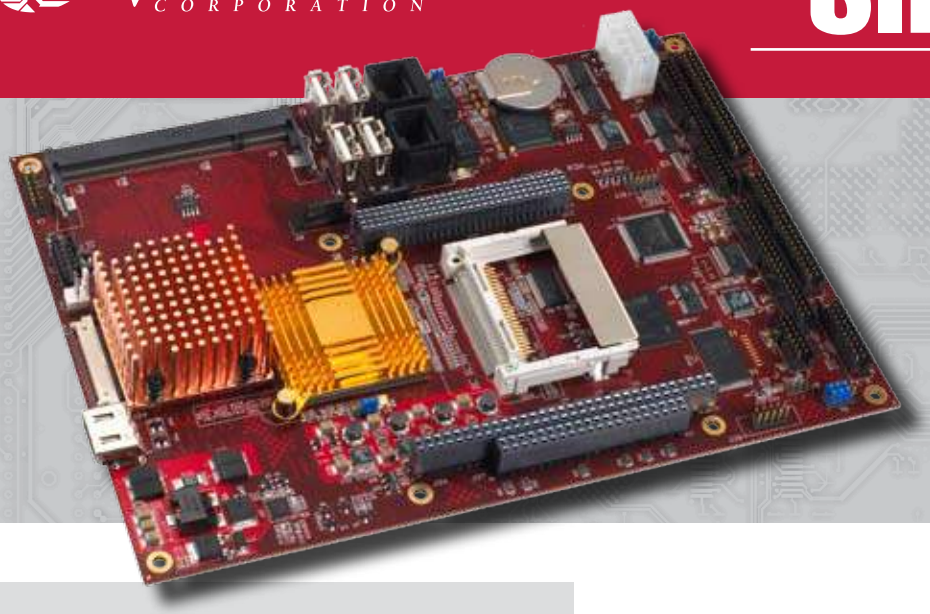
VERSALOGIC CORPORATION

SIDEWINDER

EBX Single Board Computer



- VIA Eden™ 1.2 GHz processor
- Up to 1GB System RAM
- CompactFlash socket
- Dual 10/100 Ethernet
- PC/104-*Plus* expansion site
- Flat panel display support
- RoHS-compliant

Highlights

VIA Eden 1.2 GHz Processor
High performance, power efficient CPU.

Video
Integrated video with MPEG-2/4 and WMV9 video decoding/acceleration.

Ethernet Interface
Dual onboard 10/100 Ethernet provides easy network access and boot ROM support.

USB Ports
Six USB 2.0/1.1 ports provide flexible I/O options for external devices.

Digital and Analog I/O
32-line digital I/O port. 8-channel 12-bit analog input port.

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

Fanless Operation
Standard-temperature model has no moving parts.

Power Management
Suspend-to-RAM function allows extreme power savings during system standby.

Embedded BIOS
OEM embedded features and firmware support. Field-upgradeable. Customization available.

Cost Effective Expansion
PC/104, PC/104-*Plus,* and SPX™ expansion sites.

RoHS-compliant
Meets EU Directive 2002/95/EC.

Overview

The EBX-compliant Sidewinder is a feature-packed single board computer (SBC) that uses a VIA Eden 1.2 GHz processor, which offers very high per-watt performance, excellent heat dissipation, and outstanding cost of ownership. The platform incorporates dual 10/100 Ethernet, a CompactFlash socket, and integrated I/O including 8-channel 12-bit analog input, 32-channel digital I/O, and two counter/timers. The Sidewinder design also supports PC/104, PC/104-*Plus* and SPX expansion sites and incorporates six USB 2.0 ports to create a highly reliable, cost-effective SBC. The RoHS-compliant Sidewinder is ideal for new applications requiring higher performance coupled with lower power consumption, rock solid reliability, and compatibility with standard software applications and leading operating systems.

Details

The Sidewinder is powered by the VIA Eden 1.2 GHz processor, a very high performance-per-watt processor. The companion digital media chipset integrates the VIA UniChrome Pro II 2D/3D graphics core and an array of high-end video technologies, including hardware MPEG-2/4 and WMV9 video decoding acceleration. The Sidewinder can be configured for use with either standard desktop-type displays or LVDS flat panels. For cost-effective I/O expansion without the need for additional PC/104 modules, the Sidewinder includes VersaLogic's new SPX interface. SPX modules provide a low-cost flexible solution for adding additional I/O such as analog and digital I/O, CANbus interface, relay switching, and more. The use of SPX expansion modules can dramatically reduce both development time and target system costs for most projects.

The Sidewinder features General Software's Embedded BIOS with OEM enhancements. This field-upgradeable BIOS supports custom defaults and the addition of firmware and firmbase applications for security, remote booting, and other pre-OS software functions. The Sidewinder is compatible with a variety of popular operating systems, including Windows XP/CE, QNX, VxWorks, and Linux. Dual Ethernet channels, USB 2.0 ports, RS-232 and RS-422 COM ports make the Sidewinder an ideal solution for industrial control, medical devices, and other embedded applications where high reliability and long-term availability are required.

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RoHS

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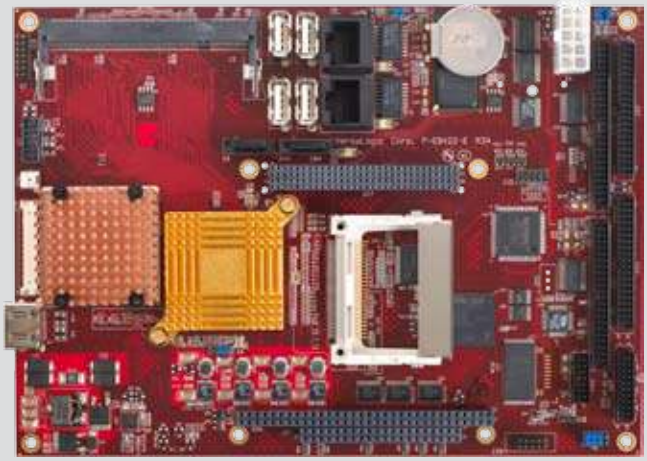
SIDEWINDER
EBX Single Board Computer

Like all VersaLogic products, this efficient SBC is designed from the ground up for long-term availability. From application design-in to 5+ years of production life, the quality and longevity provide a cost-effective, long-term solution. Customization is available on as few as 100 pieces. The Sidewinder is manufactured and tested to the highest quality standards, is compliant with RoHS regulations, and is backed by a two year limited warranty.



Ordering Information

EBX-22g..... VIA Eden 1.2 GHz, Standard Operating Temp.

Accessories

VL-CBR-2022..... Power adapter cable, 10-pin (RoHS)*
VL-CBR-1201....Video adapter cable, 12-pin 2 mm latch VGA (RoHS)*
VL-CBR-5009..... Utility I/O cable assembly (RoHS)*
VL-CBR-4405.....44-pin 2 mm IDE adapter PCB (RoHS)*
VL-CBR-4406.....IDE data cable 18" 44-pin latch IDE (RoHS)*
VL-CBR-0401..... 6.25" ATX to SATA power adapter cable (RoHS)
VL-CBR-0701.....19.75" SATA cable (RoHS)*
VL-HDW-101..... Standoff Pkg, Metric Thread*
VL-CKR-SIDE..... Development cable kit (RoHS)
VL-CBR-4004..... I/O cable assembly and paddleboard (RoHS)
VL-CBR-2003..... 20-pin 2 mm Fem D-sub LPT (RoHS)
VL-CF-CLIP1..... Retention clip for CompactFlash
VL-CBR-2010..... 20" 18-bit LVDS Flat Panel, Hirose(RoHS)
VL-CBR-2011..... 20" 18-bit LVDS Flat Panel, JAE (RoHS)
VL-HDS35-320.....320 GB 3.5" SATA hard drive
VL-MM6D-xxx.....DDR2 PC2-4200 system memory
VL-ENCL-5c.....Development enclosure
VL-SPX-x..... SPX expansion modules (RoHS)
VL-CBR-1401..... Cable Assembly, for two SPX Modules (RoHS)
VL-CBR-1402.....Cable Assembly, for four SPX Modules (RoHS)
VL-DEV-CD-L5.....Debian Linux Board Support Package

**Included in CKR-SIDE Cable Kit*

Specifications

General	Processor	VIA Eden 1.2 GHz
	Chipset	VIA CX700M
	Power Requirements	+5.0V±5%@2A (10W) typ. with 256 MB RAM, keyboard, mouse, running Windows XP
	System Reset and Hardware Monitors	Watchdog timeout Voltage rail monitoring
	Compatibility	EBX: Mechanically compatible. PC/104-*Plus* PCI expansion: 3.3V signaling, PCI 2.2 compatible. PC/104 ISA expansion: Limited support via LPC bridge SPX: Compliant RoHS: Compliant
Mechanical	Board Size	5.75" x 8" (146 mm x 203 mm)
	Storage Temperature	-40° to +85°C
	Operating Temperature	0° to +60°C
	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	$0.02g^2$/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	One 200-pin SODIMM socket. Up to 1 GB of DDR2 PC2-4200 RAM.
	Flash Interface	One CompactFlash socket. One eUSB socket.
Video	General	High-performance video. Up to 1280x1024 with 24-bit color. 2D/3D MPEG-2/4
	Desktop Display Interface	Analog output, 12-pin 2 mm connector. Digital output, HDMI connector (video only).
	OEM Flat Panel Interface	18/24-bit single channel LVDS output on 20-pin 1.25 mm connector. CMOS-selectable TFT panel types.
Network Interface	Ethernet*	Dual Autodetect 10BaseT/100BaseTX ports. Vertical RJ45 connectors.
	Network Boot Option	Firmware-based Argon Managed Boot Agent. Supports PXE, RPL, NetWare, TCP/IP (DHCP, BOOTP) remote boot protocols.
Device I/O	USB* ‡	Six USB 2.0/1.1 ports
	IDE Interface	ATA 100 compatible
	SATA Interface	Supports two SATA drives, two vertical SATA connectors
	COM 1 & 2 Interface*	RS 232. 16C550 compatible. 115 Kbps.
	COM 3 & 4 Interface*	RS 232/422/485 selectable. 16C550 compatible. 460 Kbps.
	LPT Interface*	Bi-directional/EPP/ECP/floppy mode compatible
	Digital I/O	32-line digital I/O port, 3.3V only
	Analog Input	8-channel 12-bit port
	PWM Outputs and Tach Inputs	3 PWM (pulse width modulation) outputs and tachometer inputs
	SPX Interface ‡	Up to four SPX devices
	Audio	AC'97 stereo line in/out
	AT Peripherals* ‡	Keyboard and PS/2 mouse port
Software	Operating Systems	Compatible with most x86 operating systems, including Windows, Windows Embedded, Linux, VxWorks, and QNX
	BIOS	General Software's Embedded BIOS with OEM enhancements. Field reprogrammable.

**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 is a trademark of the PC/104 Consortium. SPX is a trademark of VersaLogic Corporation.

12/02/09

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