

ARTISAN®
TECHNOLOGY GROUP

Your **definitive** source for quality pre-owned equipment.

Artisan Technology Group
(217) 352-9330 | sales@artisantg.com | artisantg.com

Full-service, independent repair center
with experienced engineers and technicians on staff.

We buy your excess, underutilized, and idle equipment
along with credit for buybacks and trade-ins.

Custom engineering
so your equipment works exactly as you specify.

- Critical and expedited services
- In stock / Ready-to-ship
- Leasing / Rentals / Demos
- ITAR-certified secure asset solutions

Expert team | Trust guarantee | 100% satisfaction

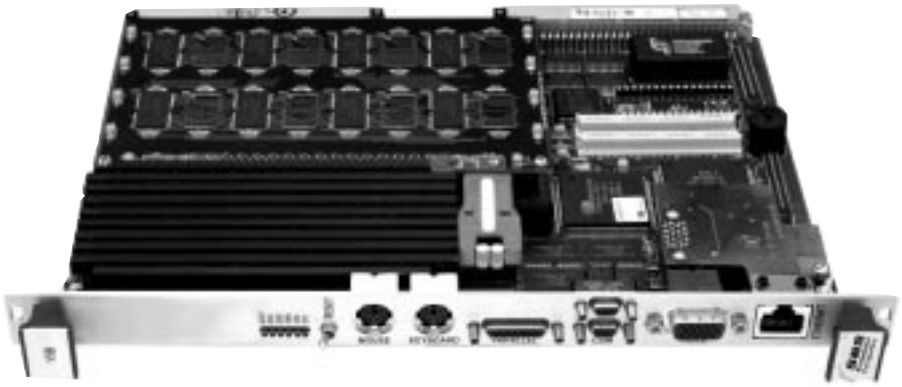
All trademarks, brand names, and brands appearing herein are the property of their respective owners.

Find the *Abaco Systems / SBS V5B* at our website: *Click HERE*

V5B
VMEbus Embedded PC

Features:

- Fully IBM PC/AT Compatible
- MMX Processor up to 400MHz
- Memory Sizes up to 128MB
- 256KB of Level 2 Cache
- PCI Bus GUI Accelerated Video Controller
- Two Megabytes of High Speed Video DRAM
- 10/100BaseT Twisted Pair or Thinwire Ethernet
- Fast SCSI-2 Interface
- Enhanced IDE Hard Disk Interface
- COM1, COM2, LPT1, Mouse, and Keyboard Port
- PCI Mezzanine Card (PMC) Expansion Interface
- VME64 Compliant via Universe II VMEbus Interface
- Occupies Only One VMEbus Slot
- ISA Expansion
- VMEbus Hardware Byte Swapping



The V5B is a high performance PC/AT compatible computer for the VMEbus, configurable with either a Pentium® MMX or AMD K6-2 processor. Using an architecture based around a local PCI bus, the V5B is designed for maximum real-world performance. Performance is further enhanced by the use of advanced memory technologies, processor speeds to 400MHz, SVGA GUI Accelerated PCI Bus Video, Fast SCSI-2, High Speed Ethernet, and VMEbus Block Mode Transfer capability. The result is high-end workstation performance in only one VMEbus slot.

Software Compatibility

The V5B Embedded PC is compatible with software written for the IBM PC/AT. Accordingly, it can run the wide variety of off-the-shelf software available for 80x86-based computers. SBS Embedded Computers has driver-level support for a number of common operating systems including Microsoft's MS-DOS, Windows 98, Linux, and Windows NT, as well as real-time operating systems such as QNX Systems Limited QNX and Wind River Systems VxWorks.

Hardware Overview

The V5B features new architecture based on the high speed PCI bus. As a result, peripherals such as video and ethernet, as well as the VME interface, have a high-bandwidth connection to the processor. The V5B has been designed to provide all the features of a complete PC/AT motherboard, along with additional features such as built-in Ethernet, SCSI-2, and hardware extensions necessary for VMEbus Master/Slave capability. The V5B incorporates an advanced third generation ALI Aladdin III chipset that is completely compatible with industry standard PC hardware and software. For a fast and flexible interface to the VMEbus, the V5B uses the industry standard Universe II VMEbus Interface Controller.

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Processor Support

The V5B is available with a choice of Socket 7 processors, allowing the selection of the processor that best suits the application needs.

Level 2 Cache

The V5B incorporates 256KB of Synchronous Pipeline-Burst SRAM (PBSRAM) as Level 2 Cache. With a front side bus clock of 66MHz, the V5B cache provides hit rates of 3-1-1-1 for read and write cycles and 3-1-1-1-1-1-1-1 for back-to-back read and write cycles. The 256KB cache is optimum for up to 128MB of system memory.

System Memory

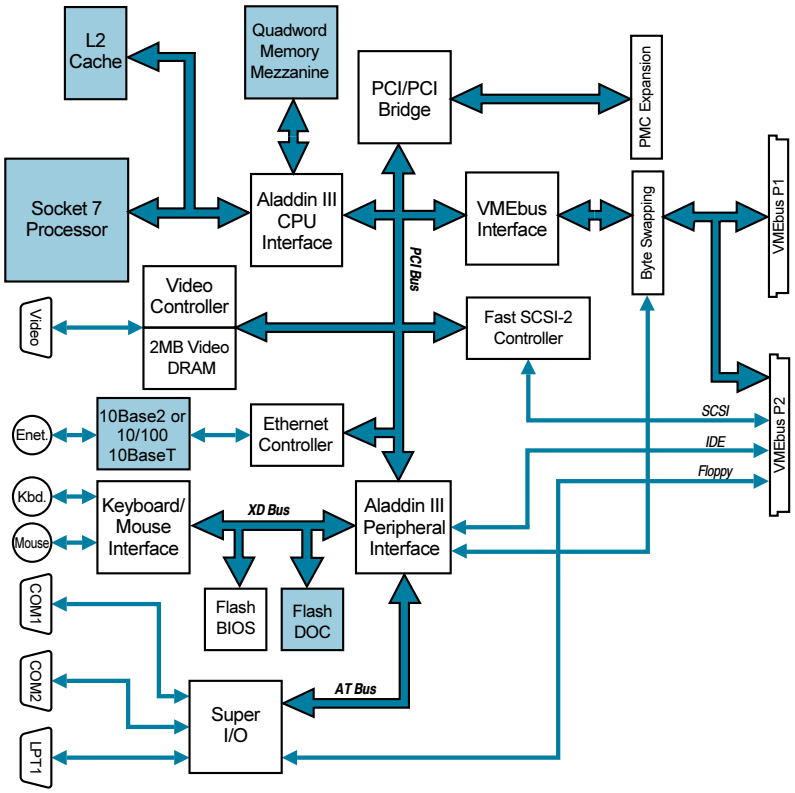
The QME memory mezzanine modules use Extended Data Out (EDO) DRAM, also known as Hyperpage Mode DRAM. EDO DRAM typically provides 20–30% performance improvement over conventional Fast Page DRAM. QME modules are available in 32, 64 and 128 megabyte sizes and do not support parity or ECC.

SVGA GUI Accelerator

The V5B video interface is a CIRRUS Logic CL-5436 32-bit PCI Bus GUI Accelerator which can be configured for many types of standard displays including VGA and Super VGA monitors. The V5B uses two megabytes of Video DRAM to enhance display capability. The Video DRAM will display 16.7 million colors at a resolution of 800x600 and 256 colors at 1280x1024, non interlaced. The video interface is accessible on a front panel SVGA compatible connector.

Disk Interfaces

An integrated floppy disk controller is provided that is capable of controlling one or two 1.44MB 3.5" floppy disk drives. For hard disks and other peripherals, the V5B features both EIDE and Fast SCSI-2 interfaces. This allows the choice of the peripherals best suited to the application.



Enhanced IDE Interface

The V5B has an industry standard IDE interface, common on desktop PCs. This interface allows the use of widely available low cost IDE disk drives. The IDE interface supports two IDE drives with enhanced PIO access modes and busmastering capability for greater data throughput.

Fast SCSI-2 Interface

The V5B features a Fast SCSI-2 interface which is generally faster and more flexible than IDE, supporting up to seven peripherals. The V5B uses the Symbios 53C860 SCSI Processor which supports Fast SCSI-2 devices in either asynchronous or synchronous modes. Data rates of 7MB/s are possible in asynchronous mode, and up to 10MB/s in synchronous mode. The V5B also offers Ultra SCSI which has data rates of 20MB/s in synchronous mode. Active SCSI terminators are provided onboard the V5B to simplify SCSI chain termination.

Ethernet

The V5B onboard Ethernet (DEC 21143), interface is fully IEEE 802.3 compatible. The V5B is available with either a 10Base2

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

(Thinwire) or a 10/100BaseT (Twisted-Pair) physical interface, both of which are accessible from the front panel.

PCI Bus (PMC) Expansion

A high-density connector on the V5B allows PMC expansion using the DPMCC. This allows the use of PCI Mezzanine Cards (PMC) which are becoming widely used in high performance VMEbus systems. PMC is fully PCI compliant and better suits the needs of an embedded system. The V5B provides electrical isolation and software access to the PMC expansion interface through a PCI bridge chip (DEC 21152). This allows concurrent operation on primary and secondary PCI busses.

VMEbus Interface

The V5B uses Tundra's Universe II VMEbus Interface Controller to provide VME Master, Slave Interrupter, Interrupt handler and System Controller functions. Being a PCI-resident device, the Universe II allows high speed data transfers to and from the VMEbus. The V5B also supports Master and Slave Block Transfers on 16-,32-, or 64-bit data paths for fast VMEbus data movement.

To help integrate the V5B into the traditionally 68000-oriented VMEbus, the V5B incorporates programmable byte-swapping capability. The Byte swapping modes supported are Intel 32, Motorola 32 and Intel 16.

I/O Interfaces

The V5B front panel provides two Serial Ports, a Parallel/Printer Port, a Keyboard Port, a Mouse Port, a Video Port and a Thinwire or Twisted-Pair Ethernet Port. Two 9-pin male micro-miniature D connectors provide front panel access to the two RS-232 Serial Ports, COM1 and COM2. COM2 can be configured for RS-422/485 operation as well. A 25-pin female micro-miniature D connector provides access to the bi-directional Parallel/Printer Port. The SMC FDC37C665 Super I/O controller supports SP, EPP, and ECP modes. The mouse port is accessed via a 6-pin circular Mini-DIN. The Keyboard Port is accessed via a 6-pin circular Mini-DIN (PS/2 style) connector. An adapter is included for use with PC/AT style keyboards. Disk interfaces are provided on the P2 connector. Row *b* of the P2 connector provides extended VMEbus signals, while rows *a* and *c* provide Floppy, IDE, and SCSI signals.

Programmable Board Configuration

The V5B is configured entirely by software, eliminating the need for hardware jumpers. Each configuration option is controlled by programmable non-volatile switches. The switches are set by the embedded setup utility or by user software. This "jumperless" feature allows foolproof setup of the board without removing it from the chassis.

Support

To aid setup and programming, software support packages are available for MS-DOS, Windows 98, Windows NT, Linux, QNX and VxWorks. SBS Embedded Computers provides free technical support for all of our board products.

V5B Ordering Numbers and Options

V5B Embedded PC

V5B - XXX - YYY - Z

XXX = Memory (*Contact factory for capacities available*)

YYY = CPU Speed in MHz (*Contact factory for capacities available*)

Z = Ethernet Option

Options and Accessories

DPMCC	Single-Slot Dual PCI Mezzanine Card Carrier on PCI Bus 1
VME-TB21	P2 Adapter for Floppy and IDE/SCSI Cabling
CA9S24	24" 9 pin Micro-D Serial Cable Assembly
CA25P24	24" 25 pin Micro-D Parallel Cable Assembly
FDOCk-XX	Flash Disk-on-Chip up to 144 MB
VME-62XX	IDE Hard Disk, 3.5" Floppy (Contact factory for capacities available)

Software Options

DOS	Microsoft DOS
Windows NT	Microsoft Windows NT
Windows 98	Microsoft Windows 98
DOSSP	Includes DOS, DOS Utilities, Video Drivers & Ethernet Drivers
WINNTSP	Microsoft Windows NT Support Software
WIN98SP	Windows 95 Support Software
QNXSP	QNX Support Package
VXWSP	VxWorks Support Package
LinuxSP	Linux Support Package

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

V5B Specifications

General	Model	V5B
	Description	PC/AT Compatible VMEbus SBC
	Hardware Compatibility	VMEbus Dual Eurocard, VME64 ANSI/VITA 1-1994
VMEbus	Controller	Tundra Universe II
	Configuration	DTB Master, Option A32/A24/A16, D32/D16/D08(EO), RMW DTB Slave, Option A32/A24/A16, D32/D16/D08(EO), RMW
	Interrupter	Programmable, 1-of-7
	Interrupt Handler	Programmable, IH(1-7)
	Requester	Programmable, BR(3,2,1,0), Option ROR and RWD
	Arbiter	RRS, PRI, SGL
	Block Mode Transfer	Master/Slave BLT and MBLT D64/D32/D16
PCI Bus	Controller	ALI Aladdin III Chip Set
	Clock Rate	33MHz
PC/AT Bus	Controller	ALI Aladdin III Chip Set
	Clock Rate	8.0MHz
Serial Interface	Controller	SMC FDC37C665
	Number	2
	Compatibility	IBM PC
	Interface Type	COM1:RS-232; COM2: RS232/422/485
	Signals Provided	RxD, TxD, RTS, CTS, DSR, DTR, DCD, RI
	Connector	Micro-Miniature DB9P
Parallel Interface	Controller	SMC FDC37C665
	Number	1
	Compatibility	Centronics Parallel, PS/2 Bidirectional
	Interface	Buffered Parallel
	Connector	Micro-Miniature DB25S
Mouse Interface	Controller	AMI 8742
	Compatibility	Microsoft Mouse
	Connector	6-pin Circular Mini-Din
Keyboard Interface	Controller	AMI 8742
	Compatibility	IBM PC/AT
	Connector	6-pin Circular Mini-Din (PS/2Style), Standard PC/AT Cable Provided
Video Interface	Controller	Cirrus GL-GD5436
	Compatibility	VGA, SVGA
	Display Supported	Color CRT
	Connector	HD15S
	Video Memory	2 Megabytes of High Speed Video DRAM
Disk Drive Interface	Floppy Disk	ST412 Interface, SMC FDC37C665 Controller, Provided Through P2
	Hard Disk	Bus-Mastering IDE Interface Provided Through P2 Fast SCSI-2 Interface Provided Through P2
Ethernet Interface	Type	IEEE 802.3 Optional 10/100BaseT (Twisted-Pair), Provided Through Front Panel RJ45 or 10Base2 (Thinwire), Provided Through Front Panel BNC
Electrical	Power	+5VDC @ 5–10A (memory & CPU dependent) +12VDC @ 200mA (max) -12VDC @ 100mA (max)
Physical	Size	160mm x 233mm (Dual Eurocard) 6Ux4HP
	Construction	Multi-Layer Printed Circuit, 8 Layers
Environmental	Temperature	0 to 55° Celsius Inlet Air, Operating -40 to 85° Celsius, Non Operating
	Cooling	Forced Air, 100LFM Minimum Required
	Humidity	10 to 95% Relative Humidity, Non-Condensing
	Shock	6G Max. Operating, 10G Max. Non-Operating

Embedded Computers
6301 Chapel Hill Road, Raleigh, NC 27607-5115 • Tel (919) 851-1101 • Fax (919) 851-2844
E-mail sales@sbs-ec.com • Internet www.sbs.com

SBS-or Computers
Memminger Str. 14, D-86159 Augsburg • *Tel +49 (821) 5034-0 • Fax 011-49-821 5034-119*
E-mail sales@or-computers.de • Internet www.sbs.com

Specifications subject to change without notice. Rev. 12/99

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Artisan Technology Group is an independent supplier of quality pre-owned equipment

Gold-standard solutions

Extend the life of your critical industrial, commercial, and military systems with our superior service and support.

We buy equipment

Planning to upgrade your current equipment? Have surplus equipment taking up shelf space? We'll give it a new home.

Learn more!

Visit us at **artisantg.com** for more info on price quotes, drivers, technical specifications, manuals, and documentation.

Artisan Scientific Corporation dba Artisan Technology Group is not an affiliate, representative, or authorized distributor for any manufacturer listed herein.

We're here to make your life easier. How can we help you today?

(217) 352-9330 | sales@artisantg.com | artisantg.com

ARTISAN® TECHNOLOGY GROUP