

## Overview

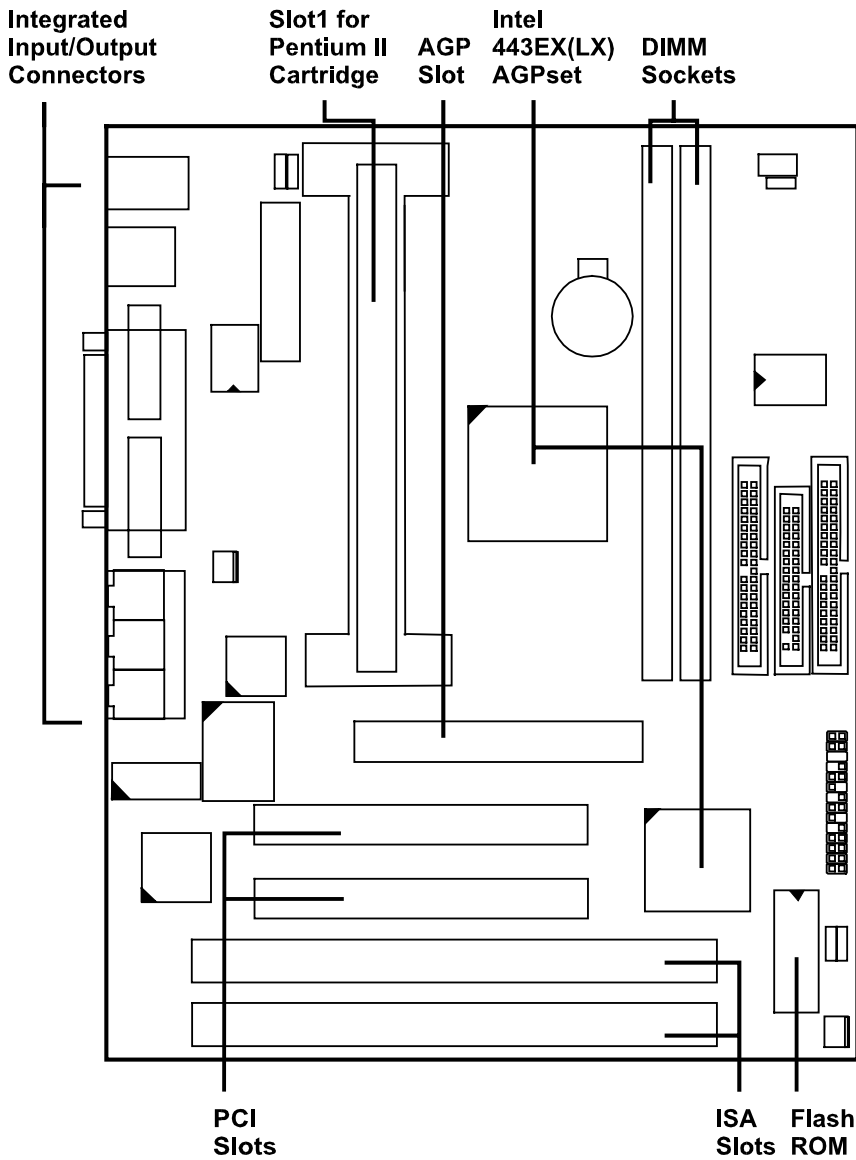
Based on the advanced Intel 443EX(LX) AGPset, the VL-603 combines blistering Pentium® II processor performance with support for the new Accelerated Graphics Port (AGP) interface which provides a dedicated path for memory-intensive graphics applications – delivering faster system performance and arcade-quality 3D graphics. Also, it has a host bus frequency of 66MHz to run a range of Intel Pentium® II processors. Compliant with the Microsoft PC97 standard at both the hardware and BIOS levels, the VL-603 comes with support for ISMP™ which continuously checks the thermal (available on the Deschutes CPU) and voltage status of your system and adjusts, when necessary, and reports any discrepancies to the network administrator. The VL-603 reduces the total cost of ownership with support for DMI (Desktop Management Interface) and Intel LANDesk® Client Manager (LDCM) software which allows for optimized system manageability across a network.

### Package Checklist

Please check that your package contains all the items listed below. If you discover any item is damaged or missing, please contact your vendor.

- The VL-603 mainboard
- This user's manual
- One IDE ribbon cable
- One floppy disk drive ribbon cable
- Retention mechanism and heat sink support brace
- Software utilities

**The VL-603 Mainboard**



## Main Features

The VL-603 mainboard comes with the following high-performance features:

- **Easy Installation**  
BIOS with support for Plug and Play, auto detection of IDE hard drives, LS-120 drives, MS Windows™ 95, Windows™ NT, and OS2™.
- **Flexible Processor Support**  
Onboard 242-pin Slot1 supports leading-edge processors:  
Intel Pentium® II processors 233/266/300MHz, Deschutes™ 333MHz or Celeron™ 266MHz with MMX™ technology.
- **Leading Edge Chipset**  
Intel 82443EX(LX) AGPset includes a CPU interface controller, integrated SDRAM controller, synchronous ISA bus controller, integrated power management unit, concurrent PCI (PCI v.2.0 and 2.1), and USB.
- **Ultra-fast Level II Cache on CPU Card**  
Supports 256KB (with Pentium® II CPU) / 512KB (with Pentium® II or Deschutes CPU) / 0KB (Celeron™ CPU) cache memory.
- **Versatile Main Memory Support**  
Accepts up to 256MB DRAM in two banks using DIMMs of 8, 16, 32, 64, 128MB with support for SDRAM or EDO memory.
- **Onboard Accelerated Graphics Port (AGP)**  
One 32-bit AGP slot supports 1x/2x AGP VGA cards for superior 3D video and graphics performance with transfer speeds up to 264MB/second under 1x AGP transfer mode and up to 528MB/second under 2x AGP transfer mode.
- **ISA and PCI Expansion Slots**  
Two 16-bit ISA and two 32-bit PCI expansion slots provide all the room you need to install a full range of add-on cards.
- **USB Support**  
Two USB ports integrated in the rear I/O panel allow convenient, high-speed Plug and Play connections to the growing number of USB compliant external peripheral devices on the market.
- **IrDA Connector**  
An onboard IR connector for wireless infrared connection is available.

■ **Enhanced PCI Bus Master IDE Controller Support**

Integrated enhanced PCI bus master IDE controller features two dual-channel connectors that accept up to four enhanced IDE devices, including CD-ROM and Tape Backup Drives, as well as Hard Disk Drives.

■ **Super Multi Input/Output (I/O) Support**

Integrated ITE IT8679F-A or IT8671F/RF Plug and Play multi-I/O chipset features two high-speed UART 16550 compatible serial ports, one IR connector, one EPP/ECP capable parallel port, and one FDD connector.

■ **Remote Wake-Up Support**

One LAN wake-up connector supports LAN cards equipped with either the Intel SB82558B or Intel SB82557 chipsets, etc. for remote wake-up functionality.

■ **Intel LANDesk® Client Manager (LDCM) Software Support**

LDCM is a Desktop Management Interface (DMI)-compliant application for local and network management of desktop client systems. The application reduces the number of help desk calls by supplying the user with self diagnostics such as a PC health meter and local alert for potential problems.

■ **SB-LINK™ for the Audio Card with PCI Bus**

The 2x3 pin SB-LINK™ header accepts the Creative CT4600 series PCI audio cards with PCI solution to connect the Legacy Sound Blaster® compatible audio to the PCI bus.

## Advanced Features

■ **Optimized Intel Pentium II® Processor Performance**

The mainboard utilizes the advanced features of the Intel 443EX(LX) AGPset to optimize the unrivaled performance of the Intel Pentium® II processor with MMX™ technology, allowing you to enjoy a richer video, audio, digital imaging and communications experience from the latest generation of multimedia software.

■ **Onboard Accelerated Graphics Port (AGP)**

The 32-bit AGP bus provides a dedicated 66MHz/133MHz path from the graphics card to the system memory offering a much greater bandwidth than the 32-bit PCI bus does which currently operates at a speed of 33MHz. AGP enabled 3D graphics cards can directly access main memory across this fast path instead of using local memory. This is especially important for memory-intensive 3D graphics applications so as to produce a more detailed 3D texture, greater clarity and higher levels of resolution without compromising system performance. This mainboard is fully compliant with the AGP 1.0 specification. To make use of the improved AGP performance, the mainboard should be installed with SDRAM type memory and the VGA card and drivers should also be fully AGP compliant. Using Microsoft's forthcoming versions of Microsoft Windows™ 98 and Windows™ NT v.5.0 which implement DirectDraw™ will allow the system to take full use of AGP's benefits without the need to install additional drivers.

■ **CPU Thermal Monitoring Alert (optional, available on the Deschutes CPU only)**

A special heat sensor monitors the CPU temperature to make sure that the system is operating at a safe heat level. If the temperature is too high, the sensor automatically generates an SMI (System Management Interrupt) to slow down the CPU clock frequency. At the same time, the system warns you that the CPU is overheating (if LDCM is installed). CPU utilization is restored to normal levels when the temperature returns to a safe level.

■ **System Over-Voltage Report (optional)**

System voltage levels are monitored to ensure a stable current to critical mainboard components. The monitored range for system voltage is -12V, -5V, +12V, +5V, +3.3V ± 10%.

## **DMI (Desktop Management Interface)**

DMI (Desktop Management Interface) is a standard for organizing system configuration information. Using DMI, computer configuration can be made much simpler, quicker, and easier. Computer system configuration information can be read and modified from remote locations, permitting remote configurations and boot up. (Requires DMI-enabled components.)

### **Intel LANDesk® Client Manager (optional)**

The mainboard comes with optional Intel LANDesk® Client Manager, a Desktop Management Interface (DMI) compliant application that simplifies local and network management of desktop client systems by monitoring PC health, and by alerting local and designated remote users of potential problems. For example, the application will indicate when memory usage is high or hardware components are likely to fail. This capability provides new levels of manageability to deliver a lower cost of PC ownership by maximizing system uptime, increasing user productivity and reducing the number of help desk calls. Because it is industry-standard DMI compliant, Intel LANDesk® Client Manager can be used with other DMI-based network management tools.

The LANDesk® Client Manager, including the client interface and the administrator's console used by the network administrator or manager, has a graphical user interface for ease-of-use and understanding and can be used for monitoring PC health, configuring key system files and viewing inventory. Please read Chapter 4 of this manual for more information.