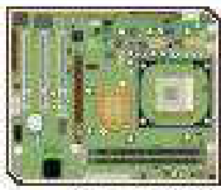
Columbia GX (GA-8SIML) Ver 1.0 µATX motherboard



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The Columbia GX is based on the Columbia motherboard. The differences on the Columbia GX are:

- Some multimedia features have been removed from the SIS 650 chipset.
- Different audio chipset: Sigmatel STAC9750T.
- Another Ethernet controller: RTL8100(BL).

Table of Contents

Specifications

Form Factor

- µATX 24.4 × 22.9 cm Form Factor.

CPU Support

- Socket MPGA 478B.
- Supports Intel P4 FC-PGA2 (0.18 Micron, 256 K cache, 400 MHz FSB), 1.4 to 2.4 GHz
- Supports Intel P4 FC-PGA2 (0.13 Micron, 512 K cache, 400 MHz FSB), 1.8 to 2.4 GHz
- Supports Intel Celeron FC-PGA2 (0.18 Micron, 128K cache 400 MHz FSB) 1.9 GHz
- 100 MHz (x4 = 400 MHz) data bus support (Quad-Bumped technology)

System Memory

- Supports 2 memory slots
- Serial Presence Detect (SPD) support
- Supports a maximum memory size of 1GB (using 2 × 512 MB memory modules)
- Support only 2.5 V DIMM DDRAM configurations
- Unbuffered type support
- 266 MHz DDR interface

Core Logic (Chipset)

The SiS 650 IGUI HMAC 3D Graphic SDR/DDR Chipset features

- Processor Host/Bus support (400 MHz data transfer rate)
- Supports DDR 266/200 SDRAM or PC 133/100 SDRAM
- AGTL+ and AGTL compliant bus driver auto compensation
- AGP 2.0 compliant
- Supports additional AGP 4X/2X interface and Fast Write Transaction

The SiS 961 MuTIOL Media I/O features

- PCI rev 2.2 specification support.
    - Supports PCI bus at 33 MHz.
    - 3 PCI bus masters slots (1 combo with CNR connector).
    - 133 MB/s maximum throughput.
- Integrated IDE controller supporting PIO Mode 4 transfers at up to 14 MB/s, Ultra ATA/33 mode transfers at up to 33 MB/s, and Ultra ATA/66 mode transfers up to 66 MB/s and Ultra ATA/100 mode transfers at up to 100 MB/s.
- Two USB controllers, supporting wake-up from sleeping states S1-S4, and legacy mouse/keyboard software.

  Note: There is support for 4 USB ports on the motherboard, all of which are active at the same time (so no need for a USB selection jumper). Two of the USB ports are on the back panel, and the onboard F_USB2 header can be connected to two USB ports.
- AC'97 link for audio and telephony codecs (AC'97 2.2 interface).
- SMBus interface.

I/O controller

WINBOND W83697HF I/O Controller with the following features:

- PS/2 keyboard and mouse controller
- Floppy disk controller supporting one FDD with 360 K, 720 K, 1.2 M and 1.44 MB
- 2 serial ports, both 16C550 Fast UART compatible
- 1 Parallel port supporting SPP (Standard Parallel Port), EPP (Enhanced Parallel Port), and ECP (Extended Capabilities Port) modes, and BPP (Bi-directional Printer port)
- 1 MIDI/game port
- Hardware monitoring
- Fan speed monitoring
- Built-in case open detection circuit
- Watchdog comparison of all monitored values

Audio Chipset

Integrated on the SigmaTel Technologies STAC9750T - audio codec

- DirectSound AC'97 2.2 audio
- Inputs and outputs: Stereo inputs for line-in, CD audio, mono inputs for microphone and TAD, MPU-401 (UART mode) interface for wavetable synthesisers and MIDI devices; integrated game port.
- Mixer features: Mixer with stereo for line, CD audio, auxiliary, music synthesiser, digital audio (wave files), and mono for microphone and speakerphone
- Features: 3D stereo enhancement for simulated surround, power management support
- SPDIF output for PCM & AC3 sound formats

Ethernet Controller

RTL8100(BL) PCI/Mini-PCI, Single-Chip Fast Ethernet Controller with Power Management, 10 Mbps 10 Base-T and 100 Mbps 100 Base-TX support

- Conforms to IEEE802.3u 100 Base-TX and IEEE802.3x Full Duplex Flow Control.
- 10/100 Mbps Half/Full duplex operation and IEEE802.3u auto negotiation.
- Supports Wake on LAN features.
- Remote power on.
- Remote wake up.
- Advanced Configuration and Power Interface (ACPI) 2.0 and PCI Power Management Specifications 2.0 compliant.
- Supports Wake-On-LAN function and remote wake-up (Magic Packet)
- The ethernet address, Vendor ID and Configuration register are stored in the EEPROM.
- Compliant to PC99/PC2001 standard.
- PCI 2.1 and PCI 2.2 compliant.

BIOS Specifications

AMI BIOS, including support for:

- Plug and Play.
- Advanced Configuration and Power Interface (ACPI) 1.0
- Advanced Power Management (APM) 1.2
- Y2K
- PC 2001
- S3 mode
- Desktop Management Interface (DMI).
- 2 Mbits flash device.
- Language supported: English.
- POST

Compliance

SPECIFICATION	DESCRIPTION
µATX	µATX form factor specifications
AGP 1.0	Accelerated Graphics Port
APM	Advanced Power Management BIOS interface specification
ACPI	Advanced Configuration and Power management Interface
EPP	Enhanced Parallel Port IEEE 1284 standard, mode 1 or 2
BPP	Bi-directional Print Port
ECP	Extended Capabilities Port
ATA-33 ATA-66 ATA-100	Synchronous DMA Transfer Protocol specification (to be proposed as Ultra DMA/33 standard)
PCI 2.2	PCI Local Bus specification
Plug and Play	Plug and Play BIOS specification
USB	Universal Serial Bus specification

How to configure..

BIOS

- Columbia GX Motherboard BIOS Screens — 07-04-2004

Jumpers

- Columbia GX Jumpers and Connectors — 07-04-2004