PCM-VDX-2-512

PC/104 Single Board Computer with 1GHz Vortex86DX Processor

Features

- 1GHz Vortex86DX processor
- PC/104 Bus compliant 3.6 x 3.8 inches (90 x 96 mm)
- 512MB of soldered down SDRAM
- Optional 512MB on board SSD flash disk
- 1MB of battery-backed SRAM
- CompactFlash socket
- Full-featured I/O includes:
  - Two 10/100 Mbps Ethernet ports
  - Four USB 2.0 ports
  - Four serial RS-232/422/485 ports
  - ESD protection on LAN, USB, and serial ports
  - 16 Digital I/O lines with event sense
  - PATA, LPT, PS/2 KYBD and mouse controller
  - MiniPCI and PC/104 expansion connectors
  - WDT, RTC, status LEDs, and beeper
- Fanless: -40°C to +85°C operation
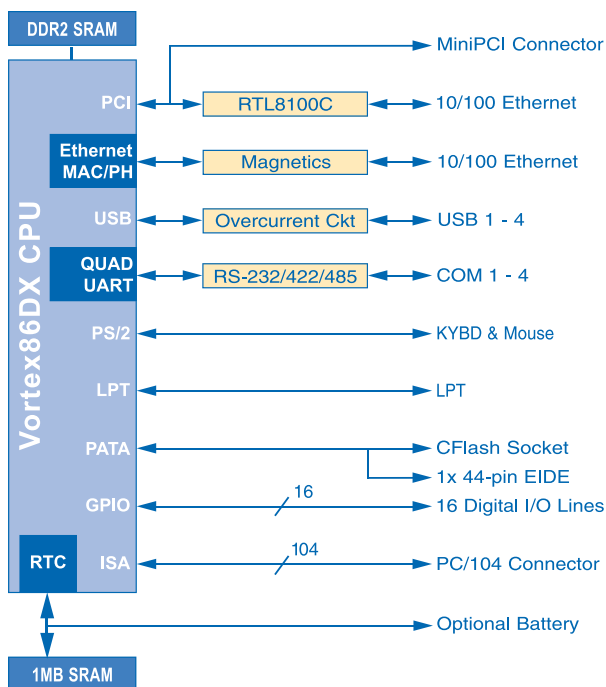- Runs Linux, DOS, and other x86-compatible operating systems

Product Description

WinSystems' PCM-VDX-2-512 is a 1GHz, fanless PC/104 single board computer based upon the ultra low power Vortex86DX processor with wired networking capability. This board requires about 6 Watts under full load while operating over an industrial temperature range of -40° to +85°C.

The PCM-VDX-2-512 has easy-to-use connectors to access the wide variety of on board I/O including Ethernet, USB, serial, and parallel I/O. Further it has PC/104 and MiniPCI card expansion as well. The board is well suited for headless configurations but will accept an optional video card.

The long-term availability of the PCM-VDX-2-512 makes it suitable for industrial applications such as instrumentation, medical, pipelines, Mil/COTS, security,utilities, communications, and transportation. It supports Linux, DOS, and other x86 operating systems. Drivers are available from the WinSystems' website.

Options include an off board battery, 512MB of soldered on board flash SSD, CompactFlash retention clip, and a MiniPCI video card. Contact a WinSystems' Applications Engineer for details and custom OEM configurations.

PCM-VDX-2-512 Block Diagram

PCM-VDX-2-512: Fanless PC/104 Single Board Computer

Technical Specifications

Processor
Vortex86DX @ 1GHz

Memory
256KB of L2 cache
512MB of soldered down DDR2 SDRAM
1MB soldered SRAM that can be battery backed

Display
Optional Volari XGI MiniPCI card

Network Interface
One 10/100 Mbps using the RTL8100C LAN*
One 10/100 Mbps using the Vortex86DX LAN*

Storage
One CompactFlash socket
One UDMA-100 IDE interface for disk drives
One optional 512MB flash SSD

On board I/O
Four USB 2.0/1.1 ports with overcurrent protection*
Four 16C550-compatible RS-232/422/485 serial channels
    with speeds up to 115.2kbps*
One PS/2 keyboard controller
One PS/2 mouse controller
16 lines of digital I/O with event sense
LPT interface with ECP/EPP support
Status LEDs for Link, Activity, and Speed of both Ethernet
    controllers plus two CPU activity LEDs
RTC with optional battery back up
Watchdog timer reset adjustable to 255 minutes
Piezo transducer for audio annunciation of BIOS beep tones

Expansion Bus
PC/104 with full 16-bit support
MiniPCI connector accepts type IIIB cards

Power
+5V @ 1.2A (typ.)

Software
AMI BIOS
Compatible with most x86 operating systems including
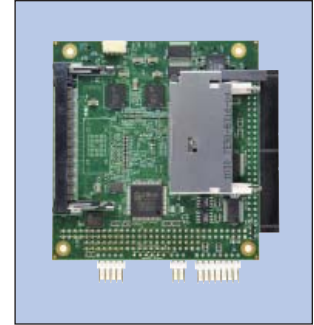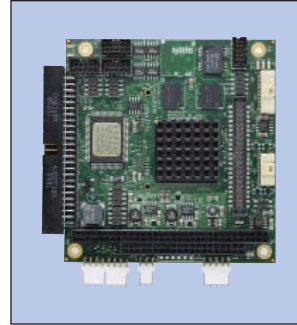   Linux and DOS

Environment
Operational from -40° to +85°C
RoHS compliant

Mechanical
Dimensions   3.6 x 3.8 inches (90 x 96 mm)
Weight   3.6 oz (102 gm)
PC Board thickness 0.078"

ESD suppressors on all data lines

Front and Back Picture of PCM-VDX-2-512

Ordering Information
(See website for complete ordering information and accessories.)

PCM-VDX-2-512	Fanless, 1GHz PC/104 SBC with 512MB memory
PCM-VDX-2-512-ST	Stack-thru PC/104 connector configuration

Video
MPCI-VGA-Z9S	MiniPCI video card and cable

Cables
CBL-174-G-1-1.5	Power cable, unterminated
CBL-225-G-1-0.333	PS/2 mouse cable
CBL-247-G-1-1.0	KYBD, LPT, COM1 and COM2 cable
CBL-266-G-2-0.75	HDD cable
CBL-DIO16-000-14	DIO cable, unterminated
CBL-DIO16-001-12	DIO cable with 2x 15 pins with Molex®Pico-Clasp™
CBL-DIO16-002-12	DIO cable with 2x 15 pins on 0.100 centers
CBL-ENET1-202-12	Ethernet cable with RJ45
CBL-ENET1-203-12	Ethernet cable with plug
CBL-SER1-202-12	Serial I/O cable
CBL-USB4-000-14	4x USB cable, unterminated
CBL-USB4-001-12	4x USB ports with Pico-Clasp
CBL-USB4-002-12	4x USB ports with two, 8-pin 2mm connectors
CBL-SET-373-G-2	Cable set for PCM-VDX-2
CBL-SET-373-G-MIN	Minimal cable set for PCM-VDX

Optional Battery
BAT-LTC-E-36-16-1	External 3.6V, 1650 mAH
BAT-LTC-E-36-27-1	External 3.6V, 2700 mAH

CompactFlash
CF-DC-A-xxG-I	1 - 16GB High Speed CF cards
CFLASH-G-xxx-I	128MB - 8GB CF cards

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