» CP3210 «
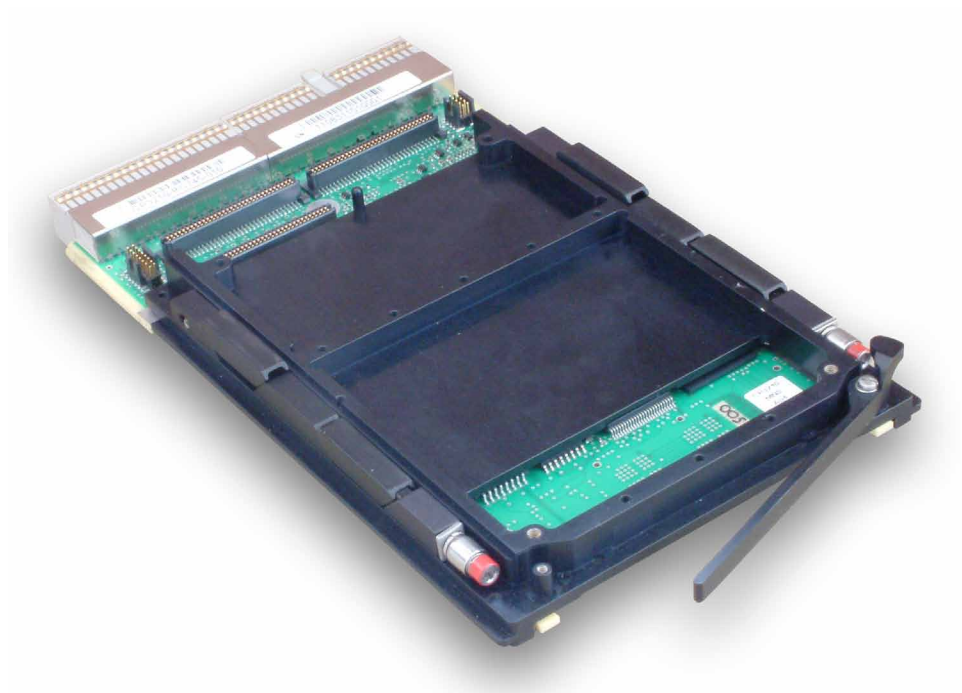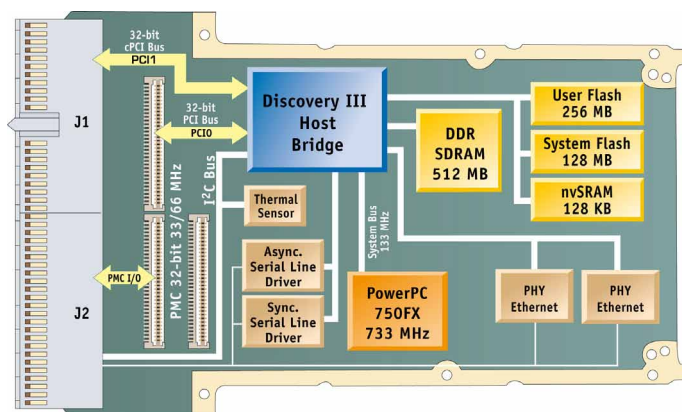

3U cPCI Rugged Conduction-Cooled Embedded Computer

» IBM PowerPC 750FX at 733 MHz

» cPCI System or Peripheral Slot

» Low Power Consumption less than 11W Typical

» Multiple Operating Systems Supported

The CP3210 is a new member of the Kontron family of rugged 3U CompactPCI embedded computers.

Based on the high reliable and powerful Kontron PowerEngineC7, the CP3210 is designed to meet the harshest and the most demanding requirements through its very low-power dissipation, real-time and certifiable software support and conduction cooled design. The CP3210 offers high storage capacities through User and System Flash, many I/Os with its dual Ethernet links, two serial lines, PMC slot, and for the most demanding I/Os applications an additional PMC can be added via the Kontron rugged PMC carrier CPMC1.

Concerning software support, Kontron provides the RTOS VxWorks 6.2 Board Support Package, and the CP3210 supports the ElinOS embedded linux and the DO-178 B and ARINC 653 certifiable PikeOS software provided by Sysgo.

Technical Information

Processor	PowerPC 750FX processor operating at 733 MHz; L1 cache: 32 KB, 32-byte line, 8-way set associative instruction cache, 32 KB, 32-byte line, 8-way set associative data cache; Dual Integer Unit; IEEE-754 Floating Point Unit; Instruction and Data Memory Management Units (MMU); Internal 512 KB L2 cache with ECC operating at processor frequency; Very low power implementation; Common on-chip processor debug port (JTAG/COP)
SDRAM Memory	512 MB of DDR SDRAM with error correction (ECC); High-speed 266 MHz memory access; Rugged design with soldered chips; Supports code execution copied from Flash memory
Flash	128 MB for System Flash; 256 MB for User Flash
nvSRAM	128 KB with RT clock. No Battery.
Thermal Management	Health monitoring with Thermal Sensor
Software	U-Boot firmware; Power-on Built-In Test (PBIT); ElinOS and PikeOS Operating Systems provided by Sysgo
PMC Expansion Slot – IEEE P1386/1386.1	32-bit 33/66 MHz PCI bus interface; 3.3V PCI signaling, 5V tolerant; Supports CCPMC Draft Standard VITA 2.0; 46 I/O pins are routed to the cPCI J2 connector; cPCI PMC Carrier Board, to fit in adjacent PCIbus slot
User I/O available on cPCI J1 or J2 Connectors	Dual Ethernet: 10/100/1000 and 10/100 ports; Asynchronous serial line, EIA-232; Simplified synchronous serial line, EIA-422/485; I2C bus for monitoring (5V tolerant); JTAG access on J1
Environmental Specifications	
Temperature range	VITA47-Class CC4
Operating	-40° to +85°C
Storage	-45° to +100°C
Conformal Coating	Standard
Relative Humidity	95% without condensing
Altitude	-1,640 to 60,000 feet
Mechanical	
Vibration Sine	22-2000 Hz - 5g Peak
Random	VITA47-Class V3
Shock	40g Peak 20 ms Half Sine Pulse 6 directions
Voltage Requirement	+3.3V +5% -2.5%: 10.5W typical +5V +5% -2.5%: 0,2 W typical

Ordering Information

Article	Order-No.	Description
CP3210	CP3210-RC745-010	CP3210 Rugged Conduction-Cooled Build, 512 MB SDRAM, 256 MB User Flash
RTM	PB-CP3210-000	I/O transition module for rear I/O routing
JTAG Cable	COP-PN3-A	Common on-chip processor JTAG cable
CPMC1	CPMC1-RC-000	3U cPCI Carrier Board
VxWorks Software	BSP-1G-CP3210	Workbench-2.4/VxWorks-6.2 BSP

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