

CG2500

Rugged Rackmount Platform



High endurance 2RU with 20" short depth and 19" chassis

- Single-socket 4th/5th Generation Intel® Xeon® SP & AMD EPYC 9004/9005 processors
- 6x hot-swap, tool-less, U2/U3 SATA/NVMe SSDs
- Up to 7x PCIe slots for flexible I/O acceleration
- Designed to meet NEBS/ETSI MIL-STD 810/167/461 certifications
- Long lifespan

Optimized for mission-critical industries

The CG2500 is a robust, scalable platform designed to meet the demands of modern decentralized, edge computing environments. It features a short-depth of 20" and supports both Intel® Xeon SP 4th & 5th generations and AMD EPYC 9004/9005 processors packaged in a 2RU chassis, delivering advanced processing power and versatility. Its tool-less customizable components, including U2/U3 drives, power supply units, and CMOS battery with front access, ensure ease of maintenance. With up to 7x PCIe slots and a flexible architecture, the CG2500 is built to meet stringent industry standards such as NEBS and MIL-STD 810/167/461 for mission-critical use cases.

The CG2500 stands out for its extended lifespan and stable component availability, offering an 8-10 year lifecycle that far exceeds the typical 3-5 year lifespan of standard servers. This extended longevity translates to reduced maintenance and replacement needs, allowing organizations to optimize their CAPEX and OPEX expenses. By enhancing compatibility with existing infrastructure, the CG2500 reduces operational disruptions, increases cost efficiency, and ensures stability for long-term deployments in industries such as defense, manufacturing, energy, mining, medical, avionics, and transportation where continuous uptime and reliability are crucial.

Additionally, the CG2500 platform excels in deployment flexibility and scalability, making it ideal for handling diverse edge computing needs, including AI at the network edge. By processing data directly on-site, closer to workers, the CG2500 reduces latency, enhances data privacy, and cuts bandwidth costs. This ability to function independently of central servers ensures resilience, even in cases of network disruptions, making it a future-proof solution tailored to specific industry requirements.



SINGLE SOCKET SERVER MOTHERBOARD	Benefit from both Intel and AMD architecture options: Intel® Xeon® SP 4th and 5th Gen processors are optimized for continuous, intensive workloads like AI, data analytics, and databases, with a balance of performance and power efficiency. AMD EPYC processors excel in power-efficient, highly-threaded, and virtualized environments, making them ideal for high-core count and virtualization applications.
EIGHT DDR5 DIMM MEMORY SLOTS SUPPORTING UP TO 5600 MT/S (MAXIMUM SPEED DEFINED BY PROCESSOR USED)	Support one DDR5 RDIMM per channel, total eight channels to maximize memory speed.
EIGHT TO TEN YEAR PLUS LIFECYCLE SUPPORT*	Reduced customer risk with fewer platform transitions and greater lifecycle stability.
SHALLOW 20-INCH (508 MM) DEPTH	Increases installation and service flexibility. Allows for deployment in compact or limited-space environments, such as telecom closets, edge computing sites, or small data centers.
2500W AC OR DC HOT-SWAP, REDUNDANT POWER SUPPLIES WITH PMBUS SUPPORT	Flexibility of either AC or DC power installation. Power supply unit is 80 Plus Titanium certified and supports PMBus power management.
HOT-SWAP, REDUNDANT FANS	Greater uptime and improved serviceability.
DUAL REAR-PANEL 10GBE NIC (CU) PORTS	Two on-board NIC ports are standard.
DRIVE TRAYS FOR UP TO SIX HOT-SWAP 2.5-INCH NVME/SATA SSD/HDD	Improved serviceability and scalability with hot-swap drives. Enhanced data redundancy with a variety of RAID options. Improved drive reliability due to proprietary rotational vibration suppression technology. SATA/NVMe HDD/SSD are supported.
INTEGRATED INTEL PCH RAID (SW) 0/1/10	Data storage virtualization that combines the disk drive components into a logical unit for data redundancy
UP TO SEVEN PCI SLOTS FOR FLEXIBILITY AND ADDITIONAL I/O	Increase server flexibility and performance with high number of PCIe Gen4** slots.
REMOTE MANAGEMENT	Lights-out management via a dedicated management NIC. This allows secure remote access and control from the network; IPMI 2.0 and SNMP v2c and v3 compliant
CUSTOMIZABLE FRONT BEZEL	Adaptable to customer needs and environment.

* From launch
** Gen5 under investigation

Optional Features and Benefits

ADVANCED REMOTE MANAGEMENT	Advanced management features including remote KVM and virtual media.
FLASH MEMORY SUPPORT	Choice of multiple flash memory options are available: Internal bootable M.2 flash drive; Two (2) front accessible SD flash media devices; SATA solid state drives

Technical Specifications

SYSTEM	CG2500	High endurance, short depth 20", 2RU 19" chassis server
SERVER-CLASS PROCESSOR & MEMORY ARCHITECTURES	INTEL	4th & 5th Intel® Xeon® SP up to 64 cores / 350 W* 8x Independent DDR5 RDIMM/UDIMM channels
	AMD	8x DDR5 DIMM sockets @ transfer rate 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 @ transfer rate up to 4800 MT/s, max. 768GB
CONNECTIONS	PCI-E ADAPTER SLOT SUPPORT	Supports two risers (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 2 PCIe riser options 2 slot FL/FH PCIe x8 passive (right side - Gen5**) 2 slot FL/FH PCIe x8 passive (left side - Gen5**) 1 slot FL/FH PCIe x16 passive (right side - Gen5**) 1 slot FL/FH PCIe x16 passive (left side - Gen5**)
	SERIAL PORTS	RJ-45 serial connector in front *required front panel rev.
	VIDEO PORTS	Display Port rear (Intel) / DB15 rear (AMD)
	USB 3.2 GEN1 PORTS	4x rear (Intel) / 2x rear (AMD)
	USB 2.0 PORTS	1x front *required front panel rev.
	MANAGEMENT PORTS	1x rear RJ-45 connector to access ASPEED AST2600 BMC
	BATTERY	1x front removable CMOS battery
	TAM	TAM dry relay connector

NETWORKING	ETHERNET 1/2	2x RJ45 10GbE PXE Support & Teaming
STORAGE	TYPE REDUNDANCY INTERNAL EXTERNAL SD FLASH STORAGE	Up to six 2.5-inch hot-swap SATA/NVMe HDD/SSD Software RAID 0, 1 and 10 2x M.2 NVMe storage 2280 (80mm) flash storage Carrier with six HDD / SSD tray Two (2) front accessible Secure Data flash media devices are supported
POWER SUPPLY	STANDARD	2x 2500W per PSU / AC or DC AC: 120-248V / DC: -48V 80+ Titanium Certified
MECHANICAL	HEIGHT X WIDTH X DEPTH WEIGHT	3.45 inches (87.6 mm) x 17.14 inches (435.3 mm) x 20 inches (508 mm) 33 lbs (15 kg) ***

* Depending on operating conditions
** GEN5 under investigation
*** Base server w/ PSUs - factory built

Environmental Specifications

TEMPERATURE	Operating: - 5 °C to 55 °C (Intel) / - 5 °C to 35 °C (AMD) * Non-operating: - 40 °C to 70 °C
HUMIDITY	95%, non-condensing at temperatures of 23 °C to 40 °C Designed to meet or exceed Telcordia GR-63 and ETSI EN 300 019 humidity requirements for operating, transport and storage environments
ALTITUDE	-60 m to 1,800 m (-197 ft to 5,906 ft) without temperature derating 3,900 m (12,795 ft) 40 °C
SHOCK AND VIBRATION	Meets or exceeds Telcordia GR-63 and ETSI EN 300 019 requirements for operating transport and storage environments.
ELECTROSTATIC DISCHARGE (ESD)	Meets or exceeds NEBS and CE mark requirements for ESD immunity Tested ESD levels up to 15kV air discharge and 8kV contact discharge
ROHS	Compliant to RoHS Recast Directive 2011/65/EU

* Depending on operating conditions

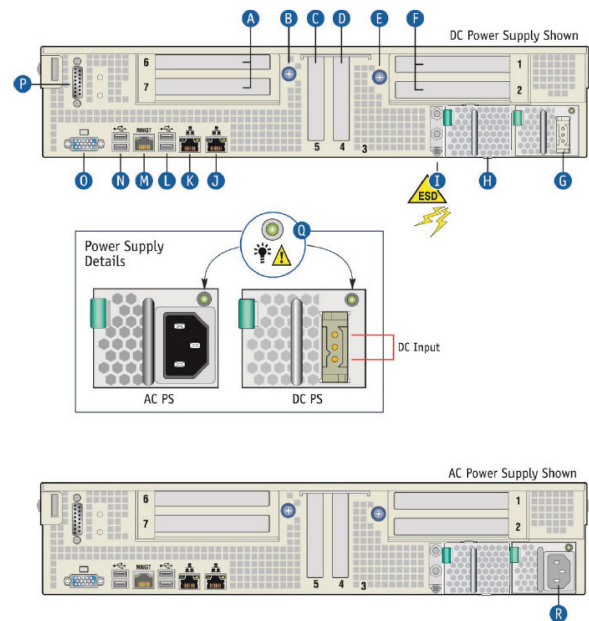
Certifications and Compliances

USA/CANADA	CSA Certified to UL 60950-1 2nd Edition and CSA C22.2 No. 60950-1-07 2nd Edition
EUROPE	CE mark to Low Voltage Directive 2014/35/EU and EN 62368-1
INTERNATIONAL	CB report and certificate to IEC 62368-1

ARTICLE	PART NO.	DESCRIPTION
*Call Kontron Sales Support for help		

CG2500 - Rear Overview

- A - 2-slot FL/FH PCI assembly (slots 6 and 7)
- B - Thumb screw to secure PCI assembly (A)
- C - LP PCI adapter (slot 5)
- D - LP PCI adapter (slot 4)
- E - Thumb screw to secure PCI assembly (F)
- F - 2-slot FL/FH PCI assembly (slots 1 and 2)
- G - Power supply 1 (shown with DC power supply installed)
- H - Optional power supply 2 (shown with filler panel)
- I - EarthGround studs (dual hole lug shown)
- J - 10GbE NIC2
- K - 10GbE NIC1
- L - USB0 and USB1 (USB0 on top, USB 3.0)
- M - Dedicated Server Management NIC
- N - USB2 and USB3 (USB2 on top, USB 3.0)
- O - Video connector
- P - TAM dry relay connector
- Q - Power supply LED signals
- R - Power Supply 1 (shown with AC power supply installed)



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