Reference Manual

VL-ENCL-3

Development Enclosure for EBX, PC/104 and PC/104-*Plus* CPUs

Doc. Rev. 2/9/2000

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MENCL-3

Introduction

Description

This EBX compliant development stand can be enclosed for use as a proto box. The SBC (EBX, PC/104 or PC/104-*Plus* CPU installs at the top for easy access. The rugged box provides physical protection and portability for system components

FEATURES

- Low cost enclosure for proto / development use
- Full connector panel for easy accessibility
- Accommodates two PC104 boards on top of the SBC
- Provides full access to the top of the SBC
- Properly supports SBC for repeated insertion / removal of PC/104 cards (without excess board flex)
- Protects system components during development
- Provides system portability during development
- Improves appearance of system for demo situations

ACCOMMODATES

- SBC (EBX, PC/104, or PC/104-*Plus* CPU)
- Up to two PC/104 boards
- 3.5” hard drive
- 3.5” floppy drive
- ATX style power supply
- 5.25” CD-ROM drive (in optional cover)

Technical Specifications

Size:
9.5"W x 11"D x 8" H (with cover)

Connector Panel:
Accommodates VGA, KBD, mouse, 4x COM, 2x LPT, RJ45 (Ethernet), 2x USB, sound/mic jacks, reset switch, 2x activity LEDs, speaker, 50 pin cable exit slot

Expansion modules:
Room for two PC104 boards on the VSBC-6

Material:
Sturdy light gauge steel

Finish:
Black powder coat

Parts List

Packing List

The enclosure includes the following hardware.

METAL PARTS

- Enclosure base
- Power supply end plate
- Connector end plate
- EBX compliant SBC mounting plate
- Cover (standard)

SCREWS & HARDWARE

- 4-40 x 1/4" screw, black
  - (10) - End panel attachment (5 screws each)
  - (4) - SBC mounting plate attachment
  - (4) - Lid attachment
  - (6) - Connector attachment
- 4-40 x 3/8 thumb screw, black
  - (4) - Optional lid attachment
- 4-40 nuts, silver
  - (6) - Connector attachment
- Jack screws and nuts
  - (16) - D connector attachment
- 10mm M3 standoff
  - (8) - SBC mounting
- M3 nuts, silver
  - (8) - SBC standoffs
- 3 x 6mm screw, silver
  - (2) - Floppy drive attachment, top
  - (8) - SBC bolt-down
- 3 x 20mm screw, silver
  - (2) - Floppy drive attachment, bottom
- 6-32 x 1/4" screw, black
  - (4) - Power supply attachment
  - (2) - Hard drive attachment, top
- 6-32 x 7/8" screw
  - (2) - Hard drive attachment, bottom
- Rubber feet
  - (4) - Feet for unit

Accessories / Options

The following accessories and options for the VL-ENCL-3 are available from VersaLogic.

- PS200-ATX 200 Watt ATX style power supply
- VL-CBL-0801 Ethernet transition cable
- VL-CBL-0501 Dual USB cable set
- VL-DEV-006 Basic cable set for VSBC-6 SBC
- VL-ENCL-3CD Lid with space for CD-ROM drive
- VL-ENCL-3HS Handle set
- VL-FDD-144 Floppy drive (black bezel)
- VL-HDD-1000 3.5" hard drive, 1+ GB

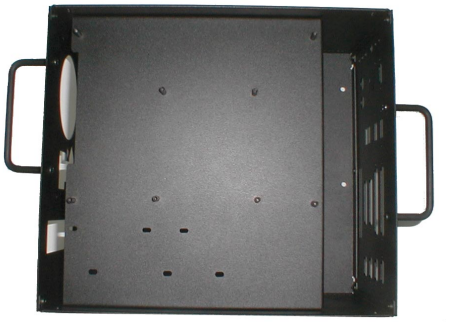
Enclosure Assembly

The empty ENCL-3 enclosure is shipped assembled in order to minimize cosmetic damage to the painted parts. The steps below should normally be used for the easiest assembly of the various system components into the enclosure.

- Remove the lid. It is held in place with 4 screws.
- Remove the connector end panel. It is held in place with 5 screws.
- Remove the hardware package. It is taped to the inside of the unit.
- Install the 4 rubber feet on the bottom of the unit (near each corner)
- Install one of the handles (optional) to the power supply end panel with the screws provided.
- Install an ATX power supply. Place the power supply inside the enclosure with the switch and fan positioned against the end panel. Use four 6/32 screws to attach the power supply to the end panel. The power supply is not attached to the standoffs on the bottom of the enclosure. The stand-offs are designed to support the weight of the power supply without any physical attachment.
- Install a floppy drive. Position the floppy drive next to the power supply with the face protruding through the cutout in the end panel. Secure it with two 3mm (silver) short screws from the top, and two 3mm long screws from the bottom (if desired).
- Install a hard drive. Place a hard drive next to the floppy drive. The end of the drive with the power and data (40-pin) connectors should be pointed to the inside of the enclosure. You do not what the data connector to be up against the end panel.. Secure the drive with two 6/32 short (black) screws from the top and two 6/32 long screws from the bottom.

- Install a second hard drive. Mounting holes for a second hard drive have been provided on the floor of the unit, between the power supply and connector panel. A second 3.5" hard drive may be mounted horizontally at this location if desired. Mounting screws have not been included for this drive (use the screws that are normally provided with the drive).
- Install connectors. Use the enclosed 4/40 screws and nuts to mount the desired connectors on the connector end plate. This is easiest to do before the end plate is bolted to the enclosure. See the enclosed chart for compatible connector and cable information.
- Install one of the optional handles (if purchased) to the connector panel with the screws provided.
- Install the Single Board Computer (SBC) using eight 4/40 screws (black). The power supply connector on this board should be oriented closest to the connector end panel. It is essential that all eight screws are used to attach this board to the enclosure. Using fewer screws can allow excessive flex of the circuit board during the installation or removal of PC/104 modules and result in permanent damage to the SBC.
- Attach the data and power cables to the floppy and hard drives. Attach the other end of these data cables to the SBC.
- Connect the power supply to the SBC.
- Screw the connector end panel in place using 5 screws.
- Connect the I/O cables to the SBC.
- Secure the lid (if desired) with either four round head screws (as shipped) or four thumb screws. Note that the air intake vents on the lid should be on the opposite end of the enclosure from the vents in the base to insure proper air flow to the CPU. See the attached photos for clarification.

Side view



Top view

Rear view

Connector Panel

The connector panel has a variety of cutouts which can be used as desired. The typical usage and corresponding cable number for these cutouts are shown below. This list addresses the cutouts in vertical rows, starting in the upper left position of the panel.

Connector Type	Typical Use	VersaLogic Cable Part #	Notes
DB9	COM1	VL-CBL-2001*	Dual COM port cable
DB9	COM2	VL-CBL-2001*	
DB9	COM3	VL-CBL-2001*	Dual COM port cable
DB9	COM4	VL-CBL-2001*	
DB37	User Option	—	Provided for optional user connector
DB37	User Option	—	Provided for optional user connector
DB25	LPT1	VL-CBL-2601*	
DB25	User Option	—	Provided for optional user connector
(slot)	Cable slot	—	Exit for cables up to 50 lines wide
USB	USB1	VL-CBL-0501	(dual USB connector set)
USB	USB2	VL-CBL-0501	
Ethernet	Ethernet	VL-CBL-0801	Cable can also connect directly to the SBC
DB15	VGA	VL-CBL-1601*	
Speaker		VL-CBL-1602*	
PS2	Keyboard	VL-CBL-1602*	
PS2	Mouse	VL-CBL-1602*	
LED	Programmable LED	VL-CBL-1602*	
LED	Disk activity LED	VL-CBL-1602*	
Switch	Reset switch	VL-CBL-1602*	
Mini-jack	User Option		Sound in / out
Mini-jack	User Option		Sound in / out
Mini-jack	User Option		Sound in / out

* Included in the DEV-006 cable kit.

Notice: