

Pentium® 4 / Celeron

G4V620-B

Revision Controlled Motherboard

**Pentium® 4 Motherboard up to 3 ISA Slots
High Performance PCI/ISA ATX board**

Standard Version: Part# G4V620-B

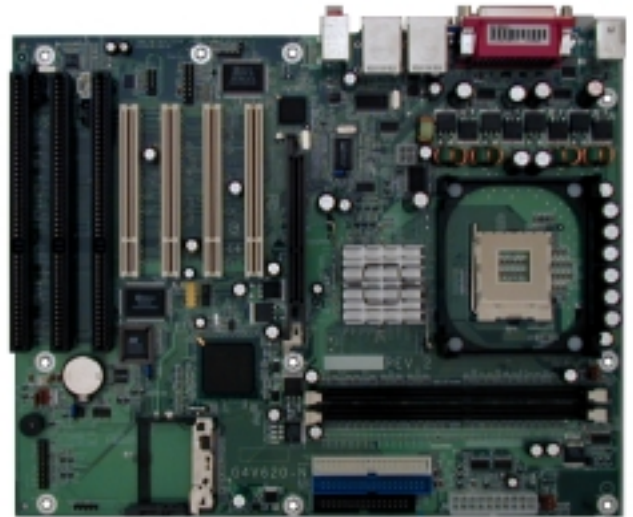
Special Order: Part#G4V620-N has 2nd LAN

12.05" (30.5cm)

Features:

- ATX format
- Supports Intel's Pentium® 4 or Celeron processor
- Intel 845GV chipset – 400/533 MHz data bus
- Seven Expansion Slots:
3 PCI, 1 Shared PCI/ISA, 2 ISA and 1 ADD (AGP Digital Display)
- On-board LAN, (2nd LAN Available as special order)
- Flat Panel Support via ADD (AGP Digital Display) slot
- On-board Audio and Video
- Supports up to 6 USB (2.0)
- On-board CompactFlash
- Long and stable product life cycle
- Monitors fan speed, temperature, and power supply voltages (4-Phase VRM)

9.6" (24.4cm)



G4V620-N Version

The G4V620-B revision controlled motherboard offers the combination of Pentium® 4 or Celeron power (478 pin), three PCI slots, one shared PCI/ISA slot, 2 ISA slots, and 1 ADD slot. This ATX motherboard has a great combination of on-board audio, on-board video, on-board LAN, and 6 USBs. If you need a second LAN ask about our special order version, the G4620-N.

The G4V620 will support flat panel display via its ADD slot (AGP Digital Display). An added feature is the direct Compact Flash boot up, which is available via the on-board Compact Flash Socket. Other industry features include voltage, fan speed, and temperature monitoring.

The G4V620 is produced under strict revision control guidelines to provide a long product life cycle (3 yrs or more). This reduces your long-term costs for system testing, certification, and maintenance. ITOX motherboards are used in a variety of applications and in many industries including those listed below.

Markets

- **Computer Telephony (CTI)**
- **Networking**
- **Medical Imaging**
- **Security**
- **Industrial Control**
- **Voice Recognition**
- **Embedded Integration**



Rev. Controlled Motherboard: G4V620-B, Special Order: G4V620-N

PROCESSOR

- Intel® Pentium® 4 Processor with Hyper-Threading Technology
- Intel® Pentium® 4 processor (478-pin)
 - 533MHz system data bus
 - 400MHz system data bus
- Intel® Celeron® processor (478-pin)
 - 400MHz system data bus

CHIPSET

- Intel® 845GV chipset
 - Intel® 845GV Graphics Memory Controller Hub (GMCH)
 - Intel® 82801DB I/O Controller Hub (ICH4)

SYSTEM MEMORY

- Two 184-pin DDR SDRAM DIMM sockets
- 2.5V unbuffered PC1600 (DDR200), PC2100 (DDR266), or PC2700 (DDR 333)SDRAM DIMM
- Supports maximum of 2GB system memory using 64Mbit,128Mbit, 256Mbit or 512Mbit technology
 - Double-sided x16 DDR SDRAM DIMM is not supported

BIOS

- Award BIOS, Windows® 98SE/2000/ME/XP Plug and Play compatible
- Supports SCSI sequential boot-up
- Flash EPROM for easy BIOS upgrades
- Supports DMI 2.0 function
- 4Mbit flash memory

ENERGY EFFICIENT DESIGN

- Supports ACPI specification and OS Directed Power Management
- Supports ACPI STR (Suspend to RAM) function
- Wake-On-Events include:
 - Wake-On-Keyboard
 - Wake-On-USB Keyboard
 - Wake-On-Ring (through internal or external modem)
 - Wake-On-LAN
 - RTC timer to power-on the system
- System power management supported
- CPU stopped clock control
- Hardware supports SMI green mode
- Microsoft®/Intel® APM 1.2 compliant
- Soft Power supported - ACPI v1.0a specification
- AC power failure recovery

DAMAGE FREE INTELLIGENCE

- Watchdog timer function
- Monitors CPU/system temperature and overheat alarm
- Monitors 5VSB/VBAT/1.5V/3.3V/±5V/±12V/Vcore voltages and failure alarm
- Monitors CPU/system/second fan speed and failure alarm
- Automatic system/second fans on/off control
- Read back capability that displays temperature, voltage and fan speed
- Opened chassis alarm
- Watchdog timer function

ONBOARD GRAPHICS FEATURES

- Graphics memory
 - Shares 512K/1MB/8MB of the system memory in DOS mode
 - Uses Dynamic Video Memory Technology (DVMT) in Windows mode
- Graphics controller
 - Core frequency of 200MHz
 - 350MHz integrated 24-bit RAMDAC
 - Analog display up to 2048x1536 @ 60Hz refresh
 - 3D setup and render engine - Discrete, Triangles, Strips and fans
 - Per pixel perspective corrected texture mapping
 - Software DVD at 30fps, full screen
- 2D graphics features
 - Optimized 256-bit BLT engine
 - 32-bit alpha blended cursor
 - Programmable 3-color transparent cursor
- 3D graphics features
 - 200 megapixels/sec fill rate
 - Maximum 3D resolution: 1600x1200x32 @ 85Hz
 - Flat and Gouraud shading
 - 16- and 24-bit Z-buffering and 16- and 24-bit W-buffering
 - Vertex and programmable pixel fogging and atmospheric effects
 - Double and triple render buffer

- Software drivers
 - Windows® 98SE/2000/ME/XP
 - Windows NT® 4.0

ONBOARD AUDIO FEATURES

- 18-bit stereo full-duplex codec with independent variable sampling rate
- High quality differential CD input
- True stereo line level outputs
- S/PDIF-out interface
- 2-channel audio output

ONBOARD LAN FEATURES

- Uses 82559 fast ethernet controller (**-N version sp. order**)
 - Integrated IEEE 802.3, 10BASE-T and 100BASE-TX compatible PHY
 - Glueless 32-bit PCI master interface
 - Glueless CardBus master interface
 - 128 Kbyte Flash interface
 - Thin BGA 15 mm2 package
- Uses 82562 fast ethernet controller
 - Basic 10/100 Client Connection. Supports 559 level cable and PHY Stats. Support for Server OS included as check item, but no Server function included
 - Same Quality Driver suits as 82559
 - Supports DMI/SNMP/WMI
 - 10/100 Auto Sensing
 - IEEE 802.3, 10BASE-T/100BASE-TX compliant physical layer interface
 - IEEE 802.3u Auto-Negotiation
 - 48-pin SSOP, 3.3V device

PCI IDE INTERFACE

- Supports ATA/33, ATA/66 and ATA/100 hard drives
- PIO Mode 4 Enhanced IDE (data transfer rate up to 14MB/sec.)
- Bus mastering reduces CPU utilization during disk transfer
- Supports ATAPI CD-ROM, LS-120 and ZIP

PROCESSOR SOCKET

- Socket 478

REAR PANEL I/O PORTS

- 4 USB 2.0/1.1 ports
- 1 RJ45 LAN port (**-N special order has 2 LAN ports**)
- 1 DB-9 serial port
- 1 DB-15 VGA port
- 1 DB-25 parallel port
- 1 mini-DIN-6 PS/2 mouse port
- 1 mini-DIN-6 PS/2 keyboard port
- 3 audio jacks: line-out, line-in and mic-in

I/O CONNECTORS

- 1 CompactFlash™ socket
- 1 connector for 2 additional external USB 2.0/1.1 ports
- 1 connector for 1 external serial port
- 1 connector for an external game/MIDI port
- 2 internal audio connectors (CD-in and AUX-in)
- 1 S/PDIF-out connector
- 1 connector for IrDA interface
- 2 IDE connectors
- 1 floppy connector
- 2 ATX power supply connectors
- 1 Wake-On-LAN connector
- 1 Wake-On-Ring connector
- 1 chassis open connector
- CPU fan, system fan and second fan connectors

EXPANSION SLOTS

- 1 ADD (AGP Digital Display) slot for flat panel support.
- 3 PCI slots
- 1 Shared PCI/ISA slot
- 2 ISA slots

COMPATIBILITY

- PCI 2.2 and AC '97 compliant

CIRCUIT BOARD (PCB)

- 4 layers, ATX form factor
- 30.5cm (12") x 24.4cm (9.6")

SAFETY

- UL, cUL, FCC Class B, CE

