

# User Manual

Version 1.0 April 2016

## Bedside Terminal Hardware System



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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.



This device complies with the requirements of the EEC directive 2014/35/EU with regard to “Electromagnetic compatibility” and 2014/35/EU “Low Voltage Directive”



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
- Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.



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



### **Battery Caution**

Risk of explosion if battery is replaced by an incorrectly type.  
Dispose of used battery according to the local disposal instructions.  
***Indicating that replacement by inadequately trained personnel could result in a hazard (such as excessive temperatures, fire, or explosion)***  
***Lithium battery: CR2032***



## Safety Caution

Note: To comply with IEC60950-1 Clause 2.5 (limited power sources, L.P.S) related legislation, peripherals shall be 4.7.3.2 "Materials for fire enclosure" compliant.

### 4.7.3.2 Materials for fire enclosures

For MOVABLE EQUIPMENT having a total mass not exceeding 18kg, the material of a FIRE ENCLOSURE, in the thinnest significant wall thickness used, shall be of V-1 CLASS MATERIAL or shall pass the test of Clause A.2.

For MOVABLE EQUIPMENT having a total mass exceeding 18kg and for all STATIONARY EQUIPMENT, the material of a FIRE ENCLOSURE, in the thinnest significant wall thickness used, shall be of 5VB CLASS MATERIAL or shall pass the test of Clause A.1

## CAUTION SYMBOL IN CARTON

Transport and Storage Temperature: -20~60 degree C  
Transport and Storage Humidity: 30~93% RH  
Atmospheric Pressure Range: 700~1060 hPa

## ATTENTION



Attention, consult ACCOMPANYING DOCUMENTS

External equipment intended for connection to signal input/output or other connectors, shall comply with relevant UL standards (e.g. UL 60950-1 for IT equipment and UL 60601-1 / IEC 60601-1 series for medical electrical equipment)."

Anyone who connects additional equipment to the signal input part or signal output part is configuring a medical system, and is therefore, responsible that the system complies with the requirements of the system standard IEC 60601-1



### WARNING:

To avoid risk of electric shock, this equipment must only be connected to a supply main with protective earth.



### WARNING:

Do not modify this equipment without authorization of the manufacturer



## **WARNING:**

If an appliance coupler or separable plug is used as the disconnecting device, it shall be readily identifiable and easily reached by the operator. For single-phase portable equipment, a plug on a cord of length not greater than 3m is considered to be easily reached.

## **LEGISLATION AND WEEE SYMBOL**

2012/19/EU 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.

***Power supply is specified as a part of ME EQUIPMENT***



Please read the user manual

# Revision History

Revision	Date	Description
V1.0	August, 2013	● Release
V1.1	April, 2016	● D35 MB added

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# 1 Intended Use

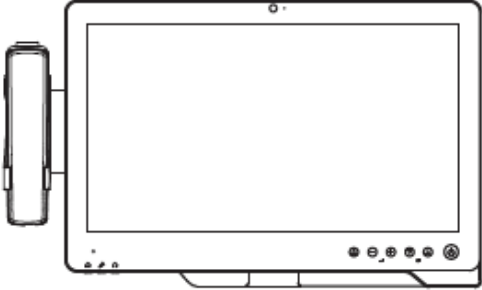
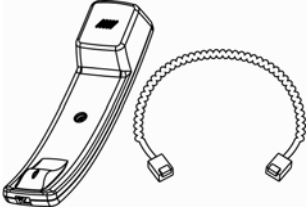
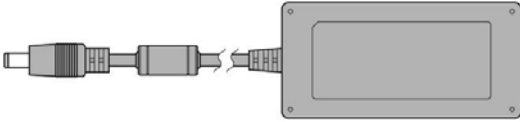
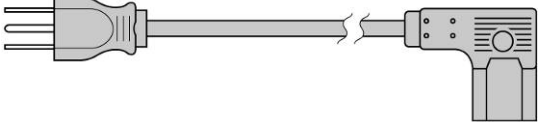
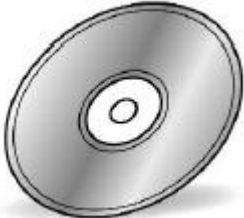
According to the Instructions for Use (IFU) of the manufacturer, the Bedside Terminal has the following intended use:

The Bedside Terminal Hardware System is a computing device capable of storing, retrieving and sending data electronically. This Bedside Terminal Hardware System, including its user interface, battery, PCB and power supply, is intended to be fixed to a stand in medical care environment.



# 2 Package Checklist


## 2-1 Standard Items

	
a. System	b. Phone
	
c. Power Adapter	d. Power Cable
	
e. Driver Bank	

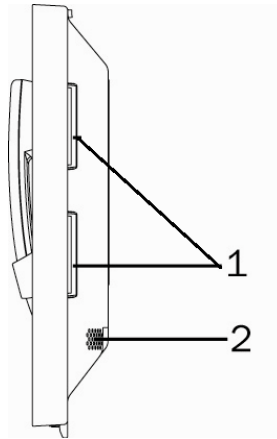
# 3 System View

## 3-1 Front View



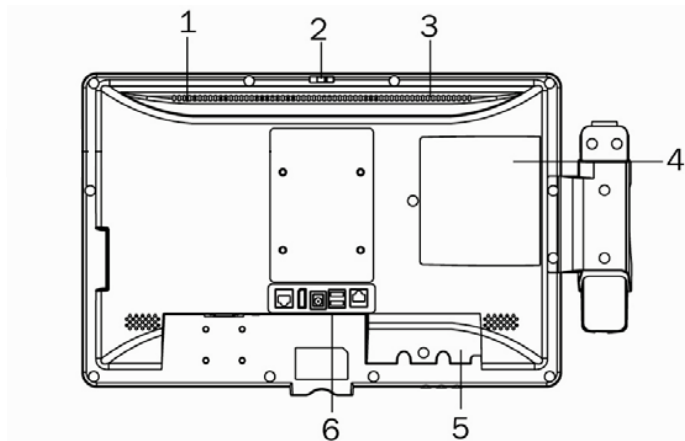
Number	Description
1	Build-in camera
2	Camera LED
3	Touch screen
4	 Touch keys (from left to right: reading light, volume down, volume up, channel down, channel up, power button)
5	Smart IC card reader
6	VOIP phone (optional)


### 3-2 Side View



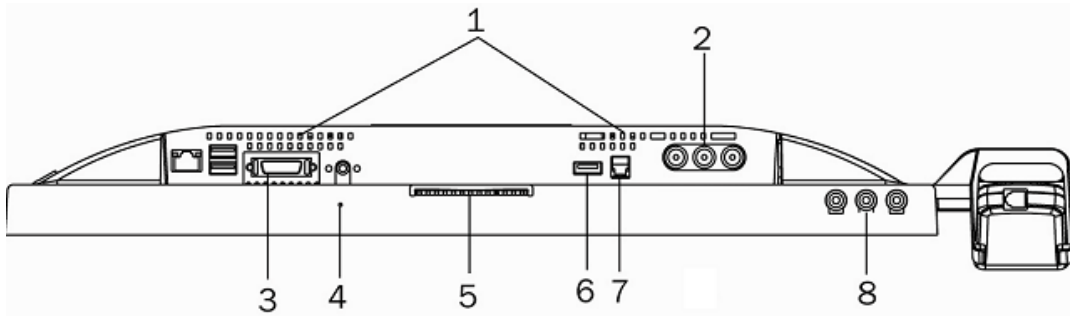
Number	Description
1	Combo smart IC card reader with separate RFID antenna (optional)
2	Speaker


### 3-3 Rear View



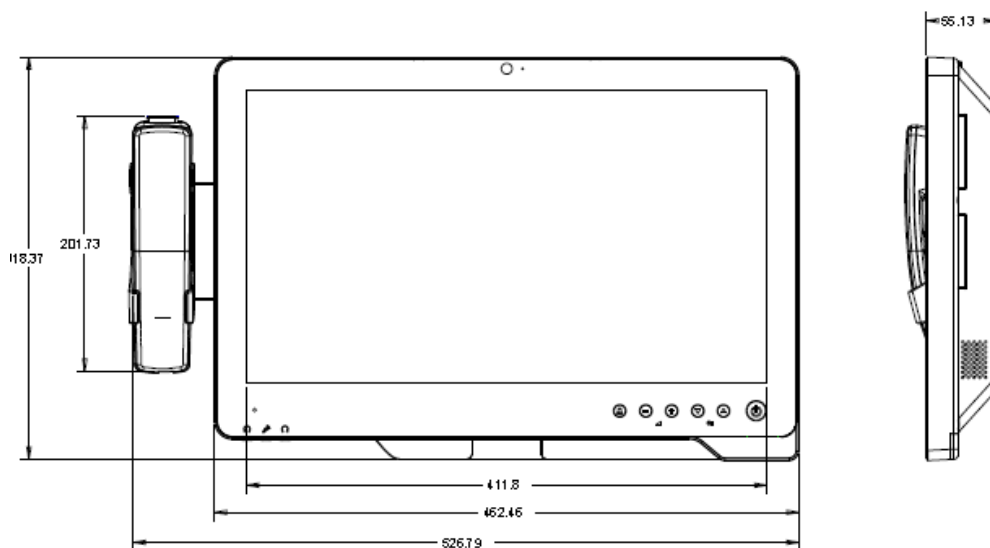
Number	Description
1	Light Sensor
2	Webcam switch
3	Ventilation
4	SSD/HDD door
5	Cable cover
6	 Vertical I/O port (from Left to Right: LAN, Display port, DC jack, USBx2, Nurse call)

### 3-4 Bottom View



Number	Description
1	Ventilation
2	From Left to Right: Video in, Audio left, Audio right (optional)
3	 Bottom I/O port (from Left to Right: LAN, USBx2, Remote, Power button)
4	Microphone
5	Smart IC card reader
6	USBx1
7	Phone jack (RJ11)
8	From Left to Right: Audio line-out, Mic-in, Audio line-out

### 3-5 Dimension



# 4 System Assembly

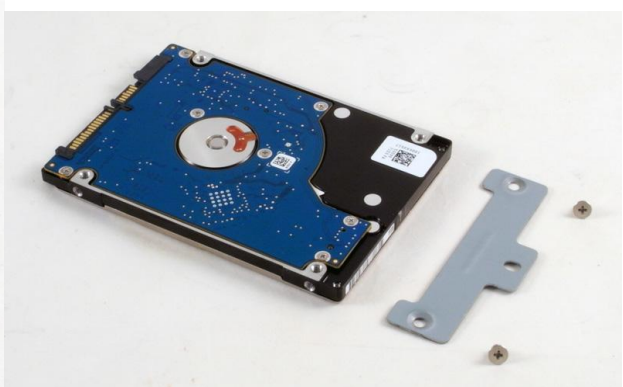
## 4-1 SSD/HDD Replacement



1. Remove the screw (x1) to open the HDD door.
2. Remove the screw (x1) that fixed the HDD to the system.



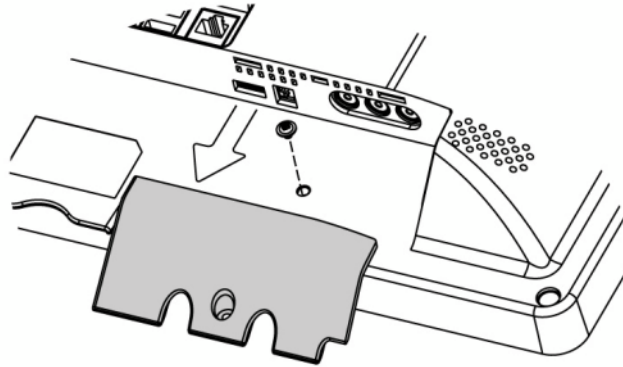
3. Pull the HDD outward as shown in the picture.



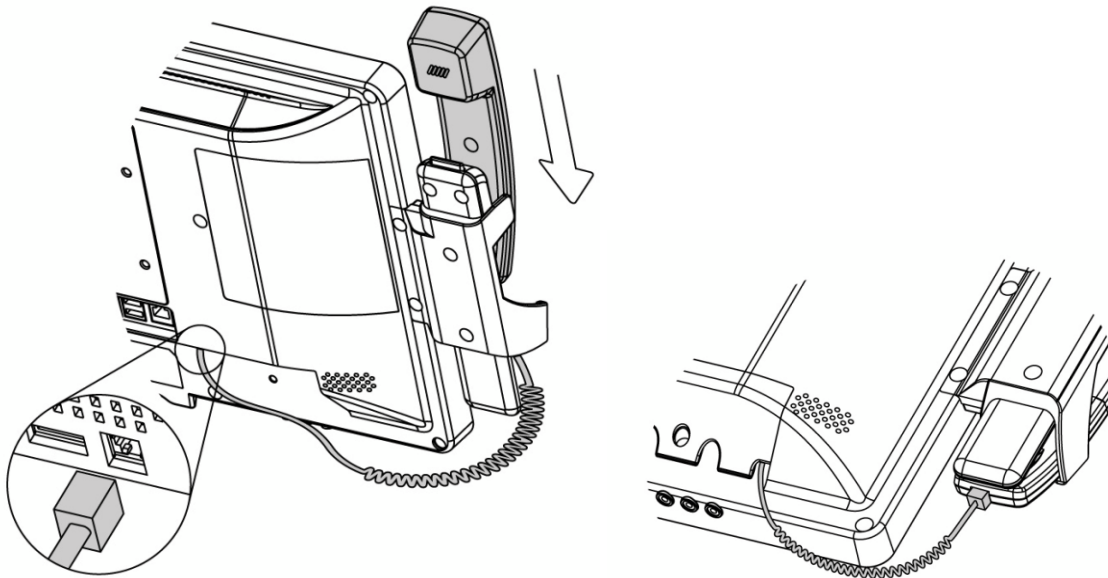
4. The HDD is secured by a metal bracket, remove the screws (x2) to release the metal bracket from the HDD.

# 5 Peripherals Installation

## 5-1 Phone module Installation

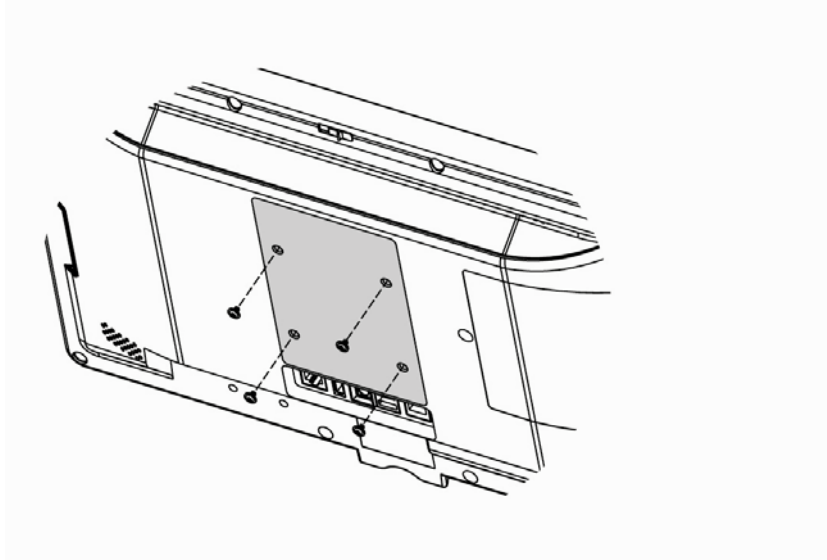


1. Loosen the screw(x1) to open the cable cover.



2. Slide the phone module into the phone holder and connect the other end of the phone cable to the connector on the system.

## 5-2 Stand Installation



1. Fasten the screws.(monitor screw M6x10 4pcs)

# 6 Specification

<b>Model</b>	<b>K948</b>	
<b>Motherboard</b>	<b>C73</b>	<b>D35</b>
Processor	Intel Celeron 1047UE	Valleyview N2930, Quad-core 1.83G, 7.5W
Core Logic	CPU with Graphic built-in HM76	Built-in SoC
System Memory	2 x DDR3 SO-DIMM slot up to 8GB FSB1600Mhz	1 x DDR3L SO-DIMM slot, FSB 1066/1333MHz Default 2GB RAM (Max 8GB)
Graphic Memory	DX11, HD Graphic 350MHz	Intel Graphic DX11.1
LAN Controller / PHY	Intel WG82583V / Intel WG82579V	Intel WG I211AT / Intel WG I211AT
Audio Controller	Realtek ALC 662-GR HD codec	Realtek ALC662VDO-GR
I/O Controller	Winbond W83627UHG	Winbond NCT6106D
Touch	TF P-cap 18.5"	
Camera LED	Green-color (GPIO)	
Microphone	1	
Power LED	Tri-color (GPIO)	
Watch Dog Timer	Hardware WDT	
Display Size	18.5"	
Resolution	1366 x 768	
Brightness	250 nits	
DC-In	12V-48V 5A-1.5A	19V
<b>Storage</b>		
HDD	Either 2.5" SATA SSD or HDD	
<b>Expansion</b>		
Mini PCI e	1 x Full Size Slot & 1 x Half Size Slot	1 x Full Size Slo
<b>Side I/O (Back-Left)</b>		
Smart IC Card Reader	1	
<b>Rear I/O (Left)</b>		
LAN (2nd LAN)	1xRJ45 (with 10/100/1000,LED indicator)	
USB	2 (USB 2 .0)	
Remote	1x SCSI 26 pin	
Reset Button	1, button can be pressed by probe	
Power Button	1	
<b>Rear I/O (Right)</b>		
Composite Video	Video in, Audio Left, Audio Right	
Line-out	2 (Auto-detect,GPIO), in external IO	
Mic-In	1 (Auto-detect,GPIO), in external IO	
<b>Rear I/O (Bottom)</b>		
LED reading light	1	
Smart IC Card Reader	1	
Scanner	1 x 2D scanner	
<b>Vertical I / O</b>		
LAN	1 x RJ45 (with 10/100/1000)	
Power	1 x DC Jack	



<b>Model</b>	<b>K948</b>	
<b>Motherboard</b>	<b>C73</b>	<b>D35</b>
Display Port	1 x DVI-D	
USB	2 (USB 2.0)	
Nurse Call	1 x RJ48	
<b>Touch Keys</b>		
Power Button	1 x Power button (GPIO)	
Channel Adjustment	1 x Channel up, 1 x Channel down (GPIO)	
Volume	1 x Volume up, 1 x Volume down (GPIO)	
Reading light	1 x Reading light (GPIO)	
<b>Certification</b>		
EMC & Safety	FCC Class B, CE, LVD / UL60601-1	
<b>Environment</b>		
Operating Temperature	0°C ~ 35°C (32°F ~ +95°F)	
Storage Temperature	-20°C ~ 60°C (-4°F ~ 140°F)	
Humidity	20% - 85% RH non condensing	
<b>Weight</b>		
Weight	5Kgs (w/ handset & cradle)	
<b>Operating System</b>		
OS Support	Windows Embedded POSReady7, Windows 7, Linux	
<b>Communication &amp; Peripherals</b>		
Speaker	2 x 3W	
Build In Microphone	In the bottom side	
Webcam	5M Camera (USB interface) with camera latch (w/ fly LED cable to MB & control by GPIO)	
VOIP Phone (Front left)	Handset module (optional)	
Smart IC Card Reader	Comply with ISO 7816-1,2,3,T=1 and T=0 protocol	
Combo Smart IC Card Reader (optional) with separate RFID antenna in the front bezel	Comply with ISO 7816-1,2,3,T=1 and T=0 Support MIFARE, MIFARE+, Desfire, PC/SC 2.0, HID	
Light Sensor	Yes (GPIO)	
TV Tuner & DVD Maker Card	Mechanical reserved	

\* This specification is subject to change without prior notice.

Application: Access to patient records / Hospital administration system / Bed management

Manufactory information:

Factory: Flytech Technology Co., Ltd.

Address: NO.36 Huaya 3rd Rd., Guishan Township, Taoyuan County 33383, Taiwan

Tel No: 886-3-272-9688 Fax No: 886-3-272-9666

Note: Cleaning solution-Wipe with cloth using clean water, 2 times a week.

Adaptor Manufacturer: FSP TECHNOLOGY INC.

1. Model: PMP105-18-B15

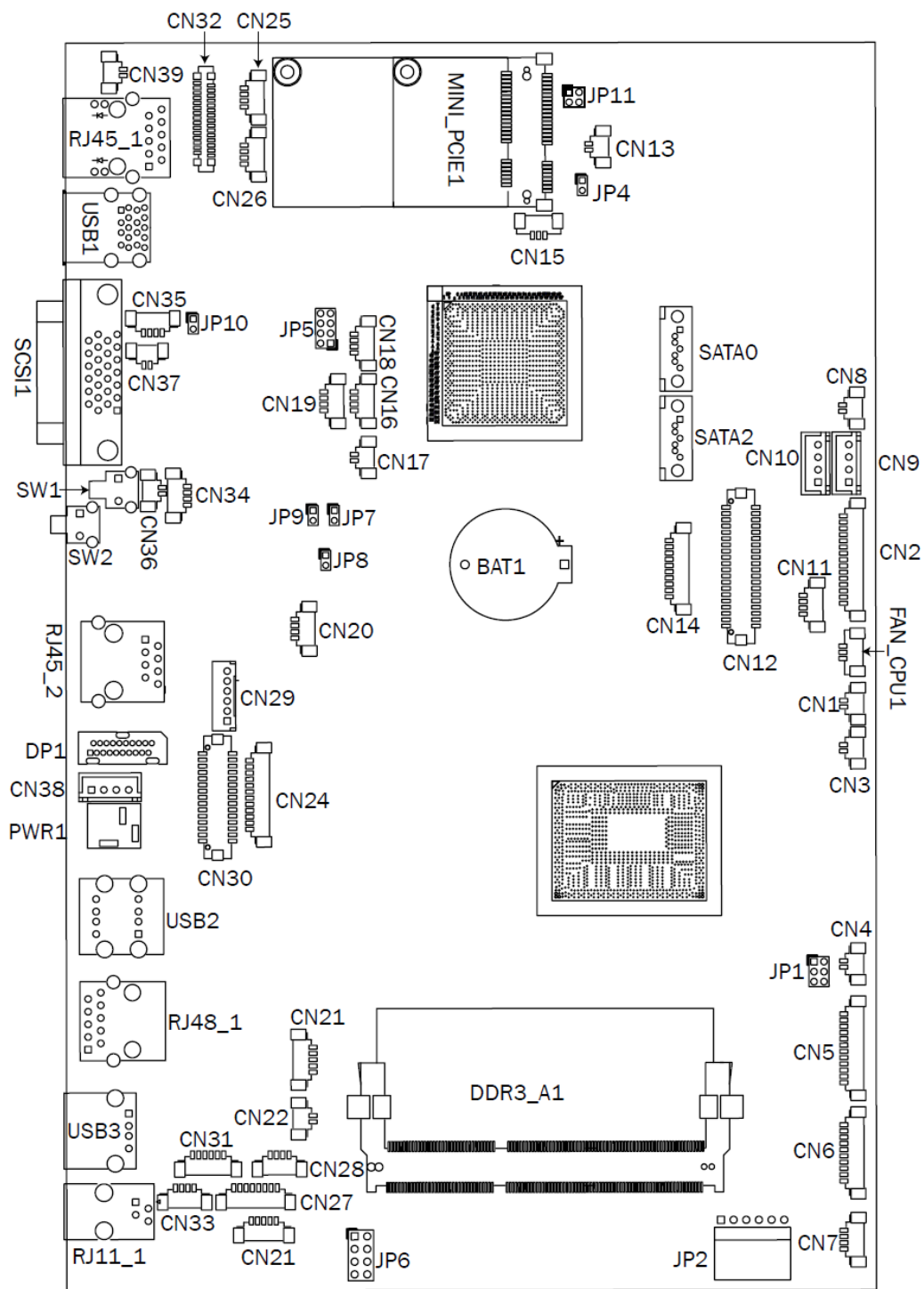
Rating: 100-240V,47-63Hz,0.7 - 1.4A

2. Model: PMP60-12-B16

Rating: 100-240V,47-63Hz,1.22-0.68A

# 7 Jumper Setting

## 7-1 C73 Motherboard 7-1-1 Motherboard Layout




## 7-1-2 Connectors & Functions



Connector	Function
CN2	Scanner
CN3	Nurse Call LED Power
CN4	Build-In MIC
CN5	Inverter
CN6	COM5 (for touch)
CN7	USB port for Web Cam
CN8	HDD LED
CN9	SATA Power
CN10	SATA Power
CN11	PS/2 keyboard
CN12	LVDS
CN14	COM1
CN16	USB
CN17	Power LED
CN18	USB
CN19	USB
CN20	IrDA
CN22	Reading Light
CN23	Cradle
CN25	USB
CN26	USB
CN27	First Audio Jack
CN28	Second Audio Jack
CN29	To front USB board connector
CN30	30P All-In-One
CN31	Speaker & MIC
CN32	MSR
CN33	Speaker
CN34	MIC
CN36	Power Button
CN37	LAN LED
CN38	Adaptor Connector
CN39	LAN LED
RJ45_1	LAN1
USB1	USB1, USB2
SCSI 1	SATA
SW1	System Reset
SW2	System Power Button
RJ45_2	LAN2
DP1	DVI-D
PWR1	Adaptor Power Jack
USB2	USB1, USB2
RJ48_1	Nurse Call
USB3	USB
RJ11_1	Handset
SATA0	SATA
SATA1	SATA
FAN_CPU1	CPU Fan

## 7-1-3 Jumper Setting

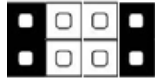
### Brightness Type Selection



Function	JP1 (1-2) (3-4) (5-6)
▲ LED	1 3 5  2 4 6

### Power Mode Setting

Function	JP8 (1-2)
▲ ATX Power	1  2
AT Power	1  2

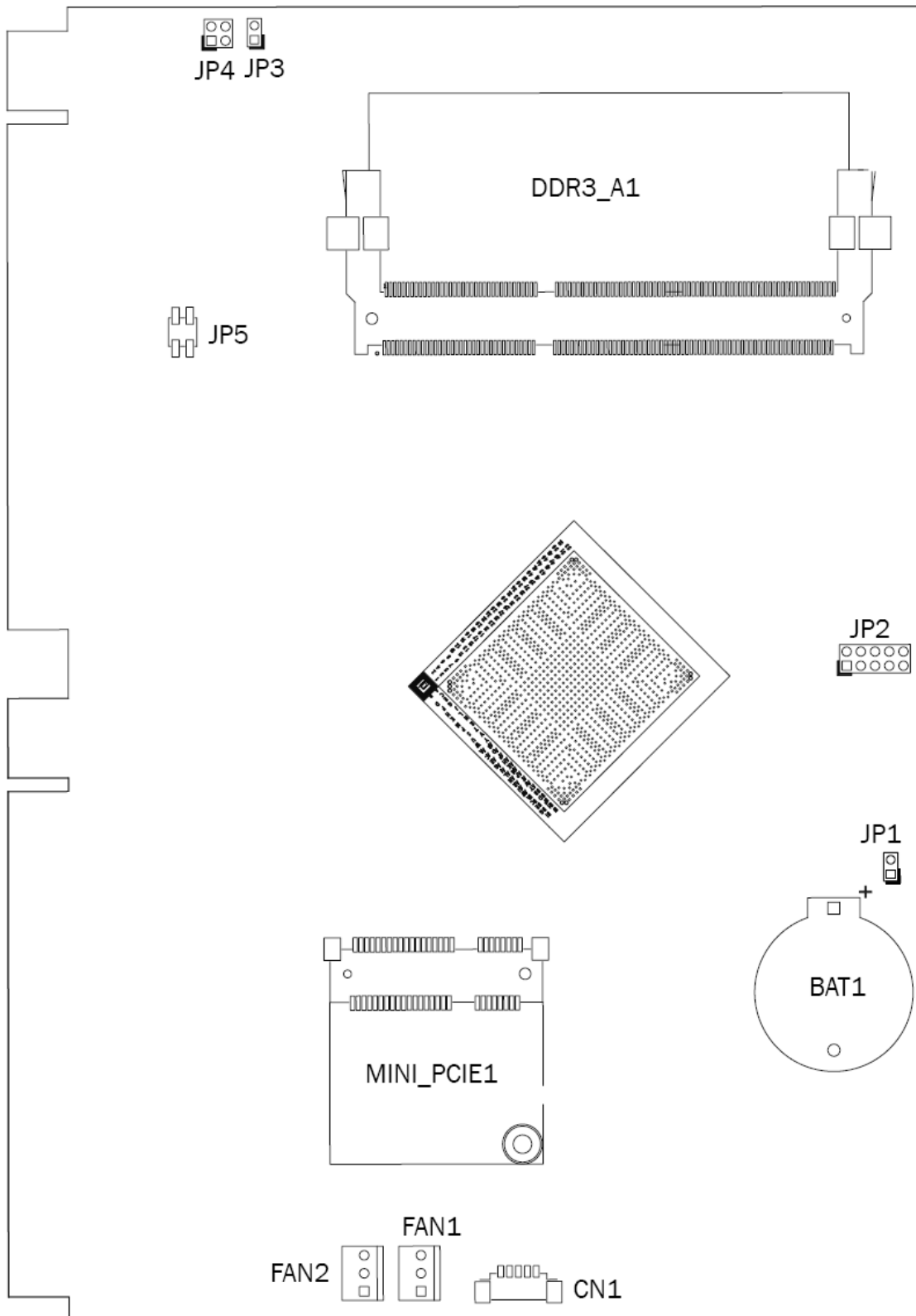
### LCD ID Setting

Function	JP5 (1-2) (3-4) (5-6) (7-8)
18.5" AUO LCD	1 3 5 7  2 4 6 8

▲ = Manufacturer Default Setting       OPEN       SHORT

## 7-2 D35 Motherboard

### 7-2-1 Motherboard Layout





## 7-2-3 Jumper Setting

### Connector PIN Definition

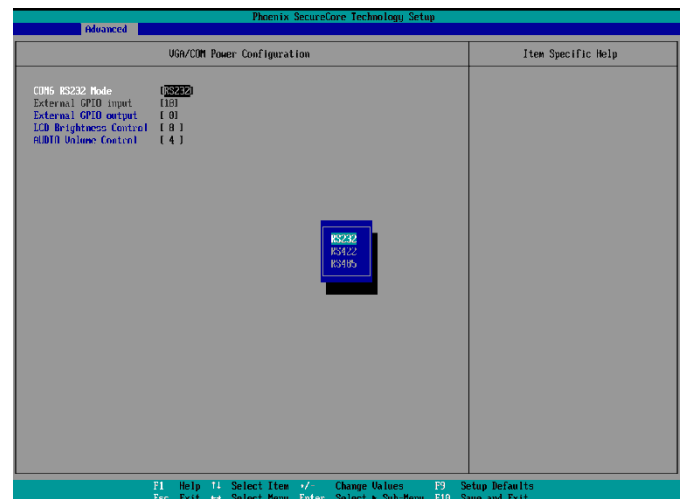
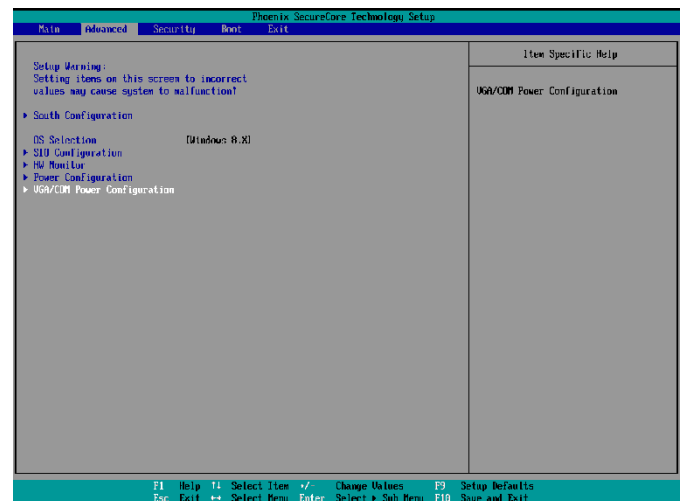
#### RS-232/422/485 mode changed by BIOS setting

RS-232 Pin Define	
1	DCD
2	DSR
3	RxD
4	RTS
5	TxD
6	CTS
7	DTR
8	GND

	RS-232/422/485 Pin Define		
	RS-232	RS-422	RS-485
1	DCD	TX-	DATA-
2	DSR		
3	RxD	TX+	DATA+
4	RTS		
5	TxD	RX+	
6	CTS		
7	DTR	RX-	
8	GND		

### RS-232/422/485 Setting

1. Power on the system, and press the <DEL> key when the system is booting up to enter the BIOS Setup utility.
2. Select the Advanced tab.
3. Select **VGA/COM Power Configuration** Ports and press <Enter> to go to display the available options.
4. To enable the power, select **RS232** Power setting and press <Enter>. Select Power and press <Enter>. Save the change by pressing F10.



# Appendix: Driver Installation

The shipping package includes a Driver CD. You can find every individual driver and utility that enables you to install the drivers in the Driver CD. Please insert the Driver CD into the drive and double click on the “index.htm” to pick the models. You can refer to the drivers installation guide for each driver in the “Driver/Manual List”.