

PFM-800P

Intel® Ultra Low Voltage Celeron® M
Processor
24/48-bit Dual-Channel LVDS
2 COM/ 2 USB2.0
CompactFlash/ PCI-104 Interface

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Packing List

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

- 9681800P00 (TF) Cable Kit
 - 1701440500 44-pin IDE Cable x 1
 - 1700060152 Keyboard & Mouse Cable x 1
 - 1701160201 VGA Cable x 1
- Quick Installation Guide
- Utility CD
- PFM-800P

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

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Chapter

1

**General
Information**

1.1 Introduction

AAEON announces the latest PC/104 CPU Module--PFM-800P. This model adopts onboard Intel[®] Ultra Low Voltage Celeron[®] M Processor up to 1GHz and the 200-pin DDR 266 SODIMM up to 1GB. It definitely is a power consumption and cost effective solution for your applications.

The PFM-800P adopts the chipset of Intel[®] 852GM and Intel 82801DB (ICH4) and one 10/100Base-TX Ethernet port for network connection. This model features the PC/104 form factor and deploys PCI-104 expansion interface for fulfilling different demands from customers.

In this compact size PC/104 CPU module, the PFM-800P supports 24/48-bit dual-channel LVDS TFT LCD and CRT/LCD simultaneous display. In addition, the PFM-800P supports ATA33 and Type I CompactFlash[™] for the storage function. Moreover, it possesses two USB2.0 ports, one RS-232 port, and one RS-232/422/485 port for a better expansion.

The debut of the PFM-800P is not only to complete the product line of PC/104 CPU module, but also provide a compact, flexible solution to customers.

1.2 Features

- Onboard Intel® ULV Celeron® M 600MHz/ 1GHz
- Intel® 852GM +ICH4
- DDR 266 SODIMM Memory Up to 1GB
- 24/48-bit Dual-channel LVDS TFT LCD (Emulated)
- 10/100Base-TX Ethernet x 1
- EIDE x 1, CompactFlash™ x 1
- USB2.0 x 2, COM x 2
- PCI-104 Socket

1.3 Specifications

System

- Processor Onboard Intel® Ultra Low Voltage Celeron® M 600MHz/ 1GHz Processor
- System Memory 200-Pin DDR 266 SODIMM x 1, Max. 1GB
- Chipset Intel® 852GM +Intel® 82801DB (ICH4)
- Ethernet Intel® 82562ET, 10/100Base-TX
- BIOS Award 1 MB FLASH ROM
- Watchdog Timer Generates a time-out system reset
- H/W status monitoring Supports power supply voltages and temperature monitoring
- Expansion Interface PCI-104 Interface
- Battery Lithium battery
- Power Requirement +5V, +12V/AT
- Power Consumption (Typical) Intel® Celeron® M 1.0GHz, DDR266 1GB
0.27A @ +12V, 3.02A @ +5V
- Operating Temperature 32°F~140°F (0°C~60°C)
- Storage Temperature -40°F~176°F (-40°C~80°C)
- Operating Humidity 0%~90% relative humidity, non-condensing

- Board Size 3.55" (L) x 3.77" (W) (90mm x 96mm)
- Gross Weight 0.33 lb (0.15 kg)
- MTBF (Hours) 100,000

Display: Supports CRT/LCD simultaneous display

- Chipset Intel® 852GM
- Memory Shared system memory up to 32MB
- Resolutions Up to 1920 x 1080 @ 24bpp colors for CRT; Up to 1280 x 1024 @ 18bpp colors for LCD
- LCD Interface 24/48-bit LVDS TFT LCD (Emulated 24/48-bit LVDS)

I/O

- Storage EIDE x 1 (UDMA 33 for one device), Type I CompactFlash x 1
- Serial Port RS-232 x 1, RS-232/422/485 x 1
- USB USB2.0 x 2
- PS/2 Port Keyboard + Mouse x 1

Chapter

2

Quick Installation Guide

Notice:

The Quick Installation Guide is derived from Chapter 2 of user manual. For other chapters and further installation instructions, please refer to the user manual CD-ROM that came with the product.



2.1 Safety Precautions

Warning!

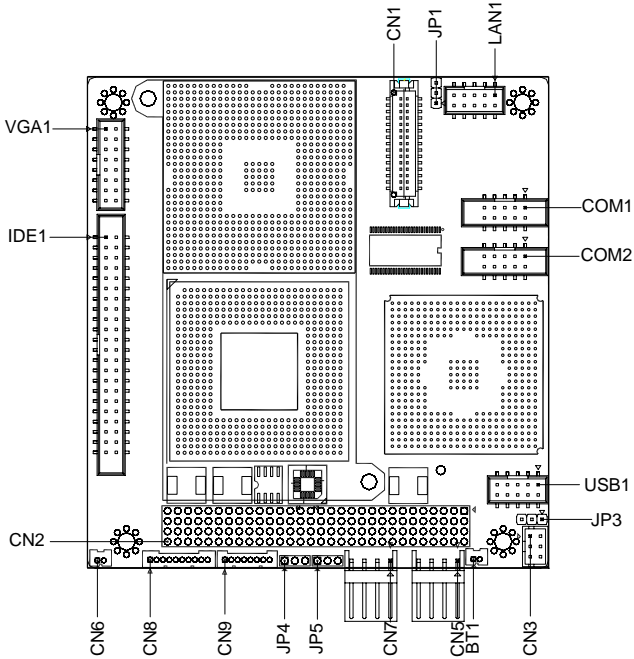
Always completely disconnect the power cord from your board whenever you are working on it. Do not make connections while the power is on, because a sudden rush of power can damage sensitive electronic components.

Caution!

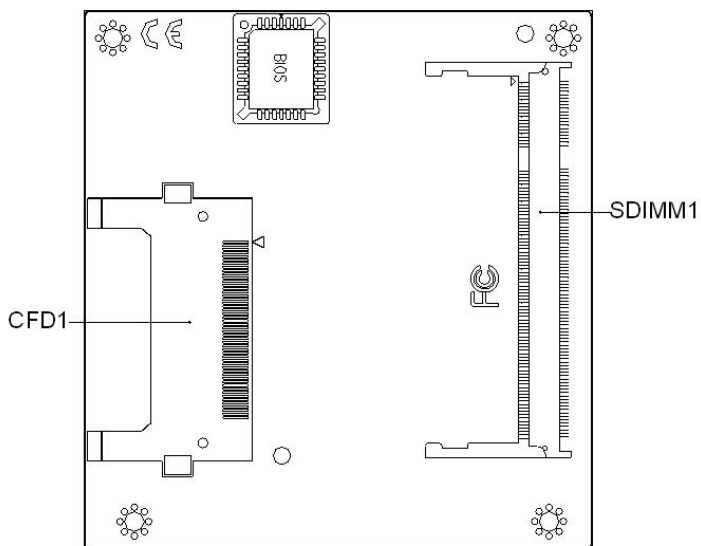
Always ground yourself to remove any static charge before touching the board. Modern electronic devices are very sensitive to static electric charges. Use a grounding wrist strap at all times. Place all electronic components on a static-dissipative surface or in a static-shielded bag when they are not in the chassis

2.2 Location of Connectors and Jumpers

Component Side

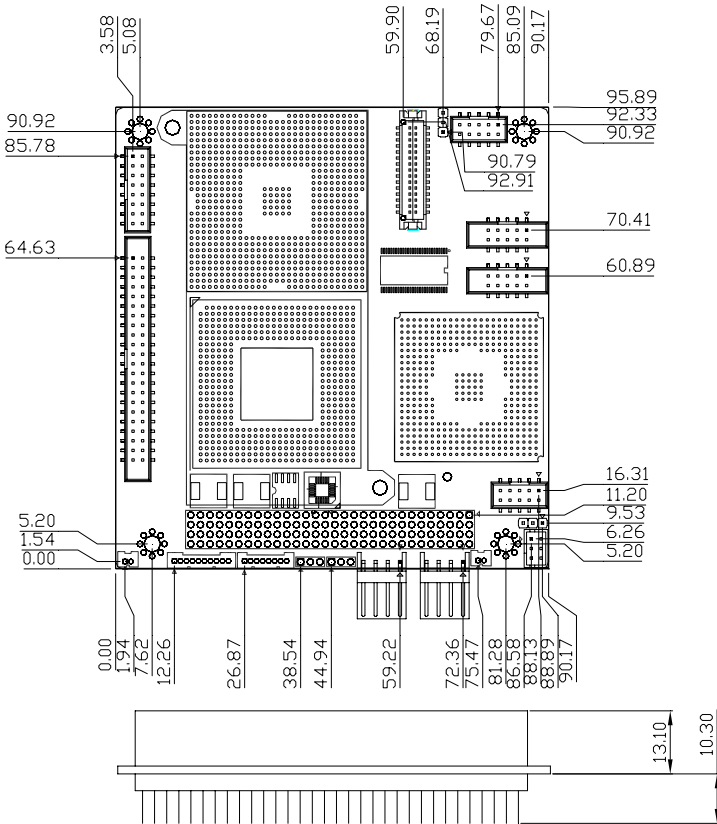


Solder Side

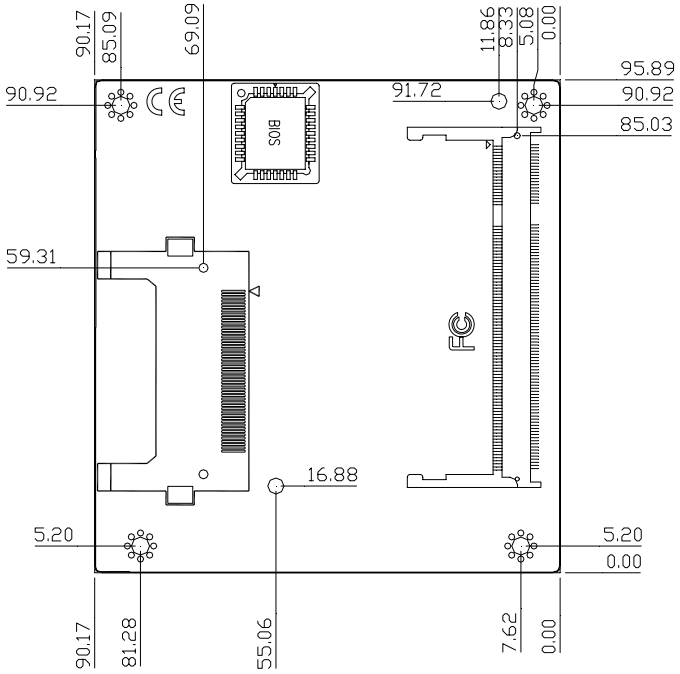


2.3 Mechanical Drawing

Component Side



Solder Side



2.4 List of Jumpers

The board has a number of jumpers that allow you to configure your system to suit your application.

The table below shows the function of each of the board's jumpers:

Jumpers

Label	Function
JP1	LCD Voltage Selection
JP3	Clear CMOS
JP4	PCI-104 Voltage Selection
JP5	COM2 Ring/+5V Selection

2.5 List of Connectors

The board has a number of connectors that allow you to configure your system to suit your application. The table below shows the function of each board's connectors:

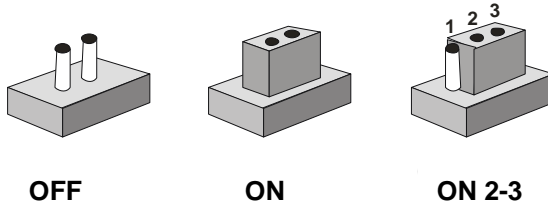
Note: For further information about mating connectors, please refer to the appendix of manual.

Label	Function
CN1	LVDS Connector
CN2	PCI-104 Connector
CN3	PS2 Keyboard/Mouse Connector
CN5	Mini 4P Power Connector
CN6	Fan Connector
CN7	Mini 4P Power Connector
CN8	Front Panel Connector
CN9	LAN LED Connector
SDIMM1	DDR SODIMM Slot
VGA1	VGA Display Connector
LAN1	10/100 Base-TX Ethernet Connector
USB1	USB 0/1Connector
IDE1	EIDE Connector
CFD1	CompactFlash Slot
COM1	RS-232 Serial Port Connector
COM2	RS-232 Serial Port Connector

2.6 Setting Jumpers

You configure your card to match the needs of your application by setting jumpers. A jumper is the simplest kind of electric switch. It consists of two metal pins and a small metal clip (often protected by a plastic cover) that slides over the pins to connect them. To “close” a jumper you connect the pins with the clip.

To “open” a jumper you remove the clip. Sometimes a jumper will have three pins, labeled 1, 2 and 3. In this case you would connect either pins 1 and 2 or 2 and 3.



A pair of needle-nose pliers may be helpful when working with jumpers.

If you have any doubts about the best hardware configuration for your application, contact your local distributor or sales representative before you make any change.

Generally, you simply need a standard cable to make most connections.

2.7 LCD Voltage Selection (JP1)

JP1	Function
1-3	+5V
3-5	+3.3V (Default)

2.8 Clear CMOS (JP3)

JP3	Function
1-2	Protected (Default)
2-3	Clear

2.9 PCI-104 I/O Voltage Selection (JP4)

JP4	Function
1-2	+5V
2-3	+3.3V (Default)

2.10 COM2 Ring/+5V Selection (JP5)

JP5	Function
1-2	+5V
2-3	Ring (Default)

2.11 LVDS Connector (CN1)

Pin	Signal	Pin	Signal
1	LVDS_BKLEN	2	LVDS_BKLCTL
3	PPVCC_1	4	GND
5	LVDS_TXLCLK#	6	LVDS_TXLCLK

7	PPVCC_1	8	GND
9	LVDS_TXL0#	10	LVDS_TXL0
11	LVDS_TXL1#	12	LVDS_TXL1
13	LVDS_TXL2#	14	LVDS_TXL2
15	LVDS_TXL3#	16	LVDS_TXL3
17	LVDS_DDCPDATA	18	LVDS_DDCPCLK
19	LVDS_TXU0#	20	LVDS_TXU0
21	LVDS_TXU1#	22	LVDS_TXU1
23	LVDS_TXU2#	24	LVDS_TXU2
25	LVDS_TXU3#	26	LVDS_TXU3
27	PPVCC_1	28	GND
29	LVDS_TXUCLK#	30	LVDS_TXUCLK

2.12 PS2 Keyboard/Mouse Connector (CN3)

Pin	Signal	Pin	Signal
1	KB_DATA	2	KB_CLK
3	KB_GND	4	KB_VCC
5	MS_DATA	6	MS_CLK

2.13 Mini 4P Power Connector (CN5)

Pin	Signal
1	+5V
2	GND
3	GND

4	+12V
---	------

2.14 Fan Connector (CN6)

Pin	Signal
1	+12V
2	GND

2.15 Mini 4P Power Connector (CN7)

Pin	Signal
1	+5V
2	GND
3	GND
4	+12V

2.16 Front Panel Connector (CN8)

Pin	Signal
1	N.C
2	N.C
3	External Buzzer(+)
4	External Buzzer(-)
5	IDE LED(+)
6	IDE LED(-)
7	Power LED(+)
8	Power LED(-)
9	Reset Switch(+)

10 Reset Switch(-)

2.17 LAN LED Connector (CN9)

Pin	Signal
1	LAN1 Speed LED(+)
2	LAN1 Speed LED(-)
3	LAN1 Active LED(+)
4	LAN1 Active LED(-)
5	N.C
6	N.C
7	N.C
8	N.C

2.18 VGA Display Connector (VGA1)

Pin	Signal	Pin	Signal
1	RED	2	VGAVCC
3	GREEN	4	GND
5	BLUE	6	N.C
7	N.C	8	SDATA
9	GND	10	H
11	GND	12	V
13	GND	14	SCLK
15	GND	16	N.C

2.19 10/100 Base-TX Ethernet Connector (LAN1)

Pin	Signal	Pin	Signal
1	RX-	2	RX+
3	Temp_GND	4	Temp_GND
5	Chassis_GND	6	Chassis_GND
7	Temp_GND	8	Temp_GND
9	TX+	10	TX-

2.20 USB Connector (USB1)

Pin	Signal	Pin	Signal
1	+5V	2	GND
3	USBD1-	4	GND
5	USBD1+	6	USBD2+
7	GND	8	USBD2-
9	GND	10	+5V

2.21 EIDE Connector (IDE1)

Pin	Signal	Pin	Signal
1	IDE RESET	2	GND
3	DATA7	4	DATA8
5	DATA6	6	DATA9
7	DATA5	8	DATA10
9	DATA4	10	DATA11
11	DATA3	12	DATA12

13	DATA2	14	DATA13
15	DATA1	16	DATA14
17	DATA0	18	DATA15
19	GND	20	N.C
21	REQ	22	GND
23	IO WRITE	24	GND
25	IO READ	26	GND
27	IO READY	28	GND
29	DACK	30	GND
31	IRQ14	32	N.C
33	ADDR1	34	UDMA DETECT
35	ADDR0	36	ADDR2
37	CS#1	38	CS#3
39	LED	40	GND
41	+5V	42	+5V
43	GND	44	N.C

2.22 RS-232 Serial Port Connector (COM1)

Pin	Signal	Pin	Signal
1	DCD	2	RXD
3	TXD	4	DTR
5	GND	6	DSR
7	RTS	8	CTS
9	RI/+5V	10	N.C

2.23 RS-232/422/485 Serial Port Connector (COM2)

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

Below Table for China RoHS Requirements

产品中有毒有害物质或元素名称及含量

AAEON Main Board/ Daughter Board/ Backplane

部件名称	有毒有害物质或元素					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr(VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
印刷电路板 及其电子组件	×	○	○	○	○	○
外部信号 连接器及线材	×	○	○	○	○	○
<p>O: 表示该有毒有害物质在该部件所有均质材料中的含量均在 SJ/T 11363-2006 标准规定的限量要求以下。</p> <p>X: 表示该有毒有害物质至少在该部件的某一均质材料中的含量超出 SJ/T 11363-2006 标准规定的限量要求。</p> <p>备注: 此产品所标示之环保使用期限, 系指在一般正常使用状况下。</p>						

Chapter

3

**Award
BIOS Setup**

3.1 System Test and Initialization

These routines test and initialize board hardware. If the routines encounter an error during the tests, you will either hear a few short beeps or see an error message on the screen. There are two kinds of errors: fatal and non-fatal. The system can usually continue the boot up sequence with non-fatal errors. Non-fatal error messages usually appear on the screen along with the following instructions:

Press <F1> to RESUME

Write down the message and press the F1 key to continue the boot up sequence.

System configuration verification

These routines check the current system configuration against the values stored in the CMOS memory. If they do not match, the program outputs an error message. You will then need to run the BIOS setup program to set the configuration information in memory.

There are three situations in which you will need to change the CMOS settings:

1. You are starting your system for the first time
2. You have changed the hardware attached to your system
3. The CMOS memory has lost power and the configuration information has been erased.

The PFM-800P CMOS memory has an integral lithium battery backup for data retention. However, you will need to replace the complete unit when it finally runs down.

3.2 Award BIOS Setup

Awards BIOS ROM has a built-in Setup program that allows users to modify the basic system configuration. This type of information is stored in battery-backed CMOS RAM so that it retains the Setup information when the power is turned off.

Entering Setup

Power on the computer and press immediately. This will allow you to enter Setup.



Standard CMOS Features

Use this menu for basic system configuration. (Date, time, IDE, etc.)

Advanced BIOS Features

Use this menu to set the advanced features available on your system.

Advanced Chipset Features

Use this menu to change the values in the chipset registers and optimize your system performance.

Integrated Peripherals

Use this menu to specify your settings for integrated peripherals. (Primary slave, secondary slave, keyboard, mouse etc.)

Power Management Setup

Use this menu to specify your settings for power management. (HDD power down, power on by ring, KB wake up, etc.)

PnP/PCI Configurations

This entry appears if your system supports PnP/PCI.

PC Health Status

This menu allows you to set the shutdown temperature for your system.

Frequency/Voltage Control

Use this menu to specify your settings for auto detect DIMM/PCI clock and spread spectrum.

Load Fail-Safe Defaults

Use this menu to load the BIOS default values for the minimal/stable performance for your system to operate.

Load Optimized Defaults

Use this menu to load the BIOS default values that are factory settings for optimal performance system operations. While AWARD has designated the custom BIOS to maximize performance, the factory has the right to change these defaults to meet their needs.

Set Supervisor/User Password

Use this menu to set Supervisor/User Passwords.

Save and Exit Setup

Save CMOS value changes to CMOS and exit setup.

Exit Without Saving

Abandon all CMOS value changes and exit setup.

You can refer to the “AAEON BIOS Item Description.pdf” file in the CD for the meaning of each setting in this chapter.

Chapter

4

**Driver
Installation**

The PFM-800P comes with a CD-ROM that contains all drivers and utilities that meet your needs.

Follow the sequence below to install the drivers:

Step 1 – Install INF Driver

Step 2 – Install VGA Driver

Step 3 – Install LAN Driver

USB 2.0 Drivers are available for download using Windows Update for both Windows XP and Windows 2000. For additional information regarding USB 2.0 support in Windows XP and Windows 2000, please visit www.microsoft.com/hwdev/usb/.

Please read instructions below for further detailed installations.

4.1 Installation

Insert the PFM-800P CD-ROM into the CD-ROM Drive. And install the drivers from Step 1 to Step 3 in order.

Step 1 – Install INF Driver

1. Click on the **Step 1-INF Driver** folder and then double click on the ***infinst_autol.exe***
2. Follow the instructions that the window shows
3. The system will help you install the driver automatically

Step 2 – Install VGA Driver

1. Click on the **Step 2 - VGA Driver** folder and double click on the ***win2k_xp141950.exe***
2. Follow the instructions that the window shows
3. The system will help you install the driver automatically

Step 3 – Install Intel LAN Driver

1. Click on the **Step 3 - LAN Driver** folder and then select the folder of ***Windows***
2. Double click on the ***PRO2KXP.exe***
3. Follow the instructions that the window shows
4. The system will help you install the driver automatically

Appendix

A

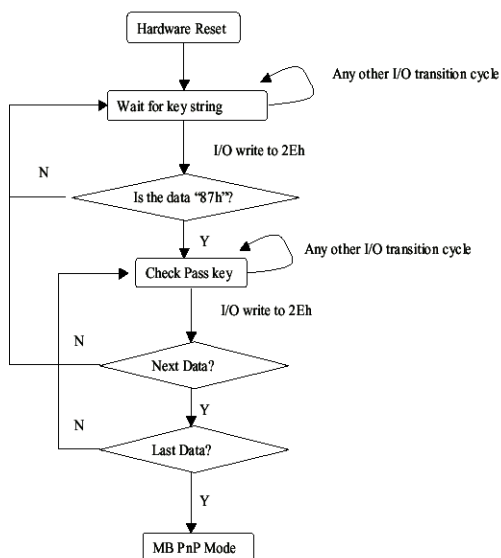
**Programming the
Watchdog Timer**

A.1 Programming

PFM-800P utilizes IT8712F-A chipset as its watchdog timer controller. Below are the procedures to complete its configuration and the AAEON initial watchdog timer program is also attached based on which you can develop customized program to fit your application.

Configuring Sequence Description

After the hardware reset or power-on reset, the IT8712F-A enters the normal mode with all logical devices disabled except KBC. The initial state (enable bit) of this logical device (KBC) is determined by the state of pin 121 (DTR1#) at the falling edge of the system reset during power-on reset.



There are three steps to complete the configuration setup: (1) Enter the MB PnP Mode; (2) Modify the data of configuration registers; (3) Exit the MB PnP Mode. Undesired result may occur if the MB PnP Mode is not exited normally.

(1) Enter the MB PnP Mode

To enter the MB PnP Mode, four special I/O write operations are to be performed during Wait for Key state. To ensure the initial state of the key-check logic, it is necessary to perform four write operations to the Special Address port (2EH). Two different enter keys are provided to select configuration ports (2Eh/2Fh) of the next step.

	Address Port	Data Port
87h, 01h, 55h, 55h:	2Eh	2Fh

(2) Modify the Data of the Registers

All configuration registers can be accessed after entering the MB PnP Mode. Before accessing a selected register, the content of Index 07h must be changed to the LDN to which the register belongs, except some Global registers.

(3) Exit the MB PnP Mode

Set bit 1 of the configure control register (Index=02h) to 1 to exit the MB PnP Mode.

WatchDog Timer Configuration Registers

LDN	Index	R/W	Reset	Configuration Register or Action
All	02H	W	N/A	Configure Control
07H	71H	R/W	00H	WatchDog Timer Control Register
07H	72H	R/W	00H	WatchDog Timer Configuration Register
07H	73H	R/W	00H	WatchDog Timer Time-out Value Register

Configure Control (Index=02h)

This register is write only. Its values are not sticky; that is to say, a hardware reset will automatically clear the bits, and does not require the software to clear them.

Bit	Description
7-2	Reserved
1	Returns to the Wait for Key state. This bit is used when the configuration sequence is completed
0	Resets all logical devices and restores configuration registers to their power-on states.

WatchDog Timer Control Register (Index=71h, Default=00h)

Bit	Description
7	WDT is reset upon a CIR interrupt
6	WDT is reset upon a KBC (mouse) interrupt
5	WDT is reset upon a KBC (keyboard) interrupt
4	WDT is reset upon a read or a write to the Game Port base address
3-2	Reserved
1	Force Time-out. This bit is self-clearing
0	WDT Status 1: WDT value reaches 0. 0: WDT value is not 0

WatchDog Timer Configuration Register (Index=72h, Default=00h)

Bit	Description
7	WDT Time-out value select 1: Second 0: Minute
6	WDT output through KRST (pulse) enable
5-4	Reserved
3-0	Select the interrupt level ^{Note} for WDT

WatchDog Timer Time-out Value Register (Index=73h, Default=00h)

Bit	Description
7-0	WDT Time-out value 7-0

A.2 IT8712F-A Watchdog Timer Initial Program

```
.MODEL SMALL
```

```
.CODE
```

Main:

```
CALL Enter_Configuration_mode
```

```
CALL Check_Chip
```

```
mov cl, 7
```

```
call Set_Logic_Device
```

```
;time setting
```

```
mov cl, 10 ; 10 Sec
```

```
dec al
```

Watch_Dog_Setting:

```
;Timer setting
```

```
mov al, cl
```

```
mov cl, 73h
```

```
call Superio_Set_Reg
```

```
;Clear by keyboard or mouse interrupt
```

```
mov al, 0f0h
```

```
mov cl, 71h
```

```
call Superio_Set_Reg
```

```
;unit is second.
```

```
mov al, 0C0H
```

```
mov cl, 72h
```

```
call Superio_Set_Reg
```

```
; game port enable  
mov cl, 9  
call Set_Logic_Device
```

```
Initial_OK:  
CALL Exit_Configuration_mode  
MOV AH,4Ch  
INT 21h
```

```
Enter_Configuration_Mode PROC NEAR  
MOV SI,WORD PTR CS:[Offset Cfg_Port]
```

```
MOV DX,02Eh  
MOV CX,04h  
Init_1:  
MOV AL,BYTE PTR CS:[SI]  
OUT DX,AL  
INC SI  
LOOP Init_1  
RET  
Enter_Configuration_Mode ENDP
```

```
Exit_Configuration_Mode PROC NEAR  
MOV AX,0202h  
CALL Write_Configuration_Data
```

RET

Exit_Configuration_Mode ENDP

Check_Chip PROC NEAR

MOV AL,20h

CALL Read_Configuration_Data

CMP AL,87h

JNE Not_Initial

MOV AL,21h

CALL Read_Configuration_Data

CMP AL,12h

JNE Not_Initial

Need_Initial:

STC

RET

Not_Initial:

CLC

RET

Check_Chip ENDP

Read_Configuration_Data PROC NEAR

MOV DX,WORD PTR CS:[Cfg_Port+04h]

OUT DX,AL

```
MOV DX,WORD PTR CS:[Cfg_Port+06h]
IN AL,DX
RET
Read_Configuration_Data ENDP
```

```
Write_Configuration_Data PROC NEAR
MOV DX,WORD PTR CS:[Cfg_Port+04h]
OUT DX,AL
XCHG AL,AH
MOV DX,WORD PTR CS:[Cfg_Port+06h]
OUT DX,AL
RET
Write_Configuration_Data ENDP
```

```
Superio_Set_Reg proc near
push ax
MOV DX,WORD PTR CS:[Cfg_Port+04h]
mov al,cl
out dx,al
pop ax
inc dx
out dx,al
ret
Superio_Set_Reg endp.Set_Logic_Device proc near
Set_Logic_Device proc near
```

```
push ax
push cx
xchg al,cl
mov cl,07h
call Superio_Set_Reg
pop cx
pop ax
ret
Set_Logic_Device endp

;Select 02Eh->Index Port, 02Fh->Data Port
Cfg_Port DB 087h,001h,055h,055h

DW 02Eh,02Fh
```

END Main

Note: Interrupt level mapping

0Fh-Dh: not valid

0Ch: IRQ12

.

.

03h: IRQ3

02h: not valid

01h: IRQ1






















































00h: no interrupt selected

Appendix

B

I/O Information

B.1 I/O Address Map

	[00000000 - 0000000F]	Direct memory access controller
	[00000000 - 00000CF7]	PCI bus
	[00000010 - 0000001F]	Motherboard resources
	[00000020 - 00000021]	Programmable interrupt controller
	[00000022 - 0000003F]	Motherboard resources
	[00000040 - 00000043]	System timer
	[00000044 - 0000005F]	Motherboard resources
	[00000060 - 00000060]	Standard 101/102-Key or Microsoft Natural PS/2 Keyboard
	[00000061 - 00000061]	System speaker
	[00000062 - 00000063]	Motherboard resources
	[00000064 - 00000064]	Standard 101/102-Key or Microsoft Natural PS/2 Keyboard
	[00000065 - 0000006F]	Motherboard resources
	[00000070 - 00000073]	System CMOS/real time clock
	[00000074 - 0000007F]	Motherboard resources
	[00000080 - 00000090]	Direct memory access controller
	[00000091 - 00000093]	Motherboard resources
	[00000094 - 0000009F]	Direct memory access controller
	[000000A0 - 000000A1]	Programmable interrupt controller
	[000000A2 - 000000BF]	Motherboard resources
	[000000C0 - 000000DF]	Direct memory access controller
	[000000E0 - 000000EF]	Motherboard resources
	[000000F0 - 000000FF]	Numeric data processor
	[00000170 - 00000177]	Secondary IDE Channel
	[000001F0 - 000001F7]	Primary IDE Channel
	[00000274 - 00000277]	ISAPNP Read Data Port
	[00000279 - 00000279]	ISAPNP Read Data Port
	[00000290 - 00000297]	Motherboard resources
	[00000290 - 0000029F]	Motherboard resources
	[000002E8 - 000002EF]	Communications Port (COM4)
	[000002F8 - 000002FF]	Communications Port (COM2)
	[00000376 - 00000376]	Secondary IDE Channel
	[00000378 - 0000037F]	Printer Port (LPT1)
	[00000380 - 0000038B]	Intel(R) 82852/82855 GM/GME Graphics Controller
	[000003C0 - 000003DF]	Intel(R) 82852/82855 GM/GME Graphics Controller
	[000003E8 - 000003EF]	Communications Port (COM3)
	[000003F0 - 000003F5]	Standard floppy disk controller
	[000003F6 - 000003F6]	Primary IDE Channel
	[000003F7 - 000003F7]	Standard floppy disk controller
	[000003F8 - 000003FF]	Communications Port (COM1)
	[00000400 - 000004BF]	Motherboard resources
	[000004D0 - 000004D1]	Motherboard resources
	[00000500 - 0000051F]	Intel(R) 82801DB/DBM SMBus Controller - 24C3
	[00000800 - 0000087F]	Motherboard resources
	[00000880 - 0000088F]	Motherboard resources
	[00000A79 - 00000A79]	ISAPNP Read Data Port
	[00000D00 - 0000FFFF]	PCI bus
	[0000D000 - 0000D03F]	Intel(R) 825xER PCI Adapter
	[0000E000 - 0000E0FF]	Realtek AC'97 Audio
	[0000E800 - 0000E807]	Intel(R) 82852/82855 GM/GME Graphics Controller
	[0000EA00 - 0000EA1F]	Intel(R) 82801DB/DBM USB Universal Host Controller - 24C2
	[0000EB00 - 0000EB3F]	Realtek AC'97 Audio
	[0000EC00 - 0000EC1F]	Intel(R) 82801DB/DBM USB Universal Host Controller - 24C4
	[0000F000 - 0000F00F]	Intel(R) 82801DB Ultra ATA Storage Controller - 24C8

B.2 Memory Address Map

Interrupt request (IRQ)	
(ISA) 0	System timer
(ISA) 1	Standard 101/102-Key or Microsoft Natural PS/2 Keyboard
(ISA) 3	Communications Port (COM2)
(ISA) 4	Communications Port (COM1)
(ISA) 6	Standard floppy disk controller
(ISA) 8	System CMOS/real time clock
(ISA) 9	Microsoft ACPI-Compliant System
(ISA) 10	Communications Port (COM3)
(ISA) 11	Communications Port (COM4)
(ISA) 12	PS/2 Compatible Mouse
(ISA) 13	Numeric data processor
(ISA) 14	Primary IDE Channel
(ISA) 15	Secondary IDE Channel
(PCI) 5	Intel(R) 8255xER PCI Adapter
(PCI) 5	Intel(R) 82801DB/DBM SMBus Controller - 24C3
(PCI) 5	Intel(R) 82801DB/DBM USB Universal Host Controller - 24C2
(PCI) 5	Intel(R) 82801DB/DBM USB Universal Host Controller - 24C4
(PCI) 5	Intel(R) 82801DB/DBM USB2 Enhanced Host Controller - 24CD
(PCI) 5	Intel(R) 82852/82855 GM/GME Graphics Controller
(PCI) 5	Realtek AC'97 Audio

B.3 IRQ Mapping Chart

Interrupt request (IRQ)	
(ISA) 0	System timer
(ISA) 1	Standard 101/102-Key or Microsoft Natural PS/2 Keyboard
(ISA) 3	Communications Port (COM2)
(ISA) 4	Communications Port (COM1)
(ISA) 6	Standard Floppy disk controller
(ISA) 8	System CMOS/real time clock
(ISA) 9	Microsoft ACPI-Compliant System
(ISA) 10	Communications Port (COM3)
(ISA) 11	Communications Port (COM4)
(ISA) 12	PS/2 Compatible Mouse
(ISA) 13	Numeric data processor
(ISA) 14	Primary IDE Channel
(ISA) 15	Secondary IDE Channel
(PCI) 5	Intel(R) 8255xER PCI Adapter
(PCI) 5	Intel(R) 82801DB/DBM SMBus Controller - 24C3
(PCI) 5	Intel(R) 82801DB/DBM USB Universal Host Controller - 24C2
(PCI) 5	Intel(R) 82801DB/DBM USB Universal Host Controller - 24C4
(PCI) 5	Intel(R) 82801DB/DBM USB2 Enhanced Host Controller - 24CD
(PCI) 5	Intel(R) 82852/82855 GM/GME Graphics Controller
(PCI) 5	Realtek AC'97 Audio

B.4 DMA Channel Assignments



Appendix

C

Mating Connector

C.1 List of Mating Connectors and Cables

The table notes mating connectors and available cables.

Connector Label	Function	Mating Connector		Available Cable	Cable P/N
		Vendor	Model no		
CN1	LVDS Connector	HO TIEN	1255H		N/A
CN2	PCI104 Connector				N/A
CN3	PS2 Keyboard /Mouse Connector	Neltron	2026B--XX	Keyboard & Mouse Cable	1700060152
CN5	Power Connector	Ever	2542H-04		N/A
CN6	FAN Connector	HRS	DF14-MS-1 .25C		N/A
CN7	Power Connector	Ever	2542H-04		N/A
VGA1	VGA Connector	Neltron	2026B--XX	CRT Cable	1701160201
LAN1	Ethernet Connector	Keentop	1014 Series	Ethernet Cable	1700100200
USB1	USB Connector	Neltron	2026B--XX	USB Cable	1709100201
IDE1	IDE Connector	Keentop	1014 Series	IDE Cable	1701440500
COM1	COM Connector	Keentop	1014 Series	Serial Port Cable	1701100207
COM2	COM Connector	Keentop	1014 Series	Serial Port Cable	1701100207
BT1	Battery Connector	HRS	DF14-MS-1 .25C		N/A