COMPACT 2U, 20-INCH DEEP
CARRIER GRADE RACKMOUNT SERVER

- Dual Intel® Xeon® 16-Core Processor E5-2600 V3 Family
- High memory, flexible I/O and storage options
- Dual redundant AC or DC power options
FEATURES AND BENEFITS

- **Dual Socket Support for Intel® Xeon® Processor E5-2600 v3 Family**
  - 22nm process technology for 32 cores/64 threads available per system, enable significant performance improvement for multi-threaded applications. 64 PCIe Gen 3 lanes.
- **Three-to-Five Year Lifecycle Support**
  - Reduced customer risk with fewer platform transitions and greater lifecycle stability.
- **Shallow 20-Inch Depth**
  - Increases installation and service flexibility. Meets typical depth needed for most central office installations.
- **850W 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 Platinum compliant and supports PMBus power management.
- **Telco Alarm Management**
  - Telco alarm LEDs on front panel. Relay connector on rear panel supports central office alarm systems.
- **Hot-Swap, Redundant Fans**
  - Greater uptime and improved serviceability.
- **Dual Rear-Panel Gbe NIC (Cu) Ports**
  - Supports four channel per processor and two slots per channel. Integrated memory controller in CPU enables higher performance at lower power.
- **Sixteen RDImm/UDimm Memory Slots**
  - (DDR4-1333/1600/1866/2133 MT/s)
  - 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.
- **Software RAID 0/1/10**
  - Data storage virtualization that combines the disk drive components into a logical unit for data redundancy.
- **Remote Management**
  - Lights-out management via a dedicated management NIC. This allows secure remote access and control from the network.
- **Customizable Front Bezel**
  - Adaptable to customer needs and environment.

OPTIONAL FEATURES AND BENEFITS

- **Software RAID 5**
  - Raid 5 available through an activation key.
- **Integrated Hardware RAID with Flash Backup and Supercap Technology**
  - Supports RAID levels 0/1/5/6/10/50/60 providing greater protection, reliability, and performance.
- **Advanced Remote Management**
  - Activation key for advanced management features including remote KVM and media redirection.
- **Flash Memory Support**
  - Choice of multiple flash memory options are available:
    - Internal bootable eUSB flash device;
    - Internal 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.
## TECHNICAL SPECIFICATIONS

| PROCESSOR | Dual 16-Core Intel® Xeon® Processor E5-2600 v3 Family |
| CHIPSET | Intel® C610 Chipset |
| CONNECTIONS | |
| **PCI ADAPTER SLOT SUPPORT** | Three low-profile slots including one without rear I/O accessibility. The following riser card options are supported: Right side: one slot x16 PCI-E riser; two slots x8 PCI-E riser; and Left side: one slot x16 PCI-E riser; or two slots x8 PCI-E riser |
| **SERIAL PORTS** | RI-45 serial connector in front |
| **VIDEO PORTS** | One DB-15 video connector (rear) |
| **USB 3.0 PORTS** | Two rear |
| **USB 2.0 PORTS** | Three (3): one front, two rear |
| **MANAGEMENT PORTS** | One RI-45 connector to support Intel® Remote Management NIC |
| STORAGE | |
| **TYPE** | Up to six 2.5-inch hot-swap SAS hard drive |
| **REDUNDANCY** | Software RAID 0, 1 and 10 (+ 5, 50 with upgrade key) and optional Hardware RAID 0, 1, 10, 5, 50, 6 and 60 |
| **INTERNAL** | Optional eUSB and/or M.2 |
| **EXTERNAL** | Carrier with six HDD tray |
| **SD FLASH STORAGE** | Two (2) front accessible Secure Data flash media devices are supported |
| MEMORY | |
| **TYPE** | DDR4 technology at 1333/1600/1866/2133 MT/s |
| **DIMM SLOTS** | Sixteen (16) RDIMM or LRDIMM slots |
| **CAPACITY** | 2048GB (non-mirrored mode with 128GB DIMMs) |
| PHYSICAL | |
| **HEIGHT | 3.45 inches (87.6 mm) x 17.14 inches (435.3 mm) x 20 inches (508 mm) |
| ENVIRONMENTAL | |
| **TEMPERATURE, OPERATING** | -5°C to 55°C (41°F to 131°F) |
| **TEMPERATURE, NON-OPERATING** | -40°C to 70°C (-40°F to 158°F) |
| **HUMIDITY** | 95%, non-condensing at temperatures of 23°C (73°F) to 40°C (104°F) |
| **ALTITUDE** | 0 to 1,800 m (0 to 5,905 ft) @ 40°C; 0 to 3,200 m (0 to 13,123 ft) @ 30°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 |
| **ACOUSTIC** | Meets or exceeds GR-63 and ETSI EN 300 753 requirements. |
| **ROHS** | CE mark to RoHS Directive 2011/65/EU |
| SAFETY COMPLIANCE | |
| **USA/CANADA** | cULus mark to UL 60950-1, 2nd Edition with Am.1 and Am.2/CSC 22.2 No. 60950-1 2nd Edition with Am.1 and Am.2 |
| **EUROPE** | CE mark to Low Voltage Directive, 2006/95/EC, EN 60950-1, 2nd Edition with Am.1 and Am.2 |
| **INTERNATIONAL** | CB Certificate and Report to IEC60950-1, 2nd Edition with Am.1 and Am.2 and all international deviations |
| ELECTROMAGNETIC COMPATIBILITY | |
| **CANADA** | IC ICES-003 Class A |
| **EUROPE** | CE mark to EMC Directive, 2004/108/EC; EN55022, Class A, Radiated & Conducted Emissions; EN55024 Immunity Characteristics for ITE: EN61000-3-2 Harmonic Currents, EN61000-3-3 Voltage Flicker |
| **INTERNATIONAL** | CISPR 22, Class A, CISPR 24 Immunity |
| **USA** | FCC 47 CFR Parts 15, Class A |
LEADING PERFORMANCE AND ENERGY EFFICIENCY IN A RUGGED, CARRIER-GRADE DESIGN

The CG2300 Carrier Grade Server combines performance, ruggedness and reliability. Moreover, the platform is designed to meet NEBS-3 and ETSI standards. This high-performing, rugged server is an excellent choice for the demanding environment and limited space of the Telco central office, as well as for network data centers. 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 CG2300 is ideal for other types of rugged applications, such as in the Military and Medical segments, where meeting tough environmental requirements is critical.

The CG2300 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, audible (optional) 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 and IP Network 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.

CG2300 - REAR OVERVIEW

- A - Right 1 2-slot FL/FH PCI assembly (slots 6 and 7)
- B - Thumb screw to secure right PCI assembly (A)
- C - LP PCI adapter (slot 5)
- D - LP PCI adapter (slot 4)
- E - Thumb screw to secure left PCI assembly (F)
- F - Left 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 - GbE NIC2
- K - GbE NIC1
- L - USB0 and USB1 (USB0 on top, USB 3.0)
- M - RMM4 Dedicated Server Management NIC (DMA)
- N - USB2 and USB3 (USB2 on top, USB 2.0)
- 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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