

P4898R Rugged MIL Storage Server

- ▶ Rugged MIL Server or Storage Appliance
- ▶ Sealed Tough Stainless Steel Main Case
- ▶ 8 Hot Swap Disk RAID Array
- ▶ Wide Operating Temperature Range
- ▶ Shock and Vibration Tolerant
- ▶ IP55 Dust and Water Resistant Front Panel
- ▶ Rugged Front Access MIL Connectors
- ▶ Optional Integrated NAS and iSCSI Support



Westek's P4898R Low Depth Rugged RAID Server complies with MIL-STD-810G and DEF-STAN 00-35 for use in hostile environments. Its innovative design provides front access to all connections as well as the hot swap disk drive bays.

The free standing tough stainless steel outer case work provides protection from the environment, and the inner plated aluminium chassis provides light weight and excellent EMI / EMC performance to comply with MIL-STD 461 and DEF STAN 59-411.

The P4898R Rugged Storage Server system is ideal for general purpose server applications and also includes a high performance hardware RAID array for data protection and increased disk I/O performance. There is optional feature-rich integrated NAS and iSCSI support to enable use as a dedicated data storage appliance.

A typical specification includes :

- ▶ Intel® Embedded Multicore Server Engine (Choice of Processors and Memory Capacity)
- ▶ Dual 10/100/1000 Gbit Ethernet Interfaces plus Ethernet RAID Management Port
- ▶ Up to 8 x 2.5" Hot Swappable Solid State Disk Drives (16TB raw with 2TB disks)
- ▶ Supports RAID 0, 1, 10, 5, 6, Single Disk or JBOD
- ▶ Disk Roaming, Dynamic Expansion, Hot Spare and Auto Rebuild
- ▶ Wide Ranging Redundant AC Power Supply (DC Options Also Available)
- ▶ Front Rugged MIL Specification Connectors with Retained Dust Caps
- ▶ Optional Feature Rich NAS and iSCSI SAN Support
- ▶ Conformal Coated Electronics For High Humidity Environments

These systems are manufactured by Westek Technology in the UK and may be customised to meet your exact requirements through Westek's rapid ISO9001:2008 design and manufacturing capabilities.

Westek also offers a full range of military specification test and verification services to provide independent fully certified testing of tolerance to shock, vibration, operating environment, EMC emissions, and EMI compliance etc.

Compliance Certification

Formal compliance testing, certification and report services for specific custom builds are available. The standard build is designed to meet the following specific requirements.

► MIL-STD 810F Environmental Test Criteria

Operating Tests :

Low Temperature	Method 502.4 Procedure 2	-20 °C or -30 °C
High Temperature	Method 501.4 Procedure 2	+55 °C
Humidity	Method 507.4	5 x 48 hour cycles
Vibration	Method 514.5 Category 4	10—500Hz 1.04Grms
Shock	Method 516.5	20G 11mSec TPS 3 axis

Non Operating Tests

Shock	Method 516.5	40G 11ms TPS 3 axis
Low Temperature storage	Method 501.4	-40 °C
High Temperature Storage	Method 502.4 Procedure 1	+70 °C
Vibration	Method 514.6 Category 4 fig 514.6C-VI	5Hz to 500Hz @ 2.24Grms

► MIL-STD-461 EMC and EMI Test Criteria

CE102	Conducted Emissions	10KHz - 10MHz
CS101	Conducted Susceptibility Power Leads	30Hz - 150KHz
CS114	Conducted Susceptibility Bulk Cable Injection	10KHZ - 200MHz
RE102	Radiated Emissions Electric Field	10KHz - 18GHz
RS103	Radiated Susceptibility Electric Field	2MHz - 18GHz

Additional test, certification and report services also available including DEF-STAN 59-411. Please contact Westek for your specific requirements.

Actual specification depends on disk type fitted to the unit:

Typically :

Industrial Specification SSD , up to 4G peak and -20 °C to +55 °C Operating Range
Maximum available capacity 2TB per disk, wide operating temperature.



Sever Features

- ▶ Processor Choice of Intel® Embedded Long Life Intel® i3, i5, i7 or Single / Dual Multicore Xeon
- ▶ Integrated VGA or DVI Graphics Support
- ▶ Dual Rugged Gbit Ethernet Ports (options for more / 10Gbit)
- ▶ Remote Ethernet Management Port Option
- ▶ Automatic Heater System for Operation at Low Temperatures
- ▶ Filtered IP55 Compliant Forced Air Cooling
- ▶ Temperature Dependant Electronic Speed Control to Extend Fan Life
- ▶ Front Rugged USB 3.0 Ports
- ▶ Supports Windows 7, 8.1, 10 Server 2008 and 2012, VMware and Linux Operating Systems.
- ▶ Optional DSS V7 Integrated NAS and iSCSI SAN Support



P4898R water ingress test

Storage

Support for up to 8 x 9.5mm wide hot swap 2.5" Solid State Disks configured in RAID 0, 1, 10, 5 or 6. Front access hot swappable 2.5" drive bays via sealed removable panel.



Environment

Specification with industrial SSD disks fitted and standard build specification.

Operating :

Temperature Range: -20°C to +55°C

Humidity: 10 to 95% Humidity Non-Condensing

Vibration: up to ~3G peak with SSD 10Hz to 500Hz

Shock: 20G / 11mSec

Altitude: -300 to +5000 metres

Non-Operating :

Storage Temperature: -40°C to +70°C

Humidity: 10 to 95% Humidity Non-Condensing

Vibration: up to 4G peak 5Hz to 500Hz

Shock: 40G / 11mSec

Altitude: -300 to +12000 metres

Power

Auto-ranging AC power supply, 96 to 264V AC 49 to 63Hz with EMI Filtering

Typical Power Consumption 250W, 400W maximum.

Options for 12V DC, 24V DC, 48V DC, 120V DC and 400Hz AC variants also available.

Physical

Dimensions: Rear 4U Case 428mm (W) x 176mm (H) x 498mm (D)

Front Panel 483mm (19" rack compliant) x 177mm (H : 4U) x 43mm (D) including handles and I/O

Weight (Net): Approximately 28.5Kg with 6 disks fitted. ~35Kg Packaged in Shipping Box

CE Class B Compliance: EEC EMC & Safety

Designed to Meet UL and FCC Requirements

RoHS Compliant

Meets Relevant Parts of MIL-STD 810G, MIL-STD 461F and Equivalent DEF STANs

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Specifications subject to change without notice

