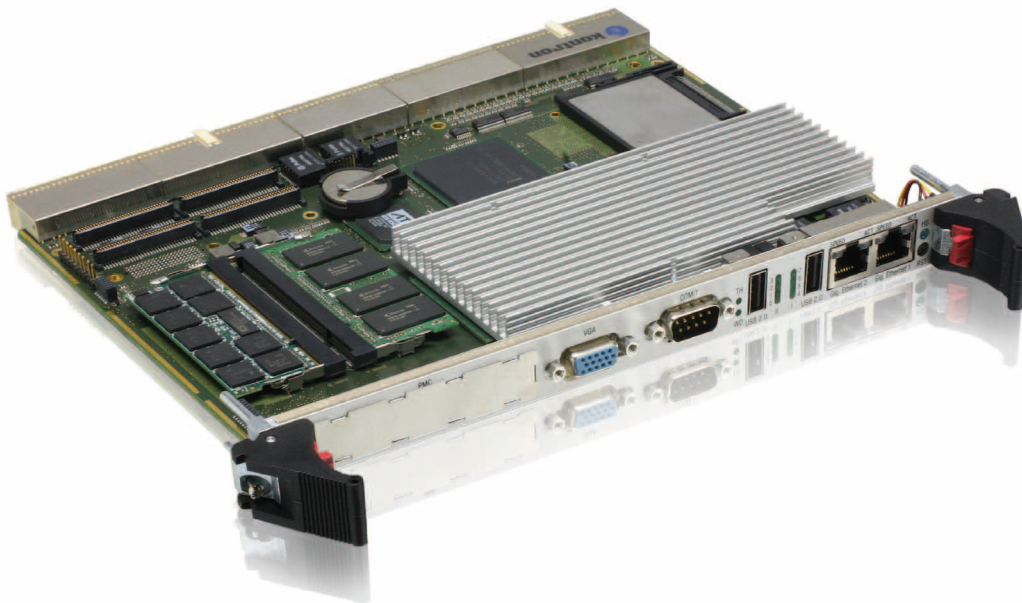


» CP6012⁶⁴ «



6U Intel Core™ 2 Duo Processor PICMG 2.16 Blade

» Highest Performance / Watt

Intel® Core™ 2 Duo processor, 2.16 GHz, T7400

» Highest Memory Density

Up to 4 GByte dual-channel, DDR2, 400 MHz memory

» Highest Versatility

Comprehensive I/O capabilities: GigEthernet, PMC/XMC, USB, VGA, SATA, CompactFlash ...

CP6012⁶⁴

6U Intel Core™ 2 Duo Processor PICMG 2.16 Blade

Explore the power and the potential of two cores in one processor with Kontron's CP6012⁶⁴ based on the 64-bit Intel® Core™ 2 Duo processor.

The CP6012⁶⁴, a 6U CompactPCI CPU board with a 64-bit Intel® Core™ 2 Duo processor, meets the highest performance demands. Combined with the E7520 and 6300ESB chipset, it handles server-like data throughput and provides next generation bandwidth capabilities.

» Greater Performance / Watt

Compared to previous processor designs the dual-core technology allows approximately twice the performance at similar power consumption.

The PICMG 2.16-compliant Kontron CP6012⁶⁴ offers up to 4 GB dual-channel 400 MHz DDR2 registered ECC SDRAM (via two 200-pin SODIMM sockets), providing up to 6.4 GB/sec data throughput. The CP6012⁶⁴ 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 CP6012⁶⁴ features a XMC site according to XMC.3 supporting x8 PCI Express (alternatively a 64/66 PCI PMC site), an onboard 2.5-inch SATA hard disk and CompactFlash - all usable at the same time in a single slot.

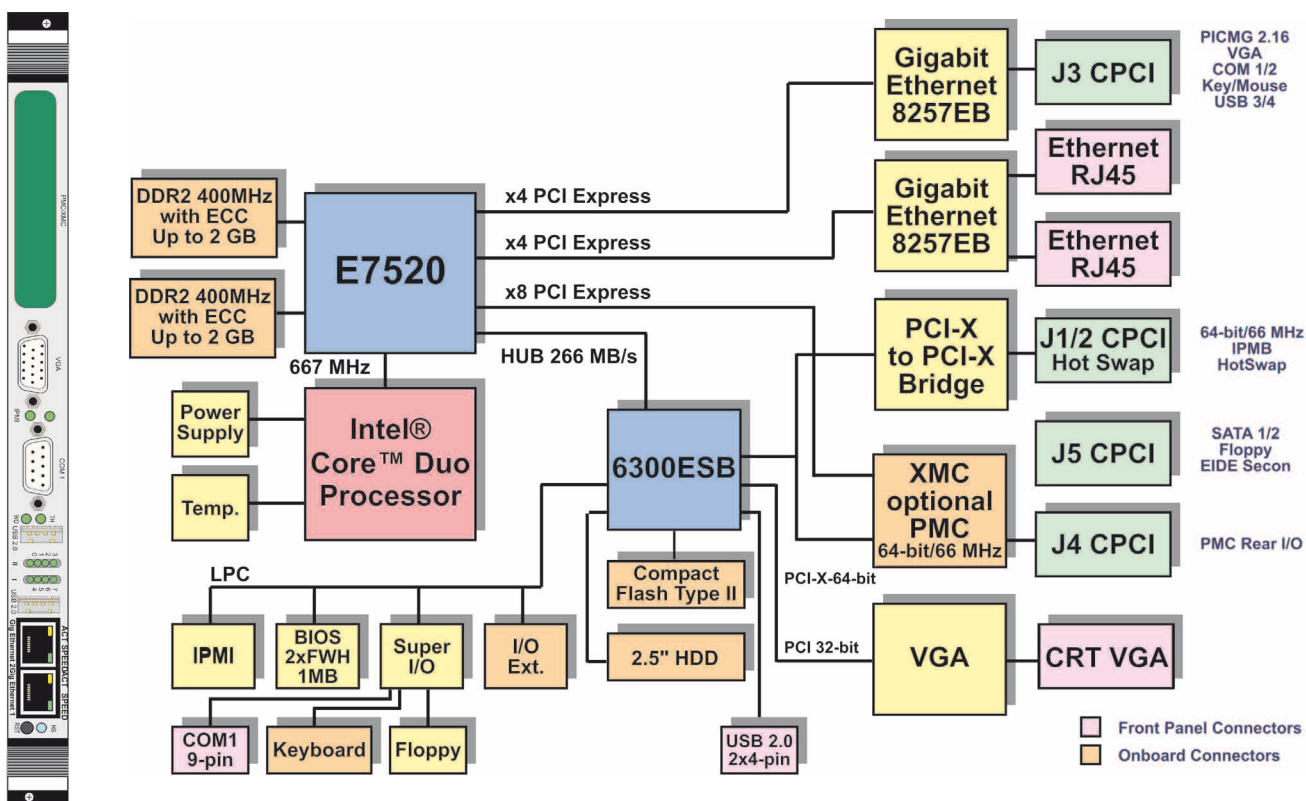
The Intel 6300ESB I/O Controller Hub provides advanced I/O technology including USB 2.0 and Serial ATA150. Four Gigabit Ethernet ports (2x ports at the front and 2x for full PICMG 2.16 support) provide comprehensive connectivity capabilities, enabling innovative applications today by offering enough headroom for the emerging next generation requirements.

Highly versatile, the CP6012⁶⁴ can be used in a system or peripheral slot. A rich set of LEDs at the front panel for debug and diagnose, as well as full rear I/O connectivity completes the CP6012⁶⁴.

» Longterm Availability

Delivering a stable product based on Intel®'s embedded product line, the CP6012⁶⁴ ensures long term availability. This eliminates the risk of unplanned design changes and unexpected expensive application modification.

While minimizing deployment risks, the CP6012⁶⁴ 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	Intel® CoreTM2 Duo processor in micro-FCBGA package (65nm manufacturing process) » T7400: 2.16 GHz, 667 MHz FSB, 4 MB L2, FCBGA » L7400: LV 1.5 GHz, 667 MHz FSB, 4 MB L2, FCBGA All board versions are provided with a passive heatsink within 4HP height. Forced air cooling at a specific flow rate is required.			
Memory Controller	Intel® E7520 supporting various RASUM features			
Memory	» Up to 4 GB DDR2 400 MHz dual channel registered SDRAM w/ ECC via two 200-pin SODIMM sockets for max. 6.4 GB/sec data throughput » 2 redundant 1 MB Firmware Hubs (FWH) for BIOS » 8 kB for storing CMOS data when operating without battery			
I/O	» Four 10/100/1000 MB/s Gigabit Ethernet ports based on two Intel 82571EB dual Gigabit Ethernet PCI Express bus controllers (two copper ports are routed to the front and two copper ports are routed to PICMG 2.16 rear pins) » Four USB 2.0 interfaces with up to 480 Mbit/sec, two front, two rear » VGA Video Controller ATI ES1000 2D-engine, PCI 32-bit / 33 MHz, external memory 64MB » Two 16C550 compatible UARTs (COM1/2) » Keyboard on rear and onboard connector » Mouse interface on rear » Floppy disk controller on rear			
Front Panel Functions				
COM1	9-pin D-Sub (RS232)			
VGA	15-pin D-Sub SVGA connector			
Ethernet	2x RJ-45			
USB	2x 4-pin connectors			
PMC/XMC	opening for PMC/XMC front panel			
LEDs	2x LAN activity (yellow) and speed (green), one blue control LED for hot swap, 2x for IPMI, 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	» One SATA connection for an onboard 2.5" SATA HDD » CompactFlash type II socket » 22-pin connector with all LPC signals » PS/2 keyboard connector » 2x 200-pin SODIMM connectors » 4x 64-pin PMC interface » 1x 114-pin XMC connector			
I/O Table Summary				
	Front I/O	Rear I/O	Onboard Connector	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	-	4
ATA100	-	1	-	1
SATA150	-	2	1	2
CompactFlash	-	-	1	1
PMC or XMC	1	via J4	4/1	1
Floppy	-	1	-	1
CompactPCI Bus Interface	» PICMG 2.0 Rev. 3.0 compatible, 64-bit / 66 MHz » 5V or 3.3V signalling, REQ/GNT for 7 slots » Operating in system slot as system master and in peripheral slot in PCI passive mode (no communication to CPC bus)			
PMC/XMC Slot	» One 64-bit / 66MHz PMC slot, Pn1-Pn4, rear I/O Pn3 to J4, 3.3 V PCIvoltage » Alternatively one XMC slot via P15, supporting XMC.3 x8 PCIExpress			
Supervisory Functions, Clock/Calendar	» Watchdog, software configurable, 125 msec to 256 sec, generates IRQ, NMI or hardware reset » Hardware monitor for thermal control, fan speed, and all onboard voltages » RTC (integrated in 6300ESB) and CMOS RAM with backup, battery replaceable			
Rear I/O via J3/J4/J5	» J3: PICMG 2.16, VGA, COM 1/2, keyboard, mouse, USB 3/4 » J4: PMC rear I/O » J5: SATA 1/2, IDE (secondary)			
IPMI	IPMI 1.5-compliant for IPMI based management and CompactPCI System Management PICMG 2.9 R1.0			
Compliance	» 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	400g			
MTBF	157,696h @ 30°C / 86°F (Bellcore Issue 6)			
USB	2x 4-pin connectors			
PMC/XMC	opening for PMC/XMC front panel			

Technical Information

CompactPCI Bus Interface

- » 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, Windows® Server 2003, Linux®, VxWorks (other OSs may be possible, please contact us for information)

Power Consumption

CP6012⁶⁴ equipped with 2GB memory:
 » LV 1.5 GHz: max 39 W
 » 2.16 GHz: max 56 W

Environmental

Operating temp.

0°C to +60°C standard with LV 1.66 GHz (with forced airflow)

Storage temp.

- 55°C to + 85°C (without battery or HDD)

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	Order-No.	Description
CPU Baseboard		
CP6012⁶⁴	35328	Intel® Core™2 Duo L7400 LV 1.5 GHz, 2xGigEthernet on FP, 2xGigEthernet on PICMG2.16/RIO, 5V I/O
CP6012⁶⁴	1021-9631	Intel® Core™2 Duo T7400 2.16 GHz, 2xGigEthernet on FP, 2xGigEthernet on PICMG2.16/RIO, 5V I/O
CP6012⁶⁴	1021-9635	Intel® Core™2 Duo T7400 2.16 GHz, 2xGigEthernet on FP, 2xGigEthernet on PICMG2.16/RIO, 3.3V I/O
Memory Modules		
SODIMM-DDR2-512-ECC	33473	512MB, SODIMM, DDR2 SDRAM, PC400, 200-pin, registered ECC
SODIMM-DDR2-1G-ECC	33474	1GB, SODIMM, DDR2 SDRAM, PC400, 200-pin, registered ECC
SODIMM-DDR2-2G-ECC	34847	2GB, SODIMM, DDR2 SDRAM, PC400, 200-pin, registered ECC
Services		
CP6-RIO-216	27829	Assembly of connectors J4/J5 and rear IO configuration for CP6012
CP6-RIO-216-NOJ4	27830	Assembly of connector J5 (no J4) and rear IO configuration for CP6012
CP6012-MK2.5SATA ¹⁾	33477	Mounting kit for 2,5" SATA-HDD onboard, mounting within 4HP
Rear Transition Modules		
CP-CTM80-3		Various 4HP versions available
Software Support		
KIT-CP6012 ²⁾	33475	Documentation and Windows driver kit on CD-ROM
LIN-BSP-CP6012 ²⁾	33476	Linux BSP CP6012 for Suse and RedHat
VXW-BSP-CP6012	36157	VxWorks 6.4 BSP CP6012 with single core support
VXW-BSP-CP6012-SMP	1021-9791	VxWorks 6.6 BSP CP6012 with SMP support

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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