

CPC314

PC/104 plus CPU Module



Features

- CPU: Vortex86DX3™800 MHz, 2 cores;
- RAM: DDR3 SDRAM 2 GB (soldered onboard);
- Integrated storage: microSD card 4 GB (SLC NAND Flash);
- Power supply: 9-24V DC or 220V AC (2 options);
- GPU: video controller with 2D accelerator, VGA port 1920x1080, 32 bit color, LVDS port 1920x1080, 32 bit color;
- Watchdog: 2 x CPU-integrated watchdogs with actuation interval of 30.5 μs...512 s;
- Operating temperature range: from -40 to +85°C;
- MTBF: no less than 100,000 hours;
- OS compatibility: Microsoft™ MS-DOS®6.22, FreeDOS, Linux 2.6, 3.2, Windows Embedded Standard 7;

Technical Specifications

Overview

The CPC314 is a CPU Module made in PC/104 plus format based on the Vortex86DX3 (800 MHz Dual Core) processor and features compact size and low power consumption. The module is designed as successor product for CPC304 and might be interested also for those customers who want to upgrade or extend their CPC304 based systems life cycle.

CPU

- CPU: Vortex86DX3™;
- Clock frequency: 800 MHz;
- Physical cores: 2;
- Floating point unit;
- 32 bit x86 core;
- L1 cache (64 KB);
- L2 cache (512 KB);

Video subsystem

- Video controller with 2D accelerator;
- VGA port, resolution up to 1920x1080, 32bit color;
- LVDS port, resolution up to 1920x1080, 32bit color;

RAM

- DDR3 SDRAM 2 GB (soldered onboard);
- Memory bus width: 32 bit;
- Memory bus frequency: 667 MHz;

Non-volatile RAM

- Volume: 8 KB, SPI interface;

Integrated storage device

- microSD card 4 GB (SLC NAND Flash);
- System sees the card as the Primary IDE master;
- Read/write speed up to 25 MB/s;

SATA port

- Support of SATA I/II modes;
- Read/write speed up to 100 MB/sec;

LAN ports

- 2 x 10/100 Mbit ports;
- Isolation of each port from the 500V system;

USB (host) ports

- Support of USB 1.1, USB 2.0 (HS, FS, LS);
- Connection of up to 2 x devices;

Serial ports

- COM1, COM2: RS-232, exchange rate up to 230.4 Kb/sec, ESD protection 15kV (IEC1000-4-2);
- COM3, COM4: RS-422/485 with lightning protection circuits, speed up to 1.5 Mb/sec, each port is isolated from the 500V system, automatic control of transmission direction

Weight

- No more than 200g

GPIO port

- 8 x CMOS / TTL lines, load up to 16 mA;
- 5V level input compatibility;
- Using the port for managing servo drives (PWM);

MTBF

- 50 / 150 g;

PS/2 port

- connection of keyboard / mouse;

LPT port

Remote reset/interrupt port Console serial ports

- COM1 / COM2 / COM3 / COM4;

Expansion buses

- PC/104 (ISA 8/16-bit, 8/16 MHz);
- PCI/104 (PCI 32-bit, 33 MHz);

Real Time Clock

- powered from an int. lithium battery CR2032;

Watchdogs

- 2xCPU-integrated watchdogs with actuation interval of 30.5 μs...512 s;

Integrated temperature sensor

- measuring range from -55 to +125 °C;

Measurement of secondary supply voltages using the built-in ADC

Buzzer

Power supply

- From PC/104 and PCI/104 connector;
- Additional power supply connector;
- Power supply voltage from 4.5 to 5.5V;
- Module's current consumption 1.5 A @ 5V;
- Active short circuit protection, overvoltage (up to 30V) and reverse polarity (up to -30V);

Operating temperature range

- from -40 to +85°C;

Humidity

- 5% ... 95% @ +25 °C, non-condensing;

Dimensions (mm)

- No more than 116 (D) x 101.56 (W) x 24.13 (H);

Resistance to multiple/single shocks

- 50 / 150 g;

Vibration resistance

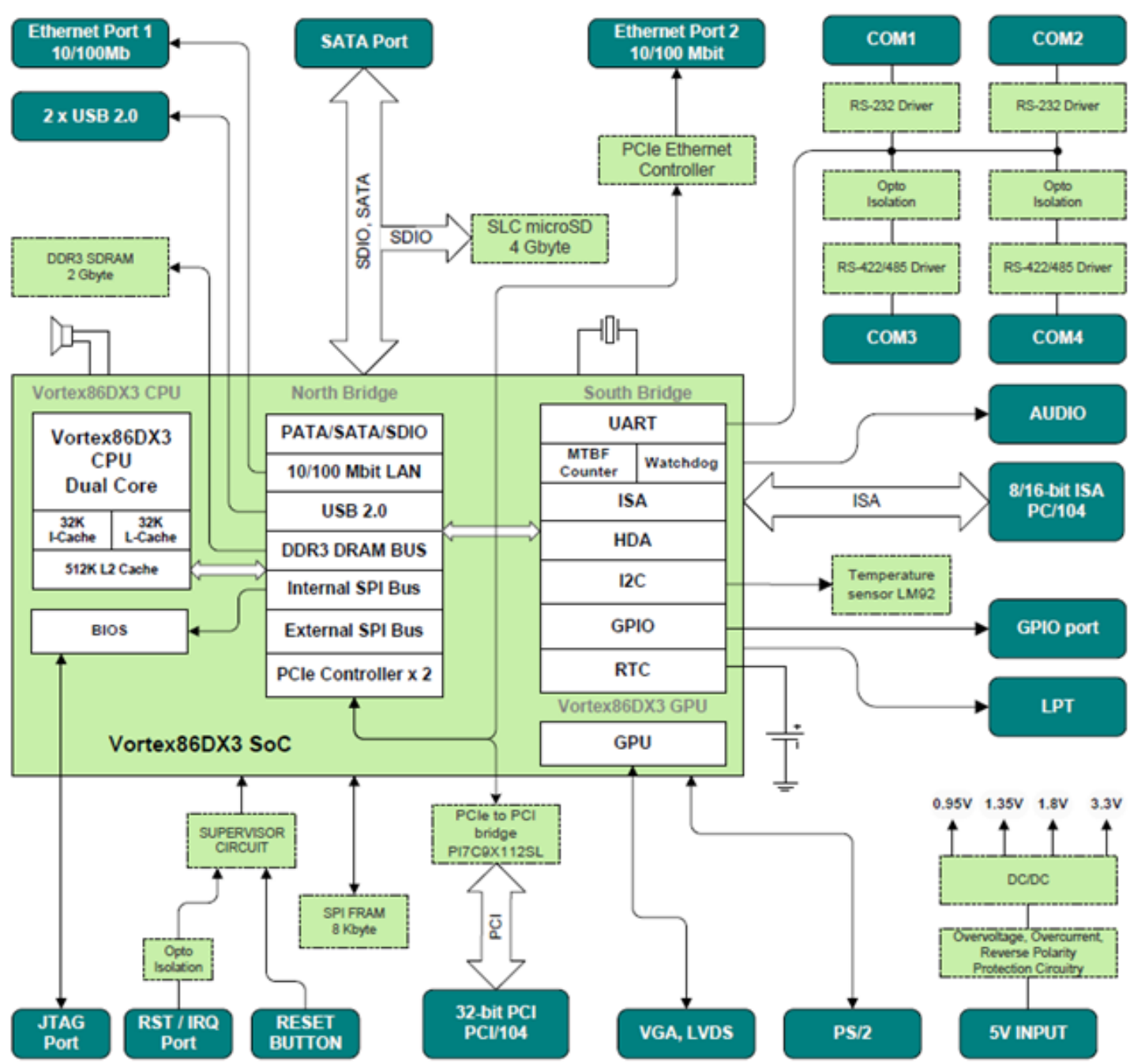
- 50 / 150 g;

OS compatibility

- Microsoft™ MS-DOS®6.22, FreeDOS;
- Linux 2.6, 3.2
- Windows Embedded Standard 7;

CPC314 PC/104 plus CPU Module

Layout



CPC314 PC/104 plus CPU Module

Ordering information

CPC314 Configuration

CPC314 \ Options

Configurations

CPC314-01

Vortex86DX3 CPU (800 MHz, Dual Core), RAM 2 GB, 4 GB SLC microSD, SATA, VGA, LVDS, Audio port, 2 x LAN10/100 Mb/sec, 2 x USB2.0, 2 x RS-232, 2 x RS-422/485, 8 x GPIO, PC/104 plus format

Delivery checklist

CPC314 delivery checklist contains:

1. CPC314 PC/104 plus CPU Module
2. Installation kit – 1 pcs
3. Packaging.

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Product specifications are subject to change without notice

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