ST-160

User' s

Manual

A Socket7 Processor based mainboard (100/66 MHz)
Supports PC100 Memory Modules

FCC INFORMATION TO THE USER

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one more of the following measures:

-. Reorient or relocate the receiving antenna.

-. Increase the separation between the equipment and receiver.

-. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

-. Consult the dealer or an experienced radio/TV technician for help.

WARNING

Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.
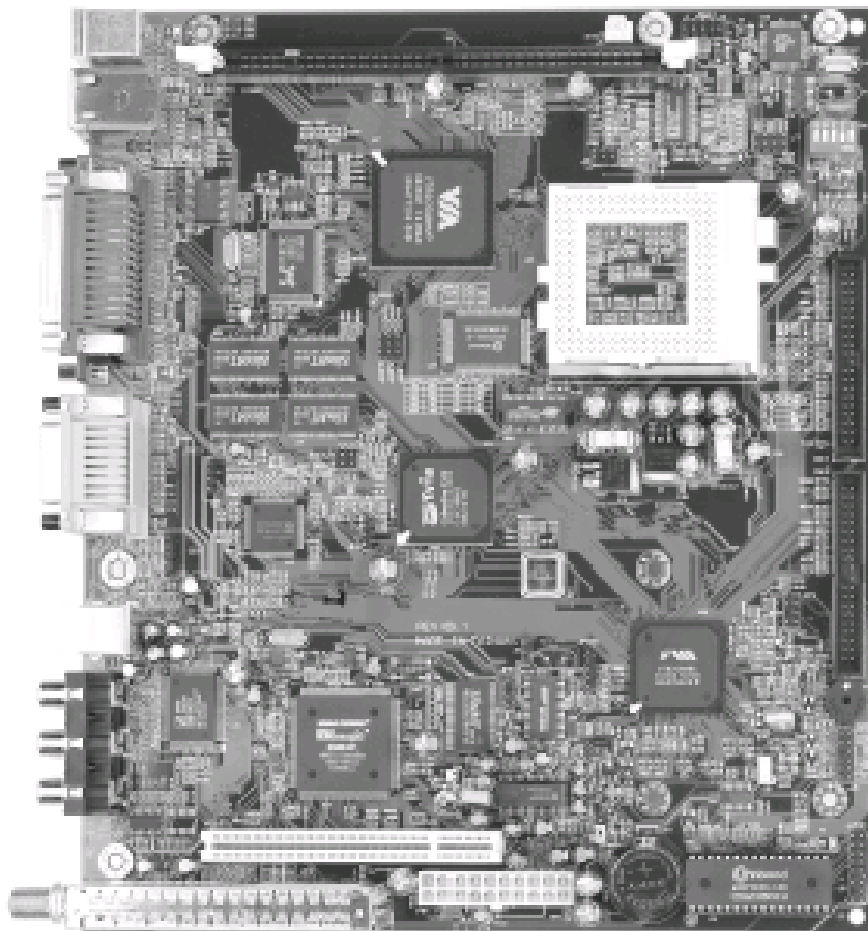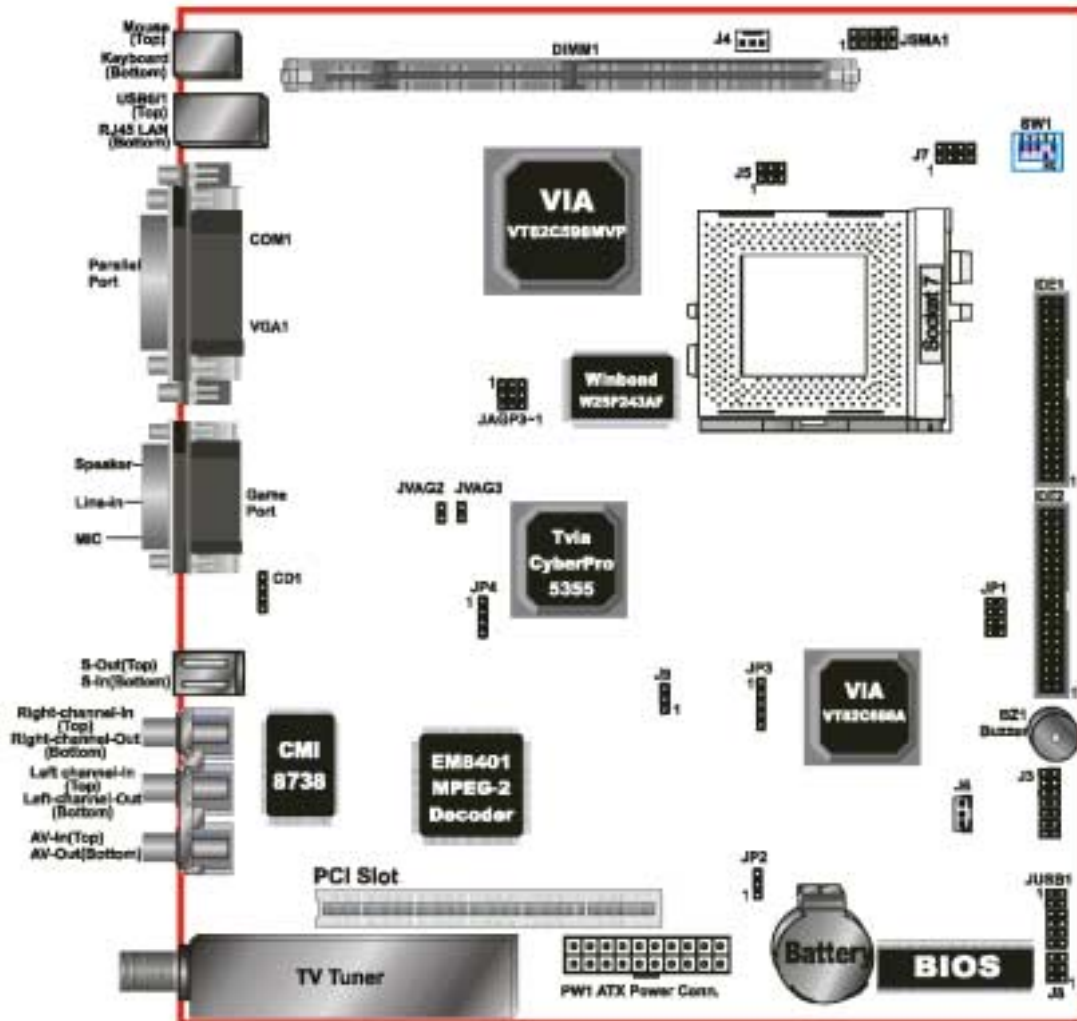
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INSTALLATION

Mainboard Detailed Layout

Figure 1

Easy Installation Procedure

The following must be completed before powering on your new system:

3-1.   **CPU Insertion**

3-2.   **Jumper Settings**

3-3.   **System memory Configuration**

3-4.   **Device Connectors**

Section 3-1
CPU Insertion
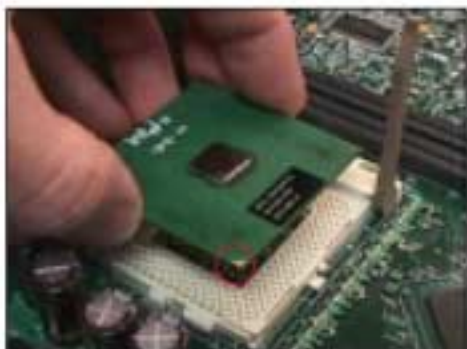
CPU Insertion

Figure 2

Step 1

Open the socket by raising the actuation lever.

Figure 3

Step 2

Insert the processor.

Ensure proper pin 1 orientation by aligning the FC-PGA corner marking with the socket corner closest to the actuation arm tip. The pin field is keyed to prevent mis-oriented insertion.

Don't force processor into socket. If it does not go in easily, check for mis-orientation and debris. Make sure the processor is fully in-serted into the socket on all sides.

Installation

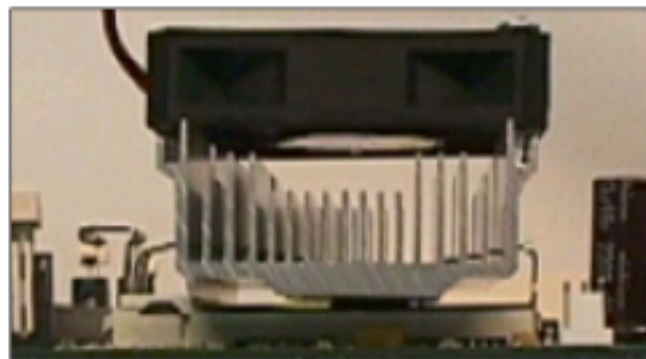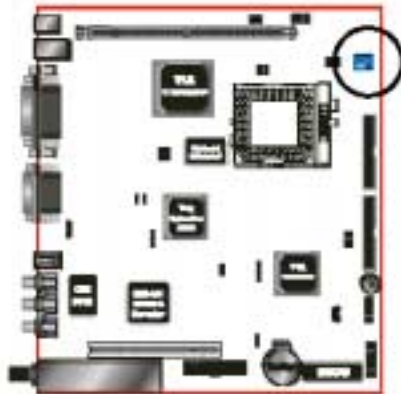

Figure 4

Step 3

Close the socket by lowering and locking the actuation lever.

Note: Intel's reference design thermal solution is an active heatsink; an extruded aluminum heatsink based and a fan attached to the top on the fin array. (See Figure 5)

*Figure 5*

Section 3-2
Jumper Settings

SW1

CPU Vcore Voltage Selection

SW1					CPU Vcore
1	2	3	4	5	(V)
ON	ON	ON	ON	OFF	3.5
OFF	ON	ON	ON	OFF	3.4
ON	OFF	ON	ON	OFF	3.3
OF	OF	ON	ON	OFF	3.2
ON	ON	OFF	ON	OFF	3.1
OFF	ON	OFF	ON	OFF	3.0
ON	OFF	OFF	ON	OFF	2.9
OFF	OFF	OFF	ON	OFF	2.8
ON	ON	ON	OFF	OFF	2.7
OFF	ON	ON	OFF	OFF	2.6
ON	OFF	ON	OFF	OFF	2.5
OFF	OFF	ON	OFF	OFF	2.4
ON	ON	OFF	OFF	OFF	2.3
OFF	ON	OFF	OFF	OFF	2.2
ON	OFF	OFF	OFF	OFf	2.1
ON	ON	ON	ON	ON	2.0

*Note: any Vcore setting over CPU specification
may cause CPU to be burned.
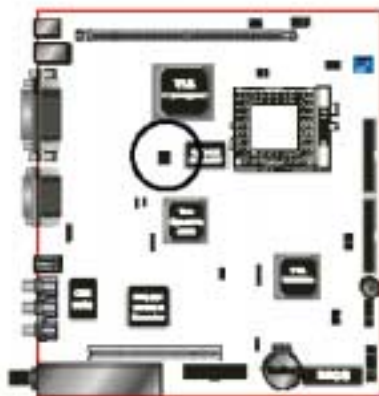
JAGP1
JAGP2
JAGP3
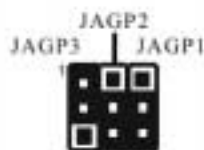
JAGP1: Setting MVP3 SDRAM Clcok
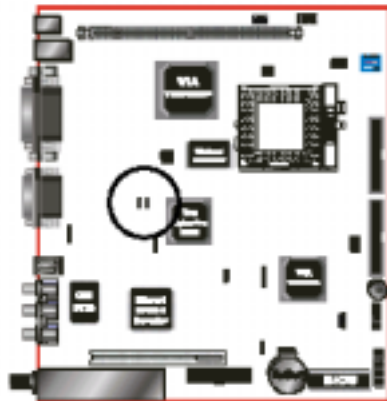1-2: AGP Clock
2-3: CPU Clcok (Default)

JAGP2/JAGP3: Setting MVP3 Bus Clcok

JAGP2	JAGP3	CPU	AGP	
2-3	1-2	60/66	60/66	
1-2	1-2	75	60	
2-3	1-2	100	66	(Default)

JVGA2
JVGA3
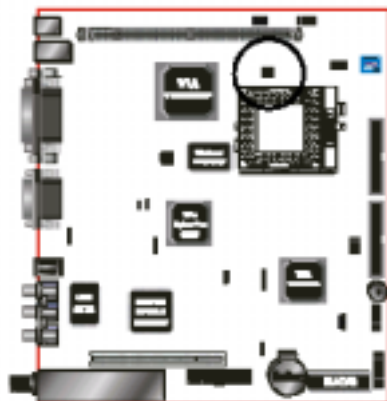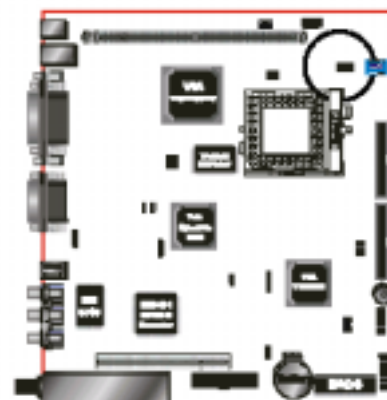
JVGA2   JVGA3

JVGA2: SCART Select
JVGA3: NTSC/PAL Select

J5

CPU BUS Rating

J5	CPU Bus Rating
1-2	2X
1-2, 3-4	2.5X
3-4	3X
None	3.5X
1-2, 5-6	4X
1-2, 3-4, 5-6	4.5X
3-4, 5-6	5X
5-6	5.5X

J7

Freguency Select

J7	CPU	PCI	AGP	
1-2	66.8	33.4	66.8	
1-2, 3-4	75	37.5	75	
1-2, 5-6	83	33.3	83	
3-4, 5-6	95	63	31	
None	100	33	100	(Default)
7-8	Select SDRAM Clcok Close: AGP clcok Open: CPU Clcok (Default)			

JP2

CMOS Clear
1-2: Normal (Default)
2-3: Clear CMOS

Section 3-3
System Memory Configuration

Memory Layout

The board supports (1) PC100 168-pin DIMMs (Dual In-line Memory Module). The DIMMs is for SDRAM (Synchronous DRAM) .

- DIMM SDRAM may be 83MHz (12ns), 100MHz (10ns).

- If you use both 50ns and 60ns memory you must configure your BIOS to read 60ns.

- When using Synchronous DRAM we recommend using the 4 clock variety over the 2 clock.

Figure 6 and Table 1 show several possible memory configuration.

DIMM 1	Bank 0/1 – Synchronous DRAM

Figure 6

Total Memory	DIMM 1 (Bank 0/1)
= 256MB Maximum	SDRAM* 32MB, 64MB, 128MB, 256MB X 1

Table 1

* *SDRAM supports 32, 64, 128, 256MB DIMM modules.*

* *We recommend to use PC100 Memory Module for bus speed.*

* *Using non-compliant memory with higher bus speed (over clocking) may severely compromise the integrity of the system.*

DIMM Module Installation

Figure 7 displays the notch marks and what they should look like on your DIMM memory module.

DIMMs have 168-pins and two notches that will match with the onboard DIMM socket. DIMM modules are installed by placing the chip firmly into the socket at a 90 degree angle and pressing straight down (figure 8) until it fits tightly into the DIMM socket (figure 9).
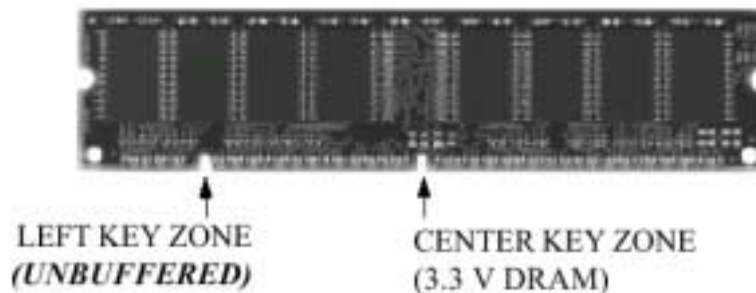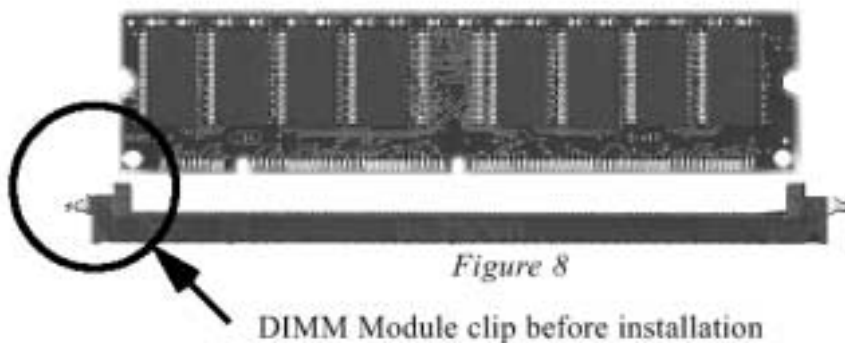

LEFT KEY ZONE   CENTER KEY ZONE
(UNBUFFERED)   (3.3 V DRAM)

Figure 7

Figure 8

DIMM Module clip before installation

Figure 9

DIMM Module clip after installation
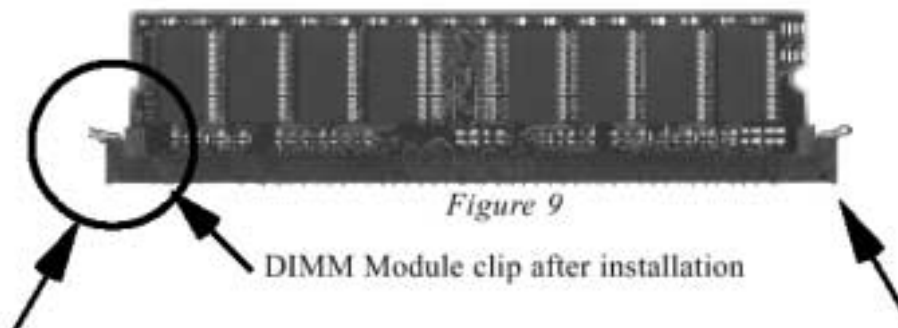
To remove the DIMM module simply press down both of the white clips on either side and the module will be released from the socket.

Section 3-4
Device Connectors

Figure 10

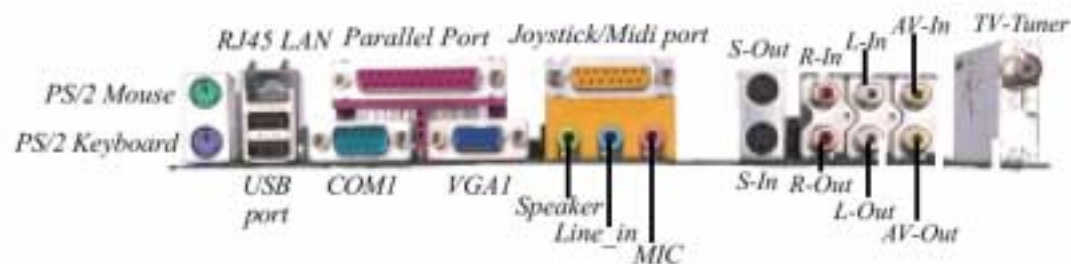**J3:** Power & LED Connector

1-3: Power Button	5: Key Pin
7-9: Reset Switch	2-4: Power LED
6-8: HDD LED	11-12: LAN LED or Message LED

J4: CPU Fan

• A plug-in for the CPU Fan Power

J6: WOL (Wake On Lan) Connector

J8: Front Audio Connector

1: SPK-R	2: SPK-L
3. MIC	4: Key
5-6: Audio GND	

J9: Keyboard VCC Voltage Select: 5V or 5VSB.

JP1: DVD Button Connector

1: NC	2: GPI
3: GPI	4: GP18
5: KEY	6: GP16
7: GND	8: GP10

JP3: Consumer IR Connector

1: RXD	2: VCC
3:KEY	4: GND

JP4: Reserved for TV

JSMA1: SMART Card Reader

1: VCC	2: CS
3: Reset	4: Data
5: CLK	6: CTS2
7,9: GND	8: LED
10: KEY	

JUSB1: Front USB Connector

1, 10: USB VCC	3, 8: USB 2-, 3-
5, 6: USB 2+, 3+	7, 9, 2, 4: GND

IDE1: Primary IDE Connector (Black color)

IDE2: Secondary IDE Connector (Black color)

PW1: ATX Power Connector
- 20-pin power connector

CD1: CD Audio_IN Connector
- Pin1(CD_IN_Left), Pin2/Pin3(CD_Reference), Pin4(CD_IN_Right)

BZ1: Buzzer

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