

# » CP307-V «



PCI   
EXPRESS®

## 3U Intel® Celeron® M Value Line CPU

### » Performance / Cost optimized

Intel® Celeron® M processor 1.86 GHz (440)

### » Industry tailored

Passive heatsink, robust formfactor

### » Comprehensive I/O capabilities

GigEthernet, USB, VGA, DVI, SATA, CompactFlash...

# CP307-V

## 3U Intel® Celeron® M Value Line CPU

Kontron introduces a new Value Line CompactPCI board in 3U height, the CP307-V. It comes with the Intel® Celeron® processor 1.86 GHz and is designed for price-sensitive applications.

The CP307-V CompactPCI system controller board based on the 1.86 GHz Intel® Celeron® M processor 440 with 533 MHz front side bus, together with the Intel® Mobile 945GM Express chipset and ICH7-R Southbridge combines the capabilities of an all-in-one industrial PC with the advantages of a robust 3U CompactPCI design.

### Optimized cost-value ratio

The CP307-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 one inexpensive SODIMM SDRAM DDR2 socket (scalable at three levels, with 512 MB, 1 GB, or 2 GB) and taking advantage of selecting value oriented components. The combination of CP307-V and CP-ASM4-POCKET chassis - Kontron's price-optimized housing for CompactPCI systems - recommends itself as an attractive solution for price-sensitive industrial applications, such as those found in production control, machine or facilities construction.

### All-in-One industrial PC

The CP307-V, a 3U CompactPCI CPU board incorporates Intel®'s latest processor technology based on a new 65nm manufacturing process. The compact design comes with all necessary industry-required interfaces such as serial port, graphics connection, Ethernet access, USB ports, HDD support.

### Greater Graphic Performance

Combined with the Mobile Intel® 945GM Express chipset featuring Intel®'s latest Graphics Media Accelerator the CP307-V delivers up to 2x improvement in graphics performance with exceptional 3D graphics performance and enables up to 25% higher data transfer compared to previous platform designs.

As a dual display solution the CP307-V offers a standard analog CRT connection with integrated 400 MHz RAMDAC and an independent DVI interface.

### Comprehensive I/O Connectivity

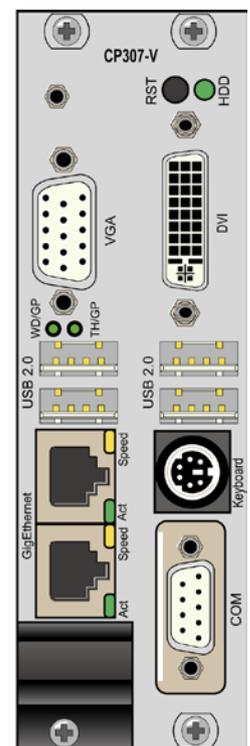
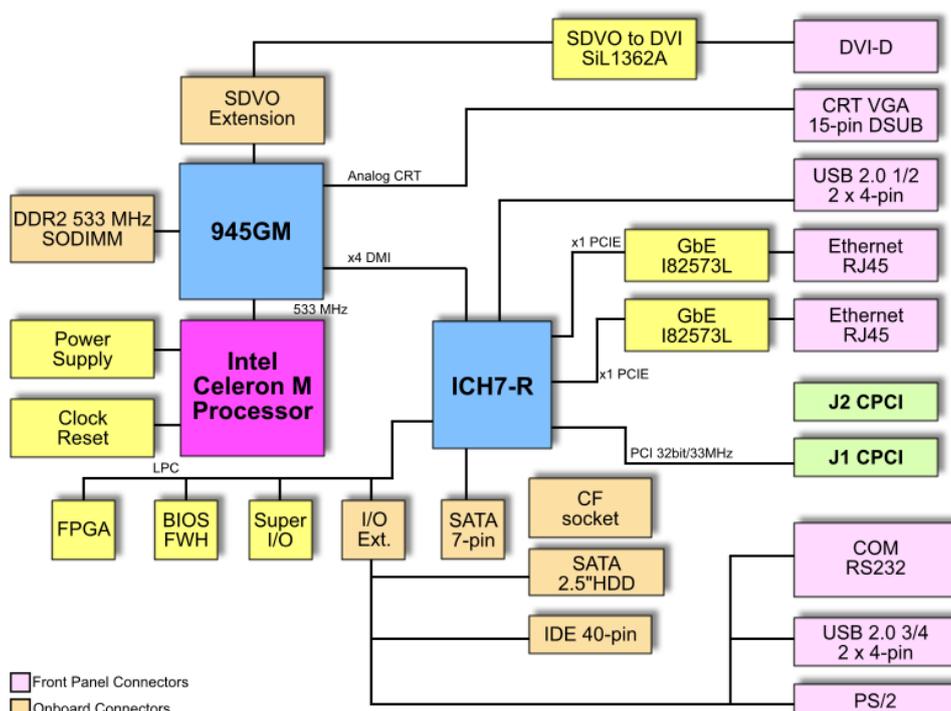
The CP307-V comes with a comprehensive I/O connectivity supporting 4 x USB 2.0, PS-2, COM and 2 x Gbit Ethernet where as high network bandwidth is guaranteed through PCI-Express as data bus to the Ethernet channels eliminating the bottleneck of parallel PCI bus. 2x SATA-300 interfaces one with on board 2.5 HDD mounting capability in addition, a CompactFlash socket allows for versatile storage media access.

### Longterm Availability

Delivering a stable product based on Intel®'s embedded product line the CP307-V ensures longterm availability.

This eliminates the risk of unplanned design changes and unexpected expensive application modification.

While minimizing deployment risks by providing a broad range of software support the CP307-V eases the process of product integration and maximizes your competitive advantage to meet your timetomarket window.

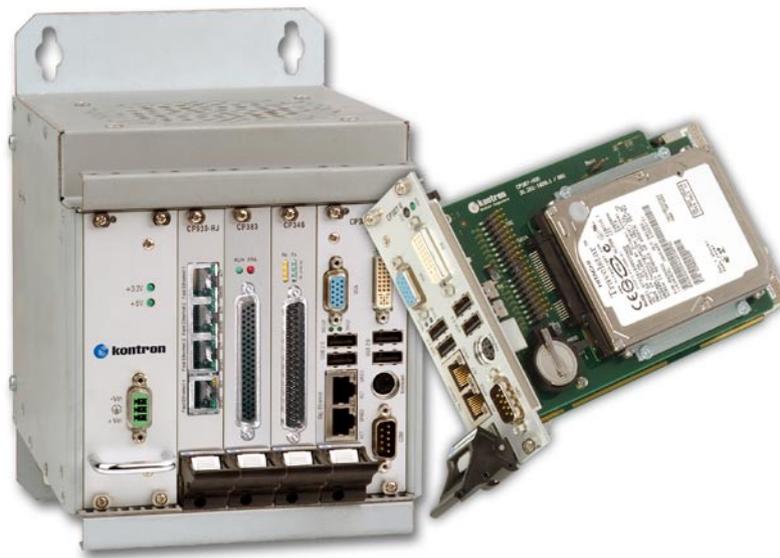


## Specification

<b>System Processor</b>	Intel® Celeron® M processor 440 in micro-FCBGA package (Intel® Core™ Solo but 1 MB L2): 1.86 GHz, 553 MHz FSB, 1 MB L2, FCBGA
	The CP307-V is passive cooled. Forced air cooling at a specific flow rate is required depending on processor version.
<b>Memory</b>	System memory: Up to 2 GByte DDR2 533 MHz memory via SODIMM-socket for max. 2 GByte memory module (no ECC)
	Flash (BIOS): 1 MB Firmware hub (FWH)
	EPROM: Serial EEPROM (24LC64) 64 kbit for CMOS data storing (no battery operation)
<b>Mass Storage</b>	Two Serial ATA (SATA) interfaces with RAID functionality: - One standard SATA interface - One SATA interface for mounting a 2.5 HDD on mezzanine
	One IDE Ultra ATA/100 interface on mezzanine
	Onboard CompactFlash socket for type I and type II CompactFlash cards (True IDE with DMA)
<b>Onboard Controller</b>	
GMCH Graphic Memory Controller Hub:	Intel® 945GM chipset
	DDR2 memory controller
	Internal Graphics controller with dual independent VGA channels
I/O Controller Hub:	Intel® ICH7R
	2 SATA II controller, 4 x USB 2.0, 2 x 1 PCI-Express, 1 x 32-bit/33MHz PCI integrated on CP307-V
VGA:	Integrated in 945GM max. 2048 x 1536 pixels (QXGA), 16M colors, @75Hz, CRT and DVI
Gigabit Ethernet:	2 x GbE, 82573L PCI-Express controller
Super I/O:	LPC Super I/O from SMSC SCH3112I-NU with 2x UART, HWMonitor, PS/2
Watchdog:	Timeout 125ms to 256s programmable in 12 steps, NMI, IRQ, Reset, dual-stage
RTC:	Integrated in ICH7R with 256 bytes of battery-backed CMOS, RAM
<b>Front Panel Interfaces</b>	
Ethernet:	2 x RJ45 with integrated LEDs (ACT, SPEED)
VGA:	1x VGA-CRT 15-pin D-Sub connector
DVI:	1x 29-pin DVI-D connector
USB:	4 x 4-pin connectors
COM:	1x 9-pin D-Sub connector
PS/2:	1x 6-Pin shielded mini-DIN connector
LEDs:	Thermal, Watchdog or both general purpose
Control:	Reset button and HDD LED
<b>CompactPCI Bus Interface</b>	PICMG 2.0 Rev. 3.0 compatible, 32-bit/33MHz System master
	5V VI/O (3.3V on request), 7 Req/Gnt & clock lines
<b>Supervisory Functions</b>	Watchdog, software configurable, 125 msec to 256 sec. in 12 steps, generates IRQ, NMI or hardware reset, two stage configuration for NMI and Reset Hardware monitoring SCH3112 for thermal control, fan-sense/control and all important onboard voltages
<b>Hot Swap</b>	Support for all signals to allow peripheral boards to be hot swapped. The individual clocks for each slot and access to the backplane ENUM# signal comply with the PICMG 2.1 Hot-Swap specification.
<b>Compliance</b>	CompactPCI Core Specification PICMG 2.0 Rev. 3.0
	CompactPCI Hot Swap Specification PICMG 2.1 Rev. 2.0
	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"
<b>General</b>	Dimensions: 100mm x 160mm
	Weight: 400g / 8HP
	MTBF: 141,543 h acc. to MIL-HDBK 217FN2, Ground Benign GB, controlled at 30°C
<b>Software Support</b>	AMI BIOS with POST codes, setup console redirection to serial port (VT100 mode) with CMOS setup access, BIOS parameters saved in EEPROM, diskless, keyboardless, 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).
<b>Power Consumption</b>	1.86 GHz Celeron® M and 1GB memory: typ. 20W
<b>Environmental</b>	Operating temp.: 0°C to +60°C (depending on available airflow in the system)
	Storage temp.: -55°C to +85°C
	Climatic Humidity: non condensing 93% at 40°C (acc. to IEC 60068-2-78)
	Altitude: 50,000 ft. (15,240 m)

## Ordering Information

Article	Part.-No.	Description
<b>CP307-V-1.86-1G-5V <sup>1)</sup></b>	35889	<b>CPU Baseboard</b> 1.86 GHz Celeron® M (440), 1MB L2 cache, 1GB SODIMM module, 5VI/0 Front I/O: 2x Ethernet, 4x USB, VGA, DVI, COM, PS/2, LEDs, Reset button
<b>CFxxxx</b>		<b>Accessories</b> Various sizes of CompactFlash up to 8GB
<b>CP-HDD-2.5-SATA-xxx</b>		Various sizes of onboard 2.5" SATA HDD
<b>KIT-CP307/-V</b>	33997	<b>Software</b> Windows XP Board Support Package, CP307-V User's Manual
<b>LIN-BSP-CP307/-V</b>	33998	Linux Board Support Package, CP307-V User's Manual
<b>CP-ASM4-POCKET</b>	27536	<b>Chassis</b> 4U / 28HP rack with 4-slot CompactPCI backplane and 75 Watt DC PSU
<b>CP-ASM4-POCKET</b>	27537	4U / 28HP rack with 4-slot CompactPCI backplane and 75 Watt AC PSU
<b>Note:</b>		<sup>1)</sup> contact your local sales office for versions with other memory sizes



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