

CPC1311

Mezzanine CPU Module COM Express® mini, Type 10



Overview

The mezzanine CPU-module COM Express® mini, Type 10, 55 × 84 mm is designed for building of highly reliable embedded power-efficient systems with compact sizes. The module corresponds to the "PICMG® COM.0 COM Express® Module Base Specification Revision 2.1"

Features

- CPU: Intel Atom: E3845: 1.91 GHz, 4x core, (CPC1311-01 version); E3825: 1.33 GHz, 2x cores, (CPC1311-02 version) E3827: 1.75 GHz, 2x cores, (CPC1311-03 version)
- L1-Cache (32 KB of instructions, 24 KB of data); L2-Cache 1024 KB
- RAM: DDR3L-1066/1333 SDRAM up to 4 GB with ECC support
- SSD SATA Flash-drive: 4 GB (SLC NAND Flash)
- Watchdog timer: 1.2 sec ... 10 sec
- Operating temperature range: -40°C up to +85°C
- Power supply: from COM-Express connector with extended range (from 4.75 V to 20 V)
- Input is equipped with overvoltage protection and pulse interference protection
- OS support: Linux 2.6; QNX 6.5; Microsoft Windows Embedded Standard 8; Microsoft Windows Embedded Standard 7

Technical Specifications

CPU

- Intel Atom CPU:
 - E3845: 1.91 GHz, 4 cores (version CPC1311-01)
 - E3825: 1.33 GHz, 2 cores (version CPC1311-02)
 - E3827: 1.75 GHz, 2 cores (version CPC1311-03)
- Support of IA 64-bit/32-bit architecture
- L1-Cache (32 KB of instructions, 24 KB of data)
- L2-Cache 1024 KB
- Support of Intel Streaming SIMD Extension 4.1 & 4.2 (SSE4.1 and 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

FLASH BIOS

- 64 MB SPI-Flash
- Ability to modify within the system

SSD SATA Flash-drive

- 4 GB (SLC NAND Flash)

MicroSD

- Connector for MicroSD cards (SDSC / SDHC, speed class 6)

FRAM

- FRAM 32 KB (SPI port) for storage of user data
- FRAM 8 KB (I2C port) for storage of configuration

COM-EXPRESS

- Connector COM-Express COM.0 Type 10

INTERFACES

- 3(4) PCIe x1 ports (PCIe Base Spec. Rev 2.0), 5 GT/s
- 4xUSB 2.0 (host), 1xUSB 2.0 (client), 1xUSB 3.0 SuperSpeed (host)
- 2xSATA II (3-Gbps Gen. II)
- 1xGbit Ethernet

- 1xSPI (External Boot)
- 1xLVDS/eDP; Digital Display Interface DDIO 2560x1600 @ 50 Hz
- 1xLPC (Specification Rev. 1.1)

SMBUS

- SMBus, I2C

HD AUDIO

- HD Audio, Speaker Out

SDIO

- SDIO (compatible with GPIO ports)

RS

- 1xRS-232 (TTL, 64 bytes FIFO, up to 4 Mbps), 1xRS-232 (TTL, 64 bytes FIFO, up to 1 Mbps) / CAN 2.0 B (TTL, up to 1 Mbps)

Battery

- RTC battery

Real-Time-Clock

- (fed from the port "RTC battery")
- Watchdog timer: 1.2 s ... 10 min.
- Console output via serial ports (COM1 / COM2)

Operating temperature range

- From -40°C to +85°C

Power supply

- From COM-Express connector with extended range (4.75 W ... 20 W)
- Input is protected against overvoltage and pulse interference

Power consumption

- CPC1311-01 ~16 W
- CPC1311-02 ~8 W
- CPC1311-03 ~10 W

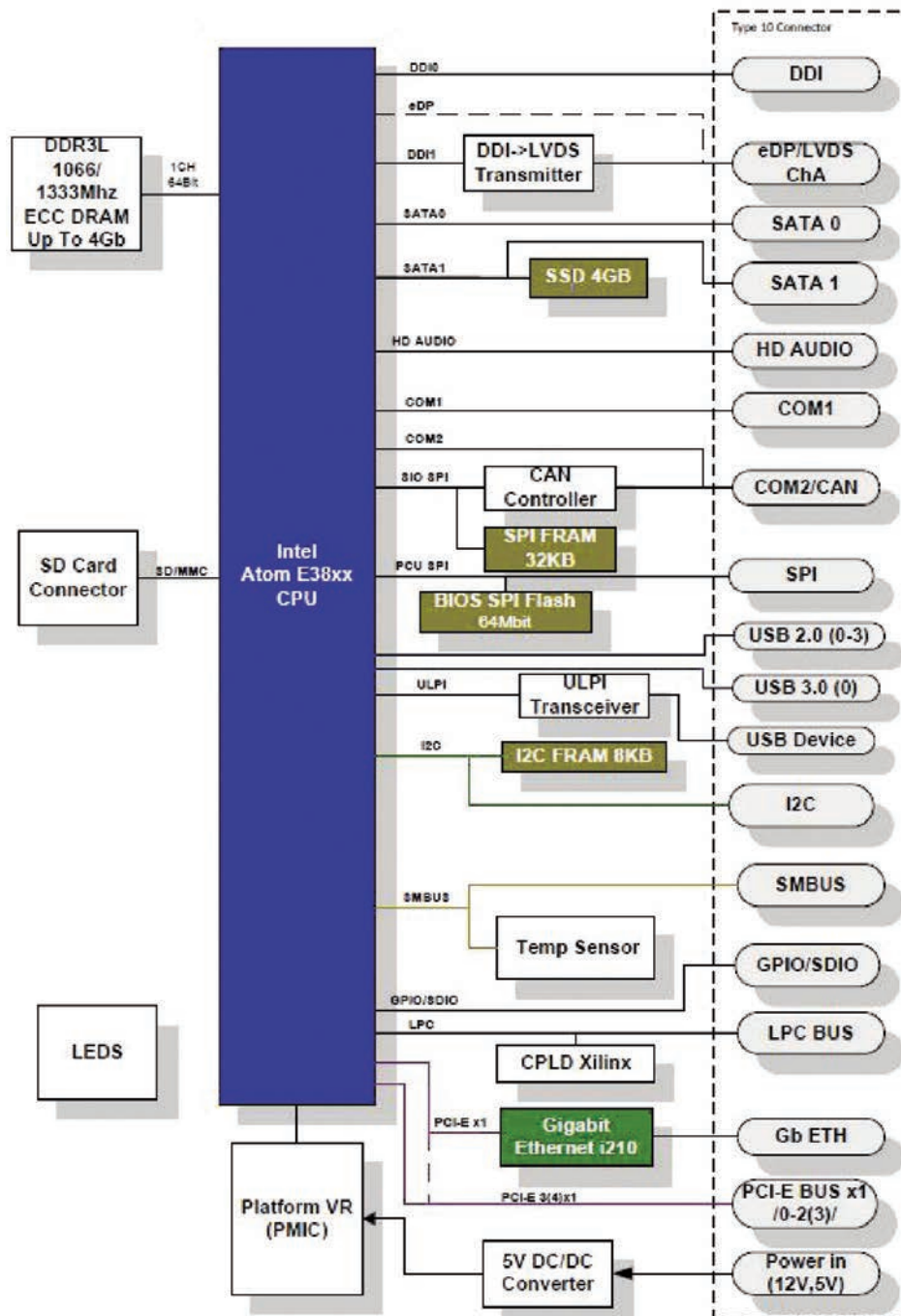
Software compatibility

- Linux 2.6
- QNX 6.5
- Microsoft Windows Embedded Standard 8
- Microsoft Windows Embedded Standard 7

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Mezzanine CPU Module COM Express® mini, Type 10

Board Layout



CPC1311

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Ordering Information

CPC1311 Configuration

CPC1311 - 01 \ Options

Configurations

- | | |
|----|--|
| 01 | E3845: 1.91 GHz, 4 cores, 4 GB DDR3L SDRAM |
| 02 | E3825: 1.33 GHz, 2 cores, 2 GB DDR3L SDRAM |
| 03 | E3827: 1.75 GHz, 2 cores, 2 GB DDR3L SDRAM |

Options

- | | |
|---------|-------------------|
| \Coated | Conformal coating |
|---------|-------------------|

Preinstalled OS:

- \LNX: Linux 2.6 (NAND)
\WIN7: Microsoft Windows Embedded Standard 7 (NAND)

Delivery checklist

CPC1311 delivery checklist contains:

1. CPC1311 CPU Module
2. Package

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Product specifications are subject to change without notice



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