

EMP 300W User Reference Manual

Revision 1.1 (080721)



System Specification of EMP 300W

Chassis	External Chassis	Aluminum alloy with rubber corners
	Internal Chassis	Aluminum alloy frame
System	Chipset	Intel 945GM
	Form Factor	Proprietary
Display	LCD	1x 17" WXGA+ (WUXGA Optional)
	Resolution	1440 x 900 (1920x1200 Optional)
	Color	256K colors
Processor	Processor	Intel Core 2 Duo T7200 2.0GHz Processor
	Cache	4MB L2 Cache
Memory	RAM	2GB DDR2 667Mhz (8GB Max)
Integrated Peripherals	Hard Drive	1x 250GB SATA 7200RPM 3.5"
	Optical Drive	8x IDE DVD-RW Slim Slot-loading DVD burner
	FDD/Cardreader	N/A
Redundancy	RAID (Internal)	0, 1, 0+1, 5, JBOD
Graphic Controller	Chipset	Intel GMA950
	Memory	Upto 224MB Shared
Drive Bay	3.5" Removable	2x
	3.5" Internal Mount	2x (1x Used)
	Slim DVD Drive	1x Slim DVD-RW
Expansion Slot	PCI-e	1x PCIe x16
	Mini PCI-e	1x Mini PCI-e
	PCI	6x PCI
Audio Controller	Chipset	7.1 Channel High Definition Audio
Communication	LAN	Marvell Gigabit LAN Intel 10/100Mb LAN
Input Peripheral	Keyboard	105-Key Cherry Keyboard
	TouchPad	Integrated TouchPad
Integrated interface	USB	4x internal USB ports, USB 2.0 compliant 4x external USB ports, USB 2.0 compliant
	SATA	4x internal SATA 3.0Gb/s (2x Free)
	IDE	1x enhanced IDE, UDMA33/66/100/133
	Parallel Port	1x ECP/EPP Parallel Port
	Serial Port	2x Fast UART Serial Port
	VGA Port	1x VGA, 1x LVDS (Used)
Software	OS	Windows XP SP2 (Optional)

Environmental Specification EMP 300W

Environmental Specification	Operating Temp	0° C - 50° C
	Relative Humidity	20-80% (non-condensing)
	Shock	15G operating, all axes
	Vibration	1.25G @ 10-100Hz operating, all axes
	Compliance	CE & FCC

Power	Power supply	400W, 1U, 110VAC ~ 220VAC
Dimensions	H	310mm
	W	440mm
	D	225mm
Weight	Net weight	26LB (System Weight)
Transport Case	Carrying Case	Padded carrying bag with wheels

1.0 Introduction

Portable Case

The EMP 300W is a robust lunchbox computer built using heavy duty metal to provide tough, go-anywhere unit ideally suitable for test and measurement applications. Every EMP 300W comes equipped with high resolution LCD displays, vast amount of external ports and easy access to its expansion ports for immediate system upgrade or maintenance. Functional practicality combined with the simple and polished design, the EMP 300W with its extra-rugged construction to sustain bumps and impacted blows is the most cost-effective, durable and efficient portable solution for your needs.

Instant Setup

Setting up is no hassle. EMP 300W enables you to be up-and-running in seconds without complicated setup. Our all-in-one design has integrated keyboard, mouse, and display into a total package for your convenience.

LCD Display Information

The EMP 300W has built-in high resolution LCD screens. With our engineering advancement, LCD is integrated seamlessly into the chassis with protective glass.

The EMP 300W is integrated with high brightness, high contrast and fast response LCD screens with optional ultra high resolution display.

Processor/Slot Information

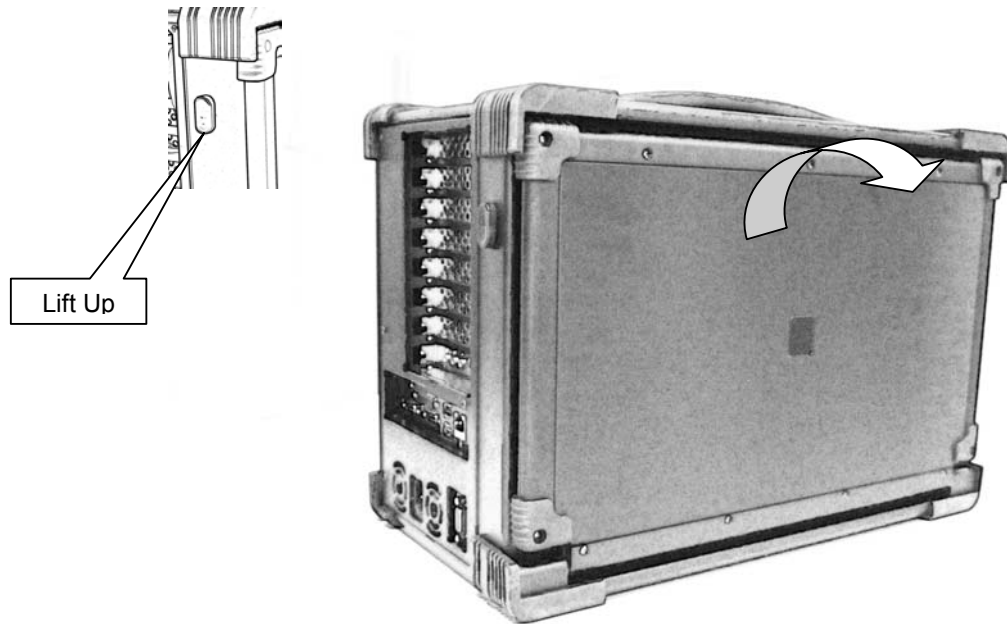
The EMP 300W system is available with the dual core Intel Mobile Core 2 Duo processor. With revolutionary performance, ultra system responsiveness, and energy-efficiency, there is no slowing down for multiple computing intensive programs and processing. The available Intel integrated graphic provide the latest precise and intensive graphic for desktop and image processing with exception speed and accuracy. Available inside is 6 full length PCI slots with 1 PCI Express x16 (Graphic) slot for expansion.

Drive Configuration

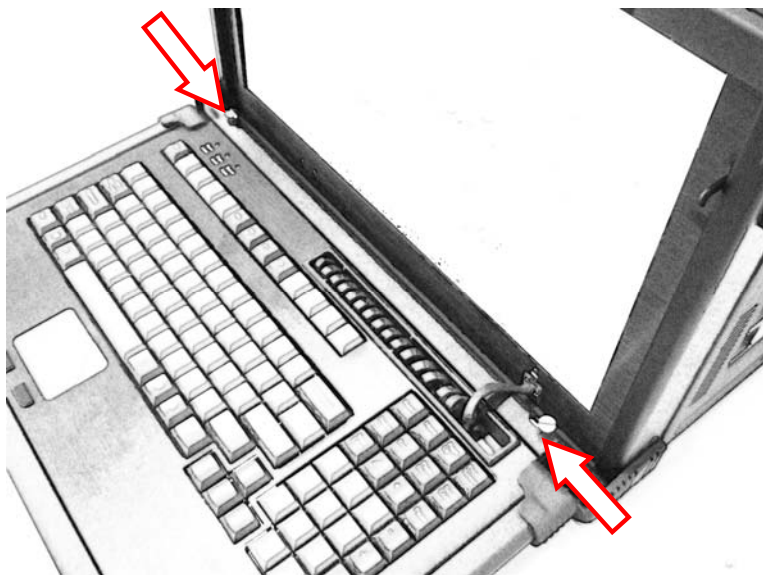
The EMP 300W is preinstalled with slot loading DVD-RW for both single and dual layer writing capability on reading. It has 2 removable 3.5" SATA drive tray that can be expanded further depending on your needs. Whether is speed or capacity requirement that you needs, the flexibility of setting up with the onboard RAID configuration is available by your choosing.

2.0 Operation

2.1 Releasing keyboard from main unit by pushing up the 2 tap located on both side of the chassis to release the locking mechanism, and then pull out the keyboard.



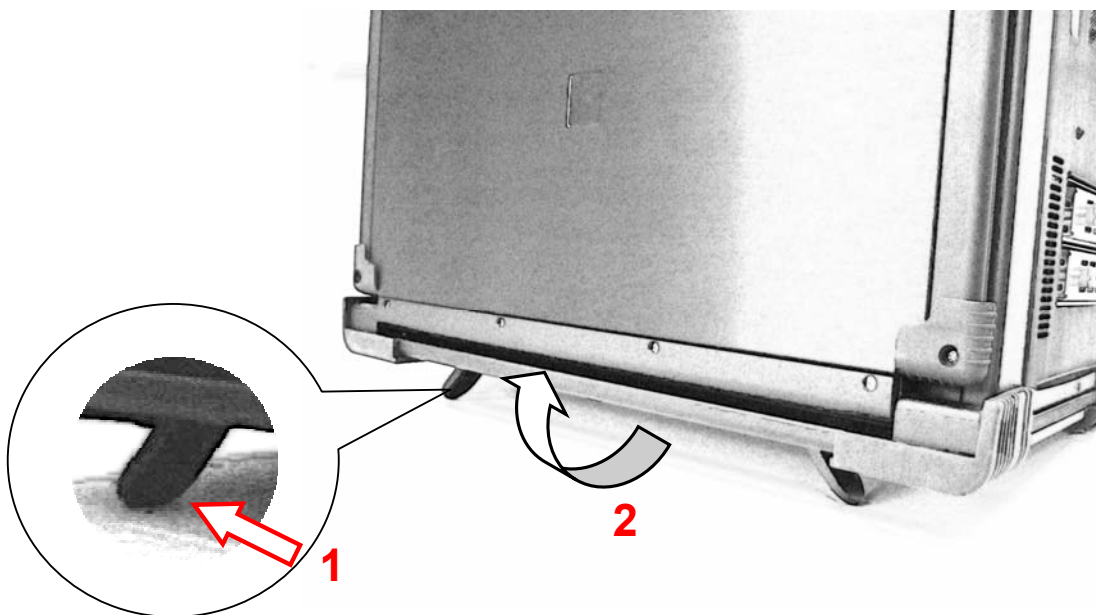
2.2 You have the option of leaving the keyboard attached to the chassis or they can be release independently from the chassis by pushing the two levers inward to release the lock.



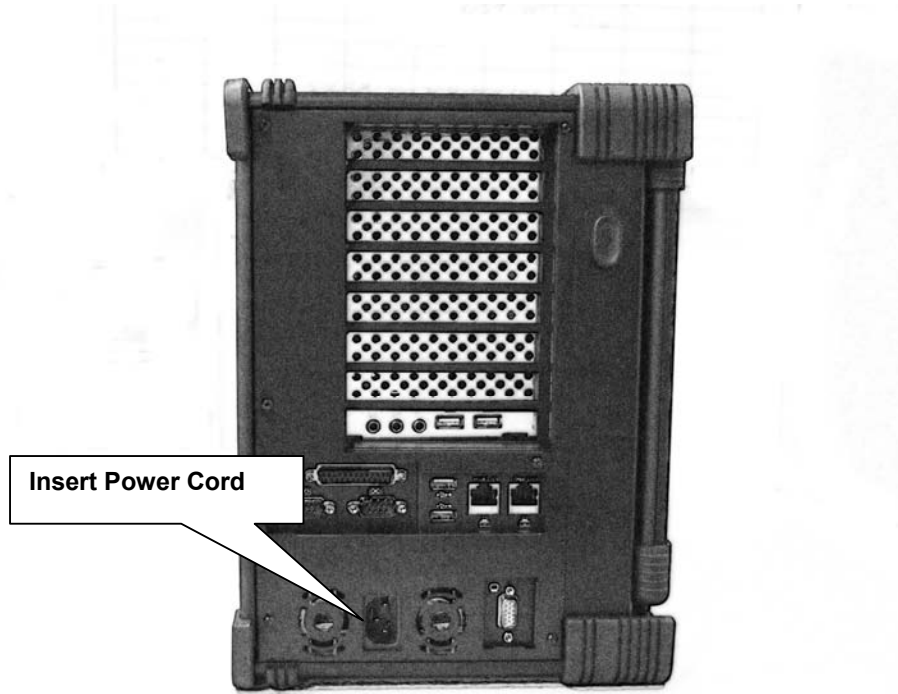
2.3 Connect the keyboard/touchpad cable to the front bottom right corner of the chassis. Make sure the pin direction is correct when inserting. **Keyboard can be close back without disconnecting this plug.



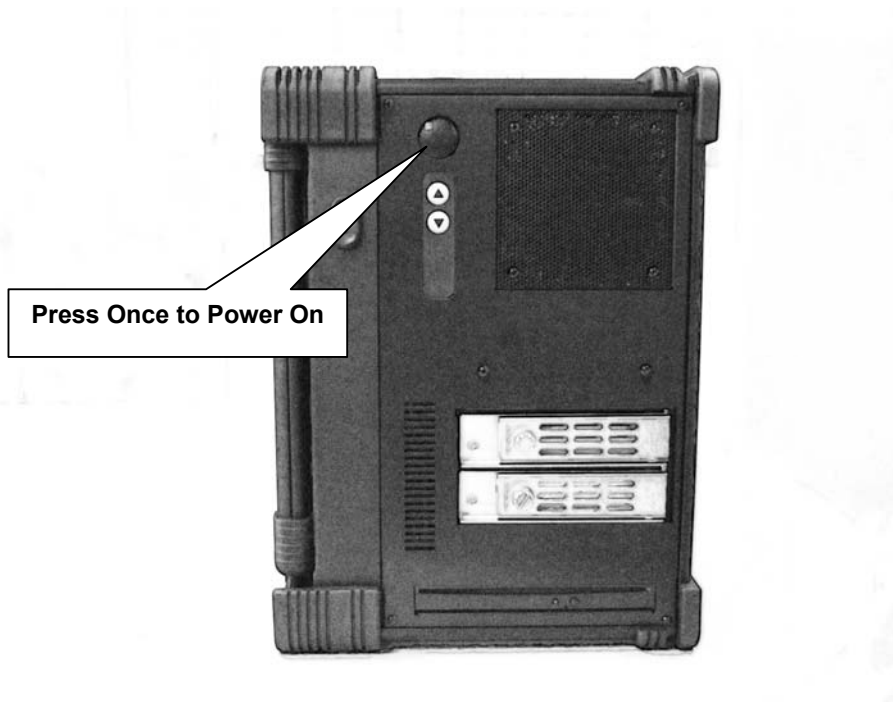
2.4 You can flip the 2 feet located underneath the chassis outward to help create an angle for the chassis for viewing comfort. Locate the feet and flip outward until click.



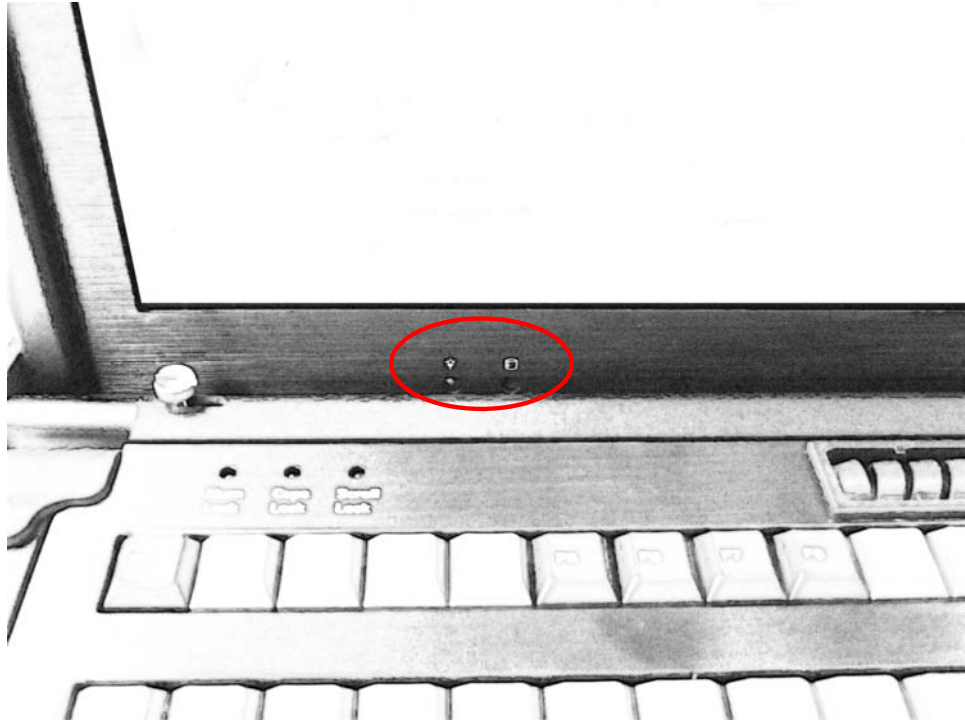
2.5 Connect the power cable outlet into the power supply unit in the main chassis on the left.



2.6 Press the round power button located on the top right of the chassis to power up the unit.



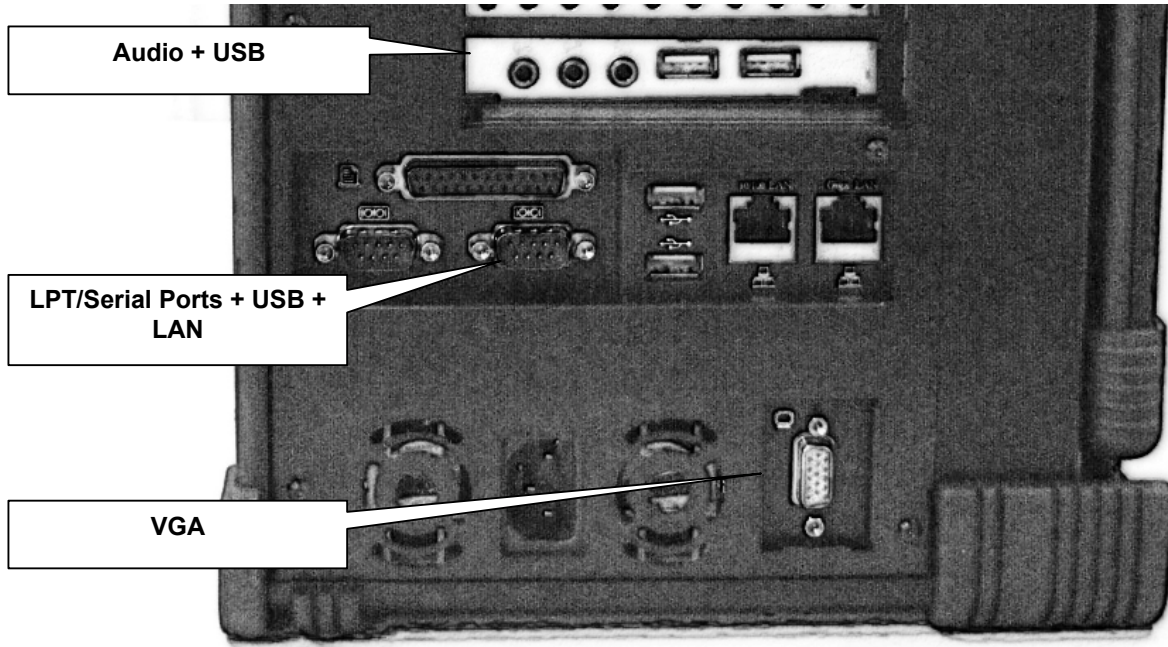
2.7 Bottom left corner will have 2 indicator lights for Power (Green) and HDD activity (Red).



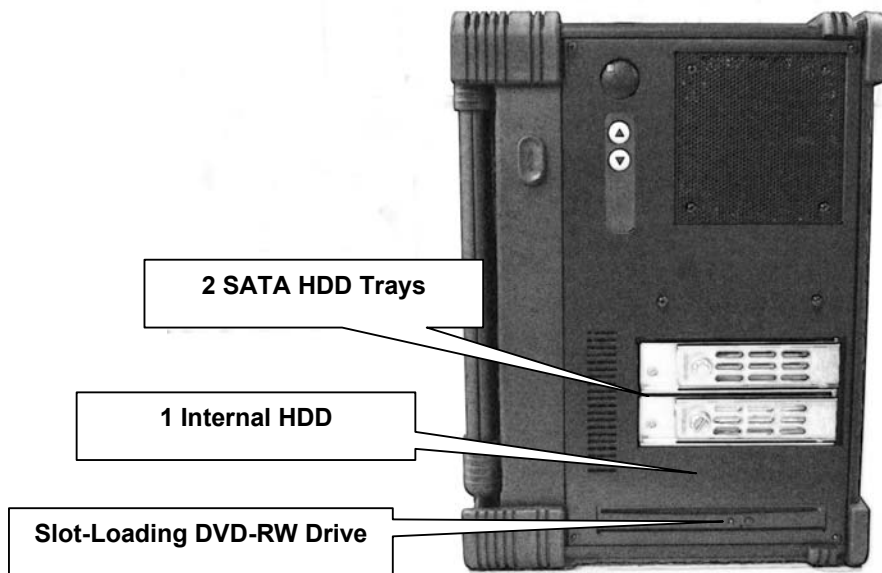
2.8 Access the available expansion slots on the left side of the chassis.



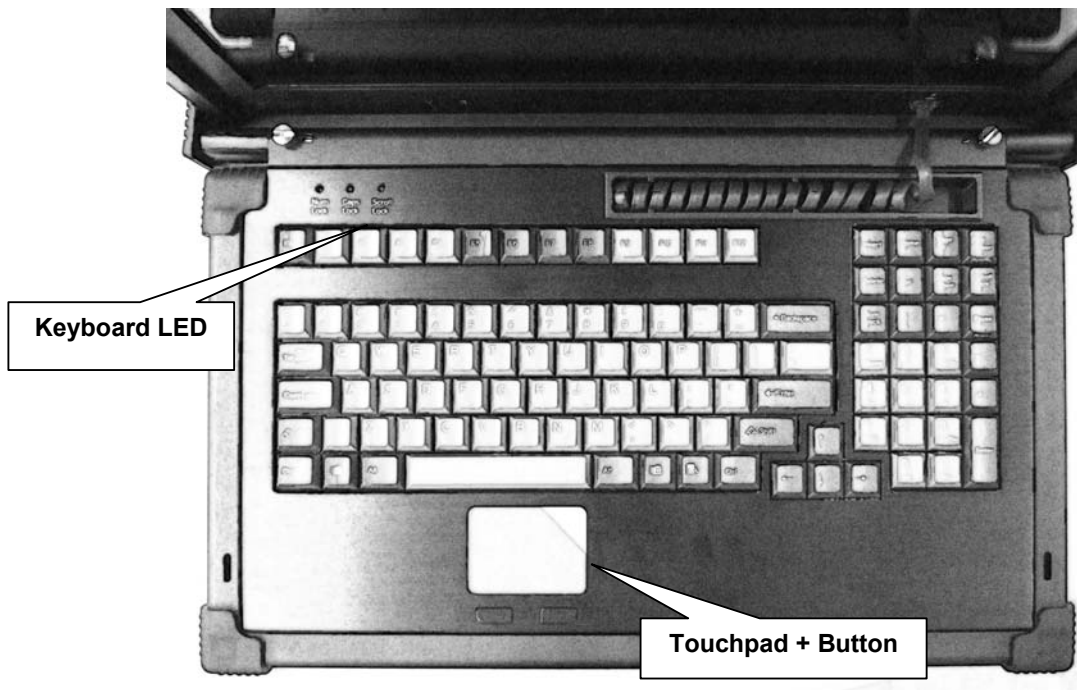
2.9 Access the system board I/O panel on the left side below the expansion slots of the chassis and additional VGA port when using onboard video. **Audio is already connected internally to built-in speaker, connecting external connection will disable internal speaker.



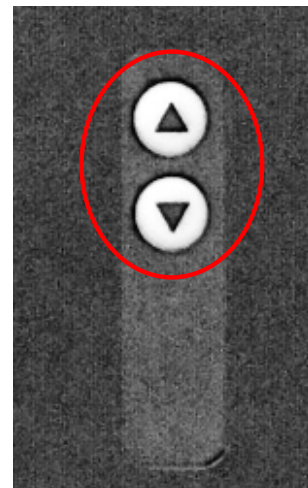
2.10 Access the optical drive and any removable drive tray on the lower right side of the chassis. The removable hard disk drive tray can be removed by turning the knob individually.



2.11 Full function keyboard and touchpad surface act as input for the system.



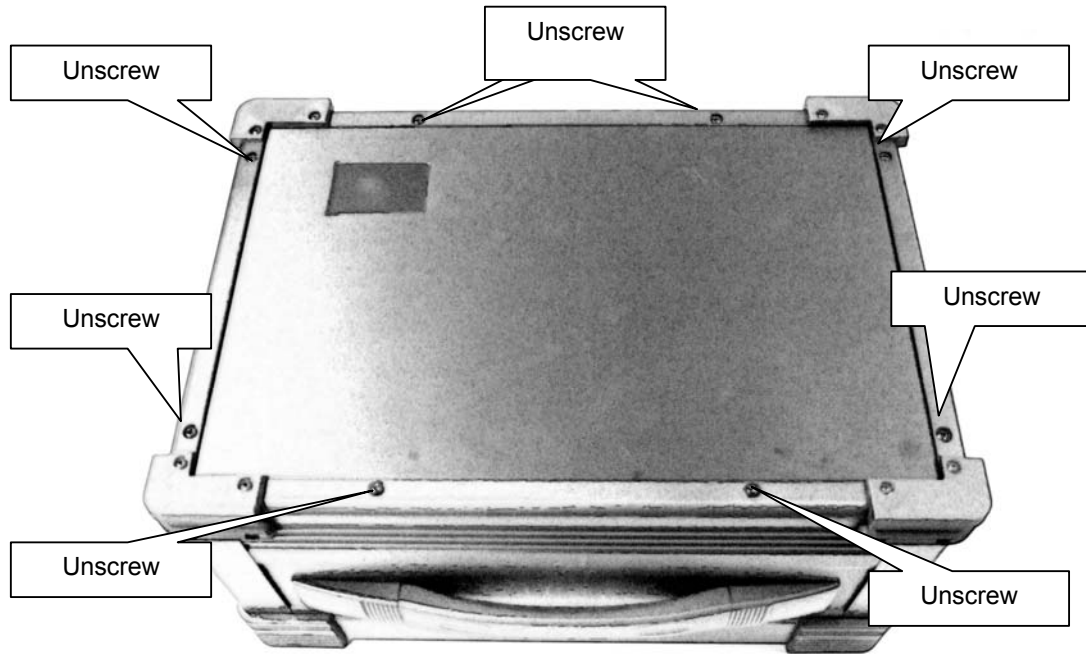
2.12 There are two buttons located on the upper right side of the chassis. This will allow adjustment of the brightness of the LCD panel.



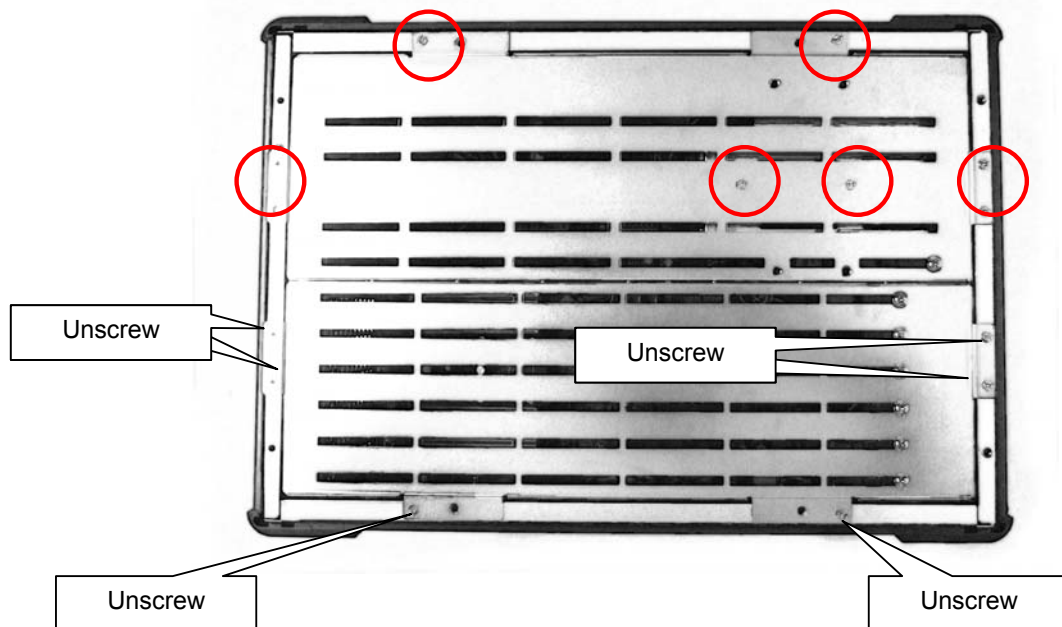
3.0 Internal Hardware Access

****Be sure power cable is not connected to the system before proceeding**

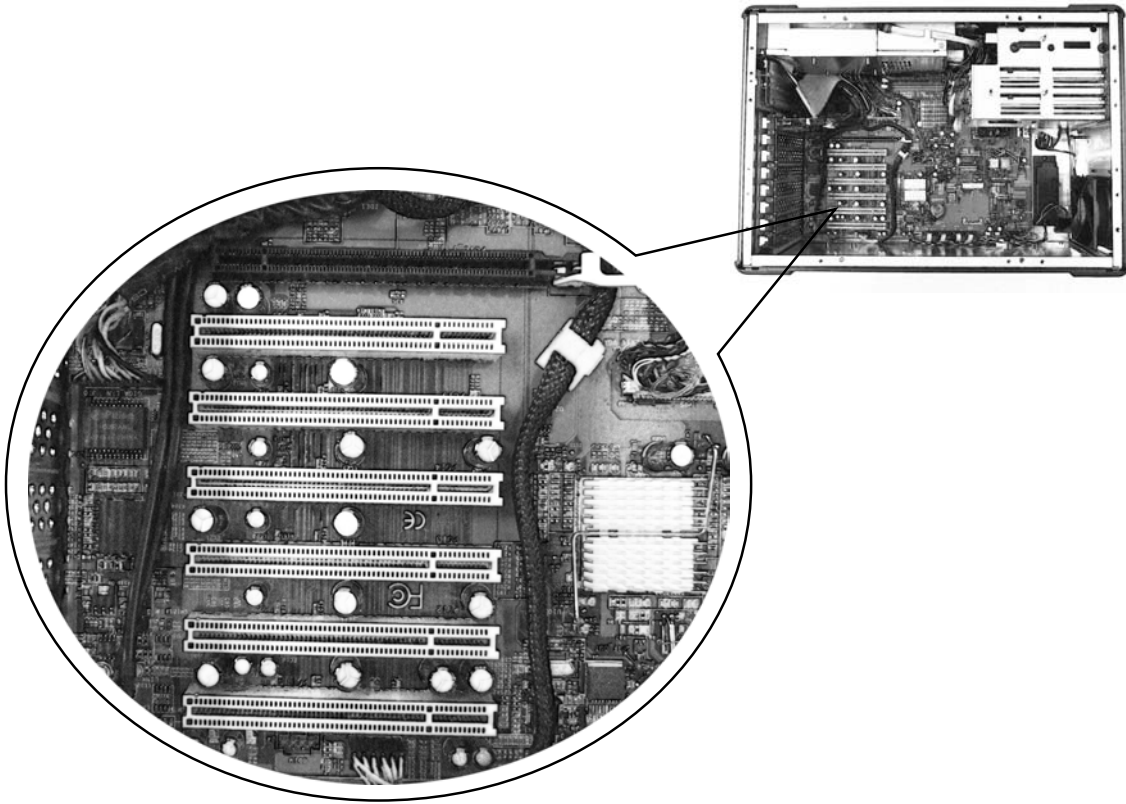
3.1 Unscrew the back cover screw (x8) to release it from the chassis.



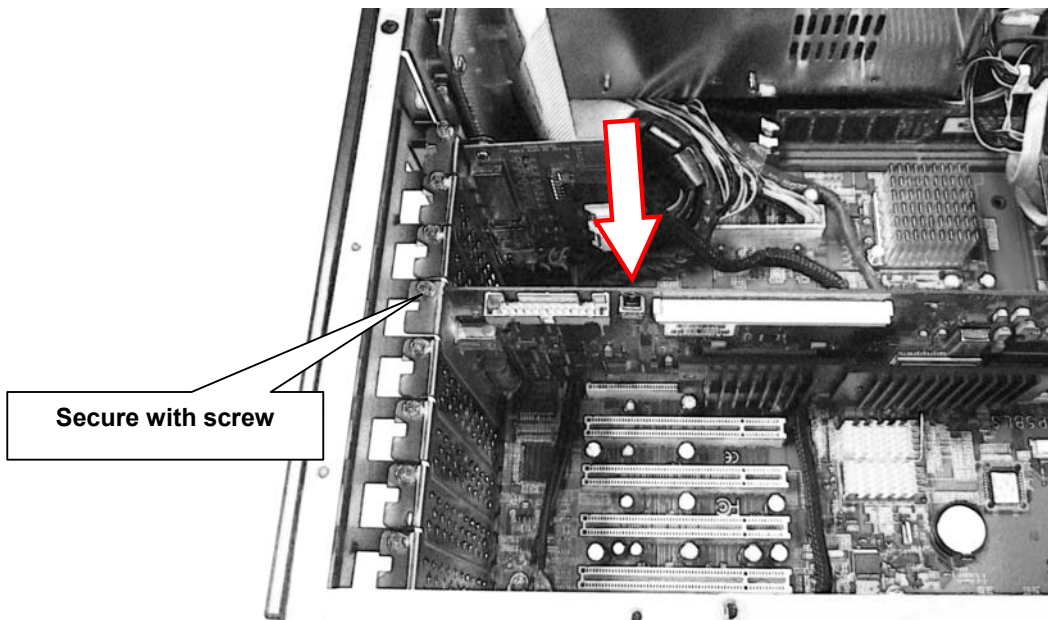
3.2 Unscrew the back slot holder cover by removing the 6 screws indicated in the picture for accessing PCI slots. ****Bottom support cover can be individually removed for adding PCI-Express card or servicing (mark in circle).**



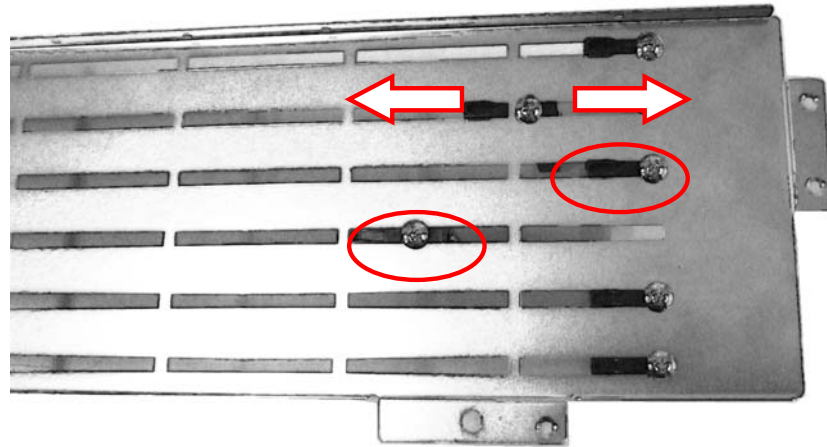
3.3 Install your add-in card as necessary based on the available interface (PCI + PCIe x16).



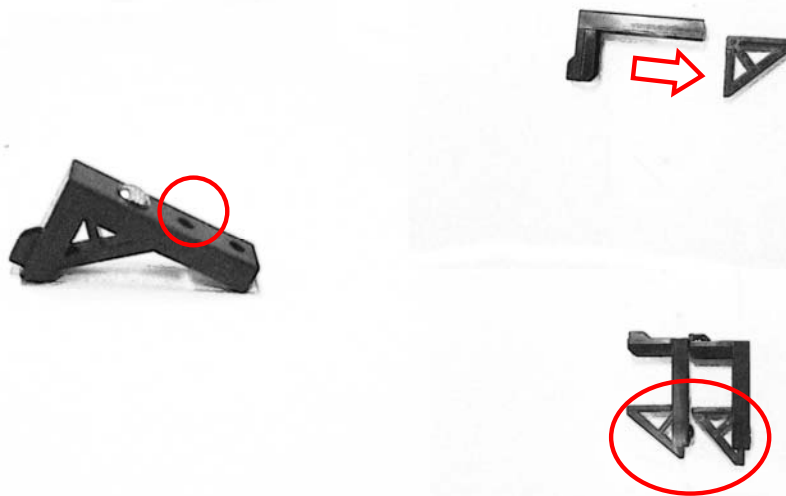
3.4 Secure the add-in card into the chassis and make sure it is inserted completely and tight.



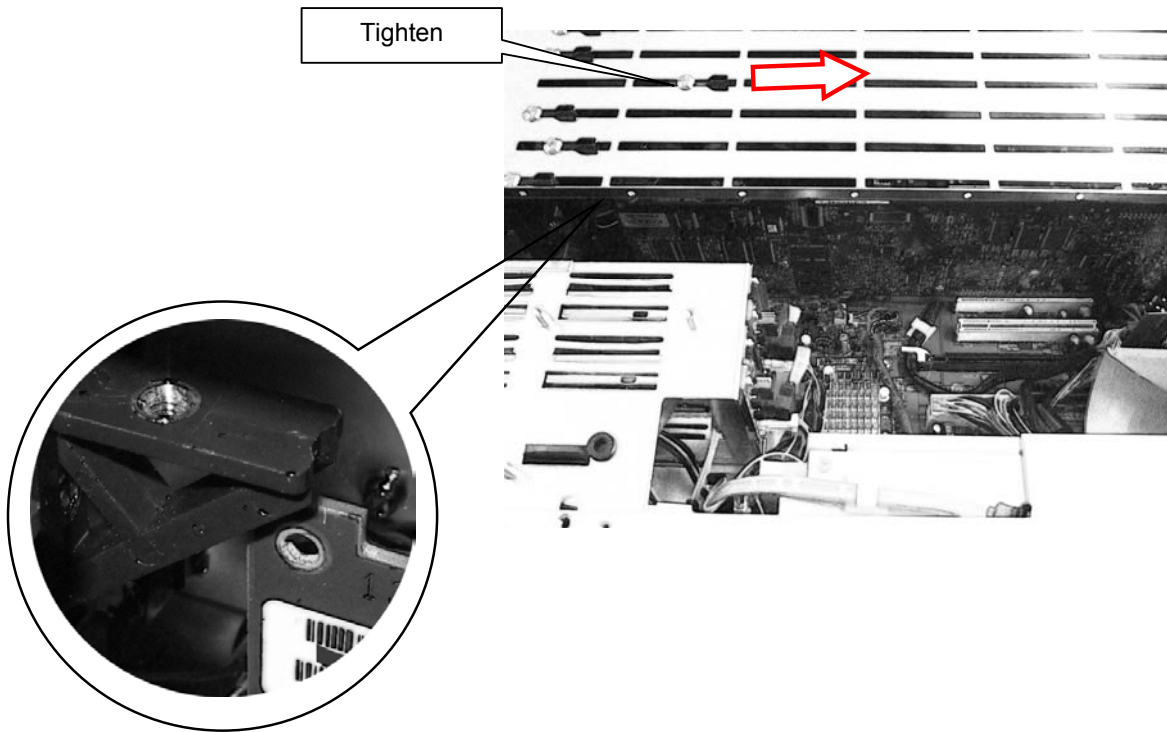
- 3.5 Adjust the card triangular holder into the appropriate length slot on the cover by removing and tightening at new location. You can loosen and slide the guide to adjust further.



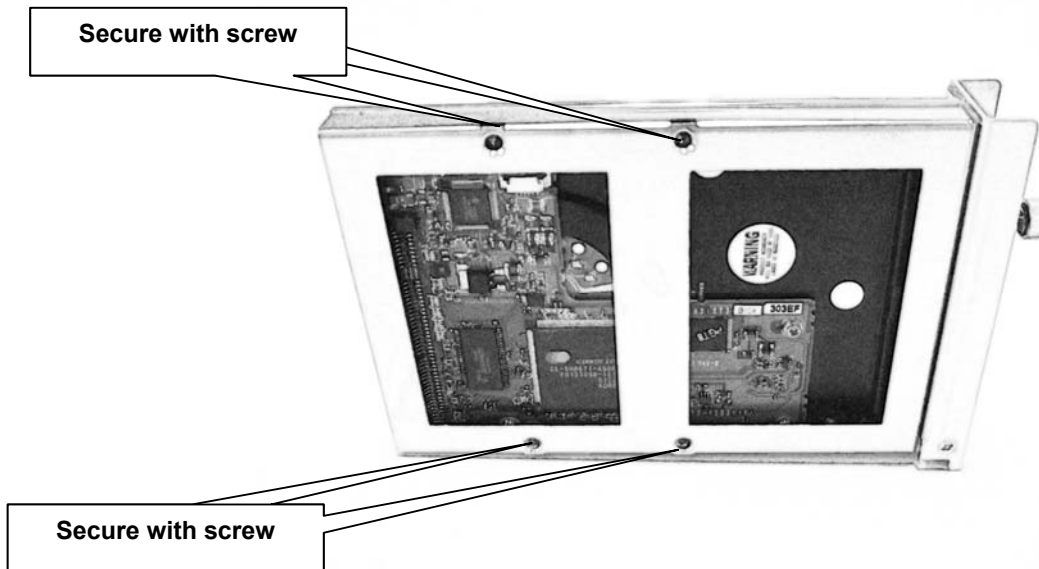
- 3.6 You can also adjust height of the triangular holder height and angle by removing the screw and lowering to the next available height opening or removing it and sliding it back in the other direction and securing at a different angle for greater compatibility.



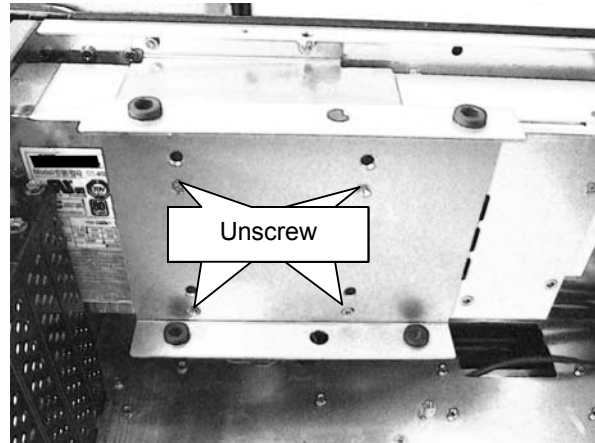
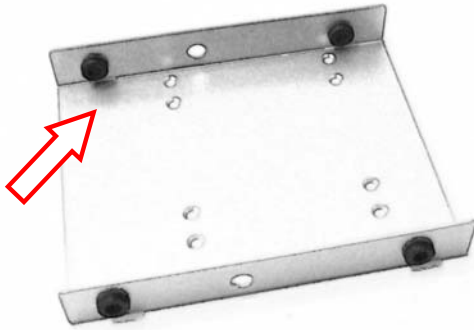
- 3.7 Fix back the back slot holder cover and slide the triangular holder to contact the add-in card securely and tighten the screw to provide support vertically and laterally.



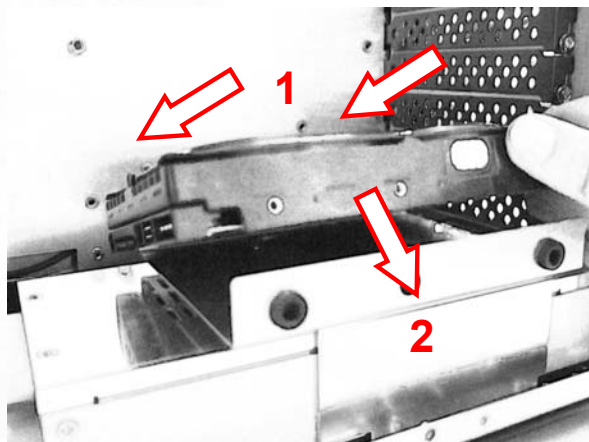
- 3.8 You can add extra removable drives by removing the drive tray and fix additional hard disk drive (SATA) as shown.



- 3.9 Optional external internal HDD mount can be mounted on top of the power supply unit. First install the rubber ring mounting on the 4 round side opening and secure onto the power supply flat surface with 4 screws.



- 3.10 Install 2 mount posts on one side of the HDD first then slide the internal side in first into the rubber ring then push down on external side until HDD is flush with the outer ring to be secure with additional 2 mounting posts.



4.0 Software Installation

You can use the built-in DVD-RW drive to load additional applications software into the system. Available medium from USB or download can also be possible. The system is pre-loaded with Windows operating system, additional multiple O/S can be added or replaced.

DOS Boot up: DOS boot up requires you to have a version of the DOS installed on hard disk drive or floppy. Depending on the execution sequence you have set in the batch file, you will usually get a DOS prompt after loading.

Window Boot up: Windows boot up requires you to have Windows installed in the hard disk drive. During Windows boot up, you will see a sequence of access to your hard disk drive which will eventually take you into a graphical user interface environment.

Other O/S description: Many other operating systems are available in the market, such as Linux, Windows, Solaris and DOS. These operating systems will behave differently and you should react accordingly.

5.0 Maintenance

5.1 Handling of EMP:

You should always make sure the keyboard assembly is properly closed onto the EMP before transporting it. This will ensure you do not lose the keyboard as well as protecting the LCD screen. You may transport the portable in its carrying case, or you can carry the EMP on its handle located on top of the machine. The handle is located securely to the strongest part of the machine, and distributes the load of the EMP evenly as to allow easy carriage and proper balance.

5.2 Handling of Cable:

All cable should be treated with care. Do not over extend any cable and this could result in breakage internally in the cable. It is essential that cable with its plug be handled in the proper manner without force.

5.3 Handling of LCD:

Do not use any abrasive material to scratch the LCD screen, as they can leave marks on the surface. Do not apply any pressure to the surface of the LCD screen either with objects or hands; this will ensure that the screen do not suffer from internal damage or cracks.

5.4 Handling of Power:

Always make sure the power cord is in top condition before using them with the EMP. Make sure your power source is reliable and of proper standard. The EMP power supply is capable of handling 100-240V and 50-60Hz. Do not use the EMP on an already overloaded circuit.

5.5 Handling of K/B:

The keyboard is essential in that it helps protect the LCD during transportation. You should always watch for spill liquid or small objects from entering the keyboard. And the touch pad surface should be kept dry and clean for proper usage.

5.6 Cleaning LCD:

1. Do not use cleaner that contain alcohol.
2. Do not use cloths that could be abrasive to the surface of the LCD.
3. Always gently wipe the LCD surface when cleaning.

5.7 Cleaning K/B:

1. Do not spill any liquid on to the keyboard.
2. Do not drop particle into the spacing between keys.
3. Using a compress air cleaner, you can remove the dust built-up within.

5.8 Cleaning Fan Filter (if exist):

1. Remove the filter from its housing.
2. Use a compress air cleaner to blow off the dust from the filter.
3. If necessary, you can wash the filter material, but do remember to dry it first.

6.0 Problem Solving

6.1 Installation problem:

1. Normally problem with a fail start up is due to installation problem.
2. Double check all the peripheral cards or items you have added to the EMP.
3. Are all the items seated properly?
4. Are all the cables connected back to its original or correct position?
5. Are the items you have added compatible?
6. Before you check for these, turn the computer off and unplug the power cord.
7. Check for 1 thru 5 and then re-power up the computer.
8. Remove all items that were added and re-try system power up.
9. If the system starts now, try inserting 1 new item in at a time and try powering up.
10. Repeat this step until you get the desired result.

6.2 BIOS Beep Code:

The BIOS beep code indicates error in system initialization. The BIOS of the system board will associate with video and memory error. Please check your video card is properly seated and your memory is installed properly.

6.3 System Fails to power up:

1. Check you power connection first.
2. Check the main power switch is in the ON positions (I) *If cold switch is available.
3. Press the power button located on the machine.

6.4 No display (LCD):

1. Check all the proper power up procedure has been taken.
2. Hook up an external CRT to the VGA port, to check if video is present.
3. If video is present on external CRT, check the internal LCD cable connection.
4. Or check your VGA setting using a CRT to make sure LCD video is enabled.
5. If there is no video on external, check your system to make sure everything is seated properly.
6. If everything is seated properly and still no video, call us for further assistance.

6.5 External CRT no display:

1. Check to see if you have internal LCD video.
2. Check if your CRT is functioning properly.
3. Check your VGA setting to make sure external video is enabled.

6.6 Keyboard fails:

1. Make sure the keyboard plug is inserted completely into the portable.
2. Make sure you do not have another keyboard connected to the side I/O PS/2 port.

6.7 TOUCHPAD fails:

1. Make sure the keyboard plug is inserted completely into the portable.
2. If you have an external PS/2 mouse hook up on the side I/O PS/2 port, the touch pad will not function simultaneously.
3. If your operating system requires and does not load the mouse driver automatically, make sure you have the proper mouse driver loaded.

6.8 DVD-ROM fails:

1. Make sure the CD/DVD is readable.
2. If DVD-ROM fails to be recognized during POST, check internal cable fit.

7.0 Standard System Accessory Kits

Package Content		Description	Qty
1	User's Manual	User's Reference Guide	1
2	Driver CD	Driver CD for driver support for reinstallation purpose	1
3	ESD Bag	ESD Bag for additional packaging	1
4	110 Power Cord 220 Power Cord (Option)	110 Power Cord 220 Power Cord (Option)	1
5	Screw Pack	Screw Pack (stabilizer)	1
6	Stabilizer Supports Pack	Additional clip for card holder to secure add-in card	1
7	Hardware Pack (system)	Additional cabling for internal interconnect	1
8	EMP300W System	Main system unit chassis	1
9	Carrying Bag	Tow bag with wheel	1