

CPCI7200

PICMG 2.0/2.16 Processor Board

■ Embedded Computing for
Business-Critical Continuity™

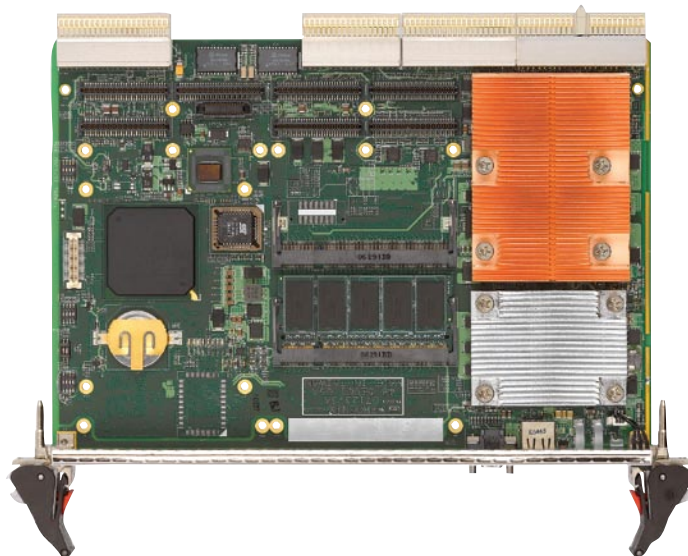
The CPCI7200 SBC offers high speed, server-class performance for advanced telecom and control plane applications.

- 1.06 or 1.5 GHz Intel Core 2 Duo processor
- 533 or 667 MHz frontside bus
- Intel® E7520 + 6300ESB dual channel 3.2GB/s memory controller
- 2GB ECC-protected DDR2-400
- Dual on-board Gigabit Ethernet interfaces
- Support for PICMG 2.16 CompactPCI Packet Switching Backplane specification
- Full PICMG 2.1, R2.0 Hot Swap specification compliance
- PICMG 2.9 System Management specification support
- One or two PCI mezzanine card (PMC) site
- Hard disk drive accessory kits optional
- Optional rear transition module in PICMG 2.16 and rear I/O variants
- PLX6466 PCI-to-PCI bridge technology

The Emerson Network Power CPCI7200 single-board computer (SBC) uses the Intel® Core™2 Duo processor and E7520 + 6300ESB chipset. The single-slot configuration is ideal for thermally constrained environments and includes dual Gigabit Ethernet interfaces and dual channel 3.2GB/s high speed, double data rate DDR2, for a combined maximum bandwidth of 6.4GB/s.

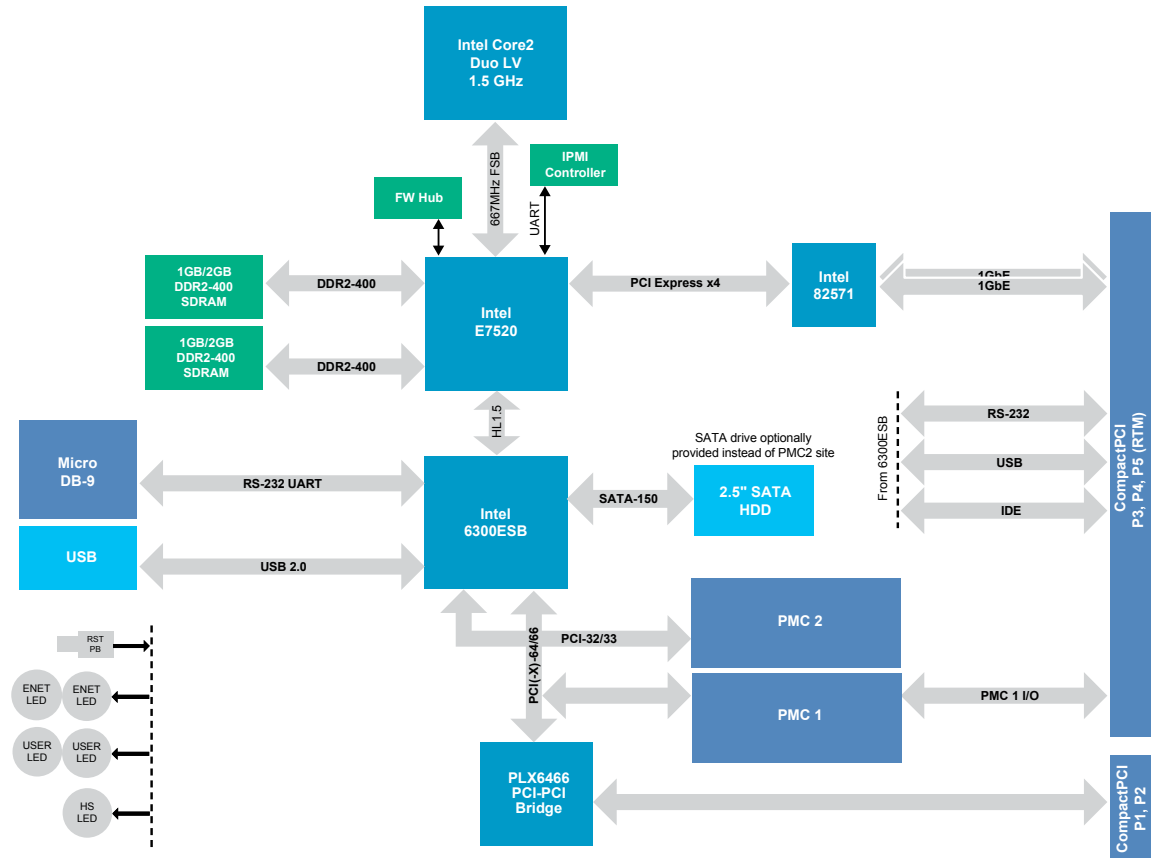
The CPCI7200 is a low-power, high-performance SBC that offers full hot swap compliance per PICMG® 2.1 and supports the PICMG 2.9 System Management and PICMG 2.16 CompactPCI® Packet Switching Backplane open specifications. In addition to the PICMG 2.16 variants, the CPCI7200 offers other value-added features including the PLX6466 PCI-to-PCI bridge (PPB) for universal CompactPCI system-slot or peripheral-slot functionality.

Also, the CPCI7200 board supports the Intelligent Platform Management Interface (IPMI) specification for full board remote system and platform management as well as baseboard management controller (BMC) and peripheral mode. Overall, with the value-added PLX6466 and Gigabit Ethernet/PICMG 2.16 features, the CPCI7200 board is a superior choice for telecom applications like softswitches, control plane media-transport nodes, wireless gateways, and control plane CompactPCI and PICMG 2.16 systems as well as industrial automation, aerospace, and medical applications such as railway control, on board flight information systems, and medical imaging.




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Block Diagram



Specifications

HARDWARE PROCESSOR/CHIPSET

- 1.06 or 1.5 GHz Intel Core 2 Duo processor
- 2MB or 4MB on-chip L2 cache; 32KB L1 cache
- 533 or 667 MHz front side bus
- Intel E7520 + 6300ESB server-class chipset
- PCI Express X4 bus to Gigabit Ethernet
- 64-bit PLX6466 CompactPCI interface

MEMORY

- Dual channel 3.2GB/s memory architecture
- 2GB ECC-protected DDR2-400

USER FLASH MEMORY

- 1MB BIOS, 1MB BIOS backup

BOOT FLASH MEMORY

- Two independent banks of firmware flash, supporting failover

COMPACTPCI INTERFACE

- Universal PLX6466 PPB
- System- and peripheral-slot capability (64-bit/33 MHz)

I/O CAPABILITIES

- Two Gigabit Ethernet interfaces
- Variants with PICMG 2.16 and rear I/O routing
- One PMC site supporting J3 PMCIO
- IPMI remote platform and system management support (PICMG 2.9)
- Rear ATA-66/100 interface
- Two USB 1.1/2.0 interfaces (one front/one rear)
- Two COM interfaces (COM1 front/rear, COM2 rear)
- Legacy USB keyboard/mouse support

OPTIONAL TRANSITION MODULES

- CompactFlash socket (Type II), USB2, ICMB, COM2, COM1, Reset, IDE
- CompactFlash socket (Type II), GbE x 2, USB2, ICMB, COM2, COM1, Reset, IDE

OTHER FEATURES

- Watchdog unit
- Status and user LEDs
- Reset switch
- Locking ejector handles
- Power-up ramping and in-rush current protection
- Hot swap support (PICMG 2.1, R2.0)
- Optional on-board 2.5 inch HDD

POWER REQUIREMENTS

- Maximum for 1.5 GHz (CPCI7200), 2GB memory variant
 - ▲ 3.3V 7A 22.1W
 - ▲ 5.0V 5.7A 28.5W

ELECTROMAGNETIC COMPATIBILITY (EMC)

- Intended for use in systems meeting the following regulations:
 - ▲ U.S.: FCC Part 15, Subpart B, Class A (non-residential)
 - ▲ Canada: ICES-003, Class A (non-residential)
- Emerson board products are tested in a representative system to the following standards, results pending:
 - ▲ CE Mark per European EMC Directive 89/336/EEC with Amendments; Emissions: EN55022 Class B; Immunity: EN55024

ENVIRONMENTAL REQUIREMENTS

- Operating temperature -5° to +55°C
- Relative humidity 5% to 95% at +40°C (non-condensing)
- Operating altitude: -300 m to +4500 m
- Product complies with flammability ratings according to UL-94V0
- Airflow: 300LFM = 1.54 m/s
- Operating vibration: 5 to 500 Hz sinusoidal, 2 G (1 oct/min); 5-62 Hz, 5 m/s; 62-500 Hz, 20 m/s
- Operating shock: 5 G, 20 ms half sine x 3

MTBF

Calculated per Telcordia SR-332, Issue 1 and based on a ground fixed, controlled environment assuming an inlet air temperature of between 0° C and 50° C. 200,000 hours

DOCUMENTATION

- Installation guide and technical reference manual
- Hardware Release Notes
- BIOS Release Notes

Ordering Information	
Part Number	Description
CPCI7200-15-2G-HDD	L7400 1.5 GHz CPU, 2GB memory, 1 PMC site, 1 board-mounted SATA Extended-Duty HDD, 2x PICMG 2.16/RTB 10/100/1000BASE-T Ethernet, no J4
CPCI7200-15-2G	L7400 1.5 GHz CPU, 2GB memory, 2 PMC site, 2x PICMG 2.16/RTB 10/100/1000BASE-T Ethernet, no J4 connector
CPCI7200-10-2G-HDD	U7500 1.06 GHz CPU, 2GB memory, 1 PMC site, 1 board-mounted SATA Extended-Duty HDD, 2x PICMG 2.16/RTB 10/100/1000BASE-T Ethernet, no J4 connector
CPCI7200-10-2G	U7500 1.06 GHz CPU, 2 GB memory, 1 PMC site, 2x PICMG 2.16/RTB 10/100/1000BASE-T Ethernet, no J4 connector
Transition Module	
RTB-714x/PSB-5E	Rear transition module for CPCI714x. PSB compatible. 2 RJ-45 COM ports, 1 KBD/MS connector, 1 RJ-45 IPMB connector, 1 USB connector, CompactFlash slot
RTB-714x-5E	Rear transition module for CPCI714x. Non-PSB version. 2 RJ-45 COM ports, 1 KBD/MS connector, 1 RJ-45 IPMB connector, 1 USB connector, CompactFlash slot, 2 Ethernet ports
RTB-714x PIM-5E	Rear transition module for CPCI714x with PIM. Non-PSB version. 2 RJ-45 COM ports, 1 KBD/MS connector, 1 RJ-45 IPMB connector, 1 USB connector, 2 Ethernet ports
RTB-714x PIM/PSB-5E	Rear transition module for CPCI714x with PIM. PSB compatible. 2 RJ-45 COM ports, 1 KBD/MS connector, 1 RJ-45 IPMB connector, 1 USB connector

SOLUTION SERVICES

Emerson Network Power provides a portfolio of solution services optimized to meet your needs throughout the product lifecycle. Design services help speed time-to-market. Deployment services include global 24x7 technical support. Renewal services enable product longevity and technology refresh.

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Offices: Tempe, AZ U.S.A. 1 800 759 1107 or +1 602 438 5720

Paris, France +33 1 60 92 31 20 • Munich, Germany +49 89 9608 2333 • Tel Aviv, Israel +972 9 9560361

Hong Kong +852 2176 3540 • Shanghai, China +8610 8563 1122 • Tokyo, Japan +81 3 5403 2730 • Seoul, Korea +82 2 3483 1500

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