cPCI-6530(BL) Series

6U CompactPCI 5th/4th Generation Intel® Core™ Processor Blade with two PMC/XMC sites

Features
- Quad-core 5th/4th Generation Intel® Core™ i7 processor with ECC
- Dual channel DDR3L ECC memory, soldered and SO-CDIMM, up to 32GB
- Versatile storage: SSD, CFAST, mSATA
- Dual PMC/XMC sites
- Remote management and TPM support
- MIL-STD-810G compliant

Specifications
- Processor & System
  CPU
  cPCI-6530BL series
  uFC-BGA quad-core Intel® 5th generation Core™ i7-5850EQ processor, 2.7/3.4GHz, 6MB SmartCache, 47/37W TDP, Intel® Iris Pro Graphics 6200
  cPCI-6530 series
  μFC-BGA quad-core Intel® 5th generation Core™ i7-5700EQ processor, 2.6/3.4GHz, 6MB SmartCache, 47/37W TDP
  μFC-BGA quad-core Intel® 4th generation Core™ i7-4700EQ processor, 2.4/3.4GHz, 6MB SmartCache, 47/37W TDP
  μFC-BGA dual-Core Intel® 4th generation Core™ i5-4402E processor, 1.6/2.7GHz, 3MB SmartCache, 25W TDP
  Chipset
  Intel® QM87 Express Chipset
  Memory
  Dual channel DDR3L-1600 SDRAM with ECC, up to 32GB for cPCI-6530BL series and 16GB for cPCI-6530 series
  * With onboard 16GB memory, the overall DDR frequency will be 1067MHz
  One channel in SO-CDIMM socket up to 16GB; one channel soldered onboard up to 16GB (dependent on availability of memory devices and modules)
  BIOS
  AMI® EFI BIOS, 8MB SPI flash memory
  CompactPCI Bus
  PCI 64-bit, 66MHz, 3.3V or 5V universal V(I/O)
  Supports operation in system slot and in peripheral slot with CompactPCI® bus communication (Universal mode)
  Standard
  PICMG 2.0 CompactPCI R3.0
  PICMG 2.1 Hot Swap R2.0
  PICMG 2.9 System Management R1.0
  PICMG 2.16 Packet Switch Backplane R1.0
  Connectivity
  PMC/XMC
  Up to Two PMC/XMC sites
  PMC1 or XMC1: 64b/33,66,133M or PCIe x8 (space shared with I/Os & onboard drive)
  PM2 or XMC2: 64b/33,66,133M or PCIe x8 Gen2 with rear I/O
  Ethernet
  Three Intel® I210 Gigabit Ethernet controllers and one Intel® I217 PHY controller
  Two 10/100/1000BASE-T ports on front panel with iAMT support on one port
  Two 10/100/1000BASE-T ports to J3 for PICMG 2.16
  Two additional 10/100/1000BASE-T ports from Intel® Ethernet controller on RTM (cPCI-R6100 series)
  Graphics
  Integrated in Intel® processor with up to DX 11.2 and OGL4.3
  One DVI-I port on front panel
  One VGA, eDP and DVI routed to rear
  All graphics interfaces are independent channels
  Supports three independent displays
  Additional graphics MXM with AMD GPU or nVidia supporting two DVI ports on RTM (cPCI-R6500 series)
  USB
  Up to two USB 3.0 and one USB 2.0 ports on front panel
  Six USB 2.0 ports routed to rear
  PS/2
  PS/2 keyboard/mouse port to rear
  Serial Port
  Up to three 16C550 compatible serial ports
  One RJ-45 RS-232 port on front panel
  Two serial ports routed to rear
  Audio
  High Definition Audio signals routed to rear
Specifications

- **Storage**
  SBC
  One SATA 6Gb/s direct connector for 2.5” removable drive
  One mSATA socket
  Optional CFAST socket by replacing 2.5” SATA drive direct connector
  RTM
  Up to three SATA ports
  CF (x1) and SD (x1) sockets when mating with cPCI-R6100 series
  *Available interfaces dependent on RTM model selected

- **Operating System**
  OS
  Microsoft Windows 7/8 32, 64-bit
  Red Hat Enterprise Linux 6.4
  Wind River VxWorks 6.9
  (Please contact ADLINK for other OS support)

- **Miscellaneous**
  LED
  Power, WDT, Hard Disk, Hot Swap and Port 80 user LED
  Battery
  Coin cell lithium battery onboard for RTC CMOS RAM
  TPM
  Version 1.2
  Atmel AT97SC3204 (optional support upon request)
  Watchdog Timer
  System Reset and NMI, with programmable interval, 1-65535 seconds or minutes
  Hardware Monitor
  Monitors CPU temperature, system temperature, Vcore and DC voltages

- **Mechanical & Environmental**
  Form Factor: 6U 4HP (single slot) CompactPCI
  233.33mm x 160mm (LxW)
  Equipped with J1, J2, J3, J4, J5 connectors
  Operating Temperature
  -20°C to +70°C extended temperature
  -40°C to +85°C extreme extended temperature for Core™ i7 4700EQ, 5700EQ, 5850EQ CPU adjusted to 37W by cTDP
  Storage Temperature
  -50°C to +100°C
  RH Humidity
  95% non-condensing
  Shock
  15G peak-to-peak, 11ms duration, non-operating
  Vibration
  2 Grms random vibration, 5-500Hz, each axis, operating
  MIL-STD-810G Compliance (cPCI-6530V/4700E)
  Temperature: MIL-STD-810G, Method 501.5 & Method 502.5 (-40°C to 85°C)
  Vibration: MIL-STD-810G, Method 514.6, Procedure I, Category Table 514.6C-II, Figure 514.6C-1 Common carrier (US highway truck vibration exposure).
  Power Consumption
  2.73A @3.3V, 11.65A @5V, total 67.26W
  Weight
  500.2g (cPCI-6530 with heatsink assembled)

- **Safety & EMI**
  Certification: CE/FCC Class A
## I/O Table

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(1) Removable adapter design. SATA adapter by default, can be replaced with CFast adapter.
(2) Two 7-pin signal connectors onboard for external HDDs and one direct connector for onboard 2.5" SATA drive. SATA direct connector can be replaced with CompactFlash adapter (DB-6920CF).
Ordering Information

Processor Blades

- **cPCI-6530BLV/5850E/M8-0**
  4HP cPCI-6530BLV with Intel® Core™ i7-5850EQ and 8GB DDR3L-1600 ECC soldered memory with 2x GbE, 1x USB 2.0, 2x USB 3.0, 1x RJ-45 COM and single PMC/XMC site

- **cPCI-6530BLV/5700E/M8-0**
  4HP cPCI-6530BLV with Intel® Core™ i7-5700EQ and 8GB DDR3L-1600 ECC soldered memory with 2x GbE, 1x USB 2.0, 2x USB 3.0, 1x RJ-45 COM and single PMC/XMC site

- **cPCI-6530V/4700E/M8-8**
  4HP cPCI-6530V with Intel® Core™ i7-4700EQ and 8GB DDR3L-1600 ECC soldered memory and 8GB SODIMM module with 2x GbE, 1x USB2.0, 2x USB 3.0, 1x RJ-45 COM and single PMC/XMC site, MIL-STD-810G compliant

- **cPCI-6530V/4700E/M4-4**
  4HP cPCI-6530V with Intel® Core™ i7-4700EQ and 4GB DDR3L-1600 ECC soldered memory and 4GB SODIMM module with 2x GbE, 1x USB 2.0, 2x USB 3.0, 1x RJ-45 COM and single PMC/XMC site, MIL-STD-810G compliant

- **cPCI-6530V/4402E/M4-0**
  4HP cPCI-6530V with Intel® Core™ i5-4402E and 4GB DDR3L-1600 ECC soldered memory with 2x GbE, 1x USB 2.0, 2x USB 3.0, 1x RJ-45 COM and single PMC/XMC site

Contact us for different CPU, memory options.

Rear Transition Modules

- **cPCI-R6002**
  4HP Rear I/O module with GbE x2, COM x2, USB x3, SATA x2, DVI-I

- **cPCI-R6002D**
  8HP Rear I/O module with 2x GbE, 2x COM, 5x USB, 2x SATA, VGA, PS/2 KB/MS

- **cPCI-R6100**
  4HP Rear I/O module with GbE x4, COM, USB x4, SATA x2, DVI, VGA, PS/2, CF, SD socket

- **cPCI-R6110**
  4HP Rear I/O module with GbE x2, COM, USB x4, SATA x3, DVI, VGA, PS/2, CF, SD socket

- **cPCI-R6120**
  8HP Rear I/O module with 2x GbE, 4x USB, 2x SATA, VGA, PS/2 KB/MS, CF, SD w/space for dual SATA drives

- **cPCI-R65N0/NV950**
  6U BHP Rear I/O module with NVIDIA GTX950M MXM 3.0 graphics module Type A with DVI-I x1, DVI-D x1, GbE x2, USB x2, COM x1, PS/2 x1, SATA x3

- **cPCI-R6500/A8860**
  4HP Rear I/O module with AMD E8860MF MXM 3.0 graphics module with DVI-I x1, DVI-D x1, GbE x2, USB x2, COM x2, PS/2 x1, audio, SATA x3

- **cPCI-R6500D**
  8HP Rear I/O module with AMD X3AE676-AN MXM 3.0 graphics module with DVI-I x1, DVI-D x1, GbE x2, USB x2, COM x2, PS/2 x1, audio, SATA x3

- **cPCI-R6501D**
  8HP Rear I/O module with AMD X3AE676-AN MXM 3.0 graphics module with DVI-I x1, DVI-D x1, GbE x2, USB x1, 2.5" SATA drive space, SATA x3 (one reserved for SATA drive)

- **cPCI-RMPS2**
  6U 8HP RTM with 2x M12 GbE, 3x M12 USB 2.0, DVI-I, DVI-D, 2x COM

See 6U RTM selection guide for more options.

Accessory

- **DB-CFast**
  CFast socket adapter board with screws for cPCI-6530

Contact us for different CPU, memory options.