

CPC1311

Mezzanine CPU Module COM Express® mini, Type 10



Features

- CPU: E3845: 1.91 GHz, 4x cores (CPC1311-01, CPC1311-03); E3825: 1.33 GHz, 2x cores (CPC1311-02, CPC1311-04)
- 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
- Watchdog timer: 1.2 sec ... 10 min
- Operating temperature range: -40°C up to + 85°C (for CPC1311-01, CPC1311-02) and 0°C to + 70°C (for CPC1311-03, CPC1311-04)
- Power supply: from COM-Express connector with extended range (from 4.75 V to 20 V)
- Power consumption: CPC1311-01, CPC1311-03 ~15 W; CPC1311-02, CPC1311-04 ~12 W
- OS support: Linux 3.8.0; QNX 6.6; Microsoft Windows Embedded Standard 8; Microsoft Windows Embedded Standard 7

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"

Technical Specifications

CPU

- Intel Atom E3845: 1.91 GHz, 4x cores (CPC1311-01, CPC1311-03); Intel Atom E3825: 1.33 GHz, 2x cores (CPC1311-02, CPC1311-04)
- 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
- Modifiable within the system

eMMC Flash drive: 8 GB

- (versions CPC1311-01, CPC1311-03)

FRAM 8 KB (I2C port) for storing configuration

COM-Express COM.0 connector, Type 10

- 3(4) ports PCIe x1 (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)

- Buses SMBus, I2C
- HD Audio, Speaker Out
- SDIO (combined with GPIO ports)
- 1xRS-232 (TTL, 64 Byte FIFO, up to 4 Mbps), 1xRS-232 (TTL, 64 Bytes FIFO, up to 1 Mbps)/ CAN 2.0 B (TTL, up to 1 Mbps)
- RTC battery

Real-Time Clock

Monitor of seven power supply voltages on SMBUS

Watchdog timer (WDT)

- 1.2 sec ... 10 min

Console I/O via serial ports (COM1/COM2)

MTBF

200 000 hours

Operating temperature range

- from -40°C up to +85°C
- From -40eC to +85eC (CPC1311-01, CPC1311-02)
- From 0eC to +70eC (CPC1311-03, CPC1311-04) (temperature control on heat spreader)

Power supply

- From COM-Express connector with an extended temperature range (4.75 V ... 20 V)

Power consumption

- CPC1311-01, CPC1311-03 ~15 W
- CPC1311-02, CPC1311-04 ~12 W

Weight

no more than 0.15 kg

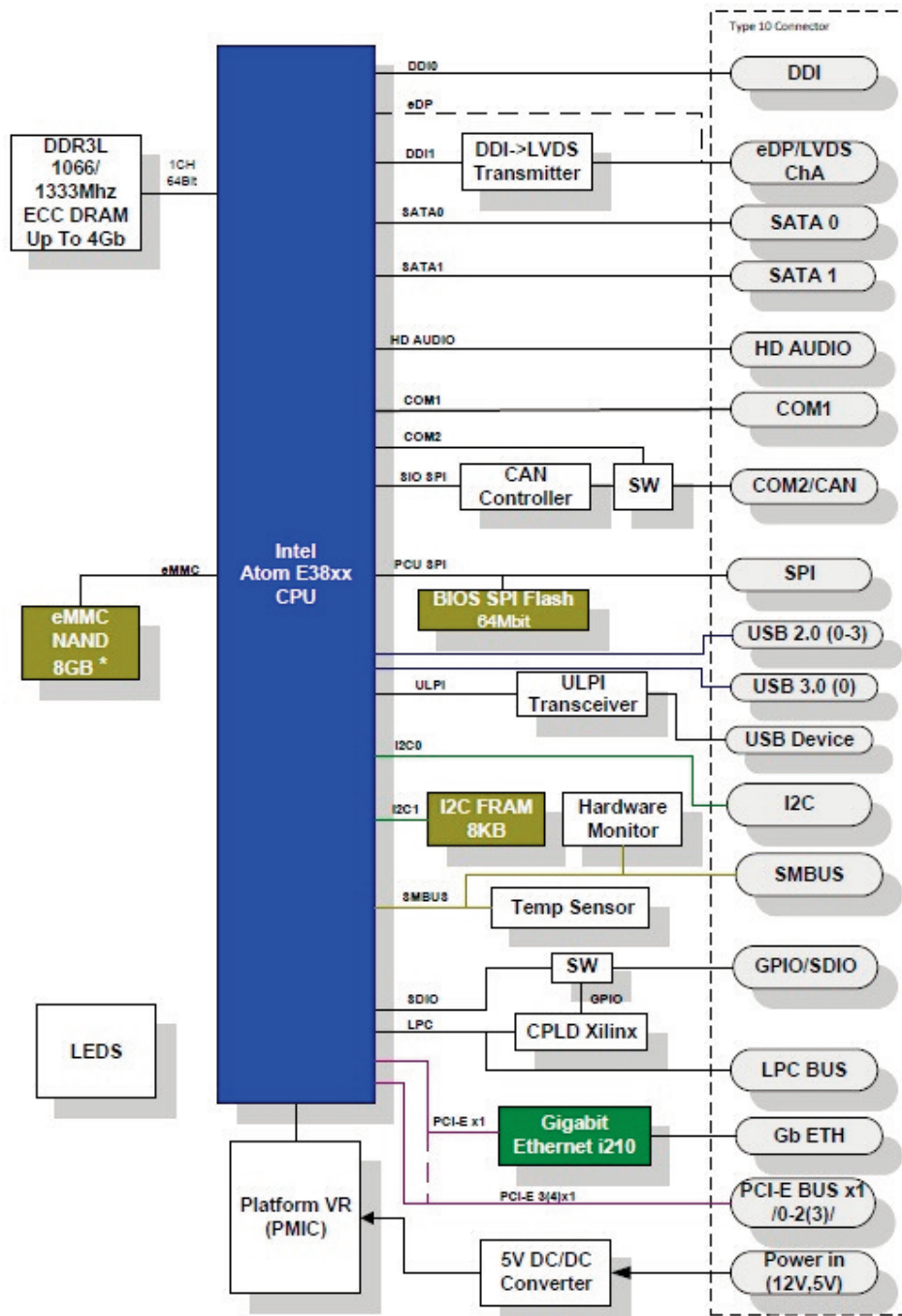
Software compatibility

- Linux 3.8.0
- QNX 6.6
- Microsoft Windows Embedded Standard 8
- Microsoft Windows Embedded Standard 7

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Board Layout



* eMMC Flash Drive: 8 GB (for versions CPC 1311-01, CPC 1311-03)



Fastwel



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Ordering Information

CPC1311 Configuration

Version	Temperature range	CPU	RAM	eMMC 8GB
CPC1311-01	- 40°C ... + 85°C	Intel Atom E3845 1.91 GHz, 4 cores	4 GB 1333DDR3L	+
CPC1311-02	0°C ... +70°C			
CPC1311-03	- 40°C ... + 85°C	Intel Atom E3825 1.33 GHz, 2 cores	2 GB 1066 DDR3L	-
CPC1311-04	0°C ... + 70°C			

Other configurations are available upon request

Available options for CPC1311:

- \LNX — Preinstalled Linux 3.8.0 (for versions with soldered eMMC)
- \WIN7E — Preinstalled OS Windows Embedded Standard 7 (for versions with soldered eMMC)
- \COATED — conformal coating option

Delivery checklist

- CPC1311-xx Module ready-assembled with a heat-spreading plate and 5 mm racks (4 pcs.)
- Installation kit:
 1. set of racks with a height of 8 mm — 4 pieces
 2. washers and screws for the racks (in order to fasten the module to the carrier-board) — 4 pieces for each
 3. jumper — 1 pcs
- Packaging

Additional accessories

- ACS30075 heatsink
- ACS30075-01 heatsink with a fan

Corporate Offices

FASTWEL GROUP Co. Ltd

108 Profsoyuznaya str.
Moscow, Russia 117437
Tel: +7 (495) 232-1681
Fax: +7 (495) 232-1654
E-mail: info@fastwel.com
Web: www.fastwel.com

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Product specifications are subject to change without notice



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