POSIFLEX

KS-6815
SERIES
TECHNICAL MANUAL

Rev. : A0

MANUFACTURED BY: ***POSIFLEX TECHNOLOGIES, INC.***

AN **ISO-9001** AND **ISO-14001** CERTIFIED MANUFACTURER

6,WU-CHUAN RD.,HSIN-CHUANG TEL: 886-2-2991599 (REP.) FAX: 886-2-2991819, 2991808

(WU-KU INDUSTRIAL ZONE) http://www.posiflex.com http://www.posiflex.com.tw

TAIPEI HSIEN, TAIWAN http://www.posiflexusa.com EMAIL: posiflex@posiflex.com.tw

SOME IMPORTANT NOTES

FCC NOTES

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions manual, may cause interference to radio communications. It has been tested and found to comply with limits for a Class A digital device pursuant to subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against interference when operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference in which case the user at his own expense will be required to take whatever measures to correct the interference.

WARRANTY LIMITS

Warranty will terminate automatically when the machine is opened by any person other than the authorized technicians. The user should consult his/her dealer for the problem happened. Warranty voids if the user does not follow the instructions in application of this merchandise. The manufacturer is by no means responsible for any damage or hazard caused by improper application.

ABOUT THIS MANUAL

This manual assists the user especially the software programmer who provides the software system for POS application to utilize the hardware of the KS series which is a member of the POSIFLEX integrated point-of-sale terminal product family. The KS is a compact point-of-sale system that gives the most user friendly application interface by providing a touch control LCD panel and combines the performance and affordability of personal computers with the elegance and reliability of business machine. The KS series also provides the built-in networking capability for easy communication among multiple terminals in addition to the data transfer and control through back office server.

The manufacturer of the KS series heartily apologizes to the user for reserving the right to change or to modify this manual without notice due to the rapid and constant progress and improvement on science and technology. The user may always obtain the most up to date information or software utilities through any of our web sites:

http://www.posiflex.com.tw; *http://www.posiflex.com*; *http://www.posiflexusa.com*

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CE

TABLE OF CONTENTS

OVERVIEW

SCOPE

The KS-6815 series is a fully integrated PC based Point-Of-Sale terminals. This series provides satisfactory performance for Point-Of-Sale, Hospitality and Kiosk systems with an Intel CPU of Atom N270 inside an Aluminum alloy die cast enclosure without any exhaust fan, therefore not only provides no noise environment but also supports application reliability in much wider environment conditions.

This series also provides a touch control panel over the 15" LCD panel of 200 nits luminance integrated on the front surface of the system. There is a 2W audio amplifier with internal speaker built in. There are various options applicable internally. This is including second SATA HDD installation, RAID control for 2 HDDs installation, and SSD or CF memory card reader instead of HDD. For side mount integrated upgrade kit with options of MSR with software controllable parameters and other security devices, rear top mount customer displays, base mount VFD or LCD customer display or a 12" or 15" 2nd LCD screen display and base installed UPS battery to support the UPS function.

The external options cover even much wider range including Wireless LAN, Cash drawer, POS printer, Bar code scanner, Programmable keyboard etc. In short, this series engages modular design for numerous advanced hi-tech applications in robust integrated construction.

FEATURES

- CPU: Intel Atom N270
- Data storage device: SATA 2.5" HDD 80 GB in main unit HDD cavity (standard) or (option) CF card or (option) SDD HDD in main unit HDD cavity or dual SATA 2.5" HDD 80 GB with 2nd HDD in base.
- Fan free structure with Aluminum die cast main unit casing against hostile environment
- An advance designed slim base. The base supports housing for optional 2.5" SATA HDD and optional UPS battery.
- Support Win XP Pro, WEPOS, POS Ready and Linux environment.
- High quality 15" TFT active matrix LCD panel with 1024 x 768 resolutions (XGA).
- LCD brightness control by buttons, which in the touch open cover at left side of main unit.
- **Vertical type LCD panel with easy tilt** angle adjust from 15° to 70°.
- Durable resistive type touch sensor for broad range of application.
- Spill proof water resistant structure is allowing easy clearance.
- Easy maintenance structure.
- Various I/O ports supported, including:
    a. 3 Serial Ports, 2 ports of DB9 connectors and 1 port 10 pin RJ45 type modular connector. DB9 ports with capability for +5V DC power support, which is controlled by software switch.
    b. 6 external USB ports (4 in I/O area, 2 in touch open door).
    c. 2 internal USB ports for touch function and optional side mount kit.
    d. 1 LAN port 10/100/1000 base T Ethernet.
    e. 1 external VGA monitor port.
    f. 1 22pin SATA + power connector for optional SATA HDD in base.
    g. 1 CR port for control over max. 2 cash drawers.
    h. 1 4 pin UPS battery connector.
    i. 1 DC 12 V 4 pin lock type power input connector.
    j. 1 reserved proprietary parallel port in service window.

k. 1 internal 2W speaker.
l. 1 internal proprietary USB port for optional SD-400/SD-400Z.
m. 1 internal SATA port for SATA HDD in main unit.

- IRQ and I/O address of all COM ports can be changed in CMOS setting.
- **Pre-programmed timer wake up function.**
- **COM port MODEM ring up function.**
- **LAN wakes up function.**
- **Touch control functions**: left/right button, double click, drag & drop through USB interface.
- **Touch parameters** like touch sound enable/disable or pitch adjust can be software controlled.
- High-resolution touch sensor controller: 1024 X 1024.
- **DDR2 SODIMM memory can extend to 2GB in 2 modules.**
- **Additional DDR2 SO-DIMM inside the HDD cover that user can direct add.**
- VGA memory shared from system 8 MB supporting DVMT up to **224 MB.**
- Integrated structure for optional side mount or base mounts upgrade kit.
- Supports power saving by suspension mode.

OPTIONAL ITEMS

.Note: The underlined items in the following list mean that option must be set prior to shipment from the factory. The rest items can set by the dealers.

a) Optional model to be without touch panel.
b) SSD or Protected CF memory card reader slot in HDD cavity in main unit or optional 2nd SATA HDD in base (Customer could buy the upgrade kits and add by themselves).
c) DDR2 SODIMM memory expansion up to 2 GB.
d) SD-400/SD-400Z integrated to right side of LCD panel to contain optional optical fingerprint sensor and optional MSR with software controllable parameters in USB interface or KP-300 integrated to right side of LCD

panel to contain 36 keys programmable keypad with 6 position electronic key lock and optional MSR.

e) Base mount 2 by 20 LCD or VFD customer display through COM or USB port or base mount 2nd LCD monitor.
f) Rear top mount 2 by 20 LCD or VFD customer display.
g) Preload Win XP Pro, WEPOS, POS Ready or Linux.
h) Wireless LAN adaptor in USB interface.
i) RJ45 to DB9 serial port conversion cable.
j) LPT interface conversion cable.
k) 2 – in – 1 cash drawer control cable.
l) Wall mount kit WB-6000VB, WB-6300, WB-6600, WB-6800.
m) Omni-direction bar code scanner kit SK-200.
n) Compatible with IPX4 water proof requirement.

GENERAL SPECIFICATION

SYSTEM

- CPU: Intel Atom N270 1.6 G
- DDR2 400/533MHz SODIMM: 512MB(expandable to 2GB, in 2 modules)
- Built-in 2.5"SATA interface HDD 80 GB or optional SSD or CF memory card reader in main unit with optional 2nd 2.5" SATA HDD 80 GB in base

POWER SOURCE

DC power adaptor:

Item	Specification
Voltage range of adaptor input	100 ~ 240 V AC
Load limit of adaptor input	2.0A max.
Input frequency	47 / 63 Hz
Voltage output	12 V DC
Output current	5 A

System:

Total Power Consumption	Normal	Maximum
	25 W	60 W

12VDC POWER SUPPLY INTO SYSTEM

- O / P: 12 +/- 1 V DC 5 Amp.
- I / P: 100 VAC/2A or 240 VAC/1A max, 50 ~ 60 Hz

OVERALL POWER OUTPUT LIMIT

- 2 DB9 COM ports: + 5 V DC / 1 A max total.
- 6 USB ports: + 5 V DC / 0.5 Amp max each.
- HDD + 5V: 1 A max for option SATA HDD in base.
- VGA port: + 12V DC / 1 A max.

SYSTEM POWER ON/OFF CONTROL

- One main power ON/OFF switch inside the touch open cover at left side of main unit, this switch can be programmed as "ON" only.
- System can be waked up after each power off by any of the preset timer or a remote COM port MODEM call or LAN wakeup packet.
- System can be switched off by software command through local or remote program control.
- Forced power off when switch is ON/OFF or when switch is ON only with prolonged effort.
- Power OFF to ON duration: 10 seconds min.

UPS SUPPORT (battery option)

- Optional battery stored in base for full UPS function
- Supports system operation for up to 30 min. depending on loading condition
- LED panel turns on green when adaptor power stand-by
- LED panel flashes in blue and system beeps when UPS battery starts working and discharging, and LED panel rapid flashes in green when UPS near to end
- Working on UPS battery status can be detected through COM1 status port

STATUS INDICATORS

- Indications: Power, HDD, LAN
- Power indicator:

  Type: blue/green dual color (blue for power on; green for stand by) LED module under logo on front bezel

  Coverage: system ON/OFF status, external power status, UPS battery monitoring
- HDD indicators (2 in I/O area):

  Type: Dual color LED's

Indication: green for any HDD being accessed; red for any HDD failure; blinking red with the other in green indicates rebuild in progress **if RAID option installed**

- LAN indicator in LAN connector:
  LED type: green/orange dual color (green for link; orange blink for data communication)

TOUCH PANEL

- Extremely endurable life survives minimum 35,000,000 touches at same spot
- Touch control interface: USB
- Sensor type: resistive
- Resolution: 1024 x 1024
- Calibration: initial calibration at setup only, no re-calibration required for day to day power on/off
- Driver support: WinCE, Win XP, WEPOS, POS Ready & Linux (with jumper setting change required for WinCE & Linux per instruction on page 6-6 of this manual)

OPERATOR DISPLAY

Model	KS-6815
Display Type	COLOR TFT 15" LCD
View area	304.1 X 228.1 mm
Internal Interface	1 channel LVDS
Luminance	200 cd/m^2 min
Contrast Ratio	500 : 1
Resolution	1024 X 768 (XGA)
Color	16.2 M (24 bits)
Memory size	DVMT 224 MB max.
Tilt angle	15° ~ 70°

HDD IN HDD CAVITY OF MAIN UNIT

- One 80 GB or above operating up to ultra SATA

AUDIO AMPLIFIER

- Output audio power 2.0 W (in mono signal to internal speaker in system)

PRELOAD OS

- Option among Win XP Pro, WEPOS, POS Ready or WinCE

EXTERIOR

- DIMENSIONS w/ 15" GEN 5 SLIM BASE:

  LCD @ 15°: 378.0 mm (W) x 313.4 mm (D) x 361.8 mm (H) or 14.9" x 12.3" x 14.2"

  LCD @ 70°: 378.0 mm (W) x 315.5 mm (D) x 268.3 mm (H) or 14.9" x 12.4" x 10.6"

- WEIGHT:

NET WEIGHT	KS-6815
w/ Gen 5 Slim base	8.0 kg (17.6 lbs)

ENVIRONMENTAL

- TEMPERATURE RANGE:

  Operating: -10°C ~ +40°C or 14°F ~ 104°F

  Non-operating: -20°C ~ +60°C or -4°F ~ +140°F

- HUMIDITY RANGE:

  Operating: 20%RH ~ 80%RH, non-condensing, max. wet bulb 26°C (78.8°F)

  Non-operating: 10%RH ~ 80%RH, non-condensing, max. wet bulb 28.9°C (84.0°F)

ACCESSORIES

- COM1 terminator plug: 1 pc
- User's manual: 1 copy
- Power adapter 12 V DC 5 A plus power cord
- Product Information CD or Recovery CD or DVD of preloaded OS

COMPLIANCE APPROVALS

- Whole system meet CE, FCC class A standard
  (meet IEC61000-4-2/-3/-4/-5/-6/-8/-11)
- Power supply is UL, TUV and PSE approved
- RoHS, WEEE

OPTIONS

SECOND DISPLAY ON REAR BASE

Model Number	LM6101	LM6501
Display Type	COLOR TFT 12.1"	COLOR TFT 15"
View area	245.8 X 184.3 mm	304.1 X 228.1 mm
Interface	VGA	
Luminance	180 cd/m^2	250 cd/m^2
Contrast Ratio	350 : 1	500 : 1
Resolution	1024 X 768 (XGA)	1024 X 768 (XGA)
Swivel angle	Left 45° and right 45°	N. A.
Power Source	DC 12 V in VGA	AC 90 ~ 264 V

2.5" HDD IN BASE

- 80 GB or above
- Operating up to ultra SATA

DRAM EXPANSION

- DDR2 533 SODIMM in 2 sockets up to total 2 GB max. (default DRAM installed on M/B component side, vacant socket on M/B solder side under HDD cover for user extension)
- Verified supported memory types:

Technology	Width	Banks	Maximum SODIMM size	Maximum Total Capacity
256 Mb	X8	4	512 MB	1 GB
256 Mb	X16	4	256 MB	512 MB
512 Mb	X8	4	1 GB	2 GB
512 Mb	X16	4	512 MB	1 GB
1 Gb	X8	8	2 GB	2 GB
1 Gb	X16	8	1 GB	2 GB

WIRELESS LAN

- IEEE 802.11b/g with USB interface

COM3 CONVERSION CABLE

- 10 pin RJ45 type modular plug to COM3 port on KS system, DB9 male connector to accept cable from RS232 device.
- This cable can be purchased through the distributor under P/N 21863233801 or refer to page 21 of this manual for pin assignment and wire connection.
- It is recommended using COM3 for modem application.
  (COM 1& 2 can not connect to modem)

PARALLEL PORT ADAPTOR CABLE

- 2 x 10 pin head receptor to reserved parallel port in service window, DB25 female connector to accept cable from parallel device.

- This cable can be purchased through the distributor under P/N 21862033420 or refer to page 23 of this manual for pin assignment and wire connection.

CUSTOMER DISPLAY UPGRADE KIT

MODEL Number	PD2602	PD2604	PD305	PD306	PD310
Display Media	VFD		LCD		
Number of rows	2				
Characters per row	20				
Character width (mm)	5.25		6		
Character height (mm)	9.03		9.66		
Character format	5 X 7				
Character code pages	14		1		
International char. sets	12		1		
Command modes	6		2		
Display color	Green (505 nm) w/ Blue filter		Dark blue / Yellow green Background		
Display area (mm x mm)	157.05 x 22.86		142.8 x 20.64		
Display head size (mm)	197 x 56 x 58		217 x 80.5 x 28.5	196.7 x 57.5 x 39.6	
Mounting method	Pole mount on base	Rear top mount	Base mount	Pole mount on base	Rear top mount
Pole height (mm)	200	N. A.	N. A.	200	N. A.
Horizontal slide (mm)	N. A.				
Horizontal rotation	270º	N. A.	+/- 45º	270º	N. A.
Inclined viewing angle	15º, 30º, 45º	N. A.	0º ~ 90º	15º, 30º, 45º	N. A.
Power source	5 V DC in DB9 or USB		5 V DC in DB9	5 V DC in DB9 or USB	

SIDE MOUNT UPGRADE KIT KP300

- To be installed to right side of KS series main unit
- USB interface in proprietary internal connector
- Functions include: programmable keypad with 36 keys plus 6-position electronic key-lock, MSR, smart card reader.

PROGRAMMABLE KEYPAD

1. 1 electronic 6-position control key to lock up or determine among 5 different pages of programmable keys
2. 16 key numeric keypad with a double sized “Enter” key
3. 20 programmable single keys of size 19 x 19 mm

MAGNETIC STRIPE READER

1. ISO 2 tracks (track 1 + track 2)
2. or ISO 3 tracks (track 1 + track 2 + track 3)
3. or JIS I/II
4. Characteristic parameters of ISO readers can be set via software
5. AAMVA/CA DMV format supported in ISO 3 tracks model

SMART CARD READER

1. PC/SC 1.0 standard, EMV level I

SIDE MOUNT UPGRADE KIT SD400/SD400Z

- To be installed to right side of KS series main unit
- USB interface in proprietary internal connector
- Functions include: MSR, optical type finger print sensor

MAGNETIC STRIPE READER

1. ISO 2 tracks (track 1 + track 2)
2. or ISO 3 tracks (track 1 + track 2 + track 3)
3. or JIS I/II
4. Characteristic parameters of ISO readers can be set via software
5. AAMVA/CA DMV format supported in ISO 3 tracks model

OPTICAL FINGER PRINT SENSOR

1. Detection area : 14.6 x 18.1 mm (nominal at center)
2. Gray scale : 8 bits (256 levels)
3. Resolution : 512 dpi (average x, y over the field)

EXTERNAL CD ROM DRIVE

- 24 x speed
- USB interface
- Slim type

WALL MOUNT KITS

- Devices installable in backpack of each kit type are as below:

KIT NAME	DEVICES
WB-6000VB	N. A.
WB-6300	2.5” HDD
WB-6800	Power adaptor, 2.5” HDD

PRINTER:

- **PP-2000**
  1. 2-station receipt/journal/validation printer
  2. Dot matrix 9 pin
  3. Bi-directional printing
  4. Auto cutter provides full cut and partial cut
  5. Auto-detect between RS232 and EPP interface
- **PP-5200**
  1. High speed thermal line printer up to 220 mm/sec
  2. High-resolution printing 8 dots/mm and 432 dots/line
  3. Supports application environment of DOS, Windows, OPOS or WEPOS
  4. Low noise high reliability
  5. Drop-and-load structure for paper roll loading
  6. Easy print head cleaning
  7. Guillotine type Auto cutter provides paper partial cut and a manual cut
  8. 10 KB input butter
  9. Built-in character registration function with 256 KB flash memory for downloading and storing special character pattern or graphics for store logo
  10. Supports option either alarm type or buzzer type kitchen alarm
- **PP-5600**
  1. Dot matrix impact 9 pin
  2. Bi-directional printing
  3. Friction feed type
  4. 40 columns for 16.9 CPI
  5. Accepts paper width 3 inches (76 mm)
  6. Prints on ordinary or up to 3-fold carbonless copy paper

- **PP-5700**
  1. Dot matrix 9 pin
  2. Bi-directional printing
  3. Sprocket feed type
  4. 2 models for single pass or double pass print of Chinese characters
  5. 4.4 lines per second for single pass or 2.2 lines per second for double pass print
  6. 8 KB input buffer
  7. 40 columns (20 columns Chinese) or 35 columns (17 columns Chinese)
- **PP-8000 series**
  1. Supports UPOS 1.8
  2. WEPOS compliant
  3. High speed thermal line printer up to 220 mm/sec
  4. High resolution 8 dots/mm by 512 dots/line (576 dots max.)
  5. Epson TM-T88 IV compatible command set
  6. Low noise high reliability
  7. Auto guillotine type cutter provides single point left partial cut
  8. Thermal sensitive paper roll at width 80 mm or 58 mm
  9. Supports UPC-A, EAN(JAN)13/8, ITF, CODE39, CODABAR printing
  10. Supports printing on label with marker on the other side
  11. Supports option spill protect cover
  12. Supports option either alarm type or buzzer type kitchen alarm
  13. Support LAN and USB interface.
- **PP-6800 series**
  1. Paper jams can be solving by push the “Hood Release Button” directly.
  2. Fast-speed printing (150mm per second).
  3. Supports application environment of Windows or OPOS or Linux.
  4. Low noise thermal printing.

5. Drop-and-load structure for paper roll loading.
6. Cash drawer control up to 2 cash drawers.
7. Supports enhancement capability in kitchen bell for reminder function.
8. Default with serial interface, option for parallel, USB or LAN interface by plug in module.

RELIABILITY SPECIFICATION

- TOUCH PANEL LIFE EXPECTANCY (TOUCHES AT SAME SPOT):

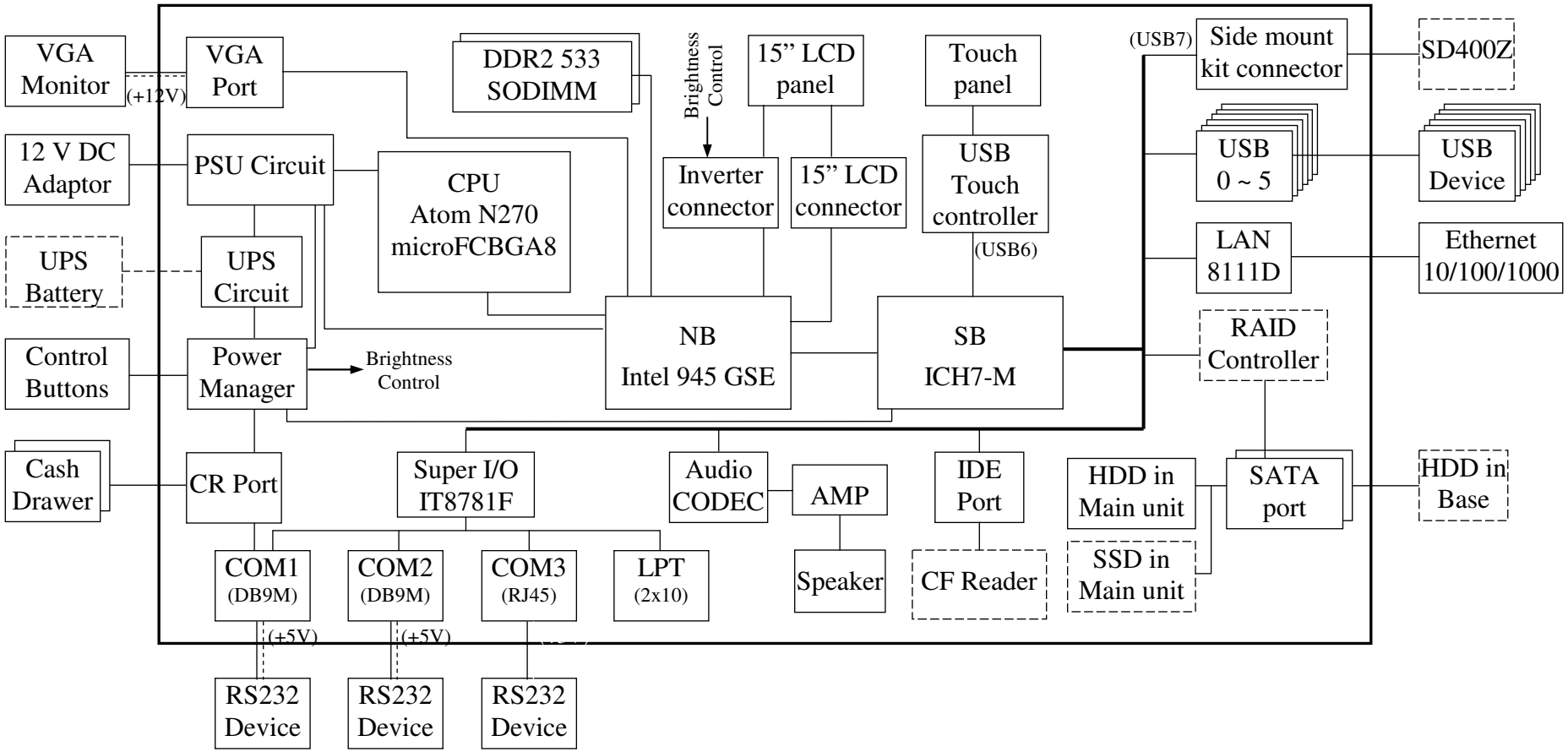
  RESISTIVE TYPE: 35,000,000 UP

- MSR LIFE EXPECTANCY: 500,000 PASSES

- WHOLE SYSTEM MTBF: 50,000 Hrs at 90% confidence level.

SYSTEM DEFINITIONS

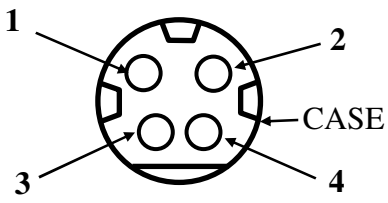
BLOCK DIAGRAM



12 V DC IN CONNECTOR

PIN ASSIGNMENT OF 4 PIN PLUG:

PIN #	DEFINITION
1	+12 V
2	+12 V
3	GND
4	GND
CASE	CHASSIS GND

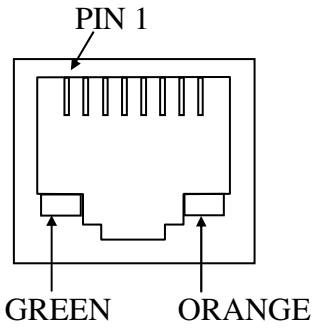


LAN PORT

PIN ASSIGNMENT OF 8 PIN RJ45 TYPE MODULAR JACK:

PIN #	DEFINITION for 10/100Mbps	DEFINITION for 1Gbps
1	TD +	DA +
2	TD -	DA -
3	RD +	DB +
4	NC	DC +
5	NC	DC -
6	RD -	DB -
7	NC	DD +
8	NC	DD -

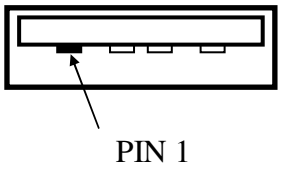
- **This port is defined as 1G base T or 100 base T or 10 base T LAN port.**
- **This port is utilized by the system in pnp (Plug-N-Play) way, IRQ assigned is not fixed for this port. Most usual observation is IRQ 11.**



USB0 ~ USB5

PIN ASSIGNMENT OF EACH 4 PIN JACK:

PIN #	DEFINITION
1	VCC
2	-DATA
3	+DATA
4	GND



VGA CONNECTOR

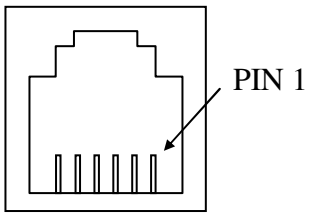
- **This port is a standard 3 x 5 D-sub VGA connector**

PIN #	DEFINITION	PIN #	DEFINITION	PIN #	DEFINITION
1	**RED**	**6**	**GND**	**11**	**NC**
2	**GREEN**	**7**	**GND**	**12**	**DDC_DATA**
3	**BLUE**	**8**	**GND**	**13**	**HSYNC**
4	**NC**	**9**	**NC/+12V**	**14**	**VSYNC**
5	**GND**	**10**	**GND**	**15**	**DDC_CLK**

CASH DRAWER CONNECTER (OPTION)

PIN ASSIGNMENT OF EACH 6 PIN RJ11 TYPE MODULAR JACK:

PIN #	DEFINITION
1	GND
2	DRAWER KICK 1
3	DRAWER OPEN SENSE
4	+POWER
5	DRAWER KICK 2
6	DRAWER OPEN RETURN



- **This is a RJ11 jack for cash drawer control providing control ability over max. 2 cash drawers.**

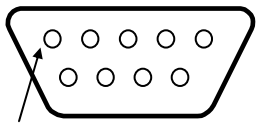
- **The cash drawer solenoid input is a 150 msec. grounding signal.**
- **The power to cash drawer solenoid is DC 12 V nominal.**
- **The command to open cash drawer is decoded through COM 1.**
- **The drawer open indication can be detected by software through status check on RI signal of COM 1.**
- **Should any difficulty occur in using the cash drawer controller, please try to arrange a serial printer to be connected to COM 1 so that the hardware handshaking signals can be properly handled.**

SERIAL PORT COM1/2

PIN ASSIGNMENT OF DB9M:

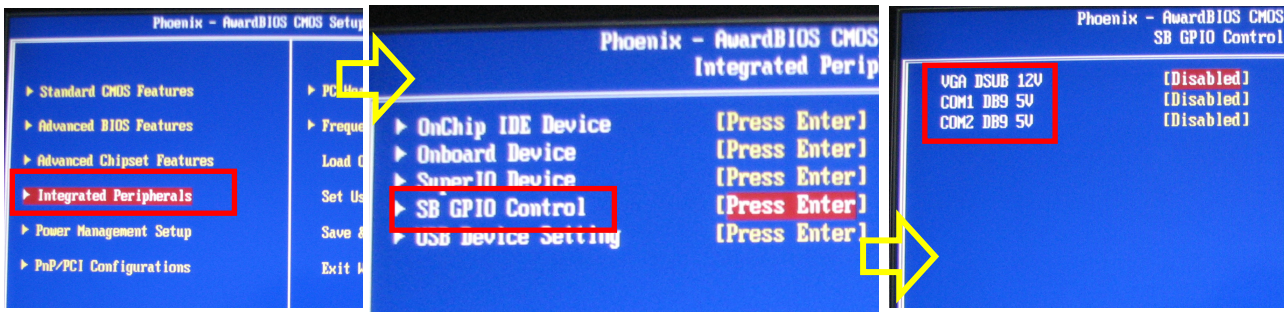
PIN #	DEFINITION	ALTERNATIVE	DEFAULT SETTING
1 (COM1)	DCD	+ 12 VDC Reserved	BATTWK
1 (COM2)	DCD		
2	RX		
3	TX		
4	DTR		
5	GND		
6	DSR		
7	RTS		
8	CTS		
9	+5 VDC	Disable / Enable	

- **Both COM ports appear in form of DB9M connectors like the right drawing.**
- **IRQ 4 is assigned to COM1 port. IRQ 3 is assigned for COM2. Can be changed in CMOS setup.**



PIN 1

- **Power setting by BIOS setup. The BIOS setup process: Please press the "ESC" button when terminal just boot up. After enter the BIOS setting page, please choose <u>INTERGRADED PERIPHERAL</u> then choose <u>SB GPIO CONTROL</u> in the next page. It may refer to following pictures. After BIOS setting, please press the power button until the power off then power on the terminal again.**

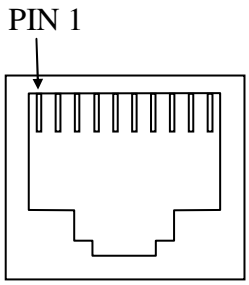


SERIAL PORT COM3

PIN ASSIGNMENT OF DB9M – 10 p RJ45 CONVERSION CABLE:

DB9M PIN #	RJ45 PIN #	DEFINITION	ALTERNATIVE	DEFAULT SETTING
-	1	GND		
1	2	DCD		
2	3	RX		
3	4	TX		
4	5	DTR		
5	6	GND		
6	7	DSR		
7	8	RTS		
8	9	CTS		
9	10	RI		

- **COM3 port appears in form of RJ45 type 10 pin modular connector like the right drawing. However, after use of the conversion cable separately ordered, the pin assignment in DB9 connector of the conversion cable complies to RS232 standard.**
- **IRQ10 is assigned for COM3. Can be changed in CMOS setup.**



PARALLEL PORT LPT

PIN ASSIGNMENT OF ADAPTOR CABLE:

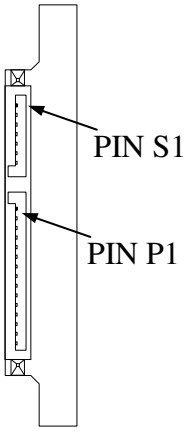
2x10 PIN#	DB25F PIN #	SPP MODE	EPP MODE	ECP MODE
4	1	- STROBE	-WRITE	-STROBE
1	2	D0	D0	D0
3	3	D1	D1	D1
5	4	D2	D2	D2
7	5	D3	D3	D3
9	6	D4	D4	D4
11	7	D5	D5	D5
13	8	D6	D6	D6
15	9	D7	D7	D7
14	10	- ACK	INTR	-ACK
10	11	BUSY	-WAIT	BUSY, PeriphAck
8	12	PE	NU	Perror, -AckReverse
6	13	SLCT	NU	SLCT
2	14	- AUTO FEED	-Datastb	-AutoFeed, HostAck
18	15	- ERROR	NU	-Fault, -PeriphRequest
16	16	- INIT	NU	-Init, -ReverseRequest
12	17	- SLCT IN	NU	- SLCT IN
17, 19, 20	18 ~ 25	GND	GND	GND

- **IRQ 7 is assigned for this port.**

INTERNAL SATA HDD CONNECTOR

PIN ASSIGNMENT OF EACH 7+15 PIN CONTACTS:

PIN #	DEFINITION	PIN #	DEFINITION
S1	GND	P1	+3.3V
S2	+TX	P2	+3.3V
S3	-TX	P3	+3.3V
S4	GND	P4	GND
S5	-RX	P5	GND
S6	+RX	P6	GND
S7	GND	P7	+5V
		P8	+5V
		P9	+5V
		P10	GND
		P11	GND
		P12	GND
		P13	
		P14	
		P15	

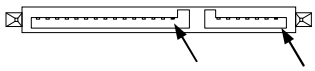


EXTERNAL SATA HDD CONNECTOR

PIN ASSIGNMENT OF EACH 7+15 PIN CONTACTS:

PIN #	DEFINITION	PIN #	DEFINITION
S1	GND	P1	+3.3V
S2	+TX	P2	+3.3V
S3	-TX	P3	+3.3V
S4	GND	P4	GND
S5	-RX	P5	GND
S6	+RX	P6	GND
S7	GND	P7	+5V
		P8	+5V
		P9	+5V
		P10	GND
		P11	GND

P12	GND
P13	
P14	
P15	



APPLICATION GUIDES

POWER SUPPLY TO I/O PORTS

Through BIOS setup the +5V DC supplies to the devices connected to COM1/COM2 and the +12V DC supply to the VGA connector can be enabled or disabled. The power supplied from the KS-6815 series to all USB devices on 5 V DC is limited to be within 2.0 Ampere total. The +5V DC in all COM ports is limited to be within 1 Ampere total. Power on 5 V DC in 22 pin type SATA connector for option SATA HDD in base is limited to be within 1 Ampere. The power supplied to VGA port on 12 V DC is limited to be within 1 Ampere. No matter what, the ventilation of the environment should be much improved to compensate the heat accumulation due to such excessive load.

COM PORT APPLICATION COMMENT

There are 2 types of connectors for the 3 COM ports supported in KS-6815 series. The COM1/2 take standard format of DB9 and are utilized as usual PC COM ports. However, the COM3 is in format of 10 pin RJ45 type modular connector and can operate as regular PC COM port after a separately prepared conversion cable is applied. This conversion cable (P/N: 21863033800) can be purchased from Posiflex or created according to pin assignment information in previous chapter.

Before using the port COM 1, the COM1 terminator should be removed and stored for future use when there will be no regular RS232 device to be connected to this port. It is definitely inadvisable to connect any serial input devices like serial mouse to COM 1 port without thorough investigation. The reason is that some input devices do not provide standard RS232 hardware handshaking signals. In KS systems, the cash drawer controller shares the COM 1 port. When the system issues any command to cash drawer controller, the hardware handshaking signal would be in error status and could halt this port if COM 1 is not connected properly. The cash drawer control

command (07h) or (17h) that is using COM1 at 9600bps, none parity, 8 data bits, 1 stop bit should be avoided in COM 1 communication.

CUSTOMER DISPLAY

The RS232 model rear base mount customer display PD2602/2604 or PD305/306/310 upgrade kit can be connected to any available COM 1 or 2 port with an internally supplied power from the KS series set per BIOS setup. The USB model PD-2602/2604/306/310 can be connected to any available USB port with an internally supplied power from the KS-6815 series. Please refer to the user's manual of customer display for detail instructions on use of PD. Please refer to earlier paragraph if COM1 is selected for this usage.

CASH DRAWER

The software command to open the cash drawer or the first cash drawer with the optional 2 in 1 cash drawer control cable is a hexadecimal code of <07> sent to COM1 port under the protocol of 9600 bps, none parity, 8 data bits, 1 stop bit.

The software command to open the second cash drawer with the optional 2 in 1 cash drawer control cable is a hexadecimal code of <17> sent to COM1 port under the same protocol as above.

The drawer open status can be obtained through checking the communication status of COM1 at signal RI. When there is no drawer open, the RI signal of COM1 is always set. When there is any cash drawer opened, the RI signal of COM1 is reset. The RI signal is obtained as the bit 6 (the second most significant bit) of the I/O address 3FEh if the COM1 address is set to 3F8h~3FFh (conventional address for COM1) in system configuration.

POWER ON/OFF CONTROL

AUTOMATIC POWER ON CONTROL

When the system is turned off after a successful boot up, the preset automatic power on functions if set as below will keep monitoring for the preset conditions and turn on the system when the preset conditions are met.

Please note that if the system is improperly turned off before a complete boot up procedure, the above preset power on control functions will be disabled until next turning off after a complete boot up.

ALARM CLOCK WAKE UP

To utilize Alarm Clock Wake Up function, the user should enter the CMOS setup by pressing “Del” key at system boot up, choose “Power Management Setup” and make the “Resume by Alarm” enabled and set the alarm to required time. Save the configuration and exit the CMOS setup program. The Preset Power On Control will then be ready.

MODEM RING UP

To utilize Modem Ring Up function, the user should enter the CMOS setup by pressing “Del” key at system boot up, choose “Power Management Setup” and make the “Power On by Ring” enabled and connect the RS232 modem to COM2 port. Save the configuration and exit the CMOS setup program. The Preset Power On Control will then be ready.

LAN WAKE UP

For LAN wakeup, the item “PCI Express PME” must be enabled in item “PCI Express PM Function” of “Power Management Setup” in BIOS setup and an operating caller system connected through LAN to the system is required. It also requires a qualified networking technician to check the LAN chip ID of the system for the caller system to wake up. In this application, there needs to be 1 master machine and 1 target machine connected together through LAN.
To get LAN chip ID (MAC address) of the target machine, please run the target machine under prompt mode. Execute “ipconfig /all” and write down the 6 2-digit numbers of the item “Physical Address:”. Then the target machine should be powered off in a normal way with AC power supply and LAN connections.

Now the networking technician at the master machine can execute the LAN wakeup utility. There will popup a dialog box for the MAC address. Enter the registered 6 2-digit Physical Address of the target machine and continue the utility then the target machine of that Ethernet Address will be automatically powered up.

FORCED POWER OFF

In case of serious system halt due to system resources conflict or any reason, the system could fail to power off through normal means. The Forced Power Off method is designed for such occasions. With the external power switch defined as power ON/OFF switch (default status), push down and hold this Power ON/OFF Switch. The system will be powered off within 10 seconds in this way. Whenever the machine receives a software command to change the external power switch to ON only, the forced power off function requires the user to keep the switch pressed for a longer period between 10 to 20 seconds to function.

In case the system halt situation is so serious that some hardware/firmware registrations are already confused, this above mentioned forced power off could though very unlikely still fail. When such situation happens, please remove the

external power input from the adaptor and disconnect the UPS battery for few minutes to reset the hardware registers.

One example of the need for this forced power off function could happen when power switch is triggered within 10 seconds of last switching off. It is a common practice that once the system power is switched off there should be some waiting time before next switching back on. If the system power is switched off and on in very short time chances are the system LED module could indicate power on status while the system remains off. In such case, please use the forced power off function to cancel the error and wait for 10 seconds before switching on again.

UPS BATTERY

The optional internal UPS battery is a maintenance-free lead-acid battery and is targeted to support basically the data preservation and smooth running of the system during intermittent power failure. This battery is not designed for prolonged power support to the system against power shutdown. That means, when the AC power outage is known to last for more than half hour, it is advisable to turn off the system instead of using the battery up while repeatedly using it up reduces the battery life dramatically.

The battery will undergo self-discharging over time even when not in use (not connected). A useful advice to preserve the battery at best condition is to regularly recharge the battery if the battery is put in storage for a period of time. It is recommended to turn on the system to recharge the battery for 1 ~ 2 hours every 3 months of storage if the storage temperature is lower than 30℃. The battery should be recharged for 1 ~ 2 hours every month if the storage temperature exceeds 30℃. However, the user shall avoid the situation with storage temperature over 30℃ to protect the life of the battery. Temperature above **40°C must be strictly avoided** as it could cause termination of battery life and unexpected result even if the battery is not in work. Do not connect any other battery to this UPS battery because mixed use of batteries of different capacity, history, or manufacturers may cause damages. In case

the user wants to have a longer battery support time during AC power off, he/she should consult his/her dealer for application of an external 12 V battery.

When the UPS battery is installed in the KS system without AC power input, the standby current will consume the battery much faster than self-discharge. An over-discharged battery will not only mean premature death of the battery itself, it also may cause danger when later being recharged. It is therefore absolutely important that the end user shall **disconnect the UPS battery from the system when the system is to be AC powered off for more than 72 hours and replace a new battery whenever the monitoring software indicates the battery is out of service**.

UPS STATUS DETECT FUNCTIONS

The UPS function requires use of the optional UPS battery. The Posiflex UPS functions can support the system against intermittent power failure. However, in order to achieve best hardware stability against any possible memory or CMOS data loss or even system crash, the UPS function will be automatically enabled or disabled depending on the existence of a healthy UPS battery.

In the KS series products, when the system is working on UPS battery power, the status is indicated by LED and is detectable by software. This “operating on battery” signal can be obtained through checking the communication status of COM1 signal.

There is further an auto detect function on the existence of a healthy UPS battery provided. This capability supports the Posiflex software installed in the preloaded operating system of Windows to enable or disable the UPS function automatically as long as it is initialized.

All the above mentioned functions are included in the “Posiflex Power Switch Manager” within the preloaded Windows OS for user’s convenience as described in “POSIFLEX TOOLS” later in this chapter.

VGA PORT

The external monitor connector is D sub 3 x 5 connector and can be set to support power to specific Posiflex monitor as 2nd display. However, the power support in this port should be disabled if the specific Posiflex monitor is no longer used.

FINGERPRINT SENSOR

When the system is delivered with SD-400Z with fingerprint sensor and when the system has preloaded OS, the driver for the optical fingerprint sensor will be installed for separated demonstration on use of the fingerprint sensor. For software developers to use all functions of the sensor in their AP, proper SDK (software development kits) should be purchased from the sensor module supplier. The supplier for the sensor module used in SD-400Z is DigitalPersona, Inc. and the module used is "U.are.U 4000B". It is advisable to visit their web site:
http://www.digitalpersona.com/developers/products.php

FIRMWARE UPDATE

The power manager firmware of KS-6815 series can be updated on site with a special provided "Firmware update device" when necessary. Open the service window of the system and connect the special cable of the firmware update device to the connector JP10 during power off. Connect the AC power to the adaptor to support the system but **DO NOT** turn the system power ON. Press a button in the firmware update device to start the update process. The red and green LED of the firmware update device will light up alternatively to indicate the update process. The LED will be green steadily to indicate a successful completion. Please make sure that there shall be no power interruption throughout the update process. In case a power interruption occurs and the update process fails, disconnect the AC power and retry the whole process from the beginning. If it still fails, a board level repair will be required.

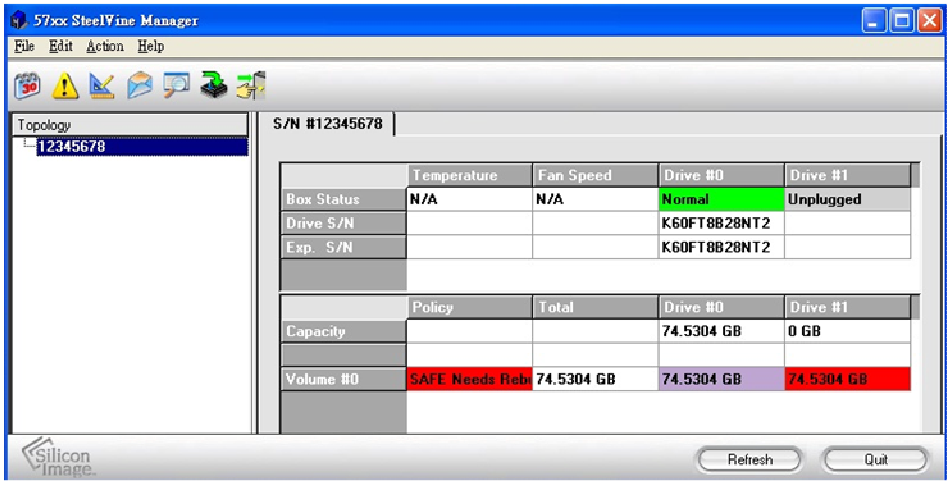
HDD, SSD & CF READER ISSUES

As described in the User's Manual, the system data storage device may take variation from the default 2.5" SATA HDD in main unit to have an optional 2.5" SATA HDD in base or to use a SATA SSD or an internal CF memory card reader instead of the default HDD. Please check the BIOS setting accordingly if the configuration has been changed.

RAID FUNCTION

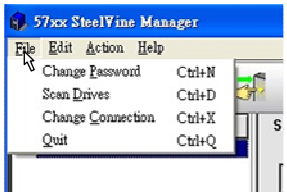
For the normal product constructed with 2 HDD's (1 in main unit and 1 in base), the HDD RAID function can be applicable if this option is installed and a monitoring utility on the RAID function from Silicon Image, Inc. can be included in the preloaded OS.

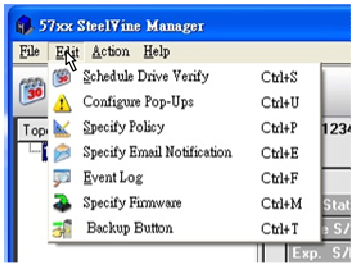
To activate the monitoring utility please select [Start] --> [All Programs] --> [Silicon Image] --> [57xx SteelVine] --> [SteelVineManager] and the example screenshot will look like below. Nevertheless, in this example screen a failure condition is intentionally implanted to show the color indications in Status window of this utility.

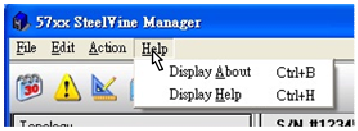


THE MENU BAR

There are 4 command groups in the menu bar for this utility: File, Edit, Action and Help, each with dropdown list as in below pictures.







Please note that for most commands, there will be a popup widow requesting for a password input before execution as the left. The default password is "admin" and can be changed in the "File" menu.

FILE MENU ITEM

- **Change Password** – Opens a dialog to establish a new password.
- **Scan Devices** – Refreshes the status details presented in Status window.
- **Change Connections** – Opens a dialog to make remote connections.
- **Quit** – Exits the utility.

EDIT MENU ITEM

Details for each item in this menu are further illustrated later.

- **Schedule Disk Verify** – Schedule a Disk Verify activity.
- **Configure Pop-Ups** – Configure the Pop-Up messages.
- **View Policy Settings** – Displays the Rebuild policy settings.
- **Setup Email Notification** – Opens the Setting-up Email Notification dialog.
- **Event Log** – Opens the Event log viewer.
- **Specify Firmware** – Opens the Firmware Selection dialog.
- **Backup Button** – Opens the Accessing the Backup Button dialog.

ACTION MENU ITEM

Items in this menu are selectable only when applicable. (ex. when one drive fails, no rebuild nor verify can be taken or when no rebuild or verify in progress, you can not abort it)

- **Start Rebuild** – Initiates a Rebuild to the target drive.
- **Start Verify** – Initiates a Verify activity on the selected drive.
- **Abort Rebuild** – Aborts the Rebuild process.
- **Abort Verify** – Aborts the Verify process.

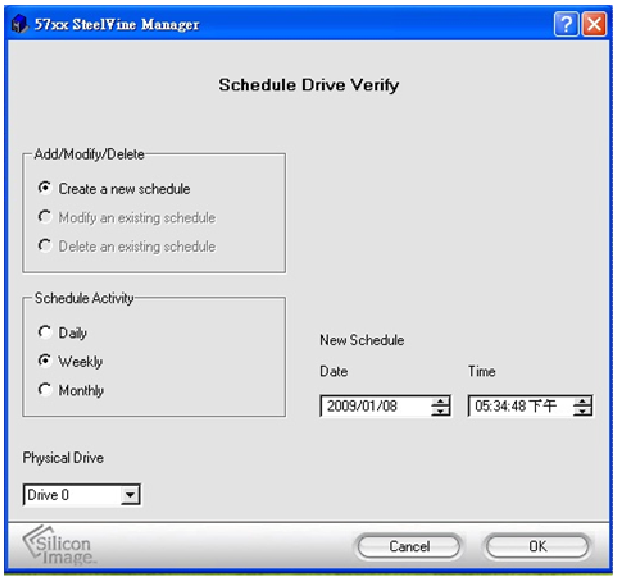
HELP MENU ITEM

- **Display About** – Displays information about this utility.
- **Display Help** – Provides help for operations in this utility.

THE TOOLBAR

The icons for each item in Edit Menu are presented in the toolbar for convenience and they are further illustrated below.

SCHEDULE DISK VERIFY

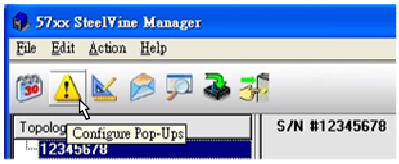


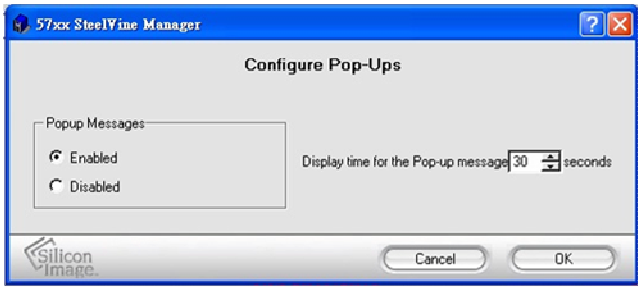
A window as in the right pops up if the icon “Schedule Drive Verify” is selected. In this screen the user may define the schedule for the regular check on the integrity of the HDD’s.

This utility is set up to automatically verify the rebuild of a hard disk drive. However, you can also create a verification schedule at your discretion. The schedule can be set for daily, weekly, or monthly. The default setting is weekly. It can be customized to run during the off-

hours so as to not interfere with your normal back-up routine. A schedule can be run for each individual hard drive. You can modify or delete an existing schedule by selecting the desired radio button, then changing the parameters and clicking the **OK** button.

CONFIGURE POP-UPS



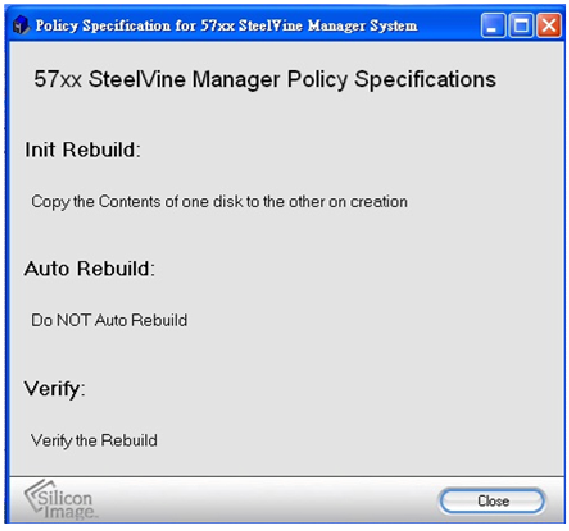


A window as in the right pops up if the icon "Configure Pop-Ups" is selected. In this screen the user enable or disable the popup error notification message and specify the display duration of the message.

You can enable or disable the Error Popup Notification. The default setting is that this feature is enabled and set to display for 30 seconds. Popup messages can appear for up to 60 seconds. To set the option for manual closure of the pop-up window, set the seconds to "0". This will keep the pop-up window from closing until you click **OK** to dismiss the pop-up message.

VIEW POLICY SETTINGS

A window as in the right pops up after password check if the icon "View Policy Settings" is selected.



The storage policy for RAID 1 as configured in the FT system is called "SAFE". The SAFE storage policy

stores all data in duplicate on separate drives to protect against data loss due to drive failure. One drive *mirrors* the other at all times, equivalent to RAID 1. Every write operation goes to both drives. SAFE provides the highest level of data protection for critical data that you cannot afford to lose if a hard drive fails, but halves the amount of storage capacity because all data must be stored twice. The resulting storage capacity of the virtual SAFE volume will be equivalent to the size of one hard drive (if both drives are the same) or the smaller of the two drives (if they are different).

If one drive fails, the SAFE volume is still usable, but it is in a vulnerable state because its mirrored hard drive is inaccessible. When the offline drive comes back online, the appliance begins a rebuild process immediately to restore data redundancy. A message box appears in the GUI to notify you that a rebuild is in progress. Although the volume remains available during the rebuild process, the volume is susceptible to data loss through damage to the remaining drive until redundancy is restored at the end of the rebuild and verification process. Host access takes precedence over the rebuild process. If you continue to use the SAFE volume during the rebuild, the rebuild process will take a longer time to complete, and the host data transfer performance will also be affected.

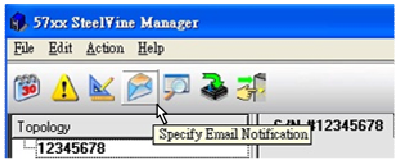
The Policy Settings dialog allows you to view the current settings for **Rebuild** and **Verify** operations for SAFE volumes, including:

Init Rebuild: Defines whether to automatically copy (mirror) the contents of Disk 0 (HDD 1) to Disk 1 (HDD 2) whenever a new SAFE volume configuration is created.

Auto Rebuild: Defines whether to remember the non-usable state of a hard drive if it is disconnected and then re-connected in the FT system.

Verify Rebuild: Defines whether to automatically perform a verification of the data after a rebuild operation is completed.

SETUP EMAIL NOTIFICATION

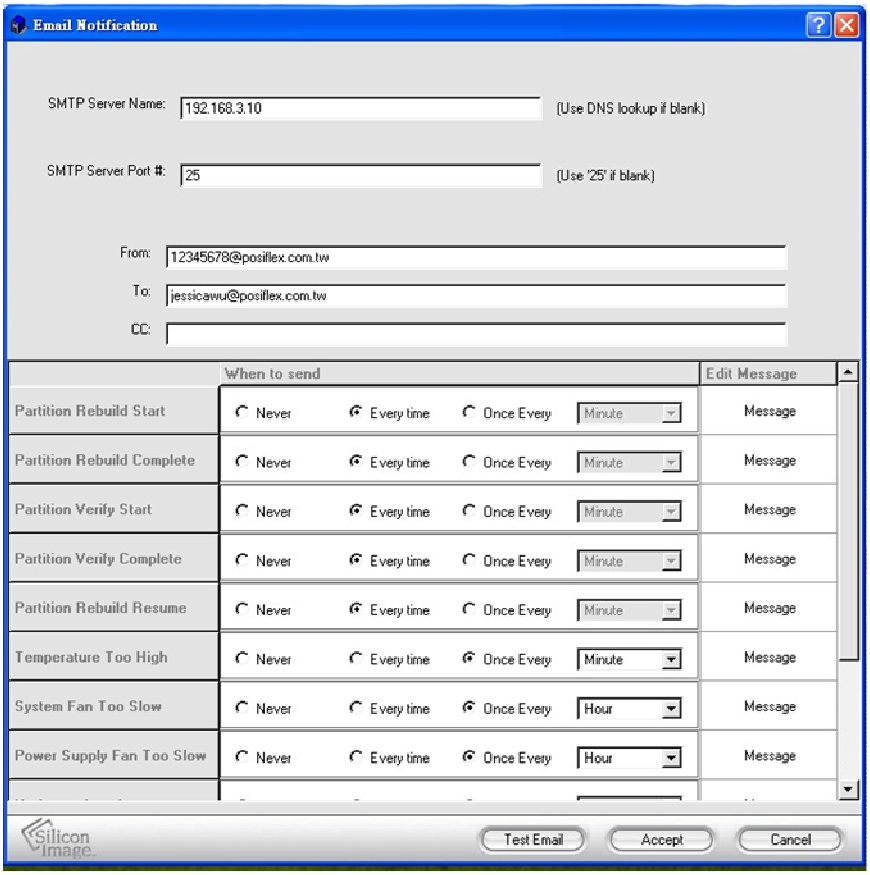


A window as in next page below pops up after password check if the icon "Setup Email Notification" is selected.

The Email Notification feature allows you to have the utility automatically send an email message if any of the following conditions or situations occur:

Partition Rebuild Start
Partition Rebuild Complete
Partition Verify Start
Partition Verify Complete
Partition Rebuild Resume
Temperature Too High (not applicable in FT systems)
System Fan Too Slow (not applicable in FT systems)
Power supply Fan Too Slow (not applicable in FT systems)
No Boxes Found
Box Removed
Drive Unplugged
Drive Inserted

Each of the above conditions can be customized for sending options as well as the message that is sent.



Enter the hostname or IP address of the SMTP server. If you leave this blank, the utility will perform a DNS lookup and will attempt to find the address of the SMTP server automatically.

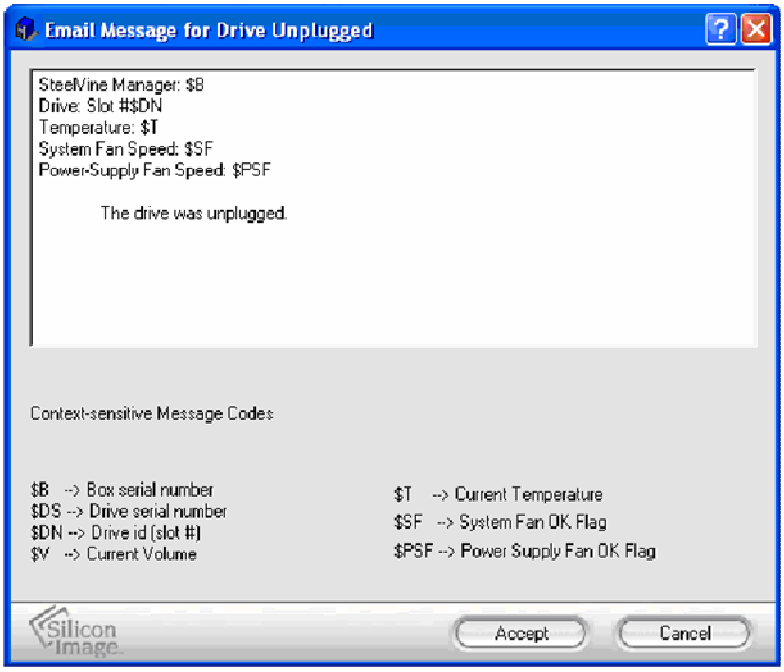
Enter the SMTP Server Port number or use the default value of Port 25.

Enter your full email address into the From box, and enter the full email address(es) of the intended recipient(s) of the notifications into the **To** and **CC** boxes.

Click on the "**Test Email**" button at the bottom of the screen to verify that you have correctly set-up the email portions of this feature. You may need some assistance from your network administrators if you have any problems.

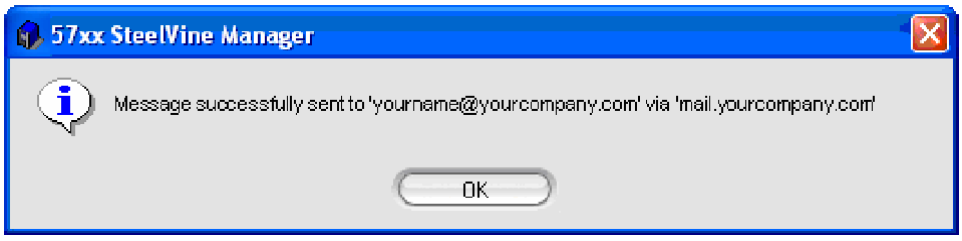
For each error condition or event item, you can use the "**When to send**" radio button items to specify the frequency of sending an e-mail notification message to prevent a flood of email messages, especially when the same error condition or event occurs multiple times. As a matter of fact, we would recommend to select "Every time" only on "Drive Unplugged" for minimal e-mail flow and maybe also on "Partition Rebuild Start"; "Partition Verify Complete"; "Partition Rebuild Resume" for more information if required. For the rest items, "Never" is suggested.

The Email Notification feature also allows you to customize a message for each of the error condition or event items (of which each has its own default message already built in). Click on "Message" button of the item of "When to Send" (for example "Drive Unplugged"), the window as in the left pops up for you to edit the message for the event.

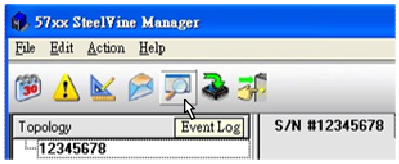


In the message box, type in the descriptive text you want. You may also include in the error message these coded information: $B; $DS; $DN; $V; $T; $SF; $PSF with definitions below the text box that the utility will extract from the RAID controller hardware automatically.

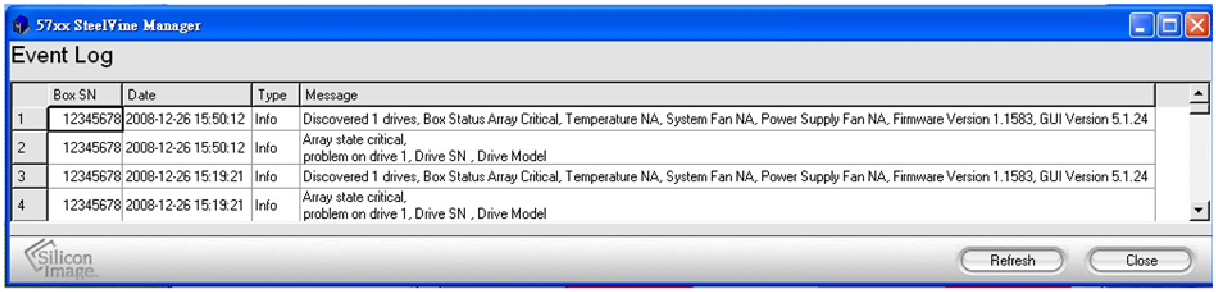
When one of the conditions/situations occurs, a pop-up dialog appears on the host computer stating that an email message has been sent.



EVENT LOG



A window as in below pops up if the icon "Event Log" is selected.



The Event Log screen displays a list of events in a table format.

Date displays the date and time of the event.

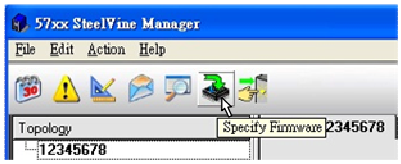
Box SN and **Drive SN** display the respective serial numbers for the event.

Drive Manufacturer displays vendor information.

Message gives an event description.

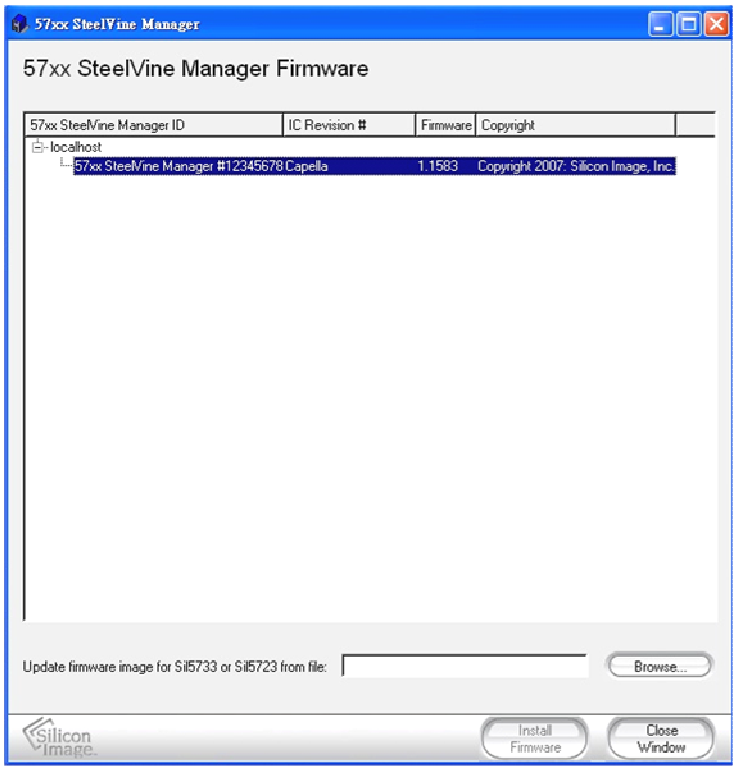
SPECIFY FIRMWARE

A window as in next page below pops up after password check to browse, select a new firmware image file to install if the icon "Specify Firmware" selected.

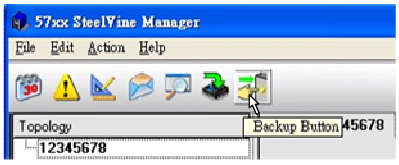


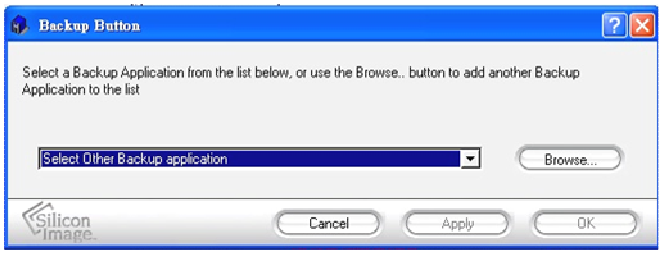
Important: *Do not install a new firmware image while an active Rebuild operation is underway. In addition, do not access or power-off the FT system while installing the firmware image. The firmware installation process takes less than two minutes to complete.*

After the firmware download is completed, a confirmation dialog appears directing you to restart your system, so that the new firmware will be used upon startup.



BAKUP BUTTON





A window as in above right pops up if the icon “Backup Button” selected.

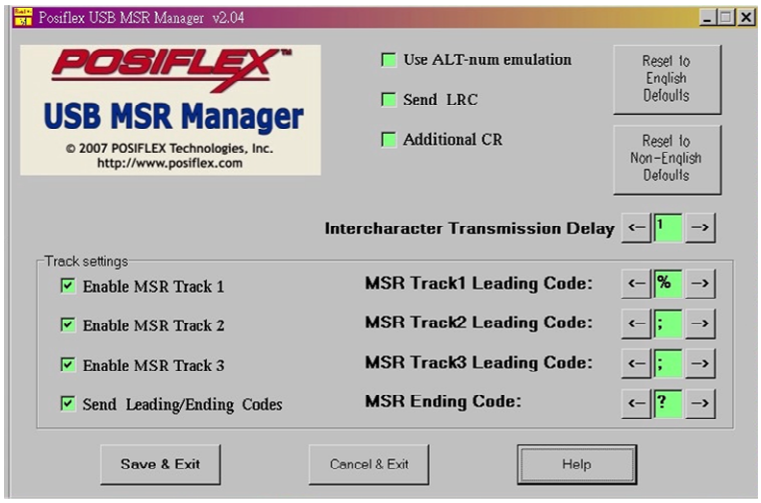
The Backup Button feature allows you to launch a pre-selected third-party software application by pressing a special-purpose push-button that is not applicable in FT system.

POSIFLEX TOOLS

In the preinstalled OS there will be a program group named “POSIFLEX Tools” for specific Posiflex device(s) installed.

POSIFLEX USB MSR MANAGER

For systems with USB MSR in side mount upgrade kit, the USB MSR manager helps defining several characteristics in output format control for reading the magnetic stripe card.



Please select “System Drivers & Utilities” --> “KS-6815” --> “USB MSR” in Posiflex product information CD ver 3.0 to install the USB MSR Manager. The screen shot of the program is similar to the top picture at right. The program will be in “Posiflex Tools” and in “StartUp” there will be

USE ALT-NUM EMULATION

This function is required for language systems using a different keyboard layout of the alphabetical part from the US keyboard when track 1 of the USBMSR is enabled. This function will have no influence if the MSR uses only track 2 and/or track 3. The reason is that the data of the MSR are sent to the host as if they were keyed in from a keyboard. When the alphabetical data in track 1 of the MSR is read, the data goes to the keyboard controller and the system keyboard controller interprets it according to the keyboard layout set for the country. The keyboard layouts could cause some confusion among some European countries (For example, the location for “A” in US keyboard is that for “Q” in a French keyboard. The location for “Z” in US keyboard is

that for “Y” in a German keyboard.) One way to deal with such problem is to use the “Alt-num” approach. This means that, for example, when “A” is read, the scan codes for pressing and holding “Alt” key while pressing “6” and “5” keys of the numerical keypad consecutively are sent to the keyboard controller. Therefore, the data will not be misinterpreted regardless of the keyboard layout.

SEND LRC

When the check box is ticked, the MSR sends LRC to the host as part of data for Application Program to double check.

ADDITIONAL CR

When the check box is ticked, the MSR sends a carriage return signal to the host at end of each track data after the ending code for Application Program to separate each field.

RESET TO ENGLISH DEFAULTS

RESET TO NON-ENGLISH DEFAULTS

These two options provide users to reset all the MSR maneuver functions to the proper defaults according to the system language the user uses. This consideration involves mostly of the Alt-Num emulation and the intercharacter delay.

INTERCHARACTER TRANSMISSION DELAY

Usually, the processing algorithm and the keyboard data input buffer in an operating system are arranged in such a way that the system resources are preserved as much as possible while data input from the USB keyboard port presents no problem. However, as we know that the amount of data read from one single swipe of MSR can be very much larger than any possibly fastest keyboard entry in same duration. Some operating system may be unable to handle such a bunch of data in so short time. Therefore, a so-called intercharacter delay is introduced to allow the system to digest the input data. When data read from the MSR is marching to the system, a programmable time delay is inserted between any two characters. The value to define

this intercharacter delay ranges from 0 to 32. The correspondent delay time ranges from 2 ms to 66 ms.

ENABLE MSR TRACK 1

A tick in the check box enables the reading of track 1 data if the reader head for track 1 exists. Without this check, the data of track 1 on the MSR will be ignored.

ENABLE MSR TRACK 2

A tick in the check box enables the reading of track 2 data if the reader head for track 2 exists. Without this check, the data of track 2 on the MSR will be ignored.

ENABLE MSR TRACK 3

A tick in the check box enables the reading of track 3 data if the reader head for track 3 exists. Without this check, the data of track 3 on the MSR will be ignored.

SEND LEADING/ENDING CODES

In data encoding of the magnetic stripes, each tracks are separated with each start/end sentinels. However the user may decide whether to send codes of/for these sentinels or not depending on the requirement of the application software. The MSR will always send a “CR” (carriage return) signal to end of each track data for separation if this item is unchecked.

MSR TRACK 1 LEADING CODE

MSR TRACK 2 LEADING CODE

MSR TRACK 3 LEADING CODE

MSR ENDING CODE

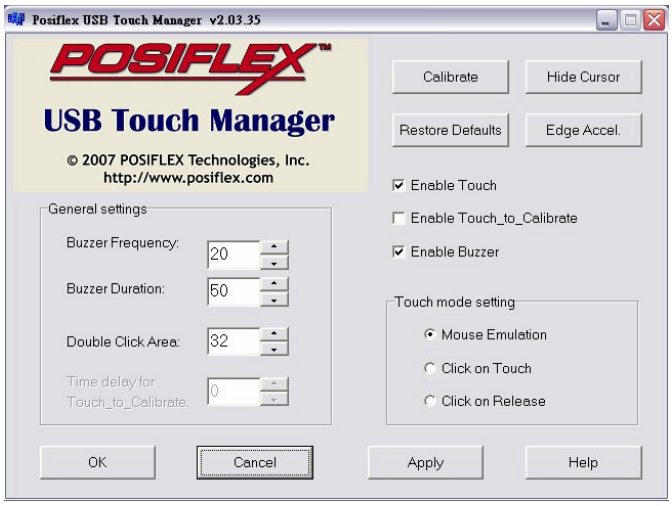
Once the codes for the sentinels of each tracks are defined to be sent to the system, the leading codes for each start sentinels and the ending code for the common end sentinel can be selected from a table of displayable characters with ASCII code from 20h to 7Eh. Clicking on each left/right button selects each code. The default track 1 leading code is “%”; the default track 2 and track 3 leading code is “;”; the default ending code is “?”.

POSIFLEX USB TOUCH MANAGER

When the touch control panel installed is the resistive type panel and the touch control interface used is USB interface, the "Posiflex USB Touch Manager" will be installed with the preloaded OS and there will be 4 utilities in the "Posiflex USB Touch Tools" program group with "Posiflex USB Touch Manager" being the main program.

POSIFLEX USB TOUCH MANAGER

Most items in this utility should be easily understandable to average user. Each item is explained as below.

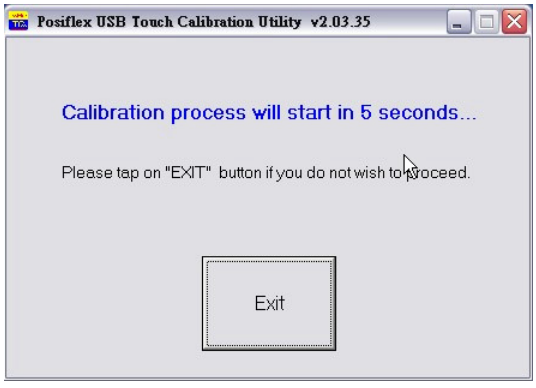


- **Calibrate** – This button engages the "Posiflex USB Touch Calibrator".
- **Hide Cursor** – This button hides or shows the mouse cursor on screen display. Please never hide cursor before the touch is enabled and calibrated.
- **Restore Defaults** – This button resets all touch parameters to default settings.
- **Edge Accel.** – This function engages the "Posiflex USB Touch Edge Acceleration Tool" and helps to find the hidden taskbar or thin scroll bar through touch.
- **Enable Touch** – This check box must be check to have the touch panel working.
- **Enable Touch_to_Calibrate** – This check box provides a shortcut for touch calibrator by holding touch for a programmed time delay. However, this function denies the touch mode of "Click on Release".
- **Enable Buzzer** – This check box enables the internal buzzer beep as response to touch on touch panel.

- **Buzzer Frequency** – To select buzzer tone by up/down arrows beside the box.
- **Buzzer Duration** – To select the length for the touch beep by up/down arrows beside the box.
- **Double Click Area** – To select the size of touch point on touch panel by up/down arrows beside the box. A too small touch size makes double click operation difficult. A too large touch size results in unsatisfactory touch accuracy.
- **Time delay to Touch_to_Calibrate** – This check box defines each touch on touch panel as clicking the right button of mouse at that point. When it is unchecked, each touch will work as clicking the left button of mouse. (Ref. to the right hand version of mouse)
- **Touch mode setting**– Only one of the three radio buttons for "Mouse Emulation", "Click on Touch", "Click on Release" can be selected. The mouse emulation refers to the drag and drop function. The Click on Release mode does not apply when "Enable Touc_to_Calibrate" box is checked.
- **OK** – This button accepts all parameters set and closes the utility window.
- **Apply** – This button accepts all parameters set and remains in the utility window.
- **Cancel** – This button discards all changes to the parameters and closes the utility window.
- **Help** – This button provides explanations.

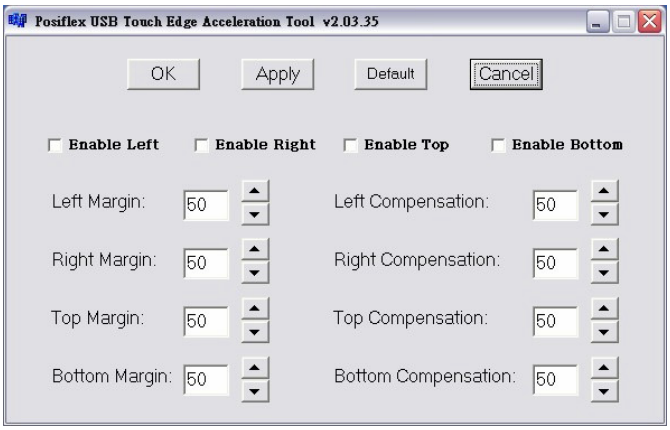
USB TOUCH CALIBRATOR

This program helps re-calibrating the touch position with the USB mouse emulation. Please touch the calibration targets at each corner and a confirmation target that appear sequentially.



USB TOUCH EDGE ACCELERATION TOOL

This program helps to find the hidden taskbar or thin scroll bar through touch.



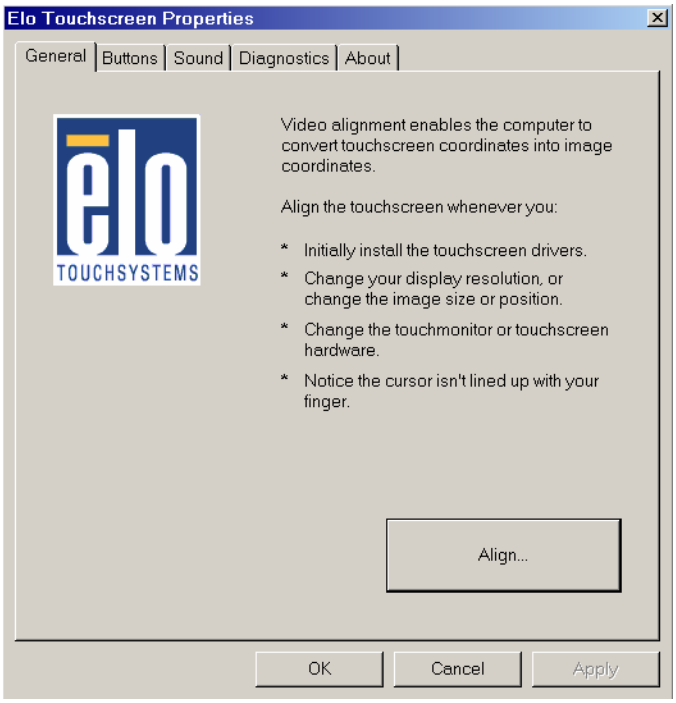
- **Enable ...** – Each check box determines whether or not to engage edge acceleration against which edge of screen.
- **Margin** – This list button selects the range to engage edge acceleration toward the edge before the edge is reached.
- **Compensation** – This list button selects the distance to advance the mouse toward edge from touch point.

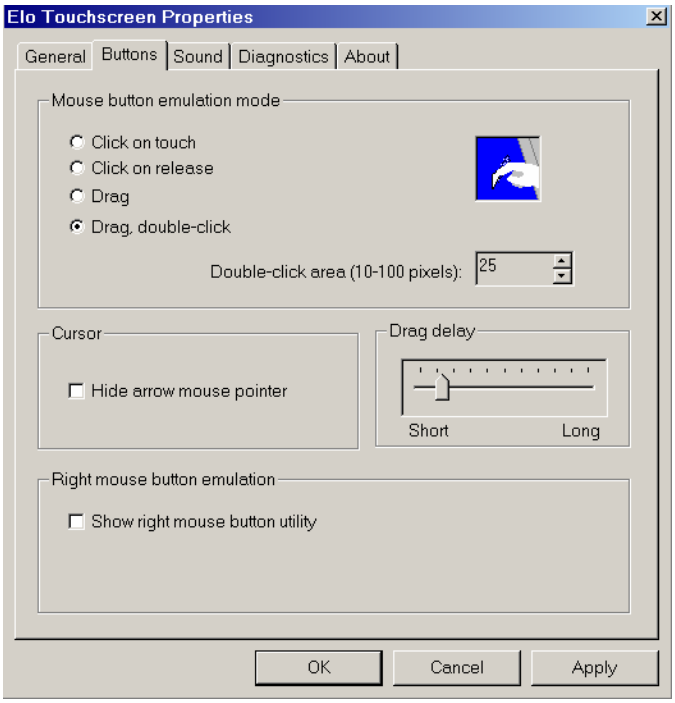
USB TOUCH RIGHT BUTTON TOOL

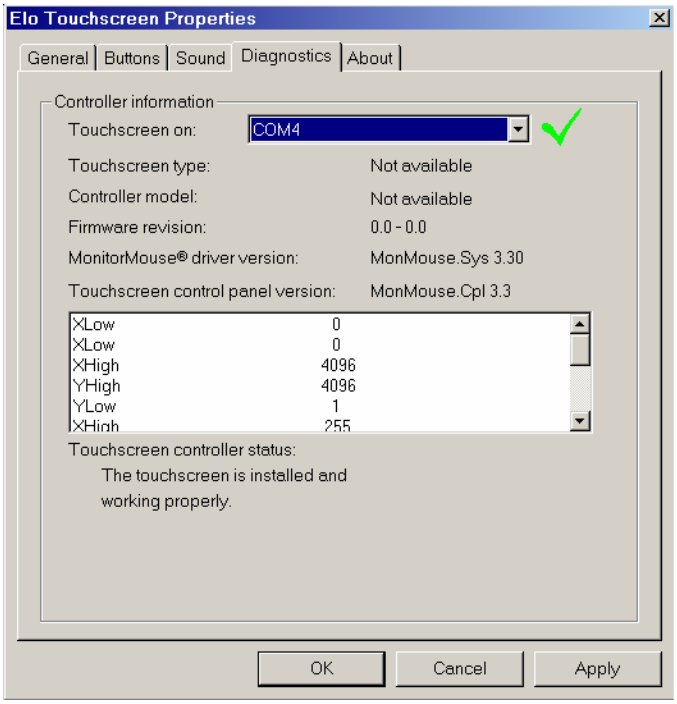
When this tool is executed, there will be a small window of "One Shot Right Button" appearing on desktop. Any touch on the panel right after touching this small window will work like clicking the right button of a right-handed mouse at that point. However, the next touch will resume the left button of mouse unless the small window is touched again.

RS232 TOUCH DRIVER

The touch control driver for the IR type touch panel used in this product series utilizing RS232 interface can also be used for the normal optional resistive type touch panel of this product series. Please find the subfolder \Drivers\KS6815\TOUCH\IR in the Posiflex Product Information CD and study the "readme" file before executing the "setup" program should there be any need for a driver re-installation. Make sure you select "COM4" for the port of the touch driver in the process. All control parameters of this driver can be reviewed through an item "Elo Touchscreen" in the "Control Panel" after driver installation. Some sample screen shots of this driver are exhibited to the right of this section for reference purpose. Please note that these may change without notice at any time.







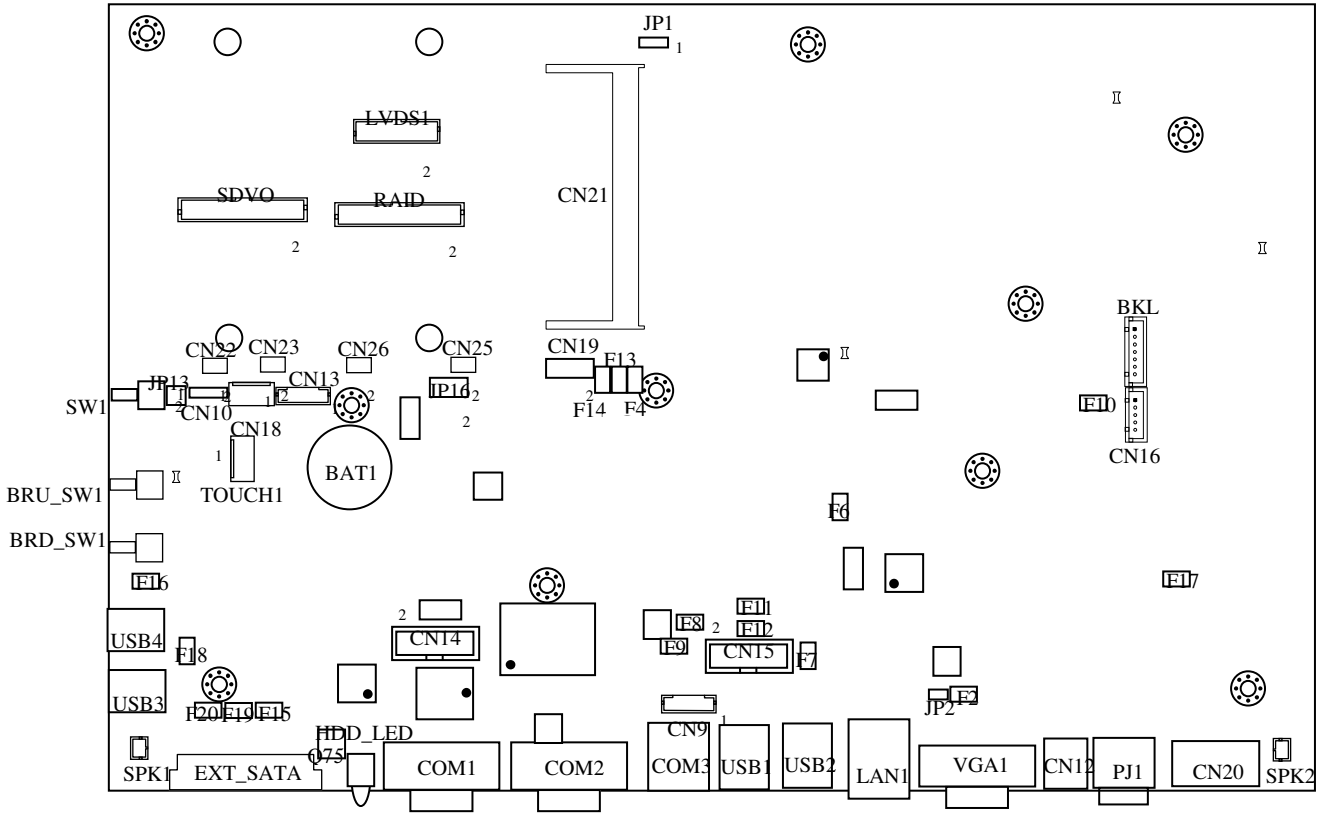
The "Align" button starts a calibration process that requires the user to click on 3 marks appeared consecutively. The size selected for "Double-click area" sets the precision definition of the simulated mouse click for the screen touch. When the value is set too large, the mouse pointer would appear to be off from the point touched. However, when this value is set too small, the double clicking would become very difficult because the 2 touches would be considered at 2 different spots. The port selection for "Touchscreen on:" must be set to "COM5" for the touch panel over the LCD panel in this product series.

In case a Posiflex touch monitor is connected to the VGA port for 2nd display, the touch function of the second display monitor has to be connected to one of the ports from COM2 to COM4. Please re-install the touch driver with a selection for multiple monitors in the process this time. Set COM5 for the touch screen on the machine and set the COM port actually connected for the 2nd display for the touch function over it.

HARDWARE DETAILS

MAIN BOARD

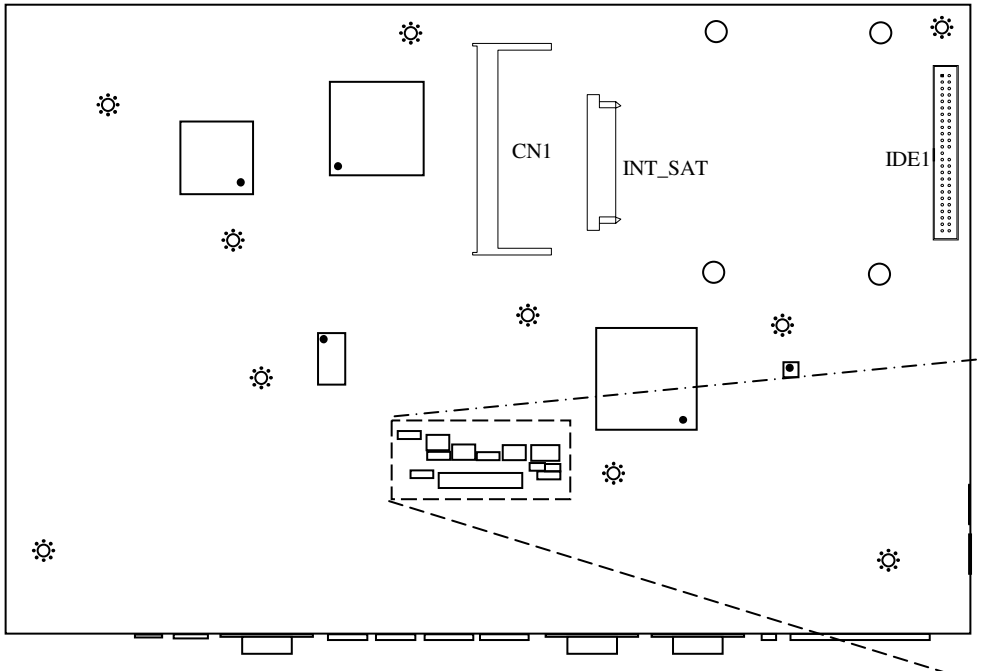
COMPONENT SIDE



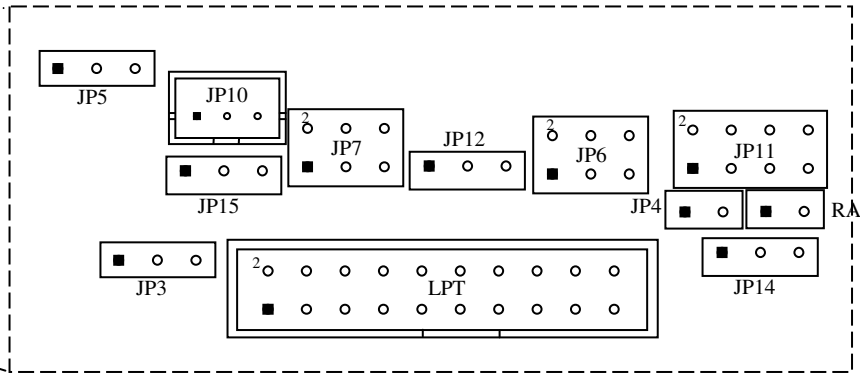
Notation Remarks:

1. A small black block ▪ or a small number “1” in the drawing for a jumper or an IC is used to indicate the position of pin number 1.
2. A small number “2” marked near a corner of a jumper with 2 rows of pins is used to indicate the position of pin number 2 for identification of all pins.

SOLDER SIDE



Detail in Service Window Area



Notation Remarks:

1. A small black block'■" or a small number "1" in the drawing for a jumper or an IC is used to indicate the position of pin number 1.
2. A small number "2" marked near a corner of a jumper with 2 rows of pins is used to indicate the position of pin number 2 for identification of all pins.

JUMPERS AND CONNECTORS

ON COMPONENT SIDE

Position	Part Spec	Usage
BAT1	Round socket	CMOS battery socket
BKL	HDR 1x7 w/H mini	Backlight connector
BRD_SW1	Tactile switch	LCD brightness -
BRU_SW1	Tactile switch	LCD brightness +
CN9	HDR 1x5 w/H	Power/Stdby LED module connector
CN10	HDR 1x4	Deleted
CN12	RJ11 jack	Cash drawer port
CN13	HDR 1x6 w/H mini	Reserved
CN14	HDR 2x6 w/H	IR Touch Header
CN15	HDR 2x6 w/H	Reserved
CN16	HDR 1x5 w/H mini	USB side mount kit connector
CN18	HDR 1x5 w/L mini	Deleted
CN19	HDR 2x5	Reserved
CN20	Conn 1x4	UPS battery connector
CN21	DDR2 SODIMM skt	DDR2 SDRAM SODIMM socket
CN22	Receptor 2x3	Support connector for SDVO card
CN23	Receptor 2x3	Support connector for SDVO card
CN24	Mini PCIE skt	Deleted
CN25	Receptor 2x3	RAID card support connector
CN26	Receptor 2x3	RAID card support connector
CN27	metal bracket	Deleted
COM1	DB9M jack	COM1 port
COM2	DB9M jack	COM2 port
COM3	10 pin RJ45 jack	COM3 port
F2	DIP Poly fuse	Reserved Fuse for +12V VGA power
F4	DIP Poly fuse	Reserved Fuse for +3.3V HDD power
F6	SMD Poly fuse	Fuse for +5V COM ports power
F7	DIP Poly fuse	Reserved Fuse for +12V COM ports power
F8	SMD Poly fuse	Fuse for +5V power in USB0 port
F9	SMD Poly fuse	Fuse for +5V power in USB1 port
F10	SMD Poly fuse	Fuse for +5V power in USB7 port
F11	SMD Poly fuse	Fuse for +5V power in USB2 port
F12	SMD Poly fuse	Fuse for +5V power in USB3 port
F13	DIP Poly fuse	Reserved

F14	DIP Poly fuse	Fuse for +5V internal HDD power
F15	SMD Poly fuse	Reserved
F16	SMD Poly fuse	Fuse for +5V power in USB4 port
F17	DIP Poly fuse	Fuse for UPS battery
F18	SMD Poly fuse	Fuse for +5V power in USB5 port
F19	DIP Poly fuse	Fuse for +5V external HDD power
F20	DIP Poly fuse	Reserved
EXT_SATA	SATA P+S conn	External SATA port for option HDD in base
HDD_LED	2x LED	HDD status indicator
JP1	HDR 1x3	LCD panel power select
JP2	HDR 1x2	Reserved
JP13	HDR 2x2	Reserved
JP16	HDR 2x4	Reserved
LAN1	RJ45 jack	LAN port (10/100/1000M)
LVDS1	HDR 2x10 w/H mini	18 bits LCD connector
PJ1	4 pin power jack w/L	Power input connector for 12 V DC 60W
RAID	HDR 2x15 w/H	RAID card connector for KS613
SDVO	HDR 2x15 w/H	SDVO card connector (for KS608A for 24 bit 15'' PANEL XN07)
SPK1	HDR 2x1 w/H	Internal speaker connector
SPK2	HDR 2x1 w/H	Reserved
SW1	Tactile switch	Power switch
TOUCH1	HDR 1x5 w/L	Touch panel connector
USB1	2 x USB jack	USB2, USB3 ports
USB2	2 x USB jack	USB0, USB1 ports
USB3	USB jack	USB4 port
USB4	USB jack	USB5 port
VGA1	3x5DB jack	2nd display connector

ON SOLDER SIDE

Position	**Part Spec**	**Usage**
CN1	DDR2 SODIMM skt	DDR2 SDRAM SODIMM socket
INT_SATA	SATA HDD conn rt	On board connector for SATA HDD in main unit
IDE1	HDR 2x25 w/H	On board connector for option CF reader card KS614
JP3	HDR 1x3	CMOS data control
JP4	HDR 1x2	Hardware reset
JP5	HDR 1x3	Speaker volume control
JP6	HDR 2x3	Reserved

JP7	HDR 2x3	Reserved
JP10	HDR 1x3 w/H mini	Power manager F/W update
JP11	HDR 2x4	USB touch setup
JP12	HDR 1x3	Reserved
JP14	HDR 1x3	UPS status control
JP15	HDR 1x3	Reserved
LPT	HDR 2x10 w/H	Parallel port cable connector
RAID_RST	HDR 1x2	RAID function reset control

JUMPER SETTINGS

The "★" marks in the following tables denote the factory default settings.

LCD PANEL POWER SELECT – JP1

STATUS OF JP1 ON COMPONENT SIDE	PANEL POWER
1 – 2 Short	3 V DC ★
2 – 3 Short	5 V DC

This jumper position in the component side and near by the DDR2 SDRAM SODIMM socket. **Following jumpers are all in the service windows except the JP2 which is in the component side and near by the VGA port.**

CMOS DATA CONTROL – JP3

STATUS OF JP3 ON SOLDER SIDE	CMOS DATA CONTROL
1 - 2 short	Normal operation ★
2 - 3 short	Clear CMOS data

HARDWARE RESET – JP4

STATUS OF JP4 ON SOLDER SIDE	SYSTEM STATUS
1 - 2 short	Hardware reset
1 - 2 open	Normal operation ★

RAID CONTROL CONFIGURATION RESET – RAID_RST

STATUS OF RAID_RST ON SOLDER SIDE	RAID CONTROL STATUS
1 - 2 short	Reset
1 - 2 open	RAID1 in operation ★

It needs short than open the jumper to reset the RAID card when it 1st time installed or both HDDs are changed.

USB TOUCH SETUP – JP11

STATUS OF JP11 ON SOLDER SIDE	APPLICABLE OS
1-2 short, 5-6 open	Windows (Win98, Win2000, WinXP)★
1-2 open, 5-6 open	Linux or WinCE
1-2 short, 5-6 short	MS-DOS
3-4 short	Touch panel type E or OEM panel ★
3-4 open	Touch panel type F

Please notice that for MS-DOS application of the USB touch, the "USB Mouse Support" in BIOS must be "Enabled".

SOFTWARE AWARENESS OF UPS STATUS – JP14

STATUS OF JP14 ON SOLDER SIDE	COM1 PIN1 STATUS
1 – 2 short	Normal (DCD signal)
2 – 3 short	Detect UPS status ★

The UPS status is used to inform the software the power source the system is operating on (AC adaptor or UPS battery). The default of this jumper is set to detect the UPS status to enable the software detection on existence of AC power. When the DCD bit of COM1 is set, the AC power is present. The user has to change this jumper if he/she wants to detect the standard DCD signal on COM1.

COM1/COM2 +5V DC SUPPLY SELECT (Reserved) – JP6

STATUS OF JP6 ON SOLDER SIDE	PIN 9 STATUS
1 – 3 short	COM1 Pin9 connected to 5 V DC
3 - 5 short	COM1 Pin9 connected as RI ★
2 – 4 short	COM2 Pin9 connected to 5 V DC
4 - 6 short	COM2 Pin9 connected as RI ★

COM1/COM2 +12V DC SUPPLY SELECT (Reserved) – JP7

STATUS OF JP7 ON SOLDER SIDE	PIN 1 STATUS
1 – 3 short	COM1 Pin1 connected to 12 V DC
3 - 5 short	COM1 Pin1 connected as DCD ★
2 – 4 short	COM2 Pin1 connected to 12 V DC
4 - 6 short	COM2 Pin1 connected as DCD ★

COM3 +5V DC SUPPLY SELECT (Reserved) – JP12

STATUS OF JP12 ON SOLDER SIDE	COM3 PIN9 STATUS
1 – 2 short	COM3 Pin9 connected to 5 V DC
2 – 3 short	COM3 Pin9 connected as RI ★

COM3 +12V DC SUPPLY SELECT (Reserved) – JP15

STATUS OF JP15 ON SOLDER SIDE	COM3 PIN1 STATUS
1 – 2 short	COM3 Pin1 connected to 12 V DC
2 – 3 short	COM3 Pin1 connected as DCD ★

Note:

1. If the 5 V DC and 12 V DC supply is selected; the power will continue supply whatever the COM port connect or not. Therefore, please remove the DC supply when there is no power demand on COM port.

2. When BIOS setup is different with jumper setting of 5 V DC or 12 V DC, the COM port will not have any power supply in this situation. Please make sure the BIOS and Jumper setting before the function needs to available.

VGA PORT +12 V DC SUPPLY SELECT (Reserved) – JP2

STATUS OF JP2	PIN 9 STATUS
1 – 2 short	VGA port Pin9 supplies + 12 V DC
1 - 2 open	VGA port Pin9 not connected ★

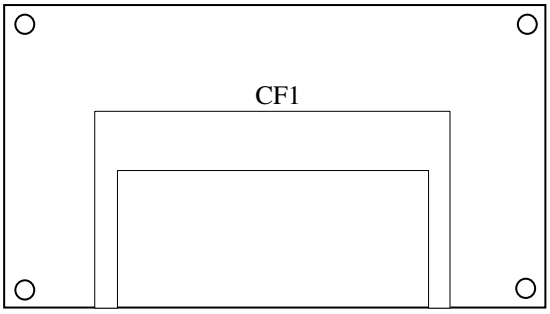
SPEAKER VOLUME CONTROL – JP5

STATUS OF JP5 ON SOLDER SIDE	2W SPEAKER STATUS
1 – 2 short	Fixed volume
1 - 2 open	Software controllable in Win XP ★

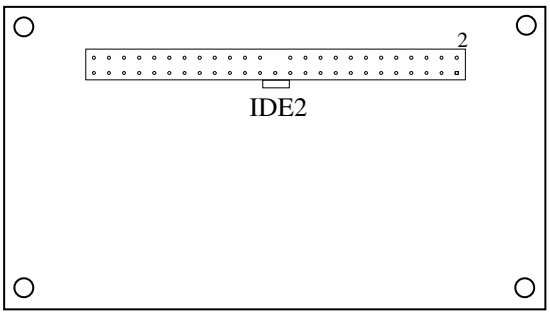
The volume control is to select the system volume can be controlled by software or reserved to fixed volume.

CF ADAPTOR CARD (KS614)

COMPONENT SIDE



SOLDER SIDE



CONNECTORS

ON COMPONENT SIDE

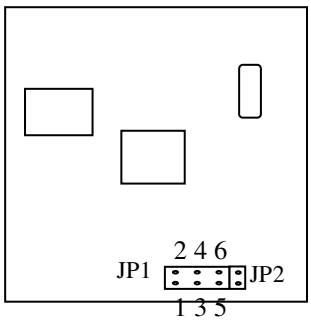
Position	Part Spec	Usage
CF1	CF card slot	To accept CF memory card

ON SOLDER SIDE

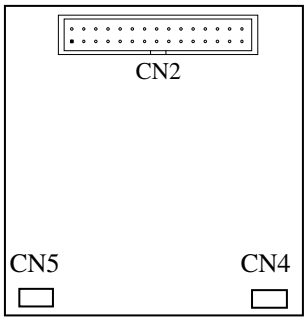
Position	Part Spec	Usage
IDE2	Connector 2x25	To connector IDE1 on main board

RAID CONTROL CARD (KS613A)

COMPONENT SIDE



SOLDER SIDE



CONNECTORS

ON COMPONENT SIDE

Position	Part Spec	Usage
JP1	HDR 2x3	RAID control.

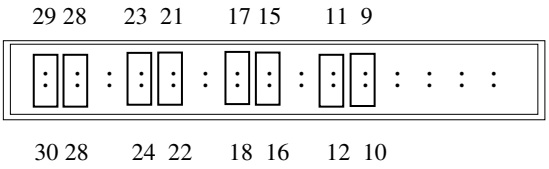
ON SOLDER SIDE

Position	Part Spec	Usage
CN2	Connector 2x15	To RAID connector on main board
CN4	Connector 2x3	To RAID adaptor support CN26 on main board
CN5	Connector 2x3	To RAID adaptor support CN25 on main board

JUMPER SETTING

RAID 1 Type	**Status Of JP1 Solder Side**					
Raid 1 SAFF	1-2	Close	3-4	Close	5-6	Open ★
Raid 1 Safe 33	1-2	Open	3-4	Open	5-6	Close
Raid 1 Safe 50	1-2	Close	3-4	Open	5-6	Close

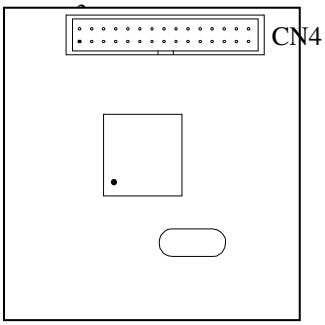
JP2: After HDD configuration changed in any mode or HDD changed, please close this jumper and the configuration will be changed when power up. Please notice that when this jumper opens, it will not change in any situation. As well as when this RAID card is not plug in mainboard, please set the connecter's jumper as follow.



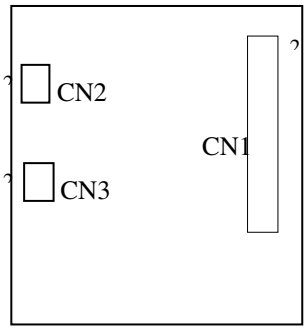
RAID Connecter on Mainboard

SDVO ADAPTOR CARD (KS608A)

COMPONENT SIDE



SOLDER SIDE



CONNECTORS

ON COMPONENT SIDE

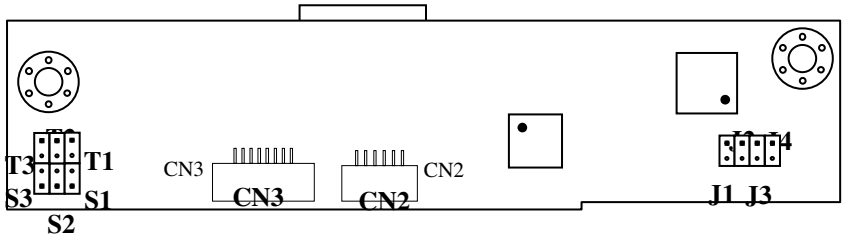
Position	Part Spec	Usage
CN4	HDR 2x15 w/H	To dual channel LVDS 17” LCD panel

ON SOLDER SIDE

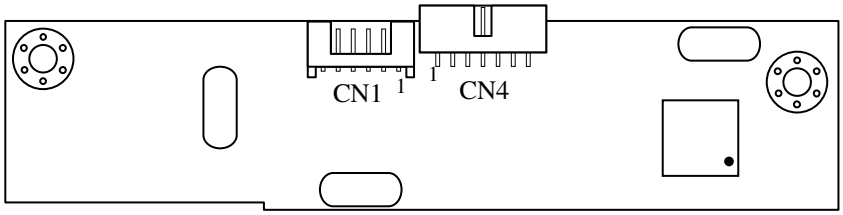
Position	Part Spec	Usage
CN1	Connector 2x15	To SDVO connector on main board
CN2	Connector 2x3	To SDVO adaptor support CN22 on main board
CN3	Connector 2x3	To SDVO adaptor support CN23 on main board

USB MSR CONTROL BOARD (SD450A)

COMPONENT SIDE



SOLDER SIDE



JUMPERS AND CONNECTORS

ON COMPONENT SIDE

Position	Part Spec	Usage
CN2	SMD connector 6p	To optional optical fingerprint sensor
CN3	SMD connector 8p	To MSR reader head

ON SOLDER SIDE

Position	Part Spec	Usage
CN1	mini HDR 6p w/H rt	To main board CN16
CN4	mini HDR 2x7 w/H rt	Reserved

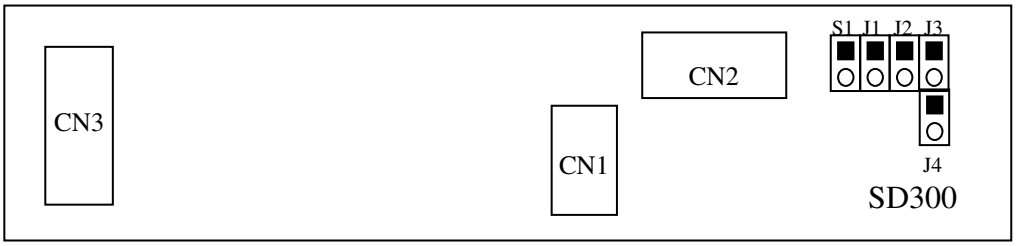
JUMPER SETTING

Jumper	J1	J2	J3	J4
Function	Alt + Num	Num Lock	Device class	OS select
When Open	Enabled	Enabled	Vendor	DOS
When Short	Disabled	Disabled	HID	Windows / Linux

Note: Please open the J1 When the terminal in European languages and in English when J1 is short. When the operating environments is Linux or win CE, it recommends opening the J3 and short in Windows environment.

Jumper	S1	S2	S3	T1	T2	T3
Function	ISO/JIS2	Reserved	Leading Code	Track 1	Track 2	Track 3
Opened	ISO	N/A	Enabled	Disabled	Disabled	Disabled
Closed	JIS2	Default	Disabled	Enabled	Enabled	Enabled

USB MSR CONTROL BOARD (SD300)



Connectors:

CN1: for external USB cable to connect to host

CN2: for internal USB cable to connect to optical type finger print sensor

CN3: for MSR cable to connect to MSR reader head

Jumpers:

The default status for normal ISO reader delivery is: S1 open and J1 ~ J3 short.

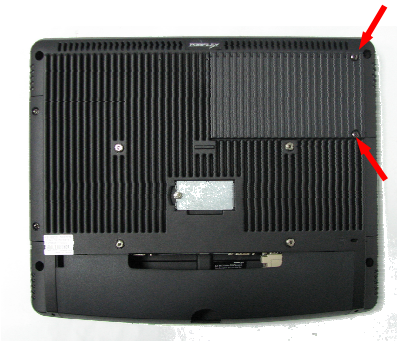
Jumper Name	Function	When Short	When Open
S1	ISO/JIS2	JIS2	ISO
J1	Alt+Num	Disabled	Enabled
J2	Num Lock	Disabled	Enabled
J3	USB Device Class	HID	Vendor
J4	DOS/Windows	Windows	DOS

SERVICE AND SPARE PARTS

SERVICE GUIDE

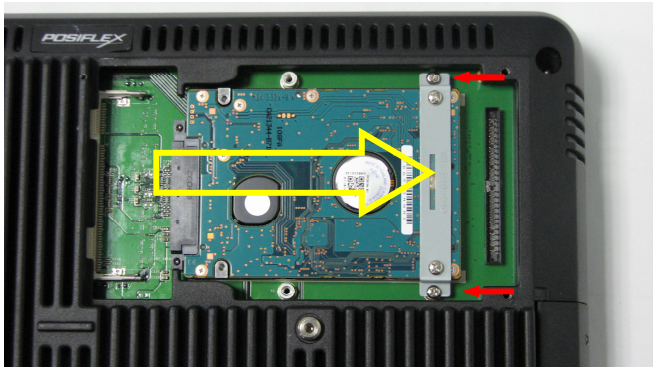
OPEN THE HDD COVER

Remove the 2 screws on back of main unit to remove the HDD cover as arrowed in the picture at right.



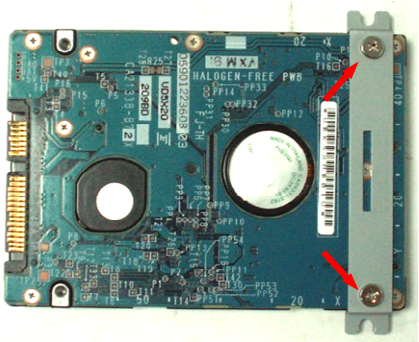
Replacing HDD, installing the option CF card reader adaptor, upgrade SSD HDD or upgrade DDR2 SODIMM memory all place inside the area under HDD cover.

HDD REPLACEMENT



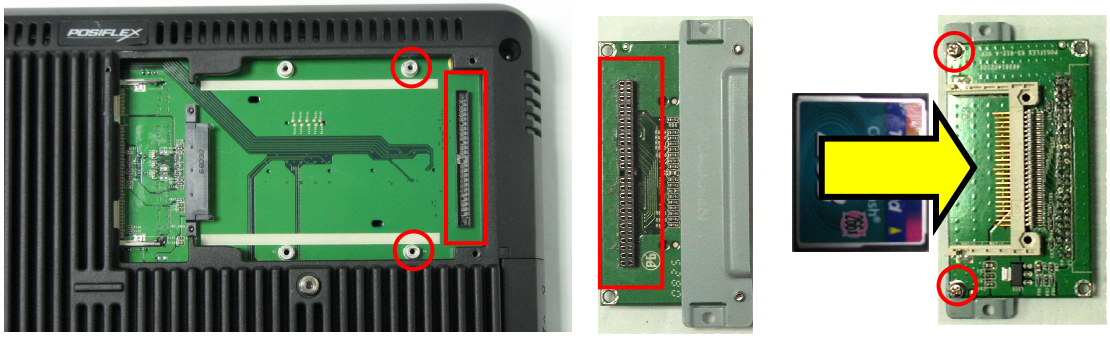
The picture at left is the close up view of the content inside the HDD cover.

Remove the 2 red arrowed screws to release the HDD bracket and slide the HDD in direction indicated by the hollow yellow arrow to take out the HDD. Next, remove the 2 remaining screws on HDD bracket as right picture to separate the HDD and the bracket.

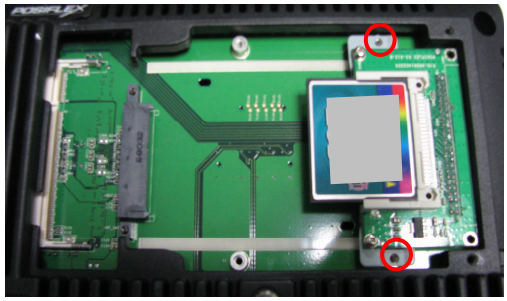


Please notice that if it needs to apply a new 2.5" SATA HDD, the HDD has to be screwed onto the bracket at arrowed positions in the right before installation.

INSTALL OPTIONAL CF CARD READER

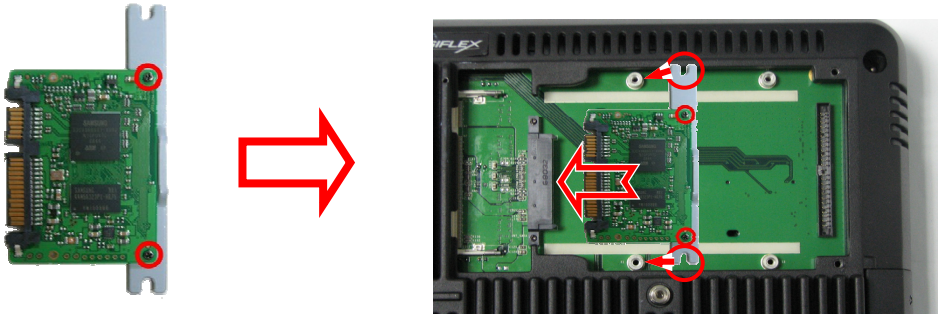


To install the optional CF card reader, the SATA HDD in the main unit must be removed. The card reader should be installed on its bracket with 2 screws as circled in the rightmost picture above. Insert the connector on back of the CF card reader as rectangle marked in the middle picture above into the correspondent connector as rectangle marked in the leftmost picture above. After the connector is well seated, screw fix the bracket at the 2 circled holes in the lower left picture to the screw posts as circled in the leftmost picture above.

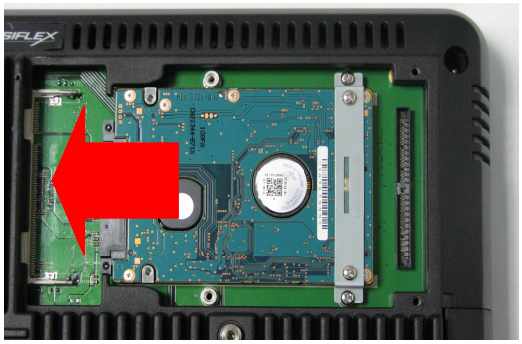


INSTALL OPTION SSD HDD

To install the option SSD HDD, the SATA HDD in the main unit must be removed. Next, please fix the bracket for SSD HDD card first as the picture in the left as follow. Afterward, take the SDD HDD Module and the pin header face to left as following picture in the right. Set the module into SATA connecter and fasten the SSD HDD bracket by screws as circled in the picture.



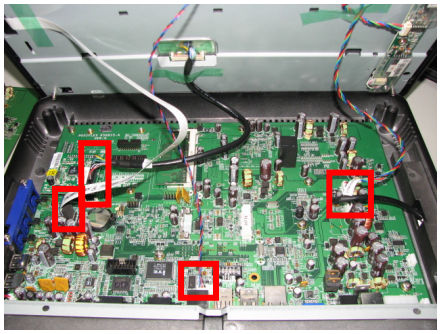
INSTALL DDR2 SODIMM



Inside the HDD cover, there is a DDR2 SODIMM socket for memory expansion which is near by the HDD. Please note the supported memory type specified in the earlier chapter GENERAL SPECIFICATIONS if upgrade or replacement is required.

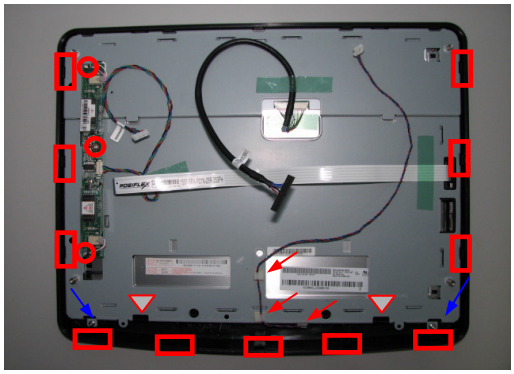
OPEN THE MAIN UNIT

Release the 4 circled screws marked in the right picture. Keep the front bezel and back cover together when carefully turning the main unit to face up (LCD side up). Gently lift the front bezel.



Disconnect the cables (incl. LCD cable, inverter cable, touch cable, LED cable) as marked in left picture from the main board inside back cover before removing the front bezel assembly away.

SEPARATE FRONT BEZEL ASSEMBLY



Back of Front Bezel

The back side view of a detached front bezel assembly is shown in the left picture. The touch panel is clipped to the LCD panel and then clipped to the plastic bezel.

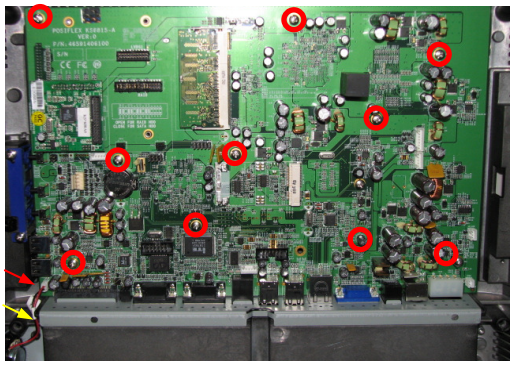
To access the inverter for the LCD panel, please unfasten the circled screw and separate the connecter then it can be remove.

Before further disassembly, please release the LED module cable from the 3 red arrowed cable clips and watch not to apply any excessive stress to this cable throughout whole operation.

To remove the LCD + touch panel from the front bezel, remove the 2 blue arrowed screws at the lower corners and push the 11 rectangular marked clips on front bezel outward (away from center) to release the panel from bezel and lift the panel at bottom edge. To further detach the touch panel from LCD panel, push the 2 triangular marked clips inward and lift the LCD panel at bottom edge while allowing the touch cable to come out of the slot in LCD panel bracket.

REPLACE MAINBOARD

After removal of front bezel assembly and all optional adaptor boards, please disconnect the red arrowed internal speaker cable and retract it back to speaker area through the passage in back cover near lower corner as indicated by yellow arrow in right picture. Please then remove the 10 screws in circles to release main board with metal I/O plate from back cover.



Please pay particular attention that the Aluminum die cast back cover plays vital role in system thermal balance and its interior contour is tailored to each component applied on the main board. Therefore, when replacing the main board only the **exactly same version/grade/type** should be used. Careless replacement of main board with deviation as minor as upgraded CPU may result in thermal/mechanical/electrical damage.

To reassemble the whole system back, please just do the counter actions in reverse order.

INSTALL RAID CARD

IMPORTANT! Please read this guide carefully before proceeding with RAID installation.

When using RAID option for the first time, or when both HDD connecting to RAID board are new, RAID control board needs to be manually reset.

In the scenario where a RAID upgrade kit is being installed to the system that already has the HDD, this existing HDD must get installed to the base stand, if it is originally located in the main unit. And then the 2nd HDD should be installed to the main unit.

The reason for this restriction is because after RAID control board is reset, it will duplicate image from HDD0 to HDD1. In the case of KS-6815, HDD0 is located in the base stand and HDD1 is located in the main unit. Therefore if the original HDD is located in the main unit, and the newly installed HDD is located in the base stand, the data in the original HDD will get written over by the empty HDD.

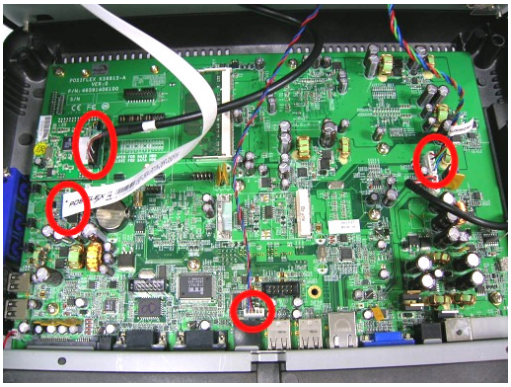
Of course if there is no data in the original HDD, then above restriction does not apply.

RAID Option Installation Guide for KS*6815 w/5th Generation Base

STEP 1. Install RAID control board to the main unit：

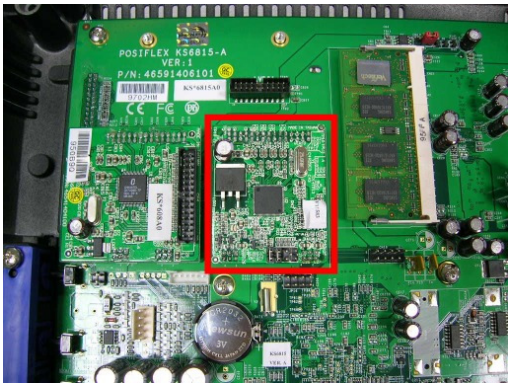
Press the Release Button, and then lift up the main unit as shown in the picture.

Separate the panel assembly and the main unit by unfastening 4 screws as indicated.



Disconnect all the cables, and then remove the panel assembly.

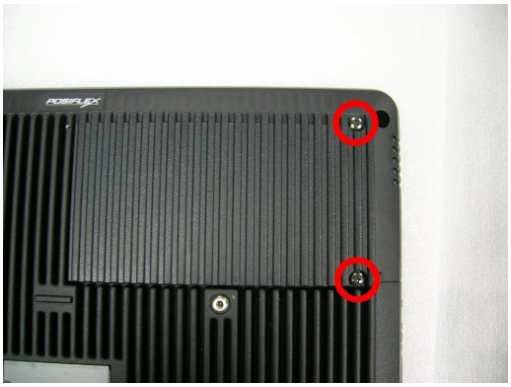
Remove all the Jumper caps from the RAID control board connector on the M/B.



Install the RAID control board.

STEP 2. Move the HDD from main unit to the base stand：

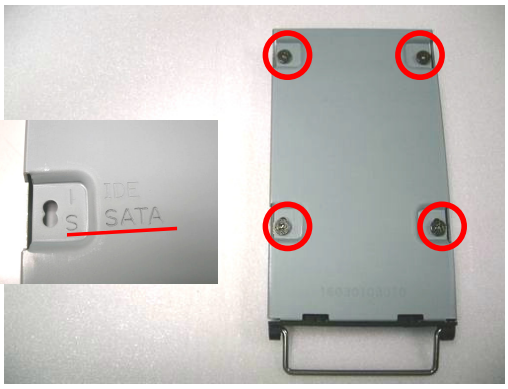
If the HDD already exists in the main unit, continue with the procedure below. If the HDD is originally located in the base stand, please skip STEP 2 and go directly to STEP 3.



Unfasten the HDD cover by removing 2 screws.

Unfasten the 2 screws indicated by red circles. Push the HDD out in the direction indicated by the red arrow.

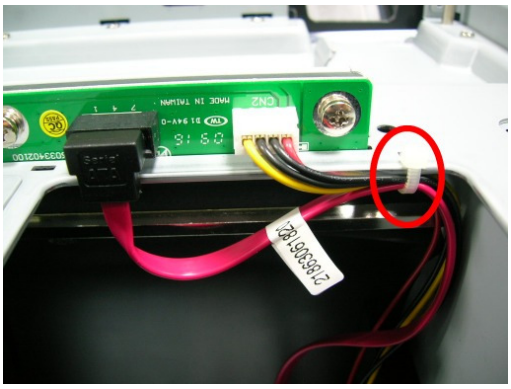
Remove the HDD bracket by unfastening the 2 screws.



Install the HDD removed from the main unit to the HDD bracket for the base stand. Fasten it with 4 screws. Make sure the screw hole for SATA is used.

Unfasten the 4 screws to remove the bottom cover.

Install the SATA HDD extension board to the base stand. Fasten it in place with 3 * (#6/32-6L+SW) screws.



Connect the SATA HDD cable to the extension board, and then fix it with a cable tie (if one is available).

Close the bottom cover, and then fasten it with 4 screws.

Follow the arrow directions to remove the cover.

Slide the HDD module into the base stand.

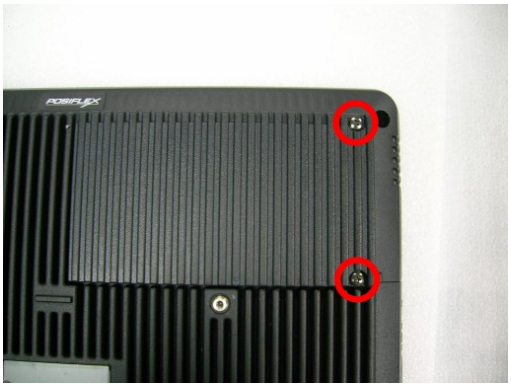
Fasten the HDD module with the screw, and then lock the handle in place.

Follow the arrow direction to insert the cover.

STEP 3. Install 2nd HDD to the main unit：

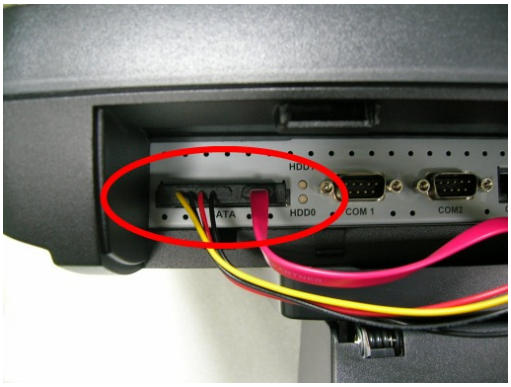
Fasten the HDD bracket to the 2nd HDD with 2 screws. Make sure the bracket is right way round; the numbers should be in the top as shown in the picture.

Slide and connect the 2nd HDD + bracket in place as shown in the picture, and then fasten it with 2 screws.



Close the HDD cover, and then fasten it with 2 screws.

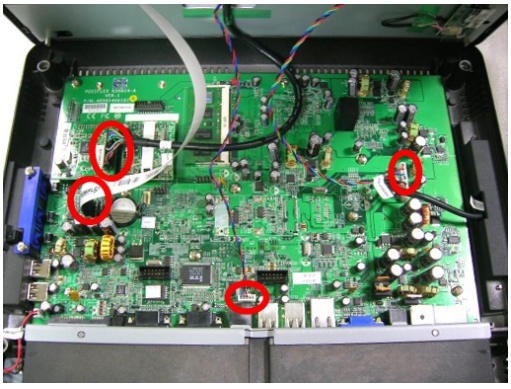
Lineup 4 studs on the back of the main unit to the 4 holes on the base stand, and then install the main unit to the base stand.



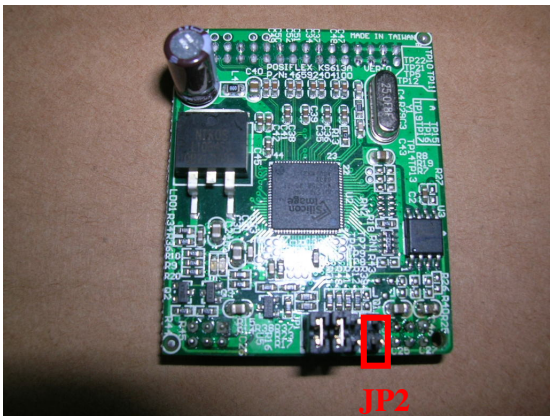
Connect SATA cable to the system.

STEP 4. Reset the RAID Control Board

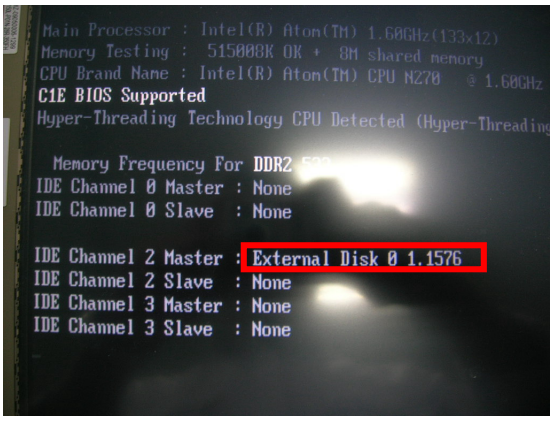
Push the gear lever on the base stand to flatten the main unit.



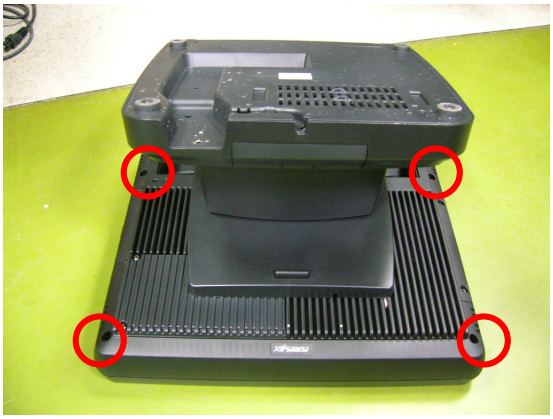
Connect the Inverter cable, LVDS cable, touch cable, and LED indicator cable to the M/B. Do not close the panel assembly and the main unit yet.



Power On the system. After the first beep sound (during BIOS POST), short JP2 of the RAID Control Board with a jumper cap for 5 seconds or more as shown in the picture.



Restart the system by pressing “Ctrl + Alt + Del”. Reset is successful if “External Disk 0” is detected.



Shut down the system. Fasten the Panel Assembly to the main unit with 4 screws.

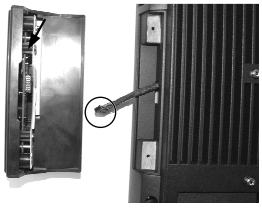
Upgrade complete.

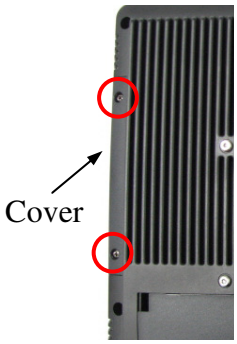
SIDE MOUNT UPGRADE KIT

The available side mount upgrade kits include SD400/400Z and KP300T up to the time this manual created. The KP300T is a larger unit with always a programmable keypad. The rest option is a smaller unit without this keypad. Various function kits besides the keypad can be applied in the upgrade kit. The possible configurations of function kits are tabulated as below:

Function Kits Included	KP300T	SD400/400Z
Keypad w/36 keys + Lock (USB interface)	V	
MSR (USB interface)	V	V
F/P sensor (Optical type)		V

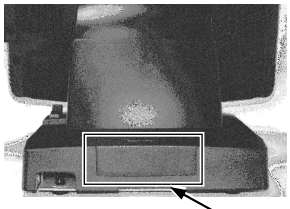
If the side mount unit is ordered together with the KS system, the SD side mount unit will be attached on the KS system when delivered. However, if the KS is delivered without such a unit and you want to install the side mount unit by yourself or if it is the KP kit, you may find two screws holding a cover on back of the right side of the main unit as indicated in the right picture. Remove the 2 screws to open the cover, connect the cable found inside the cover to the side mount unit then align the side mount unit on the right edge of the main unit and fasten the two screws with washer.

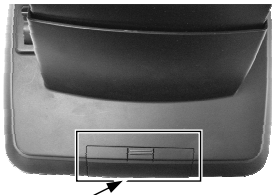




BASE MOUNT UPGRADE KIT

This upgrade kit is applicable to KS system with GEN 4 slim base or GEN 5 slim base. On rear edge of the stand

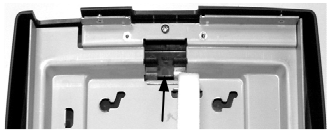




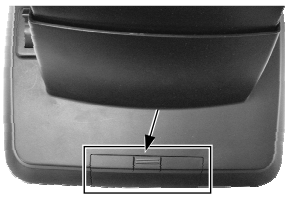
Open the rear connect cover for rear mount upgrade kit

assembly for desktop mount application, there is a rear connect cover. Either a 2nd LCD display panel option LM-6101 or a LCD or VFD customer display option such as PD-305 or a LCD customer pole display option PD-306 or PD-306U or PD-7622 or a VFD customer pole display option PD-2511 or PD-2602 can be installed here after removing this cover.

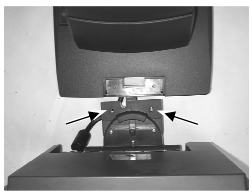
To remove the rear connect cover in Gen 4 slim base please refer to the inside view of the base unit at right and use a flat head screwdriver to pick the plastic hook plate of the rear connect cover from inside.

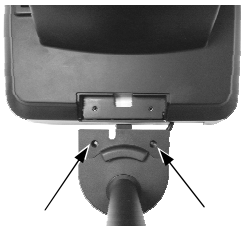


For Gen 5 slim base please Press the arrowed center part of the cover to remove it for the installation. Should there be difficulty removing it, please check if there is any locking screw nearby the center part of the cover.



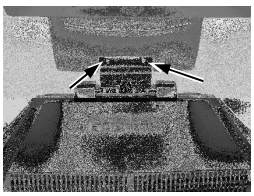
12" 2nd LCD Panel Or Customer Display





Fit the joint base of PD-306 or PD-2501 or PD-2602 or LM-6101 to the rear connect cover opening. Please route the interface cable through the normal cable exit (under the joint base) as in the 2 pictures. Fit 2 screws with washers to hold the joint tight as in the picture at right. Then insert the cable into the base mount device cable groove and cable holder on bottom plate and connect to the main unit through the base. For low profile customer display PD-305, the display unit is right on joint base without the pole. Remember to enable the +5 V DC supply in the COM port of the main unit for PD-2501, PD-2602, PD-305, PD-306 or PD-7622 or the +12 V DC in VGA port for LM-6101. However, if the customer display used is the USB interface model, the DC supply in COM port is not required, it will be powered through the USB port.

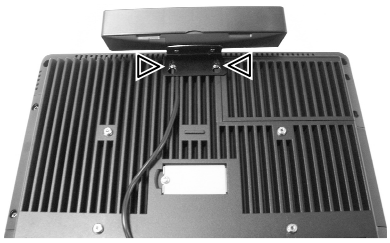
2nd LCD Panel



A bracket kit including a steel interface bracket will be provided with the 12"/10" 2nd LCD panel LM-6101/6501. Please follow the accompanying installation guide to mount the interface bracket and fix it to the rear connect area of the system as in the right picture. Route the VGA through the cable exit of the base stand to the main unit. Fit the VGA cable into the base mount device cable groove under bottom plate if the base is Gen 5 base. Connect the attached power adaptor for its power source.

The family of rear mount upgrade kits may keep growing with time, the installation principle will remain as to install the kit base or the connecting bracket to this opening and have the interface cable passing the cable exit of the system base into the system I/O area.

REAR TOP MOUNT UPGRADE KIT



On the back of the main unit, there are 2 small fixation shoulder screws for either a LCD customer display option PD-310 or a VFD customer pole display option PD-2604. Please do not screw them to the bottom but at a position that is about 1 turn loose from the bottom. Arrange the interface cable of the rear top mount upgrade kit to go into **the first groove to the right of the left shoulder screw** on back of main unit as in the picture. Hook the rear bracket of the upgrade kit onto the shoulder screws. Slide down the upgrade kit and gently tighten the shoulder screws. **Do not overdo the tightening or unrecoverable thread damage will occur.** Remember to enable the +5V DC supply in the COM port of the main unit for the upgrade kit if the serial interface model is used. The power supply in the I/O port must be disabled if it is no longer to support these intended devices otherwise **any damage or loss caused consequently shall be out of product warranty!** However, if the customer display

used is the USB interface model, the DC supply in COM port is not required; it will be powered through the USB port.

BASE INSTALLED DEVICES

The devices installable to Gen 4 slim base models and Gen 5 slim base models are different. Both bases provide besides agile and stable support to main unit and upgrade kit also a housing for several devices. The applicable protected devices to a Gen 4 slim base or Gen 5 slim base include: a 2.5" system HDD and an optional UPS battery (option) as in the left sample picture for Gen 4 slim base and right sample picture for Gen 5 slim.

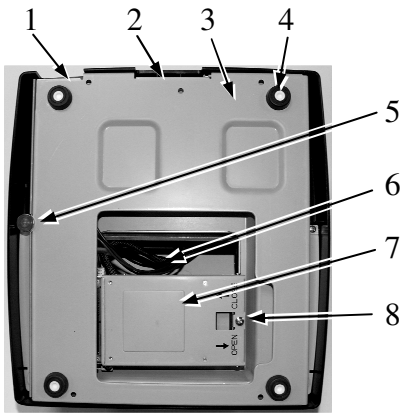
However, please note that the never ending quest for excellence of the manufacturer may result in discrepancy from the above statement and sample pictures yet the basic concepts remain. If there is any silicon rubber thermal pad found on any device, **DO NOT** remove it!! Otherwise warranty terminates.

REPLACE BASE INSTALLED 2.5" HDD

CAUTION! Every detail described below must be strictly observed. Otherwise damage may result as personal responsibility of the one who takes the operation.

FOR GEN 4 SLIM BASE

1. 2nd Cable exit
2. Cable exit
3. Bottom plate
4. Rubber feet



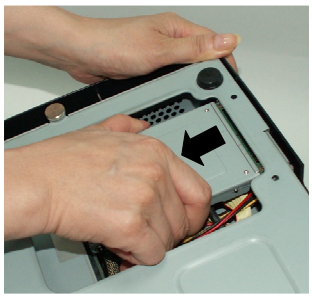
5. Bottom plate fixing screw

6. 2.5” HDD window

7. 2.5” HDD bracket fixing screw

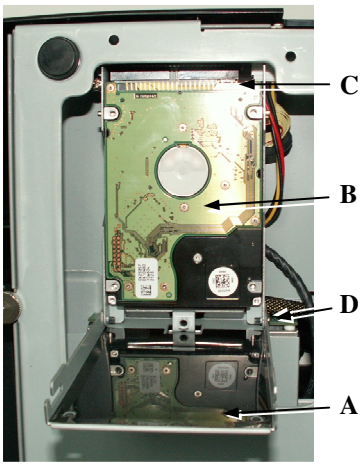
8. 2.5” HDD bracket cover

TO REMOVE THE 2.5” HDD

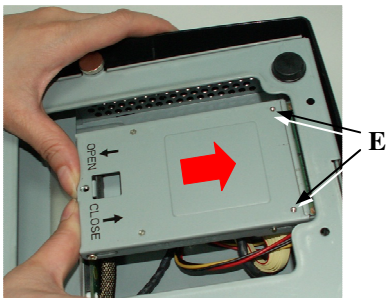


1. Remove HDD bracket cover fixing screw.
2. Hold and pull the 2.5” HDD bracket in the arrowed direction as in the right picture.
3. Open the 2.5” HDD bracket cover and take out the 2.5” HDD.

TO INSTALL THE 2.5” HDD



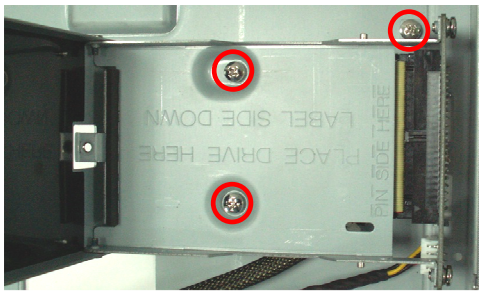
1. Open the 2.5” HDD bracket cover (A).
2. Put the 2.5” HDD (B) into bracket with its controller board facing up and its connectors (C) at far end from the bracket cover.
3. Slide the HDD to be as close to the bracket cover joint (D) as possible.
4. Close the bracket cover.
5. Check the connector end of the bracket cover that the 2 screw holes (E) in 2.5” HDD must be visible from top of the bracket cover.



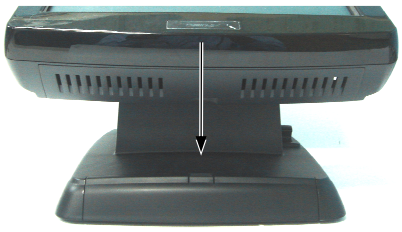
6. Reopen the bracket cover and reposition the 2.5” HDD if the screw holes are not well aligned. Proceed to next step if the positioning is OK.
7. Push the 2.5” HDD bracket cover in the direction of the red arrow in the right picture to have the HDD connector well inserted.
8. Fix back the HDD bracket cover fixing screw.

TO REMOVE THE 2.5” HDD BRACKET

In case the removal of the 2.5” HDD bracket with its connection board is required in maintenance please remove the 2.5” HDD bracket by removing 2 screws inside and 1 screw outside corner of the 2.5” HDD bracket as circled in the right picture.

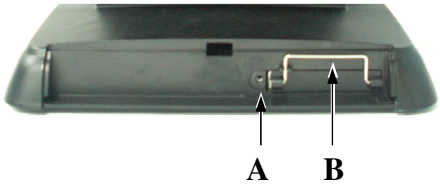


FOR GEN 5 SLIM BASE

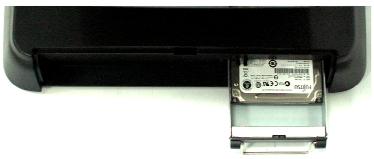


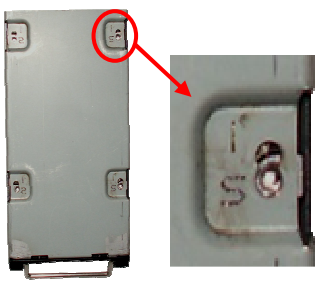
Press down the arrowed center part of the front cover in the base to remove the front cover as indicated in the left picture. Should there be difficulty removing it, please check if there is any locking screw nearby the center part of the cover.

Remove the HDD bracket fixing screw marked as “A” in the right picture then pull on the lever “B” to remove the HDD bracket from base. Missing the step A will result in damages. Remove the 4 screws on bottom side of the HDD bracket releases HDD from its bracket.



However, for reinstalling a new HDD into its bracket please refer to the left picture and note that the bracket itself is designed to accommodate both IDE and SATA interface 2.5” HDD therefore correct set of screw holes on the bracket must be checked to fix the SATA HDD into the bracket. Damage will definitely occur if wrong set of screw holes is chosen. Please choose the holes marked with “S” or “SATA”. Slide the HDD bracket with HDD into the





base in orientation shown at right. Push the lever back in place and fix back the HDD bracket fixing screw.

WALL MOUNT KITS

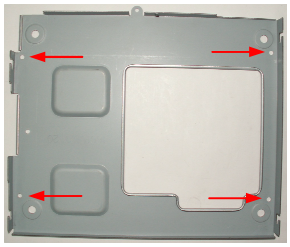
APPLICABLE WALL MOUNT KIT TYPES

WB-6000

WB-6300

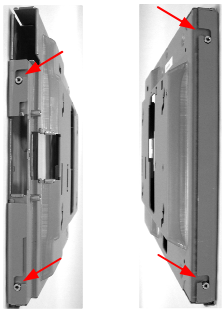
WB-6000 — no installable devices in the bracket
WB-6300 — installable with 2.5” HDD, UPS battery in backpack

MOUNTING THE KIT AND MAIN UNIT TO WALL



In supplement to the descriptions given in User’s Manual on this operation, here is some technical assistance that may help. Taking into consideration the weight of the main unit, the wall strength and the joint material must be carefully selected to hold the bracket kit with the main unit to the wall.

The plastic cotters and the screws supplied with the kit are applicable solutions for holding the bracket kit with main unit to a concrete wall. Before using the plastic cotters, 4 holes for fixing back cover to wall must be drilled in the wall in specific manner. Hole’s diameter should be 1/4” or 6.35 mm each. The hole depth should be at least 1 and 3/8” or 35 mm. A paper template is provided with WB-6000 for drilling pattern. The back cover of WB-6300 itself can be used directly for the drill pattern guide on wall at the indicated points in above pictures of each cover type. Please then insert one plastic cotter into each hole leaving the flat end with hole of the plastic cotter at the outside opening of the hole. Use a hammer to tap the plastic cotter in



WB-6300 Side Views

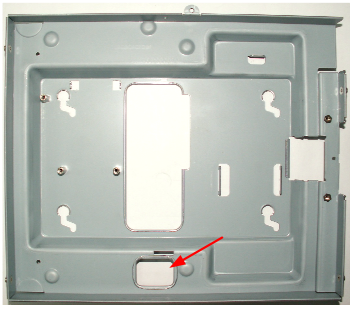
gently if necessary. Then use screw to fix back cover of WB-6300 to these plastic cotters.

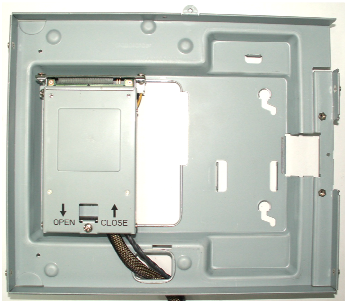
For WB-6300, WB-6600 and WB-6800 with their back cover fixed on wall, please install the applicable device kits in the wall mount bracket per guide in next section and hang the bracket onto the back cover on wall as indicated in the side view pictures above. And then apply the screw on top of the wall mount kit to hold the complete wall mount kit on wall as indicated in top view pictures.

WB-6300 Top View

It is then all right to hang the main unit with 4 matching pegs to go into the winding grooves on WB-6000 or WB-6300 and allow it to seat down the grooves. Open the cable cover of main unit to make connections including those devices installed in the wall mount bracket then close the cable cover again.

DEVICE INSTALLATION IN BRACKET

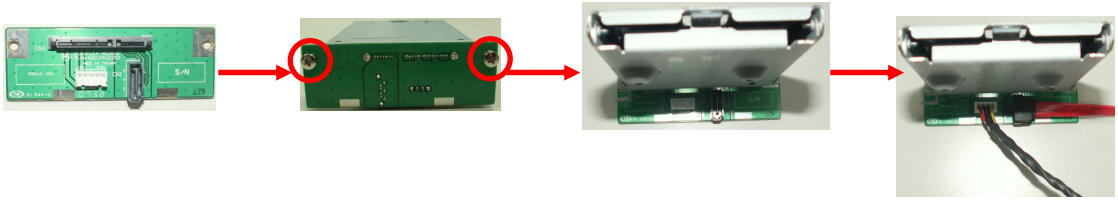




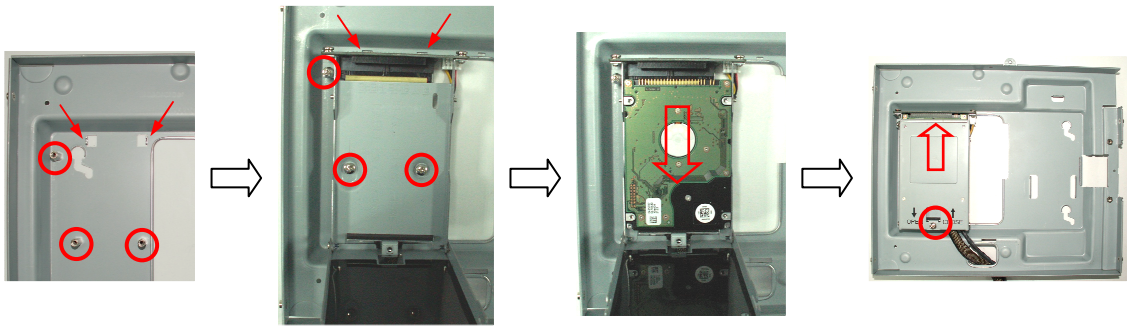
WB-6300

The left pictures are inside view pictures of the empty wall mount bracket WB-6300 and that with all possible devices installed for an overall impression. Please note that all cables of the installed devices go out of the bracket through the indicated opening in lower part of the bracket for connection to the main unit. Interpretation on the device kit follows.

2.5” HDD Kit



To install the **2.5" SATA HDD in WB-6300**, a 2.5" HDD bracket kit with SATA conversion board, screws and SATA cables besides the HDD itself are required. Some pre-assembly operation of the 2.5" HDD bracket is required. Please use 2 screws to fix the conversion board to one end of the HDD bracket as in the middle 2 pictures above and insert the IDE HDD cable and the HDD power cable in the connectors on conversion board as in the rightmost picture above. Please make sure the cables are inserted in correct orientation. Then please remove the screw fixing the HDD bracket cover on the other end of the bracket if it is preinstalled.



For WB-6300 to install the 2.5" HDD bracket into the wall mount bracket. Check in the upper left part of WB-6300 for the 3 metal posts as circled and 2 support lugs with notches as arrowed in the leftmost pictures. Place edge of the conversion board in the notches and pull back the HDD bracket cover to open it and screw the HDD bracket to the posts as in the 2nd left pictures. Put the 2.5" HDD into the HDD bracket with orientation as in the 2nd right pictures and slide the HDD to the bracket cover joint as shown. Close the cover and push the cover with HDD to the direction in the rightmost pictures firmly then screw at the circled point in same pictures. Route cables to exit the wall mount bracket through the correct opening.

SPARE PARTS LIST

The column “Pos.” in the list below refers basically to the ID numbers indicated in the Assembly Drawing. If this column is not available, it refers to a packaging item. The column “S.” indicates the alternative selections available for that position. Please be noted that the information here is for reference only. It may be revised without notice as time goes on.

KS-6815 SERIES SPARE PARTS LIST			
Pos.	**S.**	**Part Number**	**Description**
101	1	16600601113	Posiflex Logo Plate for Textured KS Series, Black
102	1	36596011003	15” Textured Front Bezel Assembly w/o LED Light module for KS-6815, Black
103	1	36534004003	15” Resistive Touch Panel Assembly w/ LED Light Module and Plastic Bracket, Black (OEM Touch)
104	1	21811156202	15” TFT LCD Panel, (AU:M150XN07 V9)
	2	21811156216	15” TFT LCD Panel, (AU:G150XG03 V2)
105	1	21863045321	LVDS Cable For 15” LCD Panel
106	1	10245109091	Cable Clip for LED Module Cable
107	1	10661030062	Pan Head Screw M3-6L SW+W-Ni
108	1	16500107050	15” LCD Metal Holder For KS
109	1	21815156217	LCD Inverter Module for CCFL 15” Panel (AU M150XN07 V9)
	2	21815156213	LCD Inverter Module for CCFL 15” Panel (AU G150XG03 V2)
110	1	10501030042	Pan Head Screw M3-4L-0.5P

111	1	21862060000	Inverter Cable for 15” LCD
112	1	10524030102	Binding Head Self-Tapping Screw § 3-10L
113	1	21955008002	2.5” SATA HDD 80G
	2	36596012000	2.5” SATA HDD Bracket Kit in Main Unit
	3	36596013000	SATA SSD Module Bracket Kit
	4	36594007010	CF Card Module Bracket Kit
114	1	10684038103	Binding Head Screw #6/32-10L SW+W-NiB
115	1	36596009003	Rear HDD Cover w/ Rubber, Black
116	1	16500104010	Service Window Cover
117	1	36566004003	GEN 5TH Slim Base Stand Assembly (incl. Stopper, w/ Front & Rear Cover & HDD Bracket), Black
	2	36566005003	GEN 6TH Super Slim Base Stand Assembly (incl. Stopper, w/ Front & Rear Cover & w/o HDD Bracket), Black
118	1	16030300013	Rear Cover for GEN 5TH Slim Base, Black
119	1	10558038082	Pan Head Screw#6/32-8L-Lip
120	1	10266020272	Rubber Foot 20 * 7 mm, Black
121	1	16030302013	Front Cover for GEN 5TH Slim Base, Black
122	1	10684038062	Binding Head Screw #6/32-6L SW+W-Ni
123	1	46033602100	SATA HDD Adapter Board for GEN 5TH Slim Base
124	1	36564003000	2.5” SATA HDD Cable Set for GEN 5TH Slim Base

125	1	36564004000	2.5” SATA HDD Kit for GEN 5TH Slim Base w/80G HDD + Bracket + Plastic Cover + HDD Cable Set
126	1	36596010003	Right Side Cover w/ Rubber, Black
127	1	36596007003	KS-6815 Back Cover Assembly (incl. All Subordinate Covers & Silicon Pads), Black
128	1	16500308023	Cable Cover for KS-6215/6315/6815, Black
129	1	21863261500	USB I/O Cable for Side Mount Kit
130	1	36594009000	KS-6815 M/B w/CPU Intel Atom N270 1.6GHz & w/ IO Connector Plate
131	1	46541604100	SDVO Adaptor Board (for AU M150XN07 V9)
132	1	36504003010	Speaker w/Cable Assembly for KS-6812/KS-6815 (L = 65 mm)
133	1	16560303027	Power & Brightness Buttons for KS-66XX/73XX/6815 Series, Blue
134	1	10241300011	Push Latch for KS-6115/621X/631X/661X/731X/6815 Series, Black
135	1	16501300043	Left Side Cover, Black
Opt.	1	46592604100	RAID SATA HDD Card
	1	21863061820	RAID SATA HDD Cable (L= 430 mm + 470 mm)
	1	21973060120	Power Adaptor 12V/60W
	1	21868601300	Power Cord for U.S.A for KS-6815/KS-6812/ KS-2010
	2	21868101310	Power Cord for Australia for KS-6815/KS-6812/ KS-2010
	3	21868201300	Power Cord for Europe for KS-6815/KS-6812/ KS-2010
	4	21868301300	Power Cord for Japan for KS-6815/KS-6812/ KS-2010

5	21868401310	Power Cord for S.A for KS-6815/KS-6812/ KS-2010
6	21868501310	Power Cord for U.K. for KS-6815/KS-6812/ KS-2010
7	21868801300	Power Cord for India for KS-6815/KS-6812/ KS-2010
8	21868901300	Power Cord for Argentina for KS-6815/KS-6812/ KS-2010
1	16500510140	Carton for KS-6115/6215-6215PLUS/6315/6815
1	10336201404	PE Bag 140 * 200mm * 0.04mm
1	16560540010	PE Foam for KS-6615/7315/6815
1	16590903010	Manual for KS-6815

POSIFLEX

ASSEMBLY DRAWING