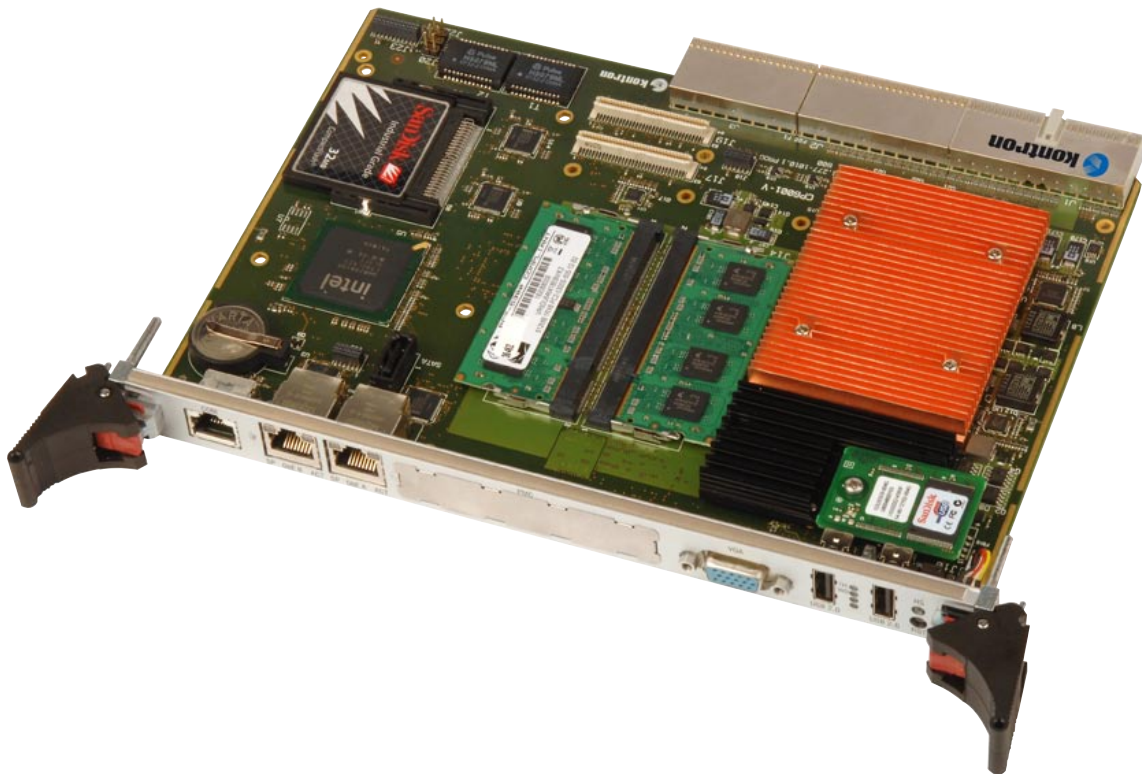


» CP6001-V «



Intel® Celeron® M 6U CompactPCI PICMG 2.16 Value Line CPU

- » Industrial Features - Cost Optimized
High computing, graphics and Ethernet performance
- » Minimum Power Consumption
Intel® Celeron® M440 processor, 1.86 GHz, 24W typical
- » Highest Versatility and Excellent Power Management
Comprehensive I/O capabilities: GigEthernet, PMC, USB, VGA, SATA, USB NAND Flash ...
- » Complete Board Support Packages for On Board Hardware and Toolchain

CP6001-V

Intel® Celeron® M 6U CompactPCI PICMG 2.16 Value Line CPU

Kontron introduces the CP6001-V, a new Value Line CompactPCI board in 6U height. It comes with the Intel® Celeron® M 440 processor 1.86 GHz and is designed for price-sensitive applications.

The CP6001-V CompactPCI system controller board combines the capabilities of an all in one industrial PC with the advantages of a robust and low power 6U CompactPCI design.

Minimum power consumption

The CP6001-V incorporates the 1.86 GHz Celeron® M 440 providing excellent performance and power dissipation figures for up-to-date industrial applications.

All-in-one industrial PC

The 4HP single-slot, space-saving board comes with all necessary industry-required interfaces such as a serial port, VGA graphics interface, Ethernet access, USB ports, PMC, HDD and USB flash disk support.

With the integrated graphics accelerator the 945GM provides high-resolution graphics up to 2048 x 1536 pixel @75 Hz and 2D/3D multimedia-quality video. The 945GM enables balanced memory usage between graphics and system for optimized performance (up to 128 MB of dynamic video memory allocation).

The Intel® ICH7-R I/O Controller Hub provides advanced I/O technology including USB 2.0 and Serial ATA300. The PMC site, USB Flash, CompactFlash socket and an

optional onboard 2.5 inch hard disk can all be used at the same time in a single 4HP slot. Utilizing the modular extensions, all industrial requirements for write-protected operating systems and data storage capabilities are supported.

Two Gigabit Ethernet interfaces available at the front panel operate independently of the additional two PICMG 2.16 compliant Ethernet channels, which are routed to the backplane.

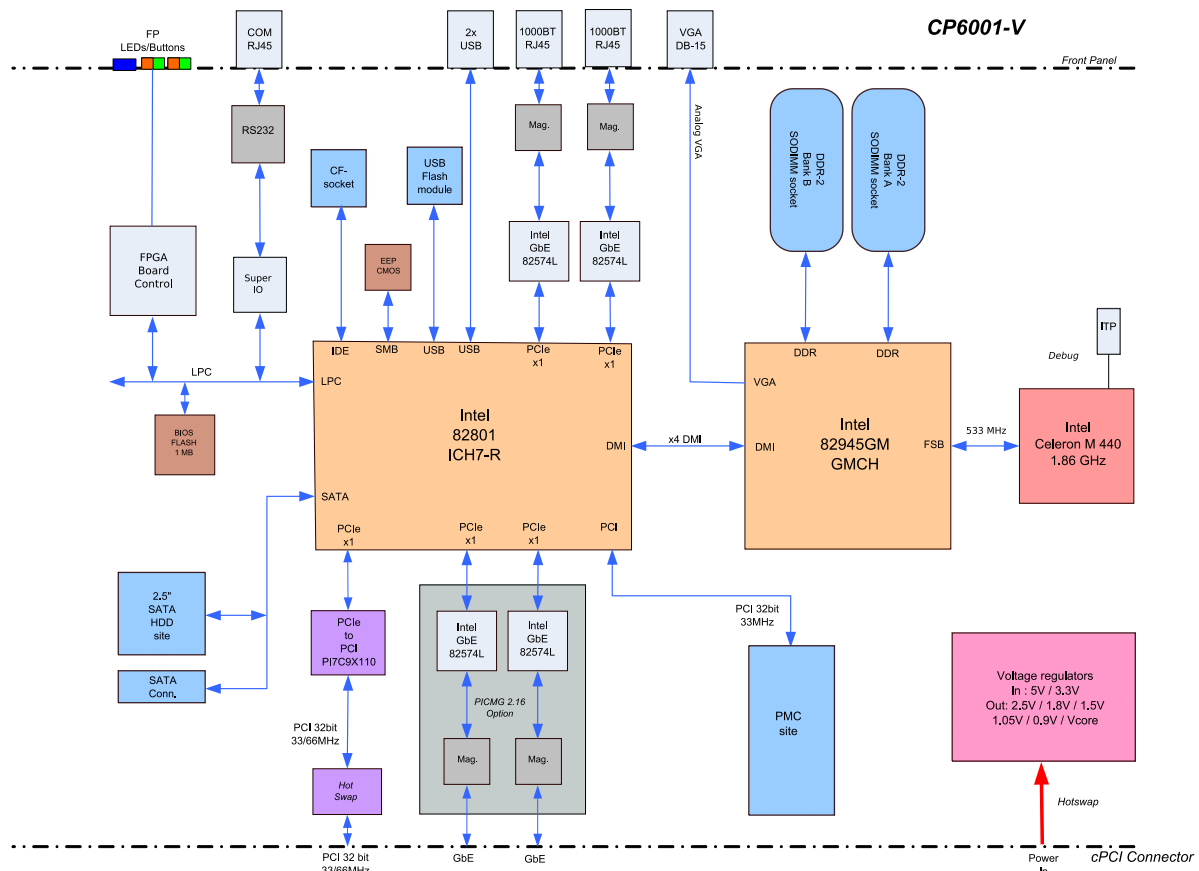
The highly versatile CP6001-V can be used in a system or peripheral slot. A rich set of LEDs is available at the frontpanel for debugging and diagnostic purposes.

Optimized cost-value ratio

The CP6001-V is tailored for cost-sensitive applications without compromising on the processor performance. The optimized cost-value ratio is achieved via the graphic support provided by the chipset, memory as two commercial off-the-shelf 533 MHz DDR2 SO-DIMM sockets, a fully integrated IO controller hub and taking advantage of selecting value oriented components.

Software Support

The CP6001-V is provided with a complete and self-installing Board Support Package for Microsoft Windows® XP, Windows® XP Embedded and Linux®. The onboard temperature and voltage sensors can be monitored, the front panel LEDs, hardware watchdog and timer can be triggered to support application specific features.



Technical Information

Processor	Intel® Celeron® M 440 Processor in µFCBGA package, 1.86 GHz, 533 MHz FSB, 1 MB L2 cache			
Chipset	<ul style="list-style-type: none"> - Intel® 945GM Express chipset with dual-channel DDR2 memory controller - Intel® ICH7-R, 4x SATA II controllers, 7x USB 2.0 (3x used), 6x PCI Express x1, LPC 			
Memory	<ul style="list-style-type: none"> - Dual channel DDR2 memory and data speed of 533 MHz per channel, and up to 4 GB on two SO-DIMM sockets - Up to 8 GB NAND Flash Module - Single 1MB Firmware Hub - Serial EEPROM (24LC64) 64 kbit 			
Onboard Controller	<ul style="list-style-type: none"> - Gigabit Ethernet: four Intel® 82574L Gigabit Ethernet PCI Express controllers, two front I/O and two rear I/O interfaces - Intel® 945GM internal graphic controller with up to 128 MB shared video memory - Watchdog: FPGA-based, software configurable, two-stage Watchdog with programmable timeout ranging from 125 ms to 256 s in 12 steps - RTC, integrated in ICH7-R - Super I/O: 1x UART for RS-232 			
System Interconnect	<ul style="list-style-type: none"> - Serial ports: one COM1 port at the front - USB NAND Flash: One USB port of the ICH7-R is routed to a dedicated onboard connector, where USB-NAND-Flash modules can be connected - SATA: two Serial ATA II ports <ul style="list-style-type: none"> - One onboard SATA interface routed to a standard SATA connector - One available for an optional 2.5" onboard HDD - PMC: one 32-bit / 33 MHz PCI PMC slot, 3.3V PCI signalling only 			
Front Panel Functions				
Ethernet	2 x 1000/100/10 Base Ethernet on RJ45			
VGA	1 x 15-Pin D-Sub connector for standard analog displays			
COM	1x RS232 UART interface on RJ45 connector			
USB	2x USB 2.0 ports, 4-pin standard USB host connectors			
PMC	opening for PMC front panel			
LEDs	2x LAN activity (yellow) and speed (green), 1x blue control LED for hot swap, 1x watchdog, 1x thermal control, 2x general purpose LEDs			
Reset	Reset button, guarded			
Micro switch	For hot swap			
I/O Table Summary				
	Front I/O	Rear I/O	Onboard Connector	Total
Video CRT VGA	1	-	-	1
USB	2	-	1 (Flash)	3
Serial	1	-	-	1
Ethernet	2	2	-	4
SATA	-	-	2	2
PATA	-	-	1 (CF)	1
USB-Flash	-	-	1	1
PMC	-	-	Pn1/Pn2	1
CompactPCI Bus Interface	<ul style="list-style-type: none"> - PICMG 2.0, 32-bit / 66 MHz - Universal signaling, REQ/GNT for 7 slots - Operating in system slot as system master and in peripheral slot in PCI passive mode (no communication to CompactPCI bus) 			
Rear I/O via J3	- J3: Two PICMG 2.16 rear I/O Gigabit Ethernet 1000BASE-T ports			
Compliance	<ul style="list-style-type: none"> - CompactPCI Core Specification PICMG 2.0 Rev. 3.0 - CompactPCI Hot Swap Specification PICMG 2.1 R2.0 - CompactPCI Packet Switching Backplane PICMG 2.16 R1.0 Designed to meet or exceed: <ul style="list-style-type: none"> - Safety: UL 1950, UL 94, CSA 22.2 No 950, EN 60950, IEC 950 - EMI/EMC: EN 55022 / EN 55024, EN 50081-1 / EN 6100-6-2 			
General				
Dimensions	233 x 160 x 20.5 mm, 6U, 4HP			
Weight	550g			
MTBF	CP6001-V: 255596h / MIL-HDBK-217 FN2 / Ground Benign 30° CP6001-V: 328068h / Bellcore Issue 6 / Ground Benign 30°			
Temperature Range	0°C to +60°C, passive module heat sink, forced system airflow required			
Humidity	93% RH at 40 °C, non-condensing (acc. to IEC 60068-2-78)			
Power Supply	+12V Hot Swap controller, PMC -12V optional PMC +5V onboard +3.3V onboard			
Power Consumption	max. 28W			
Software Support	<ul style="list-style-type: none"> - AMI BIOS with POST codes - Setup console redirection to serial port (VT100 mode) with CMOS setup access - BIOS parameters saved in EEPROM - Diskless, keyboardless, videoless operation, LAN boot support - Board identification number accessible via EEPROM - Support for Windows® XP, XP Embedded, Linux® (other OSs may be possible, please contact us for information) 			

Ordering Information

Article	Order-No.	Description
CPU Boards		
CP6001-V-1.86-2G	1022-5190	6U 4HP CPCI Intel® Celeron® M 440 System Master CPU, 1.86 GHz, 1MB L2, 2 GB DDR2 533 MHz SO-DIMM I/O: 4x GigE, VGA, COM, 2x USB, 2x SATA, USB Flash Socket, CompactFlash socket, J1-J3
CP6001-V-1.86-4G	1022-5197	6U 4HP CPCI Intel® Celeron® M 440 System Master CPU, 1.86 GHz, 1MB L2, 4 GB DDR2 533 MHz SO-DIMM* I/O: 4x GigE, VGA, COM, 2x USB, 2x SATA, USB Flash Socket, CompactFlash socket, J1-J3 (* useable application memory dependent on hardware resources)
USB-Flash Modules		
FLASH-USB-2GB	35953	USB-Module, low Profile, 2GByte
FLASH-USB-4GB	35954	USB-Module, low Profile, 4GByte
FLASH-USB-8GB	1022-5515	USB-Module, low Profile, 8GByte
Services		
CP6001-V-MK2.5SATA ¹⁾	1022-6822	Mounting kit for 2,5" SATA-HDD onboard, mounting within 4HP
Rear Transition Modules		
CP-RI06-001	37459	4HP RTM for CP6001-V; only two rear LAN channels are supported
Software Support		
KIT-CP6001 ²⁾	36894	Documentation and 32-bit Windows (XP, XP Embedded) driver kit on CD-ROM
LIN-BSP-CP6001 ²⁾	36895	Documentation and 32 bit Linux BSP for Suse and RedHat distributions on CD-ROM
(other operating systems)		Other operating systems support kits (e.g. 64-bit versions) on project request
¹⁾ HDD must be ordered separately ²⁾ Free of charge, downloadable from the Internet Please contact your local sales representative for other configuration options.		

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