

Microflex Mini Desk Top PC
MFIII⁺ -530; Millennium⁺ 100-III
USER'S MANUAL

Table of contents

CHAPTER 1 Introduction	/page 01
CHAPTER 2 Getting started	/page 02
CHAPTER 3 Specification	/page 05
3.1 Motherboard specification	/page 05
3.2 The MFII ⁺ -530 Slim size and MFIII ⁺ -530 Mini desk top PC Pentium socket 7 CPU	/page 07
CHAPTER 4 Installation	/page 10
4.1 MFIII ⁺ -530 Mini desk top PC system installation	/page 10
4.2 MFII ⁺ -530 Slim size PC system installation	/page 16
4.3 Mini Desk top PC all-in-one NLX motherboard jumper settings	/page 18
4.4 CPU jumper installation table	/page 24
4.5 System memory installation table	/page 27
4.6 TV-out & panel link digital LCD / Flat Panel installation (optional)	/page 29
CHAPTER 5 AWARD BIOS SETUP	/page 32
5.1 Load Award Bios setup defaults	/page 32
5.2 Award Bios CMOS setup	/page 32
5.3 Standard CMOS setup	/page 34
5.4 BIOS features setup	/page 35
5.5 Chipset features setup	/page 40
5.6 Power management setup	/page 40
5.6.1 The description of the power management	/page 41
5.6.1 Description of the Green functions	/page 43
5.7 PNP /PCI configuration setup	/page 44

5.8 Integrated peripherals setup	/page 47
5.9 Load setup defaults	/page 51
5.10 Change password	/page 51
5.11 IDE HDD auto detection	/page 53
5.12 Save & exit setup	/page 55
5.13 Exit without saving	/page 56
5.14 BIOS reference-post codes	/page 56
CHAPTER 6 ON BOARD SiS 3D AGP	/page 61
VGA INSTALLATION	
6.1 Features	/page 61
6.2 Software Installation	/page 61
6.2-1 Install VGA driver and Utility	/page 62
6.2-2 For Windows NT 4.0	/page 62
CHAPTER 7 ON BOARD 10/100 Mbit Fast	/page 64
Ethernet Installation	
7.1 Hardware Installation	/page 64
7.2 Software Installation	/page 64
7.2-1 Installing the on board 10/100 M Fast Ethernet driver for windows 95	/page 66
7.2-2 Installing the on board 10/100M Fast Ethernet driver for windows 98	/page 68
7.2-3 Installing the on board 10/100M Fast Ethernet driver for windows NT3.5, 3.51,& 4.0	/page 70

CHAPTER 8 AWARD BIOS UTILITY	/page 72
8.1 BIOS Update Utility	/page 72
8.2 Suspend to Hard Disk	/page 72
CHAPTER 9 TEMPERATURE CONTROL	/page 74
SiS Health Monitor Software	
9.1 Installing the System Monitor Software On Windows 95(98) /NT4.0	/page 74
9.2 General function and Information	
9.3 System Monitor Configurations	/page 75
CHAPTER 10 ON BOARD SOUND CHIP INSTALLATION	/page 77
10.1 Hardware Installation	/page 77
10.2 Software Installation	/page 77

INSTRUCTIONS MANUAL
FEDERAL COMMUNICATIONS COMMISSION
INTERFERENCE STATEMENT

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 or 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.

CAUTION:

To assure continued FCC compliance:

- (1) Any changes or modifications not expressly approved by the grantee of this device could void the user's authority to operate the equipment.

FCC Label Compliance Statement:

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

CHAPTER 1 INTRODUCTION

Introduction

This manual is suitable for both MFII⁺-530 Slim Size PC and MFIII⁺-530 Mini Desk Top PC.

The motherboard is all-in-one designed with AGP VGA , Audio Sound and 10/100M Network chip build-in. This motherboard is designed for both MFII⁺-530 Slim Size PC and MFIII⁺-530 Mini Desk Top PC, both MFII⁺-530 and MFIII⁺-530 are the new designed with NLX/Flex ATX structure.

The difference between MFII⁺-530 and MFIII⁺-530 are listed in the following:

- **Case size different**
MFII⁺ Case Size: 33cm(L) x 32cm(W) x 8cm(H)
MFIII⁺ Case Size: 33cm(L) x 32cm(W) x 11cm(H)
- **Riser card different**
MFII⁺ Riser card: 2 Slots (PCI/ISA mixed)
MFIII⁺ Riser card: 4 Slots (PCI/ISA mixed)
- **CD-ROM different**
MFII⁺ CD-ROM: Slim type CD-ROM (Same as Notebook)
MFIII⁺ CD-ROM: 5 1/4" CD-ROM (Standard size)
- **Floppy disk different**
MFII⁺ Floppy disk: 3 1/2" Floppy disk without front bezel (hidden inside the case)
MFIII⁺ Floppy disk: 3 1/2" Floppy disk with front bezel (standard size)

CHAPTER 2 GETTING STARTED

About your MFII⁺-530/MFIII⁺-530 Slim Size or Mini Desk Top Pentium socket 7 type green PC, Once you have received the MFII⁺-530/MFIII⁺-530 Slim Size or Mini Desk Top PC, please check the following items:

1. What's included

- * Slim size or mini desk top case with ATX power supply installed.
- * The Pentium socket 7 all-in-one NLX type motherboard pre-installed inside the slim size or Mini Desk Top case.
- * Mixed ISA/PCI 2 Slots Riser card pre-installed for MFII⁺-530 and 4 Slots Riser card pre-installed for MFIII⁺-530
- * One 40 pins flat cable for HDD and CD-ROM
Pre-installed on the all-in-one NLX type motherboard.
- * One 34 pins flat cable for FDD pre-installed on the all-in-one NLX type motherboard.
- * One 10 pins flat cable for COM 1 port pre-installed.
- * One 10 pins flat cable for COM 2 port pre-installed.
- * One 4 pins flat cable for PS/2 mouse port pre-installed.
- * CPU cooling fan with heat sink pre-install on the top of CPU.
If you have order the system with CPU together.
- * Pentium Socket 7 CPU. If you have order the system with CPU together.
- * 168 pins DIMM memory from 16MB up to 512MB, If you have order the system with main memory together.
- * One set screw pack which including the following:
 - a. M3 X0.5 screws 12 pcs for FDD/CD-ROM and card installation.
 - b. M3 X1 screws 4 pcs for HDD installation.
- * User's manual 1 pcs.
- * Power cord.
- * CD-ROM disc software driver.

2. Checking the AC input voltage before turn on the power switch.

The AC input voltage can be switch from 110 Volts to 230 Volts or from 230 Volts to 110 Volts. The AC input voltage

converter switch is located on the backside of the power supply. Please double check whether the AC input voltage is matching at your country or not. If it is the wrong voltage, please make the correct setting of this switch.

3. Installing the CPU, if you order the system without CPU installed.

The CPU type can be either Intel Pentium /Pentium MMX., AMD K6 /K6-2 /K6-3, Cyrix M1 /M2, IDT C6 /C6-2, Rise MP6 CPU. Choose your CPU type and speed and make the correct jumper setting. Please refer to this manual on page NO.24~29 for the right CPU jumper setting, please also make sure the correct CPU pin 1 direction before inserted the CPU into the CPU socket. Please also install the CPU cooling fan on the top of the CPU.

4. Installing the memory DIMM module, if you order the system without memory DIMM module installed.

You can install the 168 pin DIMM memory module into location DIMM1 and DIMM2 on your motherboard. The motherboard accepts only one DIMM memory module for system running. To install the memory DIMM module, please refer to page No.29~30 of this manual for detailed memory installation.

5. Installing the hard disk, If necessary.

Please refer to the step 8 of the Mini Desk Top PC system installation at page No. 13 of this manual for detailed hard disk installation.

6. Installing the floppy disk, If necessary.

Please refer to the step 9 of the Mini Desk Top PC system installation at page No. 13 of this manual for detailed floppy disk installation.

Please refer to page No. 19 of this manual for the floppy disk installation of the slim size PC system installation.

7. Installing the CD-ROM drive, If necessary.

Please refer to the step 10 of the Mini Desk Top PC system installation at page No. 14 of this manual for detailed CD-ROM drive installation.

Please refer to page No. 18~19 of this manual for the slim CD-ROM installation of the slim size PC installation.

- 8. Please refer to page No. 33 of this manual for the detailed BIOS CMOS SETUP.**
- 9. Please Refer to chapter 6 on board sis 530 3D AGP at page No. 64 of this manual for the AGP VGA software driver and Utility installation for windows 95/98 and windows NT.**
- 10. Please Refer to chapter 7 on board RTL 8139A 10/100 Mbit Fast Ethernet at page No. 67 of this manual for the network software driver installation for windows 95/98 and windows NT. The detailed network software driver installation guide also listed at the CD-ROM disc.**
- 11. Installing the I/O card, If necessary.**
The MFII⁺-530 Slim Size PC has 2 I/O slots free and the MFIII⁺-530 Mini Desk Top PC has 4 I/O Slots free (PCI/ISA mixed) for you to install any I/O card either PCI or ISA or any combinations. There are either 4 ISA or 3 ISA + 1 PCI or 2 ISA + 2 PCI or 1 ISA+ 3 PCI for MFIII⁺-530 Mini Desk Top PC and there are either 2 ISA or 2 PCI or 1 ISA +1 PCI for MFII⁺-530 Slim Size PC. Please refer to the step 20 of the Mini Desk Top PC system installation at page No. 16 of this manual for detailed I/O card installation.
- 12. Please refer to chapter 10 on board sound ship installation at page No. 80 of this manual for the sound chip software installation.**

CHAPTER 3 SPECIFICATION

3.1. Motherboard specification

The motherboard is NLX type all-in-one designed with AGP VGA, Audio Sound and 10/100M Network chip build-in.

Following is the detailed feature of the motherboard designed.

FEATURES

- **Motherboard core logic**
 - SiS 530/595 Chipset with built-in 3D AGP VGA and SiS health monitoring
 - RTL 8139A /B 10/100Mbit Network Chip.
CMI 8738 3D PCI Sound chip support 4 channel speaker.
IT8661F/SiS 680 supper I/O controller.
- **Processor support**
 - CPU host bus at 66/75/83/95/100 MHZ Support Intel Pentium/ Pentium MMX CPU; AMD K6/K6-2/K6-3 3D NOW ! CPU; Cyrix M1/M2 CPU; IDT Win chip & Win chip 2 CPU; Rise MP6 CPU.
- **Main memory**
 - Provides 2 DIMM sockets to support 4MB/8MB/16MB/32MB/64MB/128MB/256MB SDRAM/EDO memory modules up to 512MB
 - Supports Auto detection of memory type
 - Supports ECC or Parity configuration
 - PC100 (100MHz) compliant SDRAM Interface
- **BIOS**
 - 2MB flash ROM AWARD Anti-Boot virus and PnP BIOS with ACPI, AGP, DMI, Green, Plug and Play features
 - Enhanced ACPI features for PC 98/Win 98
- **I/O Port**
 - On board PCI bus master Enhanced IDE interface supports 4 IDE devices with 2 channels, supports PIO mode 0 to mode 4 and Bus master IDE DMA mode 2 and Ultra DMA/33 with maximum transfer rate of 33MB/sec.

- On board floppy disk controller supports 2.88MB, Iomega Zip-100M and LS-120 FDD
- On board supports two high speed UARTS 16C550x2 and multi-mode parallel port for standard, Enhanced EPP and high speed ECP modes.
- PS/2 mouse port with mouse wake-up function.
- PS/2 keyboard port with keyboard wake-up function.
- On board support for IR function.
- Supports two universal serial bus (USBx2)
- **Network**
 - Built in RTL 8139A/B 10/100Mbps PCI FAST Ethernet on board with RJ-45 connector and wake-up on LAN function.
- **AGP VGA**
 - Built in on board SiS 530 with 3D AGP VGA on chip.
 - VGA memory share or non-share up to 8 MB SDRAM.
 - Windows 95/98 DirectDraw and Direct3D acceleration
 - Extended display resolution up to 1600*1200*64K colors
 - 200MHz flicker-free Palette-DAC
 - Massive array of floating point Geometry Processing Units
 - Support DDC2B+DPMS and VBE2.0
 - Windows 95/98 VGA drivers with auto-installation
 - Powerful utility Windows 95, Windows 98, and Windows NT
 - Including MMX technology software MPEG
- **TEMPERATURE Control**
 - Built-in SiS health monitoring control circuit on board
 - Remote temperature sensing scheme
 - 2 external thermistors for remote sensing
 - Wide temperature detection range: 0°C to +100°C
 - Programmable hysteresis and temperature set point
 - 4 positive voltage monitored
 - 2 Fan speed monitored
 - 5 VID input
 - Read back capability of all monitored temperature, voltage and fan speed

● 3D Sound

- Build in CMI 8738 3D PCI SOUND chip on board, support 4 channel speaker.

3.2 The MFII⁺-530 Slim Size and MFIII⁺-530 Mini Desk Top PC Pentium Socket 7 CPU

Specifications:

1. **CPU:** Supports Intel Pentium / Pentium MMX, AMD K6/K6-2/K6-3, Cyrix M1/M2 , IDT winchip & Winchip 2. Rise MP6 CPU at bus speed 66/75/83/95/100 MHZ.
2. **Chipset:** SiS 530/595 + RTL 8139A/B + CMI 8738 + IT 8661F/SiS 680.
3. **Memory:** Provides 2 DIMM sockets to support 4MB/8MB/16MB/32MB/64MB/128MB/256MB SDRAM/EDO memory modules up to 512MB. Supports Auto detection of memory type. Support ECC or parity configuration
PC 100 (100MHz) compliant SDRAM Interface
4. **I/O port:** Supports two 16C550 compatible enhanced UARTs.
Supports Multi-mode high performance parallel port.
Standard mode - Bi-directional SPP.
Enhanced mode - EPP 1.7 and EPP 1.9 compatible.
High speed mode - ECP
Compatible (IEEE 1284 compliant).
Supports PS/2 mouse interface.
Supports PS/2 keyboard interface
Supports infrared - IrDA, HPSIR (option)
Supports two universal serial bus

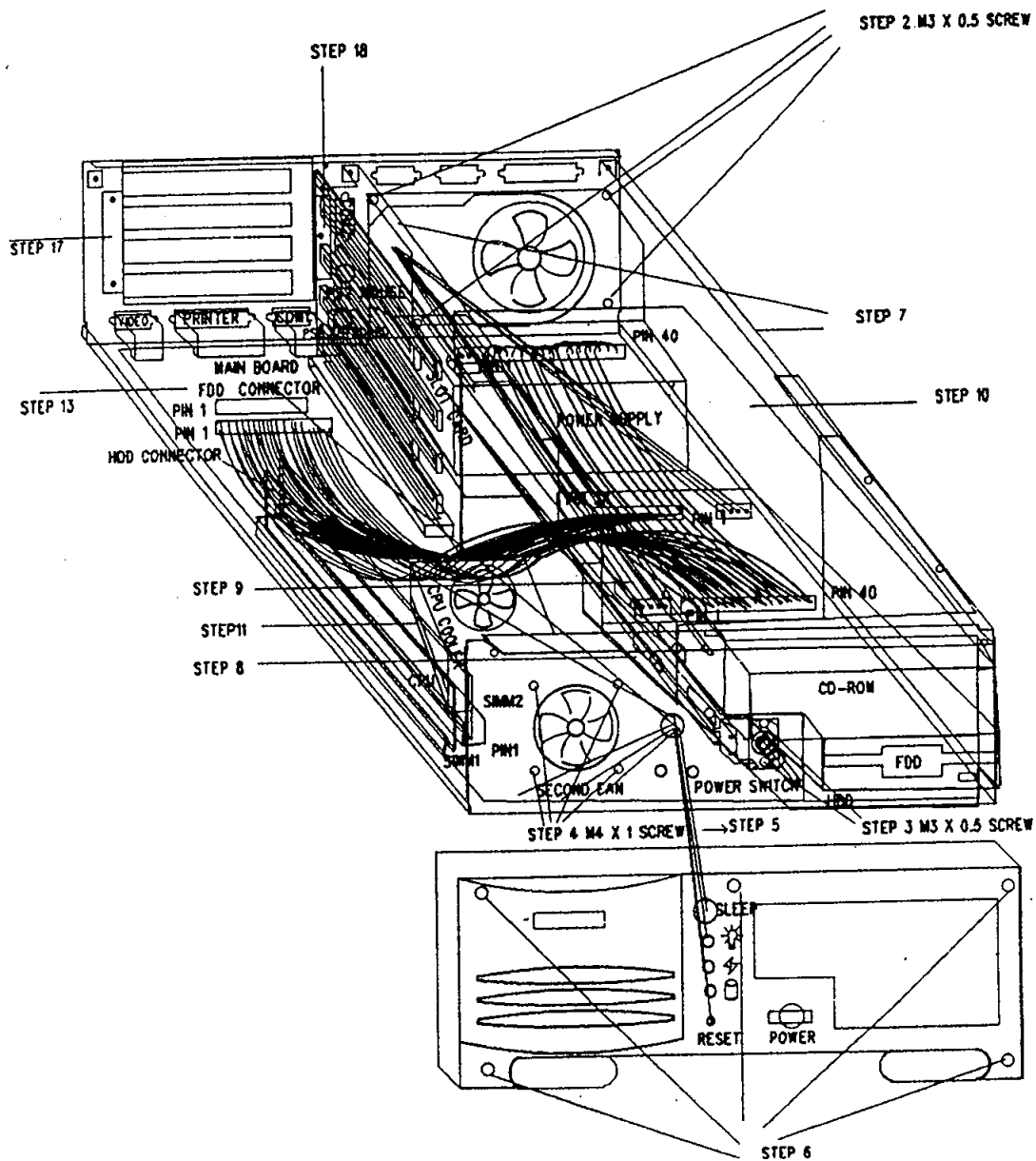
- (USBx2)
5. **I/O slots:** Supports 4 slots PCI/ISA mixed for MFIII⁺-530 model.
a. 4 ISA slots.
b. 3 ISA and 1 PCI slots
c. 2 ISA and 2 PCI slots.
d. 1 ISA and 3 PCI slots.
Support 2 slots PCI/ISA mixed for MFII⁺-530 model
a. 2 ISA slots.
b. 1 ISA and 1 PCI slots.
c. 2 PCI slots.
6. **Floppy disk:** One 3.5" 1.44MB floppy disk drive with front bezel for MFIII⁺-530 model
One 3.5" 1.44MB floppy disk drive without front bezel for MFII⁺-530 model. (Hidden inside the case)
7. **Hard disk:** One 3.5" IDE interface hard disk drive for MFIII⁺-530 & MFII⁺-530 model.
8. **CD-ROM:** One 5 1/4" CD-ROM drive for MFIII⁺-530 model.
One slim CD-ROM drive for MFII⁺-530 model.
9. **Video output:** Built in SiS 530/595 chip with 3D AGP VGA on board with 4MB SDRAM Expandable up to 8MB.
windows 95/98 Direct Draw and Direct 3D acceleration.
Extended display resolution up to 1600*1200*64K colors.
- TV out (optional):** Support both NTSC & PAL TV-out
Support both RCA & S-video Connectors.
- Panel link LCD :** Support panel link TMDS digital
(optional) LCD/flat panel connector.

- 10. Network:** Built in RTL8139A /B 10/100Mbps PCI FAST Ethernet on board with RJ-45 connector and wake-up on LAN function
- 11. Audio Sound:** Built in CMI 8738 3D PCI Sound chip on board, support 4 channel speaker.
- 12. Physical size:** 33CM(L) x 32CM(W) x11CM(H) for MFIII⁺-530 model
33CM(L) x 32CM(W) x 8CM(H) for MFII⁺-530 model.
- 13. Power supply:** ATX power supply 235W.
110V/230V switchable.
UL/CSA/TUV/VDE/DEMKO/
NEMKO/SEMKO/FIMKO/FI/
CB/CE/FCC approved.
- 14. Keyboard:** 84/85 keys mini keyboard or regular 101/102 keys keyboard or 105/106 keys WINDOWS 95 keyboard with PS/2 type Keyboard connector.
- 15. Monitor:** 9" VGA mono or VGA color monitor or regular 14"/15"/17" VGA mono or VGA color monitor or LCD display monitor.
- 16. BIOS:** 2MB flash EEPROM.
Supports PLUG & PLAY function.
- 17. Second fan:** Second fan available to increase the internal air flow for system Cooling (optional).

CHAPTER 4 INSTALLATION

4.1 MFIII⁺-530 Mini Desk Top PC system installation

The following is the Mini Desk Top PC system installation procedure step by step which will guide you to install the mini desk top PC system as much as easier. Please refer to diagram (1) of this page for detailed parts location of each step.



- Step1:** Open the case upper CORVER.
- Step2:** Installing the L shape power supply by screw in the 5 screws. Please refer to the diagram (1) for the power supply installation.
- Step3:** Installing the power switch by screw in the 2 screws. Please refer to the diagram (1) for the power switch installation.
- Step4:** Installing the second fan by screw in the 4 screws. The second fan is located between the case front side panel and the front bezel. Please refer to the diagram (1) for the second fan installation.
- Step5:** Installing the following parts on the front bezel before install the front bezel in to the case. Please refer to the diagram (1) for detailed location.
- a. Reset switch with wire.
 - b. HDD LED with wire.
 - c. Power LED with wire.
 - d. Sleep switch with wire.
- Remark:** This switch can be connected to the motherboard at J14 connector to Enable the system entering the sleep mode.
- e. Network LED with wire
 - f. Power switch Button.
- Note:** This switch should be connected to the motherboard at JP16 connector with password control .
- Step6:** Installing the front bezel into the case by screw in the 5 screws and push in the above wires (step 5, a, b, c, d, e, f) and the second fan wire into the case to connect to the motherboard and the power supply. Please refer to the diagram (1) for the detailed front bezel installation.
- Step7:** Installing the 3-supporting bracket on the lower case, please refer to diagram (1) for the detailed supporting bracket installation.
- Step8:** Installing the hard disk drive, if necessary. To install the hard disk drive, please follows the step below:
- a. Removes the HDD/FDD/CD-ROM drives

- mounting bracket by unscrew the two screws.
- b. Install the hard disk drive on the lowest bottom of the HDD/FDD/CD-ROM drive-mounting bracket by screw in the 4 screws at the side.
 - c. Connects the 40 pins HDD flat cable into the hard disk, pin 1 close to DC power connector of the hard disk drive.
 - d. Connects the power cable to the hard disk. The power cable is only one way direction.
 - e. Align the Hard disk drive position 1.5cm away from the front panel position of the case. This will guide you to line up the hard disk drive with the front bezel.
 - f. Install the HDD/FDD/CD-ROM mounting bracket by screw in the 4 screws. Please refer to diagram (1) at page No. 11 for detailed hard disk drive installation.

Step9: Installing the floppy disk drive, if necessary. To install the floppy disk drive, please follows the step below:

- a. Inserting the floppy disk drive from the front end of the case by slide into the FDD slot location.
- b. Connects the 34 pins FDD flat cable into the floppy disk drive, pin 1 close to DC power connector of the floppy disk drive.
- c. Connects the power cable to the floppy disk drive. The power cable is only one way direction.
- d. Align the floppy disk drive to be line up with the front bezel and screw in the 4 screws of the FDD side screws. Please refer to diagram (1) for detailed floppy disk drive installation.

Step10: Installing the CD-ROM drive, If necessary. To install the CD-ROM drive, please follows the step below:

- a. Inserting the CD-ROM drive from the front end of the case by slide into the CD-ROM slot location.
- b. Connects the 40pins CD-ROM flat cable into the CD-ROM drive, pin 1 close to DC power connector of the CD-ROM drive.
- c. Connects the power cable to the CD-ROM drive.

The power cable is only one way direction.

- d. Align the CD-ROM drive to be line up with the front bezel and screw in the 4 screws of the CD-ROM side screws. Please refer to diagram (1) at page No. 11 for detailed CD-ROM drive installation.
- Step11:** Installing the CPU by inserting it into the CPU socket Slot1 on the motherboard, and set correct jumper setting, please refer to page No.24~29 of this manual for detailed CPU jumper installation. After finish the CPU installation, then install the CPU cooling fan on the top of CPU.
- Step12:** Installing the DIMM memory on the motherboard. Please refer to page No.29~30 of this manual for detailed 168 pins DIMM memory installation.
- Step13:** Installing the motherboard into the case by slide in the motherboard horizontally with the base of the case until the VGA connector, printer port, Network port, PS/2 Keyboard port, 4 connectors matching up with holes of the back panel of this case, please make sure that the motherboard screw holes (total 5 screw holes) also matching up with base mounting holes of the case. Screw-in the 5 screws for the motherboard and also screw in the VGA connector, printer connector screws.
- Step14:** Connects the ATX power supply connector into the motherboard power connector PW1, please make sure the direction should be correct.
- Step15:** Install the PS/2 mouse port cable between the motherboard and Back panel of the case. Inserting the 4 pins rectangular connector on the motherboard J2 connector, Mounting the other side of this cable on PS/2 mouse hole of the back panel of case by screw in the 2 screws. It will be the Round type connector.
- Step16:** Installing the COM1 cable between the motherboard and back panel of the case. Inserting the 9 pins flat cable into the motherboard connector (COM1), PIN1 close to the EISA slot (Riser card) side and mounting the other side of this cable on the COM1 hole of the back panel of the case by screw in the 2 screws.

- Step17:** Installing the COM2 cable between the motherboard and back panel of the case. Inserting the 9 pins flat cable into the motherboard connector (COM2) PIN1 close to the EISA slot (Riser card) side and mounting the other side of this cable on the COM2 hole of the back panel of the case by screw in the 2 screws.
- Step18:** Installing the back slot window mounting bracket by screw in the 3 screws on the back panel of the case.
- Step19:** Installing the PCI/ISA Riser card into the motherboard at the location J4 and mounting this Riser card on the supporting bracket of the case by screw in the 2 screws which located on the upper two sides of the Riser card.
- Step20:** Installing I/O cards on your Mini Desk Top PC, if necessary. The Mini Desk Top PC has the ability to install 4 I/O cards either PCI or ISA or any combination. They can be either 4 ISA slots or 3 ISA slots + 1 PCI slot or 2 ISA slots + 2 PCI slots or 1 ISA slot + 3 PCI slots. You can install any I/O card simply by taking the card horizontally and insert the gold finger inside the riser card, then screw in the card metal plate on the back slot windows mounting bracket tightly.
- Step21:** Connecting all the necessary cables. They could be the following items:
- a. Connects the power connector of the CPU cooling fan to the motherboard at CPUF connector (fan connector with temperature sensor control recommended).
 - b. Connects the power connector of the second fan to the motherboard at SYSF connector(fan connector with temperature sensor control recommended).
 - c. Connects the front bezel power LED cable (Green and Black colors) to J17 connector of the motherboard.
 - d. Connects the front bezel HDD LED cable (Red and Black colors) to the J13 connector of the motherboard.
 - e. Connects the front bezel Network LED cable

(Yellow and Black colors) to the JP1 connector of the motherboard.

- f. Connects the front bezel reset switch cable (White and Black colors) to the J18 connector of the motherboard.

Step22: Check all the necessary jumper on the motherboard. If anything wrong or missing, please make the right correction. Please refer to page No.21~32 of this manual for the correct jumper setting.

Step23: Close the upper case by screw in the 2 screws of the back panel of the case.

Step24: Up to now, you have finished the system installation of the mini desk top PC and you are ready to turn on the power to operate your system. Hope everything is running well and you are very satisfy with your system. Congratulations!!

Step25: Installing the software driver, if necessary. There are three types software driver included in your system CD-ROM disc and you may need to install them when you are running your system. The first one is the high performance 3D AGP video accelerator software driver. please refer to chapter 6 of this manual for the high performance 128 bits 3D AGP video accelerator drivers installation. The second one is the 10/100M Network software driver. please refer to chapter 7 of this manual for the Network driver installation .The third one is 3D PCI Sound chip software driver, please refer to chapter 10 of this manual for the Audio Sound driver installation

Step26: If you need to play the VCD/DVD MOVIE, which you have to run the VCD/DVD software for MPEG-1/MPEG-2.

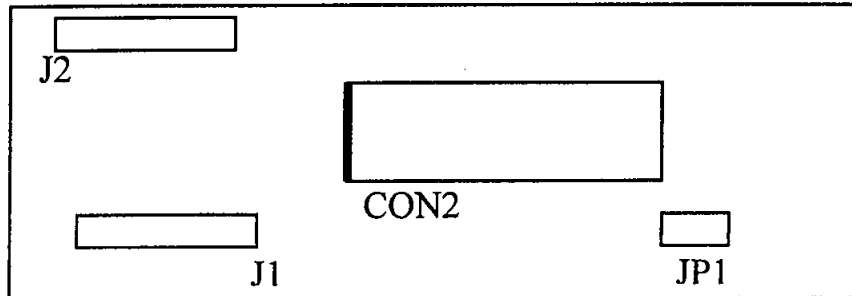
Step27: If you still have any difficulty to install your system, please consult your local distributor for the problems solving.

4.2 MFII⁺-530 Slim Size PC System installation

The MFII⁺-530 Slim Size PC system installation procedure will be similar to the MFIII⁺-530 Mini Desk-Top PC. Except the following devices need to do the special care.

Slim CD-ROM installation

The slim CD-ROM needs to install a small PC board which convert the IDE interface of the slim CD-ROM to the standard IDE interface of the motherboard. Following is the block diagram of this converter board.



- J2 : This connector is to connect the audio signal to the motherboard at J6 connector.
- J1 : This connector is to connect the power supply for the slim CD-ROM.
- CON2 : This connector is to connect the IDE interface to the motherboard.
- JP1 : This jumper is for master/slave select of the slim CD-ROM. For different brand of the slim CD-ROM, The master /slave selection method is different, So you have to check with the supplier how to set the slim CD-ROM to the slave device. Because if you installed the hard disk with the slim CD-ROM together that you have to set the slim CD-ROM to the slave condition.

1. Choose your slim CD-ROM vender and set the slim CD-ROM to the slave condition. Connects all the cables to J1, J2 and CON2 connectors.

Step1. Installing the slim CD-ROM mounting bracket by screw in the 2 screws, on the HDD/FDD/CD-ROM holding bracket.

Step2. Screw in the 2 M2 screws between the slim CD-ROM mounting bracket and the converter board.

2. **3 1/2" floppy drives installation.**

To install the 3 1/2" floppy drive, please remove the front bezel of the floppy drive before inserting in side the case, the floppy drive should be fully inserted and line up with the front bezel of the case, The front bezel will have the notch to fit in the floppy drive, please push the floppy inside the Notch direct to the front bezel

4.3 Mini Desk Top PC all-in-one NLX Motherboard Jumper Settings.

To setup the Mini Desk Top PC all-in-one NLX motherboard jumpers, please refer to the diagram (2) at this page for detailed jumper location.

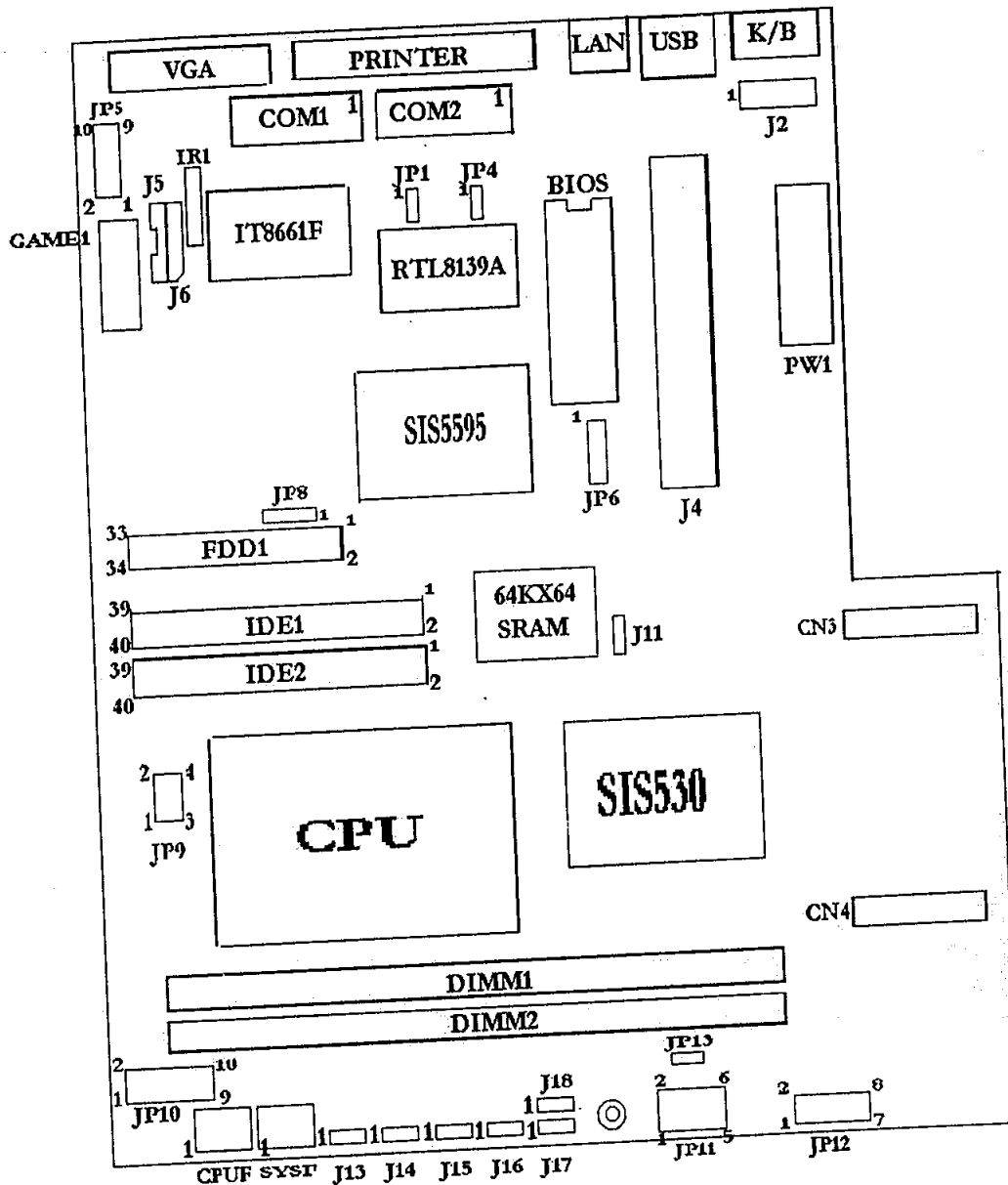


DIAGRAM (2)
THE SLIM SIZE/MIMI DESK TOP PC ALL-IN-ONE
NLX MOTHERBOARD JUMPER LOCATION V1.1

J2: PS/2 Mouse Connector

Pin No.	Function
1	Mouse clock
2	VCC
3	Mouse data
4	NC
5	GND

2. J1: PS/2 Keyboard Connector

Pin No.	Function
1	Keyboard Data
5	Keyboard Clock
2,6	NC
3	GND
4	VCC

- 3. JP8: on board CMOS data keep or clear**
2-3= on board CMOS Data keep (NORMAL)
1-2= on board CMOS Data clear(Power on)
- 4. J15: Sleep LED (It lights up when the system in the Sleep mode)**
Pin2: Cathode
Pin1: Anode
- 5. J17: Power LED**
Pin1: Cathode
Pin2: Anode
- 6. J14: SMI Switch**
When push it will force the system entering the sleep mode, if the system Green function (Power saving function ACPI mode) is enable. This is connected to the sleep switch of the front panel.
- 7. J13: Hard Disk Drive LED**
Pin1: Cathode
Pin2: Anode

- 8. IDE1:Primary Hard Disk Drives IDE Connector
- 9. IDE2:Secondary Hard Disk Drives IDE Connector
- 10. VGA1: On Board VGA Adapter
- 11. USB1: USB Port connector

	Pin no.	Function
Port 1	Pin 2	VCC
	Pin 4	-DATA0
	Pin 6	-DATA0
	Pin 8	GND
Port 2	Pin 1	VCC
	Pin 3	-DATA 1
	Pin 5	-DATA 1
	Pin 7	GND

12. PW1: Power Connector

Function	Pin No.	Pin No.	Function
12V	Pin 10	Pin 20	5V
5VSB	Pin 9	Pin 19	5V
PW-OK	Pin 8	Pin 18	-5V
GND	Pin 7	Pin 17	GND
5V	Pin 6	Pin 16	GND
GND	Pin 5	Pin 15	GND
5V	Pin 4	Pin 14	PS-ON
GND	Pin 3	Pin 13	GND
3.3V	Pin 2	Pin 12	-12V
3.3V	Pin 1	Pin 11	3.3V

13. J18: Reset Switch

14. IR1: IrDA SIR or FIR Connector

Pin No.	Function
1	VCC(+5V)
2	Infrared data input (115.2KB for SIR)
3	Infrared data input (4MB for FIR)
4	GND

- 15. FDD1: Floppy Disk Drive Connector**
- 16. COM1: Serial Port COM1 Connector**
- 17. COM2: Serial Port COM2 Connector**
- 18. LPT1:Printer Port Connector**
- 19. JP1: LAN LED (TX/RX)**
 Pin2: Cathode
 Pin1: Anode
 It will light on when the data is transmitting or Receiving.
- 20. CON1:LAN Connector**
- 21. JP13: On Board VGA Share or none share memory Select**
 Short: Enabled On Board VGA for share memory .
 Open: Enabled On Board VGA for none share memory (Factory default at 4 MB SDRAM)
- 22. JP4: On Board LAN Select**
 Short: On Board LAN Enabled (Default)
 Open: On Board LAN Disabled
- 23. J11:Level 2 Cache Mode Select**
 Open: Intel & AMD & CYRIX (Interleave Burst Mode) Tag Mode (Default)
 Short: CYRIX Linear Burst Mode
- 24. JP11:CPU Clock Ratio Select**

INTEL CPU CLOCK RATIO

1-2	3-4	5-6	CPU Ratio
S	O	O	2.0/6.0
S	S	O	2.5
O	S	O	3.0
O	O	O	1.5/3.5
S	O	S	4.0
S	S	S	4.5
O	S	S	5.0
O	O	S	5.5

25. JP12: CPU external Clock Frequency Select

1-2	3-4	5-6	7-8	CPU Clock
O	S	S	S	66MHz
O	S	S	O	75MHz
O	S	O	S	83MHz
O	S	O	O	95MHz
O	O	S	S	100MHz
O	O	S	O	112MHz
O	O	O	S	124MHz
O	O	O	O	133MHz

**Remark: The motherboard only guaranty up to 100 Mhz,
The clock speed for 112,124,133 Mhz is over
specs**

26. JP10: CPU Core Voltage Select

1-2	3-4	5-6	7-8	9-10	VCORE
O	S	S	S	S	2.0V
O	S	O	O	O	2.2V
O	O	S	O	O	2.4V
O	O	O	S	O	2.8V
S	O	O	S	O	2.9V
O	O	S	S	O	3.2V
S	O	S	S	O	3.3V
O	S	S	S	O	3.45V
S	S	S	S	O	3.52V

27. JP9: CPU I/O Voltage Select

PIN 1-2 : CPU I/O 3.3 Volt (Default)

PIN 3-4 : CPU I/O 3.45 Volt

28. JP6:KeyBoard Voltage Select

PIN 1-2:SB5B FOR ACPI FUNCTION (Default)

PIN 2-3:VCC +5V FOR NONE ACPI FUNCTION

29. J16:Power Button with password control

30. JP5:Audio connector

This connector is for Line -in, Line out and Mic.

- 31. J 5 :Panasonic CD In**
- 32. J6 :Sony CD In**
- 33. J7 : EXT. Line In**
- 34. U6 : Motherboard (2 Mega) Flash ROM SOCKET**
- 35. CPUF: CPU Fan connector**
- 36. SYSF: System Fan connector**
- 37. CN3 & CN4: TV-out & Panel Link LCD daughter
board connector**

4.4 CPU Jumper installation table

1. Intel Pentium MMX (P55C) CPU Jumper Setting (O: Open ; S : Short)

CPU Speed	JP11			JP12				JP10				
	1-2	3-4	5-6	1-2	3-4	5-6	7-8	1-2	3-4	5-6	7-8	9-10
MMX-166	S	S	O	O	S	S	S	O	O	O	S	O
MMX-200	O	S	O	O	S	S	S	O	O	O	S	O
MMX-233	O	O	O	O	S	S	S	O	O	O	S	O

2. Intel Pentium (P54C) CPU Jumper Setting (O : Open; S :Short)

CPU Speed	JP11			JP12				JP10				
	1-2	3-4	5-6	1-2	3-4	5-6	7-8	1-2	3-4	5-6	7-8	9-10
P54C-133	S	O	O	O	S	S	S	S	O	S	S	O
P54C-166	S	S	O	O	S	S	S	S	O	S	S	O
P54C-200	O	S	O	O	S	S	S	S	O	S	S	O

3. Cyrix M1/IBM/ST CPU Jumper Setting (O: Open ; S: Short)

CPU Speed	JP11			JP12				JP10				
	1-2	3-4	5-6	1-2	3-4	5-6	7-8	1-2	3-4	5-6	7-8	9-10
Cyrix L-P166	S	O	O	O	S	S	S	O	O	O	S	O
ST 6X86-P166+	S	O	O	O	S	S	S	S	S	S	S	O
IBM PR-233	O	S	O	O	S	S	S	S	O	O	S	O

4. Cyrix M2 CPU Jumper Setting For 66MHz(O: Open S:Short)

CPU Speed	JP11			JP12				JP10				
	1-2	3-4	5-6	1-2	3-4	5-6	7-8	1-2	3-4	5-6	7-8	9-10
MII PR-200	S	S	O	O	S	S	S	S	O	O	S	O
MII PR-266	O	S	O	O	S	S	S	S	O	O	S	O
MII PR-300	O	O	O	O	S	S	S	S	O	O	S	O

5. Cyrix M2 CPU Jumper Setting For 75MHz(O: Open ; S: Short)

CPU Speed	JP11			JP12				JP10				
	1-2	3-4	5-6	1-2	3-4	5-6	7-8	1-2	3-4	5-6	7-8	9-10
MII PR-233	S	S	O	O	S	S	O	S	O	O	S	O
MII PR-333	O	O	O	O	S	S	O	S	O	O	S	O

6. Cyrix M2 CPU Jumper Setting For 83MHz(O:Open; S: Short)

CPU Speed	JP11			JP12				JP10				
	1-2	3-4	5-6	1-2	3-4	5-6	7-8	1-2	3-4	5-6	7-8	9-10
MII PR-333	O	S	O	O	S	O	S	S	O	O	S	O

7. Cyrix M2 CPU Jumper Setting For 100MHz(O:Open; S: Short)

CPU Speed	JP11			JP12				JP10				
	1-2	3-4	5-6	1-2	3-4	5-6	7-8	1-2	3-4	5-6	7-8	9-10
MII PR-366	S	S	O	O	O	S	S	S	O	O	S	O

8. AMD K6/K6-2 CPU Jumper Setting For 66MHz(O: Open ; S :Short)

CPU Speed	JP11			JP12				JP10				
	1-2	3-4	5-6	1-2	3-4	5-6	7-8	1-2	3-4	5-6	7-8	9-10
AMD K6/200	O	S	O	O	S	S	S	S	O	O	S	O
AMD K6/233	O	O	O	O	S	S	S	O	O	S	S	O
AMD K6/266	S	O	S	O	S	S	S	O	S	O	O	O
AMD K6/300	S	S	S	O	S	S	S	O	S	O	O	O
AMD K6-2/266	S	O	S	O	S	S	S	O	S	O	O	O
AMD K6-2/300	S	S	S	O	S	S	S	O	S	O	O	O
AMD K6-2/333	O	S	S	O	S	S	S	O	S	O	O	O
AMD K6-2/366	O	O	S	O	S	S	S	O	S	O	O	O

9. AMD K6-2/K6-3 CPU Jumper Setting For 95MHz(O : Open ; S :Short)

CPU Speed	JP11			JP12				JP10				
	1-2	3-4	5-6	1-2	3-4	5-6	7-8	1-2	3-4	5-6	7-8	9-10
AMD K6-2/332 (2.2V)	O	O	O	O	S	O	O	O	S	O	O	O
AMD K6-2/333(2.4V)	O	O	O	O	S	O	O	O	O	S	O	O
AMD K6-2/380(2.2V)	S	O	S	O	S	O	O	O	S	O	O	O
AMD K6-2/380(2.4V)	S	O	S	O	S	O	O	O	O	S	O	O
AMD K6-2/475(2.2V)	O	S	S	O	S	O	O	O	S	O	O	O
AMD K6-2/475(2.4V)	O	S	S	O	S	O	O	O	O	S	O	O
AMD K6-3/475(2.2V)	O	S	S	O	S	O	O	O	S	O	O	O
AMD K6-3/475(2.4V)	O	S	S	O	S	O	O	O	O	S	O	O

10. AMD K6-2/K6-3 CPU Jumper Setting For 100 MHz (O :Open ;S :Short)

CPU Speed	JP11			JP12				JP10				
	1-2	3-4	5-6	1-2	3-4	5-6	7-8	1-2	3-4	5-6	7-8	9-10
AMD K6-2/300(2.2V)	O	S	O	O	O	S	S	O	S	O	O	O
AMD K6-2/300(2.4V)	O	S	O	O	O	S	S	O	O	S	O	O
AMD K6-2/350(2.2V)	O	O	O	O	O	S	S	O	S	O	O	O
AMD K6-2/350(2.4V)	O	O	O	O	O	S	S	O	O	S	O	O
AMD K6-2/400(2.2V)	S	O	S	O	O	S	S	O	S	O	O	O
AMD K6-2/400(2.4V)	S	O	S	O	O	S	S	O	O	S	O	O
AMD K6-2/450(2.2V)	S	S	S	O	O	S	S	O	S	O	O	O
AMD K6-2/450(2.4V)	S	S	S	O	O	S	S	O	O	S	O	O
AMD K6-2/500(2.2V)	O	S	S	O	O	S	S	O	S	O	O	O
AMD K6-2/500(2.4V)	O	S	S	O	O	S	S	O	O	S	O	O
AMD K6-3/400(2.2V)	S	O	S	O	O	S	S	O	S	O	O	O
AMD K6-3/400(2.4V)	S	O	S	O	O	S	S	O	O	S	O	O
AMD K6-3/450(2.2V)	S	S	S	O	O	S	S	O	S	O	O	O
AMD K6-3/450(2.4V)	S	S	S	O	O	S	S	O	O	S	O	O
AMD K6-3/500(2.2V)	O	S	S	O	O	S	S	O	S	O	O	O
AMD K6-3/500(2.4V)	O	S	S	O	O	S	S	O	O	S	O	O

13. Rise MP6 CPU Jumper Setting (O: Open ; Short)

CPU Speed	JP11			JP12				JP10				
	1-2	3-4	5-6	1-2	3-4	5-6	7-8	1-2	3-4	5-6	7-8	9-10
RISE 266 CPU	S	O	O	O	O	S	S	O	O	O	S	O
RISE 366 CPU	S	S	O	O	O	S	S	O	S	S	S	S

4.5 System memory installation table

The Mini Desk Top PC system supports two 168 pins DIMM memory module, one 168 pins DIMM module memory size can be either 16MB, 32MB, 64MB, 128MB or 256MB. So, the total two 168 pins DIMM module memory size can be from 16MB up to 512MB. The DRAM type can be either PC66 or PC100 SDRAM.

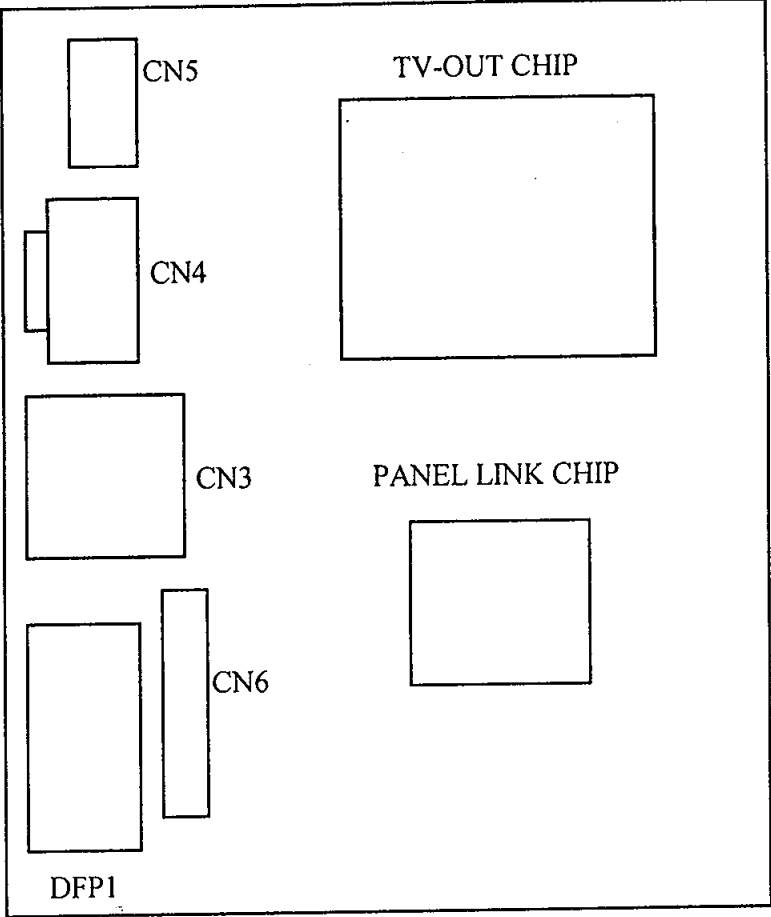
DIMM1	DIMM2	Memory Size
8MB	NC	8MB
NC	8MB	8MB
8MB	8MB	16MB
16MB	NC	16MB
NC	16MB	16MB
16MB	16MB	32MB
32MB	NC	32MB
NC	32MB	32MB
32MB	32MB	64MB
64MB	NC	64MB
NC	64MB	64MB
64MB	64MB	128MB
128MB	NC	128MB
NC	128MB	128MB
128MB	128MB	256MB
256MB	NC	256MB
NC	256MB	256MB
256MB	256MB	512MB

4.6 TV-out & panel link digital LCD/flat panel installation

The MF-530 motherboard has been designed with TV-out & Panel Link daughter board together which capable of connects the MF-530 slim size / mini desk pc to either TV or panel link TMDS digital LCD / flat panel.

Note: This daughter board is an optional which should be purchased separately.

Following is the daughter block diagram for the connector location:



1. CN4: RCA (AV) connector for TV-out

2. CN3: S-Video connector for TV-out
3. DFP1: Panel link connector for LCD/flat panel
4. CN5: Flat cable connector for both CN3 and CN4
5. CN6: Flat cable connector for DFP1

To install the daughter board to the motherboard, Just to line up the PCB with the motherboard and push the daughter to the motherboard connector CN3 and CN4.

TV-out installation:

1. Connects the TV-out metal bracket to the back panel.
2. Connects the TV-out cable to CN5 connector.

Panel link installation:

1. Connects Panel link metal bracket to the back panel.
2. Connects the Panel link flat cable to CN6 connector.