

Features

- DM&P Vortex86DX (600/800 MHz) processor
- 256 MB DDR2 SDRAM
- Flash disk 1024 MB
- HDD connection, up to two devices
- Ethernet controller 10/100 Mb/s
- Two opto-isolated CAN 2.0b
- PC/104-Plus (32-bit PCI, 16-bit ISA)
- Four USB 2.0 ports
- Six COM ports
- Two I2C ports
- Eight discrete I/O lines
- 150G/10G – shock/vibration
- Industrial operating temperature range: –40°C to +85°C
- Protective coating (option)

Overview

Fastwel CPC307 is designed for applications requiring high-performance low-power industrial controller with CAN interface. Fastwel CPC307 conforms to PC/104-Plus specification and is compatible with a large number of peripheral and power supply modules delivered by a wide range of manufacturers.

Based on x86-compatible Vortex 86DX processor operating at 600 or 800 MHz, the module bears 256 MB soldered DDR2 memory and wide range of input/output interfaces. CPC307 allows system designers simple programming and provides portability of previously developed libraries for x86 architecture with Fastwel DOS™, Linux®, Windows® XP Embedded and QNX® support. Having two isolated CAN ports onboard along with a wide set of popular industrial interfaces, such as RS-232, RS-485, RS-422, USB, and Fast Ethernet, CPC307 offers integrated functionality which is usually achieved by using several products from different manufacturers.

For debugging purposes or for applications requiring graphical interface, CPC307 can operate together with Fastwel VIM301 graphics controller module providing VGA, LVDS, TFT, and SGD interfaces.

Technical Specifications

System

- CPU: DM&P Vortex86DX (600/800 MHz): 32-bit x86 kernel, 16-bit memory bus, L1 cache 32 KB, L2 cache 256 KB
- DDR2 SDRAM 256 MB, 333 MHz memory bus
- MTBF: 100000 hours
- Watchdog timer
- Real-time clock
- Redundancy option

Flash BIOS

- 256 KB, reserved (internal SPI Flash)
- 512 KB, parallel Flash (ISA)
- In-system modification

Storage

- Non-volatile FRAM 64 Kbit
- Flash-disk 1024 MB
- HDD connection: one primary channel, up to two devices connection (when ATA Flash Disk is disabled), Ultra-DMA 100 support
- Socket for connection of two micro SD cards (ATA Flash Disk not soldered)

Software support

- Fastwel DOS™ 6.22 (preinstalled)
- Windows® CE5.0
- Windows® XPE
- Linux® 2.6x
- QNX® 6.4x

Interfaces

- One Ethernet 10/100 Mb/s
- Four USB 2.0 ports
- Two opto-isolated CAN 2.0b (Philips SJA1000 controllers)
- PC/104 (ISA): 16 bit ISA bus, 8/16 MHz
- PCI/104 (PCI): 32 bit PCI bus; 33 MHz
- Serial ports:
COM1: RS232/RS485/RS422, without opto-isolation, 115.2 Kb/s;

- COM2: RS232/RS485/RS422, without opto-isolation, up to 115.2 Kb/s;
- COM3: RS232, full control, up to 115.2 Kb/s;
- COM4: RS232, full control, up to 115.2 Kb/s;
- COM5: RS422/RS485, opto-isolated, up to 3000 Kb/s;
- COM6: RS422/RS485, opto-isolated, up to 3000 Kb/s;
- RS422/RS485 interfaces with hardware flow control.
- 8 discrete I/O lines
- PS/2: keyboard and mouse port
- Universal parallel port with SPP, EPP and ECP support
- Two switches with state read option
- Two programmable LEDs
- Two I2C ports

Mechanical

- Dimensions: 90×96 mm (3.5"×3.8")
- Weight: 0.1 kg

Power requirements

- Power supply: 5 V ±5%, 0.7A (via PC/104-Plus interface)

Environmental conditions

- Operating temperature: –40°C to +85°C
- Storage temperature: –55°C to +90°C
- Humidity: 0% to 80% non-condensing
- Vibration: 10 g
- Single shock: 150 g
- Multiple shock: 50 g

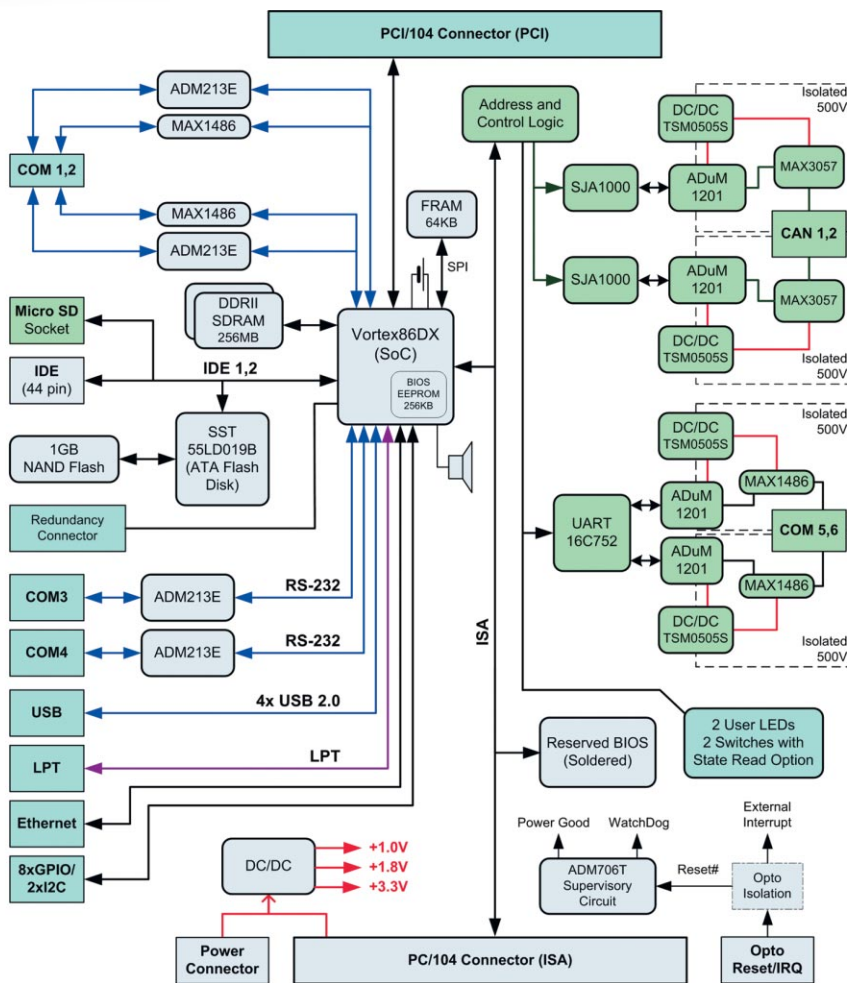
List of deliverables

- CPC307 module
- ACS00023 – adapter-cable IDC10-DB9 for connection of a console to COM-port
- CD with drivers and manual.

Warranty

- 3 years for parts and labor

Board Layout



Ordering Information

CPC307 Configuration

CPC307 - 01 \Options

Device Type

- CPC307-02 DDR2 SDRAM 256 MB, ATA Flash Disk (1024 MB soldered), PC104-Plus, LAN, GPIO, CAN1-2, COM1-6
- CPC307-03 DDR2 SDRAM 256 MB, ATA Flash Disk (1024 MB soldered), PC104-Plus, LAN, GPIO, COM1-4
- CPC307-04 DDR2 SDRAM 256 MB, microSD (2 sockets), PC104-Plus, LAN, GPIO, CAN1-2, COM1-6
- CPC307-05 DDR2 SDRAM 256 MB, ATA Flash Disk (1024 MB soldered), PC104-Plus, LAN, GPIO, CAN1-2, COM1-6, COATED, -50 +95

Options

\xxx Choose available options from the table

CPC307 Available Options

Coating	
\COATED	Protective coating
Operating System Presetting	
\FDOS	Fastwel DOS
\QNX	QNX 6.4x
\WCE	Windows CE 5.0
\LNX	Linux 2.6x
\XPE	Windows XP Embedded

Other configurations and options are available upon request.

Example

CPC307-02\COATED\XPE

DDR2 SDRAM 256 MB, ATA Flash Disk (1024 MB soldered), PC104-Plus, LAN, GPIO, CAN1-2, COM1-6
Protective coating
Windows XP Embedded

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