2U 4-slot and 4U 8-slot of 6U Boards
» High Quality Ruggedized Construction
» Modular Backplanes: VME64x, VITA 31.1 or cPCI
» Modular Power Supply Unit
» EN55022-A EMC Compliant Design
» Custom Configurations, Integration and Qualification Services
Product Overview

Kontron offers a full range of 19" Rack Mount Industrial Chassis for 6U air-cooled boards. These high quality racks complement the Kontron’s offering of Intel and PowerPC single board computers, computing nodes and I/O products.

In this way, Kontron products lines allow customers to build complex real-time systems for the most demanding Defense, Aerospace, Industrial, and Communications applications.

The 19" Rack Mount Industrial Chassis products line ranges from 2U height featuring 4 slots of VME 6U size boards up to 4U height 8 slots. Designed by Kontron, these quality products have successfully passed the mechanical, thermal, electromagnetic EMC/EMI qualification tests required by our customers.

The R2U4S and R4U8S are brand new members of Kontron’s activities of 19" Rack Mount Industrial Chassis for 6U air-cooled boards. Their modular design enables to fulfill the requirements of application areas ranging from the environmentally benign right through to deployed industrial, airborne and naval applications.

All feature a door to better protect the electronics which is placed inside. All use a modular Power Supply Unit (PSU) which allows Kontron to derive the product in a short time with a PSU more suitable for the application aimed by the customer, such as redundant PSU or higher power one. In the R2U4S and R4U8S devices, the 6U cards bay can be available either on the front or the rear, as a build option.

Custom Configuration, Integration and Qualification Services

The Kontron’s 19" racks are backed up by the full range of Kontron integration and qualification services. This ranges from the delivery of the rack equipped with boards and integration test reports, to the qualification of a full managed system in compliance with the requirements of industrial aerospace or naval applications.

COTS Tailorization

Kontron’s 19" Racks have been designed to be easily and cost effectively adapted to meet the constraints of almost any application. The installation of rugged MIL-STD-38999 connectors or the addition of fan-trays for vertical air-flow are examples of adaptations previously provided to customers. Please ask Kontron for additional information.

Inside Front to Rear Cabling Way

A cabling way ease cable passing between the front and rear cards bays and/or between one of these bays and the peripherals room.

Monitoring LEDs & Pass-through RJ-45

Located on the front panel, monitoring LEDs report the status of the power supplies, the fans and the inside temperature. Nearby these LEDs, a passthrough RJ-45 plug allows the customer to easily route an Ethernet link to the front panel.

Room for peripherals

The R2U4S and R4U8S feature a room for hosting either 2.5" or 3.5" Hard Disk Drives (HDD). An optional tray can accommodate two 3.5" HDD in the RTM bay of the R2U4S and R4U8S. A DVD drive can be provided on request.

Modular Power Supply Unit

The modularity of the power supply unit (PSU) of the R2U4S and R4U8S allows Kontron to propose at low cost the tuning of the power supplies in accordance to the electronic equipments which will be plugged into the rack.

Modular Backplane

The default version of Kontron’s 19" rack features a standard VME64x backplane. Versions equipped with a VITA 31.1 compliant or a CompactPCI backplane are also available.
### Environmental Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>D0-160E §4</th>
<th>Operating: -20° to 65° C / Non Operating: -40° to 85° C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temperature</td>
<td>D0-160E §6</td>
<td>5 to 95% non condensing</td>
</tr>
<tr>
<td>Relative Humidity</td>
<td>UL94-V0</td>
<td></td>
</tr>
<tr>
<td>Flammability</td>
<td>EN60950</td>
<td></td>
</tr>
<tr>
<td>Safety</td>
<td>EN55022 Class A</td>
<td></td>
</tr>
<tr>
<td>EMC Emissions</td>
<td>EN61000 §3.1</td>
<td></td>
</tr>
<tr>
<td>Conducted / Radiated</td>
<td>EN61000 §3.3</td>
<td></td>
</tr>
<tr>
<td>Harmonic Distortion</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flicker and Fluctuation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EMC - Immunity</td>
<td>EN50024</td>
<td></td>
</tr>
<tr>
<td>Conducted/Radiated Susceptibility</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Altitude</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shock</td>
<td>D0-160E</td>
<td></td>
</tr>
<tr>
<td>Vibration</td>
<td>D0-160E §8.5.2</td>
<td></td>
</tr>
</tbody>
</table>

- **Altitude**: Operating: 10,000 ft (3,048m) / Storage: 30,000 ft (9,144m)
- **Shock**: Operating: 15g peak half sinus 11ms duration / Storage: 15g peak half sinus 20ms duration
- **Vibration**: Operating: Curve B (1.48 Gms) from 10 to 2000 Hz / Operating: 2g sinusoidal from 5 to 500 Hz

### Technical Information

<table>
<thead>
<tr>
<th>Dimension</th>
<th>R2U4S</th>
<th>R4U8S</th>
</tr>
</thead>
<tbody>
<tr>
<td>Height</td>
<td>2U</td>
<td>4U</td>
</tr>
<tr>
<td>88.9 mm - 3.5”</td>
<td>178 mm - 7”</td>
<td></td>
</tr>
<tr>
<td>Depth</td>
<td>440 mm - 17.32”</td>
<td></td>
</tr>
<tr>
<td>Width</td>
<td>19” / 482.6 mm</td>
<td></td>
</tr>
<tr>
<td>17.63” / 448 mm (without earing)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weight (approx.)</td>
<td>6 Kg</td>
<td>12 Kg</td>
</tr>
</tbody>
</table>

- **Card Cages**
  - 6U VME64x
  - 6U cPCI or VITA 31.1
- **Slots**
  - 4 - Horizontal
  - 8 - Horizontal
- **Bay Position**
  - Front or Rear
- **Air Cooling**
  - 1.5 m/s
- **Acoustic Noise**
  - < 45 dB
  - < 55 dB
- **RTM Bay**
  - 6U - 80 mm - VITA 36 compliant
- **Door**
  - Front or Rear
- **Room for HDD**
  - 2x 2.5” or 3.5”

#### Card Cages Options

- **VITA 1.1 / VITA 1.7 & VITA 38 VME64x backplane with P0 connector**
- **Please contact Kontron**

#### Power Supply Unit (PSU)

<table>
<thead>
<tr>
<th>Voltage/Power</th>
<th>R2U4S</th>
<th>R4U8S</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input Voltage</td>
<td>100/240 VAC 50-60 Hz</td>
<td></td>
</tr>
<tr>
<td>Max. Power</td>
<td>400W</td>
<td>700W</td>
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<tr>
<td>+5V</td>
<td>40A</td>
<td>80A</td>
</tr>
<tr>
<td>+3.3V</td>
<td>40A</td>
<td>80A</td>
</tr>
<tr>
<td>+12V</td>
<td>20A</td>
<td>20A</td>
</tr>
<tr>
<td>-12V</td>
<td>5A</td>
<td>5A</td>
</tr>
<tr>
<td>Redundancy</td>
<td>Option</td>
<td>Option</td>
</tr>
<tr>
<td>Modular PSU</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

### EXAMPLES OF COTS TAYLORIZATION

- **2U “Tempest” Qualified Rack**
- **10U cPCI with Fan Tray**

**R2U4S featuring**
MIL-STD-689999 Ethernet Connector
## Ordering Information

<table>
<thead>
<tr>
<th>Article</th>
<th>Part.-No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>R2U4S</td>
<td>R2U4SV-SA4F100</td>
<td>2U 19&quot; Rack, 4*VME64x horizontal slots backplane / VITA 36 Rear Transition Modules support / Power Supply 400W, 5V/  + and - 12V/ 3.3V / Enclosure panel door: Front / 6U VME64x boards bay on Front</td>
</tr>
<tr>
<td>R2U4S</td>
<td>R2U4SV-SA4F200</td>
<td>2U 19&quot; Rack, 4*VME64x horizontal slots backplane / VITA 36 Rear Transition Modules support / Power Supply 400W, 5V/  + and - 12V/ 3.3V / Enclosure panel door: Front / 6U VME64x boards bay on Rear</td>
</tr>
<tr>
<td>R2U4S</td>
<td>R2U4SV-SA4R100</td>
<td>2U 19&quot; Rack, 4*VME64x horizontal slots backplane / VITA 36 Rear Transition Modules support / Power Supply 400W, 5V/  + and - 12V/ 3.3V / Enclosure panel door: Rear / 6U VME64x boards bay on Front</td>
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<tr>
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<td>R2U4SV-SA4R200</td>
<td>2U 19&quot; Rack, 4*VME64x horizontal slots backplane / VITA 36 Rear Transition Modules support / Power Supply 400W, 5V/  + and - 12V/ 3.3V / Enclosure panel door: Rear / 6U VME64x boards bay on Rear</td>
</tr>
<tr>
<td>R4U8S</td>
<td>R4U8SV-SA7F100</td>
<td>4U 19&quot; Rack, 8*VME64x horizontal slots backplane / VITA 36 Rear Transition Modules support / Power Supply 700W, 5V/  + and - 12V/ 3.3V / Enclosure panel door: Front / 6U VME64x boards bay on Front</td>
</tr>
<tr>
<td>R4U8S</td>
<td>R4U8SV-SA7F200</td>
<td>4U 19&quot; Rack, 8*VME64x horizontal slots backplane / VITA 36 Rear Transition Modules support / Power Supply 700W, 5V/  + and - 12V/ 3.3V / Enclosure panel door: Front / 6U VME64x boards bay on Rear</td>
</tr>
<tr>
<td>R4U8S</td>
<td>R4U8SV-SA7R100</td>
<td>4U 19&quot; Rack, 8*VME64x horizontal slots backplane / VITA 36 Rear Transition Modules support / Power Supply 700W, 5V/  + and - 12V/ 3.3V / Enclosure panel door: Rear / 6U VME64x boards bay on Front</td>
</tr>
<tr>
<td>R4U8S</td>
<td>R4U8SV-SA7R200</td>
<td>4U 19&quot; Rack, 8*VME64x horizontal slots backplane / VITA 36 Rear Transition Modules support / Power Supply 700W, 5V/  + and - 12V/ 3.3V / Enclosure panel door: Rear / 6U VME64x boards bay on Rear</td>
</tr>
</tbody>
</table>

### OTHER VIEWS

R2U4S  
R4U8S

### CORPORATE OFFICES

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