Columbia IV (GA-8SIML) Ver 1.2 µATX motherboard

Specifications

- Form Factor: µATX 24.4 x 22.9 cm Form Factor

CPU Support

- Socket mPGA 478B
- Supports Intel P4 FC-PGA2 (Flip-Chip Pin Grid Array), 1400 MHz to 3066 MHz.
- Warning: not all of the above processors have been qualified.
- 100 MHz (x4 = 400 MHz) data bus support (Quad-Bumped technology).
- 133 MHz (x4 = 533 MHz) data bus support (Quad-Bumped technology).

System Memory

- Supports 2 memory slots.
- Serial Presence Detect (SPD) support
- Supports a maximum memory size of 1 GB (using 2 x 512 MB memory modules)
  Warning: Not all memory configurations have been qualified!
- Support only 2.5 V DIMM DDRAM configurations
- Unbuffered type support

Core Logic (Chipset)

- The SiS 645 DX DDR333 Chipset features:
    - Processor Host/Bus support (533MHz data transfer rate).
    - Supports DDR333/266 SDRAM.
    - AGTL+ and AGTL compliant bus driver auto compensation
    - AGP V2.0 Compliant
    - Supports Additional AGP4X/2X interface and Fast Write Transaction
- The SiS 962 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 and ATA/133 mode transfers up to 133 MB/s.
    - 3 USB controllers, supporting wake-up from sleeping states S1-S3, and legacy mouse/keyboard software. Note about the USB features: There is support for 6 USB ports on the motherboard, all of which are active at the same time (thus no need for a USB selection jumper). 4 of the USB ports are on the back panel, and the onboard F_USB2 header can be connected to two USB ports.
    - 6 USB USB 2.0
    - IEEE 1394a Controller Integrated: Up to three 1394a ports support w/ external 1394a PHY.
    - AC'97 link for audio and telephony codecs (AC'97 2.2 interface)
    - SMBus interface in post only.
    - PC2001 Compliance

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 MB and 1.44 MB
- 2 serial ports, both 16C550 Fast UART compatible.
- 1 Parallel port supporting SPP (Standard Parallel Port), EPP (Enhanced Parallel Port), 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 Sigmatel STAC9750T -audio codec

- DirectSound AC'97 2.2 Audio
- Inputs and Outputs: Stereo inputs for line-in, CD audio, Auxiliary, mono inputs for microphone and TAD, MPU-401 (UART mode) interface for synthesizers and MIDI devices. Integrated game port.
- Mixer Features: mixer with stereo for line, CD audio, auxiliary, music synthesizer, digital audio (wave files), and mono for microphone and speaker phone.
- Features: 3D stereo enhancement for simulated surround, Power management support.
- SPDIF output for PCM and AC3 sound formats.

Ethernet Controller

Realtek RTL8100(BL) PCI/Mini-PCI Single-Chip Fast Ethernet Controller with Power Management10 Mbps 10 Base-T and 100 Mbps 100 Base-TX support

- Conforms to IEEE802.3u 100Base-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 Mbit flash device.
- Language supported: English
- POST

Compliance

SPECIFICATION	DESCRIPTION
μATX	μATX form factor specifications
AGP	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)
ECP	Extended Capabilities Port
BPP	Bi-directional Print Port
ATA-33/66 /100/133	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

Jumpers

The Columbia IV motherboard has 2 jumper settings:

- Clear CMOS jumper
- Safe Mode/Recovery/Normal selection jumper

CLR_CMOS: CLEAR CMOS JUMPER	
1-2	*Enable*
2-3	Normal (Default)

SAVE MODE: SAFE MODE/RECOVERY/NORMAL SELECTION JUMPER	
1-2	Normal (default)
2-3	Safe Mode
removed	Recovery: BIOS recovery

Connectors

INTERNAL CONNECTORS		
Denomination on drawing	**Name**	**Type**
ATX	Power Connector	16 pin Keyed Connector
AUX_12V	Power Connector	4 pin Keyed Connector
CPU_FAN	CPU fan connector	3 pin header (brown)
FDD	Floppy Drive connector	34 (2x17) pin Shrouded Header
IDE 1	Primary IDE connector	40 (2x20) pin header (blue)
IDE 2	Secondary IDE connector	40 (2x20) pin header (white)
PCI 1, 2 &3	PCI connectors	standard PCI expansion slots
AGP	Accelerated Graphics Port	standard AGP connector
CNR	Communications and Networking Riser	standard CNR connector
SOCKET	CPU connector	mPGA 478B socket
DDR1 & 2	DDR sockets	184 pin standard sockets
CD	CD-ROM Audio Line In	4 pin header (black)
CI	Chassis Intrusion	2 pin header (white)
CLR_CMOS	Clear CMOS/Normal jumper	3 pin jumper
SAFEMODE	Safe mode/Recovery/Normal selection jumper	3 pin jumper
AUX_IN	Auxiliary In	4 pin header (white)
TELE	Modem In	4 pin header (green)
SPDIF	SPDIF	3 pin header (black)
BATT	CMOS battery socket	
COMB	Serial port header	10 pin dual row header (- 1 key)
F_USB_NF	USB header	10 pin dual row header (- 1 key)
F_1394_NF	IEEE Connector	10 pin dual row header (- 1 key)
F_PANEL	Front panel Connector	2x9 pin header (- 1 key)

BACK PANEL CONNECTORS		
Name	**Function**	**Type**
A	PS/2 Mouse port	6 Pin Mini-DIN
B	PS/2 Keyboard port	6 Pin Mini-DIN
L	RJ45 LAN Connector	RJ45
C	USB port 1	
D	USB port 2	
J	Printer / EPP / ECP and BPP port	25 pin SUB D
E	Serial port COMA	9 pin SUB D
K	Fire Wire Port	IEEE 1394
M	USB port 3	
N	USB port 4	
G	Stereo line out	jack socket
H	Stereo line in	jack socket
I	Mono Microphone in	jack socket
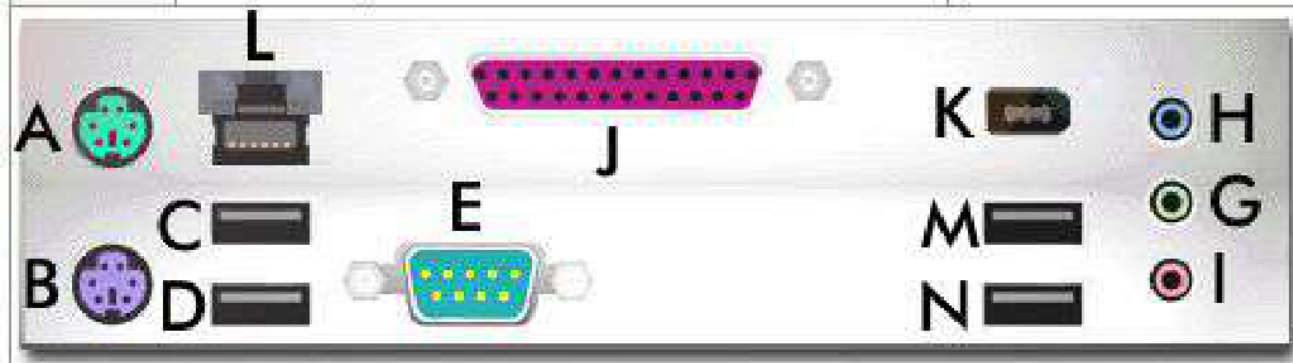
How to configure..

BIOS

▸ Columbia IV Motherboard BIOS Screens

15-05-2003

Related items

Download

- Columbia II / Columbia IV BIOS
  Version: [2.0U] WinXP

Support articles (FAQ)

- Video card blocks access to DIMM socket