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# CPB4912V

## CompactPCI Processor Blade

**CompactPCI**



DTI's CPB4912V is a PICMG 2.16-compliant packet switched backplane (PSB) CompactPCI blade based on the Intel® Core™ i7 processor. The board provides a single piece solution by combining storage, video and networking all on one 6U blade. By utilizing high performance processing with low power, the CPB4912V is an ideal fit for video intensive applications in telecom, industrial control, medical/image monitoring and testing services.

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 CPB4912V, allowing multitask applications to perform faster and unleashing incredible digital media processing. The board provides 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 Onboard I/O

- (2) 10/100/1000 Ethernet on RJ-45 connectors
- Serial Port COM1 RJ-45 connector
- (2) USB 2.0 Ports
- VGA video via (1) HD-15 connector
- LEDs: Healthy, Drive Activity, and PICMG 2.16 link and activity
- (1) SATA 2.5-inch on-board hard drive
- (1) PMC/XMC site 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

**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**

- (2) 10/100/1000 Ethernet on RJ-45 connectors
- Serial Port COM1 on an RJ-45 connector
- Dual USB 2.0 Ports
- VGA video via one HD-15 connector
- LEDs (Healthy, Drive Activity, and PICMG 2.16 link and activity)
- One SATA 2.5-inch on-board hard drive
- One PMC/XMC site 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  | 50W       | 42W           |
| 2.00GHz, 8GB  | 43W       | 36W           |
| 1.33GHz, 8GB  | 35W       | 32W           |

**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: 317,406 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 55024:1998 with A1 and A2

**Ordering Information****CPB4912V/2530**

CPU Blade with 2.53GHz Intel® Core™ i7 Processor,  
4MB L2 Cache

**CPB4912V/2000**

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

**CPB4912V/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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