CPCI6200

PICMG 2.0/2.16 Processor Board

Embedded Computing for Business-Critical Continuity™

PRELIMINARY DATA SHEET

The CPCI6200 offers high speed bandwidth and server-class performance for compute intensive and control plane applications.

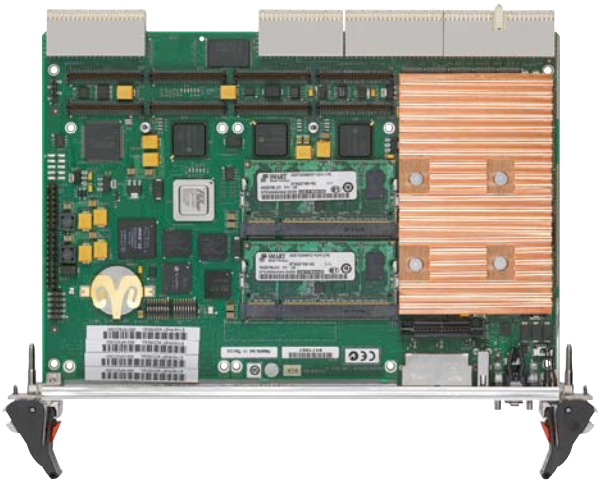
- 1.3 or 1.5 GHz Freescale MPC8572 dual core integrated processor
- Integrated north bridge in the processor (no frontside bus)
- 2GB or 4GB ECC-protected DDR3-800
- Four on-board Gigabit Ethernet interfaces
- Two serial ports
- One USB 2.0 port
- Support for PICMG 2.16 CompactPCI Packet Switching Backplane specification
- Full PICMG 2.1, R2.0 Hot Swap specification compliance
- PICMG 2.9 System Management specification support
- Two PCI-X/PCI mezzanine card (PMC) site
- Optional rear transition module in PICMG 2.16 and rear I/O variants
- PLX6466 PCI-to-PCI bridge technology

The Emerson Network Power CPCI6200 single-board computer (SBC) uses the Freescale MPC8572 PowerQUICC III dual core processor and offers high speed bandwidth and server-class performance for compute intensive and control plane applications. The single-slot CPCI6200 SBC is ideal for thermally constrained environments and includes four Gigabit Ethernet (GbE) interfaces and dual channel 3.2GB/s high speed, double data rate DDR3, for a combined maximum bandwidth of 6.4GB/s.

The CPCI6200 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 CPCI6200 offers other value-added features including the PLX6466 PCI-to-PCI bridge (PPB) for universal CompactPCI system- or peripheral-slot functionality. Also, the CPCI6200 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.

The CPCI6200 also offers MRAM, magnetoresistive random access memory. MRAM is high speed non-volatile RAM with unlimited read/write access that protects data in the event of a power loss and does not require periodic refresh. MRAM is ideal for critical non-volatile data storage, data logs, dynamic program updates and dynamic security.

Overall, with the high performance dual core processor for scalability and leading edge I/O and memory for flexibility, the CPCI6200 board is a superior choice for telecom applications like softswitches, VoIP, control plane media-transport nodes, wireless gateways, as well as advanced defense and aerospace systems, signal testing and simulation, medical imaging, transportation control and control plane CompactPCI and PICMG 2.16 systems.

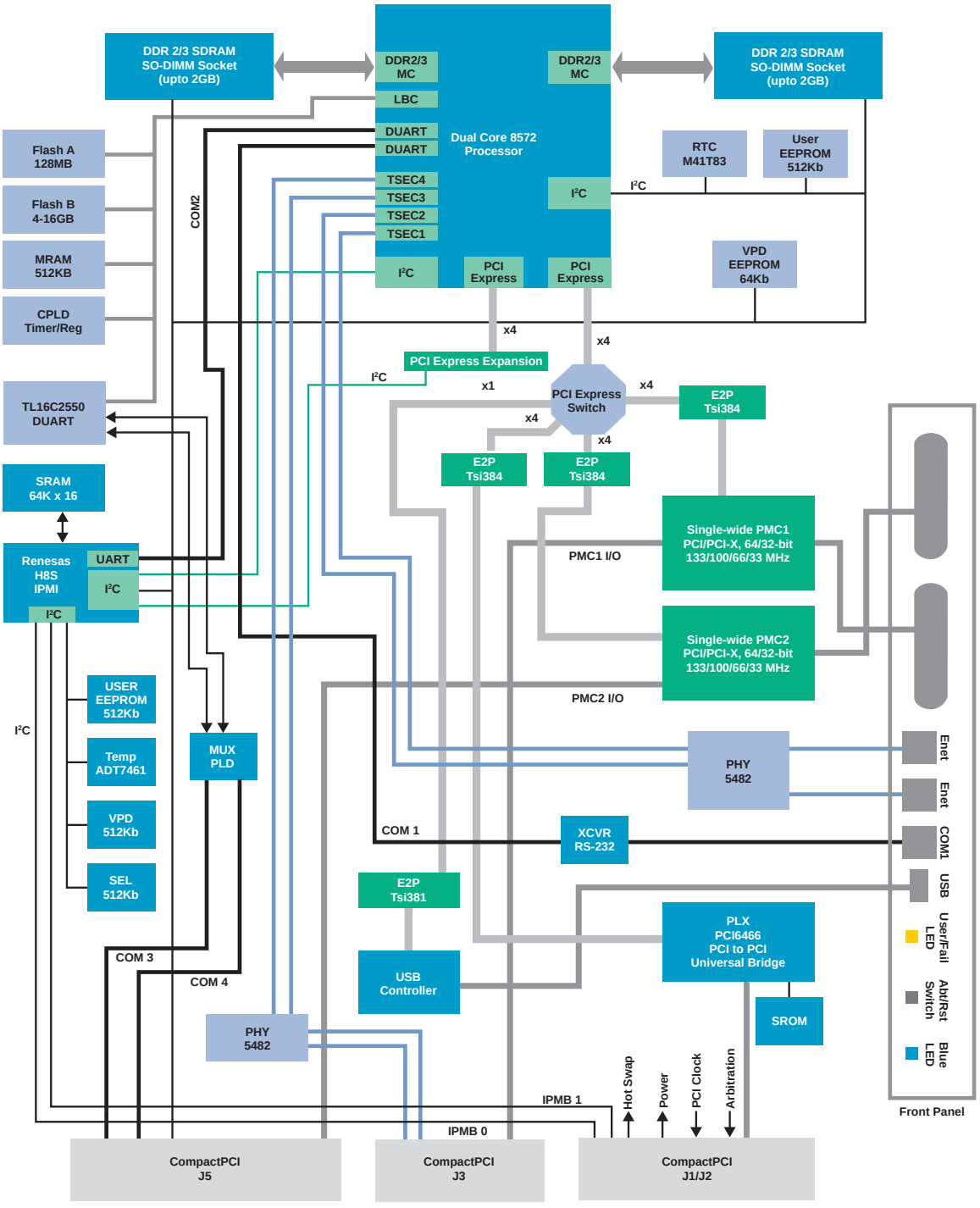


RoHS 6/6 COMPLIANT

CompactPCI®

EMERSON™ Network Power

Block Diagram



Specifications

HARDWARE PROCESSOR/CHIPSET

- 1.3 or 1.5 GHz Freescale MPC8572 processor
- 32KB L1 cache for each core, 1MB L2 shared cache
- No front side bus, north bridge is integrated in the processor
- Quad embedded GbE, two front and two rear, to the rear transition module (RTM)
- Two integrated 4-channel DMA controllers.
- 64-bit, 66 MHz PLX6466 CompactPCI interface

MEMORY

- Dual channel 3.2GB/s memory architecture
- 2GB or 4GB ECC-protected DDR3-800

USER FLASH/ NVRAM MEMORY

- 4GB NAND flash
- 512KB MRAM (NVRAM)

BOOT FLASH MEMORY

- 128MB NOR flash. Two independent banks of firmware flash, supporting failover

COMPACTPCI INTERFACE

- Universal PLX6466 PPB
- System- and peripheral-slot capability (64-bit/66/33 MHz)

I/O CAPABILITIES

- Four Gigabit Ethernet interfaces
- Variants with PICMG 2.16 and rear I/O routing
- Two PMC sites supporting J3/J5 PMCIO
- IPMI remote platform and system management support (PICMG 2.9)
- One USB 1.1/2.0 interfaces (front)
- Two COM interfaces (COM1 front, COM2 rear)

OTHER FEATURES

- Watchdog unit
- Multiple 32-bit timers
- 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)

POWER REQUIREMENTS

- Maximum for 1.3 GHz (CPCI6200), 2GB memory variant
  - 3.3V 6A 19.8W (Estimated)
  - 5.0V 5A 25.0W (Estimated)
- Maximum for 1.5 GHz (CPCI6200), 4GB memory variant
  - 3.3V 7A 22.1W (Estimated)
  - 5.0V 5.7A 28.5W (Estimated)

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

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: 0° C 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
- Tested and certified to NEBS Criteria Level 3 requirements (Bellcore GR-1089-CORE; Issue 3, October 2003, and GR-63-CORE, Issue 2, April 2002)
- 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

DOCUMENTATION

- Installation Guide and Technical Reference Manual
- Hardware Release Notes
- MotLoad Release Notes
- Linux Installation and Programmer's Guides

Ordering Information	
Part Number	Description
CPCI6200-13-2G	MPC8572 1.3 GHz 2GB DDR3 6E
CPCI6200-15-4G	MPC8572 1.5 GHz 4GB DDR3, 6E
Transition Module	
CPCI-6115-MCPTM-02	CPCI-6115 and CPCI6200 T/M, 5E

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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