

# G4V100-P

Intel® Pentium® 4 Processor and Intel® Celeron® Processor

Introduced: Q3/2004

## PROCESSOR (Socket: 478-based Intel®)

- Intel® Pentium® 4 Processor with Hyper-Threading Technology
  - 533MHz system data bus
- Intel® Pentium® 4 Processor
  - 533MHz/400MHz system data bus
- Intel® Celeron® Processor
  - 400 MHz system bus

## CHIPSET

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

## SYSTEM MEMORY

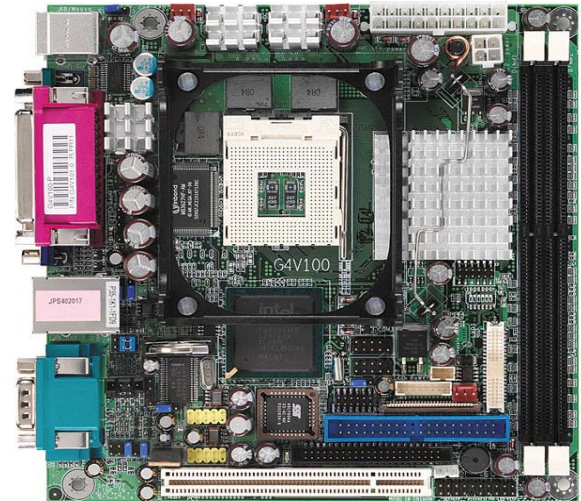
- Two 184-pin DDR SDRAM DIMM sockets
- 2.5V unbuffered PC1600 (DDR200), PC2100 (DDR266), or PC2700 (DDR333) DDR SDRAM DIMM
- Supports maximum of 2GB system memory using 64Mbit, 128Mbit, 256Mbit, or 512Mbit technology.
  - Double-sided x16 DDR SDRAM DIMM is not supported

## BIOS

- Award BIOS, Windows® 98SE/2000/ME/XP Plug and Play compatible
- Supports SCSI sequential boot-up
- 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-PS/2 Keyboard/Mouse
  - Wake-On-USB
  - Wake-On-LAN
  - Wake-On-Ring
  - 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



6.7" (17cm)

## 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
  - High quality 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
  - Supports maximum 3D resolution: 1600x1200x32 @ 85Hz
  - Flat and Gouraud Shading
  - 16-bit and 24-bit Z-buffering; and 16-bit 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 and Windows NT® 4.0



# G4V100-P Revision Controlled Motherboard

## LVDS TRANSMITTER

- Chrontel CH7017
- Supports scale up to 1600x1200 pixels
- 18-bit and 24-bit outputs
- 2D dither engine
- Support for second CRT DAC bypass mode
- Dual LVDS supporting pixel rates up to 330Mpixels/sec when both 12-bit input ports are utilized

## DAMAGE FREE INTELLIGENCE

- Monitors CPU/system temperature and overheat alarm
- Monitors 5VSB(V)/VBAT(V)/1.5V/3.3V/5V/±12V/CPU(V) voltages and failure alarm
- Monitors CPU/chassis/2nd fan speed and failure alarm
- Read back capability that displays temperature, voltage and fan speed
- Supports Watchdog Timer Function

## ONBOARD AUDIO FEATURES

- Realtek ALC202A
- 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
- Speaker-out jack supports 2W amplifier providing better audio quality to the headphone or speakers

## ONBOARD LAN FEATURES

- Intel® 82562EM fast ethernet controller
- IEEE 802.3, 10BASE-T/100BASE-TX compliant physical layer interface
- IEEE 802.3u Auto-Negotiation
- Digital Adaptive Equalization control
- Link status interrupt capability
- 10BASE-T auto-polarity correction
- Alert on LAN functionality
- LAN Connect I/F
- 1:1 transmit transformer ratio support
- Automatic detection of "unplugged mode"

## 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

## REAR PANEL I/O PORTS

- 2 USB 2.0/1.1 ports
- 1 RJ45 LAN port
- 2 DB-9 serial ports
- 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

- 2 connectors for 4 additional external USB 2.0/1.1 ports
- 1 connector for COM 3 (RS232 or LVDS)
- 1 connector for COM 4 (RS232 or RS485)
- 1 44-pin connector for LVDS LCD panel
- 1 connector for LCD power
- 1 front audio connector for speaker-out and mic-in jacks
- 1 CD-in internal audio connector
- 1 S/PDIF-out connector
- 1 connector of IrDA interface
- 1 40-pin IDE 1 connector for 3.5" HDD
- 1 44-pin IDE 2 connector for 2.5" HDD
- 1 floppy connector (FPC type)
- 2 ATX power supply connectors
- 1 Wake-On-LAN connector
- 1 chassis open connector
- 3 fan connectors

## EXPANSION SLOTS

- 1 PCI slot for PCI expansion card or Riser Card
  - G4V100-P: 1 PCI slot for PCI expansion card
  - G4V100-P (R): 1 PCI slot for customized riser card for 1, 2, or 3 PCI slot expansion (for low profile PCI card only)

## COMPATIBILITY

- PCI 2.2 and AC '97 compliant

## PCB

- 6 layers, mini-ITX form factor
- 17cm (6.7") x 17cm (6.7")

## SAFETY

- UL, cUL, FCC, CE



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