



XRS 3U S8 Series

EXTREME RUGGED
EDGE SERVERS



TECHWAY
SIGNAL VISION SYSTEM

19 Avenue de Norvège
91140 Villebon sur Yvette
FRANCE

■ info@techway.com
☎ +33 (0)1 64 53 37 90

www.techway.com

www.gomarugged.com

XRS 3U S8 Series

Extreme Rugged Edge Servers

The **XRS Series** is a family of Extreme Rugged Servers optimized for Edge applications, where they offer superior robustness and high-performance computing technology.

The **XRS 3U S8 Series** is powered by single or dual socket 5th/4th Gen Intel® Xeon® Scalable Processors that bring significant advancements in core counts, memory capacities, AI and machine learning acceleration, advanced security features, and PCIe 4.0/5.0 support, establishing the series as a foundational element for the future of high-performance and AI-driven Edge applications.

The integrated IPMI services enhance Edge operations by supporting monitoring, control, and management functions, sending alarm notifications in case of critical events.

This series features a 3U milled aluminium chassis providing unmatched resistance and torsional strength essential for Edge computing sites, which often face extreme operational demands. It offers configurations with depths of 470mm or 550mm for standard or round MIL-grade I/O connectors, respectively, catering to the specific needs of Edge infrastructure.

Capable of accommodating up to six full-height, full-length PCIe boards, including GPUs and FPGA modules, and designed for high-density storage with the capacity for up to twelve removable SSDs, the **XRS 3U S8 Series** is robust and versatile. It also includes air filters and protective horizontal doors with thumbscrews for its front panel, with an optional key lock or a door-less variant available upon request, ensuring secure and reliable operation.

Qualified according to MIL-STD-810G for temperature, shocks, and vibrations, and conforming to MIL-STD-461 for EMI/EMC, the **XRS Series** Extreme Rugged Servers are robustly built to meet the stringent requirements of Edge computing environments.

 **High Performance Dual Intel® Xeon® Architecture**

 **IPMI Based Management**

 **Extreme Rugged Aluminum Chassis**

 **Up to 12x 2.5" SSD**

 **Optional round MIL connectors**

 **MIL Grade Qualifications**

Technical Specifications

System	
CPU	5 th Gen Intel® Xeon® / 4 th Gen Intel® Xeon® Scalable Processors, Dual Single Socket LGA-4677 (Socket E) up to 270W TDP
Memory	Up to 4TB ECC RDIMM, DDR5-4800MHz, 16 DIMM slots
Chipset	Intel® C741
Network Connectivity	1x Dedicated IPMI LAN port 2x 10GbE with RJ45 connectors
Serial	1x COM Port
USB	3x USB 2.0 ports (2 via headers; 1 Type A) 6x USB 3.0 ports (4 rear; 2 via headers)
Storage	Internal: 2x M.2 NVMe PCIe 4.0 x2; M-Key, 2280/22110 2x SATA Disk on Module (RAID 0,1) Removable: Up to 6x 2.5" SAS SSD or Up to 12x U.2 NVMe SSD or Up to 12x 2.5" SATA SSD
TPM	TPM Header
I/O connectors	2x 10 GbE LAN, 1x BMC LAN, 4x USB 3.0, VGA, COM (available on the rear panel)
Expansion slots	2x PCIe 5.0 x8, 4x PCIe 5.0 x16
Operative Systems	Windows® 11 IoT Enterprise; Windows® 10 IoT Enterprise LTSC; Windows Server 2022; Windows Server 2019; RHEL 8.5 64bit; Ubuntu 20.04.6 LTS 64bit; CentOS 8.5 64bit;
IPMI	IPMI2.0, SPM, Watchdog; SNMP and e-mail alarms and notifications
Remote Monitoring	Monitoring, control and management functions (fan speed, temperature, voltage, redundant power failure, power consumption, disk health, raid health, and memory health)
Power Section	
Power Input	AC or DC input, redundant PSU. Optional EMC Filter and MIL D38999 connector with single power supply.
Mechanical Features	
Dimensions (W x D x H)	Width 483mm Depth 470mm - standard I/O ports and power input / MIL power input Depth 550mm - MIL grade connectors on I/O ports Height 132,5mm - 3U rack
Material	Milled Aluminum chassis with surface passivation treatment; AISI316L Stainless steel rear panel
Weight	<18,5 Kg
Colour	Black / RAL 9005 - Powder Coating
Mounting	3U 19" rackmount chassis with bridge handles.
Front Panel	IP30 double-door front panel with air filters. Optional door-less front panel Power ON with led; 2 x USB 3.0; Remote Battery Holder
Rear Panel	Standard connectors, Optional D38999 MIL type connectors
Environmental Features	
Operating Temperature	Standard: -5°C to +55°C according to MIL-STD-810G Change 1 (501.6 & 502.6) Extended: -20°C to +60°C (depending on configuration)
Storage Temperature	-40°C to +71°C according to MIL-STD-810G Change 1 (501.6 & 502.6)
Humidity	5% to 95% non-condensed according to MIL-STD-810G Change 1 (506.7 Procedure II)
Fungus	Conformal coating on request
Shock	40g, 11ms functional shock on each direction, according to MIL-STD-810G Change 1 (516.7 Procedure I)
Vibrations	Functional : MIL-STD-810G Change 1 (514.7, Category 20 Procedure I - Wheeled vehicle) Transportation: MIL-STD-810G Change 1 (514.7, Category 7 Procedure I - General exposure)
EMC / Electromagnetic Compatibility	According to MIL-STD-461G with EMI Filter and MIL type connectors on power input at least





Strada Antica di Collegno, 225
10146 Torino - Italia
Tel. +39 011.7725024

www.gomarugged.com

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