

COBALT™ RR-2500



- Single-socket 4th/5th generation Intel® Xeon® SP / AMD EPYC™ 9004/9005 processors
- Designed to meet extreme temperatures, shock, vibration, high altitudes and more
- Up to 6x front access, hot-swappable and tool-less U2/U3 NVMe SSDs
- Up to 7x PCIe expansion slots for flexible I/O acceleration
- Long lifespan
- ITAR Free

Opening the door to new possibilities

Very few high-end servers can withstand the higher operating temperatures required for demanding applications to run reliably in harsh environments and fit into a constrained space or unconventional cabinet. This is where the Cobalt™ RR-2500 rugged rackmount server shines. Kontron's compact 2U, 20-inch-deep platform opens the door to high performance compute in true Edge environments, way beyond the common server can.

Cobalt™ RR-2500 Product Overview

Designed to meet NEBS/ETSI and MIL-STD 810/167/461 certifications, the Cobalt™ RR-2500 supports any fixed wireless or mission-critical use case that requires High Availability. Operators in military and defense can rely on a ruggedized yet sophisticated, highly available server unsusceptible to dust, elevated altitudes, extreme temperatures, and vibrations. Any demanding application for AI Inference, High Performance Computing (HPC), Security, Data Analytics, Disaster Recovery, and other services, paired with the Cobalt™ RR-2500 bring workloads previously limited to centralized, datacenter-like environments – to the network edge.

The 7 – 10 year lifespan of the Cobalt™ RR-2500 ensures consistent performance and stability longer than the standard 3 – 5 year server does. This deepens compatibility and integration with existing infrastructure and reduces the frequency of replacements and

maintenance, leading to decreased CAPEX and OPEX expenses and increased cost efficiency within organizations. Beyond the end-of-life date, dedicated Long Term Services are available to guarantee procurement, inform of significant evolutions of monitored frozen configurations, and propose best strategies to protect the future.

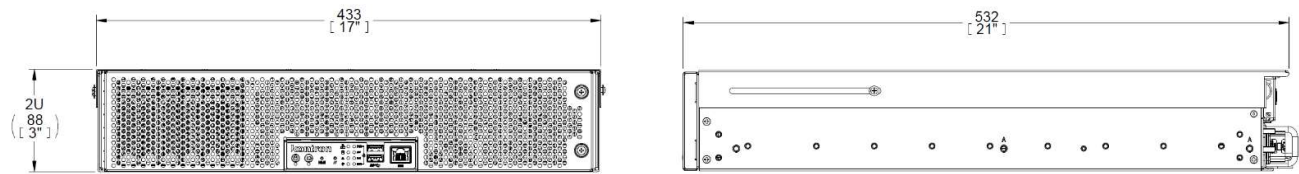
The Cobalt™ RR-2500 rugged rackmount server combines performance, ruggedness and reliability in a compact, high-density system design supporting 4th/5th generation Intel® Xeon® SP and AMD EPYC™ 9004/9005 processors and up to 8x DDR5 DIMMs (one DIMM per channel). Its High Availability capabilities are due to state-of-the-art features including hot-swappable and redundant power supply modules and fans, up to 6 x hot-swappable U.2/U.3 NVMe SSDs, and 2 x M.2 NVMe internal storage SSDs or 2280 flash storage support. For added versatility, the Cobalt™ RR-2500 bolsters up to 7 x PCIe accelerator cards. For advanced power management, any PCIe card that consumes more than 75W, such as a GPU, can be directly fed by an internal power distribution board providing auxiliary power. Additionally, the scalable architecture of the Cobalt™ RR-2500 makes it compatible to a variety of operating systems.

Designed and manufactured in Canada, Kontron Cobalt™ RR-2500 is ITAR and BAFA free.



SERVER-CLASS PROCESSOR & MEMORY ARCHITECTURES	Intel® Xeon® AMD EPYC™	4th & 5th Intel® Xeon® SP up to 64C/350W* & Intel® C741 (PCH) 8x Independent DDR5 RDIMM/UDIMM channels 8x DDR5 DIMM sockets, up to 5600 MT/s, max. 768GB AMD EPYC™ 9004/9005 processors up to 128 cores* 8x Independent DDR5 RDIMM channels 8x DDR5 DIMM sockets, up to 5600 MT/s, max. 768GB
CONNECTIONS	PCIe ADAPTER SLOTS SUPPORT SERIAL PORTS VIDEO PORTS USB 3.0 PORTS USB 2.0 PORTS MANAGEMENT PORT BATTERY TAM	Supports two risers (up to 4 FL/FH cards) and 3 LP adapters for a total of 7 PCIe Gen5 I/O cards 3x PCIe LP slots on motherboard 1x PCIe x16 Gen5 slots 1x PCIe x8 Gen5 slots 1x PCIe x8 Gen5 slot reserved for NVMe HBA 2x PCIe riser options 2x slot FL/FH PCIe x8 passive (right side - Gen5) 2x slot FL/FH PCIe x8 passive (left side - Gen5) 1x slot FL/FH PCIe x16 passive (right side - Gen5) 1x slot FL/FH PCIe x16 passive (left side - Gen5) RJ-45 serial connector in front Display Port rear (Intel) / DB15 rear (AMD) 4x rear (Intel) / 2x rear (AMD) 1x front 1x rear RJ-45 connector to access ASPEED AST2600 BMC 1x front removable CMOS battery TAM dry relay connector
NETWORKING	ETHERNET 1/2	2x RJ45 10GbE PXE Support & Teaming
STOCKAGE	TYPE REDUNDANCY INTERNAL EXTERNAL SD FLASH STORAGE	Up to 6x U.2/U.3 hot-swappable NVMe SSDs Software RAID 0, 1 and 10 2x M.2 NVMe storage 2280 (80mm) flash storage 6x front accessible and tool-less trays & carriers for SSDs 2x front accessible Secure Data flash media devices
POWER SUPPLY	STANDARD AND REVERSED AIRFLOW	2x 2500W per PSU / AC or DC / N+1 redundant / hot-swappable AC: 120-248V / DC: -48V 80 PLUS® Titanium certified
MANAGEMENT & SECURITY	REMOTE MANAGEMENT SECURITY	Dedicated management NIC allowing secure remote access and control from the network; IPMI 2.0 and SNMP v2c and v3 compliant TPM 2.0 certified EAL 4+
MECHANICAL	H W D IP LEVEL COOLING	3,45 in (87,6 mm) x 17,14 in (435,3 mm) x 20 in (508 mm) IP20 Fan cooled
ENVIRONMENTAL	TEMPERATURE HUMIDITY ALTITUDE CHOCK AND VIBRATION ELECTROSTATIC DISCHARGE (ESD) ROHS	Operating: - 5 °C to 55 °C (41 °F to 131 °F), NOTE: 105W CPU or less for 55 °C Non-operating: - 40 °C to 70 °C (-40 °F to 158 °F) 95%, non-condensing at temperatures of 23 °C (73 °F) to 40 °C (104 °F) Designed to meet or exceed Telcordia GR-63 and ETSI EN 300 019 humidity requirements for operating, transport and storage environments. -60 m to 1,800 m (-197 ft to 5,906 ft) without temperature derating 3,900 m (12,795 ft) 40 °C Meets or exceeds Telcordia GR-63 and ETSI EN 300 019 requirements for operating transport and storage environments Meets or exceeds NEBS and CE mark requirements for ESD immunity Tested ESD levels up to 15kV air discharge and 8kV contact discharge Compliant to RoHS Recast Directive 2011/65/EU
CERTIFICATIONS and COMPLIANCES	US/CANADA EUROPE INTERNATIONAL	CSA Certified to UL 60950-1 2nd Edition and CSA C22.2 No. 60950-1-07 2nd Edition CE mark to Low Voltage Directive 2014/35/EU and EN 62368-1 CB report and certificate to IEC 62368-1

* Depending on operating temperature target.



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