SBC

Note: This product may not be appropriate for new designs, depending on product life span requirements. For more information see www.versalogic.com/support/rdmp/rdmp.asp.

VSBC-7

Pentium-class Single Board Computer

Up to 550 MHz Pentium-class EBX SBC with 10/100 Ethernet, AGP video, sound and industrial I/O.

Features

- **EBX compliant. 5.75" x 8.00" footprint**
- **Super Socket 7 Processor**
  - 100 MHz Front Side Bus
  - AMD K6-2, K6-2E+, and K6-IIIE+
  - Intel MMX
- **Aladdin V chipset**
- **168-pin DIMM SDRAM to 256 MB**
- **512 KB level 2 cache**
- **IDE CompactFlash (Type I & II) option**
- **10/100 Ethernet interface**
- **AGP video / flat panel support**
  - C&T (Asiliant Technologies) 69030 chip
- **PCI-based sound**
- **PC/104-*Plus* expansion site**
- **Dual PCI based IDE controllers**
- **Dual USB interfaces**
- **4 COM + 1 LPT port**
- **AT peripherals and I/O including keyboard and PS/2 mouse port**
- **Industrial I/O**
  - Analog input option
  - 16 channel Opto 22 compatible
  - Three spare 16-bit counter/timers
  - Two RS-232/422/485 selectable ports
- **Watchdog timer**
- **3 extra 8254-style timer/counters**
- **Vcc sensing reset circuit**
- **Flash BIOS with OEM enhancements**
- **Latching I/O connectors**
- **CPU temperature sensor**
- **Customizing available**
- **UL and CE compliant**
- **Low power fanless version**

VERSALOGIC CORPORATION

Description

This feature-rich single board computer is designed specifically for OEM control projects requiring fast processing, industrial I/O, flexible memory options, designed-in reliability and long product lifespan / availability.

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-7 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 PC100 compatible SDRAM is supported in a high-reliability latching DIMM socket. Application programs and files can be stored in an optional bootable Type I / II CompactFlash device. The CompactFlash socket also accepts IBM Microdrive modules with current capacities up to 1 GB (see www.ibm.com/storage/microdrive). To learn more about CompactFlash, see www.compactflash.org.

The VSBC-7 features high reliability design and construction including latching I/O connectors, watchdog timer, long-life battery, and voltage sensing reset circuit. It also features spread spectrum clock generation technology for lower EMI and self-resetting fuse on the 5V supply to the keyboard, mouse, USB and Opto 22 I/O ports. An onboard programmable CPU temperature sensor is included for use in difficult thermal situations. The sensor output can be used to turn on additional fans, create local or remote warnings, or take other action through software triggers.

3888 Stewart Road, Eugene, OR 97402 • (541) 485-8575 • Fax (541) 485-5712 • info@versalogic.com • www.versalogic.com

VSBC-7

Pentium / K6 Single Board Computer

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.

Ordering Information

VSBC-7x**p** . . . . . SBC without analog inputs
VSBC-7x**r** . . . . . SBC with analog inputs

x = Processor type. Specify one of the following:

c – 233 MHz Intel Pentium
g – 400 MHz AMD K6-2
k – 550 MHz AMD K6-IIIE+
n – 350 MHz AMD K6-2E+ AMZ low power fanless

Accessories

VL-CBL-0501 . . . . . Dual USB transition cable
VL-CFA-1a . . . . . CompactFlash adapter
VL-CFM-xxx . . . . . xxMB CompactFlash module
VL-DEV-007 . . . . . Development cable kit
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 . . . . . 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:
0° to +60° C free air, no airflow

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

Humidity:
Less than 95%, noncondensing

Power Requirements: (with 32 MB PC100 SDRAM, keyboard, mouse, two HDDs and a FDD, running Win98 with Ethernet.)
+5V ±5% @ 4.7A typ. 23.5W (VSBC-7cx)
+5V ±5% @ 5.8A typ. 29.0W (VSBC-7gx)
+5V ±5% @ 5.8A typ. 29.0W (VSBC-7kx)
+5V ±5% @ 3.1A typ. 15.5W (VSBC-7cx)
5V only operation. 3.3V or ±12V required by some expansion modules

DRAM Interface:
One 168-pin DIMM socket, 256 MB, EDO (60 ns) or 3.3V SDRAM (PC100)

CompactFlash Interface Option:
IDE-based socket. Compatible with Type I and II cards (Flash modules or Microdrives). Uses 2mm IDE connector

Video Interface:
AGP standard. Based on C&T (Asiliant) 69030 chip (4 MB SDRAM). Resolutions to 1600x1200. 3.3V and 5V flat panel display support

IDE Interface:
Two channels, one standard 40-pin 0.1" and one 44-pin 2mm. Supports up to four IDE devices. Supports high speed IDE Type 4 and Ultra DMA drives

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

Ethernet Interface:
10/100BaseT based on AM79C973 chip. On-board RJ-45 Ethernet connector

Audio Interface:
16-bit Sound Blaster Pro compatible. PCI-based. Non-amplified Line Out and Line In supported

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 including customizable splash screen

Bus Speed:

CPU External:	100 MHz
PCI, PC/104-*Plus*:	33 MHz
PC/104:	8 MHz

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

VERSALOGIC CORPORATION

3888 Stewart Road, Eugene, OR 97402 • (541) 485-8575 • Fax (541) 485-5712 • info@versalogic.com • www.versalogic.com