

TM-VA370E
PCI/ AGP/AMR Mainboard

Version: 1.0

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Overview

The **TM-VA370E** is a PPGA-Celeron based mainboard that utilizes VIA 694A+686A chipset, a high level of integrated function. This mainboard is designed for Celeron & 133 MHz CuMine FC-PGA CPU, and support new architectures such as high speed AGP graphic port, ATA33/66(VIA) Bus Master IDE, Sound On Board, SDRAM memory and expandable to a maximum 768MB. There is no second level cache onboard since the cache is on the CPU.

In addition to above features, this mainboard implements most advanced technology such as Synchronous switching regulator, CPU thermal protection, CPU fan monitoring, System voltage monitoring, Over current protection, Modem Wake Up, Keyboard Power On, PS/2 mouse Power On, Debug sensor on board.

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Introduction

A. Specifications

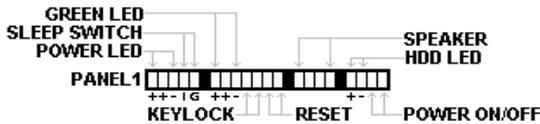
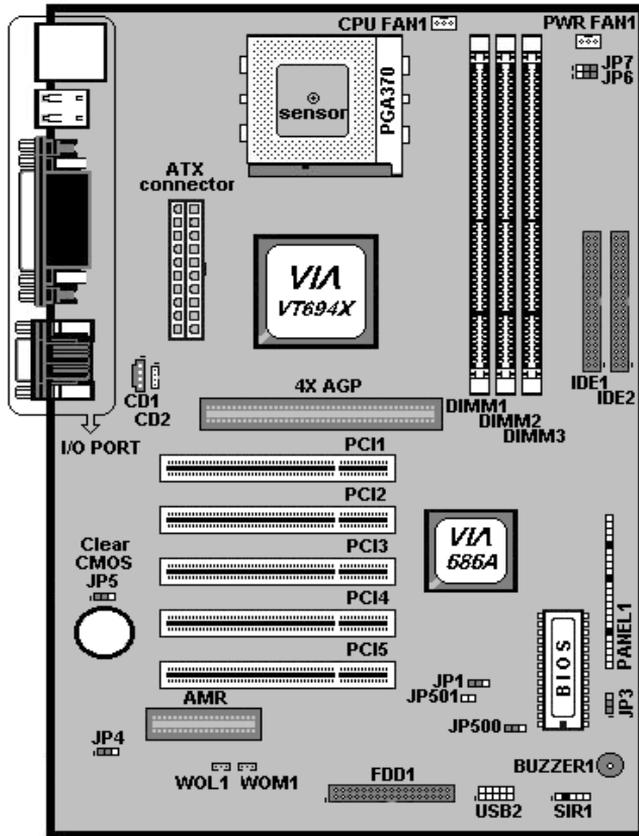
System Chipset	VIA 694A+686A chipset.
CPU	Intel PPGA-Celeron processors, support 300/333/366/400/433/466/500/533/566/600 (Ex. Clk 66 MHz); CuMine FC-PGA 450/500/550/ 600/ 650/ 700/750/ 800 (Ex. Clk 100 MHz); CuMine FC-PGA 533/600/667/733/800 (Ex.Clk 133 MHz) CPU.
Memory	Expandable to 1.5GB (3 banks) with three 168-pin DIMM socket {support 3.3 V EDO (66MHz only) / SDRAM (66/100 &133 MHz for VIA chipset)}.
I/O	Two high speed 16550 compatible serial ports, one Multi-Mode. Parallel Port support SPP/EPP/ECP standard mode. Two onboard PCI IDE Ports (32-bit data transfer). LS-120/ ZIP FDD, IrDA/ ASK IR/ Consumer IR. Dual USB ports Support two 360/720KB/1.2/1.44/2.88MB floppy disk devices. One PS/2 Mouse port.
BIOS	Award System BIOS installed in socket (Flash and PnP).
Expansion slots	1x AGP slot, 5xPCI Master Slots and 1x AMR.
Voltage	Auto
Dimension	4-layer PCB, size (300mm x 180mm).
Others	CPU Auto Temperature Sensor & Music Alarm, voltage monitor and CPU Fan monitor, Bus Master/ Ultra DMA/33, ATA/66, ACPI, AGP Bus,

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Keyboard Power On, Modem Ring On, LAN Wake Up, Sound on board.

Setup Guide Layout Diagram

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Jumper Setting

- **JP1 : Clear CMOS**

JP1	
Short 1-2	Normal Operation (Default)
Short 2-3	Clearing CMOS Data

- **JP3 : BIOS Flash**

JP3	
Short 1-2	Disable BIOS Flashing
Short 2-3	Enable BIOS Flashing

- **JP4 : Onboard Codec & AMR selection**

JP4	
Short 1-2	On Board Codec
Short 2-3	AMR Slot

- **JP5 : AMR Master/Slave Selection**

JP5	
Short 1-2	AMR Slave
Short 2-3	AMR Master

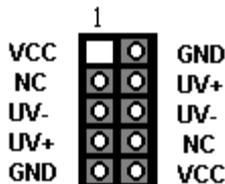
- **JP6/JP7 : CPU Frequency Selection**

CPU Freq.	JP6	JP7
66 MHz	Short 1-2	Short 1-2
100 MHz	Short 2-3	Short 1-2
105 MHz	Short 1-2	Short 2-3
133 MHz	Short 2-3	Short 2-3

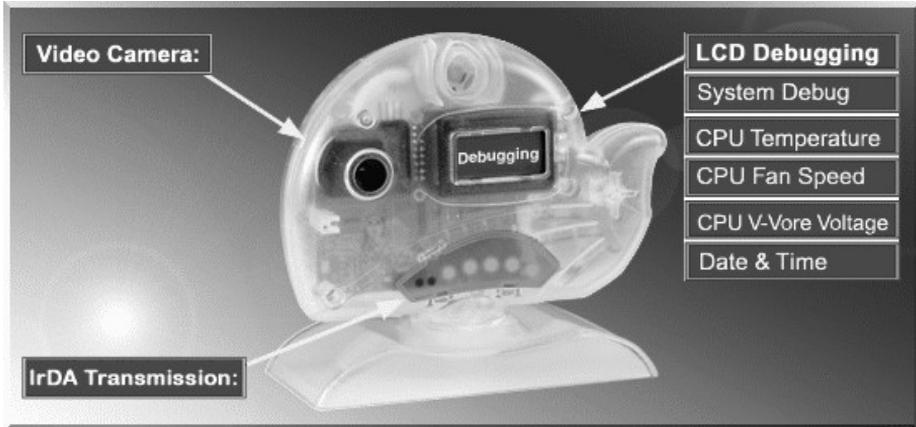
- **JP500/501**

JP500 is for setting on board ROM voltage and JP501 is for setting ROM size so that do not make any adjustment on both jumpers !!

- **USB2 : USB Connector**



EscoCAM – An Integrated Module



It's so valuable that you don't have to pay thrice to buy three fashionable devices of PC Camera, Debugging and IrDA ware now because we have integrated them into our **EscoCAM** in the shape of a lovely whale to escort your system. The whale is the king of the sea and the symbol of all-mighty power. With PC camera, Debug, CPU heat monitor and IrDA device built into the **EscoCAM**, we offers you the unbeatable solution to upgrade the value of your PC system.

1. PC Camera:

As video and audio email is gaining popularity, PC cameras are making inroads into PC systems and it will increasingly become a standard PC peripheral. In view of this strong market demand, we has timely launched its state-of-the-art PC cameras. Besides, our PC Camera is allowed to adjust the Focus of Camera via Keyboard or mouse instead of wheel. It's a patent design in PC Camera. Hope you enjoy this new technology.

2. External Debug :

When initializing system, LCD will check the peripherals of CPU, Chipset, DRAM, BIOS, Keyboard, CMOS, VGA card, Devices, FDD, HDD and Cache...Once peripherals were not been properly installed or defective, the LCD display will show out the detective place. After system successfully booted up, Time & Date, CPU

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Temperature, CPU V-Core Voltage, CPU Fan Speed will take turn to show out on the LCD display.

3. Monitor CPU Temp. And FAN Working Status:

Audio, video and multi-tasking functions call for faster and faster CPUs to improve system efficiency. However, faster CPUs will generate more heat which must be dissipated in a timely manner. Therefore, a more efficient fans to dissipate heat is as important as watch-out of fan working situation. In this Internet era, people are using their computers for longer and longer time which can easily cause overheat and damage to the CPU. Prolonged use of the computer will increase CPU temperature. It is therefore necessary to have a device to constantly monitor the CPU temperature, CPU fan speed and V-Core voltage and timely remind user.

4. IrDA For Data Transmission :

As more and more computers, notebook, mobile phone and PDA are installed with the IrDA device for wireless transmission, we also developed its own IrDA device for this purpose.

The Connection of EscocAM

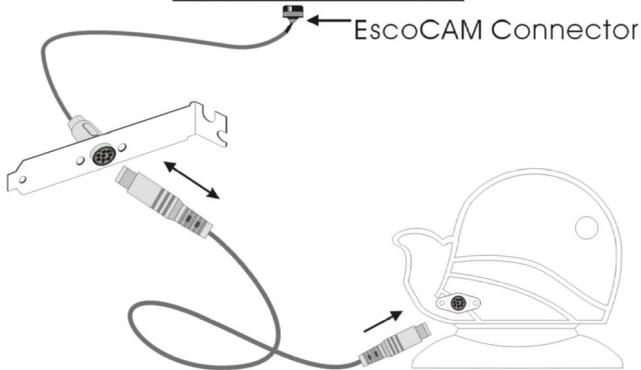
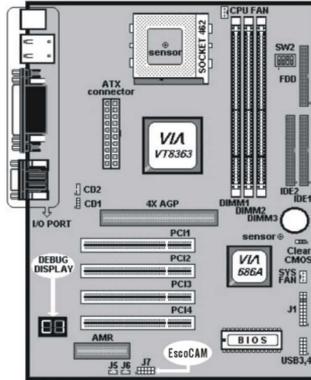
I. For TM-VAK7 Mainboard :

If you use TM-VAK7P, the most updated mainboard, it's already built-in all the circuit of **EscocAM** so that user don't need a extra daughter card to connect it.

The connection drawing as follows:

For TM-VAK7P only (I)

★ Functions :All

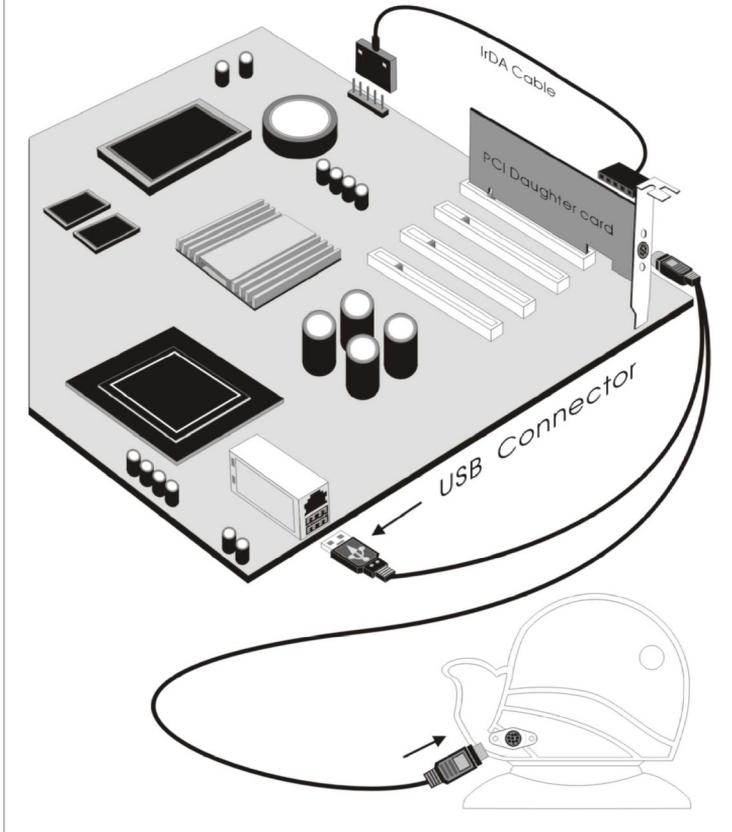


II. For All Others Mainboards:

If the mainboard you used is not TM-VAK7, you need A PCI daughter card to be inserted and make connection as follows:

For All Mainboards (I I)

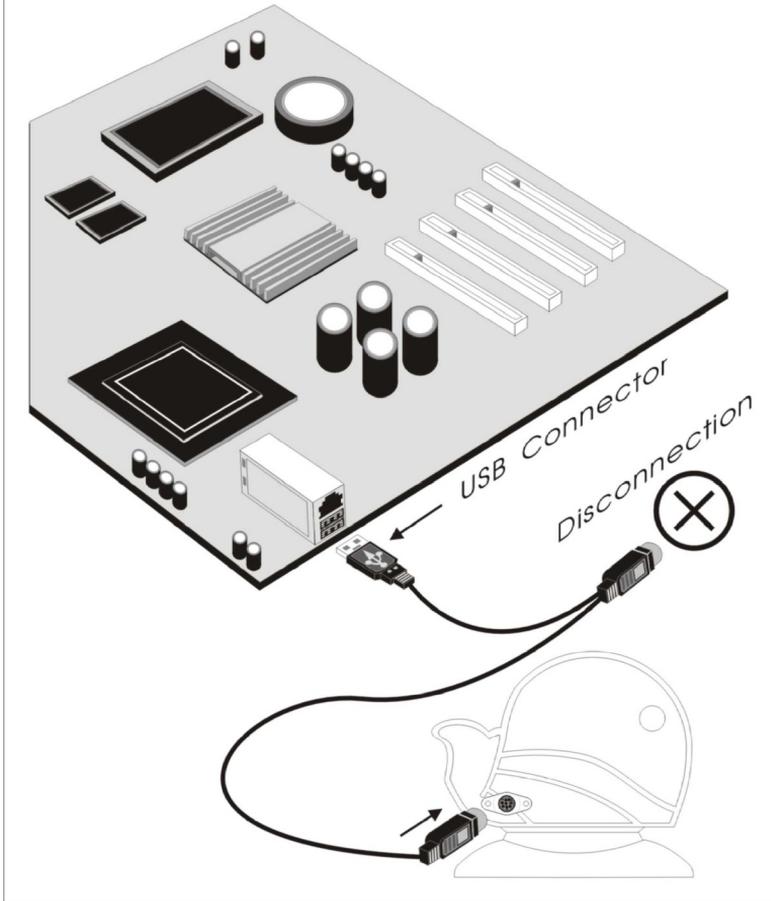
*Functions :All



III. Or, if you just want use the function of PC Camera, the connection drawing as follows:

For All Mainboards (III)

*Functions : PC Camera Only



BIOS Update Note

Do not update the BIOS if no abnormalities occur. However, if BIOS update

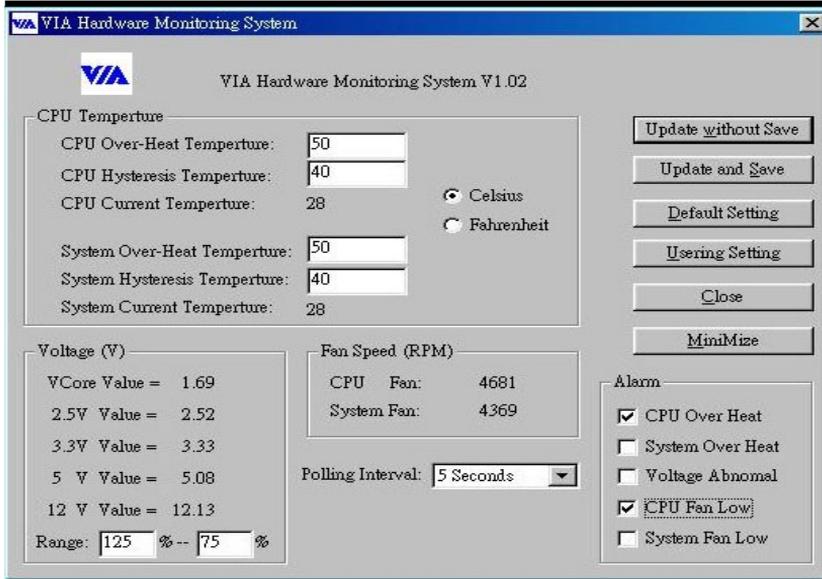
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is needed, consult your dealer first. Prior to updating your BIOS, you are recommended to save the original BIOS values.

1. Download the AWARD BIOS Flash Utility file (**Awdflash.exe**)
2. Download the BIOS file used by your mainboard(e.g., **XXXXXXX.BIN**)
3. **Reboot** your system (but do not run **Himem.sys** and **Emm386.exe**) to execute the new BIOS program.
4. Execute these commands: **Awdflash XXXXXXX.BIN**
5. When this message displays: "**Do you want to save BIOS (Y/N)?**"
Type "**N**"
6. When this message displays: "**Are you sure to program (Y/N)?**"
Type "**Y**"

Hardware Monitor

User's Manual



- **Hardware Monitoring:** Installed **VIAhm.exe** in the start of system to enable this function.
 1. **CPU Temperature** : Display Current CPU temperature and will alarm when CPU temperature is higher than the set point.
 2. **System Temperature** : Display Current System temperature and will alarm when System temperature is higher than the set point.
 3. **CPU Fan Speed** : Display Current CPU Fan speed and will alarm when Fan speed is lower than the set point
 4. **Chassis Fan Speed** : Display Current Chassis Fan speed and will alarm when Chassis Fan speed is lower than the set point.
 5. **CPU voltage level of the CPU V-Core** : Display 3.3V, 5V, 12V.