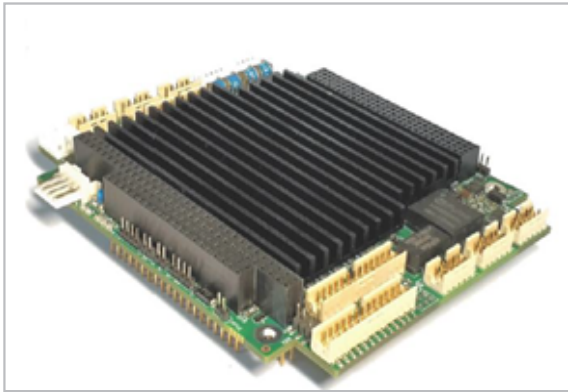


CPC316

PC/104 plus Vortex86DX3 CPU Module



Features

- CPU: Vortex86DX3™800 MHz, 2 cores;
- RAM: DDR3 SDRAM 2 GB (soldered onboard);
- Integrated storage: 8 GB NAND Flash;
- Power supply voltage from 4.5 to 5.5V;
- 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 μ s...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;

Overview

The CPC316 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.

Technical Specifications

CPU

- **CPU: Vortex86DX3™:**
- Clock frequency: 800 MHz;
- Physical cores: 2;
- 32 bit x86 core;
- 32 bit memory bus;
- 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: 533 MHz;

Non-volatile RAM

- 32 KB, SPI interface;
- Requires no battery power supply;

Flash Drive

- Connected to SATA interface;
- System sees the card as the Primary IDE master;
- 8 GB NAND Flash;
- Read / write rate - 100 / 80 MB/sec;
- Integrated wear and tear control system and ECC;
- Compact Flash slot;

LAN ports

- Port 10 / 100 Mb;
- Port 10 / 100 / 1000 Mb;
- Isolation of each port from the system: 500V;

USB (host) ports

- Support of USB 1.1, USB 2.0 (HS, FS, LS);
- Connection of up to 4 x devices;

Serial ports

- **COM1, COM2:** RS-232, exchange rate up to 115.2 Kb/sec, ESD protection 15kV (IEC1000-4-2);
- **COM3, COM4:** RS-422/485 isolated with lightning protection circuits, speed up to 115.2 Kb/sec, each port is isolated from the system: 500V, automatic (hardware) control of transmission direction;

Universal digital I/O port

- 48 CMOS/TTL lines, load up to 24 mA;
- Ability to change the functions (scheme) of the port within the system;

Console serial ports

- COM1 / COM2 / COM3 / COM4;

PC/104 (ISA)

- 16-bit ISA bus, bus frequency 8/16 MHz;

PCI/104 (PCI)

- 32-bit PCI bus, bus frequency 33 MHz;

Integrated lithium battery 3V

- CR2032, typical capacity 200 mA*h;

Real Time Clock

Watchdogs

- 2 x CPU-integrated watchdogs with actuation interval of 30.5 μ s...512 s;
- External, with a fixed actuation interval of 1.6 s

Integrated temperature sensor

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

Measurement of module's secondary supply voltages using 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;
- Protection against short circuit, overvoltage and reverse polarity when the power supply voltage is fed via an additional connector;

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);

Weight

- No more than 200g;

Resistance to multiple/single shocks

- 50 / 150 g;

Vibration resistance

- 10 g;

OS compatibility

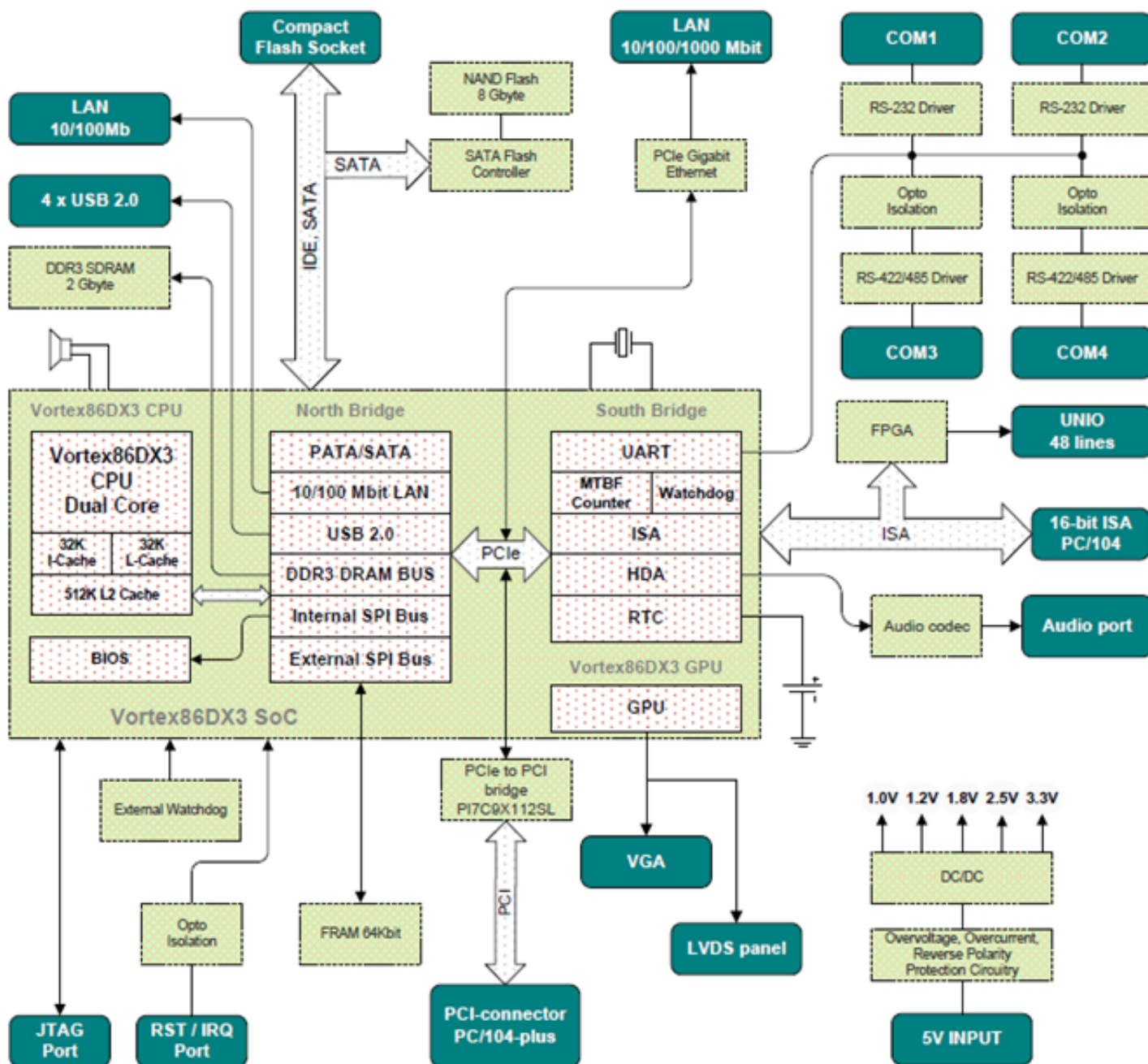
- Microsoft™ MS-DOS®6.22, FreeDOS;
- Linux 2.6, 3.2
- Windows Embedded Standard 7;

MTBF

- No less than 100,000 hours;

CPC316 PC/104 plus Vortex86DX3 CPU Module

Layout



CPC316

PC/104 plus Vortex86DX3 CPU Module

Ordering information

CPC316 Configuration

CPC316 \Options

Configurations

CPC316-01	Vortex86DX3 CPU (800 MHz Dual Core); 2 GB RAM; 8 GB flash-drive, Compact Flash; VGA; LVDS; Audio port; 2 x LAN, 2 x RS-232, 2 x RS-422/485, 4 x USB2.0; 48 x DIO; PC/104-plus format
CPC316-02	Vortex86DX3 CPU (800 MHz Dual Core); 2 GB RAM; 8 GB flash-drive, Compact Flash; VGA; 2 x LAN, 2 x RS-232, 2 x RS-422/485, 4 x USB2.0; 48 x DIO; PC/104 format

Conformal coating option. In this case, the order will include \COATED option

Delivery checklist

CPC316 delivery checklist contains:

1. CPC316 PC/104 plus Vortex86DX3 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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