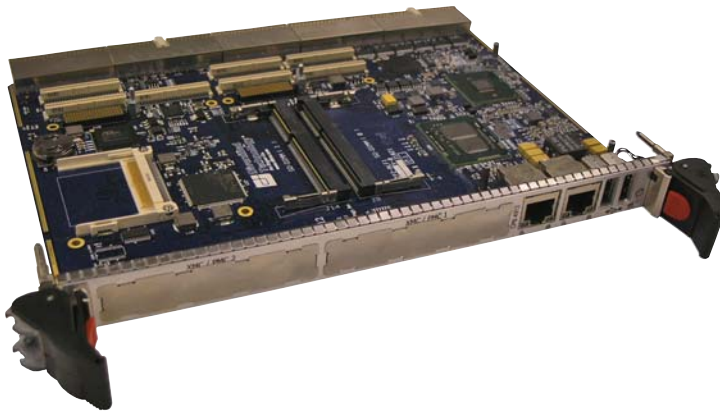# CPB4912

CompactPCI Processor Blade

CompactPCI

The CPB4912 is a PICMG 2.16-compliant packet switched backplane (PSB) processor blade based on the Intel® Core™ i7 processor. It combines high performance with low power, making it an ideal fit for telecommunications and Internet IP-based applications, as well as industrial control, testing services, and medical monitoring.

With faster, intelligent, multi-core technology that applies processing power where it's needed most, the Intel® Core™ i7 processor delivers incredible breakthrough performance for the CPB4912, allowing multitask applications to perform faster and unleashing incredible digital media processing. The CPB4912 adds great flexibility via two PMC/XMC sites and Rear Transtion Module (RTM) support. This board is a cost effective choice for application developers addressing high performance, converging Telecom and Internet IP-based markets such as media gateways, 2.5G/3G wireless, server clusters, IP DSLAM and voice/video/data servers.

Product Features

Form Factor
PICMG 2.16 CompactPCI CPU Blade

CPU
• Intel® Core™ i7 Processor up to 2.53GHz

Chipset
• Intel® QM57 Chipset

Memory
• Total of 8GB of DDR3-800/1066 (PC3-8500 or PC3-6400) via (2) DDR3 Unbuffered SO-DIMMs with ECC

Front Panel and Onboard I/O
• (2) 10/100/1000 Ethernet on RJ-45 connectors
• (2) USB 2.0 Ports
• (1) CompactFlash socket
• (2) PMC/XMC sites, (1) with PIM

RTM and Backplane I/O
• (2) PICMG 2.16 Gigabit Ethernet interfaces
• PMC/XMC PIM I/O
• Serial Port COM2
• (2) x1 PCI-E lanes
• (3) Serial ATA ports
• (3) USB 2.0 ports
• Dual Video support:
  (1) DVI-I port and (1) DVI-D port
• 64-bit / 66MHz PCI bus

Physical Dimensions:
• 6U CompactPCI 2.16 form factor

OS Support
• Microsoft Windows XP
• Microsoft Windows Server 2008
• Microsoft Windows 7
• Linux SKU is TBD

Warranty
Parts and labor covered for 2 years

www.dtims.com/cpci • **sales@dtims.com** • **1.800.443.2667**

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General
- Intel® Core™ i7 Processor up to 2.53GHz
- Other CPU Options: 1.33GHz ULV and 2.00GHz LV
- Intel QM57 Chipset
- Total of 8GB of DDR3-800/1066 (PC3-8500 or PC3-6400) via (2) DDR3 unbuffered SO-DIMMs with ECC
- Phoenix EFI BIOS (8MB flash chip)
- Trusted Platform Module

Front Panel or Onboard:
- Two 10/100/1000 Ethernet on RJ-45 connectors
- Dual USB 2.0 Ports
- One CompactFlash socket
- Two PMC/XMC sites, (1) with PIM

To RTM or Backplane
- Dual PICMG® 2.16 Gigabit Ethernet interfaces to the J3 connector
- PMC/XMC PIM I/O through CompactPCI J3 connector
- Serial Port COM2 through CompactPCI J4
- Two x1 PCI-E lanes through CompactPCI J4
- Three Serial ATA ports through CompactPCI J4
- Three USB 2.0 ports through CompactPCI J4
- Dual Video support via one DVI-I port and one DVI-D port, both at J5
- 64-bit / 66MHz PCI bus

OS Compatibility
- Microsoft Windows XP
- Microsoft Windows Server 2008
- Microsoft Windows 7
- Linux SKU is TBD

BIOS
- Phoenix UEFI BIOS (flash chip size is 8MB)
- ACPI Rev 1.0b and 2.0 compliant
- SMBIOS 2.3.1 compliant
- Plug-n-Play 1.0a compliant
- Processor microcode update BIOS support
- Thermal Management
- Headless Operation
  (Serial Console Redirection; BIOS Flash via serial port)
- Peripheral enable or disable
- USB 2.0 Legacy Keyboard and Mouse;
  Boot from Mass Storage Devices
- Pop-up Boot Menu
- S.M.A.R.T. Support
- BIOS Boot Specification (BBS)
- Security features
- Keyboard features
- Fast POST Support
- Multi Boot
- PXE 2.1 Boot ROM
- Watchdog (integrated into PCH)

Clock / Calendar
- Real-time clock with battery backup CMOS RAM

Mechanical
- 9.2 in. x 6.3 in. 0.8 in. (233.35 mm x 160 mm x 20.32 mm)
- 6U x 4HP
- Conforms to:
  - PICMG 2.0 CompactPCI R3.0
  - PICMG 2.1 Hotswap R3.0
  - PICMG 2.9 System Management R1.0
  - PICMG 2.16 Packet Switching Backplane R1.0

Power Requirements

Board Version	Max Power	Typical Power
2.53GHz, 8GB	54W	47W
2.00GHz, 8GB	48W	40W
1.33GHz, 8GB	39W	35W

Environmental
Operating
- Temperature: 0°C to 65°C
- Humidity (RNC): 10% to 85% non-condensing
- Altitude: 4,000m / 13,000 ft @ 40°C
- Shock: 10g 11ms half-sine
- Vibration: 5-100Hz @ 1g sine sweep
  Random 5-20Hz @ 0.01g2/Hz; 20-500 -3dB slope

Storage and Transit (in approved packaging)
- Temperature: -40° to 70°C
- Humidity (RNC): 10% to 90% non-condensing
- Altitude: 12,192m / 40,000 ft
- Shock: 40g 6ms half-sine, 500/axis
- Vibration: 5-50Hz @ ½g 50-100Hz @ 3g sine sweep
  Random 5-20Hz @ 0.01g2/Hz; 20-500 -3dB slope

Reliability and Serviceability
- MTBF: 311,479 hours @ 25°C
- 2 year limited warranty

Regulatory Compliance
- Designed for NEBS/ETSI Compliance
- CE Certification with national deviations
- Safety: UL/cUL 60950-1:2007; EN/IEC 60950-1:2006
- EMI/EMC: FCC 47 CFR Part 15 Class A;
  EN 55022:2006 with A1; EN 50024:1998 with A1 and A2

Ordering Information
CPB4912/2530
CPU Blade with 2.53GHz Intel® Core™ i7 Processor,
4MB L2 Cache

CPB4912/2000
CPU Blade with 2.00GHz Intel® Core™ i7 Processor,
4MB L2 Cache

CPB4912/1330
CPU Blade with 1.33GHz Intel® Core™ i7 Processor,
4MB L2 Cache

Options
PMC/PIM Integration
XMC/PIM Integration
CRT4912-VHD : Rear Transition Module (Video and Hard drive)
CRT4912-4E   : Rear Transition Module (4 Ethernet Ports)
URT4812   : Rear Transition Module (Dual DVI)

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1.800.443.2667
476 Highland Colony Parkway • Ridgeland, MS 39157

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