Pentium-class EBX Single Board Computer with ethernet, video and industrial I/O.

New Tillamook versions!

Features

- **EBX compliant. 5.75" x 8.00" footprint**

- **Full Socket 7 CPU support**

- **8 to 256 MB system RAM**

- **256-512 KB level 2 cache**

- **32-pin DiskOnChip socket**

- **10BaseT Ethernet interface**

- **PCI video / flat panel support**

- **PC/104-*Plus* expansion site**

- **Dual PCI based IDE controllers**

- **Dual USB interfaces**

- **4 COM + 1 LPT port**
  - Two RS-232/422/485 selectable ports

- **Keyboard and PS/2 mouse port**

- **Industrial I/O**
  - Analog input option (eight 12-bit channels)
  - 16 channel Opto 22 compatible
  - Three spare 16-bit counter/timers

- **Watchdog timer**

- **Vcc sensing reset circuit**

- **Flash BIOS with OEM enhancements**

- **Latching I/O connectors**

- **Customizing available**

- **Extended temperature versions**
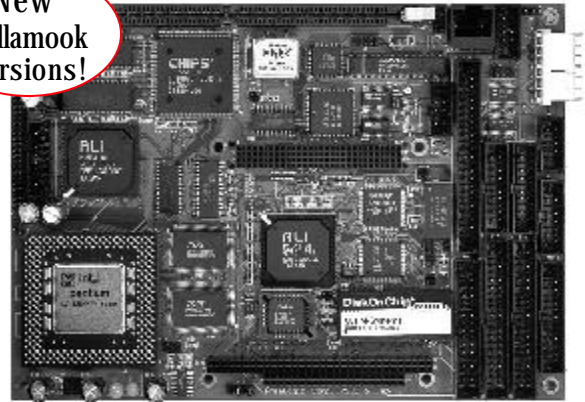
Description

The VSBC-6 is a feature-packed single board computer designed specifically for OEM control projects requiring fast processing, industrial I/O, flexible memory options, and designed-in reliability and longevity (product lifespan).

Full EBX compliance allows easy migration to future boards or alternate sources. Enclosure or mounting changes are not required when migrating between EBX compatible products.

The VSBC-6 is fully compatible with a wide selection of popular operating systems including most Windows and Real Time Operating Systems. Please call for more information.

Up to 256 MB of low power system RAM is supported in a high-reliability latching DIMM socket. Application programs and files can be stored in a bootable DiskOnChip Flash device. A battery-backed SRAM can be used in lieu of the DiskOnChip.

The VSBC-6 features high reliability design and construction including latching I/O connectors, watchdog timer, voltage sensing reset circuit, industrial long-life battery, and self-resetting fuse on the 5V supply to the keyboard, mouse, USB and Opto 22 I/O ports.

This exceptional SBC was designed from the ground up for OEM applications with longevity and reliability as the focus. Each board is subjected to burn-in and complete functional testing and backed by a limited two-year warranty. It is fully supported by the VersaLogic design team. Both hardware and software (BIOS) customization are available in 100 unit quantities.

VERSALOGIC
CORPORATION

Ordering Information

VSBC-6x**p** .SBC without analog inputs
VSBC-6x**r** .SBC with analog inputs

x = Processor type. Specify one of the following:
c – 233 MHz Intel Pentium
s – 266 MHz Intel Tillamook low power fanless
t – 266 MHz Intel Tillamook extended temperature

Note: Processor options **b** *through* **h** *may not be appropriate for new designs, depending on required product life span. For more information, see the roadmap at* www.versalogic.com/support/rdmp/rdmp.asp

Accessories
VL-CBL-0501 . . . . .Dual USB transition cable
VL-CFA-1c . . . . .Type I/II CompactFlash adapter
VL-DEV-006 .Development cable kit
VL-DOC-xxx . . . . xxx MB DiskOnChip Flash module
VL-ENCL-3 (VersaBox) . . . . Development enclosure
VL-FDD-144 . . . . Floppy drive (black face)
VL-HDD-1000 . . . . 3.5" IDE hard disk drive
VL-HDW-104 . . . . SBC mounting kit
VL-HDW-201 . . . . SBC & PC/104 extractor tool
VL-LATCH-06 . . . . Connector latch set
VL-MM3S-xxx . . . . .16–256 MB SDRAM module
VL-PS200-ATX . . . . .Development power supply

Specifications

Specifications are typical at 25° C with 5.0V supply unless otherwise noted.

Board Size:
5.75" x 8.00" x 1.75"; EBX Compliant

CPU Height:
1.25" with fan, 1.15" with heatsink

Storage Temperature:
– 40° C to +85° C

Operating Temperature: (free air, no airflow)
Standard versions: 0° C to +60° C
Extended temperature version: – 20° C to +85° C
See www.versalogic.com/products/ds.asp?pn=vsbc-6 for details.

Bus Speed:

CPU External:	66 MHz
PCI, PC/104-*Plus*:	33 MHz
PC/104:	8 MHz

Humidity:
Less than 95%, noncondensing

Power Requirements: (with 32 MB RAM, keyboard, mouse, running Win95 with Ethernet)
+5V ±5% @ 3.9A typ. 19.5W (VSBC-6c)
+5V ±5% @ 2.3A typ. 11.4W (VSBC-6s)
+5V ±5% @ 2.4A typ. 11.9W (VSBC-6t)
3.3V or ±12V required by some expansion modules

System Reset:
Vcc sensing, resets below 4.70V typ.
Watchdog timeout

DRAM Interface:
One 168-pin DIMM socket, 8 to 256 MB EDO or 3.3V SDRAM (66 MHz or PC-100). (Rev 4 and later PCBs only)

Flash / BBSRAM Interface:
One 32-pin JEDEC DIP socket. Accepts battery-backed static RAM chip or M-Systems DiskOnChip. Chip accessed in 64K blocks.

Video Interface:
Based on C&T 65550 chip. 2 MB VRAM standard. Resolutions to 1280x1024. Flat panel display interface.

IDE Interface:
Two channels, standard 40-pin IDE. Supports up to four IDE devices. Designed to support newer high speed IDE Type 4 and Ultra DMA drives.

Floppy Disk Interface:
One 34-pin connector, supports two floppy drives

Ethernet Interface:
10BaseT based on SMSC LAN91C96 chip. On-board RJ-45 Ethernet connector. Optional AUI interface

Analog Input:
8-channel, 12-bit, single-ended, 6 microsecond, input range: ±5, ±10, 0 to +5V, 0 to +10V, channel independent

COM 1-2 Interface:
RS-232, 16C550 compatible, 115K baud max

COM 3-4 Interface:
RS-232/422/485, 16C550 compatible, 460K baud max

LPT Interface:
Bi-directional/EPP/ECP compatible

Opto 22 / Digital Interface:
16 channel, full compliance, ±24 ma outputs

BIOS:
General Software embedded BIOS with OEM enhancements

Compatibility:
PC/104 – Full compliance
PC/104-*Plus* – Full compliance, 3.3V or 5V modules

Specifications are subject to change without notice. Pentium is an Intel Corporation trademark. PC/104 is a trademark of the PC/104 Consortium. DiskOnChip is a trademark of M-Systems.