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Chapter 1

1. Specification

@Chipset: INTEL 82443 BX AGP set.

@CPU: INTEL PENTIUMIICPU at 233MHz~450MHz (SLOT1).

*Host bus frequency: 66MHz / 100MHz.

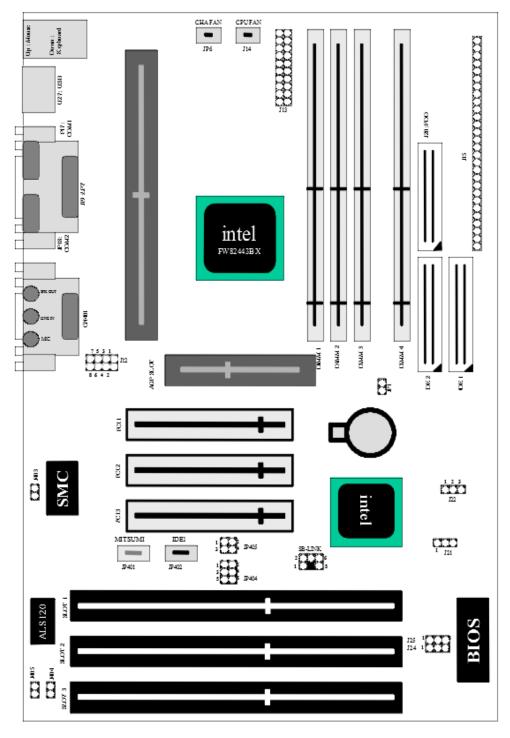
- @Four 168 pin DIMM sockets to support (8, 16, 32, 64, 128 or 256MB) 3.3V EDO DRAM or SDRAM.
- @Switching Voltage Regulator.
- @Optional GL518SM: with Digital Temperature Sensor, Thermal Watchdog,

Voltage Monitors, Fan Speed Monitors & ON / OFF Control.

- @Supports one AGP slot, three ISA slots and three PCI slots.
 - *Accelerated Graphics Port Supports AGP 66MHz / 133MHz (2X).
- @Dual Master IDE connectors support up to four IDE devices.
- @Dual channel Ultra DMA / 33 Bus Master IDE ports (Support up to 4 IDE devices and LS-120MB Floppy Drive) Support:
- *PIO Mode 3&4.
- *DMA Mode 2.
- *Ultra DMA / 33.
- @Supports USB Connector.
- @Supports PS/2 keyboard and mouse connector.
- @One FDC port supports two devices up to 2.88MB.
- @Supports IrDA TX / RX header.
- @Supports ACPI.
- @When you set up your clock at 100MHz, Please use RAM Module: SDRAM under -8 or include -8 (80NS).
- @Highly-integrated plug and play audio subsystem for IDE CD-ROM.
- @Subsystem control logic.
- @Built-in 3D Sound Effect Processor.
- @Digital to analog and analog to digital conversions.
- @Mixer functions.
- @Built-in ALSFM Synthesizer.
- @Enhanced Game/MIDI port support.
- @ALS120 fully supports the ISA Plug and Play standard. For non-ISA Plug and Play compatible systems, a software utility "ISA Configuration Utility" (ICU) is available that sets the IRQ and DMA addresses.

Chapter 2 Hardware Configuration

1. Layout Placement



INTEL 82440 BX-S ATX

2. Jumper Setting

J12: CPU Voltage Frequency Ratio Jumper Setting

Ratio Jumper	X3.0	X3.5	X4.0	X4.5	X5.0	X5.5	X6.0
J12	1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	1 2 2 2	1 2 2 2 2 2	1 2 2 2 2 2	1 2 2 2 2 2	1 2	

J24: ROM size J25: Flash ROM Type Voltage J22: CMOS Clear Function Select

Jumper	2M 1M	
J24		

Jumper	+12V	+5V
J25	1	1

Jumper	Normal	Clear CMOS	
J22		1	

JP1: CPU Clock Generator Jumper Setting

Jumper	66MHz	100MHz or Auto
JP1		

JP404 \(JP405 : Sound \) Line Out / Speaker Setting

	LINE OUT	SPK OUT	
JP404	1 3 5	1 3 5	
JP405	OFF	1 2	

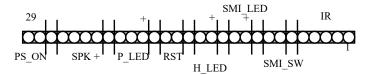
J403: MIC Mono/Stereo

<u></u>	ூ J403
1 Mono	
Stereo	

J404 \ J405: Sound Disable/ Enable

	SOUND CHIPS DISABLE	SOUND CHIPS ENABLE
J404		
J405		

J25: Other Jumper Setting



Other Jumper Setting

JP6	CHA FAN
JP7: SB-LINK	SB-LINK connector can support Creative-compatible PCI sound card. If you have a
PCI Sound Card	Creative-compatible PCI sound card installed, it is necessary to link the card to SB-
connector	LINK connector for compatibility issue under DOS environment.
J11	Up: PS/2 Mouse port
J11	Down: Keyboard port
J13	ATX Power Connector
J14	CPU FAN
J16: EISCA Cooler	External Thermal Sensor & Temperature Controller.
J10. EISCA Coolei	Note: EISCA (Enhanced Intelligent System Cooler Architecture)
J17	COM1
J18	COM2
J19	LPT Connector
J20	FDD Connector
121. I AN WAVELID	By using a network card that supports this feature and a network management software
J21: LAN_WAKEUP	(such as ADM), you can wake up a system through a local area network.
U26	AGP Slot
U27	USB Connector

JP401	CD AUDIO IN (MITSUMI)
JP402	CD AUDIO IN (IDE1)

3. CPU Quick Index

CPU TYPE	PRINTING	MHz	MUL / BUS	J12	JP1
Pentium® II 233 MHz	233MHz	233	X3.5 / 66	1-2&7-8	CLOSE
Pentium® II 266 MHz	266MHz	266	X4.0 / 66	3-4&5-6&7-8	CLOSE
Pentium® II 300 MHz	300MHz	300	X4.5 / 66	3-4&7-8	CLOSE
Pentium® II 333 MHz	333MHz	333	X5.0 / 66	5-6&7-8	CLOSE
Pentium® II 350 MHz	350MHz	350	X3.5 / 100	1-2&7-8	OPEN
Pentium® II 400 MHz	400MHz	400	X4.0 / 100	3-4&5-6&7-8	OPEN
Pentium® II 450 MHz	450MHz	450	X4.5 / 100	3-4 & 7-8	OPEN
Pentium [®] !!! 450 MHz	450MHz	450	X4.5 / 100	3-4 & 7-8	OPEN
Pentium [®] !!! 500 MHz	500 MHz	500	X5.0 / 100	5-6 & 7-8	OPEN

CPU TYPE	PRINTING	MHz	MUL / BUS	J12	JP1
Pentium® Celeron 266	266MHz	266	X4 / 66	3-4&5-6&7-8	CLOSE
MHz					
Pentium® Celeron 300	300MHz	300	X4.5 / 66	3-4&7-8	CLOSE
MHz					
Pentium® Celeron 300A	300MHz	300	X4.5 / 66	3-4&7-8	CLOSE
MHz					
Pentium® Celeron 333	333MHz	333	X5/66	5-6&7-8	CLOSE
MHz					
Pentium® Celeron 366	366MHz	366	X5.5 / 66	7-8	CLOSE
MHz					
Pentium® Celeron 400	400MHz	400	X6 / 66	1-2&3-4&5-6	CLOSE
MHz					

4. ALS120 Introduction

The ALS120 Integrated Audio Subsystem is a single chip designed for plug and play specification which minimizes support and installation issues. This highly-integrated plug and play audio subsystem for IDE CD-ROM interface incorporates the following functions:

- Subsystem control logic.
- Built-in 3D Sound Effect Processor.
- Digital to analog and analog to digital conversions.
- Mixer functions.
- Built-in ALSFM Synthesizer.
- Enhanced Game/MIDI port support.
- The ALS120 fully supports the ISA Plug and Play standard. For non-ISA Plug and Play compatible
 systems, a software utility "ISA Configuration Utility" (ICU) is available that sets the IRQ and DMA
 addresses. Sound card implementations designed around the ALS120 are completely jumper and switch
 free.

Input/Output Connections

Phonejacks, connectors, and headers are used to connect other devices to the sound cards. A phonejack is a single hole receptacle for a phoneplug and headers and connectors are multi-hole receptacles for multi-pin plugs. The Mainpeaker Out, Line Out, Line In, and Microphone In connections are phonejacks, the Game/MIDI Port is a D-shell 15-pin connector, and the Wavetable, CD-ROM audio, CD-ROM data/external controller connections are headers of various sizes.

Speaker Out - The Speaker Out phonejack provides the built-in power amplifier outputs for the left and right stereo channels. The power amplifier has a maximum output power of two watts per channel with four ohm speakers.

Line In - The Line In phonejack is used to attach monaural or stereo devices such as a cassette, Digital Audio Tape, or Minidisc players for playback, mixing, or recording.

Mic In - The Microphone In phonejack is used to attach a monaural microphone for live audio input for playback, mixing, or recording.

Game/MIDI Port - The Game/MIDI Port connector is used to attach a joystick for game interaction or to attach an external MIDI device for playback, mixing, or recording.

ATAPI IDE/Sony CD-ROM Audio - The ATAPI IDE/Sony CD-ROM Audio connector is used to connect the audio cable from either an ATAPI IDE or Sony CD-ROM drive for playback, mixing, and recording.

Mitsumi CD-ROM Audio - The Mitsumi CD-ROM Audio connector is used to connect the audio cable from a Mitsumi CD-ROM drive for playback, mixing, or recording. Only one of the two CD-ROM audio connectors may be used at a time.