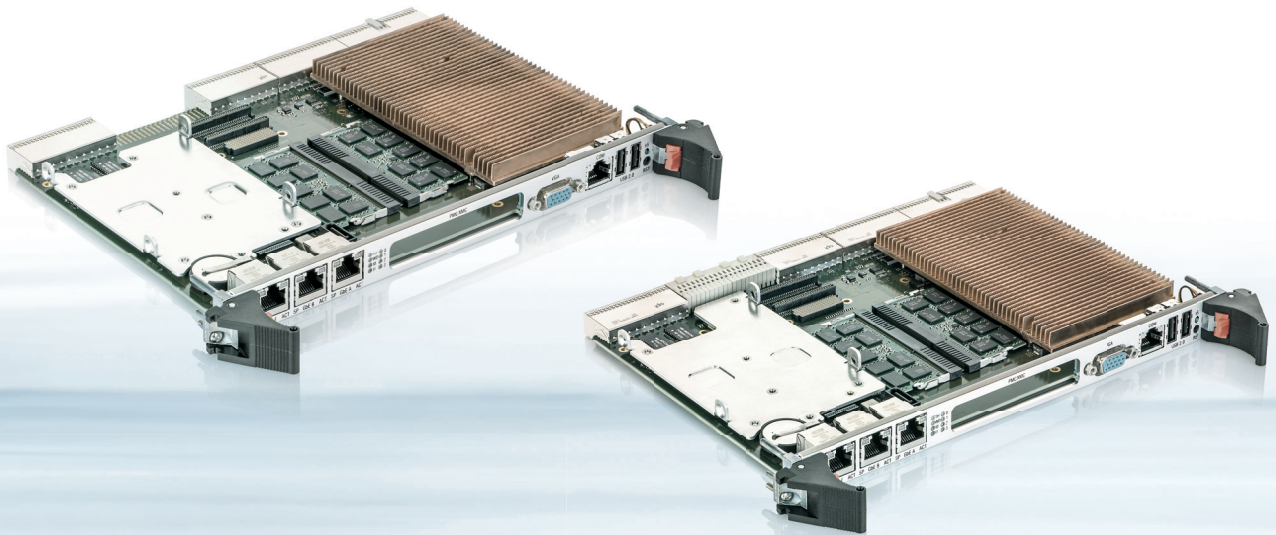


CP6005(X)-SA



Intel® 4TH GENERATION Core™ I5/I7 CompactPCI® PROCESSOR BOARD

- ▶ high performance processor and graphics
- ▶ high speed Interconnections
- ▶ highest versatility and excellent power management
- ▶ broad software support
- ▶ production in Europe

POSSIBILITIES START HERE



6U CompactPCI® PROCESSOR BOARD BASED ON INTEL®
4TH GENERATION CORE™ i7/i5 PROCESSORS - OPTION
FOR 10 GIGABIT ETHERNET & PCIE ON THE BACKPLANE

With the powerful quad core Intel® Core™ i7/i5 4th generation processors, the Kontron CP6005(X)-SA processor family offers extraordinary performance per watt values and is an ideal backbone for powerful network intensive applications, providing virtualization (VT-X, VT-D) and highest graphics performance by up to 20 graphics cores supporting OpenCL 1.2 and OpenGL3.2 and 3 independent interfaces.

The Intel® Advanced Vector Extensions AVX 2.0 enhancements provide a huge performance improvement in floating-point-intensive computations which are a key part of digital signal and image processing applications such as medical imaging and radar or sonar.

and tele-communications applications, but also include highly sensitive, security related solutions as well as image processing systems.

The Intel® Platform Controller Hub QM87 provides advanced I/O technology including USB and Serial ATA channels for an onboard 2.5- inch SATA hard disk or SSD and an industrial grade NAND Flash SSD device – all usable in a 4HP single slot.

Longterm Availability

TECHNICAL INFORMATION

PROCESSOR		Intel® Core™ i7/i5 Processor 4th Generation			
PLATFORM CONTROLLER HUB		Intel® QM87			
MEMORY	SYSTEM MEMORY	Up to 16 GByte SODIMM dual channel DDR3L memory with ECC and data speed of up to 1600 MHz per channel			
	NAND FLASH	Socket for optional Kontron Solid State Drive up to 64 GByte SLC flash technology			
	FLASH BIOS	Two redundant 8 MByte SPI Flashes			
FRONT PANEL FUNCTIONS	GIGABIT ETHERNET	3x 1000BASE-T Ethernet channels			
	USB INTERFACE	2x USB2.0 interface on USB-A host connector			
	SERIAL	1x RS232 serial interface on RJ45 connector			
	ANALOG MONITOR	DSUB connector for analog monitors			
	MICRO SWITCH	For Hot Swap and reset			
	STATUS LED	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 / NAND FLASH	Four ports fixe d to rear I/O, One port routed to a standard SATA connector, One port available for mounting an optional 2.5" HDD or SSD, or an optional SSD NAND Flash module			
	SERIAL PORT	COM1 (RS232) routed to front panel and rear I/O			
	CompactPCI® BUS	COM2 (RS232) routed to rear I/O only			
		PICMG 2.0 Rev. 3.0 compatible, 64-bit / 66 MHz, Universal V(I/O) 5 V or 3.3 V 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 PCI Express®			
REAR IO		J3: 2x ETH acc. PICMG 2.16, 2x ETH, VGA, COM 1/2, 4x USB, GPIO, Speaker, fan sense J4: CP6005-SA: not assembled; CP6005X-SA 2x 10GBASE-KR, PCIe Gen 2 x4 J5: 4x SATA, 2xHDMI, HDA, battery, fan control, additional GPIO			
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		Trusted Platform Module (TPM) 1.2 for enhanced hardware and software based data and system security			
I/O TABLE SUMMARY	DESCRIPTION	Front IO	Rear IO	Onboard Connector	Total
	VIDEO CRT	1	1		1
	DVI/HDMI		2		2
	USB2.0	2	4		6
	HD AUDIO		1		1
	SERIAL	1	2 (RS232, RS422)		2
	ETHERNET	3	2 (4*)		5 (7*)
	SATA		4	2	6
	SATA NAND FLASH			1	(in 6 SATA incl.)
	PMC/XMC			1/1	1/1
	FAN CONTROL		2		2
	BATTERY INPUT		1		1
	SMB		1 optional		1 optional
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	
MTBF		185968 h MIL-HDBK-217 FN2 Ground Benign 30° 230420 h Bellcore Issue 6 Ground Benign 30°			
DIMENSIONS		233 x 160 x 20.5 mm, 6U, 4HP			
WEIGHT		Approx. 800 gr			
SOFTWARE SUPPORT		Phoenix EFI (BIOS) with POST codes, BIOS parameters saved in EEPROM, diskless, keyboardless, videoless operation, LAN boot support Board identification number accessible via EEPROM, Support for Windows® 7, Windows® Server 2008R2, Linux®, VxWorks (other OSs may be possible, please contact us for information)			
POWER CONSUMPTION		Up to 60 watts (quad core), up to 50 watts (dual core) or less, depending on CPU type			
OPERATING TEMP.		0° C to +60° C, passive module heat sink, requires forced airflow cooling, Extended temperature on request			
STORAGE TEMP.		- 55° C to + 85° C (without battery or HDD)			
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	
CP6005-SA-2.4Q-8	- Quad Core 2.4 GHz, Intel® Core™ i7-4700EQ - 8 GByte SODIMM dual channel DDR3L memory 1600 MHz with ECC - Backplane connector J4 not assembled - Temperature range 0° C to +60° C - Standard air cooled
CP6005X-SA-2.4Q-8	- Quad Core 2.4 GHz, Intel® Core™ i7-4700EQ - 8 GByte SODIMM dual channel DDR3L memory 1600 MHz with ECC - Dual 10Gigabit/s and PCIe Gen 2 x4 on backplane connector J4 (ZDPlus) - Temperature range 0° C to +60° C - Standard air cooled
CP6005-SA-1.8Q-GT3-8 (on project request)	- Quad Core 1.8 GHz, Intel® Core™ i7-4860EQ, GT3 graphics - 8 GByte SODIMM dual channel DDR3L memory 1600 MHz with ECC - Backplane connector J4 not assembled - Temperature range 0° C to +60° C - Standard air cooled
CP6005-SA-2.7D-8	- Dual Core 2.7 GHz, Intel® Core™ i5-4400E - 8 GByte SODIMM dual channel DDR3L memory 1600 MHz with ECC - Backplane connector J4 not assembled - Temperature range 0° C to +60° C - Standard air cooled
CP6005-SA-2.7D-8-E1X	- Dual Core 2.7 GHz, Intel® Core™ i5-4400E - 8 GByte SODIMM dual channel DDR3L memory 1600 MHz with ECC - Backplane connector J4 not assembled - Temperature range -40° C to +70° C - Standard air cooled
ACCESSORIES	
FLASH-SATA	Various Kontron SSD products / sizes available
CP-RAPID3	PICMG 2.20 based system for 6U CompactPCI high speed interconnects
REAR TRANSITION MODULES	
	Several versions on request
CP-RI06-001	4HP Rear I/O Module for CP6005(X)-SA with 2x DVI-D; 2x USB2.0; 2x GbE; headers for 2x COM, Flash, SATA, Fan
CP-RI06-001-HD	4HP Rear I/O Module for CP6005(X)-SA with 1x DVI-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
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 CP6005(X)-SA with 2x USB, 2x GbE; Audio, 2x COM, 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 CP6005(X)-SA with 2x USB, 2x GbE; Audio, 2x COM, 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
CP-RI06-M	4HP Rear I/O Module for CP6005(X)-SA with 2 disk sockets
SOFTWARE SUPPORT	
	All downloadable from Web
WINDOWS	Documentation and Windows driver kit (Windows 7 / 2008R2)
LINUX	Linux Fedora and RedHat Board Support Package and documentation
WINDRIVER LINUX	Windriver Linux Board Support Package and documentation
VXWORKS	VxWorks 6.9.x Board Support Package and documentation
QNX	QNX Board Support Package and documentation

► CORPORATE OFFICES

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