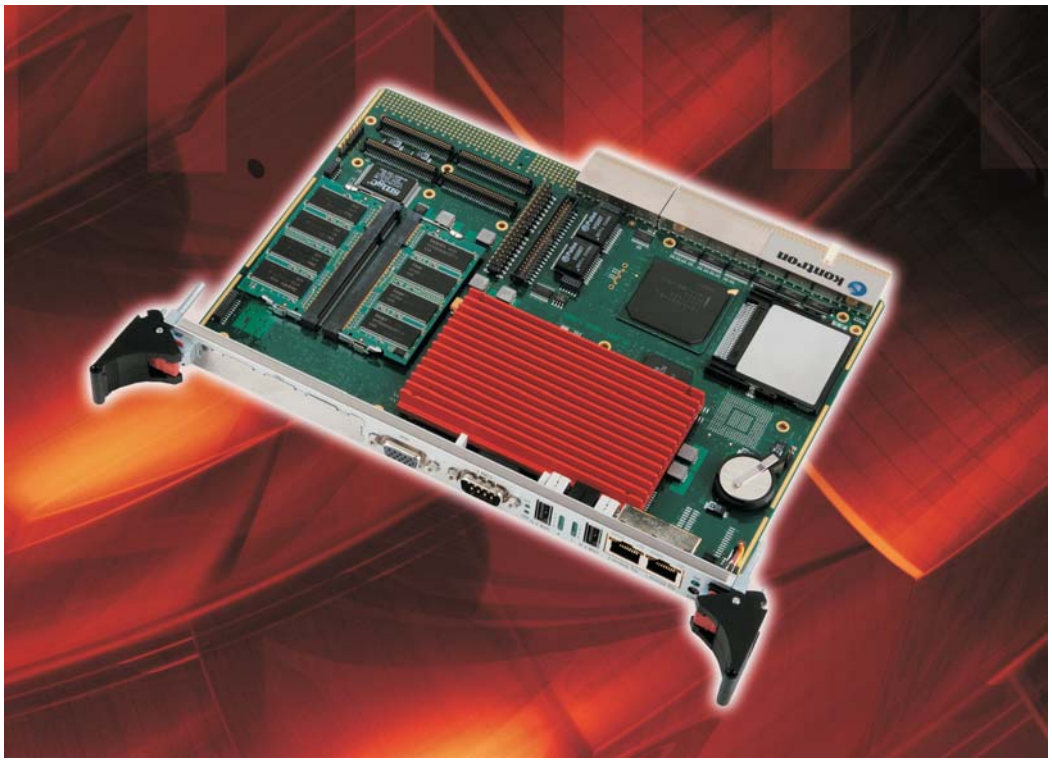
CP6000-V

6U Celeron® (Pentium® M - like) PICMG 2.16 Value Line CPU



CompactPCI

- **Minimum power consumption**
  Ultra low voltage processor with max. 7W
- **Industry tailored**
  Compact all-in-one Industrial PC
- **Optimized cost-value ratio**
  Designed for price sensitive applications

PCI-X

SERIAL ATA 1.5Gb/s

Intel® Communications Alliance Premier Member GOLD

Great Performance. Exceptional Value

Just pay for what you need ...

Kontron Modular Computers introduces the CP6000-V, a new Value Line CompactPCI board in 6U height. It comes with the Intel® Celeron® processor 600 MHz (Pentium® M technology) and is designed for price-sensitive applications.

The CP6000-V CompactPCI system controller board combines the capabilities of an all-in-one industrial PC with the advantages of a robust and low powered 6U CompactPCI design.

Minimum power consumption
The CP6000-V incorporates the ULV (ultra low voltage) 600 MHz Celeron® - Pentium® M technology - providing excellent power dissipation figures.
The 600MHz version even allows operation without any additional cooling provision in the system.

All-in-one industrial PC
The 4HP single slot, space saving board comes with all necessary industry-required interfaces such as serial port, graphics connection, Ethernet access, USB ports, HDD support.

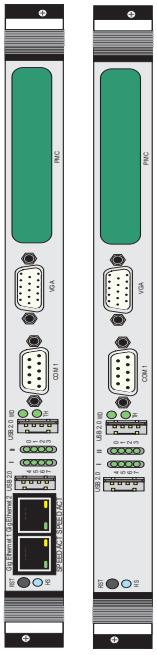
With the integrated graphics accelerator - Intels Extreme Graphics 2 technology - the 855GME provides high-resolution graphics up to 2048 x 1536 x 8bit/60Hz pixel and 2D/3D multimedia-quality video. The 855GME enables balanced memory usage between graphics and system for optimized performance (up to 64MB of dynamic video memory allocation).

The Intel 6300ESB I/O Controller Hub provides advanced I/O technology including USB 2.0 (40X faster than USB 1.1), Serial ATA150 and onboard 64/66 PCI-X bus.
The CP6000-V features a PCI-X PMC site, a CompactFlash socket and an onboard 2.5-inch hard disk (optional)- all usable at the same time in a single slot. The onboard 2.5-inch hard disk can be either an IDE drive or alternatively a SATA drive.

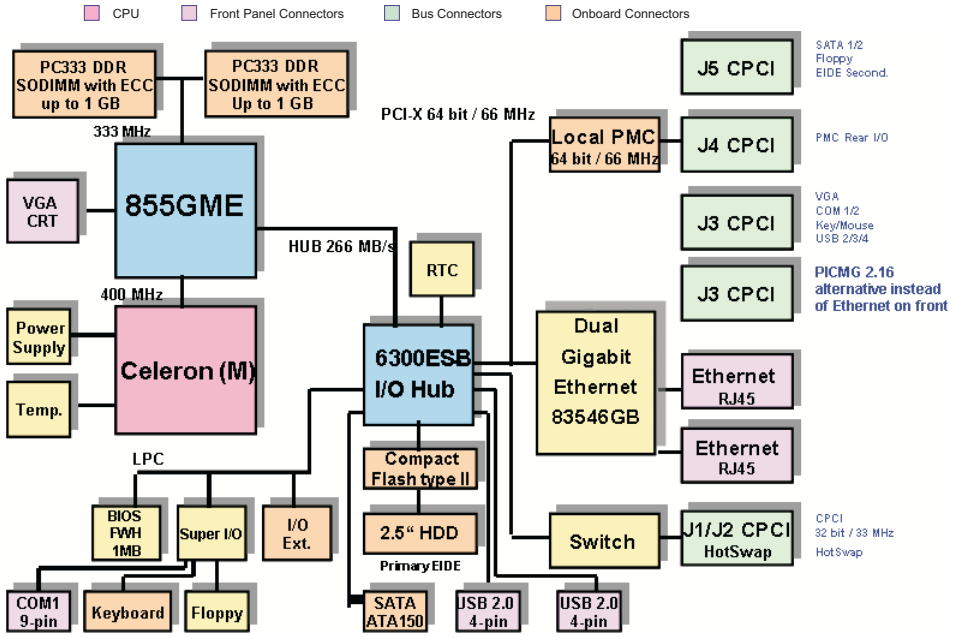
Two Gigabit Ethernet interfaces, which are either accessible via the front panel or, alternatively, realized through the backplane in accordance with PICMG 2.16, enable wireless switched fabrics.
Highly versatile the CP6000-V can be used in a system or peripheral slot.
A rich set of LEDs at the frontpanel for debug and diagnose as well as full rear IO connectivity completes the CP6000-V.

Optimized cost-value ratio
The CP6000-V is tailored for cost-sensitive applications without compromising on the processor performance. The optimized cost-value ratio is achieved by graphic support coming along with the chipset, memory as two inexpensive PC333 SODIMM SDRAM sockets (scalable at three levels, with 512 MB, 1 GB, or 2 GB) and taking advantage of selecting value oriented components.

Frontpanel



Functional Block Diagram



Specification

Exceptional Cost-Value Ratio

Processor

Pentium® M technology 2x 32KB L1 cache and 400MHz processor system bus
Low power Intel® Celeron® processor: 600 MHz no cache
Low power Intel® Celeron® M processor: 600 MHz 512 KByte cache

All board versions are passive cooled with a heatsink within 4HP height. Forced air cooling at a specific flow rate might be required depending on the application needs.

Memory

- 400MHz processor side bus, Intel® 82855GME
- 512 MB up to 2 GB PC333 DDR SDRAM memory w/ or w/o ECC via two 200-pin DDR SODIMM sockets
- Socket for CompactFlash Type II module
- Connector for onboard 2.5" HDD support
- 1 MB Firmware Hub (FWH) for BIOS
- 8 kB for storing CMOS data when operating without battery

I/O

- Two 16C550 compatible UARTs (COM1/2)
- Keyboard on rear and onboard connector and mouse interface on rear
- Floppy disk controller on rear
- Four USB 2.0 interfaces with up to 480 Mbit/sec, two front, two rear
- Two 10/100/1000 MB/s Gigabit Ethernet ports based on the Intel 82546GB Ethernet 64-bit PCI bus controller. either routed to the front or routed to the PICMG 2.16 rear pins.
- VGA Video Controller integrated in Intelfi 82855GME GMCH providing 2048x1536x8bit/60Hz resolution, max. shared memory 64MB

Front Panel Functions

COM1:	9-pin D-Sub (RS232)
VGA:	15-pin D-Sub SVGA connector
Ethernet:	2x RJ-45 (depending on version)
USB:	2x 4-pin 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
	8-LED-field for BIOS POST code or general purpose
Reset:	reset button, guarded
Micro switch:	for hot swap

Onboard Interfaces

- Two IDE connectors supporting Ultra DMA:
  one 40pin/2.54mm, one 44 pin/2mm for onboard 2.5 IDE HDD or Flash
- One SATA connection (optional), can be used alternatively to connect an onboard 2.5" **SATA** HDD instead of an onboard 2.5" **IDE** HDD
- CompactFlash type II socket
- 22-pin connector with all LPC signals
- PS/2 keyboard connector
- 2x200-pin SODIMM connectors
- 4x 64-pin PMC interface

I/O Table Summary

Description	Front I/O	Rear I/O	Onboard Conector	Total
Video	1	1	-	1
USB	2	2	-	4
Serial	1	2	-	2
PS/2 Mouse	-	1	-	1
PS/2 Keyboard	-	1	1	1
Ethernet	2	2	-	2
ATA100	-	1	2	2
SATA150	-	2	1	2
CompactFlash	-	-	1	1
PMC	1	via J4	Pn1-Pn4	1
Floppy	-	1	-	1

CompactPCI Bus Interface

PICMG 2.0 Rev. 3.0 compatible, 32 bit/33 MHz.
5V default signaling (3.3V on request available), 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).

PMC slot

One 64-bit / 66MHz PMC slot Pn1-Pn4, rear I/O Pn3 to J4.
3.3 V PCI voltage.

Supervisory Functions, Clock/Calendar

Watchdog, software configurable, 125 msec to 256 sec
generates IRQ, NMI or hardware reset.
Hardware monitor LM87 for thermal control, fan speed and all onboard voltages.
RTC (integrated in HanceRapids) and CMOS RAM with backup, battery replaceable.

Rear I/O via J3/(J4)/J5

J3: PICMG 2.16, VGA, COM0/1, keyboard, mouse, USB3/4
J4: PMC rear I/O
J5: SATA 1/2, IDE (secondary), Floppy

Compliancy

CompactPCI Core Specification PICMG 2.0 Rev. 3.0
CompactPCI Hot Swap Specification PICMG 2.1 R2.0
CompactPCI System Management PICMG 2.9 R1.0
CompactPCI Packet Switching Backplane PICMG 2.16 R1.0
Designed to meet or exceed:
- 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: 350g
MTBF: 139.589 h @ 30 C / 86 F (Bellcore Issue 6)

Software Support

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® 2000, XP, XP Embedded, Windows® Server 2003, Linux® (other OSs may be possible, please contact us for information).

Power Consumption

	600 MHz
3.3V	typ. 7-9 W / max. 10 W
5V	typ. 3-4 W / max. 6 W
+12V	required
-12V	not required

Environmental

Operating temp.:	0 °C to +60 °C
Storage temp.:	-55 °C to +95 °C
Climatic Humidity:	non condensing 93% at 40 °C (acc. to IEC 60068-2-78)
Altitude:	50,000 ft. (15,240 m)

Ordering Information

Product	Description	Order No.
	CPU Boards	
CP6000-V	Celeron 600 MHz, 2xGigEthernet on front panel, J1/J2	29995
CP6000-V	Celeron 600 MHz, 2xGigEthernet on PICMG2.16/RIO, J1/J2/J3	29996
	Memory Modules	
SODIMM-DDR-512	SODIMM, DDR SDRAM, 512MB, PC333, 200-pin, no ECC	27488
SODIMM-DDR-512-E	SODIMM, DDR SDRAM, 512MB, PC333, 200-pin, ECC	27489
SODIMM-DDR-1024	SODIMM, DDR SDRAM, 1GB, PC333, 200-pin, no ECC	27490
SODIMM-DDR-1024-E	SODIMM, DDR SDRAM, 1GB, PC333, 200-pin, ECC	27491
	Services	
CP-RIO	Assembly of connectors J3/J4/J5 and rear IO configuration for CP6000-V with GbE to front panel	27827
CP-RIO-NOJ4	Assembly of connectors J3/J5 (**no J4**) and rear IO configuration for CP6000-V with GbE to front panel	27828
CP-RIO216	Assembly of connectors J4/J5 and rear IO configuration for CP6000-V with GbE for PICMG2.16/RIO	27829
CP-RIO216-NOJ4	Assembly of connectors J5 (**no J4**) and rear IO configuration for CP6000-V with GbE for PICMG2.16/RIO	27830
CP6000-MK2.5 [1)]	Mounting kit for 2.5" IDE-HDD onboard, mounting within 4HP, mutually exclusive with CP6000-MK2.5SATA	27831
CP6000-MK2.5SATA [1)]	Mounting kit for 2.5" SATA-HDD onboard, mounting within 4HP, mutually exclusive with CP6000-MK2.5	30905
	Rear Transition Modules	
CP-CTM80-2 [2)]	4HP for SCSI (together with PMC261 on CP6000-V) and Ethernet on rear panel	25127
CP-CTM80-2 [2)]	4HP for SCSI (together with PMC261 on CP6000-V) and PICMG 2.16	27622
CP-CTM80-3	4HP for SATA and Ethernet on rear panel	29974
CP-CTM80-3	4HP for SATA and PICMG 2.16	29973
	Software Support	
KIT-CP6000/-V [3)]	Documentation and Windowsfi driver kit on CD-ROM	27790
LIN-BSP-CP6000/-V [3)]	Linux BSP CP6000-V for Suse and RedHat	27791

Note:

1) HDD must be ordered separately

2) no SATA150 support

3) Free of charge downloadable from the Internet

please contact your local sales representative for other configuration options

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