P1496R 1U Rugged Xeon Server

westek
TECHNOLOGY

- ▶ **Rugged 1U System Server**
- ▶ **Latest Intel® Xeon Processors**
- ▶ **Low Depth Compact Chassis**
- ▶ **AC or DC Power Supply**
- ▶ **Shock and Vibration Tolerant**
- ▶ **Rear Rugged Connectors**
- ▶ **Front Access USB Ports**
- ▶ **Low Power Consumption**

Westek's P1496R Rugged 1U Computer Server is designed for use in high and low temperature environments that are subject to shock and vibration. Westek's range of Rugged Servers are ideal for use in hostile environments including military COTS use where space is at a premium.

The server is designed to comply with MIL-STD-810, MIL-STD 461 and DEF STAN 59-411 for use in aircraft, mobile or fixed land based systems, transportation and naval environments below decks as well as general use where a compact ruggedized system is required.

The P1496R provides one or two multi-core Intel® Xeon® processors in a compact rugged 1U low depth chassis, with automatic temperature dependent fan control system and hot swappable RAID protected rugged disk drives. The P1496R is manufactured from ultra tough highly corrosion resistant aluzinc plated steel with optional additional anti-corrosion paint finish for marine environments.

A typical specification provides :

- ▶ One or Two Latest Technology Intel® Embedded High Performance Xeon Multi-Core Processors
- ▶ Dual Gbit Ethernet interfaces (options for up to 6 and 10Gbit)
- ▶ Up to Six Hot Swap Disk Drives in Rugged Carriers
- ▶ Up to 256GB Memory
- ▶ Options for Multiple USB and Serial Ports
- ▶ Rear Rugged MIL SPEC I/O Connectors
- ▶ Front Door Access Lifetime Cleanable Stainless Steel Dust Filters
- ▶ Integrated Video Support with Options for High Performance DVI Graphics

An automatic electronic temperature dependant fan speed controller ensures high airflow at elevated operating temperatures and extend long term reliability. Multiple fans ensure high airflow from front to rear.

The removable disk carriers are shock mounted, and accessible behind rugged front doors with integrated lifetime stainless steel mesh dust filters to protect from environmental contamination. Solid State (SSD) disk drives, and conformal coated electronics provide a wide operating temperature range in humid environments.

Westek also offers a full range of military specification test and verification services to provide independent fully certified testing to environmental, EMC and EMI standards.

Server Engine

- Single or Dual Intel® Embedded E5-2600L V3/V4 Series Multi-Core Xeon Processors
- Long Life Embedded Processors with 6, 8, 10 or 12 Cores Each
- Intel® C612 Express Chipset
- Up to 256GB DDR4 Memory
- Dual Gbit Ethernet LAN Ports*
- Optional IPMI Remote Management LAN Port*
- On Board VGA Graphics
- Up to 8 x USB 2.0 / 2 x 3.0 Ports*
- Up to 8 RS232 Serial Ports*
- USB Mouse and Keyboard Interface

Rear Connector Examples with retained caps shown in place below

* Note that actual I/O available is a customisable option based on build configuration and rugged rear connectors. The unit has a custom rear panel allowing a range of metal rugged connectors to be provisioned at manufacturing time depending on what I/O signals are required by the application. Circular MIL, D Type, or semi rugged options are available.

Storage

Options for 1, 2 , 4 or 6 hot swap removable 2.5" SATA III wide operating temperature SSD up to 2TB+ (MLC) capacity each. Two front access USB ports may also be used to connect temporary additional storage such as external disk or CD/DVD/Bluray or USB memory stick for data transfer. 2 x hot swap SAS bays are also available as an alternative.

Environment

Operating** :
Temperature Range : -20℃ to +55℃
Humidity : 10 to 95% non-Condensing
Vibration : 2G+ with solid state disks 5Hz to 500Hz
Shock: 20G / 11mSec
Altitude: -300 to +5000 metres

Non-Operating** :
Storage Temperature -40℃ to +75℃
Humidity : 10 to 95% non-Condensing
Vibration : up to ~4G 5Hz to 500Hz
Shock : 40G / 11mSec
Altitude –300 to +10000 metres

** With conformal coated electronics and wide temperature SSDs

Power Supply

Rugged rear MIL power input connector, rear earth post, internal EMI filtering tested to meet MIL-STD-461F
High reliability power supply with Options for 100V to 265V AC 47-400Hz or 18V to 36V DC
Approximately 150 Watts nominal power consumption depending on configuration.

Physical

- Dimensions: 431(W) x 44(H) x 550(D) mm Corrosion Resistant Tough Aluzinc Plated Steel Chassis
- Weight (Net): approximately 11Kg (depending on build options and connectors)
- CE Compliance: EEC EMC & Safety.
- Compliant with MIL-STD 810G environmental and MIL-STD 461F EMI standards.
- RoHS Compliant