



## Features

- Intel IvyBridge processors (2/4 Cores, up to 2,5 GHz)
- Up to 8 GB soldered, dual-channel DDR3 SDRAM with ECC
- 2 DisplayPort up to 2560x1600@60Hz at the front panel, 1 DisplayPort up to 2560x1600@60Hz is routed to the mezzanine module
- 2xGigabit Ethernet ports (front panel)
- 2xUSB 2.0 (front panel)
- Intermodule communication (PICMG CPCI-S.0 CompactPCI® Serial): two x8 FatPipe PCI-E 2.0; four x4 PCI-E 2.0; 8 USB2.0 or 4 USB2.0 + 4 USB3.0; 2 SATA II and 2 SATA III
- SD card slot with USB 2.0 interface
- Increased heatsink versions for passive cooling
- Protective coating (optional)
- -40...+85°C or 0...+70°C
- Windows 7 Embedded, Linux 2.6

## Technical Specification

### Intel IvyBridge CPU (2/4 Cores):

- Intel i7-3517UE (DC, 2C/4T, 1,7 GHz, 1600 MHz, 4 MB, 17 W).
- Intel i7-3555LE (DC, 2C/4T, 2,5 GHz, 1600 MHz, 4 MB, 25 W).

### Panther Point PCH

#### MEMORY:

DDR3 SDRAM 1333, 1600 Mhz or DDR3L SDRAM 1066, 1333 Mhz with ECC up to 8 GB soldered, dual-channel.

### Video Output (simultaneous output to 3 monitors):

- Two DisplayPort connectors (resolution up to 2560x1600@60Hz) at the front panel.
- DisplayPort interface (resolution up to 2560x1600@60Hz) is routed to the mezzanine module.

### LPC Bus:

- To the mezzanine connector. PCI-E Bus
- CPU Hosts. PCI-E 2.0 support (up to 5GT/s).
  - Output via the PCI-E switch to J1 and J2 CPCI Serial connectors with support for two x8 FatPipe#1 and FatPipe#2 devices;
  - Support for the Non-Transparent mode for FatPipe#1;
  - Output via the PCI-E switch to J4 CPCI Serial connector with support for four x4 devices;
- PCH Hosts. PCI-E 2.0 support (up to 5GT/s):
  - Output to the mezzanine module on the left; support for 1 x4 or 4 x1 devices;
  - MIC590 connection.

### SMBUS Bus:

- Compatibility with the 2.0 specification.
- Speed up to 100 kbps.

### FLASH BIOS:

- 64 Mbit SPI-Flash
- MicroSD Interface

- Support for the SDHC 2.0 specification.
  - Connected to a USB 2.0 interface.
- ### SATA II Interface:
- One interface is always routed to the mezzanine connector:
    - One interface - is switched between J3 CPCI Serial connector and the mezzanine connector;
    - Two ports are routed to the J3 CPCI Serial connector.

### SATA III Interface:

- Two interfaces are routed to the J3 CPCI Serial connector.
- Support for RAID 0, 1, 5, 10.

### 2 ports LAN 10/100/1000 Mbit at PCI-E x4 Gen2:

- Two interfaces are routed to the XS5 connector at the front panel.
- Implementation of a server network adapter.

### USB ports:

- 13 USB 1.1 ports (12Mb/sec), USB 2.0 (480Mb/sec) and 4 USB 3.0 ports (4.8Gb/sec).
- Two USB2.0 ports are routed to connectors at the front panel.
- Two USB2.0 ports are routed to the mezzanine connector.
- 8/4 USB2.0 ports are routed to the J3 CPCI Serial connector\*.
- 1 USB2.0 port is used for implementation of the MicroSD interface.
- 4 USB3.0 ports are routed to the J1 and J2 CPCI Serial connectors\*.

### FRAM Memory:

- 32 Kbyte, RAM 1 Kbyte for storing settings of the Bios Setup.
- Implemented on the SPI Bus.

### Real time clock (RTC):

- Power is supplied from a CR 2032 lithium battery (3V).

### Audio Support:

- HD Audio interface is routed to the mezzanine connector.

### Watch dog timer:

- Internal with a possibility of programmed control.

### SGPIO Interface:

- Support for signaling according to the SFF-8485 Specification.

### Hardware monitor:

- Implemented via PECI/SMBUS interfaces.
- Monitoring of three supply voltages.
- Monitoring of the CPU temperature.
- Monitoring of the PCB temperature.
- Monitoring of the RAM temperature.

### Support for the power source management Indication:

- Board Startup Diagnostics LED / Hot Swapping Light.SATA/SD Drives Access LED.
- Two software-controlled LEDs (user-defined).
- Temperature state LED.
- PCI Express Interconnections state LED

### OS Programming Compatibility:

- Windows 7 Embedded.
- Linux 2.6.

### Power Requirements:

- Power voltage +12V, +5V\_STBY (option).

### Operating temperature range:

- Industrial Modification: from -40°C to +85°C.
- Commercial Modification: from 0°C to +70°C.

### Humidity:

- Up to 80% non-condensing.

### Vibration / Single shock resistance:

- 5g/100g.

### MTBF:

- Not less than 100,000 hours.

\* when USB 3.0 is used four USB 2.0 ports are utilized by the USB 3.0 ports



## Ordering Information

### CPC510 Configuration

#### CPC510 - 01 - i72C1.7-RAM4096-R1-I\Options

##### Configurations

01 Without mezzanine card  
02 MIC590

##### Processor

i72C1.7 Intel i7-3517UE (DC, 2CI4T, 1.7 GHz, 1600 MHz, 4MB, 17W), BGA 1023 CPU  
i72C2.5 Intel i7-3555LE (DC, 2CI4T, 2.5GHz, 1600 MHz, 4MB, 25W), BGA 1023 CPU

##### Memory

4096 4096MB Soldered DDR3L SDRAM  
8192 8192MB Soldered DDR3L SDRAM

##### Cooling system (front panel width)

R1 4HP  
R2 8HP

##### Temperature Range

I Industrial Range, -40...+85°C  
C Commercial Range, 0...+70°C

### CPC510 Available Options

Coating	
\COATED	Protective Coating
Operating System Presetting	
\LNX	Linux 2.6
\Win7e	Windows 7 Embedded

Other configurations and options are available upon request.

#### Example

##### CPC510-01- i72C1.7- RAM4096-R1-I\Coated\LNX

3U CompactPCI serial SBC, Intel i7-3517UE (DC, 2CI4T, 1.7 GHz, 1600 MHz, 4MB, 17W), BGA 1023 CPU, 4096MB Soldered DDR3L SDRAM, 4HP cooling system, Industrial Range, -40...+85°C, Protective Coating, Linux 2.6

#### Delivery checklist:

- CPC510 module or CPC510 assembled with the MIC590 module (video/PCI bridge mezzanine expansion module).

#### Additional accessories:

- MIC584 module. I/O mezzanine expansion module.
- KIC550 module. 2.5" HDD carrier module or 2.5" SSD.

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