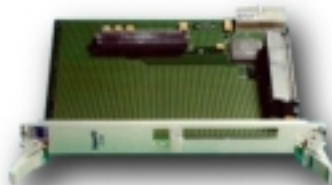


### Overview:

The **VRM-CA1** is a carrier board, allowing the operation of virtually any standard (desktop) PCI card in a *CompactPCI*<sup>®</sup> system. The **VRM-CA1** for this acts as a PCI bridge, being as well electrically and mechanically a perfectly smooth interface between the worlds of PCI and *CompactPCI*<sup>®</sup>. A major goal to be solved was the fastening of the PCI card on the **VRM-CA1** carrier board in a reliable manner, withstanding mechanical shock and vibrations. PCI cards sized up to 160x106mm find their place in the slot 1 socket. Using this mounting place, the bracket of the PCI board is fixed directly behind the **VRM-CA1** double width front panel. An extrusion allows access to the connectors of the PCI board, which is fixed to the **VRM-CA1** carrier board by a single screw, locked to the front panel. The majority of commercially available PCI host adapters can be fitted in slot 1. The PCI specification, however, defines a maximum length of 167.64mm for so called Short Cards. This size exceeds the Euro card standard depth (160mm). Longer PCI boards therefore must use slot 2 of the **VRM-CA1**. When using slot 2, wiring of the PCI card I/O connectors to the **VRM-CA1** front panel has to be done by means of suitable cable assemblies and mounting brackets. In order to fully comply with both, PCI and *CompactPCI*<sup>®</sup> specifications, the **VRM-CA1** is provided with a PCI bridge chip (Intel/DEC 21150 PCI to PCI bridge, 32-Bit). By its built-in buffers, the bridge can speed up system data transfer rates compared to the individual PCI board in use. All modern operating systems can treat a PCI bridge in a plug and play manner. Some competitor's products do not provide a PCI bridge, thus reducing adapter costs (by tolerating a violation of the PCI specs). Overall PCI compatibility however is a must in order to achieve total system reliability. Use of the **VRM-CA1** adapter/bridge in order to allow standard PCI boards to work in a *CompactPCI*<sup>®</sup> system is both an absolutely smooth technical solution, and a smart economical decision. The **VRM-CA1** totally frees the system integrator from the need of a redesign of PCI cards already available to the *CompactPCI*<sup>®</sup> standard. This is a great advantage, especially when time to market counts, or the number of systems to be built is limited, or the function to be implemented underlies fast innovation cycles.



### Features:

- Printed Circuit Board: 6U Double Size Eurocard (ca. 233x160mm<sup>2</sup>). Front panel width: 40.3mm
- PCI Bus: Bus Type: PCI 2.1, 32-Bit, 33MHz (133MB/s), 3.3V or 5V interface. Connectors: 2-fold 90, either Slot 1 or Slot 2 to be used. Maximum Card Size: Slot 1 for Boards up to 160x106mm, I/O externally available, Slot 2 for boards up to 167.64mm Length (Short Card), I/O internally
- PCI Bridge: DEC 21150 PCI-to-PCI Bridge Chip (32/32-Bit), Delayed Transactions Feature, 88Bytes Buffer (Data/Address) for Posted Write Transactions, 72Bytes Buffer for Read Data
- *CompactPCI*<sup>®</sup> Bus (external): 32-Bit, 33MHz (133MB/s), 32-Bit DMA Bus Master (133MB/s), PCI Burst Mode, 3.3V or 5V interface
- Power Supply (*PCI Board power consumption not taken into consideration*): +5V  $\pm$ 5% (required by PCI Board only), +3.3V  $\pm$ 0.3V 0.2A max., Vio (+5V or +3.3V) 0.1A max, +12V  $\pm$ 5% (required by PCI Board only), -12V  $\pm$ 5% (required by PCI Board only).
- Temperature: 0-70°C,
- Relative Humidity: 5-90% non-condensing.