CPC310
E38xx Based SBC, PC/104-Plus Intel Atom

Features

- CPU Intel Atom E38xx (1.33–1.46 GHz)
- RAM: DDR3L-1066/1333 SDRAM up to 4 GB with ECC support
- Integrated video controller: 2D/3D – accelerator; VGA output (resolution up to 2560×1600 60GHz); 2×LVDS ports (resolution up to 1600×1200 60GHz 18/24bit);
- USB ports: Support of USB 1.1 (12 Mb/sec), USB 2.0 (480 Mb/sec); Connection up to 4x devices
- PS/2 keyboard and mouse port
- Compatibility with OS: Linux, QNX; Microsoft Windows Embedded Standard 8; Microsoft Windows Embedded Standard 7
- Power supply: +5 V
- Operating temperature range: from –40°C up to +85°C

Overview

CPC310 represents an embedded single-board computer in PC/104-Plus format designed for mission-critical applications.

Technical Specifications

Intel Atom E38xx CPU (1.33–1.46 GHz)

- 1 or 2 CPU cores
- Support of IA 64-bit/32-bit architecture
- L1-Cache (32 Kbyte instructions, 24 Kbyte data)
- L2-Cache 1024 Kbyte
- Support of Intel Streaming SIMD Extension 4.1 & 4.2 (SSE4.1 и SSE4.2)
- Intel VT-x
- Intel Digital Random Number Generator
- Support of Intel SpeedStep Technology
- Support of Deep Power Down Technology (C7)
- Support of Intel Burst Technology

RAM

- DDR3L-1066/1333 SDRAM up to 4 GB with ECC support
- 64-bit data bus

Integrated video controller

- 2D/3D-accelerator
- VGA output (resolution up to 2560x1600 60 GHz)
- 2x LVDS ports (resolution up to 1600x1200 60 GHz 18/24 bit)

PCI bus

- 32-bit / 33 MHz
- Support of up to 3-x bus master devices

ISA bus

- 16-bit / 8 MHz
- Support of DDMA, ISA IRQ

FLASH BIOS

- 64 Mb SPI-Flash
- Modifiable within the system

SSD SATA Flash disk up to 8 GB (SLC NAND Flash)

FRAM 32 Kbyte (SPI port) for storing user data

Connector for CFast drives

SATA Gen II connector (switched with CFast connector)

2x LAN 10/100/1000Mb ports (use a single connector)

USB ports

- Support of USB 1.1 (12 Mb/sec), USB 2.0 (480 Mb/sec)
- Connection up to 4x devices

Serial ports

- COM1: RS-232 (up to 1.5M baud)
- COM2: RS-232 (up to 1.5M baud)
- COM3: RS-422/485 (up to 921 k baud), optoisolated (up to 500V)
- COM4: RS-422/485 (up to 921 k baud), optoisolated (up to 500V)
- Console I/O via serial ports (COM1/COM2)

Digital I/O port

- 8x separately programmed I/O lines

Optoisolated input of external reset/interrupt

- Isolation up to 500 V

PS/2 keyboard and mouse port

Audio support

- HD Audio codec
- Linear input (stereo)
- Linear output (stereo)
- Mic (mono)

Real Time Clock (powered from a separate connector)

Watchdog timer

- WDT1 with a fixed actuation interval
- WDT2 with software adjustment possibility

Operating temperature range

- From –40°C up to +85°C

Software compatibility

- Linux
- QNX
- Microsoft Windows Embedded Standard 8
- Microsoft Windows Embedded Standard 7
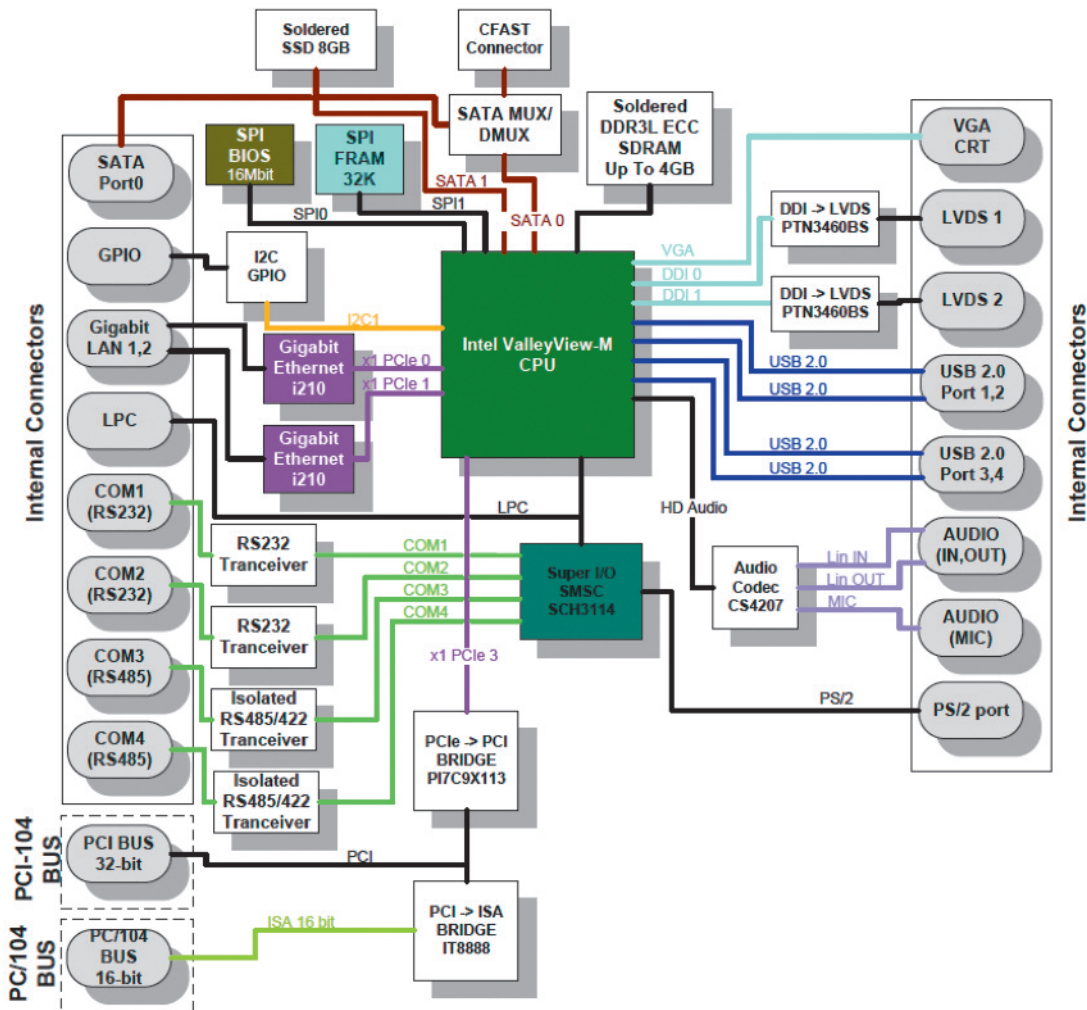
Power supply

- +5 V

Power consumption

- CPC310-01 – 10 W
- CPC310-02 – 8 W

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Board Layout

Ordering Information

CPC310 Configuration

CPC310 - 01/02

Configurations

01	4 GB RAM, 8 GB NAND, Intel Atom E3825 (Dual Core)	
02	2 GB RAM, 4 GB NAND, Intel Atom E3815 (Single Core)	

Delivery checklist

CPC310 delivery checklist contains:

1. CPC310 Module
2. Packaging

Corporate Offices

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PCI/104-Plus MODULES

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