» CP3003-V «

3U CompactPCI® Intel® Celeron® Value Line CPU

» **Cost-Optimized Board Design**
  Based on Intel® Celeron® technology
» **Industry Tailored**
  Robust Form Factor
» **Comprehensive I/O Capabilities**
  Gigabit Ethernet, USB 2.0/3.0, DisplayPort, SATA ...

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The pulse of innovation

CP3003-V
3U CompactPCI® Intel® Celeron® Value Line CPU

Optimized for reduced costs delivering maximum value, the CP3003-V combines the capabilities of an all-in-one industrial PC with the advantages of a robust 3U CompactPCI® design. The board offers customers an all-round package of up-to-date communication interfaces combined with solid graphics and processing performance all at a competitive price level. This combination makes the CP3003-V a perfect fit for industrial automation applications such as visualization, machine control or inspection where the price is often the crucial criterion.

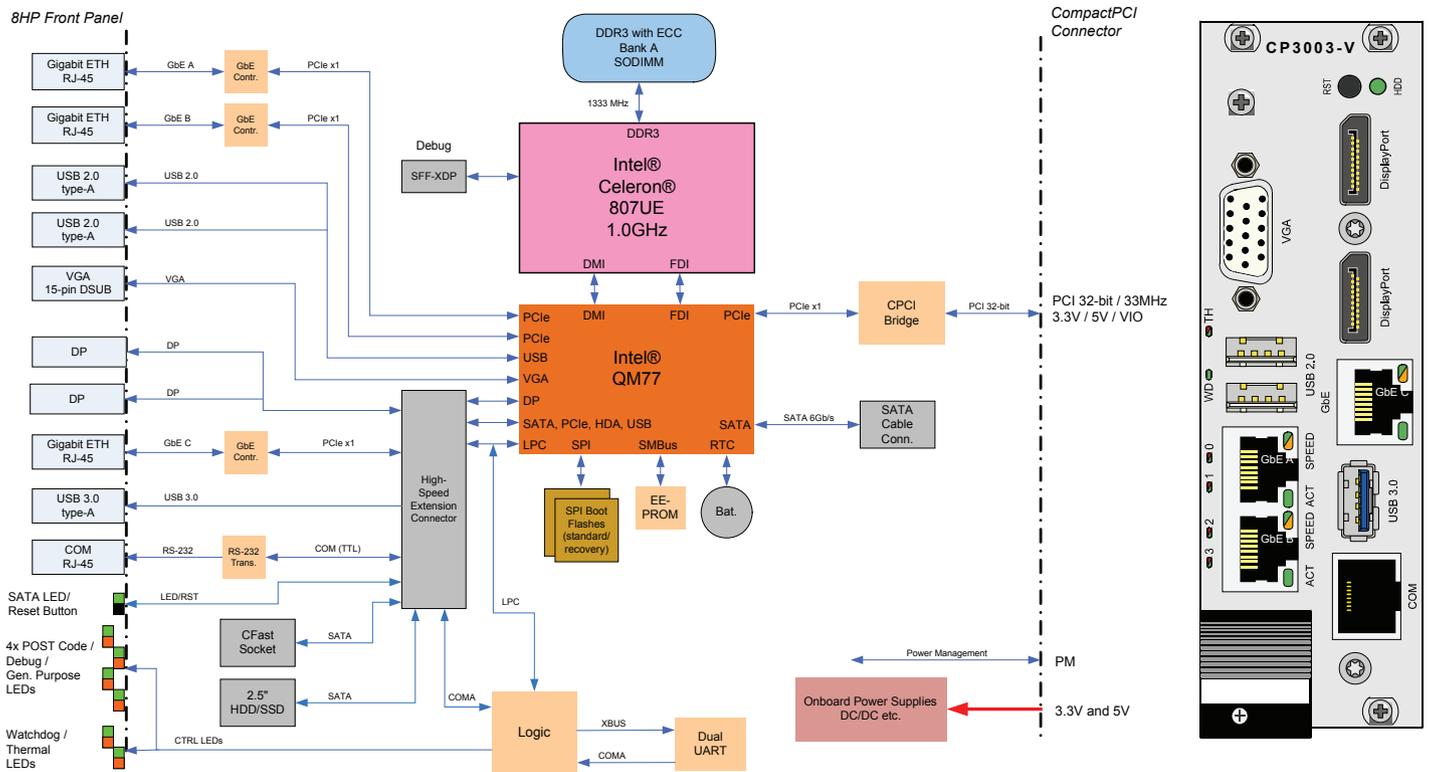### Optimized Price-Performance Ratio

The CP3003-V features the Intel® Celeron® 807UE processor (2nd Generation Core™ technology) combined with the Mobile Intel® QM77 Express PCH. The 807UE Celeron® CPU offers a good performance level at an extremely low power consumption plus a superior graphics performance through the Intel® HD graphics core. On top of that the QM77 PCH provides the latest I/O interfaces such as USB3.0 or SATA 6Gb/s. The CPU board offers up to 4GB 1333 MHz DDR3 SDRAM with Error Checking and Correction (ECC).

On the system side, the CP3003-V supports a PCI 32-bit/33MHz CompactPCI® interface enabling the passive mode feature. When installed in a system master slot, the CompactPCI® interface is enabled, whereas the CompactPCI® interface will be isolated when installed in a peripheral slot.

Comprehensive I/O Connectivity

The CP3003-V comes as compact all-in-one solution that offers a comprehensive set of interfaces. At the front panel a variety of communication interfaces such as one VGA, two DisplayPort, one USB 3.0, two USB 2.0, three Gigabit Ethernet ports and a Serial port (RS-232) are available. Two SATA 6Gb/s interfaces and a CFAST socket, all realized as onboard connectors, complete the boards I/O capabilities.

Long-Term Availability

Investing in a new project is always a challenge and risky. Extending the lifetime of an application to the maximum possible is therefore a critical issue to save the development investments.

Delivering a stable product based on Intel®'s embedded product line, the CP3003-V ensures long-term 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 CP3003-V eases the process of product integration and maximizes your competitive advantage to meet your time-to-market window.

Technical Information	
Processor	Intel® Celeron® Processor (32nm technology): 807UE: Single-Core 1.0 GHz, 1MB cache
Memory	
System Memory	Up to 4GB 1333MHz DDR3 memory, with ECC, only 1x memory channel supported
Boot Flash (uEFI)	Two redundant 8 MB SPI boot flashes with fail-over functionality
EEPROM	Serial EEPROM (24LC64) 64 Kbit for storing uEFI BIOS settings and serial number
HDD	Onboard 2.5" SATA SSD/HDD installation via 8HP extension
CFast	Onboard CFast installation via 8HP extension
Onboard Controller	

Platform Controller Hub	Mobile Intel® QM77 Platform Controller Hub featuring:
	» USB host interface with ten USB2.0 and four USB3.0 ports
	   (only two USB2.0 and one USB3.0 ports are used on the CP3003-V)
	» SATA host controller with four SATA 3Gb/s and two SATA 6Gb/s ports with RAID support
	   (only 1x SATA 3Gb/s and two SATA 6GB/s ports are used on the CP3003-V)
	» Eight x1 PCI Express® 2.0 ports operating at 5.0 GT/s (only three x1 PCI Express® ports are used)

Graphics	High performance 3D graphics controller integrated in the processor: » Support for up to 2x independent displays » Supports analog displays up to a resolution of 2048 x 1536 pixels with 32-bit color @ 75 Hz » Supports digital displays up to a resolution of 1920 x 1200 pixels @ 60 Hz » Dynamic Video Memory Technology (DVMT)
Gigabit Ethernet	Three 1000BASE-T interfaces with WOL (Wake-on-LAN) support, Intel® 82574L Ethernet controller
UART	XR16L2750IM-F UART, 16C550-compatible
Watchdog	FPGA-based, timeout ranging from 125ms to 4096s programmable in 16 steps, IRQ, reset, dual-stage configuration
RTC	Integrated in PCH, with 256 Byte CMOS RAM
Front Interfaces	
VGA	1x VGA-CRT 15-pin D-Sub connector
USB	2x USB 2.0 ports, 4-pin standard USB connectors 1x USB 3.0 port, 9-pin type-A connector
Ethernet	3x RJ-45 with integrated LEDs (ACT, SPEED)
DisplayPort	2x 20-pin DisplayPort connectors, DVI/HDMI capable through passive cable adapter
Serial Port	1x 16C550-compatible serial port, RS232 signalling, RJ-45
Control	Reset button, HDD activity LED
LEDs	4x POST Code or General Purpose, WD, TH
Onboard Interfaces	
Serial ATA	1x onboard standard SATA cable connector with locking mechanism (SATA 6Gb/s) 1x SATA connector for connecting a SATA 2.5" HDD/SSD (SATA 6Gb/s)
CFAST	1x CFast card socket
CompactPCI® Bus Interface	PICMG 2.0 Rev. 3.0 compatible, 32-bit/33MHz Universal 5V and 3.3V PCI signalling voltage supported, 7 Req/Gnt & clock lines Operating in system slot as system master and in peripheral slot in PCI passive mode
Hot Swap	Support for all signals to allow peripheral boards to be hot swapped. The individual clocks for each slot and access the backplane ENUM# signal comply with the PICMG 2.1 Hot Swap Specification
Supervisory Functions	Watchdog, software configurable, 125ms to 4096s in 16 steps, generates IRQ or hardware reset or dual-stage configuration
Software Support	» AMI uEFI, setup console redirection to serial port (VT100 mode) with CMOS setup access, EFI Shell support, board configuration via Shell, diskless, keyboardless, videoless operation » LAN boot support » Board identification number accessible via EEPROM » Support for Windows® 7, Windows® Embedded Standard 7, Linux® (Other OSs may also be used with the CP3003-V. Please contact Kontron for further information)
Compliancy	» 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 60950-1, CSA 22.2 No 60950, EN 60950-1, IEC 60950-1 » EMI/EMC: EN 55022 / EN 55024, EN 61000-6-3 / EN 61000-6-2
General	
Dimensions	100 x 160mm, 3U/8HP
Weight	460 g
MTBF	233,687 h acc. to MIL-HDBK-217 FN2, Ground Benign, controlled at 30°C

Technical Information

Power Consumption	TBD
Environmental	
Operating Temperature	0°C to +60°C, standard
Storage Temperature	-40°C to +85°C (without additional components)
Climatic Humidity	93% RH at 40°C, non-condensing (acc. to IEC 60068-2-78)

Ordering Information

Article	Description
CP3003-V Configurations	
CP3003-V-1.0S-2-8F	Celeron 807UE, Single-Core 1.0 GHz, 1MB cache, 2GB DDR3 SODIMM (one memory channel), 8HP, Front I/O
Storage (as separate items, not mounted on the CPU)	
CFASTx	Industrial grade CFast, various sizes available
CP-HDD-2.5-SATA-xx	Industrial grade HDD, various sizes available
CP-SSD-2.5-SATA-xx	Industrial grade SSD, various types and sizes available

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