage. It is essential that the network centric storage systems used to support these mission-critical applications provide maximum uptime and complete redundancy to ensure decision makers have more information all of the time.

CHASSIS FEATURES

- Wide Range of Drive Options
- 2U Chassis with 12 or 24 Drives
- Built-In Redundancy in Controllers and Power Supplies
- Redundant, Hot Swap Components
- 2-½" and 3-½" SAS, SATA or SSD Drives
- 1 To 3 Terabyte Energy-Saving Enterprise-Grade Drives
- DC Power Options
- Tested To Meet NEBS Level 3
- Tested To Meet MIL-STD-810F

CONTROLLER FEATURES

- RAID 0, 1, 3, 5, 6, 10, 50
- Optional Snapshot Capability
- Additional Data Protection with Full Volume Copies
- Built-In Schedule Capability
- Dual or Single Raid Controller or JBOD
- Data Rates Up To 8GB/Sec FC or 6GB/Sec SAS
- OS Support - Windows, Linux, Solaris
- Low Latency Cache Mirroring
- Battery-Free Cache Backup
- 1.6GB/Sec Read / 1.3GB/Sec Write
- Same Sector Cache Hits Of 375,000 IOPS

HIGH PERFORMANCE 2U RAID DISK ARRAYS

CHASSIS PLANS
Systems Engineered to Perform

SA2U-12EHP

- Ultra-High IOPS Performance - 375,000 IOPS
- Data Rates Up To 4Gb/sec
- Rugged - Tested to NEBS Level 3 and MIL-STD-810F
- 12 SAS, SATA or SSD Drives
- Redundancy Built In - Drives, Controllers & Power
- Supports Raid 0, 1, 3, 5, 6, 10, 50 or JBOD
- Full Volume Copies and Snapshot Capability

SA2U-24

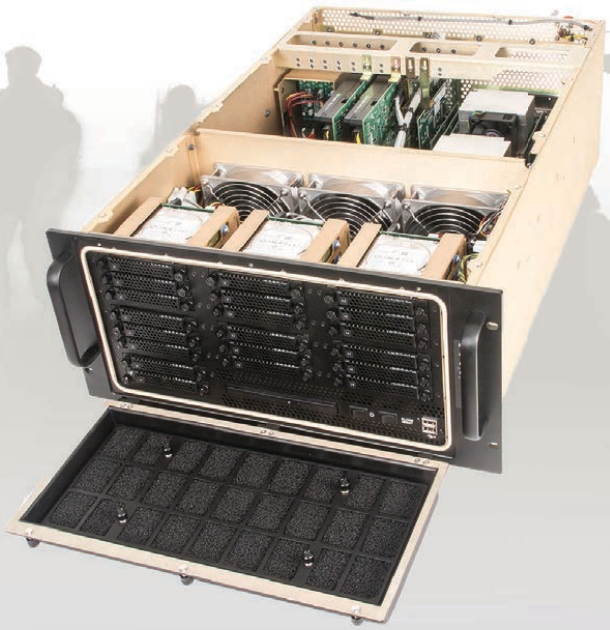
- 24 2-1/2" SAS, SATA or SSD Drives
- Data Rates Up To 3Gb/sec
- Can Daisy-Chain Up To 7 Additional Units
- Redundancy Built In - Drives, Controllers & Power
- Supports Raid 0, 1, 3, 5, 6, 10, 50 or JBOD
- Full Volume Copies and Snapshot Capability
- Low Latency Cache Mirroring

SA2U-4000

- 24 2-1/2" SAS or SSD Drives
- Data Rates Up To 8Gb/sec
- Rugged - Tested to NEBS Level 3 and MIL-STD-810G
- Redundancy Built In - Drives, Controllers & Power
- Supports Raid 0, 1, 3, 5, 6, 10, 50 or JBOD
- Full Volume Copies and Snapshot Capability
- 99.999% Uptime Availability

SA2U-12EHP

SA2U-24 / SA2U-4000



DoD PROGRAMS AND APPLICATIONS

Navy

Ship Signal Exploitation Equipment
UCLASS X-47B
CVN's
DDG's
F-18 Flight Simulator
Rolling Airframe Missile (RAM)
Fleet Replenishment Oilers (T-AO's)
Global Hawk Ground Control Station
Navigation Sensor System Interface (NAVSSI)
Low Band Universal Communication System (LBUCS)
Computer Open System Implementation Program (COSIP)
Next Generation Command and Control Processor (NGC2P)
Sea Wolf Class Submarine Sonar Recording System
Shipboard Digital Voice Recorder
Virginia Class Submarine LCD Display
Littoral Combat Ship (LCS)
LCS Bridge Simulator
Ship Self Defense Integrated Combat System
Combat Environment Simulator
Long Range Anti-Ship Missile System
Common Missile Compartment (Columbia Class Submarines)
SeaRAM
MH-53 Sea Dragon

Air Force

F-35 Matrix System
KC-46 Tanker
Radar Test Station
Joint Range Extension (JRE)
Pocket-J System
Firebird
RC-135
F-16 Flight Simulator
F-22 Flight Simulator
Highlighter Beechcraft King Air A-200T
Distributed Common Ground System (DCGS)
Ground Based Mid-Course
Gorgon Stare
Peace Dragon
Control and Reporting Center Operations Module (OM Mod)
Missile Flight Testing and Telemetry
Joint Air to Surface Standoff Missile
GPS III
Scorpion Ground Station
COSMIC
Joint Threat Emitter (JTE)
Integrated Base Defense
Battle Control System

Army

AH-64 Apache
Hunter UAV
Shadow UAV GCS
J-LENS
Kestrel WAPS
Predator
Patriot (PAC-3)
Vigilant Pursuit
Desert Owl IED Sensor Systems
Saturn Arch IED Sensor Systems
Radiant Falcon DHC-8 Aircraft
Tactical Data Link Integration Exerciser (TIGER)
Tactical Airspace Integration System (TAIS)
Tactical Situation Server
Gray Eagle UAS GCS
Javelin Weapon System
Instrument Radar Support Program (IRSP)
Aircraft Survivability Trainers
Dual Carrier Satellite Terminal
UH-60M Black Hawks
JSOC Ft Bragg
Enhanced Medium Altitude Reconnaissance and Surveillance System (EMARSS)

Marine Corps

Tactical Data Link Integration Exerciser (TIGER)
Joint Range Extension (JRE)
F-18 Flight Simulator
F-18 Radio Controller
VIPER-T
Large Aircraft Infrared Countermeasure CH-53E Super Stallion (LAIRCM)

REFERENCE GUIDE

CHASSIS PLANS®
Systems Engineered to Perform®

CHASSIS PLANS®
Systems Engineered to Perform®
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SYSTEMS & SOLUTIONS