

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



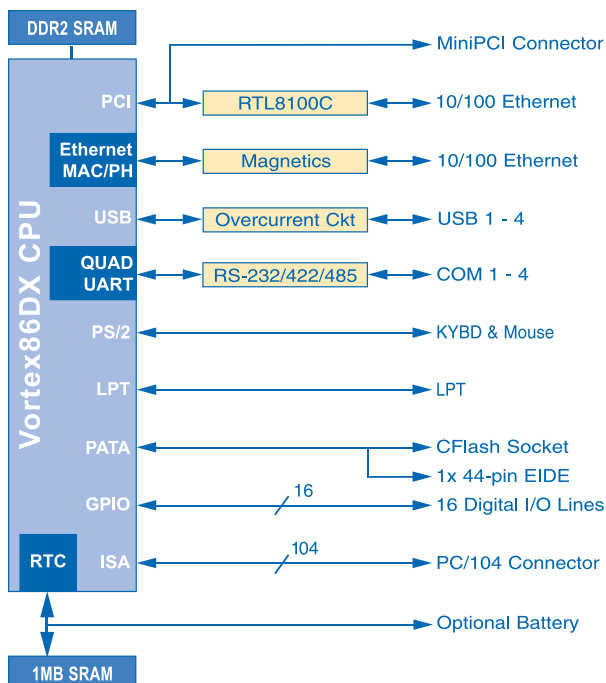
Product Description

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

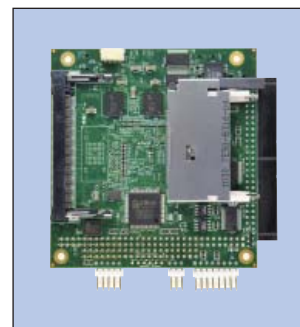
Mechanical

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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