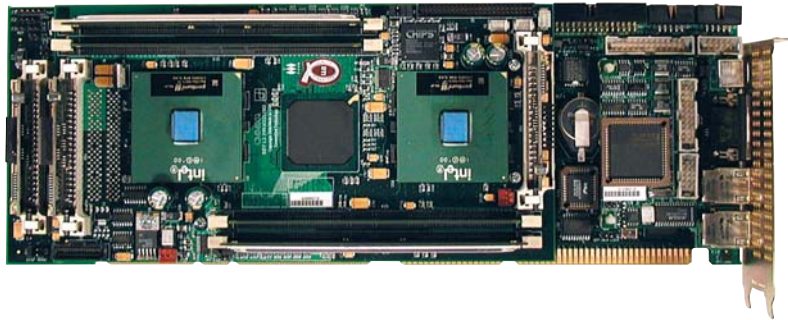


# PCI/ISA Single Board Computer

# LBC8926



- Single/Dual Intel Pentium III Processor up to 1 GHz
- Intel 840 Chipset with 100/133MHz FSB
- 64-bit / 66 MHz PCI Bus
- Up to 2 GB of RAMBUS Memory
- AGP Video with Flat Panel Support
- Dual PCI 10/100 Base-T Ethernet
- PCI EIDE
- Flash Disk Support
- PCI Ultra-2 SCSI
- 2 Floppy, 2 Serial, 1 Parallel, and 1 USB Port
- System Monitor

## SPECIFICATIONS:

### PROCESSOR

Dual Pentium III with support for 100MHz or 133 MHz front side bus speeds.

### MEMORY

Up to 2G (2048MB) using RDRAM

### MEMORY ORGANIZATION

2 Rambus Channels with 2 RIMMS per channel

### PCI BUS SPEED

33 or 66MHz - 32 or 64 bits

### BIOS

DTI Enhanced PHOENIX BIOS, Plug-n-Play compliant

### PCI IDE

EIDE support, Ultra 66/33 ATA, bootable CD-ROM

### PCI SCSI

SymBIOS SYM53C896 SCSI  
Independent Ultra 2 and Fast SCSI Channels

### DUAL PCI ETHERNET

10/100 Base-T using Intel's 82559ER

### AGP VIDEO with FLAT PANEL SUPPORT

C&T 69030 with 4MB video memory

### USB

UHCI compatible host controller with one port

### KEYBOARD/MOUSE PORTS

PS/2 and /AT internal connectors use determined by jumper setting.

### PHYSICAL

4.2" x 13.3"

### HUMIDITY

0% - 95% Non-condensing

### POWER

TBD

## FEATURES:

### PROCESSOR

Dual or Single processors are supported. A termination card is required with a single CPU. Allows the use of 500 to 800MHz processors in Intel's socket 370 (FC-PGA) package. The Pentium III 600MHz processor will have extended longevity through Intel's ACPP program. Higher speeds will be validated on this product when available. Call for current speed support.

### PCI BUS

The LBC8926 provides support for up to 4 - 64 bit PCI cards at 33MHz. Each of these slots can be bus masters. The LBC8926 will also support 32 bit PCI devices and can fit into any PICMG designed backplane with or without 64 bit support.

### ISA BUS

The LBC8926 provides an interface to the ISA bus with DTI's enhanced buffering to reduce loading issues that can occur with high slot count backplanes.

### SYSTEM MONITOR

The LBC8926 includes DTI's standard system monitor which provides environmental monitoring of all system temperatures and voltages (CPU, System, Ambient, and Remote). The system monitor also features fan/switch monitoring through eight inputs, a built-in two-stage watchdog timer, alarming mechanisms for failure reporting, a dedicated serial port for remote communication through a modem or a CPU-to-CPU connection, and a general purpose scratch pad area.

### AGP VIDEO

The LBC8926 uses the C&T 69000 to provide enhanced 3D graphics performance and flat panel support. Two megabytes of synchronous graphics memory is built into the 69000.

### ETHERNET

The LBC8926 supports two fully auto-negotiating 10/100 Base-T connections, and full duplex operation which allows data rates to reach 20Mbps and 200Mbps.

### SCSI

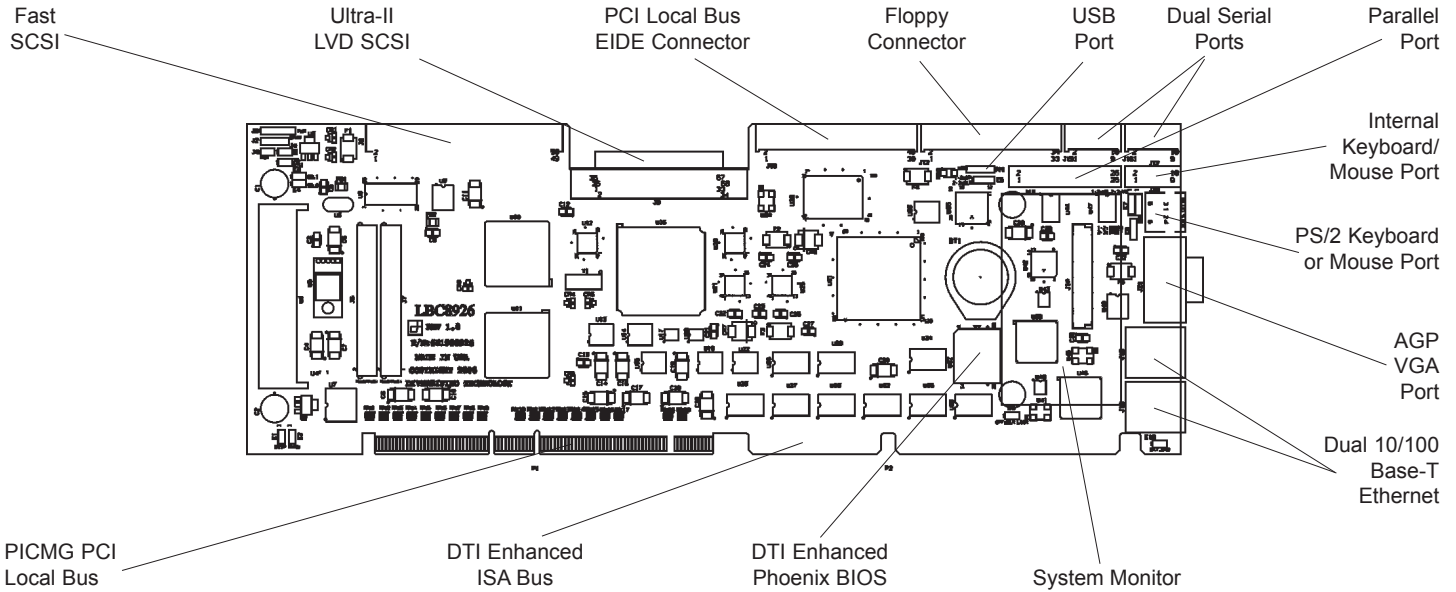
The LBC8926 provides a high performance Low Voltage Differential Ultra-II SCSI interface allowing data transfers to reach 80 MB/s using the SymBIOS SYM53C896 LVD SCSI controller. A second independent SCSI channel supports older fast SCSI devices.



 **Diversified  
Technology®**  
An Ergon Co.

[www.dtims.com](http://www.dtims.com)

1.800.443.2667



The LBC8926 is a dual Pentium®III FC-PGA single board computer which is offered in a full-size /AT PCI PICMG card form factor. The LBC8926 is based on Intel®'s 100MHz/133MHz front side bus Pentium®III FC-PGA processor with the 840 chipset

The Pentium®III processor, like its predecessors in the P6 family of processors, implements a Dynamic Execution microarchitecture—a unique combination of multiple branch prediction, data flow analysis, and speculative execution. This enables these processors to deliver higher performance than the Intel® Pentium® processor, while maintaining binary compatibility with all previous Intel® Architecture processors. The processor also executes Intel® MMX™ technology instructions for enhanced media and communication performance just as it's predecessor, the Intel® Pentium®II processor. Additionally, the Pentium®III processor executes Streaming SIMD (single-instruction, multiple data) Extensions for enhanced floating point and 3-D application performance. The concept of processor identification, via CPUID, is extended in the processor family with the addition of a processor serial number. Refer to the Intel® Processor Serial Number application note for more detailed information.

The processor includes an integrated on-die, 256 KB, 8-way set associative level-two (L2) cache. The L2 cache implements the new Advanced Transfer Cache Architecture with a 256-bit wide bus. The processor also includes a 16 KB level one (L1) instruction cache and 16 KB L1 data cache. These cache arrays run at the full speed of the processor core. As with the Intel® Pentium®III processor for the SC242 connector, the Pentium®III processor for the PGA370 socket has a dedicated L2 cache bus, thus maintaining the dual independent bus architecture to deliver high bus bandwidth and performance. Memory is cacheable for 4 GB of addressable memory space, allowing significant headroom for desktop systems. The LBC8926 also supports up to two processors at FSB frequencies of 100/133 MHz. The LBC8926 directly supports two channels of Direct Rambus memory operating in lock-step using Rambus Signaling Level (RSL) technology. Only 300 MHz and 400 MHz Direct Rambus devices are supported in any of 64, 128 or 256Mb technology. The 64 and 128 Mbit RDRAMs use page sizes of 1 KB, while 256Mb devices target 1 KB or 2

KB pages. A maximum of 64 Rambus devices (64Mb technology implies 512 MB maximum in 16 MB increments, 256Mb technology implies 2 GB maximum in 64 MB increments) are supported on the paired channels.

The LBC8926 provides enhanced 3D graphics performance by utilizing a C&T 69030 video controller. The video controller provides desktop graphics with full featured high end performance up to extended VGA mode. It also provides support for various flat panels such as VGA, XGA, SVGA, and SXGA active matrix TFT panel displays. Passive matrix flat panels like DSTN and SSTN are also supported. Some of its more notable features are its advanced frame rate control (FRC) for STN panels, auto-expansion and centering for text and graphics modes on high resolution panels, and advanced power sequencing techniques for the panel power and control/data signals. The LBC8926 can support simultaneous display on a CRT and a flat panel.

The LBC8926 implements a 32-bit or 64-bit PCI interface which provides burst transfer speeds up to 132MB or 264MB per second. It is designed to support up to four PCI expansion slots (at 33MHz) or 2 PCI expansion slots (at 66MHz), of which all may be PCI masters. The LBC8926 also provides outstanding ISA support.

The LBC8926 provides a high performance Ultra-II LVD SCSI interface. 16-bit (wide) devices are supported. Ultra 2 operation is supported, allowing data rates to reach 80MB/s. The SCSI interface is based on the SymbIOS SYM53C896 controller.

Integrated onboard are two of Intel®'s 82559 ethernet controllers. This PCI ethernet interface provides a fully auto-negotiating 10/100 Base-T connection over a standard UTP-5 data grade twisted pair up to 100 meters in length. Support for Remote-Boot operation for diskless workstations can also be provided. Drivers are available for many of today's popular operating systems.

A PCI based, enhanced IDE Ultra 66/33 ATA interface on the LBC8926 provides excellent performance with all modern high speed IDE drives. It supports 32-bit access, LBA mode, and bootable CD-ROMs. This interface supports enhanced speeds up to PIO mode 4. One or two devices can be supported through this interface. Also, fast DMA modes can be utilized with device drivers in advanced operating systems such as Windows 95 and Windows NT.

The LBC8926 also features DTI's standard System Monitor for monitoring of system critical variables like voltage, temperature, and fan operation. The system monitor provides eight inputs that can be configured as switch closure inputs or strobed inputs useful for monitoring the rotational speed of fans with strobe outputs. A two-stage programmable watchdog timer is built into the system monitor providing a timeout in the case of a software failure. A dedicated serial port is also included, allowing the System Monitor to transfer data and diagnostic information through a modem or a CPU-to-CPU connection.

Standard ISA bus peripherals like a PS/2 Keyboard/Mouse Controller, Real Time Clock, floppy controller, RS-232 serial port, and field upgradeable flash BIOS are also integrated on to the LBC8926.

The LBC8926 is designed for operation in passive back-plane systems. DTI offers a wide variety of PCI passive backplane versions. A comprehensive validation has been completed on the product.



All products are shipped FOB factory (MS). Specifications subject to change without notice. Trademarks are the property of their respective owners.

(C) Copyright 2004 by Diversified Technology, Inc. All rights reserved.