



### Features

- Intel® Pentium® M processor up to 2.0 GHz and 1 GB PC4200 DDR2 DRAM soldered on board
- Built-in solid-state disk up to 32 MB soldered on board
- Six USB 2.0 ports
- Two Serial ATA channels
- Two Gigabit Ethernet ports
- Two independent CRT/LVDS displays
- PC/104 modules support
- Shock and vibration resistant
- Conduction or convection cooling
- Operating temperature:
  - 0°C to +70°C — commercial
  - 40°C to +85°C — industrial

### Overview

CPC1600 is a PC/104-Plus single board computer designed for mission critical embedded systems.

The board is based on Intel® Pentium® M processor up to 2.0 GHz, 915GM & ICH6M chipset.

All components including memory are soldered onboard thus providing superior shock/vibration standing construction.

The board also has a 32 MB solid-state disk for embedded OS.

Video system supports CRT-monitors and flat panels with LVDS interface with resolution up to 2048×1536.

Peripheral devices can be connected to CPC1600 through 6 high-speed USB 2.0 channels.

Two Gigabit Ethernet channels make this board perfect for developing communication intensive applications.

The board supports drives with IDE UltraATA/100, SerialATA interfaces and CompactFlash Cards.

The board is available in conduction or convection cooling versions.

Additional reliability of CPC1600 is provided by the hardware monitoring subsystem, watchdog timer and reserved CMOS memory.

The board is available in two versions – for industrial temperature range (-40°C to +85°C) and for commercial temperature range (0°C to +70°C).

### Technical Specifications

#### System

- Intel® Pentium® M processor up to 2.0 GHz
- Up to 2 MB L2 cache memory at CPU speed
- 400/533 MHz processor system bus
- Chipset: 915GM GMCH & ICH6M
- Up to 1 GB PC4200 DDR2 DRAM soldered onboard
- MTBF: 130 000 hours

#### BIOS

- Phoenix® BIOS with backup copy
- LAN Boot
- USB Boot
- Multi Boot
- Quick Boot
- ACPI 3.0
- Reserved CMOS memory

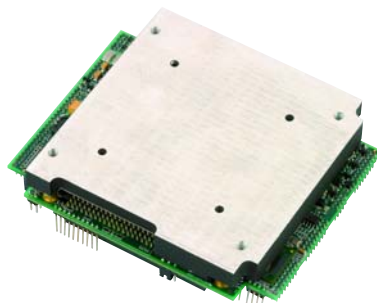
#### Graphics

- Video controller integrated in 915GM
- Video memory up to 64MB shared with system
- Analog display interface supports resolution up to 2048×1536 @ 75 Hz
- VGA-CRT and LVDS headers

#### Storage

- IDE Ultra ATA/100 interface
- Compact Flash card Type I/II socket
- Solid-state disk up to 32 MB
- Two Serial ATA channels, sockets for standard SATA interface cable

#### Heatsink options



For conduction cooling (supplied with the board)



For air cooling (optional)

#### Software support

- Windows XP®, XPE
- QNX V4.20, 6.0®
- Linux® 2.4.20, 2.6.11
- Windows CE

#### Interfaces

- Two PCI-E Gigabit Ethernet ports 10/100/1000 Mb/s
- Six USB 2.0 ports
- 32-bit 33MHz (3.3/5 V) PCI interface
- 16-bit ISA interface
- Eight programmable I/O lines

#### Mechanical

- Dimensions: 115.5×96 mm (4.4"×3.7")
- Weight: 0.120 kg

#### Power requirements

- 5 V ±5%

#### Environmental conditions

- Operating temperature:
  - 40°C to +85°C — industrial
  - 0°C to +70°C — commercial
- Storage temperature: -55°C to +95°C
- Humidity: 0% to 95%, noncondensing
- Shock/Vibration: 50G/2G
- Cooling: convection or conduction

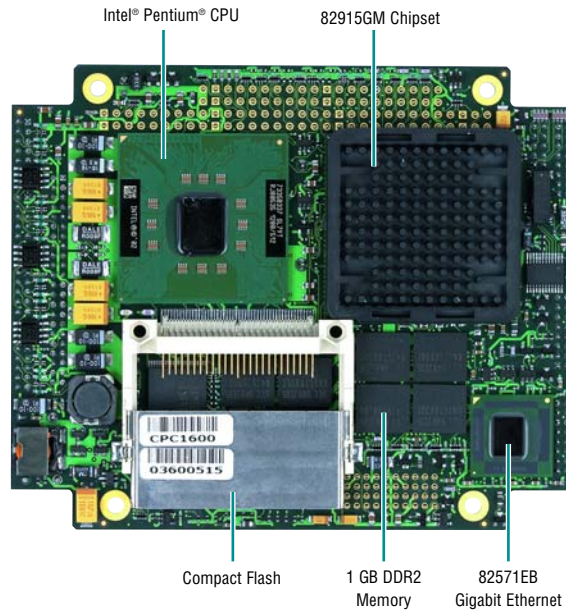
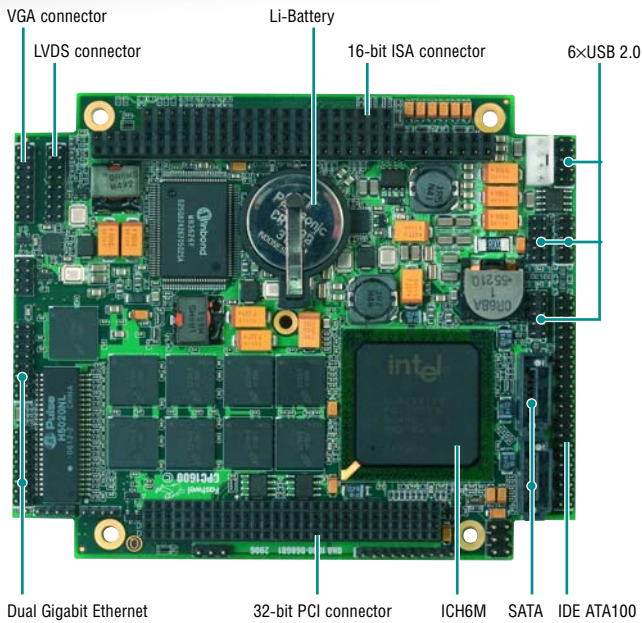
#### Warranty

- 3 years for parts and labor

# CPC1600

PC/104-Plus Intel® Pentium® M SBC

## Board Layout



### List of deliverables

- CPC1600 with heatspreader
- PC/104 modules installation set
- CD-ROM with documentation and service SW

It is recommended to use CPC1600 module with cooling system (ACS00035 or ACS00034).

### Additional accessories sets (not included into standard deliverables list and ordered separately)

#### ACS00034

- Increased height radiator
- Mounting screws set

#### ACS00035

- Fan
- Radiator
- Mounting screws set

#### ACS00036

- IDE cable 2.5" – 1 pc
- USB connector adapter – 3 pcs
- Ethernet cable – 2 pcs
- VGA adapter – 1 pc
- HDD SATA cable (angle) – 2 pcs
- Power adapter – 1 pc

## Ordering Information

### CPC1600 Configuration

#### CPC1600 - 01 - P2.0 - RAM1024 - C \Options

#### Device Type

CPC1600 PC/104-Plus, Intel® Pentium® M, Intel® 915GM, DDR2, SVGA, SATA, 2xGigabit LAN

#### Processor

C1.0 Celeron M 1.0 GHz, LV, 400 MHz FSB  
P1.4 Pentium M 1.4 GHz, 400 MHz FSB

#### Soldered Memory

RAM1024 1024 MB Soldered DDR2 SDRAM

#### Temperature Range

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

#### Options

\xxx Choose available options from the table

### CPC1600 Available Options

Compact Flash Module	
\CF1024	1024 MB Compact Flash, industrial (CF1024C – commercial)
\CF2G	2 GB Compact Flash, industrial (CF2GC – commercial)
\CF4G	4 GB Compact Flash, industrial (CF4GC – commercial)
\CF8G	8 GB Compact Flash, industrial (CF8GC – commercial)
\CF16G	16 GB Compact Flash, industrial (CF16GC – commercial)
Coating	
\COATED	Protective coating
Operating System Presetting	
\XPE	Windows XP Embedded
\QNX	QNX 4.20, 6.0
\WCE	Windows CE
\LNX	Linux 2.4.20, 2.6.11

Other configurations and options are available upon request.

#### Example

##### CPC1600-01-P1.4-RAM512-C\CF1024C\COATED\XPE

PC/104-Plus, Intel® Pentium® M, Intel® 915GM, DDR2, SVGA, SATA, 2xGigabit LAN.  
Pentium M 1.4 GHz, 400 MHz FSB  
1024 MB soldered DDR2 SDRAM  
Commercial temperature range 0...+70°C  
1024 MB Compact Flash, commercial  
Protective coating  
Windows XP Embedded

## Corporate Offices

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Product specifications are subject to change without notice