CPC801
EPIC Intel® Pentium® M SBC

Features

- ■ Intel® Pentium® M up to 1.8 GHz onboard
- ■ Up to 1 GB DDR SDRAM ECC soldered onboard
- ■ Two Gigabit Ethernet ports
- ■ Four USB 2.0 ports
- ■ Two SerialATA channels
- ■ PC/104-Plus modules support
- ■ Protective coating (optional)
- ■ 50G/5G – shock/vibration resistance
- ■ Operating temperature:
  0°C to +70°C — commercial
  –40°C to +85°C — industrial

Overview

CPC801 has the same architecture and key components as CPC800, but with all front panel interfaces available through pin header connectors on a board.

CPC801 is a compact single board computer in EPIC form-factor. The board is based on Intel® Pentium® Mprocessor up to 1.8 GHz and up to 1 Gb of DDR SDRAM.

All components including CPU, SDRAM and 32 MB solid-state disk are soldered onboard thus providing superior shock/vibration resistance.

For demanding applications there is a CompactFlash socket for cards of up to 16 GB.

Two Gigabit Ethernet ports make CPC801 an ideal platform for robust redundant systems. Very compact size of CPC801– 115×165 mm – combines full set of PC functions including video and audio interfaces.

Onboard 32K nonvolatile RAM allows users to save critical data in case power fails. CPC801 also has 64K EEPROM memory for user applications.

One of the board's benefits is a PC/104 connector, which allows EPIC and PC/104 modules work together as an integral system.

The board can withstand shock up to 50g and vibration up to 5g in 3 dimensions with working temperatures from –40°C to +85°C.

Technical Specifications

System
- Intel® Pentium® M processor, up to 1.8 GHz
- Up to 2 MB L2 on-die cache at CPU speed
- 400 MHz processor system bus
- Chipset: 82855GME GMCH & 6300 ESB ICH
- Up to 1 GB PC2700 soldered DDR SDRAM with ECC
- Hardware monitor: voltages and temperature monitoring, system control functions
- Programmable watchdog timer
- Real time clock with Li battery
- MTBF: 110000 hours

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

Graphics
- Video controller integrated in 855GME
- 2D/3D built-in accelerator
- Shared video memory up to 64 MB
- Analog display connector supports resolution up to 2048×1536 @ 75 Hz
- LVDS support

Storage
- 32 MB solid-state disk soldered onboard
- CompactFlash™ Type I/II or Microdrive socket
- Two EIDE Ultra ATA/100 Interfaces
- Two SerialATA channels

Software Support
- Windows® XP
- QNX® 6.0
- Linux® 2.4.20, 2.6.11
- Windows® CE
- Fastwel DOS™ (MS™ DOS compatible)

Interfaces
- Two Gigabit Ethernet ports 10/100/1000 Mb/s
- Four USB 2.0 ports
- PC/104: 16-bit ISA bus
- PC/104-Plus: 32-bit PCI bus
- Four serial ports, high speed NS16C550 compatible (2 RS-232 and 2 RS-485)
- Parallel port: SPP/ECP/EPP compatible
- PS/2 keyboard and mouse interface
- AC'97 2.3 compliant stereo audio
- LPC interface
- Three programmable LEDs

Mechanical
- Dimensions: 115×165 mm (4.5"×6.5")
- Weight: 0.200 kg (without radiator)

Power Supply Options
- ATX Power connector: 5 V, 3.3 V, 12 V or
- External PC/104 Plus Power Supply (PCI connector) max 25 W

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
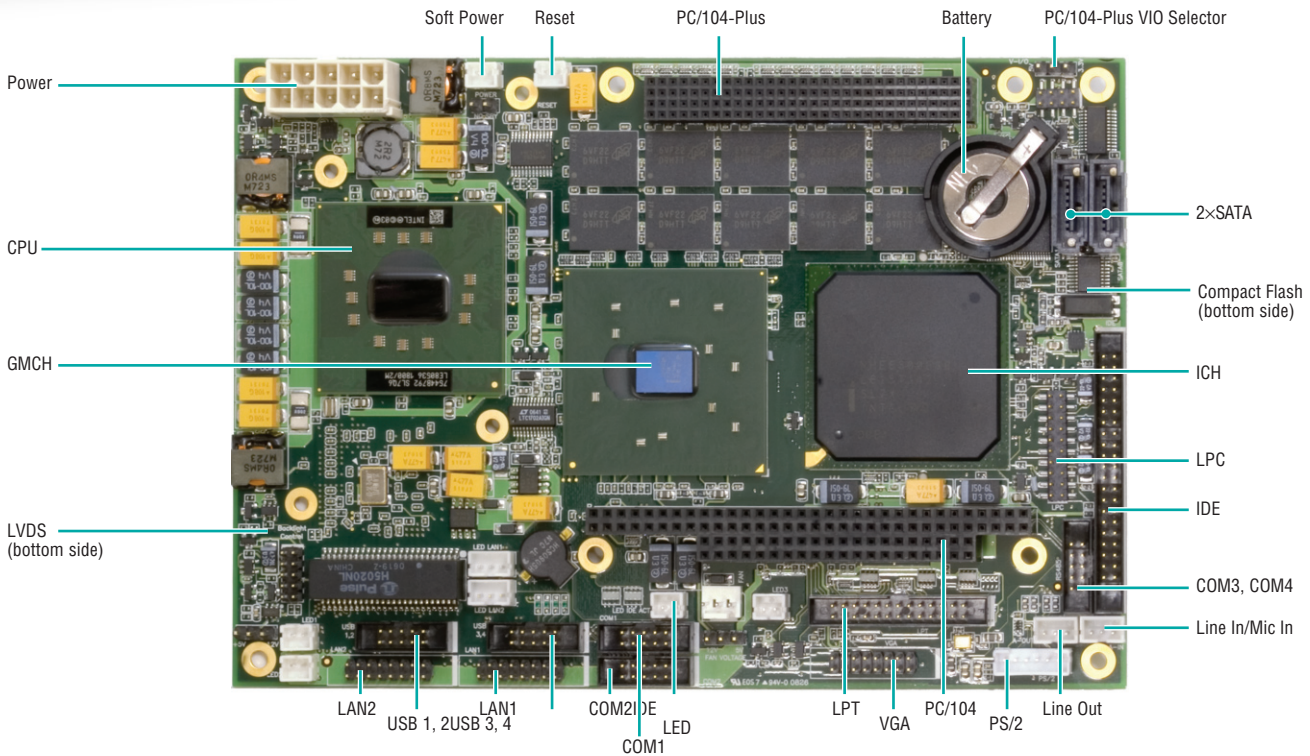- Shock/Vibration: 50G/5G
- Cooling: heatsink and fan

Warranty
- 3 years for parts and labor

List of deliverables
- CPC801 processor module with heat spreader installed
- IDE 44-pin cable
- SATA cable
- SATA power cable
- RS-232/RS-485 cable
- ATX power cable
- VGA cable
- Ethernet cable
- USB cable (2 pcs)
- CD-ROM with documentation and service SW
- Package

CPC801
EPIC Intel® Pentium® M SBC

Board Layout

Labels around board: Soft Power, Reset, PC/104-Plus, Battery, PC/104-Plus VIO Selector, Power, CPU, GMCH, LVDS (bottom side), 2×SATA, Compact Flash (bottom side), ICH, LPC, IDE, COM3, COM4, Line In/Mic In, LAN2, USB 1, 2, USB 3, 4, LAN1, COM2, IDE, LED, COM1, LPT, VGA, PC/104, PS/2, Line Out

Ordering Information

CPC801 Configuration

CPC801 - 01-P1.8-RAM1024-I\Options

Device Type

CPC801 EPIC, Pentium® M, DDR SDRAM soldered, FFD 32MB, SVGA, 2×Gigabite LAN, LVDS, pin header connectors

Processor

P1.4 Pentium M 1.4 GHz, 400 MHz FSB
P1.8 Pentium M 1.8 GHz, 400 MHz FSB

Soldered Memory

RAM512 512 MB soldered DDR SDRAM ECC
RAM1024 1024 MB soldered DDR SDRAM ECC

Temperature Range

I Industrial Range, −40…+85°C
C Commercial Range, 0…+70°C

Options

\xxx Choose available options from the table

CPC801 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)
Disk Drive 2.5" Installed	
\HDDxx	Hard Disk Drive 2.5" xx GB
Coating	
\COATED	Protective coating
Operating System Presetting	
\FDOS	Fastwel DOS
\XPE	Windows XP Embedded
\QNX	QNX 6.4
\WCE	Windows CE
\LNX	Linux 2.6

Other configurations and options are available upon request.

Example

CPC801-01-P1.4-RAM512-C\CF1024C\HDD240\COATED\XPE
EPIC, Pentium® M SBC, DDR, FFD 32MB, SVGA, 2×Gigabit LAN, LVDS, pin header connectors
Pentium M 1.4 GHz, 400 MHz FSB
512 MB soldered DDR SDRAM
Commercial temperature range, 0…+70°C
1024 MB Compact Flash, commercial
Hard Disk Drive 2.5" 240 GB
Protective coating
Windows XP Embedded

Ver. 1.2 2011

Product specifications are subject to change without notice

CorporateOffices

READY FOR RoHS

CE

TÜV CERT
EN ISO 9001:2000
Zertifikat: 75.100.9545
TÜV Rheinland InterCert

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