Zykronix
INCORPORATED

AMD 5X86 processors up to 133 MHz

256K L2 asynchronous cache

On-board PCI Flat Panel VGA controller

On-board Pen/Touch controller (optional)

Four serial ports (16550)

Two parallel ports (IEEE 1284)

Support for Windows CE, 95, NT

PCI IDE supports up to 2 Enhanced IDE drives

Floppy controller supporting 2.8 MB floppy drives

PCI and ISA mezzanine connectors for expansion

Less than 4 watts power consumption

-25° to +70° C operating temperature range

Two year warranty

Monster

VI

The Little Monster VI (LM VI) is a high-performance, AMD 5X86 Processor-based Single Board Computer in a very small, and versatile form factor.

The Zykronix 32-bit PCI and 16-bit ISA mezzanine Buses allow the LM VI to drive up to four PCI and eight ISA mezzanine peripheral boards.

The LM VI has an impressive array of on-board functions including Flat Panel VGA controller, Pen or Touch screen controller, Enhanced IDE, four serial ports and two parallel ports. The LM VI is fully PC software compatible.

Main Features:

AMD 5X86 processor up to 133 MHz

The Little Monster VI (LM VI) is built with a 32-bit, low-voltage AMD 5x86 CPU with power management features.

Memory

16 Mbytes of EDO DRAM is included on the LM VI. For expansion, the LM VI supports 72-pin SO-DIMM DRAM modules for increased ruggedness. Extended Data Out (EDO) DRAM is used for high performance. Total capacity is 96 Mbytes DRAMS.

Cache Memory

LM VI has 256KB of Level 2(L2) asynchronous cache memory.

On-Board Peripherals

The LM VI contains many standard on-board peripherals making it a very powerful single board computer. In addition to the standard keyboard, four serial (16550) ports and two IEEE-1284 parallel ports, it also contains an enhanced IDE controller, a floppy controller, flat panel Super VGA controller and Pen & Touch screen controller. A watchdog timer for critical applications is also included.

Serial I/O

The LM VI supports four asynchronous serial ports. All four serial ports are compatible with the 16550 UART.

Parallel Port
The LM VI provides two bi-directional EPP and ECP compatible parallel ports that are IEEE-1284 compliant. These ports can be used for printer interfacing, keypad interfacing, or general-purpose digital I/O.

Enhanced IDE Interface
The on board PCI Enhanced IDE controller supports two disk drive.

Floppy Interface
An on-board floppy disk controller provides support for any 3.5” or 5.25” floppy drives.

Keyboard
The LMVI supports any standard AT/PS/2 style keyboard.

Software
The LMVI comes standard with SystemSoft BIOS. The BIOS is user configurable to allow Booting from a floppy disk, a hard drive or a PCMCIA device. The LM VI supports popular PC operating systems such as Windows 95 and Windows CE.

Advanced Flat Panel VGA controller
Chips & Technologies 69000 Flat Panel and CRT controller supports displays up to 1280 x 1024 resolution.

Pen & Touch Screen Controller
The advanced resistive Pen & Touch screen controller supports over 1000 touch points per axis.

Specification:

Processing

AMD 5X86 processor

133 MHz processing power
256K asynchronous Level 2 cache
3.3V core operation
5V PCI Interface

16 or 32 Mbytes expandable to 128 Mbytes on board EDO DRAM

32 bit wide DRAM interface
72-pin industry standard memory expansion connector

Stackable & Self-configuring PCI

Up to 3 PCI bus masters
Full DMA and IRQ support

Stackable 16 bit ISA

Industry Standard Architecture (ISA) Bus Interface
Full DMA and IRQ support
Three 16-bit counter/timers

Flash BIOS with protection

Housed in 256Kbytes Flash chip
Holds BIOS, POST, PCIBIOS, Plug & Play, video BIOS
Upgradable and/or customizable
Extension for Video or Keyboard-less operation

Real Time Clock

Battery backup
Battery life of 2 years - removable standard battery

Watchdog

Programmable as OFF, or in 1.5 second steps
Power supply voltage monitoring

I/O

PCI IDE controller

Supports up to two enhanced IDE drives
Up to 28 Mbytes/Sec. transfer in DMA mode
Up to 16.7 Mbytes/Sec. transfer in PIO
Fully compliant with ATA-2
PCI Bus Mastering
Optionally configurable for two 16 bits of digital I/O

Super I/O Systems

Two/Four RS-232 serial ports, full modem control
- Fully compatible with 16550A with FIFO
- One port may be Infrared Data compatible

One/Two bi-directional parallel ports useful for digital I/O or a printer
- DMA capable
- EPP capable
- ECP (IEEE 1284 level 2) compliant

Floppy Disk Controller
- DMA control
- Support for 3.5” and 5.25” drives

Boot Options

Boots from;
- Floppy Drive
- Hard Drive
- PCMCIA ATA devices
- Flashdisk

Flash Disk

4 - 20 Mbytes on-board Flash Disk (optional)

IDE/ATA Flash Disk with SanDisk controller on-board
Write protection jumper
Bootable, supports operating system and application programs

Video

Advance Flat Panel Controller (Chips & Technologies 69000 PCI controller)

Simultaneous Flat panel and CRT support
2MBytes video memory
Windows Graphics Acceleration
64 bit graphics engine
Transparent BitBLT
Flat Panels up to 1280 x 1024 resolution
Up to 36 bit Flat panels are supported
Power sequencing controls for panel

Pen & Touch Screen Controller

Advance Resistive Pen/Touch controller (optional)

Fully integrated pen input processor
10 bit A/D for high resolution (>1000 points per axis)
Position acquisition speeds from 50 to 400 coordinate pairs per second
Microsoft© Mouse protocol implemented in hardware
Tap, double-tap, and drag features in Mouse mode

Operating Environment

Temperature & Humidity

-25 to +70 °C operating temperature range
-40 to +80 °C non-operating temperature range
8 to 85 % Relative Humidity range
26 °C maximum wet bulb temperature
20 °C maximum rate of change of temperature per hour
(Maximum rate of change of temperature must be less than that which causes condensation)

Shock & Vibration

3G Vibration from 50 Hz to 1 kHz
100G Shock

Zykronix, Inc.
357 Inverness Drive South, Englewood, Colorado 80112
Tel (303) 799-4944 Fax (303) 799-4978
www.Zykronix.com

Power

Advance Power Management

Power consumption less than 5 watts
+5.0 ±5% volt operation
System Management Interrupts for power control
SMB bus for power system
Polarity protection
Over-voltage protection

Board Dimensions

PCB Dimension 3.935” X 7” or 100mm X 178mm

Reliability & MTBF

Highly reliable construction and low cost

>40,000 hours (MIL-HDBK-217F)
8-layer PCB construction with full power and ground planes

Accessories

Dual PCI PCMCIA slice

Supports CardBus
Compliant with PCMCIA 2.1
Dual or Single slot
ATA disk operation

Dual USB Interface slice

Programmable power source
Co-resident with legacy devices
Up to 12Mbps bandwidth

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Ordering Information

The LM VI with 133 MHz AMD 5X86 processor, 256K cache,
16Mbytes EDO DRAM, Two serial ports, VGA controller,
Touch screen controller and no Flashdisk would be ordered as:
LM VI-P3M1V2S1T2F1B1

Choose one option from each category:

CPU options:

P1	100 MHz AMD 5X86 processor
P2	120 MHz AMD 5X86 processor
P3	133 MHz AMD 5X86 processor

Memory options:

M1	16 Mbytes EDO DRAM
M2	32 Mbytes EDO DRAM

Video options:

V1	No VGA on board
V2	C&T 65550 controller with 2 MB DRAM

Serial port options:

S1	2 serial ports
S2	4 serial ports

Pen/Touch options:

T1	No Pen/Touch controller
T2	Pen/Touch screen controller on board

Flash disk option:

F1	No Flashdisk on board
F2	2 Mbytes Bootable Flashdisk
F3	4 Mbytes Bootable Flashdisk
F4	10 Mbytes Bootable Flashdisk
F5	20 Mbytes Bootable Flashdisk

BIOS options:

B1	Normal SystemSoft BIOS
B2	Windows CE BIOS

Note: *Contact Zykronix regarding custom configurations and special order options*.

Warranty

Two years with an optional 5-year extension.
Call Zykronix for full warranty information

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