



Features

- Processor: Intel Atom D510 or N450, 1.66 GHz, from long term manufacturing program
- Support for PC/104 Plus modules
- System memory: 512 MB or 1 GB, DDR2 667 MHz, soldered
- Graphics: VGA up to 2048×1536 and LVDS, 18 bit, up to 1365×768
- Two Gigabit Ethernet ports
- 2×SATA, 300 MB/s; SATA NAND flash disk, up to 4 GB; CF Type I/II
- 4×USB 2.0, 2×RS 232, 2×RS 485/422 isolated
- Operating temperature ranges: 40...+85°C (industrial), 0...+70°C (commercial)

Overview

Fastwel CPC308 is an embedded SBC in PC/104 Plus format (PCI 32 bit, ISA 16 bit) with an optimized CPU performance to heat emission ratio. CPC308 is based on Intel Atom CPUs with integrated graphics and wide range of communication interfaces. CPC308 estimated power consumption is from 12 to 17 watts depending on model. Thermal design allows using both air cooling and conductive cooling.

The module includes CompactFlash socket, two Ethernet channels, four USB ports, two SerialATA ports, four serial ports, and NAND Flash drive.

PC/104 and PC/104 Plus modules can be used for functionality expansion.

The module is supplied with preinstalled FreeDOS operating system (if the preinstalled operating system options are not selected) and is compatible with MS DOS 6.22, QNX 6.5, Windows XP Embedded, and Linux 2.6 operating systems.

Technical Specifications

Processors:

- Intel Pineview M Single Core (N450), 1.66 GHz, 512 KB cache;
- Intel Pineview D Dual Core (D510), 1.66 GHz, 1 MB cache

Chipset:

- Intel ICH8M

System memory:

- DDR2 SDRAM 667 MHz w/o ECC, 512 MB / 1 GB, 64 bit addressing, soldered

Integrated graphics controller:

- 2D/3D accelerator;
- VGA output (up to 1400×1050 60 Hz (N450) and 2048×1536 60 Hz (D510));
- LVDS interface (up to 1280×800 60 Hz (N450) and 1366×768 60 Hz (D510), single channel 18 bit mode)

PCI bus:

- 32 bit / 33 MHz;
- Support for up to 3 bus mastering devices

ISA bus:

- 16 bit / 8 MHz;
- Support for DDMA, ISA IRQ.

Flash BIOS:

- In system modification

Flash disk:

- 4 GB NAND Flash (dual channel)
- SATA interface: 50 MB/s read, 45 MB/s write

CompactFlash socket:

- Support for Type1/Type2 modules;
- UDMA mode support

Gigabit Ethernet:

- Two 10/100/1000 Mbit/s controllers

USB ports:

- Support for USB 1.1, USB 2.0 modes;
- Connection of up to four devices

SATA II:

- Two channels available via SATA connectors;
- Up to 300 MB/s transmission rate

Serial ports:

- COM1, COM2: RS232, complete, up to 1.5 Mbit/s;

- COM3, COM4: RS422 / RS485, up to 921 Kbit/s, galvanically isolated, automatic transmitter control

HD Audio controller:

- Stereo line in/out
- Microphone input

PS/2 keyboard and mouse port

Eight digit input/output:

- 8 input/output lines, individually programmable
- 3.3 V, 8 mA

RTC:

- Battery backed, CR2032 (3V);

FRAM memory:

- BIOS settings are stored in CMOS and FRAM;
- 31 KB is available to user;
- Batteryless operation is possible

Optoisolated reset/interrupt input

Two watchdog timers:

- WDT1 with fixed timeout period;
- WDT2 programmable timeout

Possibility to connect external LED indicators

Power:

- +5 V ±5%;
- Consumption current: max 3.2 A (D510)

Humidity:

- Up to 80%, noncondensing

Multiple shock/vibration stability:

- 50g/5g.

Operating temperature range:

- From 40°C to +85°C

MTBF:

- Min 100000 hours

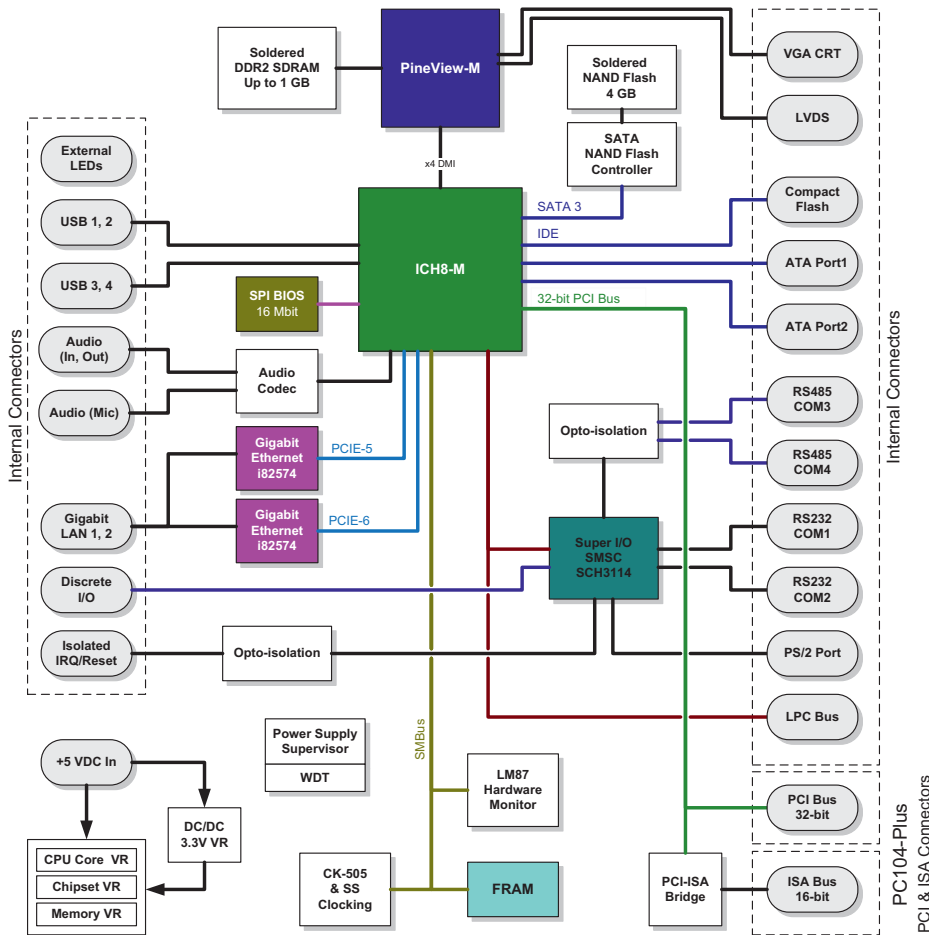
Dimensions:

- 115.6×101.5×23.7 mm

OS compatibility:

- MS DOS 6.22, FreeDOS
- Windows XP (Embedded)
- Linux 2.6
- QNX 6.5

Board Layout



Ordering Information

CPC308 Configuration

Versions

CPC308 01	1GB RAM, 4 GB NAND, Intel Atom N450
CPC308 03	1 GB RAM, 4 GB NAND, Intel Atom D510

Options (xx version)

CPC308 xxXPe	preinstalled Windows XPe
CPC308 xxLNX	preinstalled Linux 2.6

For all versions the option \Coated is available (protective coating).

Delivery checklist:

1. CPC308 module;
2. ACS00023 Adapter cable for connection to COM1, COM2 (DB9M IDC10);
3. ACS00027 Adapter cable for connection to VGA monitor (DB15F IDC10);
4. ACS00043 01 Adapter cable for keyboard and mouse connection;
5. ACS000xx Socket with contacts for connection of a power supply;
6. Set of fixture elements;
7. Package.

Additional accessories and cables*:

1. ACS00031 01 Socket with contacts PHR 5 (RS422/485, Audio);
2. ACS00031 02 Socket with contacts PHR 6 (keyboard, mouse);
3. ACS00031 03 Socket with contacts PHR 2 (Mic In);
4. ACS00037 Socket with contacts DF13 (for connection of LVDS panel);
5. ACS00040 01 Socket IDC 10 (RS232, USB, VGA);
6. ACS00040-04 – Socket IDC-20 (Ethernet);
7. ACS00041 Socket for connection to discrete input/output header;
8. ACS00035-01 – A radiator and installation screws.

*Are not included in delivery checklist, ordered separately

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Product specifications are subject to change without notice