



V Rose Microsystems, Inc.

www.vrosemicrosystems.com

VRM-CP5

Product Data Sheet

Overview:

Based on the PCI Express and USB standards, ExpressCards and PCI Express Mini Cards became very popular also for industrial applications. The VRM-CP5 is a carrier board for a single 54/34mm ExpressCard and two PCI Express Mini Cards, and can in addition be equipped with two USB Silicon State Drive (SSD) modules.

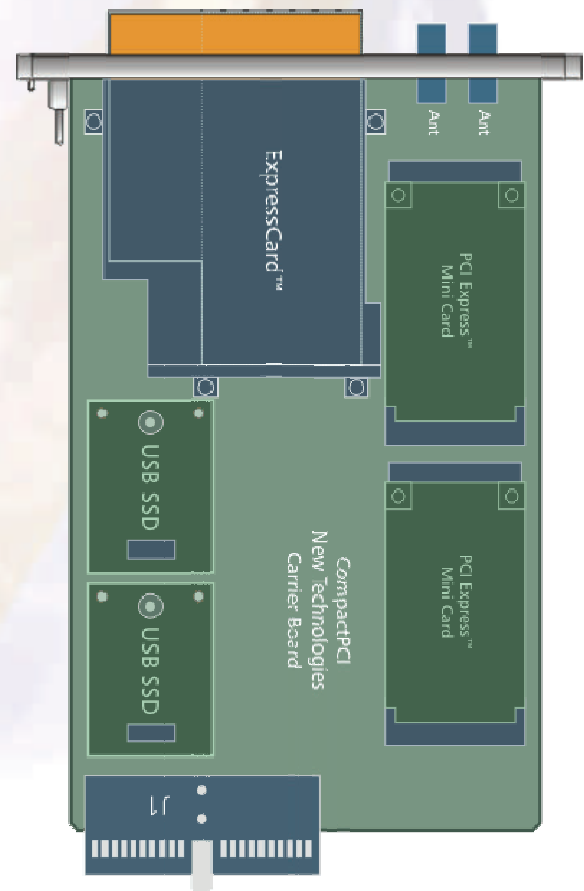
The VRM-CP5 is a 3U/4HP CompactPCI® peripheral board. In addition to an USB controller it provides PCI Express based circuitry, as required for attachment of both, PCI Express Mini Cards, and the ExpressCard.

The front panel ExpressCard slot stands for flexible system configuration. The push-push mechanics accommodates either an ExpressCard/54 (54mm x 75mm) or an ExpressCard/34 (34mm x 75mm) module. ExpressCard technology is designed to allow users to install and remove modules from the VRM-CP5 at any time, without having to switch off their systems.

The on-board PCI Express Mini Card sockets on the VRM-CP5 are especially useful for wireless applications such as WiFi (WLAN), GSM, WiMax, and in addition for the Intel® Turbo Memory modules. Up to 6 antenna connectors (SMA/RP style) in the front panel allow for MIMO (RF multiple-input multiple-output) card employment. Typically, wireless Mini Cards provide U.FL style antenna receptacles. A double ended U.FL plug coaxial cable assembly will be required for each Mini Card receptacle as interconnection to its associated front panel SMA connector.

In addition, the VRM-CP5 is equipped with two on-board sockets for USB Flash disk modules such as the Intel® Z-U130. Similar to an USB stick, Solid State Drive (SSD) modules are mass storage devices based on NAND flash memory, while providing error correction management, performance and endurance parameters suitable for rugged industrial applications.

V Rose Microsystems can fully customize your product and integrate it with compatible turnkey systems.





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Features:

Form Factor	<ul style="list-style-type: none">• Single size CompactPCI style Eurocard (160x100mm²)• Front panel width 4HP (20.3mm)
CompactPCI	<ul style="list-style-type: none">• 32-bit• 33MHz• Suitable for CPCI backplanes with +5V or +3.3V VIO (J1 w/o key)
PCIe Mini Card	<ul style="list-style-type: none">• 2 x PCI Express Mini Card sockets• UIM ports wired to on-board SIM connectors (hinge style)• Suitable for WLAN, GSM, WiMax, Turbo Memory and other PCIe Mini Cards• Suitable for USB and PCI Express Mini Cards
Antenna Connectors	<ul style="list-style-type: none">• 2 x SMA/RP connectors available from the front panel, wired to on-board U.FL receptacles, suitable for double ended U.FL plug cable assemblies from Mini Card to VRM-CP5 board• up to 6 x SMA/RP front panel connectors optionally available when ExpressCard slot is not populated (MIMO solutions)
USB Solid State Drive (SSD)	<ul style="list-style-type: none">• 2 x 2.00mm Pin header provided for low profile industrial USB SSD module, e.g. Intel, M-Systems, STEC (8GB as of current)
ExpressCard Slot	<ul style="list-style-type: none">• Front panel access, push-push mechanics• Suitable for 54mm and 34mm cards• Suitable for USB and PCI Express cards• Electronic power switch• Individual card retention solution for ruggedized systems available from EKF• Extended ExpressCards limited to 54mm width
Main Components	<ul style="list-style-type: none">• PCI to PCI bridge (CompactPCI frontend to local PCI)• PCI to PCI Express bridge• PCI to USB 2.0 host controller, 5 port• PCI Express packet switch, 4-lane
Thermal Conditions	<ul style="list-style-type: none">• Operating temperature: 0°C ... +70°C
Environmental Conditions	<ul style="list-style-type: none">• Storage temperature: -40°C ... +85°C, max. gradient 5°C/min• Humidity 5% ... 95% non condensing• Altitude -300m ... +3000m• Shock 15g 0.33ms, 6g 6ms• Vibration 1g 5-2000Hz
EC Regulations	<ul style="list-style-type: none">• EN55022, EN55024, EN60950-1 (UL60950-1/IEC60950-1)• 2002/95/EC (RoHS)

Ordering:

VRM-CP5-01: 3U CompactPCI new technologies carrier board: one ExpressCard slot 34/54mm, full support for PCI Express & USB type ExpressCards, two PCI Express MiniCard sockets incl. SIM/UIM card holders, 2 x SMA antenna connectors for WiFi/GSM/WiMax, 2 x USB Flash module (SSD) sockets

VRM-CP5-02: Similar as above, single ExpressCard slot 34/54mm, on-board module sockets removed

VRM-CP5-03: Similar as above, two PCI Express MiniCard sockets incl. SIM/UIM card holders, 6 x SMA antenna connectors for MIMO (WiFi/GSM/WiMax), 2 x USB Flash module (SSD) sockets, ExpressCard slot removed