# CG2400

# Telco Central Office and AI Edge Solutions





## Compact 2U, 20-Inch Deep Carrier GradeRackmount Server

- ▶ Dual-socket 1<sup>st</sup>/2<sup>nd</sup> Generation Intel® Xeon® Scalable processors
- ▶ Designed to meet NEBS-3/ETSI certifications;
- ▶ 6x hot-swap, tool-less, 2.5" SAS HDDs / SATA SSDs
- ▶ Up to 7x PCIe slots for flexible I/O acceleration



# CG2400 PRODUCT OVERVIEW BENEFITS OF DUAL 2ND GEN INTEL XEON SCALABLE

In keeping with a proven history dedicated to designing 'long-life' carrier grade communication servers, Kontron introduces the CG2400.

Designed to meet NEBS-3/ETSI certification this ruggedized yet sophisticated server is the ideal server to support most telecom fixed-wireless central office or any mission-critical edge use cases that require High Availability. Services can range from security and fintech, to surveillance and deep learning data and video analytics.

The CG2400 server can also support manufacturing, industrial, oil & gas, utility, and even military applications where a rugged, highly reliable server is required for harsh environments that involve dust, high altitude, fire hazard, earthquake propensity, and high ambient temperatures.

The Kontron CG2400 Carrier Grade Server is a compact,high-density, rack-mount server with support for the Intel® Xeon® Scalable processor series and up to sixteen DDR4 DIMMs (eight for each processor). The CG2400 server also supports High Availability features such as hot-swappable and redundant power supply modules, hot-swappable and redundant fans, and up to six hot-swappable 2.5-inch hard disk drives, as well as two M.2 NVMe storage or 2280 flash storage support.

For added versatility, the CG2400 can support up to seven (7) PCIe cards. For advanced power management, any PCIe card that consumes more than 75W, such as a GPU card, can then be directly fed by an internal Power Distribution Board that provides auxiliary power.

The scalable architecture of the CG2400 server supports a variety of operating systems.

### FEATURES AND BENEFITS

DUAL SOCKET SUPPORT FOR FIRST & SECOND GENERATION INTEL® XEON® SCALABLE

MINIMUM FIVE YEAR LIFECYCLE SUPPORT\*

SHALLOW 20-INCH (508 MM) DEPTH

850W AC OR DC HOT-SWAP, REDUNDANT POWER SUPPLIES WITH PMRUS SUPPORT

TELCO ALARM MANAGEMENT

HOT-SWAP, REDUNDANT FANS

DUAL REAR-PANEL 10GBE NIC (Cu) PORTS

SIXTEEN RDIMM MEMORY SLOTS (SUPPORTS UP TO DDR4-2933MHZ; MAXIMUM SPEED DEFINED BY PROCESSORS USED)

DRIVE TRAYS FOR UP TO SIX HOT-SWAP 2.5-INCH SATA / SAS HARD DISK DRIVES

INTEGRATED INTEL PCH RAID (SW) 0/1/10

REMOTE MANAGEMENT

**CUSTOMIZABLE FRONT BEZEL** 

Intel® Xeon® Platinum 81xx/82xx processor

Intel® Xeon® Gold 61xx/62xx processor

Intel® Xeon® Gold 51xx/52xx processor Intel® Xeon® Silver 41xx/42xx processor

Intel® Xeon® Bronze 31xx/32xx processor

Reduced customer risk with fewer platform transitions and greater lifecycle stability.

Increases installation and service flexibility. Meets typical depth needed for most central office installations.

Flexibility of either AC or DC power installation. Power supply unit is 80 Plus Platinum compliant and supports PMBus power management.

Telco alarm LEDs on front panel. Relay connector on rear panel supports central office alarm systems. (Note: Functionality available via firmware update – future plan)

Greater uptime and improved serviceability.

Two on-board NIC ports are standard.

Supports six channel per processor and two slots per channel. Integrated memory controller in CPU enables higher performance at lower power.

Choice of SAS drives. Improved serviceability with hot-swap drives. Large number of drives enables a variety of RAID options. Improved drive reliability due to proprietary rotational vibration suppression technology. SATA Solid State Drives are supported. (SAS drives support require an additionnal PCIe RAID or HBA controller)

Data storage virtualization that combines the disk drive components into a logical unit for data redundancy

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

Adaptable to customer needs and environment.

#### **OPTIONAL FEATURES AND BENEFITS**

ADVANCED REMOTE MANAGEMENT FLASH MEMORY SUPPORT

Advanced management features including remote KVM and virtual media.

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

UP TO SEVEN PCI SLOTS FOR FLEXIBILITY AND ADDITIONAL I/O

Faster performance with PCI-E Gen3/Gen 2. Three low-profile PCI-E slots (one internal without rear I/O accessibility); Choice of risers to support either:
(1) Four PCI-E x8 slots; (2) Two PCI-E x16 slots; (3) Two PCI-E x8 or one PCI-E x16

<sup>\*</sup>From launch

### ► TECHNICAL SPECIFICATIONS

Chipset Intel® C622 Chipset (PCH)  CONNECTIONS  PCI ADAPTER SLOT SUPPORT  PCI ADAPTER SLOT SUPPORT  Supports two risers (4 FL/FH cards) and 3 LP adapters for a total of 7 PCle Gen2/Gen 3 I/O cards 7 Vivo riser options for each of two PCle slots 2 viol FL/FH PCle x8 passive (left side* - Gen3) 2 viol FL/FH PCle x8 passive (left side* - Gen3) 3 viol FL/FH PCle x8 passive (left side* - Gen3) 3 viol FL/FH PCle x8 passive (left side* - Gen3) 3 viol FL/FH PCle x8 passive (left side* - Gen3) 3 viol FL/FH PCle x8 passive (left side* - Gen3) 4 viole Flow PCle x8 passive (left side* - Gen3) 4 viole Flow PCle x8 passive (left side* - Gen3) 5 viole Flow PCle x8 passive (left side* - Gen3) 5 viole Flow PCle x8 passive (left side* - Gen3) 5 viole Flow PCle x8 passive (left side* - Gen3) 5 viole Flow PCle x8 passive (left side* - Gen3) 6 viole Flow PCle x8 passive (left side* - Gen3) 7 viole Flow PCle x8 passive PCle x8 passive PCle x8 passive PCle x8 passive PCle x8 p	PROCESSOR	First or Second Generation Intel® Xeon® Scalable
Supports two risers (4 FL/FH cards) and 3 LP adapters for a total of 7 PCIe Gen2/Gen 3 I/O cards Two riser options for each of two PCIe slots 2 slot FL/FH PCIe & passive (int side* - Cen3) 3 slot FL/FH PCIe & passive (int side* - Cen3) 1 slot FL/FH PCIe & passive (int side* - Cen3) 1 slot FL/FH PCIE & pass	CHIPSET	Chipset Intel® C622 Chipset (PCH)
Two riser options for each of two PCle slots 2 slot FL/FH PCle x8p assive (light side* - Gen3) 1	CONNECTIONS	
VIDEO PORTS USB 3.0 PORTS USB 2.0 PORTS One front One R1-45 connector (rear)  MANAGEMENT PORTS One R2-45 connector to support ASPEED AST2500 BMC  STORAGE  TYPE Up to six 2.5-inch hot-swap SATA solid-state drives REDUNDANCY Software RAID 0, 1 and 10 INTERNAL EXTERNAL Carrier with six HDD / SSD tray SD FLASH STORAGE  MEMORY  TYPE Up to DDR4-2933 MT/s ECC depending on processor selection DIMM SLOTS Sixteen (16) RDIMM or LRDIMM slots CAPACITY 2048GB (non-mirrored mode with 128GB DIMMs)  HEIGHT   WIDTH   DEPTH  ENVIRONMENTAL  TEMPERATURE, OPERATING HUMIDITY SSC (40-E to 130-F), NOTE: 105W CPU or less for 55°C HUMIDITY DSS, 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.  ELECTROSTATIC DISCHARGE (ESD)  ROHS SAFETY COMPLIANCE  USA/CANADA CSA Certified to UL 60950-1 2nd Edition and CSA C22.2 No. 60950-1-07 2nd Edition CE mark to Low Voltage Directive 2011/35/EU and EN 62368-1	PCI ADAPTER SLOT SUPPORT	Two riser options for each of two PCIe slots 2 slot FL/FH PCIe x8 passive (right side* - Gen3) 2 slot FL/FH PCIe x8 passive (left side* - Gen3) 1 slot FL/FH PCIe x16 passive (right side* - Gen3)
USB 3.0 PORTS USB 2.0 PORTS One front One RI-45 connector to support ASPEED AST2500 BMC  STORAGE  TYPE REDUNDANCY Software RAID 0, 1 and 10 INTERNAL EXTERNAL EXTERNAL SD FLASH STORAGE  MEMORY  TYPE Up to DDR4-2933 MT/s ECC depending on processor selection Sixteen (16) RDIMM or LRDIMM slots CAPACITY PHYSICAL  HEIGHT   WIDTH   DEPTH ENVIRONMENTAL  TEMPERATURE, NON-OPERATING HUMIDITY Software RAID 0, 13 on 10 345 inches (87.6 mm) x 17.14 inches (435.3 mm) x 20 inches (508 mm)  HUMIDITY Software Aspending on processor selection  TEMPERATURE, NON-OPERATING HUMIDITY Software Consider the temperatures of 23° C (73° F) to 40° C (104° F) Software reversing transport and storage environments.  ALTITUDE SHOCK AND VIBRATION Meets or exceeds Telcordia GR-63 and ETSI EN 300 019 humidity requirements for operating, transport and storage environments.  ELECTROSTATIC DISCHARGE (ESD)  MESS OF CEMPLIANCE  USA/CANADA CSA CERTIFIED to Work of Complete to 15kV air discharge and BKV contact discharge Compliant to RoHS Recast Directive 2011/65/EU  ELECTROSTATIC USA/CANADA CSC Certified to UL 60950-1 2nd Edition and CSA C22.2 No. 60950-1-07 2nd Edition	SERIAL PORTS	RJ-45 serial connector in front
USB 2.0 PORTS MANAGEMENT PORTS One RJ-45 connector to support ASPEED AST2500 BMC  TYPE Up to six 2.5-inch hot-swap SATA solid-state drives Software RAID 0, 1 and 10 2x M.2 NVMe storage 2280 (80mm) flash storage EXTERNAL Carrier with six HDD / 55D tray SD FLASH STORAGE  MEMORY  TYPE Up to DDR4-2933 MT/s ECC depending on processor selection Sixteen (16) RDIMM or LRDIMM slots CAPACITY 2048GB (non-mirrored mode with 128GB DIMMs)  PHYSICAL HEIGHT   WIDTH   DEPTH ENVIRONMENTAL  TEMPERATURE, OPERATING TEMPERATURE, NON-OPERATING -5°C to 55°C (41° F to 131° F), NOTE: 105W CPU or less for 55°C -40°C to 70°C (-40° F to 158° F) Designed to meet or exceed Telcordia GR-63 and ETSI EN 300 019 humidity requirements for operating, transport and storage environments.  ALTITUDE 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 Telcordia GR-63 and ETSI EN 300 019 requirements for operating transport and storage environments.  ELECTROSTATIC DISCHARGE (ESD) SAFETY COMPLIANCE  USA/CANADA EUROPE  CSA Certified to UL 60950-1-2nd Edition and CSA C22.2 No. 60950-1-07 2nd Edition CE mark to Low Voltage Directive 2011/35/EU and EN 62368-1	VIDEO PORTS	One DB-15 video connector (rear)
STORAGE  TYPE  TYPE  Up to six 2.5-inch hot-swap SATA solid-state drives  REDUNDANCY  INTERNAL  EXTERNAL  Carrier with six HDD / 55D tray  Two (2) front accessible Secure Data flash media devices are supported  MEMORY  TYPE  Up to DDR4-2933 MT/s ECC depending on processor selection  Sixteen (16) RDIMM or LRDIMM slots  CAPACITY  PHYSICAL  HEIGHT   WIDTH   DEPTH  ENVIRONMENTAL  TEMPERATURE, OPERATING  HUMIDITY  Solve to 70°C (-40° F to 158° F)  HUMIDITY  Designed to meet or exceed Telcordia GR-63 and ETSI EN 300 019 requirements for operating, transport and storage environments.  ALTITUDE  ALTITUDE  SHOCK AND VIBRATION  ROHS  ROHS  ROHS  CSA Certified to UL 60950-1-2nd Edition and ESA 6236-1  CSA Certified to UL 60950-1-2nd Edition and ES 62368-1	USB 3.0 PORTS	Four rear
TYPE REDUNDANCY REDUNDANCY INTERNAL REDUNDANCY INTERNAL REDUNDANCY INTERNAL RETURNAL SD FLASH STORAGE  MEMORY  TYPE DIMM SLOTS Sixteen (16) RDIMM slots CAPACITY PHYSICAL  HEIGHT   WIDTH   DEPTH ENVIRONMENTAL  TEMPERATURE, OPERATING HUMIDITY REMPERATURE, OPERATING HUMIDITY SHOCK AND VIBRATION RETURNAL RETURNA	USB 2.0 PORTS	One front
TYPE REDUNDANCY REDUNDANCY INTERNAL RETURNAL SOftware RAID 0, 1 and 10 2x M.2 NVMe storage 2280 (80mm) flash storage EXTERNAL EXTERNAL EXTERNAL SD FLASH STORAGE  MEMORY  TYPE Up to DDR4-2933 MT/s ECC depending on processor selection Sixteen (16) RDIMM or LRDIMM slots CAPACITY PHYSICAL  HEIGHT   WIDTH   DEPTH ENVIRONMENTAL  TEMPERATURE, OPERATING HUMIDITY BS96, non-condensing at temperatures of 23° C (73° F) to 40° C (104° F) Designed to meet or exceed Telecordia GR-63 and ETSI EN 300 019 humidity requirements for operating; transport and storage environments.  ALTITUDE SHOCK AND VIBRATION ROBS SHOCK AND VIBRATION ROBS SAFETY COMPLIANCE  USA/CANADA EUROPE  CE mark to Low Voltage Directive 2011/65/EU  CE mark to Low Voltage Directive 2011/65/EU  CE mark to Low Voltage Directive 2014/35/EU and EN 62368-1	MANAGEMENT PORTS	One RJ-45 connector to support ASPEED AST2500 BMC
REDUNDANCY INTERNAL INTERNAL INTERNAL EXTERNAL EXTERNAL Carrier with six HDD / SSD tray  SD FLASH STORAGE  MEMORY  TYPE Up to DDR4-2933 MT/s ECC depending on processor selection DIMM SLOTS Sixteen (16) RDIMM or LRDIMM slots CAPACITY 2048GB (non-mirrored mode with 128GB DIMMs)  PHYSICAL  HEIGHT   WIDTH   DEPTH ENVIRONMENTAL  TEMPERATURE, OPERATING HUMIDITY BS\$6, 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 requirements for operating stransport and storage environments.  ELECTROSTATIC DISCHARGE (ESD)  ROBE  ROBS  SAFETY COMPLIANCE  USA/CANADA EUROPE  EVA/CANADA EUROPE  EVA/CANADA EUROPE  EX MEX SU NAME STORAGE  EX M.2 NVMe storage 2280 (80mm) flash storage Two (2) front accessible Secure Data flash storage Two (2) front accessible Secure Data flash storage Two (2) front accessible Secure Data flash media devices are supported  Weets or exceeds Telcordia GR-63 and ETSI EN 300 019 humidity requirements for operating, transport and storage environments.  BLECTROSTATIC DISCHARGE (ESD)  Meets or exceeds NEBS and CE mark requirements for ESD immunity Tested ESD levels up to 15kW air discharge and 8kV contact discharge Compliant to RoHS Recast Directive 2011/65/EU  SAFETY COMPLIANCE  USA/CANADA EUROPE  EUROPE  CE mark to Low Voltage Directive 2014/35/EU and EN 62368-1	STORAGE	
INTERNAL EXTERNAL EXTERNAL Carrier with six HDD / SSD tray  Two (2) front accessible Secure Data flash media devices are supported  MEMORY  TYPE DIMM SLOTS Sixteen (16) RDIMM or LRDIMM slots CAPACITY PHYSICAL HEIGHT   WIDTH   DEPTH ENVIRONMENTAL  TEMPERATURE, OPERATING HUMIDITY Designed to meet or exceed Telcordia GR-63 and ETSI EN 300 019 requirements for operating transport and storage environments.  ALTITUDE SHOCK AND VIBRATION Meets or exceeds NEBS and CE mark requirements for eSD immunity Tested ESD levels up to 15kW air discharge and 8kV contact discharge  ROHS  ROHS  SAFETY COMPLIANCE  USA/CANADA EUROPE  UD to DDR4-2933 MT/s ECC depending on processor selection Sixteen (16) RDIMM or LRDIMM slots 2048GB (non-mirrored mode with 128GB DIMMs)  120 to 1	ТҮРЕ	Up to six 2.5-inch hot-swap SATA solid-state drives
EXTERNAL SD FLASH STORAGE  MEMORY  TYPE Up to DDR4-2933 MT/s ECC depending on processor selection Sixteen (16) RDIMM or LRDIMM slots 2048GB (non-mirrored mode with 128GB DIMMs)  PHYSICAL HEIGHT   WIDTH   DEPTH ENVIRONMENTAL  TEMPERATURE, OPERATING HUMIDITY Designed to meet or exceed Felcordia GR-63 and ETSI EN 300 019 humidity requirements for operating, transport and storage environments.  ALTITUDE ALTITUDE SHOCK AND VIBRATION HORS SHOCK AND VIBRATION ROHS ROHS ROHS SAFETY COMPLIANCE  USA/CANADA EUROPE  CE mark to Low Voltage Directive 2014/35/EU and EN 62368-1	REDUNDANCY	Software RAID 0, 1 and 10
MEMORY  TYPE DIMM SLOTS Sixteen (16) RDIMM or LRDIMM slots 2048GB (non-mirrored mode with 128GB DIMMs)  HEIGHT   WIDTH   DEPTH ENVIRONMENTAL  TEMPERATURE, OPERATING TEMPERATURE, NON-OPERATING HUMIDITY HUMIDITY Shock AND VIBRATION ALTITUBE ALTITUBE SHOCK AND VIBRATION BHOCK AND VIBRATION BLECTROSTATIC DISCHARGE (ESD) ROBE SAFETY COMPLIANCE  USA/CANADA EUROPE  USA/CANADA EUROPE  SAFETY COMPLIANCE  MEMORY  TYPE Up to DDR4-2933 MT/s ECC depending on processor selection Sixteen (16) RDIMM or LRDIMM slots 2048GB (non-mirrored mode with 128GB DIMMs)  3.45 inches (87.6 mm) x 17.14 inches (435.3 mm) x 20 inches (508 mm)  3.45 inches (87.6 mm) x 17.14 inches (435.3 mm) x 20 inches (508 mm)  -5°C to 55°C (41° F to 131° F), NOTE: 105W CPU or less for 55°C -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.  ALTITUBE -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.  Compliant to RoHS Recast Directive 2011/65/EU  SAFETY COMPLIANCE  USA/CANADA EUROPE  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	INTERNAL	2x M.2 NVMe storage 2280 (80mm) flash storage
TYPE DIMM SLOTS Sixteen (16) RDIMM or LRDIMM slots CAPACITY PHYSICAL HEIGHT   WIDTH   DEPTH ENVIRONMENTAL TEMPERATURE, OPERATING TEMPERATURE, NON-OPERATING HUMIDITY HUMIDITY Soft to 15°C (-40° F to 131° F), NOTE: 105W CPU or less for 55°C -40°C (-40° F to 158° F) Designed to meet or exceed Telcordia GR-63 and ETSI EN 300 019 humidity requirements for operating, transport and storage environments.  ALTITUDE SHOCK AND VIBRATION ELECTROSTATIC DISCHARGE (ESD) Weets or exceeds Telcordia GR-63 and ETSI EN 300 019 requirements for operating storage environments.  ELECTROSTATIC DISCHARGE (ESD) SAFETY COMPLIANCE USA/CANADA EUROPE  CE mark to Low Voltage Directive 2011/65/EU  SIGNAMS SIX METS AND SIX METS AND SIX METS AND SIX METS AND G0950-1-07 2nd Edition  CE mark to Low Voltage Directive 2014/35/EU and EN 62368-1	EXTERNAL	Carrier with six HDD / SSD tray
TYPE DIMM SLOTS Sixteen (16) RDIMM or LRDIMM slots  CAPACITY PHYSICAL  HEIGHT   WIDTH   DEPTH ENVIRONMENTAL  TEMPERATURE, OPERATING HUMIDITY PHYBICAL  ALTITUDE ALTITUDE SHOCK AND VIBRATION ELECTROSTATIC DISCHARGE (ESD) SAFETY COMPLIANCE  USA/CANADA EUROPE  USA/CANADA CSA Certified to UL 60950-1 2nd Edition and CSA C22.2 No. 60950-1-07 2nd Edition EUROPE  USA/CANADA CSA Certified to UL 60950-1 2nd Edition and EN 62368-1	SD FLASH STORAGE	Two (2) front accessible Secure Data flash media devices are supported
DIMM SLOTS CAPACITY  PHYSICAL  HEIGHT   WIDTH   DEPTH  S.45 inches (87.6 mm) x 17.14 inches (435.3 mm) x 20 inches (508 mm)  ENVIRONMENTAL  TEMPERATURE, OPERATING TEMPERATURE, NON-OPERATING HUMIDITY  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.  ALTITUDE SHOCK AND VIBRATION ELECTROSTATIC DISCHARGE (ESD)  ROHS  ACHIEVE  ROHS  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	MEMORY	
PHYSICAL  HEIGHT   WIDTH   DEPTH  ENVIRONMENTAL  TEMPERATURE, OPERATING TEMPERATURE, NON-OPERATING HUMIDITY  By the part of th	ТҮРЕ	Up to DDR4-2933 MT/s ECC depending on processor selection
PHYSICAL  HEIGHT   WIDTH   DEPTH  3.45 inches (87.6 mm) x 17.14 inches (435.3 mm) x 20 inches (508 mm)  ENVIRONMENTAL  TEMPERATURE, OPERATING TEMPERATURE, NON-OPERATING HUMIDITY  Bysigned to meet or exceed Telcordia GR-63 and ETSI EN 300 019 humidity requirements for operating, transport and storage environments.  ALTITUDE SHOCK AND VIBRATION Bets or exceeds Telcordia GR-63 and ETSI EN 300 019 requirements for operating transport and storage environments.  ELECTROSTATIC DISCHARGE (ESD)  ROHS  ROHS  SAFETY COMPLIANCE  USA/CANADA EUROPE  CSA Certified to UL 60950-1 2nd Edition and CSA C22.2 No. 60950-1-07 2nd Edition EUROPE	DIMM SLOTS	Sixteen (16) RDIMM or LRDIMM slots
HEIGHT   WIDTH   DEPTH  ENVIRONMENTAL  TEMPERATURE, OPERATING TEMPERATURE, NON-OPERATING HUMIDITY  BY  TEMPERATURE, NON-OPERATING HUMIDITY  TEMPERATURE, NON-OPERATING HUMIDITY  ACC to 70°C (-40° F to 158° F)  Seginged to meet or exceed Telcordia GR-63 and ETSI EN 300 019 humidity requirements for operating, transport and storage environments.  ALTITUDE  ALTITUDE  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  Compliant to RoHS Recast Directive 2011/65/EU  SAFETY COMPLIANCE  USA/CANADA  EUROPE  SAFETY COMPLIANCE  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	CAPACITY	2048GB (non-mirrored mode with 128GB DIMMs)
ENVIRONMENTAL  TEMPERATURE, OPERATING  -5°C to 55°C (41° F to 131° F), NOTE: 105W CPU or less for 55°C  TEMPERATURE, NON-OPERATING  HUMIDITY  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  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  Compliant to RoHS Recast Directive 2011/65/EU  SAFETY COMPLIANCE  USA/CANADA  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		
TEMPERATURE, OPERATING TEMPERATURE, NON-OPERATING  HUMIDITY  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.  ALTITUDE 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  Compliant to RoHS Recast Directive 2011/65/EU  SAFETY COMPLIANCE  USA/CANADA  EUROPE  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		3.45 inches (87.6 mm) x 17.14 inches (435.3 mm) x 20 inches (508 mm)
TEMPERATURE, NON-OPERATING  HUMIDITY  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.  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  SAFETY COMPLIANCE  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	ENVIRONMENTAL	
HUMIDITY  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.  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  Compliant to RoHS Recast Directive 2011/65/EU  SAFETY COMPLIANCE  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	TEMPERATURE, OPERATING	-5°C to 55°C (41° F to 131° F), NOTE: 105W CPU or less for 55°C
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.  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  Compliant to RoHS Recast Directive 2011/65/EU  SAFETY COMPLIANCE  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		-40°C to 70°C (-40° F to 158° F)
SHOCK AND VIBRATION 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  ROHS Compliant to RoHS Recast Directive 2011/65/EU  SAFETY COMPLIANCE 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	HUMIDITY	Designed to meet or exceed Telcordia GR-63 and ETSI EN 300 019 humidity requirements for
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  Compliant to RoHS Recast Directive 2011/65/EU  SAFETY COMPLIANCE  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	ALTITUDE	-60 m to 1,800 m (-197 ft to 5,906 ft) without temperature derating 3,900 m (12,795 ft) 40 $^{\circ}\mathrm{C}$
15kV air discharge and 8kV contact discharge  ROHS  Compliant to RoHS Recast Directive 2011/65/EU  SAFETY COMPLIANCE  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	SHOCK AND VIBRATION	
SAFETY COMPLIANCE  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	ELECTROSTATIC DISCHARGE (ESD)	
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	ROHS	Compliant to RoHS Recast Directive 2011/65/EU
EUROPE CE mark to Low Voltage Directive 2014/35/EU and EN 62368-1	SAFETY COMPLIANCE	
	USA/CANADA	CSA Certified to UL 60950-1 2nd Edition and CSA C22.2 No. 60950-1-07 2nd Edition
INTERNATIONAL CP report and contiferate to IEC 62260.1	EUROPE	CE mark to Low Voltage Directive 2014/35/EU and EN 62368-1
IN I EKINATIONAL CB report and certificate to IEC 02308-1	INTERNATIONAL	CB report and certificate to IEC 62368-1

It enables OEMs and TEMs to create specialized, value-added solutions for a variety of telecom applications including unified messaging, SoIP, call control, streaming media and signaling gateways, and operational system support. In addition, the CG2400 is ideal for other types of rugged applications, such as in the Military and Medical segments, where meeting tough environmental requirements is critical.

The CG2400 has been designed to withstand extreme heat, humidity, altitude and zone 4 earthquake shock and multiple other extreme environmental conditions to compliance with NEBS-3/ETSI requirements. Also important for the rigid requirements of the telecom central office, the server includes advanced server management and telco alarm management features that provide visual and SNMP event indications of faults.

## MAINTAINING HIGH PERFORMANCE AND RELIABILITY: INNOVATIVE VIBRATION SUPPRESSION TECHNOLOGY

Kontron has integrated innovative vibration suppression technologies into its communication rack mount servers which benefit customers by allowing denser systems to operate at higher temperatures, thus, enabling the customer to deploy their solutions in environments not previously possible. In addition, they benefit from being able to use a greater variety of hard disk types and sizes instead of being limited to a few "extra rugged" devices.

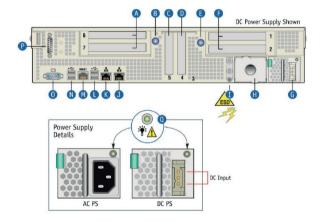
The proprietary vibration suppression technologies in Kontron's communication rack mount servers are designed to significantly reduce the amount of vibration by isolating both vibration-generating devices and vibration-sensitive devices.

The company's 1U and 2U Carrier Grade servers utilize a unique

vibration-absorbing material allowing its designers to isolate both the fans and hard drives from direct contact with the system's metal infrastructure so they literally "float" inside the chassis. This approach requires that the initial system design includes vibration suppression as a key requirement.

### CG2400 - 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)
- 0 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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