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JAGUAR

PC/104-Plus Single Board Computer



- 350 MHz Celeron version
- 850 MHz Pentium III version
- Extended temperature versions
- AGP video, flat panel support
- 10/100 BaseT Ethernet
- DiskOnChip Flash socket

Highlights

850 MHz Pentium III processor

High-speed processing.

Celeron versions

Extended temperature, fanless, and low power versions.

ATI Rage Mobility video chip

3-D rendering, MPEG-2, flat panel support.

32-pin DiskOnChip socket

On-board nonmechanical storage.

10/100 Ethernet & dual USB

High-speed I/O.

TVS devices on user I/O ports

Enhanced ESD protection.

CPU temperature sensor

Control system cooling programmatically.

Watchdog timer

Stops runaway applications.

Intel 440BX chipset

High-speed Front Side Bus.

PC/104-Plus interface

Expand using PC/104 or PC/104-Plus add-on modules.

Overview

The Jaguar is designed for projects requiring fast processing, compact size, flexible memory options, high reliability, and long term availability. This compact two-board set is fully compatible with a wide selection of popular operating systems, including most Windows and Real Time OSs.

The Jaguar features full socket 370 compatibility, which supports a number of Celeron and Pentium III CPUs, with speeds up to 850 MHz. See the Ordering Information section for the models available.

It also features the ATI Rage Mobility video processor for high-speed rendering, with standard CRT and LVDS interface. Fast Ethernet (10/100) and USB ports are also included.

Up to 256 MB of low-power system RAM can be used in the high-reliability latching 144-pin SODIMM socket. Additional features include DiskOnChip support, 128 to 256 KB level 2 cache, watchdog timer, and Vcc sensing reset circuit. Standard I/O ports include floppy, keyboard, PS/2 mouse, PCI-based IDE, LPT, and two COM (one RS-232/422/485 selectable).

The high-reliability design and construction of this board features Transient Voltage Suppressors (TVS) on user I/O ports for enhanced ESD protection, latching I/O connectors, low EMI clock generation, industrial long-life battery, and self-resetting fuse on the 5V supply to the keyboard, mouse, and USB ports.

Details

The CPU temperature sensor output can be used to control additional fans, create local or remote warnings, or take other action through software triggers. The General Software embedded BIOS supports CD-ROM and Ethernet boot capability and features reconfigurable BIOS defaults for use in battery-free applications.

The Jaguar delivers both full performance and product longevity by utilizing standardized components. Features such as full Socket 370 compatibility were made possible by its unique two-board design with PC/104-Plus interconnect. It is designed to mount at the top of a PC/104 stack due to the fan and heat sink height. Other configurations are possible depending on the environmental characteristics of the application.

Both hardware and software (BIOS) customization is available in quantities as low as 100 units. Each board is subjected to Environmental Stress Screening (ESS) and complete functional testing and is backed by VersaLogic service and support.





Ordering Information

EPM-CPU-10g..... Intel Celeron 350 MHz (equiv) low power fanless
EPM-CPU-10h..... Intel Celeron 566
EPM-CPU-10k..... Intel Pentium III 850 MHz
EPM-CPU-10m..... Intel Celeron 350 MHz (equiv) extended temp.

Accessories

VL-CBL-0501..... Dual USB transition cable
VL-CBL-0801..... Ethernet extension cable
VL-CBR-1007*..... VGA cable adapter (RoHS)
VL-CBL-1008*..... ATX power cable adapter
VL-CBL-8001*..... Primary I/O breakout cable
VL-CBL-8002*..... Secondary I/O breakout cable
VL-CDD-IDE1..... CD-RW, DVD ROM drive
VL-HDW-101*..... Mounting standoffs, metric thread
VL-CFA-1e..... Type I/II CompactFlash adapter
VL-DEV-CPU6..... Development cable set
VL-DOC-xxx..... xxxMB DiskOnChip Flash module
VL-ENCL-4..... VersaTainer ruggedized enclosure
VL-ENCL-5..... Development enclosure
VL-FDD-144..... Floppy drive (black face)
VL-HDD35-XX..... 3.5" IDE hard disk drive
VL-HDW-201..... PC/104 extractor tool
VL-MM4S-xxx..... xxx MB SDRAM module
VL-PS200-ATX..... Development power supply
VL-XCC104A*..... 64-pin, 8-bit, PC/104 spacer (RoHS)

* Included in DEV-CPU6 cable kit

Specifications

General	Processor	Intel Celeron 350 - 566 MHz Intel Pentium III 850 MHz
	Chipset	Intel 440BX
	Power Requirements	+5.0V $\pm 5\%$ @ 3.37A (16.85W) typ. (EPM-CPU-10g) +5.0V $\pm 5\%$ @ 4.47A (22.35 W) typ. (EPM-CPU-10h) +5.0V $\pm 5\%$ @ 5.45A (27.25W) typ. (EPM-CPU-10k) +5.0V $\pm 5\%$ @ 3.52A (17.60W) typ. (EPM-CPU-10m)
	System Reset	Watchdog timeout VCC sensing, resets below 4.70V typ.
	Bus Speed	CPU External: 66/100 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
Mechanical	Board Size	3.95" x 3.775" (two-board set)
	Storage Temperature	-40° to +85°C
	Operating Temperature	0° to +50°C free air, no airflow (EPM-CPU-10g/h/k) 0° to +60°C 100 FPM airflow (EPM-CPU-10g/h/k) -40° to +75°C free air, no airflow (EPM-CPU-10m) -40° to +85°C 100 FPM airflow (EPM-CPU-10m)
	Humidity	Less than 95%, noncondensing
Memory	DRAM Interface	One 144-pin SODIMM socket, up to 256 MB of 3.3V SDRAM (PC100 or faster)
	Flash Interface	One 32-pin JEDEC DIP socket. Accepts M-Systems DiskOnChip (height limit of 0.330")
Video	General	ATI Rage Mobility chip AGP interface and 4 MB integrated RAM. CRT, LVDS and TTL flat panel outputs. Resolutions up to 1280 x 1024 with 16.7 million displayable colors. Supports MPEG-2, 3-D, edge anti-aliasing, specular shading and texture mapping.
Network Interface	Ethernet*	Autodetect 10BaseT/100BaseTX based on Intel 82551ER.
	Network Boot Option	Argon Managed Boot Agent. Supports PXE, RPL, NetWare, TCP/IP (DHCP, BOOTP) remote boot protocols
Device I/O	USB*	Two USB 2.0/1.1 ports
	IDE Interface	Supports up to two IDE devices. PIO mode 0 only. 2.5 MB/sec max.
	COM 1 Interface*	RS-232, 16C550 compatible, 115K baud max.
	COM 2 Interface*	RS-232/422/485, 16C550 compatible, 460K baud max.
	LPT Interface*	Bidirectional/EPP/ECP compatible.
	Floppy Interface	Supports two floppy drives
	Other*	Keyboard and PS/2 mouse port.
Software	Operating Systems	Compatible with most X86 operating systems, including Win98/2000/NT/CE/XP, QNX, VxWorks, and Linux.
	BIOS	General Software's Embedded BIOS with OEM Enhancements.

*TVS protected port (Enhanced ESD protection).

Data represents standard operation at 25°C with 5.0V supply unless otherwise noted. Specifications are subject to change without notice. PC/104 is a trademark of the PC/104 Consortium.