

# *SBC-6742S/F User's Manual*

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# SBC-6742S/F Socket 370 PIII®Coppermine™ Celeron™ Single Boaed Computer with SCSI ultra 160 , VGA/CRT/LCD , Ethernet , DOC , CompactFlash , Digital I/O and 4S1P RS-232/422/485, HDD, FDD, Supports four PCI Secondary master

## Startup Manual

### Packing List (option)

Before you begin installing your card, please make sure that the following materials have been shipped:

- 1 SBC-6742S/F all-in-one single board computer
- 2 hard disk drive (IDE) interface cable (40-pin)
- 1 SCSI hard disk drive interface cable (68-pin)
- 1 floppy disk drive interface cable (34-pin)
- 1 parallel port cable (26-pin)
- 1 serial port cable (9-pin)
- 1 user' s manual
- CD-ROM or disks for utility, drivers, and manual (in DOC/PDF format)
- Warranty certificate

If any of these items are missing or damaged, contact your distributor or sales representative immediately.

Note 1: For detailed contents of the SBC-6742S/F, please refer to the enclosed CD-ROM or disk (in DOC/PDF format).

Note 2: Acrobat Reader is acquired to view any PDF file. Acrobat Reader can be downloaded at: [www.adobe.com/Prodindex/acrobat/readstep.html](http://www.adobe.com/Prodindex/acrobat/readstep.html)

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## Specifications

### SBC-6742S/F(PICMG) Functions

- **CPU** :PentiumIII®Coppermine™ and Celeron™ supported (With system bus frequencies of 66/100MHz),Jumper select to AUTO for 66/100/133 MHz.
- **CPU socket** : Intel socket 370
- **BIOS** : Award Flash BIOS
- **Chipset** : Intel 443BX

- **I/O Chipset** :ITE IT8661F/Winbond W83977F. Full 16-bit I/O decoded
- **Memory** : Onboard two 168-pin DIMM socket supports up to 1GB bytes SDRAM
- **Enhanced IDE** : Support up to four IDE devices. Supports Ultra DMA/33 mode with data transfer rate up to 66MB/sec.
- **FDD interface** : Supports up to two floppy disk drives, 5.25" (360KB and 1.2MB) and /or 3.5" (720KB, 1.44MB, and 2.88MB)
- **Parallel port** : One parallel port. Supports SPP, ECP and EPP modes
- **Serial ports** : Three RS-232 and one RS-232/422/485 serial ports. Ports can be configured as COM1, COM2, COM3, COM4, or disabled individually.
- **IR interface** :Supports one IrDA Tx/Rx header
- **Keyboard/mouse connector** : supports PC/AT keyboard and PS/2 mouse
- **USB connectors** : 5 x 2 header onboard supports dual USB ports
- **Battery** : Lithium battery for data retention
- **Watchdog Timer** : Can generate a system reset( IRQ11or RESET). Support software selectable timeout interval. 1 sec-255 sec, I/O port 441h enable/disable, I/O port 443h Timer set
- **Digital I/O** : 4 bits TTL digital input and 4 bits TTL digital output, I/O port 220h
- **Power management** : Supports ATX and AT (P8) power supply. LAN wake up, and external modem ring-in functions. I/O peripheral devices, support power saving and doze/standby/suspend modes. APM 1.2compliant

- **H/W status monitoring** : Winbond W83782D H/W status monitoring IC, supports power supply voltage and temperatures monitoring

## Flat Panel/CRT Interface

- **Chipset** : C&T 69000
- **Display memory** : Built-in 2MB SDRAM
- **Display type** : Supports non-interlaced CRT and LCD (TFT, DSTN, and Mono) displays. Can display both CRT and Flat Panel simultaneously
- **Resolution** : Up to 1024x768@64K colors

## SCSI Interface(Support for 6742F)

- **Chipset** : SYMBIOS®53C1010
- **Features** : Ultra 160 SCSI, Transfer rate 160MB/sec, Dual 68-pin connector

## Ethernet Interface

- **Chipset** : Intel 82559XX 100Base-T Fast Ethernet
- **Ethernet interface** : 100Base-T RJ-45 connector.

## SSD Interface

Supports CompactFlash socket on solder side  
One 32-pin DIP socket supports M-systems  
DiskOnChip 2000 Series up to 288MB

## Expansion BUS

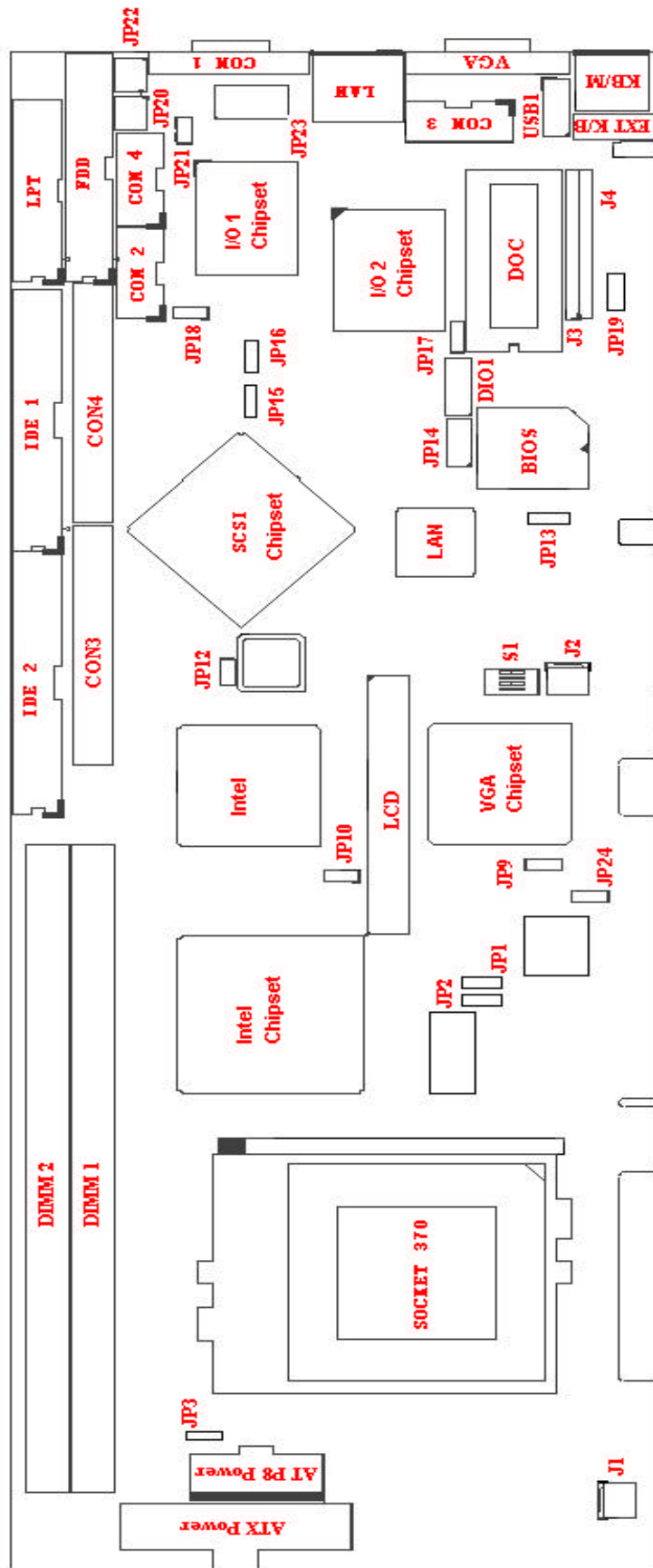
### PICMG PCI-ISA

- **ISA Golden Finger** : One 16-bit ISA BUS
- **PCI Golden Finger** : One 32-bit PCI BUS
- **Supports four PCI Secondary master**

## Mechanical and Environmental

- **Power supply voltage** : +5V (4.75V to 5.25V), +12V (11.4V to 12.6V)
- **Operating temperature** : 32 to 140 ° F (0 to 60 ° C)
- **Board size** : 13.3"(L) x 4.8"(W) (338mm x 122mm)

# JUMPERS AND CONNECTORS



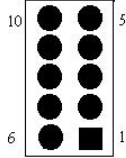
## Jumpers Function

Connectors on the board link it to external devices such as hard disk drives, a keyboard, or floppy drives. In addition, the board has a number of jumpers that allow you to configure your system to suit your application. The following tables list the function of each of the board's jumpers and connectors.

<b>ATP1</b> AT (p8) power connector	<b>JP17</b> DOC(SSD) voltage 3.3/5V select
<b>ATX1</b> ATX power connector	<b>JP14</b> DOC(SSD) address select
<b>COM1/2/3/4</b> Serial ports connector	<b>JP15</b> SCSI INTA/ routing enable
<b>DIO1</b> Digital I/O ports connector	<b>JP12/16</b> SCSI channel A/channel B
<b>DIMM1/2</b> DIMM socket	<b>JP18</b> CF CARD voltage 3.3/5V select
<b>FDD1</b> Floppy drive connector	<b>JP21</b> CF CARD master/slaver select
<b>IDE1/2</b> HDD drive connector	<b>JP24</b> On board VGA enable/disable select
<b>J1/2</b> Fan power connector	<b>JP9</b> LCD Panel voltage select
<b>J3</b> Front panel connector RESET/SPEAKER /KEY LOCK/Power_LED	<b>JP10</b> LCD SHF CLOCK select
<b>J4</b> Front panel connector IrDA /HDD_LED/ Turbo_LED/Power switch	<b>JP1/2</b> CPU speed select
<b>JP13</b> Clear CMOS	<b>JP3</b> CPU type select
<b>JP22/23</b> RS-232/422/485 function select	<b>S1</b> (1~4) LCD panel type select
<b>JP20</b> RS-232 function select , 422/485 voltage 5v/12v select	<b>LAN1</b> 100Base-T Ethernet connector
<b>JP19</b> Watch Dog IRQ11/RESET select	<b>LCD1</b> LCD display connector
<b>KBC1</b> EXT Keyboard	<b>LPT1</b> Printer ports connector
<b>CON1</b> PS2 KB/MOUSE	<b>USB1</b> USB ports connector
<b>CON2</b> VGA connector	
<b>CON3</b> SCSI connector 1	
<b>CON4</b> SCSI connector 2	

### COM1~COM3 PIN LIST

Pin Number	Signal	Pin Number	Signal
1	DCD	6	DSR
2	SIN(RXD)	7	RTS
3	SOUT (TXD)	8	CTS
4	DTR	9	RI(+5V, +12V)
5	GND	10	N.C

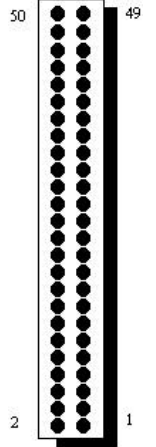


### COM4 PIN LIST

Pin Number	Signal	Pin Number	Signal
1	DCD(422 TXD-485 DATA-)	6	DSR
2	RXD(422 RXD+)	7	RTS
3	SOUT(422 TXD+/485DATA+)	8	CTS
4	DTR(422 RXD-)	9	RI(+5V, +12V)
5	GND	10	N.C

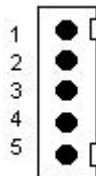
### LCD1

Pin Number	Signal	Pin Number	Signal
1	+12v	2	+12V
3	GND	4	GND
5	+5V(+3V)	6	+5V(+3V)
7	ENAVEE	8	GND
9	P0	10	P1
11	P2	12	P3
13	P4	14	P5
15	P6	16	P7
17	P8	18	P9
19	P10	20	P11
21	P12	22	P13
23	P14	24	P15
25	P16	26	P17
27	P18	28	P19
29	P20	30	P21
31	P22	32	P23
33	P24	34	P25
35	SHFCLK	36	FLM (V-SYS)
37	M	38	LP (H-SYS)
39	GND	40	ENABKL
41	P26	42	P27
43	P28	44	P29
45	P30	46	P31
47	P32	48	P33
49	P34	50	P35



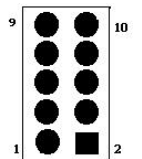
### KBC1 PS/2 KEY-BOARD

Pin Number	Signal
1	KCLK
2	KDATA
3	X
4	GND
5	KVCC



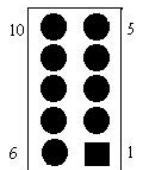
### DIO1 DIGITAL I/O PIN LIST

Pin Number	Signal	Pin Number	Signal
1	GND	2	GND
3	DOUT4	4	DIN1
5	DOUT3	6	DIN2
7	DOUT2	8	DIN3
9	DOUT1	10	DIN4



### USB1 PIN LIST

Pin Number	Signal	Pin Number	Signal
1	USBV	6	GND
2	USBD0-	7	GND
3	USBD0+	8	USBD1+
4	GND	9	USBD1-
5	GND	10	USBV



**JP13**

JP13	CONFIG
1-2	Normal
2-3	Clear CMOS

**JP20/JP22/JP23**

RS232 / RS422 / RS485 Select					
	A	B	C	D	JP22
RS232	1-2	1-2	1-2	1-2	1-2
RS422	2-3	2-3	2-3	2-3	3-4
RS485	2-3	2-3	X	X	5-6

JP20	RS232/422/485
1-2	RS232
3-4	RS422/485 +5V
5-6	RS422/485 +12V

**JP1/2**

CPU SPEED Select			
	66	100	AUTO
JP1	X	2-3	1-2
JP2	2-3	1-2	1-2

**JP3**

CPU TYPE Select	
1-2	FOR INTEL CPU
2-3	FOR OTHER CPU

**JP24**

On board VGA Select	
1-2	Enable
2-3	Disable

**JP12**

SCSI Channel A Select	
1-2	Channel A Terminator Disable
2-3	Channel A Terminator Enable

default

**JP19**

WatchDog Select	
1-2	IRQ11
2-3	System RESET

**JP9**

JP9	LCD Voltage Select
1-2	5 Voltage
2-3	3.3 Voltage

**JP17**

JP17	DOC Voltage Select
1-2	5 Voltage
2-3	3.3 Voltage

**JP10**

JP10	LCD Shift Clock Select
1-2	SHF +
2-3	SHF -

**JP14**

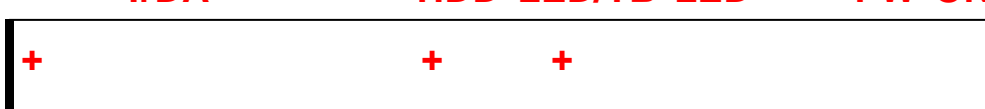
JP14	DOC Address Select
1-2	CC-CD
3-4	D0-D1
5-6	D4-D5
7-8	D8-D9
9-10	DC-DD

**JP16**


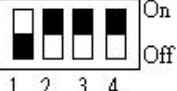

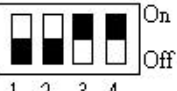

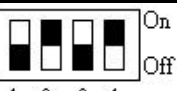
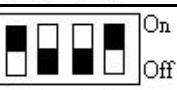

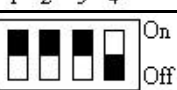

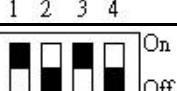
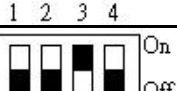
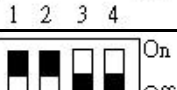
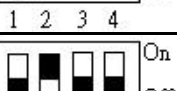
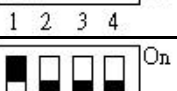
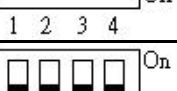
SCSI Channel B Select	
1-2	Channel B Terminator Disable
2-3	Channel B Terminator Enable

**JP15**

SCSI IRQ INT/A/B Select	
Close	Single IRQ
Open	Dual IRQ

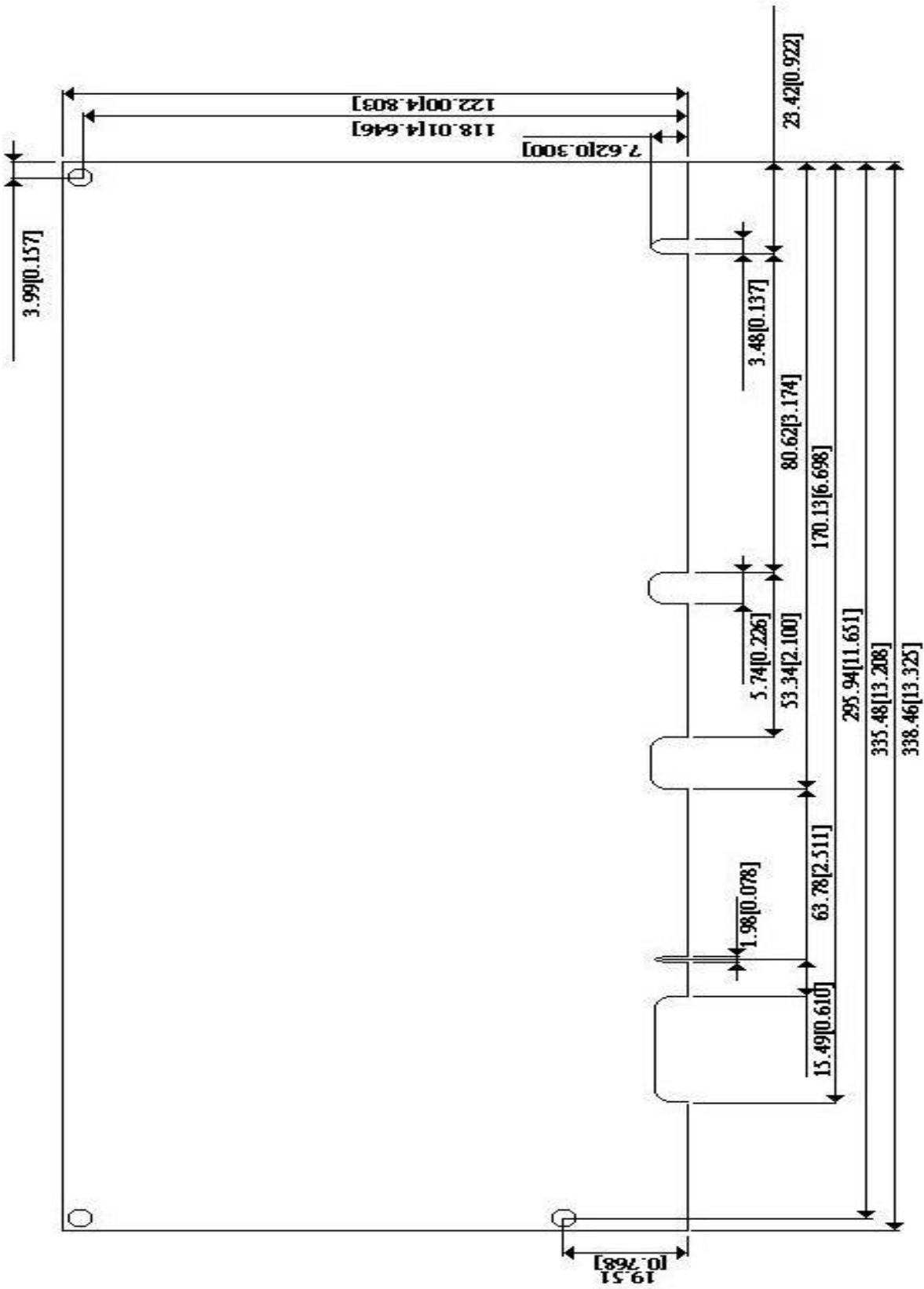
**J3      RESET                      SPEAKER                      PW LED/KEY LOCK****J4                      IrDA                      HDD LED/TB LED                      PW ON**

## SW1: LCD PANEL TYPE SELECT

DISPLAY	TYPE	Setting (SW1)
1024*768	Dual scan STN	 On Off 1 2 3 4
1280*1024	TFT color	 On Off 1 2 3 4
640*480	Dual scan STN	 On Off 1 2 3 4
800*600 36bits	Dual scan STN	 On Off 1 2 3 4
640*480	Sharp TFT color	 On Off 1 2 3 4
640*480	18-bits TFT color	 On Off 1 2 3 4
1024*768	TFT color	 On Off 1 2 3 4
800*600	TFT color	 On Off 1 2 3 4
800*600 <b>default</b>	TFT color	 On Off 1 2 3 4
800*600	TFT color	 On Off 1 2 3 4
800*600	Dual scan STN color	 On Off 1 2 3 4
800*600	Dual scan STN color	 On Off 1 2 3 4
1024*768	TFT color	 On Off 1 2 3 4
1280*1024	Dual scan STN	 On Off 1 2 3 4
1024*600	Dual scan STN	 On Off 1 2 3 4
1024*600	TFT color	 On Off 1 2 3 4



# BOARD DIMENSIONS



## Notice

Dear Customer,

Thank you for purchasing the SBC-6742S/F board. Please read user' s manual thoroughly before you install and use the board. The product that you have purchased comes with two-year warranty, but we will not be responsible for any misusing of the product. Therefore, we strongly urge you to read the manual first before using the product.