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Bobcat

PC/104-*Plus* Single Board Computer

- Low power AMD Élan SC520
- 64 MB SDRAM
- PC/104-*Plus* form factor
- Extended temperature version
- DiskOnChip socket
- Fanless operation

Highlights

AMD Élan SC520 Processor
133 MHz 486/586 class CPU.

PC/104-*Plus* Form Factor
Small footprint. Multi-vendor support.

Network Support
10/100 Ethernet provides fast network access and boot ROM support.

Integrated I/O
Four COM ports (two RS-232, two RS-422/485).

DiskOnChip Socket
Removable non-volatile media has no moving parts and is bootable.

System Resets
VCC sensing reset circuit and Watchdog timer.

Multiple Interface
Floppy, IDE, PC/104 and PC/104-*Plus* expansion interfaces.

Fanless Operation
No moving parts required for CPU cooling.

Customizing Available
Can be engineered to fit specific application needs.

Overview

The Bobcat single board computer is designed for projects requiring low cost, compact size, high reliability, and long product lifespan / availability. It can be used alone as an Ethernet node processor card or with a plug-in PC/104 video module in applications requiring a video display.

Like all VersaLogic products, this small and efficient SBC is designed to support OEM applications where high reliability and long-term availability are required. From application design-in to 5+ years production life, its quality and longevity provide a cost-effective, long-term solution. Customization is available on as few as 100 pieces. The Bobcat is manufactured and tested to the highest quality standards and is backed by a two year limited warranty.

Details

The board includes 64 MB of low-power system SDRAM which is soldered in place to increase reliability in hostile environments. It also supports bootable DiskOnChip Flash chips to allow program and data file storage without mechanical disk drives.

The high-reliability features of the Bobcat include a watchdog timer, voltage sensing reset circuit, industrial long-life battery, and self-resetting fuse on the 5V supply to the keyboard and mouse.

This exceptional processor card was designed from the ground up for OEM applications with longevity and reliability as the focus. It is fully supported by the VersaLogic application team. Both hardware and software (BIOS) customization are available in 100 unit quantities. Each board is subjected to Environmental Stress Screening and complete functional testing.

The Bobcat is compatible with a wide selection of popular operating systems including most Windows and Real Time OSs. Please contact VersaLogic for more information.

Ordering Information

EPM-CPU-3p...*AMD Élan SC520*
EPM-CPU-3r ....*AMD Élan SC520, Pass-through Connectors*
EPM-CPU-3s.....*AMD Élan SC520, Pass-through Connectors, Extended Temp.*

*Other configurations available by special order

Accessories

VL-CBL-0802* .... *2 mm 8-pin RJ45 cable*
VL-CBL-1008*... *Cable adapter*
VL-CBL-1501* .... *2 mm 15-pin floppy cable*
VL-CBR-4404*....................................*2 mm 44-pin cable (RoHS)*
VL-CBR-4405*....................................*2 mm to 0.1" IDE adapter (RoHS)*
VL-CBL-5008* .... *50-pin breakout cable*
VL-CDD-IDE1 .... *CD-RW, DVD ROM*
VL-CFA-1D ....*Type I/II CompactFlash adapter*
VL-CKT-BOB1 ....*Development cable kit*
VL-DOC-xxx ....*DiskOnChip Flash module*
VL-ENCL-5 ....*Development enclosure*
VL-EPM-VID-3..*PC/104-Plus SVGA module*
VL-HDW-101.......................................*Standoff package, metric thread*
VL-PS200-ATX .... *Development power supply*

*Included in CKT-BOB1 cable kit

Specifications

General	Processor	AMD Élan SC520
	CPU Speed	133 MHz (EPM-CPU-3p,r) 100 MHz (EPM-CPU-3s)
	Chipset	Integrated
	Power Requirements	+5.0V ± 5% @ .96A (4.8W) typ. (EPM-CPU-3p,r) +5.0V ± 5% @ .86A (4.3W) typ. (EPM-CPU-3s)
	System Reset and Hardware Monitors	Watchdog timeout. VCC sensing, resets below 4.7V typ.
	Compatibility	PC/104 – Refer to reference manual. PC/104-*Plus* – Full compliance, 3.3V or 5V modules, PCI 2.2 compliant.
Mechanical	Board Size	3.55" x 3.775" (90 mm x 96 mm)
	Storage Temperature	-40° to +85°C
	Operating Temperature	0° to +50°C free air, no airflow (EPM-CPU-3p,r) 0° to +60°C 100 FPM airflow (EPM-CPU-3p,r) -40° to +75°C free air, no airflow (EPM-CPU-3s) -40° to +85°C 100 FPM airflow (EPM-CPU-3s)
	Thermal Shock	5°C/min over operating temperature.
	Vibration, Sinusoidal Sweep	2g constant acceleration from 5 to 500Hz, 20 minutes per axis, MIL-STD-202G, Method 204, Modified Condition A.
	Vibration, Random	.02g^2/Hz (5.35g rms) 15 minutes per axis, MIL-STD-202G, Method 214A, Condition A.
	Mechanical Shock	30g half-sine, 11 ms duration per axis, MIL-STD-202G, Method 213B, Condition J.
	Humidity	Less than 95%, noncondensing.
Memory	System RAM	64 MB SDRAM. Soldered on.
	Flash Interface	One 32-pin JEDEC DIP socket. Accepts battery-backed static RAM chip or M-Systems DiskOnChip. SRAM accessed in 64K blocks.
Network Interface	Ethernet*	Autodetect 10BaseT/100BaseTX port. Shrouded header.
	Network Boot Option	Firmware-based Argon Managed Boot Agent. Supports PXE, RPL, NetWare, TCP/IP (DHCP, BOOTP) remote boot protocols.
Device I/O	IDE Interface	PIO interface with 44-pin 2 mm connector.
	COM 1 & 2 Interface*	RS-232 compatible, 115K baud max.
	COM 3 & 4 Interface*	RS-422/485 selectable, 460K baud max.
	Floppy Interface	Supports one floppy drive.
	Other	Two general-purpose timer inputs.
	AT Peripherals* ‡	Keyboard and PS/2 mouse port.
Software	Operating Systems	Compatible with most x86 operating systems, including Windows 98/NT/CE, QNX, VxWorks, and Linux.
	BIOS	General Software's Embedded BIOS with OEM enhancements. Field reprogrammable. User-configurable CMOS defaults.

*TVS protected port (Enhanced ESD protection).
‡ Power pins on this port are protected with a self-resetting fuse.

*Data represents standard operation at 25°C with 5.0V supply unless otherwise noted
Specifications are subject to change without notice. PC/104 and PC/104-*Plus* are trademarks of the PC/104 Consortium.*

DOC-06-120-R1