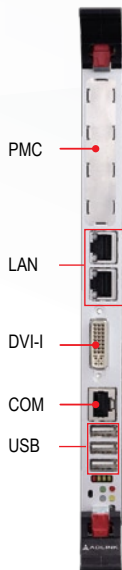


# cPCI-6880 Series

## 6U CompactPCI® 45nm Intel® Core™2 Duo Processor Blade



cPCI-6880

### Features

- 45nm Intel® Core™2 Duo 2.53GHz, 6MB L2 cache
- Up to 8GB DDR2-800 memory (soldered + SO-DIMM)
- DVI + VGA display interfaces
- Four PCI-Express GbE ports
- Supports system/peripheral operation

**EXTENDED  
TEMPERATURE**

### Specifications

#### Processor & System

|                 |  |
|-----------------|--|
| CPU             | <p>µFC-PGA Intel® Core™2 Duo Processor SV 2.53GHz (T9400), 6MB L2, FSB 1066MHz, TDP 35W</p> <p>µFC-PGA Intel® Core™2 Duo Processor LV 2.26GHz (P8400), 3MB L2, FSB 1066MHz, TDP 25W</p> <p>µFC-PGA Intel® Core™2 Duo Processor 2.2GHz (T7500), 4MB L2, FSB 800MHz, TDP 35W</p> <p>µFC-PGA Intel® singal-core Celeron® M 2.0GHz (575), 1MB L2, FSB 667MHz, TDP 31W</p> <p>µFC-PGA Intel® dual-core Celeron® 1.9GHz (T3100), 1MB L2, FSB 800MHz, TDP 35W</p> |
| Chipset         | Intel® GM45 with ICH9M   |
| RAM             | <p>Dual channel DDR2-667/800 SDRAM, up to 8GB</p> <p>One channel for soldered memory, up to 4GB; one channel for SO-DIMM socket</p>  |
| BIOS            | <p>AMIBIOS®8 dual 16Mbit SPI Flash memory</p> <p>Supports failover</p>   |
| CompactPCI Bus  | <p>PCI 64bit/ 66MHz, 3.3V or 5V universal V (I/O)</p> <p>Supports operation in system slot and peripheral slot (cPCI-6880P cannot be installed in a peripheral slot with CT bus backplane)</p>   |
| PICMG Standards | <p>PICMG® 2.0 CompactPCI R3.0</p> <p>PICMG® 2.1 Hot Swap R2.0</p> <p>PICMG® 2.9 System Management v1.5 R1.0</p> <p>PICMG® 2.16 Packet Switching Backplane R1.0</p>   |

#### Connectivity

|             |   |
|-------------|---|
| PMC         | One PCI 64bit/66MHz PMC site  |
| Ethernet    | <p>Four PCI-Express Intel® 82573L Gigabit Ethernet controllers</p> <p>Two 10/100/1000BASE-T front panel ports</p> <p>Two 10/100/1000BASE-T PICMG® 2.16 ports</p> <p>Two additional 10/100/1000BASE-T ports from Intel® 82576EB on RTM cPCI-R6100</p>  |
| Graphics    | <p>Integrated in Intel® GM45, powered by Gen-5.0 Graphics Architecture</p> <p>One DVI-I (digital+analog) port on front panel (Contact ADLINK if need DVI support on RTM)</p> <p>Analog VGA signal routed to RTM (mirror of VGA)</p> <p>Additional discrete ATI/AMD E4690 GPU supporting two DVI-I ports on RTM cPCI-R6700</p> <p>Analog monitor supports up to QXGA</p> |
| USB         | <p>Three USB 2.0 front panel ports</p> <p>Six USB ports routed to RTM</p>   |
| PS/2        | PS/2 Keyboard Mouse port routed to RTM  |
| Serial Port | <p>Max. three 16C550 compatible serial ports</p> <p>One RJ45 port on front panel, two serial ports routed to RTM</p>  |

### Storage

|      |   |
|------|---|
| SBC  | <p>Built in 4GB USB NAND flash onboard (Standard temperature range support only)</p> <p>One removable SATA direct connector for 2.5" onboard HDD</p> <p>Optional CF socket to replace SATA direct connector (Standard temperature range support only)</p> |
| RTM* | <p>Up to 3 SATA ports</p> <p>CF (x1) and SD (x1) sockets</p> <p>Eight SAS ports by LSI SAS1068E with hardware RAID by two mini SAS x4 connectors</p>  |

\*Available interfaces dependent on RTM model selected

### Operating System

|    |  |
|----|--|
| OS | <p>Microsoft Windows® XP Professional</p> <p>Microsoft Windows® XP x64 Edition</p> <p>Microsoft Windows® Vista x64 Edition</p> <p>Microsoft Windows® 7</p> <p>Red Hat Enterprise Linux 5.1</p> <p>Wind River VxWorks 6.8, 6.6, 5.5.1</p> <p>(Please contact ADLINK for other OS support)</p> |
|----|--|

### Miscellaneous

|                  |  |
|------------------|--|
| LED              | Power, WDT, Hot Swap, Hard Disk  |
| Battery          | Coin cell lithium battery onboard for RTC CMOS RAM                           |
| Watchdog Timer   | System Reset and NMI, with Programmable Interval, 1-65535 seconds or minutes |
| Hardware Monitor | Monitors CPU & system temperatures, Vcore and DC voltages                    |

### Mechanical & Environmental

|                   |   |
|-------------------|---|
| Form Factor       | 6U 4HP CompactPCI®  |
|                   | 233.33mm x 160mm (LxW)  |
|                   | cPCI-6880: equipped with CompactPCI connectors J1,J2,J3,J5  |
|                   | cPCI-6880P: equipped with CompactPCI connectors J1,J2,J3,J4,J5  |
| Operating Temp.   | 0°C to +60°C standard   |
|                   | -20°C to +70°C extended temperature (cPCI-ET6880)   |
| Storage Temp.     | -40°C to +85°C  |
| Rel. Humidity     | 95% @60°C, non-condensing   |
| Shock             | 15G peak-to-peak, 11ms duration, non-operating  |
| Vibration         | 1.88 Grms, 5-500Hz, each axis, operating (with CF card)   |
| Power Consumption | Single Core™2 Duo T9400, 4GB DDR2-800, 100GB SATA HDD onboard under Windows® XP with 100% CPU loading |
|                   | Current (A) Power (W)   |
|                   | 5V 8.46 42.3  |
|                   | 3.3V 2.20 7.26  |
|                   | Total 49.56   |
| Weight            | Net weight 858g with heatsink   |

### Safety & EMI

|                |         |
|----------------|---------|
| Certifications | CE, FCC |
|----------------|---------|

## I/O Table

|                    |                  | GbE | USB 2.0   | COM                       | DVI       | VGA | PMC        | SATA             | CF                             | Mic-in     | Line-out | PS/2<br>KB/MS | SD | SAS             |
|--------------------|------------------|-----|-----------|---------------------------|-----------|-----|------------|------------------|--------------------------------|------------|----------|---------------|----|-----------------|
| <b>SBC</b>         |                  |     |           |                           |           |     |            |                  |                                |            |          |               |    |                 |
| <b>cPCI-6880</b>   | <b>Faceplate</b> | 2   | 3         | 1 (RJ-45)                 | 1 (DVI-I) |     |            |                  |                                |            |          |               |    |                 |
|                    | <b>Onboard</b>   |     |           |                           |           |     | 1          | 1 <sup>(1)</sup> | 1 <sup>(1)</sup>               |            |          |               |    |                 |
| <b>RTM</b>         |                  |     |           |                           |           |     |            |                  |                                |            |          |               |    |                 |
| <b>cPCI-R6002</b>  | <b>Faceplate</b> | 2   | 2         | 1 (DB-9)                  |           | 1   |            |                  |                                |            |          |               |    |                 |
|                    | <b>Onboard</b>   |     | 1 (5-pin) | 1 <sup>(2)</sup> (10-pin) |           |     |            | 2 (7-pin)        |                                |            |          |               |    |                 |
| <b>cPCI-R6000P</b> | <b>Faceplate</b> | 2   | 2         | 1 (DB-9)                  |           | 1   |            |                  |                                |            |          |               |    |                 |
|                    | <b>Onboard</b>   |     | 1 (5-pin) | 1 (10-pin)                |           |     | 1<br>(PIM) | 2 (7-pin)        |                                |            |          |               |    |                 |
| <b>cPCI-R6100</b>  | <b>Faceplate</b> | 4   | 4         | 1 (RJ-45)                 |           | 1   |            |                  |                                |            |          | 1             |    |                 |
|                    | <b>Onboard</b>   |     |           |                           |           |     |            | 2 (7-pin)        | 1 <sup>(4)</sup>               |            |          |               | 1  |                 |
| <b>cPCI-R6110</b>  | <b>Faceplate</b> | 2   | 4         |                           |           | 1   |            |                  |                                |            |          | 1             |    |                 |
|                    | <b>Onboard</b>   |     |           |                           |           |     |            | 3 <sup>(3)</sup> | 1 <sup>(4)</sup>               |            |          |               | 1  |                 |
| <b>cPCI-R6200</b>  | <b>Faceplate</b> | 2   | 5         | 1 (DB-9)                  |           | 1   |            |                  |                                | 1          | 1        | 1             |    | 4<br>(SFF-8088) |
|                    | <b>Onboard</b>   |     | 1 (5-pin) | 1 <sup>(2)</sup> (10-pin) |           |     |            | 3 <sup>(3)</sup> | 1<br>(optional) <sup>(3)</sup> |            |          |               |    | 4<br>(SFF-8087) |
| <b>cPCI-R6700</b>  | <b>Faceplate</b> | 2   | 3         | 1 (DB-9)                  | 2 (DVI-I) |     |            |                  |                                |            |          |               |    |                 |
|                    | <b>Onboard</b>   |     | 1 (5-pin) | 1 <sup>(2)</sup> (10-pin) |           |     |            | 3 (7-pin)        |                                | 1 (10-pin) |          | 1 (10-pin)    |    |                 |

(1) Removable SATA connector adapter for onboard 2.5" HDD. Optional CompactFlash socket is supported by replacing SATA connector adapter with CompactFlash adapter. 2.5" HDD and CF share the same space and cannot be installed simultaneously.

(2) Tx, Rx signals only

(3) Two 7-pin signal connectors onboard for external HDDs and one direct connector for onboard 2.5" SATA HDD. Optional CompactFlash slot is supported by replacing SATA connector adapter with CompactFlash adapter. SATA HDD and CF cannot be used simultaneously.

(4) Converted from USB

## Ordering Information

| Model Number | Description/Configuration |
|--------------|---------------------------|
|--------------|---------------------------|

### Processor Blades

|                     |  |
|---------------------|--|
| cPCI-6880/T94/M2-0  | 6U CompactPCI® blade with Core™2 Duo 2.53GHz (T9400) processor and 2GB soldered DDR2-800 memory                |
| cPCI-6880/T94/M0-2  | 6U CompactPCI® blade with Core™2 Duo 2.53GHz (T9400) processor and 2GB DDR2-800 SODIMM                         |
| cPCI-6880/T94/M4-0  | 6U CompactPCI® blade with Core™2 Duo 2.53GHz (T9400) processor, 4GB soldered DDR2-667 memory                   |
| cPCI-6880/P84/M0-2  | 6U CompactPCI® blade with Core™2 Duo 2.26GHz (P8400) processor and 2 GB DDR2-800 SODIMM memory                 |
| cPCI-6880/T31/M0-2  | 6U CompactPCI® blade with dual core Celeron® 1.9GHz (T3100) processor and 2GB DDR2-800 SODIMM memory           |
| cPCI-6880P/T94/M0-2 | 6U CompactPCI® blade with Core™2 Duo 2.53GHz (T9400) processor and 2GB DDR2-800 SODIMM memory with PIM support |

SATA adapter is included in package of CPU board

### Rear Transition Modules

|             |  |
|-------------|--|
| cPCI-R6002  | 4HP Rear I/O module with GbE x2, COM x2, USB x3, SATA x2, VGA  |
| cPCI-R6000P | 4HP Rear I/O module with GbE x2, COM x2, USB x3, SATA x2, PIM, VGA (for cPCI-6880P)  |
| cPCI-R6100  | 4HP Rear I/O module with GbE x4, COM, USB x4, SATA x2, VGA, PS/2, CF, SD   |
| cPCI-R6110  | 4HP Rear I/O module with GbE x2, USB x4, SATA x3, VGA, PS/2, CF, SD  |
| cPCI-R6200  | 8HP Rear I/O module with GbE x2, USB x6, VGA, SATA x3, Mic-in, Line-out, PS/2 KB/MS, SAS x8                                |
| cPCI-R6700  | 4HP Rear I/O module with discrete GPU ATI/AMD E4690, DVI-I x2, GbE x2, USB x3, COM x2, KB/MS header, SATA x3, audio header |

### Mezzanines

|          |   |
|----------|---|
| DB-CF-SB | CompactFlash socket adapter kit for cPCI-6880               |
| DB-CF-SA | CompactFlash socket adapter kit for cPCI-R6002D, cPCI-R6200 |

Contact your ADLINK representative for different CPU, memory combinations. See 6U RTM selection guide for more options.

