

Microflex Slim/Mini Desk Top PC

User's Manual

M/N: MFII⁺ -6BXV3; Millennium⁺ X-II

MFIII⁺ -6BXV3; Millennium⁺ X-III

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.

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CHAPTER 1 INTRODUCTION

Introduction

This manual is suitable for both MFII⁺-6BX Slim Size PC and MFIII⁺-6BX Mini Desk Top PC.

The motherboard is all-in-one designed with AGP VGA and 10/100M Network chip build-in. This motherboard is design for both MFII⁺-6BX Slim Size PC and MFIII⁺-6BX Mini Desk Top PC, both MFII⁺-6BX and MFIII⁺-6BX are the new designed with ATX structure.

The difference between MFII⁺-6BX and MFIII⁺-6BX 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⁺-6BX/MFIII⁺-6BX Slim Size or Mini Desk Top Pentium II green PC, Once you have received the MFII⁺-6BX/MFIII⁺-6BX 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 II all-in-one ATX type motherboard pre-installed inside the slim size or mini desk top case.
- * Mixed ISA/PCI 2 Slots Riser card pre-installed for MFII⁺-6BX and 4 Slots Riser card pre-installed for MFIII⁺-6BX
- * One 40 pins flat cable for HDD and CD-ROM
Pre-installed on the all-in-one ATX motherboard.
- * One 34 pins flat cable for FDD pre-installed on the all-in-one ATX 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.
- * Intel Pentium II 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 AT keyboard to PS/2 keyboard converter connector.
- * 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.
 - c. AT keyboard to PS/2 keyboard converter cable.
- * User's manual 1 pcs.
- * Power code.
- * CD-ROM disk 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 convert 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, Celeron slot 1 or Pentium II slot 1 CPU, the available CPU from the current market are Celeron slot 1 CPU 300/300A/333A and Pentium II slot 1 CPU 333/350/400/450. It can be accepted more higher speed CPU, if it is available in the future. Choose your CPU type and speed and make the correct jumper setting. Please refer to this manual on page NO.25 ~26 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.27 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 driver 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. 28 of this manual for the detailed BIOS CMOS SETUP.

9. Please Refer to chapter 6 on board RIVA 128ZX 128 bit 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 disk.

11. Installing the I/O card, If necessary.

The MFII⁺-6BX Slim Size PC has 2 I/O slots free and the MFIII⁺-6BX 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⁺-6BX Mini Desk Top PC and there are either 2 ISA or 2 PCI or 1 ISA +1 PCI for MFII⁺-6BX 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.

CHAPTER 3 SPECIFICATION

3.1. Motherboard specification

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

Following is the detailed feature of the motherboard designed.

FEATURES

- **Motherboard core logic**
Intel 82440BX + RIVA 128ZX 128bit 3D AGP + RTL 8139A 10/100M FAST Ethernet + W83977 EF supper I/O controller + GL520SM temperature control.
- **Processor supports**
 - Intel Celeron slot 1 CPU or Pentium II slot 1 CPU up to 100MHz bus frequency.
 - Intel Celeron 300/300A/333/A
 - Intel Pentium II 333/350/400/450
 - Auto detection of CPU voltage
- **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 10/100Mbps PCI FAST Ethernet on board with RJ-45 connector and wake-up on LAN function.
- **AGP VGA**
 - Built in RIVA 128ZX chip 128bit 3D AGP VGA on board with 4MB SGRAM.
 - Windows 95/98 DirectDraw and Direct3D acceleration
 - OpenGL LCD for Window 95/98 and Windows NT
 - On board 4MB SGRAM with 1.6GB/sec bandwidth
 - Extended display resolution up to 1800*1440*64K colors @60Hz and 1600*1200*32-bit true color
 - Maximum 250MHz Palette-DAC
 - Flicker-Free refresh rate to 120Hz
 - 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
 - Optional software DVD/MPEG-2 play back on Pentium II 266MHz or above CPU speed
- **TEMPERATURE Control**
 - Built-in GL520SM temperature 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 inputs
- 4 type of speaker-driven signal output for different sound signal for CPU and system temperature, power supply voltage/CPU voltage and fan speed SMBus serial interface
- Read back capability of all monitored temperature, voltage and fan speed

3.2 The MFII⁺-6BX Slim Size and MFIII⁺-6BX Mini Desk Top PC Pentium II Specifications:

- 1. CPU:** Supports Intel Pentium II and Celeron CPU up to 100MHz bus Frequency.
Intel Celeron 300/300A/333A
Intel Pentium II 333/350/400/450
Auto detection of CPU voltage
- 2. Chipset:** Intel 82440BX + RIVA 128ZX
128 bit 3D AGP + RTL 8139A
10/100M FAST Ethernet +
W83977 EF supper I/O controller +
GL520SM temperature control.
- 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

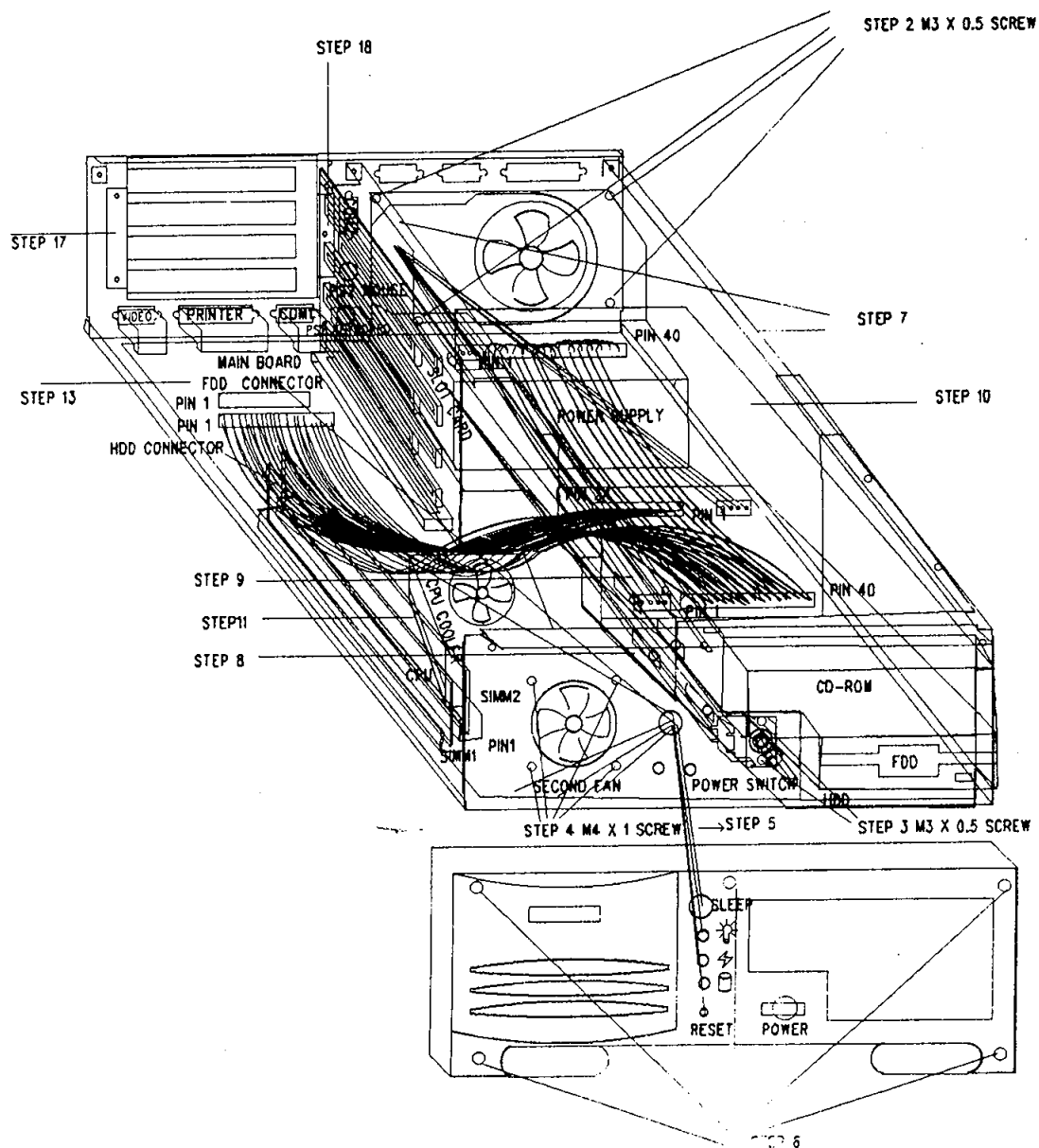
- (option)
Supports two universal serial bus (USBx2)
5. **I/O slots:** **Supports 4 slots PCI/ISA mixed for MFIII⁺-6BX model.**
a. 4 ISA slots.
b. 3 ISA and 1 PCI slots
c. 2 ISA and 2 PCI slots.
d. 1 ISA and 3 PCI slots.
Support 2 slots PCI/ISA mixed for MFII⁺-6BX model
a. 2 ISA slots.
b. 1 ISA and 1 PCI slots.
c. 2 PCI slots.
6. **Floppy disk:** One 3.5" 1.44MB floppy disk drive with front bezel for MFIII⁺-6BX model
One 3.5" 1.44MB floppy disk drive without front bezel for MFII⁺-6BX model. (Hidden inside the case)
7. **Hard disk:** One 3.5" IDE interface hard disk drive for MFIII⁺-6BX & MFII⁺-6BX model.
8. **CD-ROM:** One 5 1/4" CD-ROM drive for MFIII⁺-6BX model.
One slim CD-ROM drive for MFII⁺-6BX model.
9. **Video output:** Built in RIVA 128ZX chip
128-bit 3D AGP VGA on board with 4MB SGRAM.
Windows 95/98 Direct Draw and Direct 3D acceleration.
Extended display resolution up to 1800*1400*64K colors@60Hz and 1600*1200*32-bit true color.
10. **Network:** Built in RTL8139A 10/100Mbps PCI FAST Ethernet on board with RJ-45 connector and wake-

- up on LAN function
- 11. Physical size:** 33CM(L) x 32CM(W) x11CM(H)
for MFIII⁺-6BX model
33CM(L) x 32CM(W) x 8CM(H)
for MFII⁺-6BX model.
- 12. Power supply:** ATX power 200W. 110V/230V
switchable.
UL/CSA/TUV/VDE/DEMKO/
NEMKO/SEMKO/FIMKO/FI/
CB/CE/FCC approved.
- 13. Keyboard:** 84/85 keys mini keyboard or
regular 101/102 keys keyboard
or 105/106 keys WINDOWS 95
keyboard.
PS/2 keyboard connector.
- 14. Monitor:** 9" VGA mono or VGA color
monitor or regular 14"/15"/17"
VGA mono or VGA color monitor
or LCD display monitor.
- 15. BIOS:** 2MB flash EEPROM.
Supports PLUG & PLAY
function.
- 16. Second fan:** Second fan available to increase
the internal air flow for system
Cooling (optional).

CHAPTER 4 INSTALLATION

4.1 MFIII⁺-6BX 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 CORNER.
- 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 LED with wire. (not connected on Pentium II model).
 - e. Sleep switch with wire. (not connected on Pentium II model).

Remark: This switch can be connected to the motherboard jumper J8 as a power switch without password control. This feature is provided for emergency power on the system, if you have forgotten the password and you are unable to power on the system (If you have setup the password at the power on stage.) So, the sleep switch will be provided to power on the system, which pass the password control.

- f. Network LED with wire
- g. Power switch Button.

Note: This switch can be connected to the motherboard either JP12 with password control or JP8 without 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.25~26 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.27 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 connectors into the motherboard power connector J5, 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 J1 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 J3 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 J11 (fan connector with temperature sensor control manufacturer recommended) or J7.(CPU fan connector always active +12Volts.)
- b. Connects the power connector of the second fan with the power supply connector together. They are 2 pins connector and be sure to matching the colors of the wires.
- 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 JP5 connector of the motherboard.
- f. Connects the front bezel reset switch cable (White and Black colors) to the J14 connector of the motherboard.

Step22: Check all the necessary jumper on the motherboard. If any wrong or missing, please make the right correction. Please refer to page No.21~27 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.

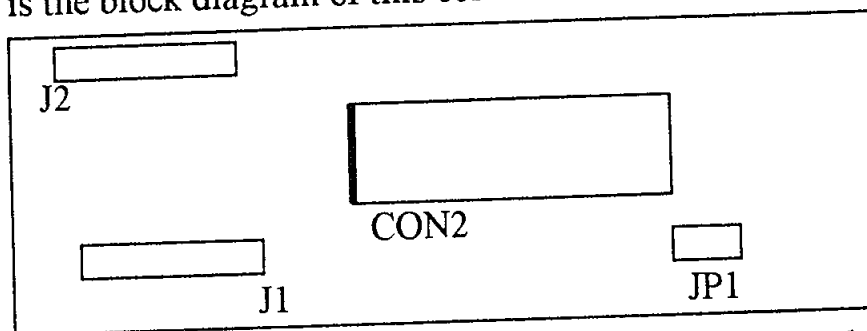
- Step24:** Up to now, you have finished the system installation of the mini desk top PC and you are ready to turn on the power to operate your system. Hope everything is running well and you are very satisfy with your system. Congratulations!!
- Step25:** Installing the software driver, if necessary. There are two types software driver included in your system CD-ROM disk and you may need to install them when you are running your system. The first one is the high performance 128 bits 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.
- 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⁺-6BX Slim Size PC System installation

The MFII⁺-6BX Slim Size PC system installation procedure will be similar to the MFIII⁺-6BX 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 sound card.
- 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 inside 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 ATX Motherboard Jumper Settings.

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

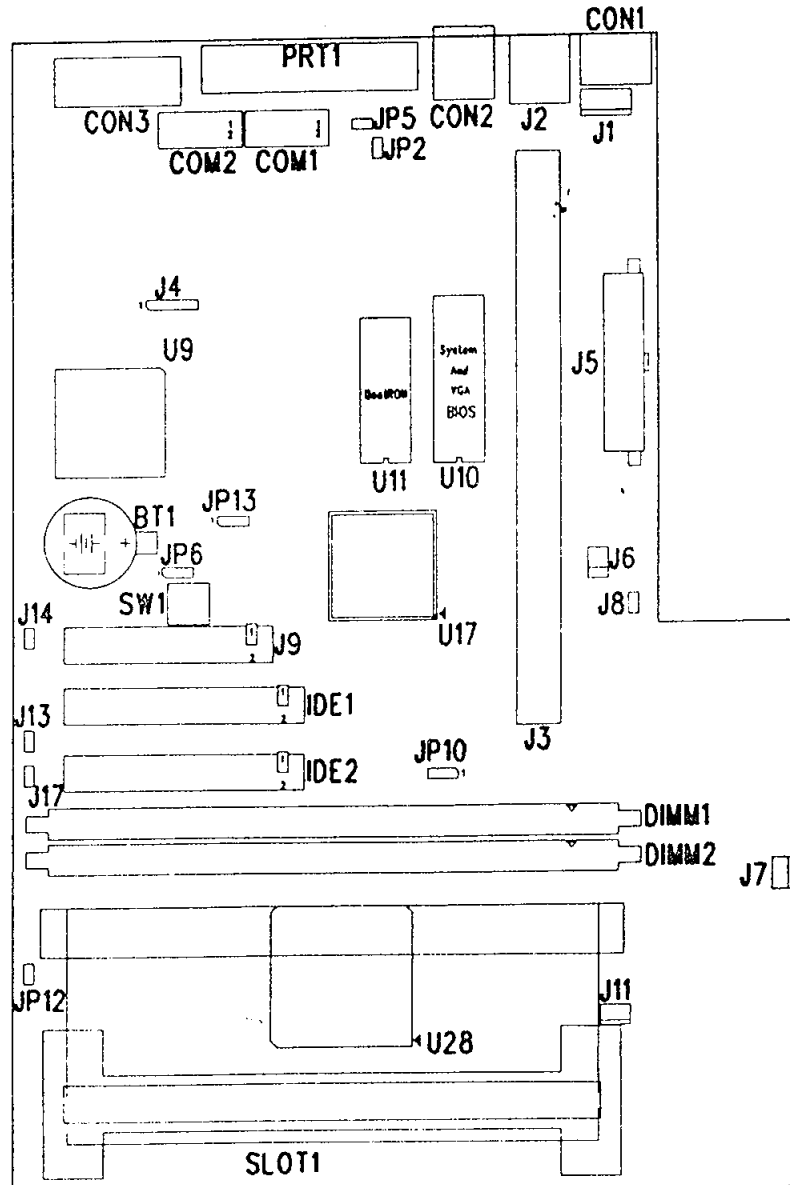


DIAGRAM (2)
THE SLIM SIZE/MIMI DESK TOP PC ALL-IN-ONE
ATX MOTHERBOARD JUMPER LOCATION V1.0

1. J1: PS/2 Mouse Connector

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

2. CON1: PS/2 Keyboard Connector

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

3. JP6: on board CMOS data keep or clear

Pin 1-2: on board CMOS Data keep (NORMAL)

Pin 2-3: on board CMOS Data clear

4. PWLED: Power LED

Pin1: Cathode

Pin2: Anode

5. HDLED: Hard Disk Drive LED

Pin1: Cathode

Pin2: Anode

6. IDE1: Primary Hard Disk Drives IDE Connector

7. IDE2: Secondary hard disk drives IDE connector

8. CON3: On Board VGA Adapter

9. J2: USB Port connector

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

10. J5: ATX 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

11. RESET: Reset Switch

12. IR: IrDA SIR or FIR Connector

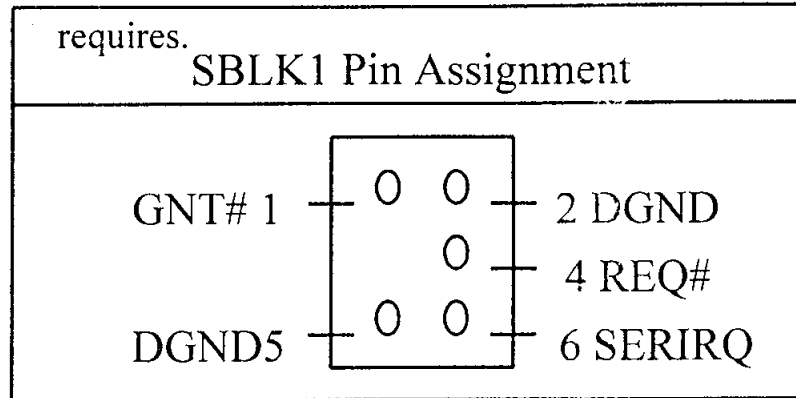
Pin No.	Function
1	Infrared Data Input (115.2Kbytes for SIR)
2	GND
3	Infrared Data Output
4	VCC (+5V)
5	Infrared Data Input (4M Bytes for FIR)

13. J9: Floppy Disk Drive Connector

14. COM1: Serial Port COM1 Connector

- 15. COM2: Serial Port COM2 Connector**
- 16. PRT1: Printer Port Connector**
- 17. LANLED: LAN LED (TX/RX)**
 - Pin1: Cathode
 - Pin2: Anode
 - It will light on when the data is transmitting or Receiving.
- 18. CON2: 10/100Mbit Fast Ethernet Connector**
 - RJ-45 port**
- 19. JP13: On board AGP VGA Card Select**
 - Pin 1-2 Short: On board AGP VGA Card Enabled (Default)
 - Pin 2-3 Short: On board AGP VGA Card Disable
- 20. JP2 :On Board 10/100 Mbps PCI Fast Ethernet Select**
 - Open : To Disabled on board 10/100 Mbps PCI Fast Ethernet
 - Short: To Enabled on board 10/100 Mbps Fast Ethernet (Default)
- 21. U11:LAN BOOT ROM (EPROM) SOCKET**
- 22. U10:Motherboard (2 Mega) EEPPROM SOCKET**
 - NOTE:** Currently, combines the motherboard BIOS and VGA BIOS together at U10 location.
- 23. U12 :AGP VGA Bios (EPROM) SOCKET**
 - (Currently, not used)
- 24. BT1:Battery**
- 25. SYSFAN:CPU FAN Connector always active**
 - (+12Volts)
- 26. CPUFAN:CPU FAN Connector with temperature**
 - Sensor control**
- 27. J3:PCI/ISA Mixed Slot for Riser Card**
- 28. J6:SBLK1-PCI Audio Card Connector**
 - This 5-pin connector is used for plugging the PCI Audio card's PCI request/grant sideboard signals connector into. Through this connector, it will request for legacy DMA channel support as needed

by some soundcards from that the PCI Bus. Your sound card package should include a cable for this feature if it



- 29. Slot 1: Pentium II/Celeron CPU Slot.**
- 30. PWT: Power Button with password control.**
- 31. SPLED: Power Button without password control.**
- 32. J12: Thermistor temperature sensor for CPU cooling fan control.**

4.4 CPU Jumper installation

1. JP10: CPU Frequency Select

1-2 Short: CPU frequency auto detection, if set the (Default) jumper JP10 to pin 1-2 short, the motherboard will automatic detects the CPU frequency. In this case that you don't need to install any CPU jumper for both 66MHz and 100MHz CPU.

If 100MHz CPU installed, then it will run 100MHz automatically, while 66MHz installed, then it will RUN 66MHz.

On the BIOS setup, there is a corresponding feature to setup the CPU frequency, but this is only to run the CPU speed over specs.

- a. If 100MHz CPU installed, on the BIOS setup it will show the following:

1-2 Short	100MHz	CPU HOST/PCI CLOCK	DEFAULT
1-2 Short	100MHz	CPU HOST/PCI CLOCK	103/34 MHz
1-2 Short	100MHz	CPU HOST/PCI CLOCK	112/33 MHz
1-2 Short	100MHz	CPU HOST/PCI CLOCK	133/44 MHz
1-2 Short	100MHz	CPU HOST/PCI CLOCK	100/33 MHz (Recommend)

- b. If 66MHz CPU installed, on the BIOS setup , it will show the following:

1-2 Short	66MHz	CPU HOST/PCI CLOCK	DEFAULT
1-2 Short	66MHz	CPU HOST/PCI CLOCK	68/34 MHz
1-2 Short	66MHz	CPU HOST/PCI CLOCK	75/37 MHz
1-2 Short	66MHz	CPU HOST/PCI CLOCK	83/41 MHz
1-2 Short	66MHz	CPU HOST/PCI CLOCK	66/33 MHz (Recommend)

2-3 Short:

This is to run the CPU frequency at higher speed (over specs), if the 66MHz CPU installed, it will run 100MHz, please enter the chip set feature menu at the BIOS setup to select the CPU bus speed that you want to run over specs.

1-2 Short	100MHz	CPU HOST/PCI CLOCK	DEFAULT
1-2 Short	100MHz	CPU HOST/PCI CLOCK	103/34 MHz
1-2 Short	100MHz	CPU HOST/PCI CLOCK	112/33 MHz
1-2 Short	100MHz	CPU HOST/PCI CLOCK	133/44 MHz
1-2 Short	100MHz	CPU HOST/PCI CLOCK	100/33 MHz

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CPU HOST CLOCK:

JP10	JP14	CPU CLK
1-2	NC	AUTO
2-3	2-3	66
1-2	2-3	100
1-2	1-2	133

2. SW1: BUS fraction core/bus ratio select

This is only effect at the Intel CPU clock ratio not locked internally. At the current, Intel delivery the CPU has been locked the clock ratio internally. So, this switch SW1 will not effect for this type CPU.

SW1	1	2	3	4	RATIO
	ON	ON	OFF	ON	2.5 x clock
	ON	OFF	ON	ON	3.0 x clock
	ON	OFF	OFF	ON	3.5 x clock (Default)
	OFF	ON	ON	ON	4.0 x clock
	OFF	ON	OFF	ON	4.5 x clock
	OFF	OFF	ON	ON	5.0 x clock
	OFF	OFF	OFF	ON	5.5 x clock
	ON	ON	ON	OFF	6.0 x clock
	ON	ON	OFF	OFF	6.5 x clock
	ON	OFF	ON	OFF	7.0 x clock
	ON	OFF	OFF	OFF	7.5 x clock
	OFF	ON	ON	OFF	8.0 x clock

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 8MB, 16MB, 32MB, 64MB, 128MB or 256MB. So, the total two 168-pins DIMM module memory size can be from 16MB up to 512MB. If you only installed one 168-pins DIMM module that you can install at location either DIMM1 or DIMM2. The system will detect the memory location either DIMM1 or DIMM2 automatically.

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