CompactPCI

» Communication
» Industrial
» Medical
» Military
» Transportation
Kontron and CompactPCI

Kontron CompactPCI boards and platforms provide excellent EMI shielding, low mean time to repair (MTTR), off-the-shelf standard software capabilities, optimized cooling, reliability and serviceability.

Processing power based on the high performance and low-power 45 nm Intel® processors, the latest Kontron CompactPCI boards provide up to 25 percent faster core speeds, 50 percent more L2 cache and a 60 percent faster FSB at similar energy consumption as previous generations.

Kontron offers the latest technology on 3U and 6U CompactPCI. Whether you’re looking for standard or rugged CompactPCI products, we offer boards and platforms for applications in military, energy, transportation, industrial, communications and medical.

Key attributes of CompactPCI

System designers for OEM applications should consider the following:

» Modularity
» Proven and reliable standards
» Commercial-off-the-shelf products
» Favorable Time-to-market
» High reliability
» Long-term availability
» Wide range of software support

Kontron considers all of these features during the development process of their CompactPCI products. Our goal is to provide you with a reliable, serviceable and robust system.

CompactPCI provides the answer:

» High-performance PCI bus
  (528 MByte/s with up to 64 Bit data width)

» Rear I/O support option for internal cabling requirements and hot swap

» Up to 14 peripheral slots on a dual CompactPCI system compared to 4 on a standard motherboard industrial PC

» Multi-processing with latest generation PCI Bridge technology and a selection of operating systems

» Parallel card insertion from front for easy replacement and minimum MTTR

» Improved airflow by consequent vertical mounting of boards

» 19" mechanics in 3U, 6U and mixed configurations

» Hot swap hardware provision on high reliable connector
Vertical Markets

**Military**

Kontron provides military and aerospace customers with reliable COTS products that are not limited by extreme temperatures or high levels of physical stress. Dense IP based computing performance is a typical requirement to maintain the required data throughput.

CompactPCI boards and platforms are deployed in Radar, Sonar, flight simulators and onboard systems applications throughout the military market. The rugged high-performance 6U and 3U processor boards from Kontron and the high-end switches are a perfect fit for applications that demand ruggedness for use in extreme temperatures.

**Transportation**

Kontron has solid experience in developing, certifying and manufacturing real time embedded computers for the public transportation market. Commercial-Off-The-Shelf (COTS) products like the EN50155 compliant CP305, CP3923, CP-ASM3-MP and CP-ASM3-RAID, partial and full custom design, are used to meet customer requirements with focus on reducing time-to-market.

Kontron works with selected partners to ensure that standards (ISO9001, EN50155, SILx, etc.) are strictly adhered to and organizes regular audit checks to secure the quality of all parts.

**Industrial Automation**

Cost sensitivity plays a major role in industrial applications. To meet this market demand, Kontron offers 3U and 6U CompactPCI value line products. These products come with high availability and competitive pricing for applications in all industrial sectors.

Complete systems like the CP-POCKET line provide a cost-optimized solution for CompactPCI. Kontron also provides systems designed for harsh environments to achieve highest shock, vibration and temperature ranges. Standard features like Hot Swap and rear I/O capabilities reduce the mean time to repair.

**Communications**

Solutions using packet switched backplanes (PICMG 2.16) are tremendously efficient for Media / VoIP gateways, routing devices, storage area networks and clustering. CompactPCI has been well accepted in the communications industry, which has also supported the specification refinement process on industry-specific sub-specifications such as the H. 110 bus TDM traffic support.

Typical application areas within the communications field are found both in datacom, net management, routing or security systems, as well as in telecom / VoIP, telephony switches, IP PBXs, wireless base stations, signaling gateways, gateway controllers and soft-switches.

**Medical**

Time to market, incorporating product scalability and longevity are just some of the design challenges for existing medical image processing applications. Kontron’s Compact PCI systems help grant long-time availability of products in the medical industry.

Kontron helps medical OEMs free resources to concentrate on core competencies, reduce costs and speed time to market. Kontron is also a knowledgeable collaborative resource for everything from design services and customization to program management, testing, certification and manufacturing.
CompactPCI Rugged Line

Processor Boards and Switches

**CP6002-R2**
Intel® Core™ i7 Rugged System / Peripheral CPU

- Intel® Core™ i7 processor up to 2.53 GHz, up to 8GB soldered RAM with ECC
- Comprehensive I/O capabilities, two mezzanine card slots
- Rugged levels according VITA 47

**CP3002-RC**
Intel® Core™ i7 Rugged CPU

- High performance based on latest technology Core i7-620LE 2.0 GHz
- Up to 8GB soldered DDR3 memory, with ECC support
- VITA 47 compliant
- Various rugged levels for demanding application requirements
- Comprehensive I/O capabilities

**CP6001-R2/R3**
PICMG 2.16 Intel® Core™ 2 Duo Rugged System / Peripheral CPU

- Low power consumption: Intel® ULV Core™ Duo 1.2 GHz and LV 1.5 GHz Core™2 Duo processors
- High computing and graphic performance via 945 chipset

**CP3210**
PowerPC Single Board Computer

- Low - power PowerPC 750FX @733 MHz
- 512 KB L2 cache clocked at processor frequency

**CP6923-R2/R3**
High-end CompactPCI Switch

- PICMG2.16 Layer 2/3 switching and routing
- 24x Gigabit Ethernet Ports
- Air - and conduction cooled, VITA 47 compliant

**CP3923-RC**
Rugged 8-Port Layer2/Layer3 Switch

- Fully managed layer 2/3 switching and routing
- Leading edge technology based on BCM56226
- VITA 47 compliant

**MEC-PPV-AV1**
COTS Rugged Modular Embedded Computer

- CPCI Conduction-Cooled Turnkey Subsystem
- Low-power dissipation less than 17 W
- Preloaded VxWorks 6.2 Real-Time Software
- MIL-STD-1553, UART Serial Lines, Ethernet and GPIOs
- One year hotline support
CompactPCI Performance Line

6U Processor Boards

**CP6002**  
CPCI/PICMG 2.16 Intel® Core™ i7  
Rugged System/Peripheral CPU  
- Intel® Core™ i7 processor up to 2.53 GHz  
- up to 8GB soldered DDR3 RAM with ECC  
- Single and dual PMC / XMC versions  
- Highly shock and vibration resistant, extended temperature range

**CP6001**  
PICMG 2.16 Intel® Core™ 2 Duo  
Rugged System/Peripheral CPU  
- Low power consumption  
- Intel® ULV Core™ Duo 1.2 GHz and LV 1.5 GHz Core™2 Duo processors  
- High computing and graphic performance via 945 chipset

**CP6016**  
CPCI PICMG 2.16 Processor Blade  
- Intel® Core™2 Duo up to 2.53 GHz  
- Based on latest 45 nm technology with 1066 MHz FSB  
- Up to 16 GByte DDR2 667 MHz SDRAm via two SO-RDIMM sockets with ECC  
- 4HP, single slot CPU with passive cooling

**CP6014**  
CPCI PICMG 2.16 Dual Intel® Dual/Quad-Core Processor Board  
- Up to 8 (45 nm) cores running at 2.13 GHz, 1066 MHz FSB;  
- 12 MByte L2 cache  
- Up to 32 GByte DDR 667 MHz  
- Intel® 5100 MCH chipset and Intel® I/O Controller Hub 9R

Switches

**CP6930**  
High-end PICMG 2.16 Switch  
- Fully managed non-blocking Layer 2/3 switching and routing  
- 24x GbE Ports, 6x 10 GbE SFP+, 2x 1 GbE SFP  
- VITA 31 compliant

**CP6930-RM**  
High-end Rack Mount Switch  
- Modular switch family, based on CP6930  
- Up to 24x GbE Ports, 6x 10 GbE SFP+, 2x 1 GbE SFP  
- Optionally redundant power supply, ext. temperature

**CP6923**  
Layer2/Layer3 PICMG2.16 Switch  
- Fully managed non-blocking Layer 2/3 switching and routing  
- 24x Gigabit Ethernet ports, optional 2x 10 GbE via XFP  
- Low power consumption

**CP6925**  
Cost optimized unmanaged PICMG 2.16 Switch  
- 14x Port Gigabit to rear and 2x Port Gigabit to front

**CP3923**  
16-Port Layer2/Layer3  
3U CompactPCI Switch  
- Fully managed layer 2/3 switching and routing  
- Leading edge technology based on BCM56226  
- Versatile design with RJ45 or M12-D front options

**CP932**  
Gigabit Ethernet Switch  
- 5+1 Port Switch with integrated NIC  
- Versatile design for use in various platforms
3U Processor Boards

**CP3002**
High end Intel® Core™ i7 CPU

- High computing performance by Intel® Core™ processors, up to 2.53 GHz
- Up to 8GB DDR3 memory with ECC, via two SODIMM’s
- Up to 16GB NAND Flash
- System master or peripheral board

**Available Q1 2011**

**CP307 / CP307-RS**
Intel® Core™ Duo / Core™ 2 Duo CPU

- Scalable processor solution, up to 2.16 GHz
- Up to 4 GByte memory
- 945GM + ICH7-R chipset, PCI Express structure to I/O devices
- Version for extended temperature range (-40 °C up to +85 °C)

**CP308**
Intel® Core™ 2 Duo CPU

- Scalable processor speed, up to 2.26 GHz
- Version for extended temperature range (-40 °C up to +85 °C) with 1.2 GHz
- Up to 8GB DDR3 memory, via two SODIMM’s
- Two extension modules available

**CP305**
Intel® Atom™ 3U CompactPCI CPU

- Low-power Intel® Atom™ N270 @ 1.6 GHz
- Passive cooling concept for convection cooled and forced airflow applications
- Fully EN50155 compliant

XMCs / PMCs

**XMC01**
Dual 10 Gigabit Ethernet XMC

- Outstanding Performance and CPU Offload by Intel® Niantic 82599 10GBe Controller
- Flexibility by PClExpress x8 Host & SFP+ Ethernet Interface
- Cost Effective by Integrated Single Chip Solution

**XMC-ETH2**
Dual Gigabit Ethernet Mezzanine Card

- General Purpose Long Life Ethernet Mezzanine
- x4 PCI Express™ XMC and PCI PMC interface to Host
- Operating from -40°C up to +85 °C

**XMC-G72**
Dual Head Graphics XMC

- x8 PCI-Express Interface to Host
- 1600x1200 Resolution DVI Interface
- Low Power Dissipation
- Air-cooled & Rugged Conduction-Cooled Versions
- Linux Support

**CP384**
Digital-In/Relay Out Controller

- 16 channels digital in, 8 channels Relay out

**CP383**
Digital-In/Out Controller

- 16 channels digital in
- 16 channels digital out

**CP372**
Analog-Out Controller

- 8 channels (4 optional)

**CP690 / CP390**
3U/6U PMC Carrier Boards

- Carries two (CP690) or one (CP390) PMC modules
- INT A,B,C,D support
CompactPCI Systems

Application-Ready Platforms

**CP-ASM3-RAID**
Video surveillance in harsh environments
- Fanless RAID System, up to 8 hot swap HDD / 2 TBytes
- Hardware RAID controller RAID 0,1,5,10, JBOD
- ENS0155 compliant
- Network Power Management Option

**CP-ASM3-MP**
Modular Platforms for train applications
- Internet On Train
- Passenger Information
- CCTV
- Train Management & Control
- Multiple CPU switched via Backplane

**CP-ASM3-MPSW**
Switched Multiple CPU Platform
- Secondary CPCI bus and CPU for redundancy, diagnostic, or supervision
- Managed GbE switch, integrated access to CPU’s via backplane

Chassis

**XL1000 Series**
- Intended for rugged and cost effective solutions
- Efficient side-to-side cooling
- 250 W redundant power supplies (loadsharing / hot swappable)

**XL2000**
- Slim design with 28HP / 7U / 210 mm, 75W PSU
- Can be equipped with standard off the shelf components

**CP-ASM3**
- Complete 19” rack for 3U applications
- Built-in 4-11 slot backplane
- 3 cooling fans built into 4U enclosure

**CP-ASM10-HP**
- PICMG2.16 rack with high performance fan tray
- Optionally up to 6 redundant power supplies (1500 Watt)
- 14 node slots within two 7 slot CPCI segments
- 2 switch slots for Gigabit Ethernet Switches

CompactPCI Value Line

**CP6001-V**
CPCI PICMG 2.16 Intel® Celeron®
- Celeron® M processor 1.86 GHz (440)
- Scalable memory size up to 4 GByte S0-DIMM
- 2x GbE on FP and 2x GbE PICMG 2.16
- Single slot 4HP CPU with passive cooling

**CP307-V**
Celeron® M, Industry tailored CPU
- Celeron® M processor 1.86 GHz (440)
- Up to 2 GByte DDR2, 533 MHz SDRAM via S0-DIMM socket
- 2x Gigabit Ethernet interfaces via PCIExpress

**CP-POCKET**
- Cost effective complete system
- Slim design with 28HP
- CPU included (up to 1.86 GHz Celeron® M)
About Kontron

Kontron, the global leader of embedded computing technology, designs and manufactures standards-based and custom embedded and communications solutions for OEMs, systems integrators, and application providers in a variety of markets. Kontron engineering and manufacturing facilities, located throughout Europe, Americas, and Asia-Pacific, work together with streamlined global sales and support services to help customers reduce their time-to-market and gain a competitive advantage. Kontron’s diverse product portfolio includes: boards and mezzanines, Computer-on-Modules, HMIs and displays, systems, and custom capabilities.

Kontron is a Premier member of the Intel® Embedded Alliance.

For half-a-decade now, Kontron has been named a VDC Platinum Embedded Board Vendor. Based entirely on user feedback, industry professionals evaluate vendors on over 45 non-product related criteria. Kontron is only one of two companies to receive the Platinum award 5-years running.

Kontron is listed on the German TecDAX stock exchange under the symbol “KBC”.

For more information, please visit: www.kontron.com