

CPC1303

CPU Module in COM Express Basic Format



Overview

CPU Module CPC1303, implemented in the standard format COM Express Basic, provides developers of embedded systems with such possibilities as compatibility with the x86 family, modern set of functionalities based on PCI Express 3.0, SATA 3.0, USB 3.0, 10 GbE interfaces, high performance and reliability of Intel Xeon D-1500 CPUs.

Features

- CPU Intel Xeon D-1559 1.5 GHz 12C 45 W
- CPU Intel Xeon D-1539 1.6 GHz 8C 35 W
- CPU Intel Pentium D-1519 1.5 GHz 4C 25 W
- RAM: DDR4-2133 SDRAM up to 32 GB, with ECC support
- Power supply: +12 V from the COM Express connector, +5 V_STBY from COM Express connector (as an option)
- Operating temperature: from -40 to + 60 °C for CPC1303-01, from -40 to +85 °C for CPC1303-02 (-03)
- Software compatibility: Linux Debian 8 Jessie (core 3.16), QNX 6.x, Microsoft Windows Embedded 10 64bit / Standard 7 64bit
- MTBF: no less than 100 000 hours

Technical Specifications

CPU Intel Xeon D-1559 1.5 GHz 12C 45W

- 12×Intel x64 cores
- 18 MB cache memory

CPU Intel Xeon D-1539 1.6 GHz 8C 35W

- 8×Intel x64 cores
- 12 MB cache memory

CPU Intel Pentium D-1519 1.5 GHz 4C 25W

- 4×Intel x64 cores
- 6 MB cache memory
- Switching field will be used to select interrupt level of each of the CAN and RS485/422 channels

RAM

- DDR4-2133 SDRAM up to 32 GB, with ECC support
- 64-bit data bus

FLASH BIOS

- 256 MB SPI-Flash
- Modifiable within the system

FRAM 32 Kbyte (SPI port) for storing user data

COM Express Type 7 connector

- 1×PCIe port x16 GEN3, 8 GT/s
- PCIe port x8 GEN3, 8 GT/s
- 7 (8) PCIe ports x1 GEN2, 5 GT/s
- 4×USB 3.0 ports
- 2×USB 2.0 ports
- 2×ports SATA III 6 GbpsF
- Port "LAN 0": Gbit Ethernet Intel 210
- SPI port (External Boot)
- 2×10GbE KR ports
- LPC port (Specification Rev. 1.1)
- SMBus port
- I²C port
- Speaker Out
- 4×GPIO ports
- 2×RS-232 ports (TTL, 128-byte FIFO, up to 3Mbps)

Real Time Clock (power supply from "RTC battery" port)

Two SSDs 16 GB with SATA interface

Watchdog Timer

Monitoring of 7 power supply voltages,

monitoring of PCB temperature

Console input/output via serial ports (COM1 / COM2)

Power supply

- +12 V from the COM Express connector
- +5 V_STBY from COM Express connector (as an option)

Operating temperature

- From -40 to + 60°C for CPC1303-01
- From -40 to +85°C for CPC1303-02 (-03)

Weight of the module with heat-spreader

- No more than 0.4 kg

Software compatibility

- Linux Debian 8 Jessie (core 3.16)
- QNX 6.x
- Microsoft Windows Embedded 10 64bit
- Microsoft Windows Embedded Standard 7 64bit

Humidity

- Up to 93% (± 3) at the temperature of 55 °C (± 2), no condensation

Resistance to sinusoidal vibration from 5 to 500 Hz with acceleration of 5g

Resistance to single shocks 100g

Resistance to multiple shocks 50g

EMI resistance in accordance with the requirements of the GOST R standard 50839- 2000 (II group) (BS EN 61000-6-2:2001)

The level of the radio interference caused does not exceed the values set by the GOST R standard 51318.22-99 Class A (CISPR 22-97)

MTBF

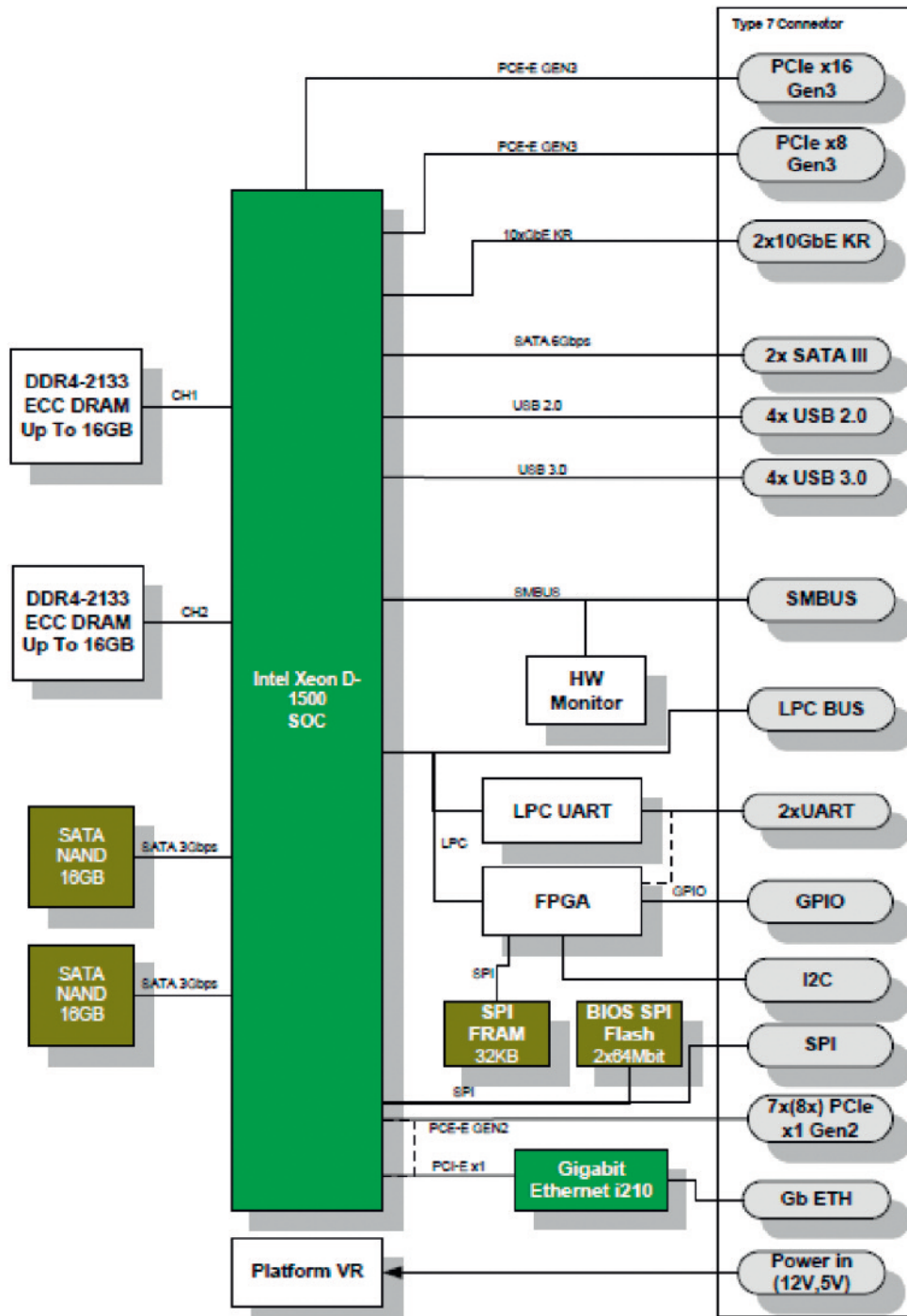
- No less than 100 000 hours



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Board Layout



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CPC1303

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Ordering Information

CPC1303 Configuration

CPC1303 - 01 \Options

Configurations

- | | |
|----|--|
| 01 | CPU Module CPC1303, Intel Xeon D-1559 1.5 GHz 12 Core, 32 GB DDR4 SDRAM, onboard SSD 2×16 GB, -40...+60°C |
| 02 | CPU Module CPC1303, Intel Xeon D-1539 1.6 GHz 8 Core, 16 GB DDR4 SDRAM, onboard SSD 2×16 GB, -40...+85°C |
| 03 | CPU Module CPC1303, Intel Pentium D-1519 1.5 GHz 4 Core, 8 GB DDR4 SDRAM, onboard SSD 2×16 GB, -40...+85°C |

Options

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

Delivery checklist

CPC1303 delivery checklist contains:

1. CPC1303-xx module with the heat-spreader and racks with a height of 5 mm
2. Racks with a height of 8 mm – 5 pcs.
3. Washers and nuts for racks – 5 pcs. per each
4. Packaging

Additional equipment (to be supplied as accessories):

5. ACS30076-01 heatsink
6. ACS30076-02 heatsink with a fan

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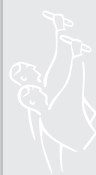
Product specifications are subject to change without notice



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