

# G4S600-B

Introduced: Q1/2004

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

ATX board with SATA support, 5 PCI, and on-board Audio, LAN, and Video

## Features:

- ATX format
- Supports Intel® Pentium® 4 processor or Intel® Celeron® processor
- Hyper Threading Technology
- Intel® 865G chipset – 400/533/800 MHz data bus
- On-board Video
- On-board LAN
- On-board Audio
- Serial ATA support
- Supports up to 8 USB (2.0)
- Stable product life cycle
- Open chassis alarm
- Monitors fan speed, temperature, and power supply voltages

The G4S600-B revision controlled motherboard offers the combination of the Intel® Pentium® 4 or Celeron® processor power (478 pin), with five PCI slots and 1 AGP 1.5V slot. This ATX motherboard has a great combination of on-board audio, on-board video, on-board LAN, and up to 8 USB 2.0 ports.

The G4S600-B features the Intel® 865G chipset on an ATX format motherboard. The 800MHz/533MHz system data bus provides a seamless user interaction while other features include read back capability that displays voltage, fan speed, temperature monitoring and a S/PDIF connector offering a digital audio interface.

12.05" (30.5cm)

8.26" (21cm)



The G4S600-B is produced under strict revision control guidelines to provide an extended product life cycle (2 years 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

- ATM machines
- POS Terminals
- Kiosk
- Gaming
- Networking
- Medical Imaging
- Security
- Industrial Control
- Voice Recognition
- Embedded Integration



# Extended Life Motherboard: G4S600-B

## Intel® 865G Chipset, ATX System Board

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

- Intel® Pentium® 4 Processor with Hyper-Threading Technology
  - 800MHz/533MHz system data bus
- Intel® Pentium® 4 Processor
  - 533MHz/400MHz system data bus
- Intel® Celeron® Processor
  - 400MHz system data bus

### CHIPSET

- Intel® 865G chipset
  - Intel® 865G Graphics Memory Controller Hub (GMCH)
  - Intel® 82801EB I/O Controller Hub (ICH5)

### SYSTEM MEMORY

- Supports dual channel (128-bit wide) memory interface
  - Each channel supports 2 DIMM sockets
- Supports up to 4GB system memory
- Synchronous operation with processor system bus
  - PC2100/PC2700/PC3200 (DDR266/DDR333/DDR400) with 800MHz FSB CPU
  - DDR333 will run at 320MHz memory frequency when used with 800MHz FSB CPU
  - PC2100/PC2700 (DDR266/DDR333) with 533MHz FSB CPU
  - PC2100 (DDR266) with 400MHz FSB CPU
- Supports non-ECC (x64) DIMM using 128Mb, 256Mb, or 512Mb
- Supports unbuffered DIMMs

### 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
- 2Mbit 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/Mouse
  - Wake-On-USB Keyboard
  - Wake-On-Ring (external modem) and Wake-On-Lan
  - RTC timer to power-on the system
- System power management supported
- CPU stopped clock control
- Microsoft®/Intel® APM 1.2 compliant
- Soft Power supported - ACPI v1.0a specification
- AC power failure recovery

### 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
- Opened chassis alarm

### ONBOARD GRAPHICS FEATURES

- Graphics memory
  - Shares 1MB/4MB/8MB/16MB/32MB of the system memory in DOS mode
  - Uses Dynamic Video Memory Technology (DVMT) in Windows mode
- Graphics controller
  - Core frequency of 266MHz
  - 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 Realtek RTL8101L fast ethernet controller
- Integrated IEEE 802.3, 10BASE-T and 100BASE-TX compatible PHY
- 32-bit PCI master interface
- Integrated power management functions
- Full duplex support at both 10 and 100 Mbps
- Supports IEEE 802.3u auto-negotiation
- Supports wire for management

### 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

### SATA IDE INTERFACE

- Supports two SATA (Serial ATA) interfaces which are compliant with SATA 1.0 specification (1.5Gbps interface)

### ACCELERATED GRAPHICS PORT (A.G.P.)

- Supports 1.5V AGP 8x (2.13GB/sec.) and AGP 4x (1066MB/sec.) for 3D graphics applications (AGP 2x and 3.3V AGP card are not supported)
- Supports AGP 3.0 and AGP 2.0 spec

### REAR PANEL I/O PORTS

- 2 USB 2.0/1.1 ports
- 1 RJ45 LAN port
- 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
- 1 game port
- 3 audio jacks: line-out, line-in and mic-in

### I/O CONNECTORS

- 3 connectors for 6 additional external USB 2.0/1.1 ports
- 1 connector for 1 external serial port
- 1 front audio connector for external line-out and mic-in jacks
- 1 CD-in internal audio connector
- 1 S/PDIF-out connector (audio digital interface)
- 1 connector for IrDA interface
- 2 Serial ATA, 2 IDE, and 1 floppy connectors
- 2 ATX power supply connectors
- 1 Wake-On-LAN connector
- 1 opened chassis alarm connector
- 3 fan connectors for CPU fan, chassis fan and 2nd fan

### EXPANSION SLOTS

- 1 AGP slot-1.5V
- 5 PCI slots

### COMPATIBILITY

- PCI 2.2 and AC '97 compliant
- Intel® AGP version 3.0

### PCB

- 4 layers, ATX form factor
- 30.5cm (12.05") x 21cm (8.26")

### SAFETY

- UL, cUL, FCC Class B, CE

