User Manual

Revision v1.0 December

Orion

TOUCH DYNAMIC

Manual Version 1.0
Part Number:

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Safety

IMPORTANT SAFETY INSTRUCTIONS

1. To disconnect the machine from the electrical power supply, turn off the power switch and remove the power cord plug from the wall socket. The wall socket must be easily accessible and in close proximity to the machine.
2. Read these instructions carefully. Save these instructions for future reference.
3. Follow all warnings and instructions marked on the product.
4. Do not use this product near water.
5. Do not place this product on an unstable cart, stand, or table. The product may fall, causing serious damage to the product.
6. Slots and openings in the cabinet and the back or bottom are provided for ventilation to ensure reliable operation of the product and to protect it from overheating. These openings must not be blocked or covered. The openings should never be blocked by placing the product on a bed, sofa, rug, or other similar surface. This product should never be placed near or over a radiator or heat register or in a built-in installation unless proper ventilation is provided.
7. This product should be operated from the type of power indicated on the marking label. If you are not sure of the type of power available, consult your dealer or local power company.
8. Do not allow anything to rest on the power cord. Do not locate this product where persons will walk on the cord.
9. Never push objects of any kind into this product through cabinet slots as they may touch dangerous voltage points or short out parts that could result in a fire or electric shock. Never spill liquid of any kind on the product.

CE MARK

CE This device complies with the requirements of the EEC directive 2004/108/EC with regard to “Electromagnetic compatibility” and 2006/95/EC “Low Voltage Directive”.

FCC

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.

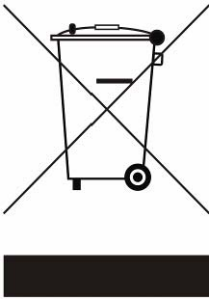
(2) This device must accept any interference received, including interference that may cause undesired operation.

CAUTION ON LITHIUM BATTERIES

There is a danger of explosion if the battery is replaced incorrectly. Replace only with the same or equivalent type recommended by the manufacturer. Discard used batteries according to the manufacturer’s instructions.

LEGISLATION AND WEEE SYMBOL

2002/96/EC Waste Electrical and Electronic Equipment Directive on the treatment, collection, recycling and disposal of electric and electronic devices and their components.



The crossed dustbin symbol on the device means that it should not be disposed of with other household wastes at the end of its working life. Instead, the device should be taken to the waste collection centers for activation of the treatment, collection, recycling and disposal procedure. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate this from other types of wastes and recycle it responsibly to promote the sustainable reuse of material resources.

Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take this item for environmentally safe recycling.

Business users should contact their supplier and check the terms and conditions of the purchase contract.

This product should not be mixed with other commercial wastes for disposal.

Revision History

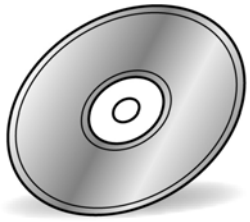
Changes to the original user manual are listed below:

Version	Date	Description
1.0	2009 December	● Initial release
		●
		●
		●

Table of Content

1. Packing List

Take the system unit out of the carton. Remove the unit from the carton by holding it by the foam inserts. The following contents should be found in the carton:



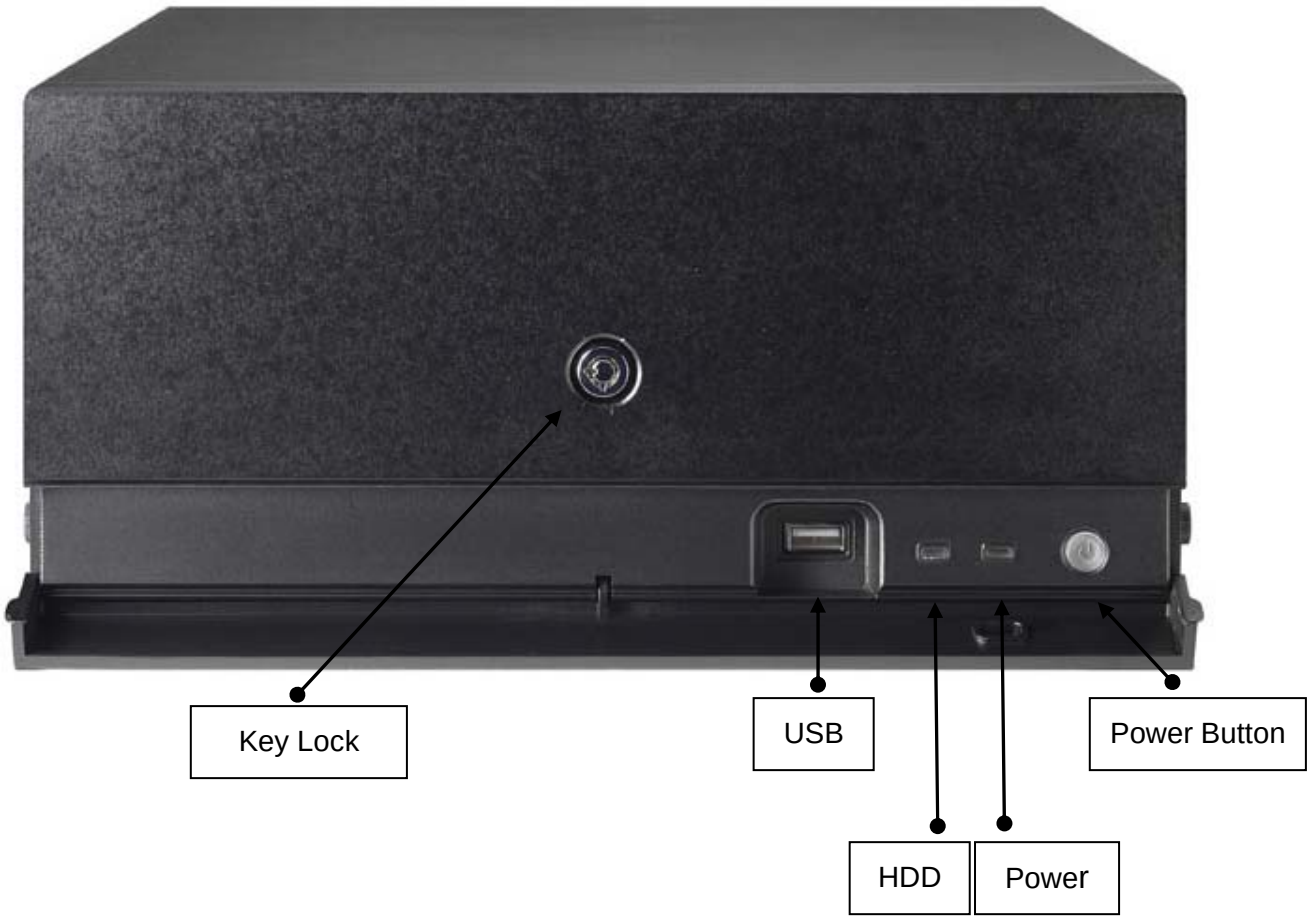
a. Driver CD

b. Power Cable

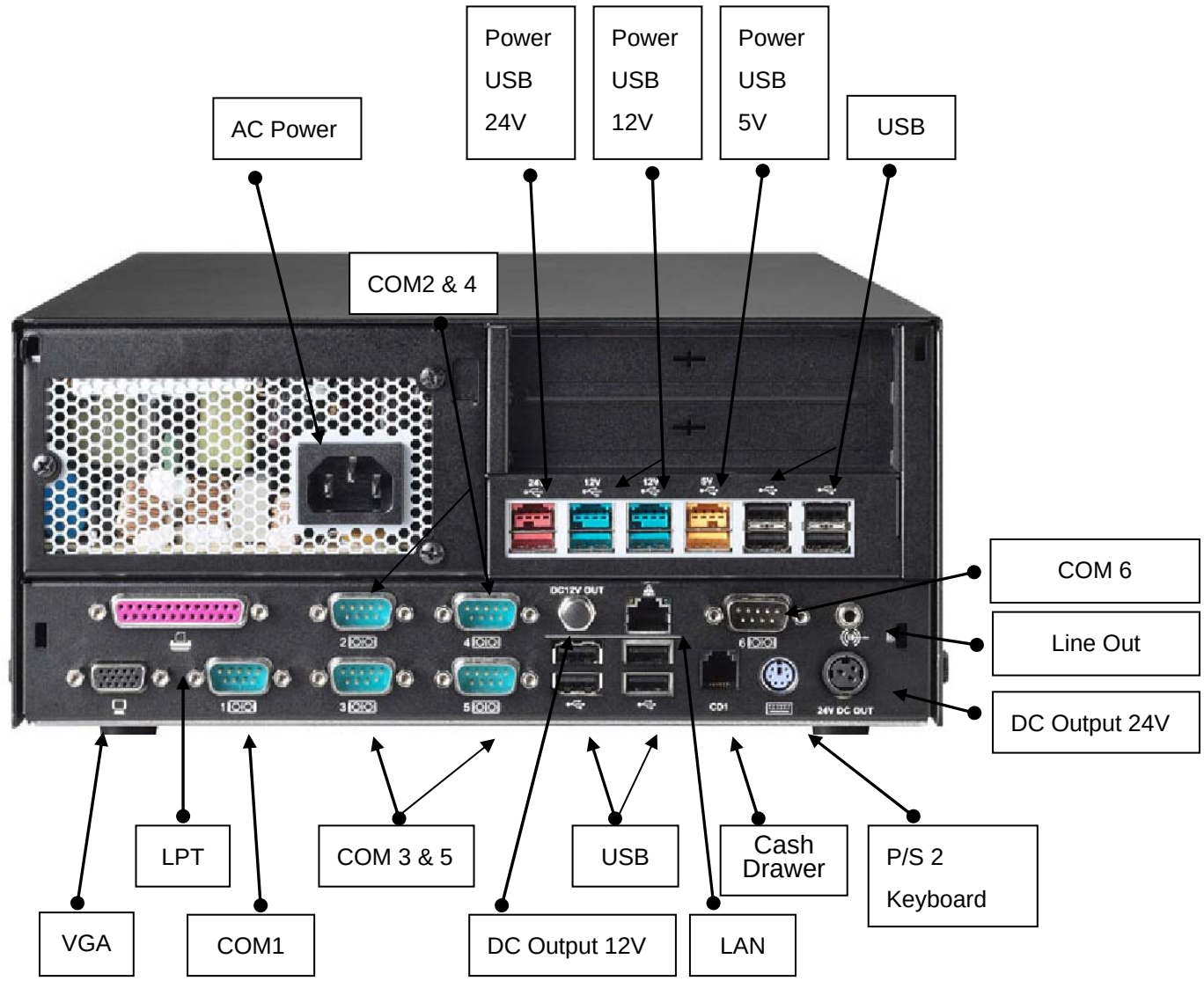
Note: The power cord type various according to different country and region.

2. System View

2.1. Front View



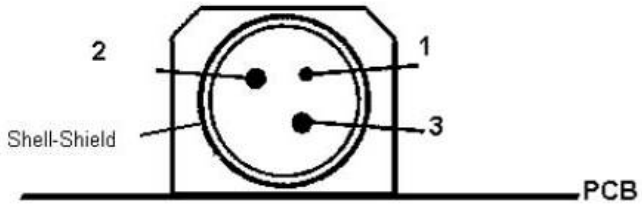
2.2. Rear View



Note: The maximum current that can be drawn from each COM port is 500 mA.

Pin	Assignment
1	NC
2	+ 24V DC
3	Ground

DC output 24V Pin Assignment

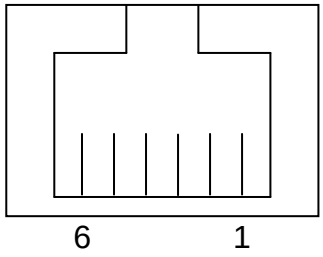


3. Peripherals Installation

3.1. B89 Cash Drawer Installation

You can install a cash drawer through the cash drawer port. Please verify the pin assignment before installation

Cash Drawer Pin Assignment



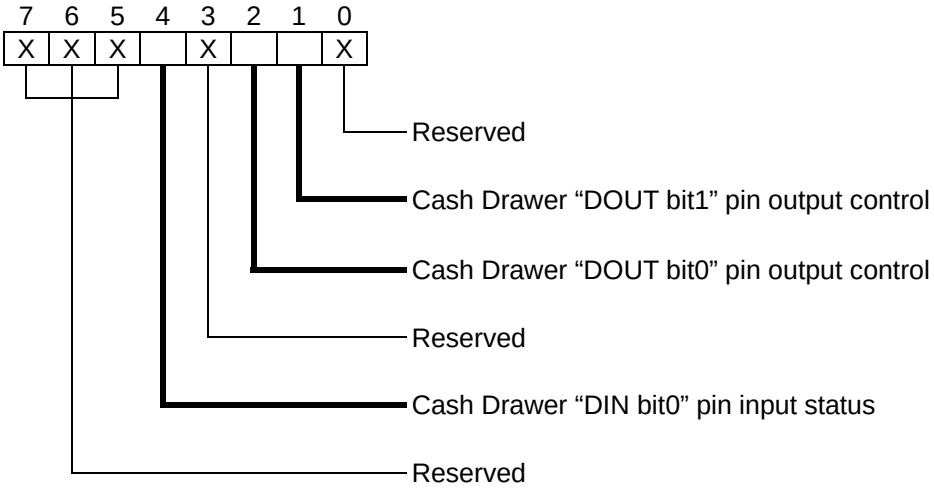
Pin	Signal
1	GND
2	DOUT bit0
3	DIN bit0
4	12V / 24V
5	DOUT bit1
6	GND

Cash Drawer Controller Register

The Cash Drawer Controller use one I/O addresses to control the Cash Drawer.

Register Location: 4B8h
Attribute: Read / Write
Size: 8bit

BIT	BIT7	BIT6	BIT5	BIT4	BIT3	BIT2	BIT1	BIT0
Attribute	Reserved			Read	Reserved	Write		Reserved



Bit 7: Reserved.
Bit 6: Reserved.
Bit 5: Reserved.
Bit 4: Cash Drawer “DIN bit0” pin input status.
= 1: the Cash Drawer closed or no Cash Drawer.
= 0: the Cash Drawer opened.
Bit 3: Reserved.
Bit 2: Cash Drawer “DOUT bit0” pin output control.
= 1: Opening the Cash Drawer
= 0: Allow closing the Cash Drawer
Bit 1: Cash Drawer “DOUT bit1” pin output control.
= 1: Opening the Cash Drawer
= 0: Allow closing the Cash Drawer
Bit 0: Reserved

Note: Please follow the Cash Drawer control signal design to control the Cash Drawer

Cash Drawer Control Command Example

Use Debug.EXE program under DOS or Windows98

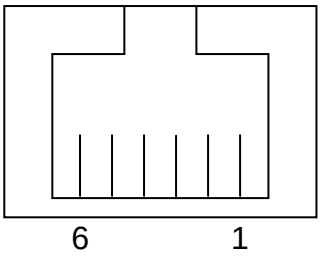
Command	**Cash Drawer**
O 4B8 04	Opening
O 4B8 00	Allow to closing
➢ Set the I/O address 4B8h bit2 =1 for opening the Cash Drawer by “DOUT bit0” pin control. ➢ Set the I/O address 4B8h bit2 = 0 to allow closing Cash Drawer.	

Command	**Cash Drawer**
I 4B8	Check status
➢ The I/O address 4B8h bit4 =1 means the Cash Drawer is closed or no Cash Drawer. ➢ The I/O address 4B8h bit4 =0 means the Cash Drawer is open.	

3.2. B99 Cash Drawer Installation

You can install a cash drawer through the cash drawer port. Please verify the pin assignment before installation.

Cash Drawer Pin Assignment



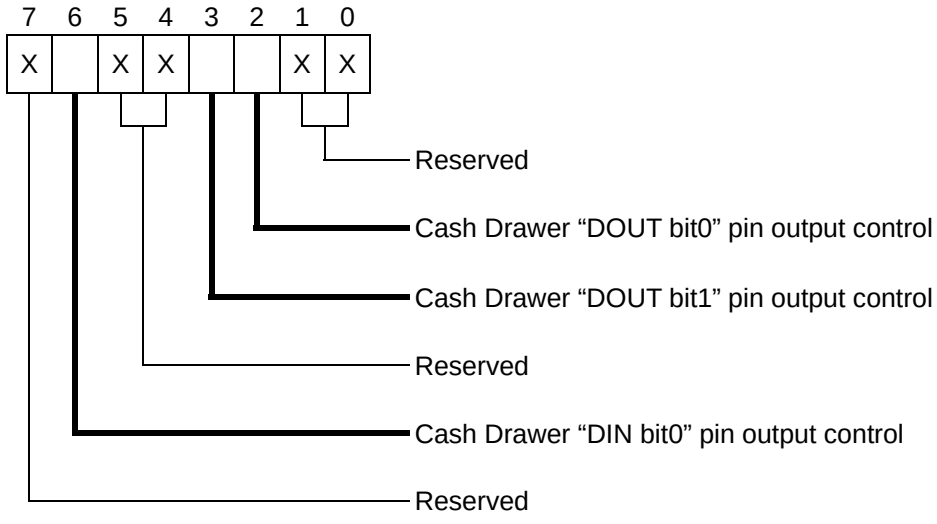
Pin	Signal
1	GND
2	DOUT bit0
3	DIN bit0
4	12V / 24V
5	DOUT bit1
6	GND

Cash Drawer Controller Register

The Cash Drawer Controller use one I/O addresses to control the Cash Drawer.

Register Location: 48Ch
Attribute: Read / Write
Size: 8bit

BIT	BIT7	BIT6	BIT5	BIT4	BIT3	BIT2	BIT1	BIT0
Attribute	Reserved		Read	Reserved	Write		Reserved	



Bit 7: Reserved
Bit 6: Cash Drawer “DIN bit0” pin input status.
= 1: the Cash Drawer closed or no Cash Drawer
= 0: the Cash Drawer opened
Bit 5: Reserved
Bit 4: Reserved
Bit 3: Cash Drawer “DOUT bit1” pin output control.
= 1: Opening the Cash Drawer
= 0: Allow close the Cash Drawer
Bit 2: Cash Drawer “DOUT bit0” pin output control.
= 1: Opening the Cash Drawer
= 0: Allow close the Cash Drawer
Bit 1: Reserved
Bit 0: Reserved

Note: Please follow the Cash Drawer control signal design to control the Cash Drawer.

Cash Drawer Control Command Example

Use Debug.EXE program under DOS or Windows98

Command	**Cash Drawer**
O 48C 04	Opening
O 48C 00	Allow to close
➢ Set the I/O address 48Ch bit2 =1 for opening Cash Drawer by “DOUT bit0” pin control. ➢ Set the I/O address 48Ch bit2 = 0 for allow close Cash Drawer.	

Command	**Cash Drawer**
I 48C	Check status
➢ The I/O address 48Ch bit6 =1 mean the Cash Drawer is opened or not exist. ➢ The I/O address 48Ch bit6 =0 mean the Cash Drawer is closed.	

4. System Disassembly

4.1. Removing the Front Cover

a. Use the key to unlock the front cover
Remove the front cover

b. Lift the front cover up in the direction as shown by the arrows

c. Remove the front cover

4.2. Removing the Top Cover

To remove the top cover, please follow the steps as described in chapter 5.1.

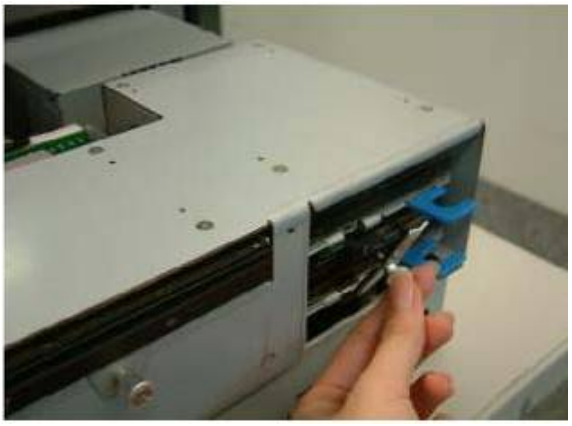
a. Remove the screw (1)

b. Loosen the thumb screws (4) (two from each side) to release the top cover from the system.

4.3. Replacing the HDD

To replace the front cover, please follow the steps as described in chapter 5.1.

a. Loosen the thumb screw (1).



b. Loosen the locking bar (1).

c. Disconnect the cables (4).

d. Use your finger to pull the HDD holder out.

e. Remove the HDD.

f. Repeat the step d. and e. to remove the other HDD.

4.4. Replacing the DVD-ROM

To replace the front cover, please follow the steps as described in chapter 5.1

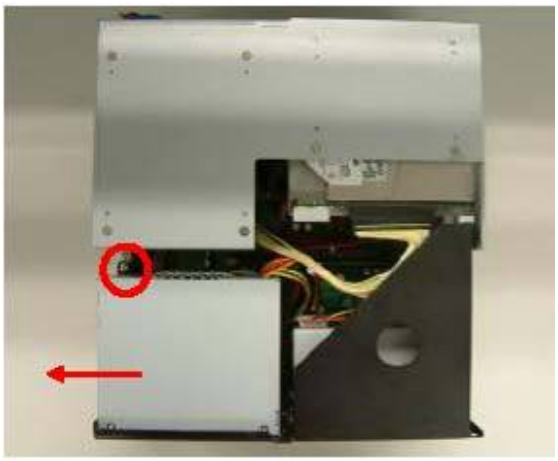
a. Loosen the thumb screw (1)

b. Pull the DVD-ROM holder out

c. Disconnect the cables (2) to remove the DVD-ROM

4.5. Replacing the Power Supply

To replace the power supply, please follow the steps as described in chapter 5.1 and 5.2



d. Remove the screw (1) and slide the

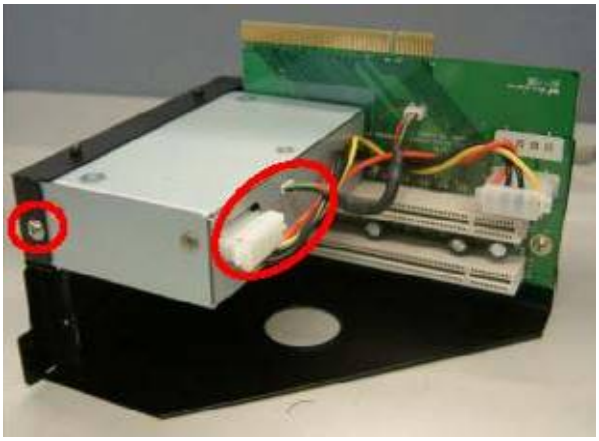
e. Disconnect the cables (3) to release the power supply holder in the direction as power supply holder from the system. shown by the arrow.

f. Remove the screws (3) to separate the power supply from the holder.

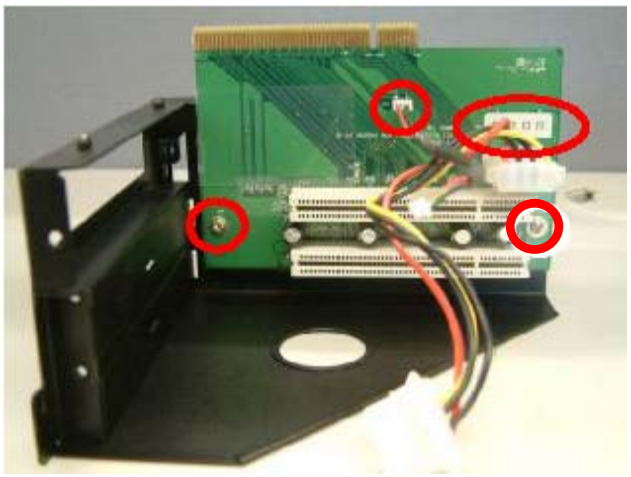
4.6. Replacing the I/O & PCI Extension Module

To replace the I/O and PCI extension module, please follow the steps as described in chapter 5.1 and 5.2

a. Remove the extension module by gently pulling it upwards taking care not to damage the connector.



b. Disconnect the cables (3) and remove the I/O module from the holder.

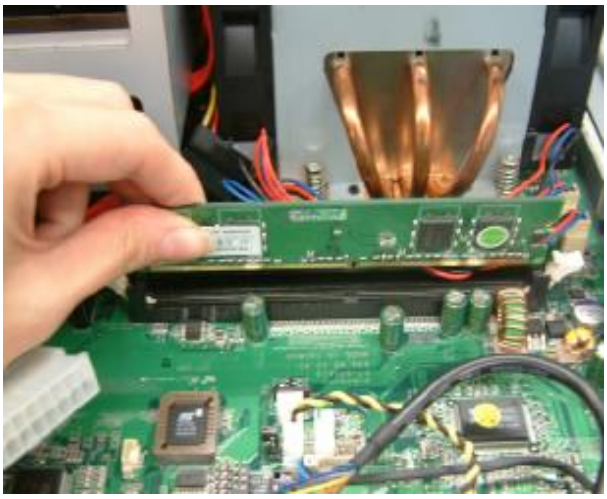


c. Disconnect the cables (2) and remove the screws (2) to release the PCI riser card from the holder.

4.7. Replacing the Memory

To replace the memory, please follow the steps as described in chapter 5.1, 5.2, 5.5(a)

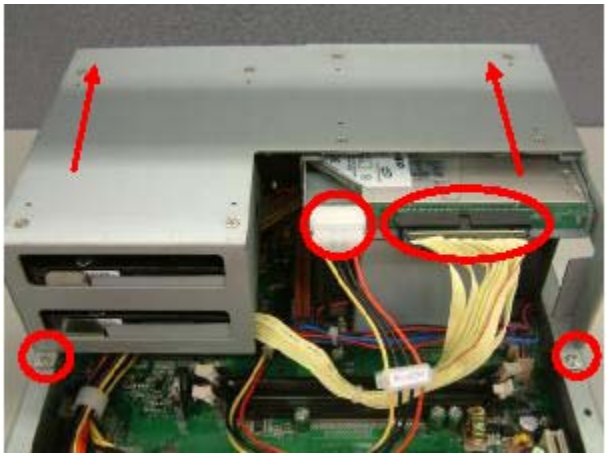
a. Use your finger to push the DIMM slot ejector clips into the down position.



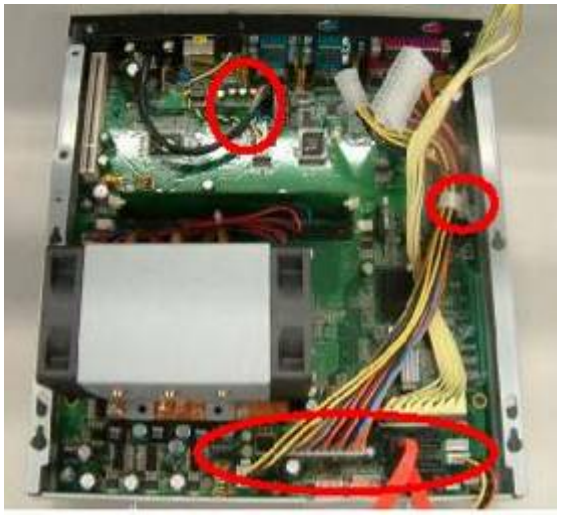
b. Remove the memory module from the slot.

4.8. Replacing the Motherboard

To replace the motherboard, please follow the steps as described in chapter 5.1, 5.2, 5.5(a) and 5.6(a)



a. Disconnect the cables (2), remove the screws (2) and slide the HDD module in the direction as shown by the arrows to release the module from the motherboard Chassis



b. Remove the screw (1) and disconnect the cables (9) as shown in the picture.

c. Remove the screws (7)

d. Remove the hex screws (14) to release the motherboard from the chassis

5. Specification

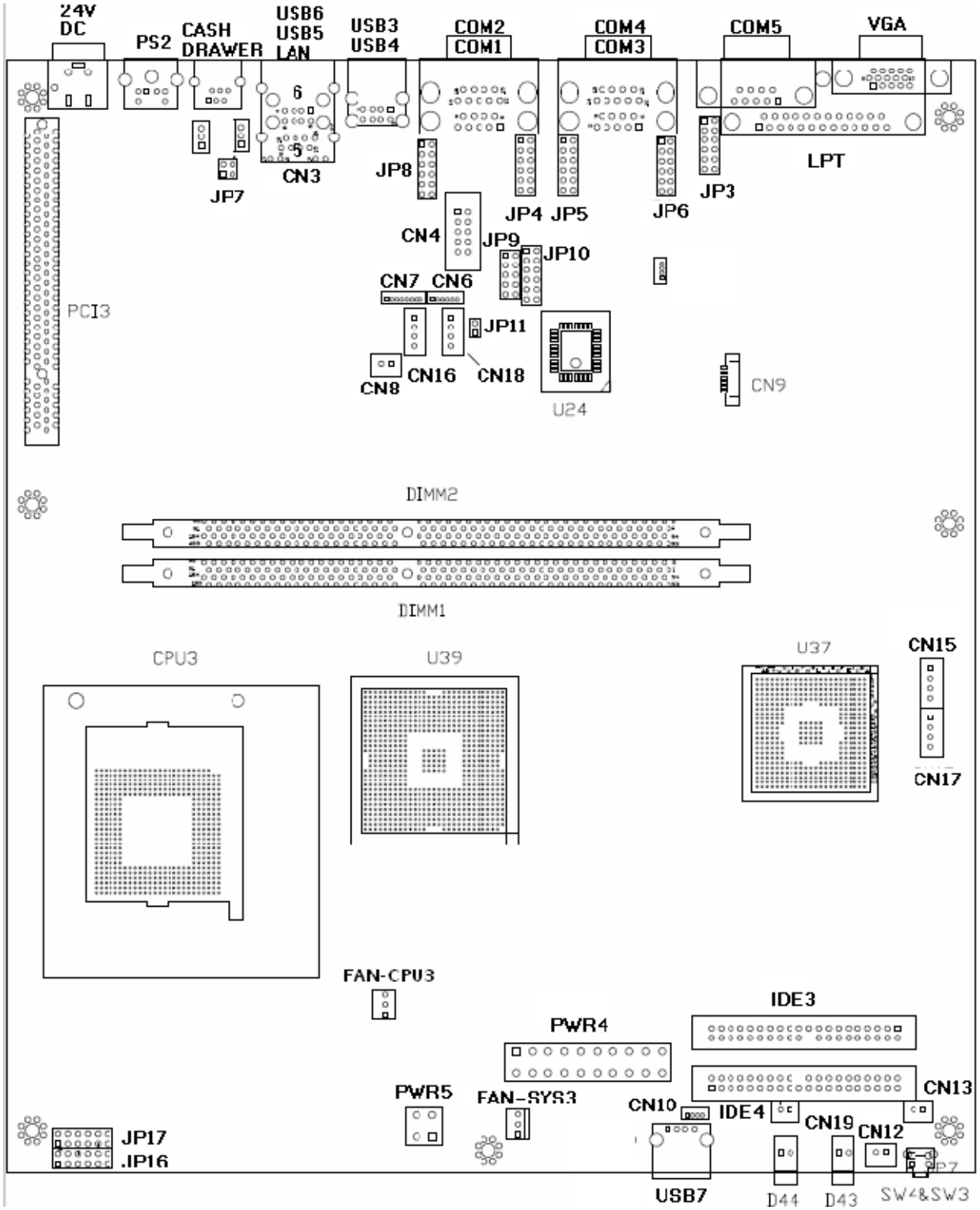
Mainboard	**B99**	**B89**
CPU Support	Intel P4 / Celeron / Core 2 Duo LGA775	Intel SK478 CPU Up to P4 2.6G, Celeron 2.5G, Mobile Celeron 1.2G
Chipset	INTEL 945G FSB 533 / 800 / 1066 MHz + ICH7R	INTEL 852GM + ICH4
System Memory	Up to 4GB DDR ll RAM, 2 RAM-DIMM	Up to 2GB DDR RAM, 2 RAM-DIMM
Graphic Memory	Shared memory up to 232MB	Shared memory up to 64MB
Storage		
HDD	2 x 3.5" SATA	2 x 3.5" PATA
ODD	1 x Slim PATA CD-ROM / CD-RW / DVD-ROM Drive Bay (optional)	
Expansion		
PCI Slot	2 slots supported from PCI riser card	
External I/O Ports		
Front I/O		
USB	2 (USB1~2)	1 (USB 7)
Rear I/O		
LAN	10 / 100 / 1000 Mb	10 / 100Mb
PS/2 Keyboard	1	
USB	4 (USB3~ 6)	
Power Serial RS232	5 (COM1, COM2, COM3, COM4, COM5)	
Serial RS232/422/485	1 (COM6)	
Parallel	1	
VGA	1 (DB15)	
Line- out	1	
Cash Drawer Port	1	
DC 24V output	1	
DC 12V output	1	

Control / Indicators		
Power Button	1 (Front)	
LED_HDD/Power	2	
Internal Header		
USB	1 (USB8)	
Power Button	1 (pin header)	
Peripherals (special feature)		
Second HDD (hot swap)	80GB (optional)	N/A
RAID	Supports RAID 0, RAID 1 for 2 SATA HDDs	N/A
System ID	Built-in	
Option Module (Connectivity)		
Powered USB (12V)	2	
Powered USB (24V)	1	
Powered USB (5V)	1	
USB	4	
Environment		
EMC & Safety	FCC Class A, CE, LVD	
Operating Temperature	5°C~ 35°C (41°F ~95°F)	
Storage Temperature	-10°C~ 60°C (14°F ~140°F)	
Operating Humidity	20% - 85% RH non condensing	
Storage Humidity	5% - 90% RH non condensing	
Dimension (W x D x H) System Box	270 x 300 x 120mm	
Power Supply	230W	

6. Jumper Settings

6.1. B89 Jumper Settings

B89 Motherboard



B89 Connectors and Jumper Settings

◎ = Factory Default Setting

1. COM1 / COM2 / COM3 / COM4 / COM5 Power Setting

COM Port	Jumper
COM1	JP4
COM2	JP8
COM3	JP6
COM4	JP5
COM5	JP3

Pin	Function	Jumper Setting
1	DCD#	◎1-2
	+5V	3-4
	+12V	5-6
9	RI#	◎7-8
	+5V	9-10
	+12V	11-12

2. COM 6 RS232/ 485/ 422 Setting

Function	◎RS232	RS485	RS422
JP9 (1-2)	v		
JP9 (3-4)	v		
JP9 (4-6)		v	
JP9 (5-7)	v		
JP9 (7-8)		v	
JP9 (9-10)			v
JP10 (1-2)	v		
JP10 (3-4)		v	
JP10 (5-6)			v
JP10 (7-8)			v
JP10 (9-10)			v
JP10 (11-12)			v

3. 2ND Display Power Setting

Function	JP11 (SHORT)
+12V	1-2
NC	◎1

4. CMOS Operation Mode Setting

Function	JP13 (SHORT)
COMS Normal	◎N/C
COMS Reset	1-2

5. Power Mode Setting

Function	JP15 (SHORT)
ATX Power	◎N/C
AT Power	1-2

6. Cash Drawer Power Setting

Voltage	JP7 (SHORT)
+12V	◎1-2
+ 24V	3-4

7. ACPI Mode Setting

Function	JP12 (SHORT)
Disable	1-2
Enable	◎N/C

8. CPU Frequency Setting

Function	JP14 (SHORT)
FSB400	◎1-2, 3-4
FSB533	3-4

9. CPU Voltage Setting

CPU Type	JP16	JP17
P4	◎1-2, 3-4, 5-6 7-8, 9-10, 11-12	◎N/C
P4-M(1.3V) Perf. Mode	N/C	3-4, 9-10 1-2(NC), 5-6(NC) 7-8(NC), 11-12(NC)

Note: OPEN SHORT

B89 Connector and Pin Definitions

CN4: COM6 RS232/422/485

Pin 1	DB9_1	Pin 2	DB9_2
Pin 3	DB9_3	Pin 4	DB9_4
Pin 5	GND	Pin 6	RS232_6_DSR#
Pin 7	RS232_6_RTS#	Pin 8	RS232_6_CTS#
Pin9	RS232_6_RI	Pin 10	N/C

CN6: Speaker & MIC Connector

Pin 1	LIN_OUT_L	Pin 2	GND
Pin 3	GND	Pin 4	LIN_OUT_R
Pin 5	GND	Pin 6	MIC1

CN7: CD-IN & Line-In Connector

Pin 1	CDIN_L	Pin 2	CDIN_REF
Pin 3	CDIN_R	Pin 4	CDIN_REF
Pin 5	GND	Pin 6	LINE_IN_L
Pin 7	LINE_IN_R	Pin 8	GND

CN8: Hardware Reset

Pin 1	GND	Pin 2	PWR_OK

CN10: USB5

Pin 1	+5V_USB1	Pin 2	USB20_R_P1-
Pin 3	USB20_R_P1+	Pin 4	GND

CN12: Power LED

Pin 1	+5V	Pin 2	GND

CN13: Power Button

Pin 1	GND	Pin 2	SW_PWRBT#

CN15: HDD Power Connector

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

CN16: CD-ROM Power Connector

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

CN17: HDD Power Connector

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

CN18: Power Connector external 12V Power connector

Pin 1	+12V	Pin 2	GND
Pin 3	GND (not used)	Pin 4	+5V (not used)

CN19: IDE LED

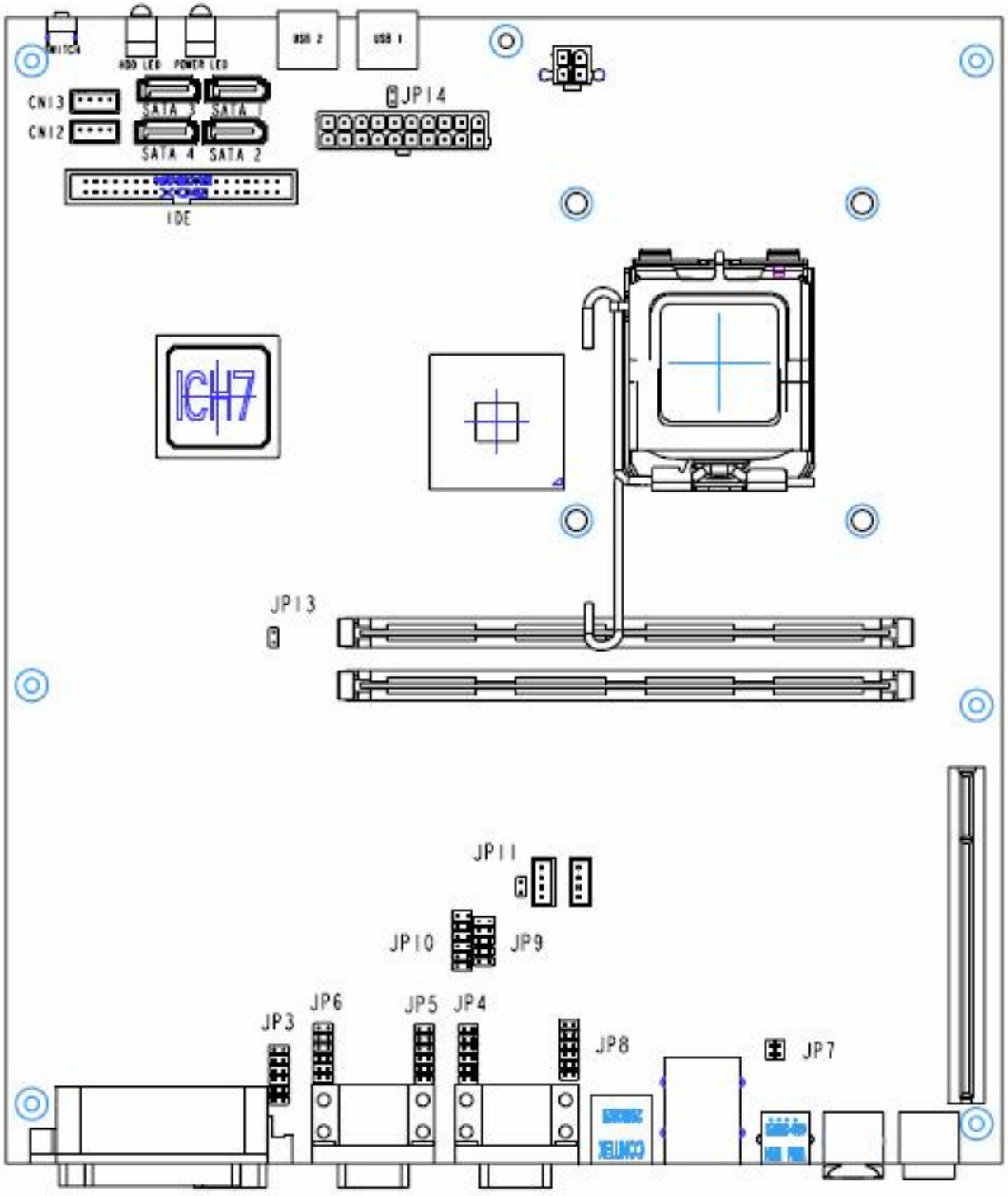
Pin 1	HDD_LED#	Pin 2	+5V

FAN_CPU3: CPU FAN CONTROL

Pin 1	GND	Pin 2	+12V
Pin 3	FB		

6.2. B99 Jumper Settings

B99 Motherboard



B99 Connectors and Jumper Settings

Connectors	Function	Connectors	Function
BAT3	CMOS Battery Base (use CR2023)	FAN_CPU3	CPU Fan Connector
CN3	LAN & USB5/ USB6	FAN_SYS3	System Fan Connector
CN4	COM6 Connector	IDE3	Primary IDE Connector (40pin pitch = 2.54mm)
CN5	Speaker & MIC Connector	PCI3	PCI Slot
CN6	CD-in & Line-in Connector	PRN3	Parallel Port
CN7	USB8	PS3	PS2 Connector
CN8	IrDA Connector	PWR3	+24V Power Output
CN9	Power Connector (+5V/+12V)	PWR4	ATX Power Connector
CN10	Power Connector (+5V/+12V)	PWR5	VRM +12V Connector
CN11	Hardware Reset Connector	RJ11_3	Cash drawer Connector
CN12	Power Connector (+5V/+12V)	SATA1	Serial ATA
CN13	Power Connector (+5V/+12V)	SATA2	Serial ATA
CN14	Internal Power Switch Connector	SATA3	Serial ATA
CN15	Power LED Connector	SATA4	Serial ATA
CN16	HDD Action LED Connector	USB3	USB3/USB4
CN17	LAN Action LED Connector	USB4	USB1
COM1_3	COM4/COM5	USB5	USB2
COM3_3	COM2/COM3	VGA3	VGA Port
COM3	COM1		

1. COM1 Power Setting ◎Factory Default Setting

Pin	Function	JP4 (SHORT)
1	DCD#	◎1-2
	+5V	3-4
	+12V	5-6
9	RI#	◎7-8
	+5V	9-10
	+12V	11-12

2. COM 2 Power Setting

Pin	Function	JP8 (SHORT)
1	DCD#	◎1-2
	+5V	3-4
	+12V	5-6
9	RI#	◎7-8
	+5V	9-10
	+12V	11-12

3. COM 3 Power Setting

Pin	Function	JP6 (SHORT)
1	DCD#	◎1-2
	+5V	3-4
	+12V	5-6
9	RI#	◎7-8
	+5V	9-10
	+12V	11-12

4. COM 4 Power Setting

Pin	Function	JP5 (SHORT)
1	DCD#	◎1-2
	+5V	3-4
	+12V	5-6
9	RI#	◎7-8
	+5V	9-10
	+12V	11-12

5. COM 5 Power Setting

Pin	Function	JP3 (SHORT)
1	DCD#	◎1-2
	+5V	3-4
	+12V	5-6
9	RI#	◎7-8
	+5V	9-10
	+12V	11-12

6. COM 6 RS232/ 422/ 485 Setting

Function	◎RS232	RS422	RS485
JP9 (1-2)	v		
JP9 (3-4)	v		
JP9 (4-6)			v
JP9 (5-7)	v		
JP9 (7-8)			v
JP9 (9-10)		v	
JP10 (1-2)	v		
JP10 (3-4)			v
JP10 (5-6)		v	
JP10 (7-8)		v	
JP10 (9-10)		v	
JP10 (11-12)		v	

7. 2ND Display Power Setting

Function	JP11 (SHORT)
+12V	1-2
NC	◎1

8. CMOS Operation Mode Setting

Function	JP13 (SHORT)
COMS Normal	◎N/C
COMS Reset	1-2

9. Power Mode Setting

Function	JP14 (SHORT)
ATX Power	◎N/C
AT Power	1-2

Cash Drawer Power Setting

Voltage	JP7 (SHORT)
+12V	◎1-2
+ 24V	3-4

11. System Indicator

Function	JP15 (SHORT)
Disable	◎1-2 3-4
Enable	5-6 7-8

Note:

OPEN SHORT

B99 Connector and Pin Definitions

CN4: COM6 RS232

Pin 1	RS485_TXRX-	Pin 2	RS485_TXRX+
Pin 3	N/C	Pin 4	N/C
Pin 5	GND	Pin 6	N/C
Pin 7	N/C	Pin 8	N/C
Pin 9	N/C		

CN4: COM6 RS485

Pin 1	DCD#	Pin 2	Rx#
Pin 3	Tx#	Pin 4	DTR#
Pin 5	GND	Pin 6	DSR#
Pin 7	RTS#	Pin 8	CTS#
Pin 9	RI#		

CN4: COM6 RS422

Pin 1	RS422_TX-	Pin 2	RS422_TX+
Pin 3	RS422_RX+	Pin 4	RS422_RX-
Pin 5	GND	Pin 6	N/C
Pin 7	N/C	Pin 8	N/C
Pin9	N/C		

CN5: Speaker & MIC Connector

Pin 1	AMP_ORL	Pin 2	GND
Pin 3	GND	Pin 4	AMP_ORR
Pin 5	GND	Pin 6	MIC1

CN6: CD-IN Connector

Pin 1	CDIN_L	Pin 2	CDIN_REF
Pin 3	CDIN_R	Pin 4	CDIN_REF
Pin 5	GND	Pin 6	LINE_IN_L
Pin 7	LINE_IN_R	Pin 8	GND

CN7: USB8

Pin 1	+5V_USB1	Pin 2	USB20_R_P1
Pin 3	USB20_R_P1+	Pin 4	GND

CN8: IrDA Connector

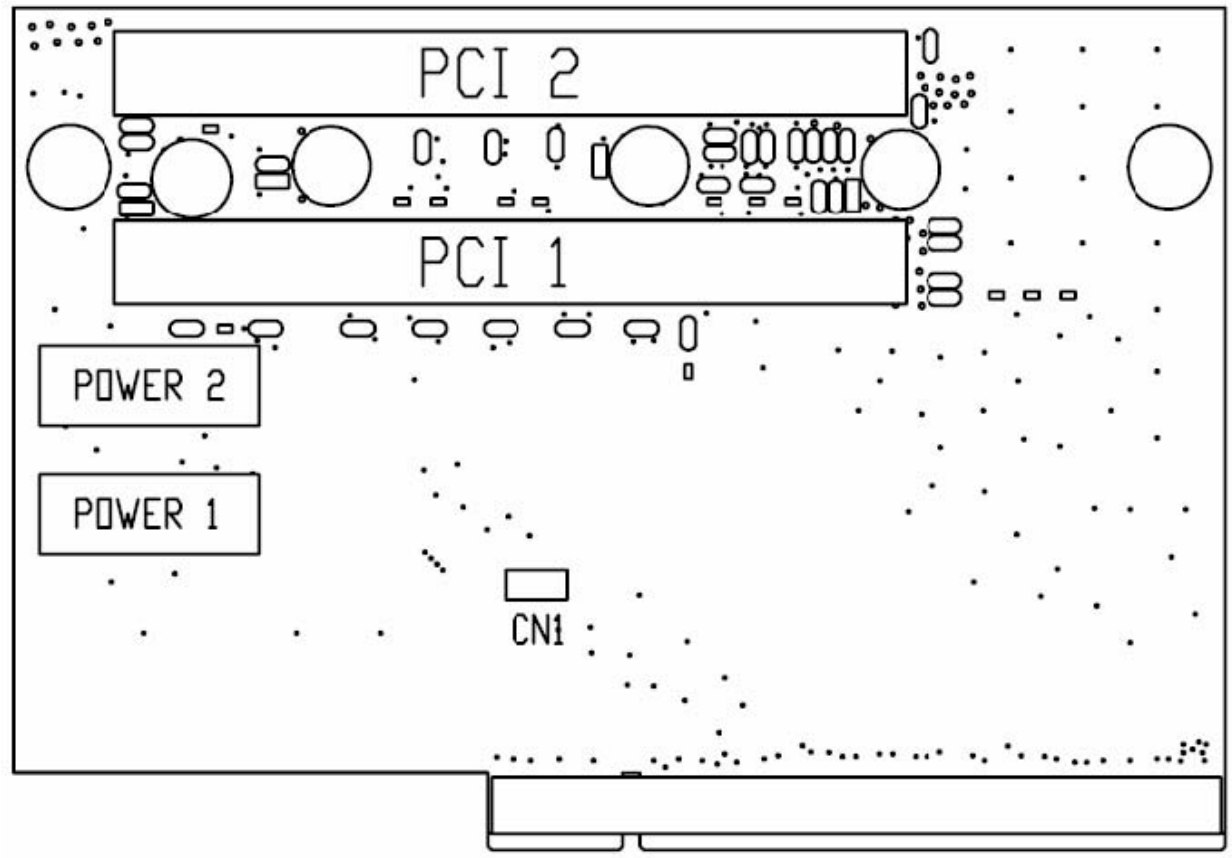
Pin 1	+5V	Pin 2	IRDA_RX
Pin 3	IRDA_TX	Pin 4	GND

CN9/10/12/13: Power Connector (+5V/+12V)

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

Appendix A: PCI Card Dimension

Maximum dimension of the PCI add-on card: Component Side: 130mm x 90.26mm (D x W) (Picture 1)



Appendix B: Driver Installation

The shipping package includes a Driver CD in which you can find every individual driver and utility that enables you to install the drivers on the system.

Please insert the Driver CD into the drive and double click on the “index.htm” to select the models. You can refer to the drivers installation guide for each driver in the “Driver/Manual List”.