CPB902
3.5" Highly Integrated Low Power SBC

Features

- STPC Vega 200 MHz CPU onboard
- Up to 128 MB SDRAM onboard
- Two Fast Ethernet ports
- Six COM ports
- Two USB ports
- PC/104 expansion bus
- Low power consumption
- Operating temperature range from –40°C to +85°C

Overview

CPB902 is a sub-compact single board computer with full PC functionality. The board is equipped with STPC Vega CPU 200 MHz and 32/128 MB of SDRAM.

All components including CPU, SDRAM and 16 MB solid-state disk are soldered onboard thus providing superior shock/vibration resistance.

For disk storage demanding applications there is a CompactFlash socket for CF cards of up to 8 GB.

Two Fast Ethernet, six COM and two USB ports enable CPB902 to control various peripheral devices.

The board has very compact size (107 × 147 mm) and only 6 watt of power consumption, which makes it highly suitable for embedded and mobile designs.

The board can withstand shock up to 50g and vibration up to 5g in 3 dimensions with operating temperatures from –40°C to +85°C.

Technical Specifications

System

- STPC Vega 200 MHz CPU, 32-bit x86 PII core, 64-bit coprocessor, 64-bit memory bus
- 32/128 MB soldered DDR SDRAM system memory
- Two watchdog timers with LED indication
- Real time clock with Li battery
- System configuration settings stored in CMOS+SFRAM
- Saving essential user data in SFRAM in case of power failure
- MTBF: 200000 hours

BIOS

- Flash-based BIOS
- Reserved BIOS
- System parameters saving in emergency cases
- In-system modification

Graphics

- Video memory 4 MB
- Analog display support
- LCD (TFT or DSTN) panels support, resolution up to 1024×768
- DualApp and DualView modes support

Storage

- 16 MB Solid State Disk (up to 1GB upon OEM request) soldered onboard
- CompactFlash™ Type I/II socket on board
- One ATA/66 Interface
- Floppy disk interface

Software support

DOS; QNX® 6.3x; RTOS32; Windows®2000/CE5/XPe; Linux®

Interfaces

- Two Fast Ethernet ports 10/100 Mb/s
- Two USB 1.1 channels
- PC/104 header
- Six serial ports; COM1 – RS-232, 3 wires, COM2 – RS-232, complete; COM3-COM6 – RS-232/422/485; high speed NS16C550 compatible, 921 Kb/s; FIFO buffer for each channel 64 bytes
- Parallel port: SPP/ECP/EPP compatible; connector shared with FDD
- PS/2 keyboard and mouse interface
- LCD Display and Matrix keyboard ports
- Opto-isolated remote Reset/IRQ
- FBUS port; Fastwel-I/O modules support
- Two user LEDs

Mechanical

- Dimensions: 147 × 107 × 26 mm
- Weight: 0.220 kg

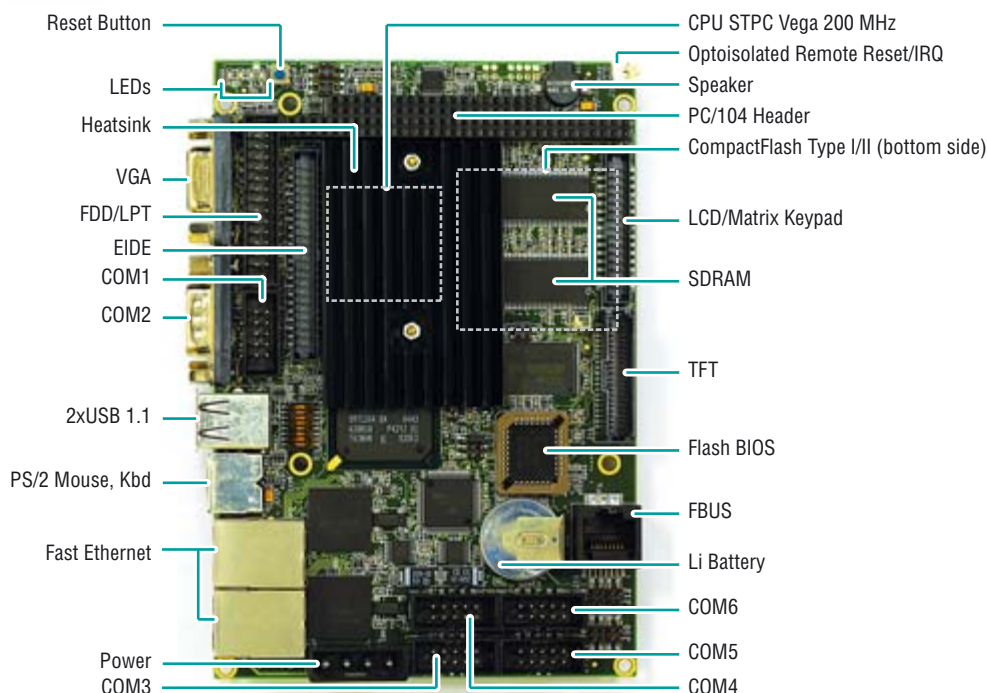### Power requirements

- 5 V @ 1.2 A

Environmental conditions

- Operating temperature: –40°C to +85°C
- Storage temperature: –55°C to +85°C
- Humidity: 0% to 95%, noncondensing
- Shock/Vibration: 50G/5G

Fastwel

Board Layout

Reset Button
LEDs
Heatsink
VGA
FDD/LPT
EIDE
COM1
COM2
2xUSB 1.1
PS/2 Mouse, Kbd
Fast Ethernet
Power
COM3

CPU STPC Vega 200 MHz
Optoisolated Remote Reset/IRQ
Speaker
PC/104 Header
CompactFlash Type I/II (bottom side)
LCD/Matrix Keypad
SDRAM
TFT
Flash BIOS
FBUS
Li Battery
COM6
COM5
COM4

Ordering Information

CPB902 Configuration

CPB902 - 01 - \Options

Device Type

CPB902   STPC Vega 200 MHz; SDRAM; FFD 16 MB; 2xFast Ethernet; 6xRS-232/422/485, –40…+85°C

Configurations

01   128 MB, SVGA
02   32 MB, no SVGA

Options

\xxx   Choose available options in the table

CPB902 Available Options

Compact Flash Module	
\CF128	128 MB Compact Flash, Industrial
\CF256	256 MB Compact Flash, Industrial
\CF512	512 MB Compact Flash, Industrial
\CF1024	1024 MB Compact Flash, Industrial
Coating	
\COATED	Protective Coating
Operating System Presetting	
\DOS	DOS
\XPE	Windows XP Embedded
\QNX	QNX
\WCE	Windows CE 5.0
\LNX	Linux 2.4.20
Accessories	
CC902	Mounting cage. Can be installed into a cabinet or on a DIN-rail. Allows installation of one PC/104 expansion module
PS902	DC-DC converter, 18-72 V to +5 V
ACS00011	FCD25F LPT connection cable, IDC26 – DB25
ACS0002	FC26-60 FDD connection cable, IDC26_IDC26
CDM01	FDD connection adapter
CVM01	VGA monitor or TFT/STN panel adapter module
CVM02	Sharp LQ104V1DG51 LCD panel connection module

Other configurations and options are available upon request.

Example

CPB902-01\CF512\COATED\WCE\CC902

STPC Vega 200 MHz; 128 MB SDRAM; FFD 16 MB; 2xFast Ethernet;
SVGA; 6xRS-232/422/485;
Industrial temperature range –40…+85°C
512 MB Compact Flash
Protective Coating
Windows CE presetting
Mounting cage.

Product specifications are subject to change without notice

Corporate Office

EN ISO 9001:2000
Zertifikat: 75.100.9545
TÜV Rheinland InterCert