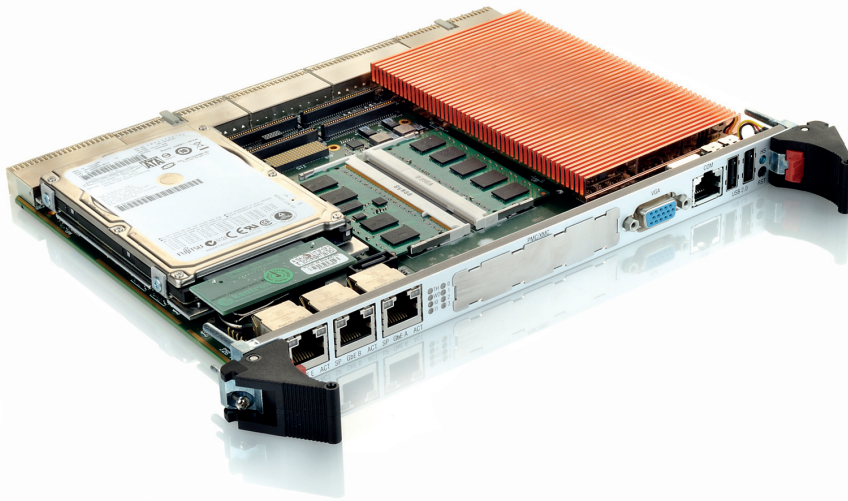


» CP6004-SA «



Intel® Core™ i7 Third Generation CompactPCI Processor Blade

» Dual- and Quad-Core Performance:

Third Generation Intel® Core™ i7 processor with up to 16 GByte DDR3 memory including ECC support

» Power Saving:

Latest 22nm Technology for low power budgets

» Highest Versatility and Excellent Power Management:

Comprehensive I/O capabilities: DVI/HDMI, GigEthernet, PMC/XMC, USB, VGA, SATA RAID, SATA NAND Flash ...

» Broad Software Support:

Complete Board Support Packages for On Board Hardware and Toolchain

CP6004-SA

Intel® Core™ i7 Third Generation CompactPCI Processor Blade

Benefit from the latest technology that achieves highest processor performance at optimized power consumption.

The power of up to four cores / eight threads enables virtualization and multithreading applications to run in full 64-bit mode using Enhanced Intel® Virtualization, Intel® HD Graphics, and Intel® Turbo Boost Technology.

Greater Performance / Watt

Compared to previous processor designs the 22nm quad-core Ivy Bridge technology allows much better performance at similar power consumption. The PICMG 2.16-compliant Kontron CP6004-SA offers up to 16GB dual-channel 1600 MHz DDR3 ECC memory via two SODIMM sockets, providing up to 25 GB/sec data throughput. The CP6004-SA is designed for bandwidth intensive applications and thanks to hotswap support and IPMI (PICMG 2.9-compliant Intelligent Platform Management Interface) the CPU board meets the highest demands for the management of high-availability applications. Many of these are data and tele-communications applications, but also include highly sensitive, security related solutions as well as image processing systems in medical technology and other vertical industries.

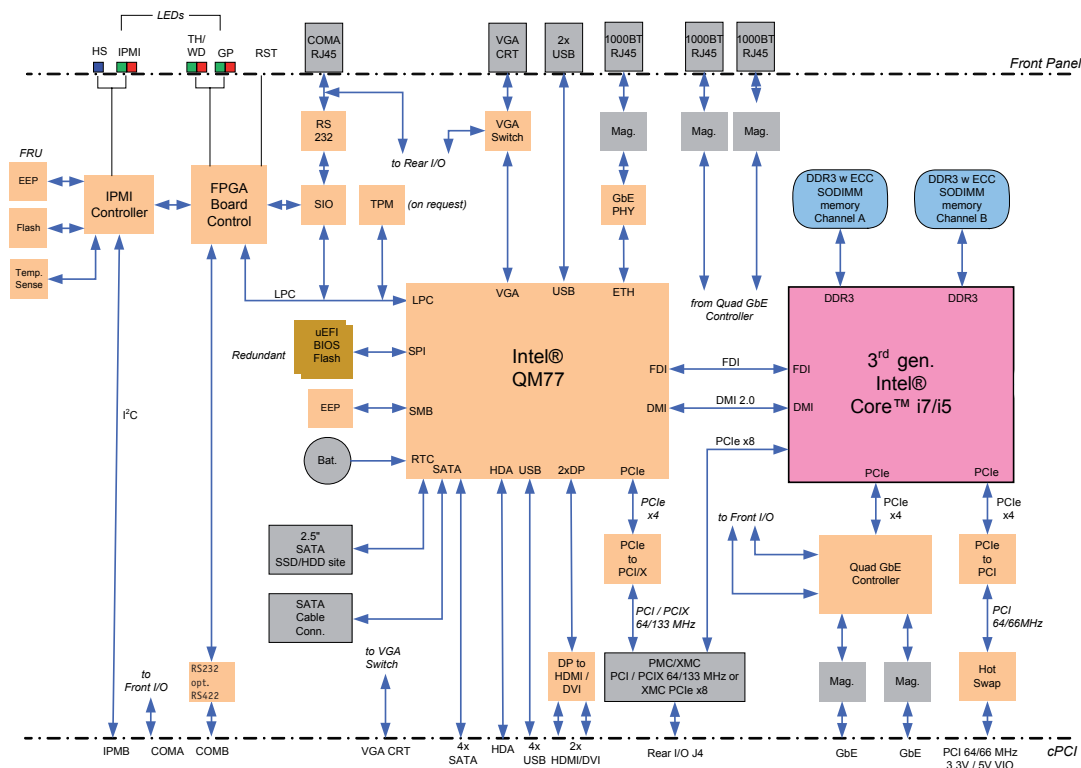
Unique Versatility

The highly integrated CP6004-SA features a XMC site according to XMC.3 supporting x8 PCI Express (alternatively a 64-bit/133MHz PCI PMC site), an onboard 2.5-inch SATA hard disk or SSD and an industrial grade NAND Flash device - all usable in a 4HP single slot.

The Intel® Platform Controller Hub provides advanced I/O technology including USB 2.0 and several Serial ATA channels. Five independent Gigabit Ethernet ports (3x ports at the front and 2x for full PICMG 2.16 support) provide comprehensive connectivity capabilities, enabling innovative applications today by offering enough room for the emerging next generation requirements. Highly versatile, the CP6004-SA can be used in a system or peripheral slot. A rich set of LEDs at the front panel for debug and diagnostic, as well as full rear I/O connectivity completes the CP6004-SA.

Longterm Availability

Delivering a stable product based on Intel®'s embedded product line, the CP6004-SA ensures long term availability. This eliminates the risk of unplanned design changes and unexpected expensive application modification. While minimizing deployment risks, the CP6004-SA provides a broad range of software support to ease the process of product integration and maximize the competitive advantage of meeting the time-to-market window.



Technical Information

| | | | | |
|--|---|-----------------|--------------------------|--------------|
| Processor | 3rd Generation Intel® Core™ processor (22nm manufacturing process, code name Ivy Bridge) Quad Core i7-3612QE (2.1 GHz), i7-3615QE (2.3 GHz); Dual Core i7 - 3555LE (2.5GHz LV), i5-3610ME (2.7GHz) Further processors available on project request | | | |
| Platform Controller Hub | Platform Controller Hub Intel® QM77 | | | |
| Memory | | | | |
| System Memory | Dual channel DDR3 memory with ECC and data speed of up to 1600 MHz per channel, and up to 16 GB on two SODIMM sockets | | | |
| NAND Flash | Up to 64 GB NAND Flash Module option (SSD) | | | |
| Flash BIOS | Two redundant 8 MByte SPI Flashes | | | |
| Front Panel Functions | | | | |
| Gigabit Ethernet | Three 1000BASE-T Ethernet on the FP | | | |
| Serial Port | One RS232 interface on RJ45 connector | | | |
| USB interface | Two USB 2.0 ports, 4-pin standard USB host | | | |
| VGA | One 15-Pin D-Sub connector for analog monitors | | | |
| Reset button | One reset button | | | |
| Micro Switch | For Hot Swap | | | |
| LEDs | Eight bicolor (red and green) control and status LEDs Two IPMI LEDs One Watchdog and one thermal LED Four GP LEDs One blue hot Swap LED | | | |
| Onboard Interfaces | | | | |
| Gigabit Ethernet | Two PICMG 2.16 rear I/O 1000BASE-T ports | | | |
| SATA | Four ports fixed to rear I/O One port routed to a standard SATA connector One port available for mounting an optional 2.5" HDD or SSD | | | |
| NAND Flash | One port available for mounting an optional NAND Flash module | | | |
| Serial Ports | COM1 (RS232) routed to front panel and rear I/O COM2 (RS232) routed to rear I/O only | | | |
| PCI Bus | PICMG 2.0 Rev. 3.0 compatible, 64-bit / 66 MHz Universal V(I/O) 5V or 3.3V signalling Operating in system slot as system master and in peripheral slot in PCI passive mode (no communication to CompactPCI bus) | | | |
| PMC/XMC | One 64-bit / 133 MHz PMC slot, Pn1-Pn4, rear I/O Pn3 to J4, 3.3 volt V(I/O) Alternatively one XMC slot via P15, supporting XMC.3 x8 PCIeExpress | | | |
| Rear I/O | J3: PICMG 2.16, VGA, COM 1/2, 4x USB J4: PMC rear I/O J5: 4x SATA, HDA, battery, fan control | | | |
| Supervisory Functions, Clock/Calendar | Watchdog, software configurable, 125 msec to 256 sec, generates IRQ or hardware reset. Hardware monitor for thermal control, fan speed, and all onboard voltages RTC battery backup | | | |
| IPMI | IPMI 1.5-compliant for IPMI based management and CompactPCI System Management PICMG 2.9 R1.0 | | | |
| TPM | Optional Trusted Platform Module (TPM) 1.2 for enhanced hardware and software based data and system security | | | |
| I/O Table Summary | | | | |
| Description | Front I/O | Rear I/O | Onboard Connector | Total |
| Video CRT VGA | 1 | 1 | - | 1 |
| USB 2.0 | 2 | 4 | - | 6 |
| HDAudio | - | 1 | - | 1 |
| Serial | 1 | 2 | - | 2 |
| DVI/HDMI | - | 2 | - | 2 |
| Ethernet | 3 | 2 | - | 5 |
| SATA | - | 4 | 2 | 6 |
| NAND Flash | - | - | 1 | 1 |
| PMC / XMC | - | - | 1/1 | 1/1 |
| FAN control | - | 2 | - | 2 |
| Battery Input | - | 1 | - | 1 |
| SMB | - | 1 optional | - | 1 optional |

Technical Information (continued)

| | |
|--------------------------|--|
| Compliance | <p>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</p> <p>Designed to meet or exceed: Safety: UL 1950, UL 94, CSA 22.2 No 950, EN 60950, IEC 950 EN 55022 / EN 55024, EN 50081-1 / EN 6100-6-2</p> |
| MTBF | <p>182768 h according MIL-HDBK-217 FN2 Ground Benign 30°C 215050 h according Bellcore Issue 6 Ground Benign 30°C</p> |
| General | |
| Dimensions | 233 x 160 x 20.5 mm, 6U, 4HP |
| Weight | 790g |
| Software Support | <p>AMI EFI (BIOS) with POST codes, setup console redirection to serial port (VT100 mode) with CMOS setup access, BIOS parameters saved in EEPROM, diskless, keyboardless, videless operation LAN boot support Board identification number accessible via EEPROM Support for Windows® 7, XP, XP Embedded, Windows® Server 2008R2, Linux® (other OSs may be possible, please contact us for information)</p> |
| Power Consumption | Maximum: up to 50 or 60 watts (quad core versions), 50 watts or less (dual core versions) |
| Environmental | |
| Operating temp. | 0°C to +60°C, passive module heat sink, requires forced airflow cooling, extended on request |
| Storage temp. | -40°C to +85°C Without hard disk and without battery |
| Climatic Humidity | 93% RH at 40°C, non condensing (acc. to IEC 60068-2-78) |
| Altitude | 50,000 ft (15,240 m) |

Ordering Information

| Article | Description |
|--|---|
| CPU Boards | |
| CP6004-SA-Q2.3-8G | <ul style="list-style-type: none"> » Quad Core 2.3 GHz, Core i7-3615QE » 8GB SODIMM dual channel 1600 MHz with ECC » Standard front & rear I/O, PMC/XMC » Temperature range 0°C to 60°C |
| CP6004-SA-2.7-4G | <ul style="list-style-type: none"> » Dual Core 2.7 GHz, Core i5-3610ME » 4GB SODIMM dual channel 1600 MHz with ECC » Standard front & rear I/O, PMC/XMC » Temperature range 0°C to 60°C |
| CP6004-SA-Q2.1-8G (on request) | <ul style="list-style-type: none"> » Quad Core 2.1 GHz, Core i7-3612QE » 8GB SODIMM dual channel 1600 MHz with ECC » Standard front & rear I/O, PMC/XMC » Temperature range 0°C to 60°C |
| CP6004-SA-2.5-4G-E1x (on request) | <ul style="list-style-type: none"> » Dual Core 2.5 GHz, Core i7-3555LE (Low Voltage) » 4GB SODIMM dual channel 1600 MHz with ECC » Standard front & rear I/O, PMC/XMC » Temperature range -40°C to 70°C |
| Accessories | |
| CP6004-MK2.5 SATA | Mounting kit for 2.5" SATA-HDD/SSD onboard, mounting within 4HP |
| Flash-SATA | Various SSD products / sizes available (not possible, if onboard HDD / SSD used) |
| Rear Transition Modules | |
| CP-RI06-001 | 4HP Rear I/O Module for CP6004 with 2xDVI-D; 2x USB2.0; 2x GbE; headers for 2x COM, Flash, SATA, Fan |
| CP-RI06-001-HD | 4HP Rear I/O Module for CP6004 with 1xDVI-D; 2x USB2.0; 2x GbE; socket for SATA 2.5" disk; headers for 2x COM, Flash, SATA, Fan |
| CP-RI06-001-HD-216 | Similar to CP-RI06-001-HD, but PICMG 2.16 compliant; without external Ethernet ports |
| CP-RI06-001-HD-VGA | Similar to CP-RI06-001-HD, but with VGA interface instead of DVI-D |
| CP-RI06-B | 4HP Rear I/O Module for CP6004 with 2xUSB, 2xGbE; Audio, 2xCOM, DVI, HDMI, Connectors for USB Flash, 4x SATA, Fan |
| CP-RI06-B-216 | Similar to CP-RI06-B, but PICMG 2.16 compliant; without external Ethernet ports |
| CP-RI06-A | 4HP Rear I/O Module for CP6004 with 2xUSB, 2xGbE; Audio, 2xCOM, VGA, Connectors for USB Flash, 4x SATA, Fan |
| CP-RI06-A-216 | Similar to CP-RI06-A, but PICMG 2.16 compliant; without external Ethernet ports |
| Software Support (All packages downloadable from Web) | |
| Windows | Documentation and Windows XP, XPe, 7, Server 2008-R2 driver kit |
| Linux | Linux (Redhat, Fedora, Windriver) Board Support Package |
| VxWorks | VxWorks 6.x Board Support Package |

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