

# Comrade 480 User Reference Manual

Revision 1.0 (100706)



## System Specification of Comrade 480

<b>Chassis</b>	External Chassis	Aluminum alloy with rubber corners
	Internal Chassis	Aluminum alloy frame
<b>System</b>	Chipset	Intel Q57
	Form Factor	mATX
<b>Display</b>	LCD	1x 17" WXGA+ (WUXGA Optional)
	Resolution	1440 x 900 (1920x1200 Optional)
	Color	262K colors
<b>Processor</b>	Processor	Intel Core i7 860 2.8GHz Quad Core (Intel Core i5 660 3.3GHz Dual Core Optional)
	Cache	8MB L2 Cache
<b>Memory</b>	RAM	4GB DDR3 (16GB Max)
<b>Integrated Peripherals</b>	Hard Drive	1x 250GB SATA 7200RPM 2.5"
	Optical Drive	8x DVD-RW Slim Slot-loading DVD burner
	FDD/Cardreader	N/A
<b>Redundancy</b>	RAID (Internal)	N/A
<b>Graphic Controller</b>	Chipset	Geforce 9400GT (with Intel i7) Intel HD Graphics (with Intel i5)
	Memory	1GB (Intel HD 384MB Shared Memory Option)
<b>Drive Bay</b>	2.5" Internal Mount	1x (Shock Mounted) (Used)
	3.5" Drive Bay	1x (Shock Mounted)
	5.25" Drive Bay	2x (Shock Mounted)
	Slim DVD-RW	1x (Used)
<b>Expansion Slot</b>	PCI-e	1x PCIe x16 (Used w/ Intel i7) 1x PCIe x4 (in x16 slot), 1x PCIe x1
	PCI	1x PCI
<b>Audio Controller</b>	Chipset	7.1 Channel High Definition Audio
<b>Communication</b>	LAN	2x Intel 82578DM + 82574L Gigabit LAN
<b>Input Peripheral</b>	Keyboard	105-Key Cherry Keyboard
	TouchPad	Integrated TouchPad
<b>Integrated interface</b>	USB	4x internal USB ports, USB 2.0 compliant 8x external USB ports, USB 2.0 compliant
	SATA	6x internal SATA 3.0Gb/s (4x Free)
	Serial Port	2x Fast UART Serial Port (internal)
	IDE	N/A
	VGA Port	2x DVI (1x Used)
<b>Software</b>	OS	Windows 7 Pro (Optional)

## Environmental Specification Comrade 480

<b>Environmental Specification</b>	Operating Temp	0° C to 50° C (Optional -20° C to 50° C)
	Non-Operating Temp	-40° C to 70° C
	Relative Humidity	20-80% (non-condensing)
	Shock (all axis)	10g 11ms operating/ 30g 11ms non-operating
	Vibration (all axis)	0.4g @ 10-500Hz operating 1.12g @ 10-500Hz non-operating
	Compliance	CE & FCC

<b>Power</b>	Power supply	650W, PS/2, 110VAC ~ 220VAC
<b>Dimensions</b>	H	310mm
	W	440mm
	D	225mm
<b>Weight</b>	Net weight	27LB (System Weight)
<b>Transport Case</b>	Carrying Case	Padded carrying bag with wheels

## 1.0 Introduction

### Portable Case

Comrade is one of our products designed to exceed your most demanding expectations. Its expandable, portable and reliable configuration enhances not only the operational performance but also addresses the most demanding business environments. Comrade also accommodates a standard size ATX motherboard, and passive backplane to fit various technical requirements. But most importantly is that the Comrade is a powerhouse that contains dual processors that are traditionally found in bulky workstations. In fact, the Comrade comes with everything a large bulky workstation has such as built in LCD screen for super sharp images, built-in amplified speakers, integrated keyboard/mouse, cooling fans, internal card stabilizer; you name it. With its rugged infrastructure, Compare is manufactured to fulfill the function in the most severe of working conditions, and at the same time provide secure timely and elegant solutions. Furthermore, the Comrade ingenious layout focuses on space saving, and yet it provides unsurpassed power, more than any existing compatible system. Undoubtedly, with its expandable configurations, Comrade is the ultimate choice for application and solution needs.

### Instant Setup

Setting up is no hassle. Comrade 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 Comrade has built-in high resolution LCD screens. With our engineering advancement, LCD can be tilted and retracted fully effortlessly. The Comrade 480 is integrated with 17" high brightness, high contrast and fast response LCD screens, and includes glass protection or touch screen option.

### Processor Information

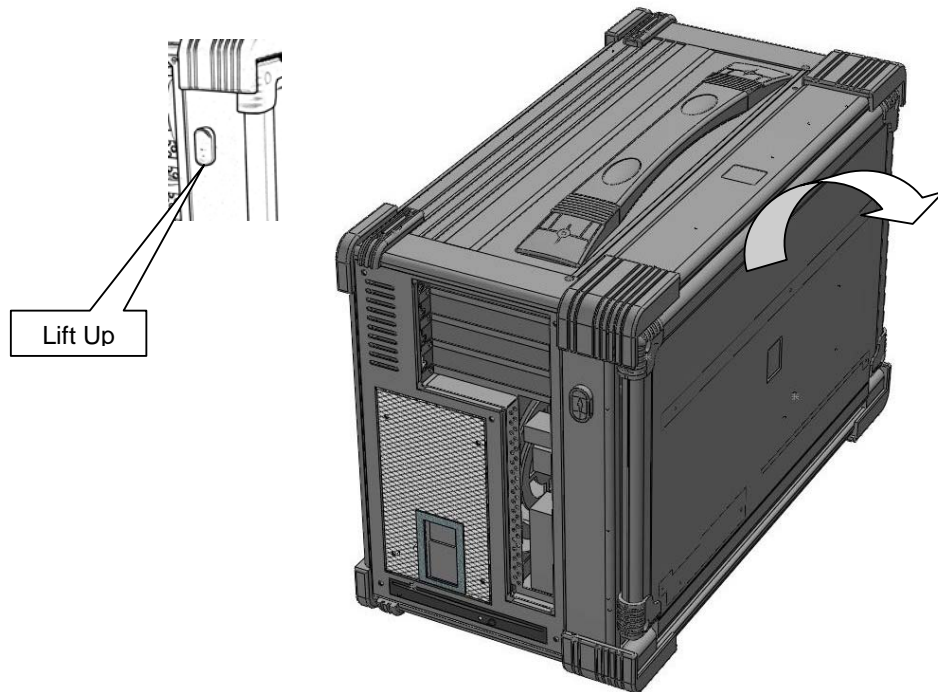
The Comrade system has been design to allow integration of the latest system board and either single or multi processors. With revolutionary performance, ultra system responsiveness, and energy-efficiency, there is no slowing down for multiple compute intensive programs and downloads. The available GPU board can to install to provide the latest precise and intensive graphic 3D rendering and image processing with exception speed and accuracy.

### Drive Configuration

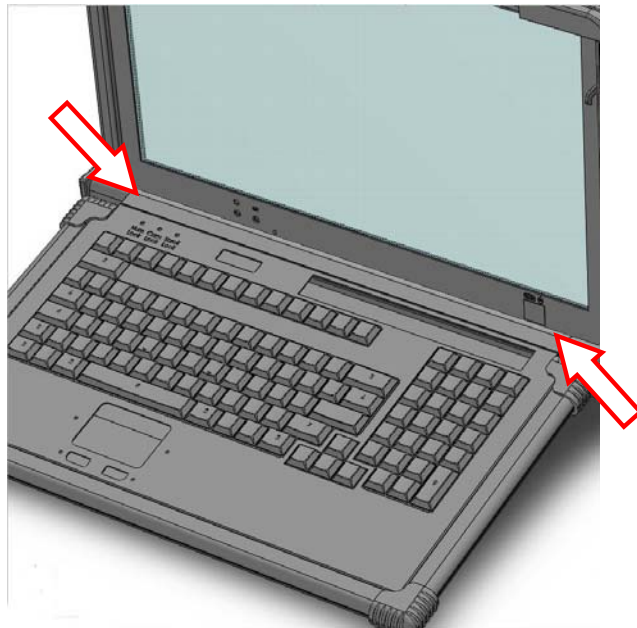
The Comrade 480 has available bay for slim for DVD-RW drive for both single and dual layer writing capability on reading. It has 1 empty 3.5" drive bay that can be expanded further depending on your needs, and 2 empty 5.25" drive bay to add in removable tray or I/O interface. Also optional is an internally mounted 2.5" HDD mount for O/S needs. Whether is speed or capacity requirement that you needs, the flexibility of setting up different 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.



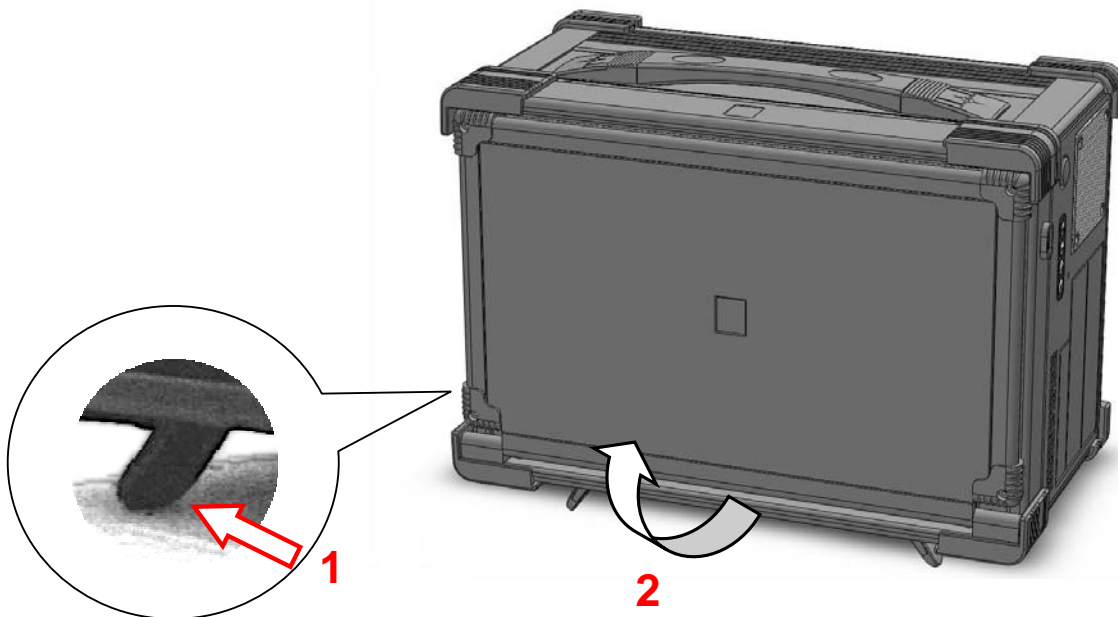
2.2 You have the option of leaving the keyboard attached to the chassis or they can be release independently from the chassis by pushing the two levers inward to release the lock.



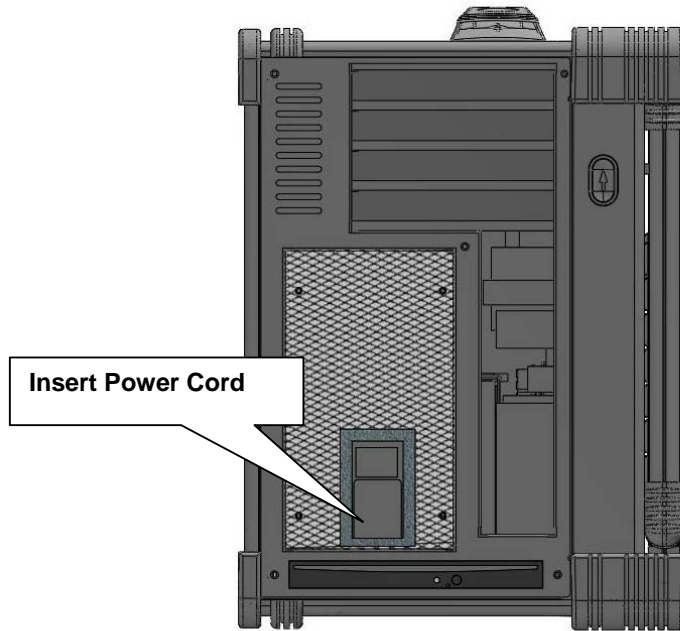
2.3 Connect the keyboard/touchpad cable to the front bottom right corner of the chassis. Make sure the pin direction is correct when inserting. \*\*Keyboard can be close back without disconnecting this plug.



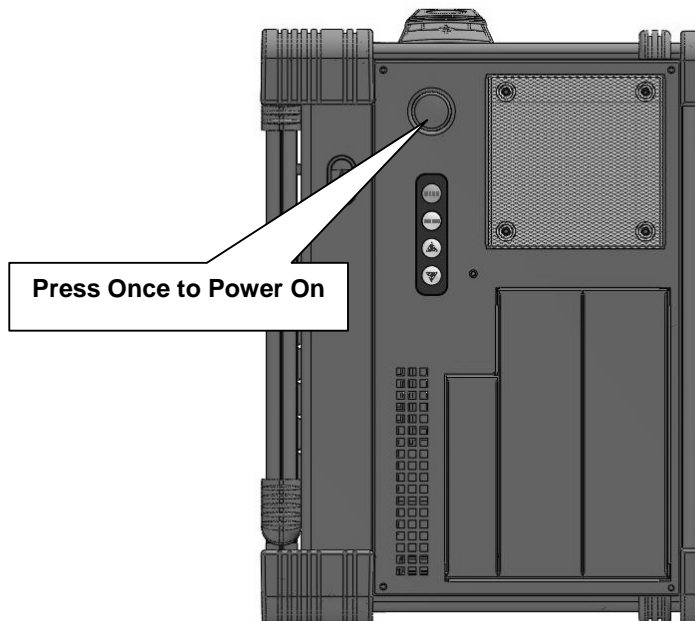
2.4 You can flip the 2 feet located underneath the chassis outward to help create an angle for the chassis for viewing comfort. Locate the feet and flip outward until click.



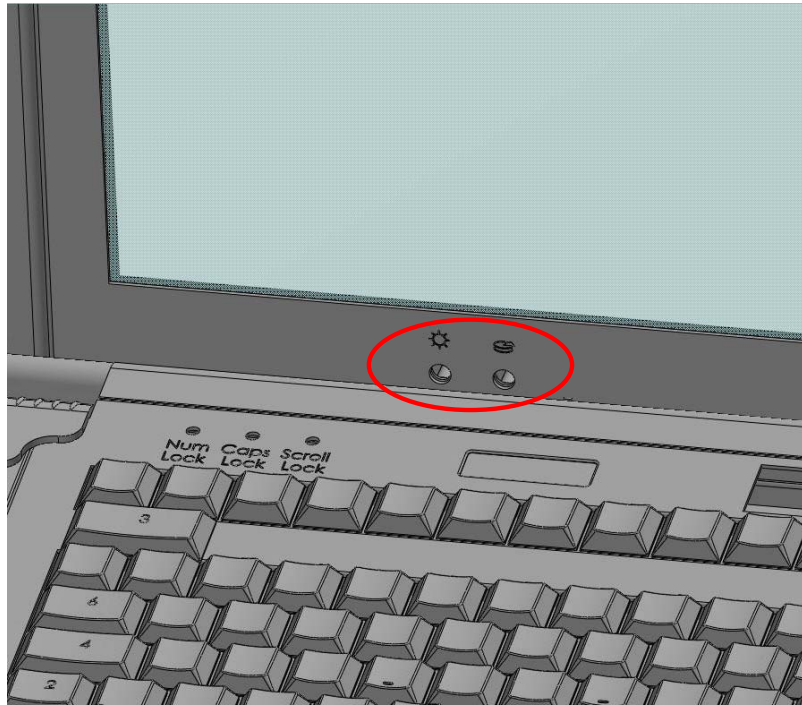
2.5 Connect the power cable outlet into the power supply unit in the main chassis on the left.



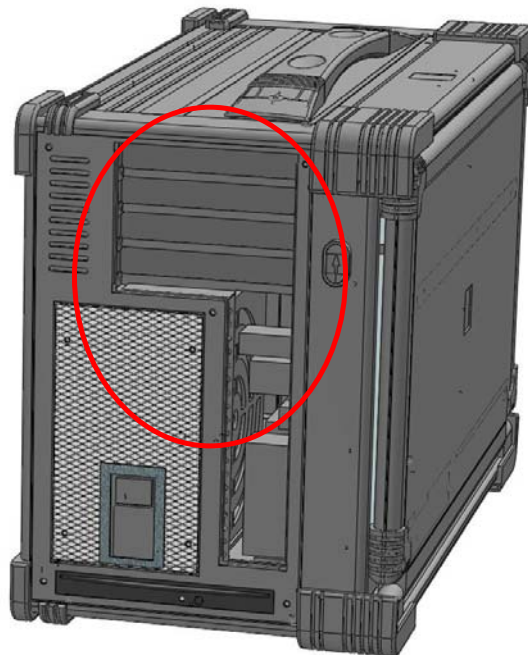
2.6 Press the round power button located on the top right of the chassis to power up the unit.



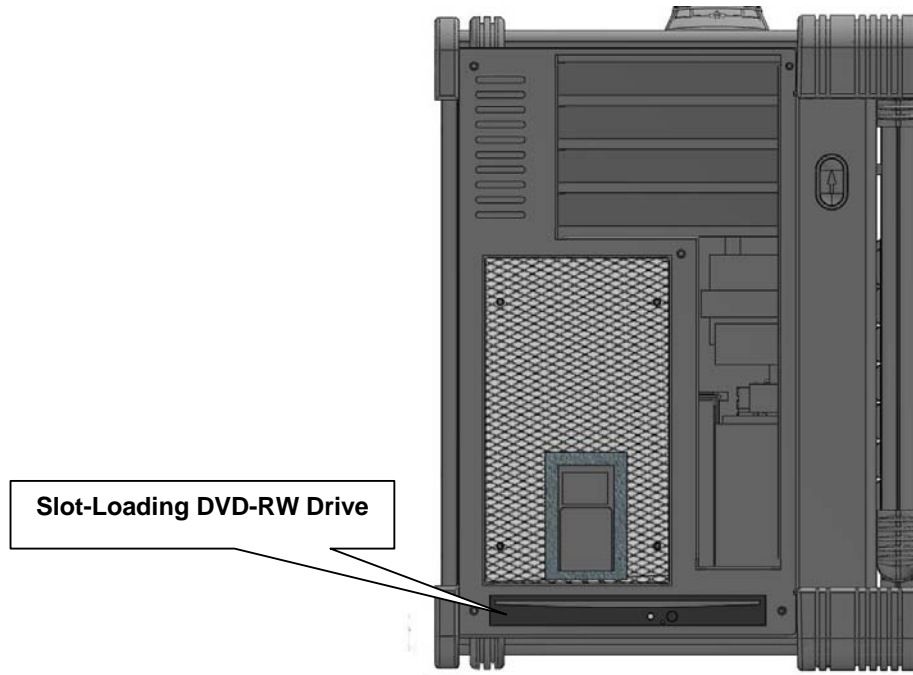
2.7 Bottom left corner will have 2 indicator lights for Power (Green) and HDD activity (Red).



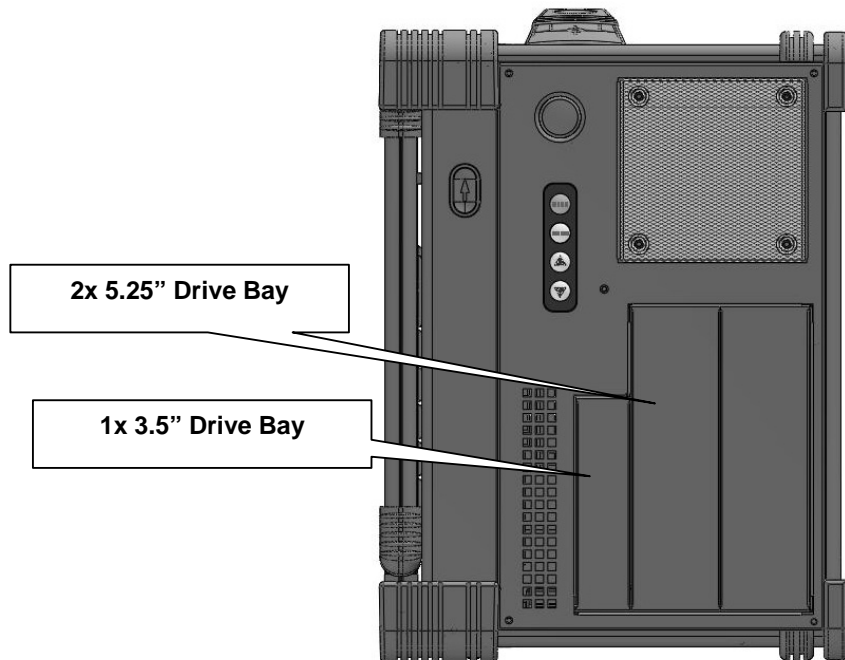
2.8 Access the available expansion slots and I/O on the left side of the chassis.



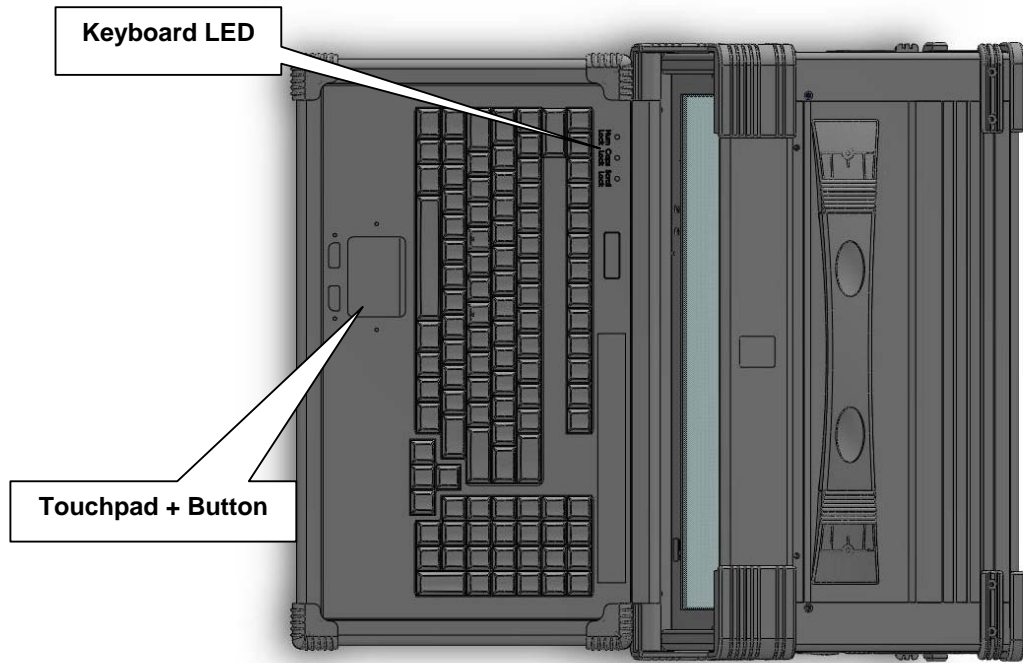
2.9 Access the optical drive on the lower left side of the chassis.



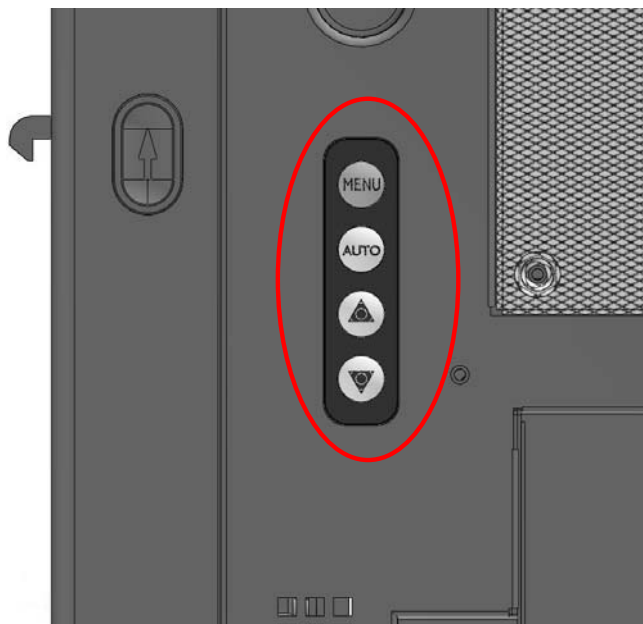
2.10 Access the 3.5" and 5.25" drive bay the right side of the chassis.



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



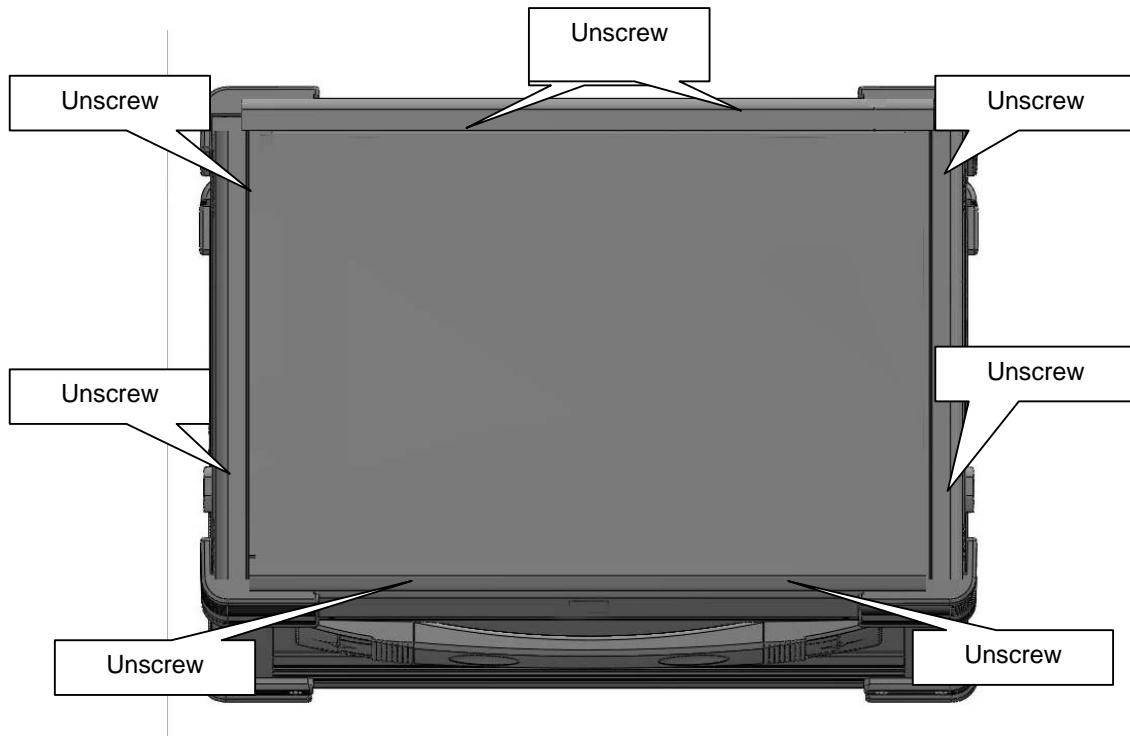
2.12 There are four buttons located on the upper right side of the chassis. This will allow display of adjustment of the OSD for the LCD panel.



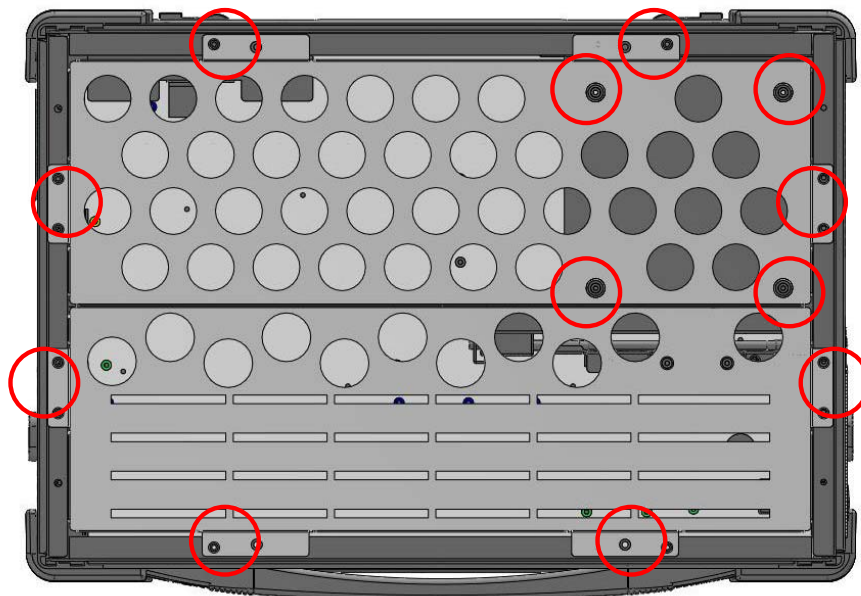
### 3.0 Internal Hardware Access

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

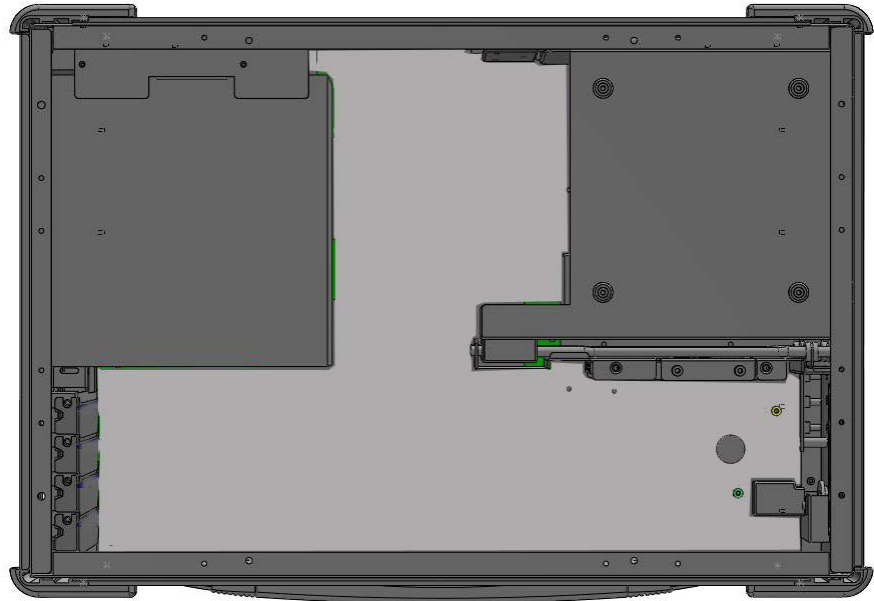
3.1 Unscrew the back cover screw (x8) to release it from the chassis.



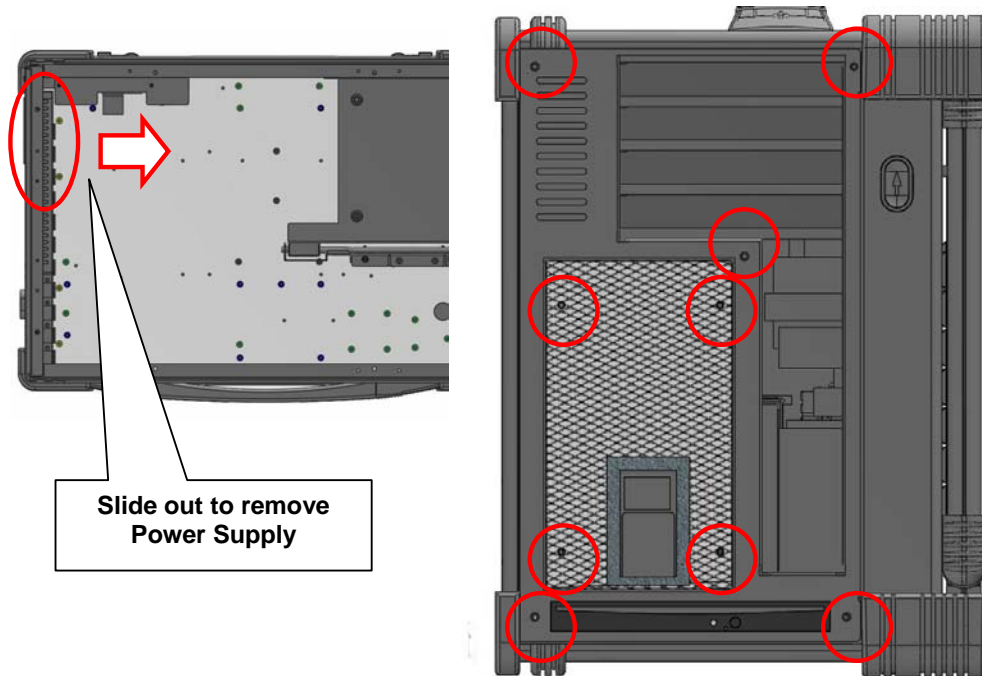
3.2 Unscrew the back slot holder cover by removing the screws indicated in the picture for accessing PCI slots/Drive bay. **\*\*Support cover can be individually removed for adding Add-In card or servicing (mark in circle).**



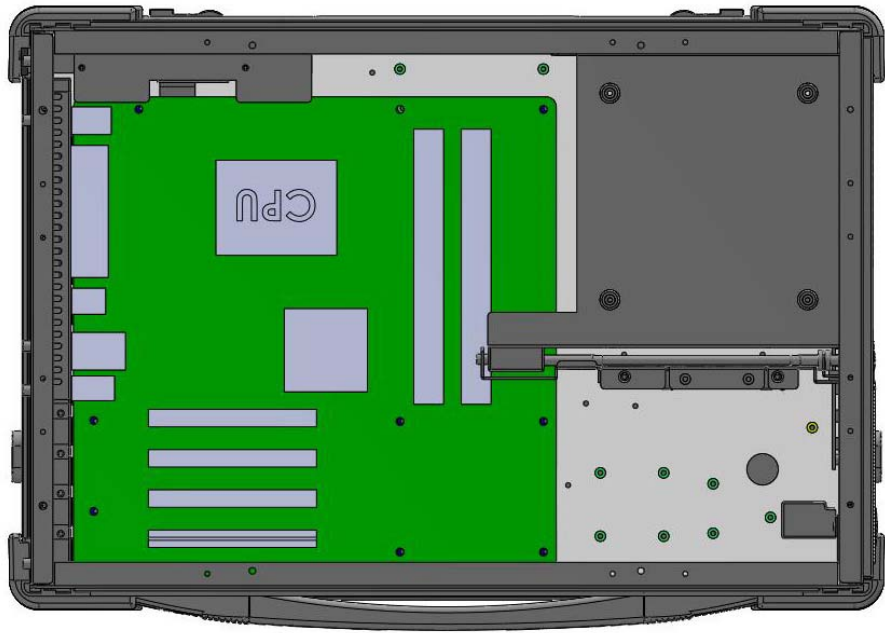
3.3 Once the cover is removed, you can access the internal mounting for Micro ATX system board, drive cage and all the necessary connectors.



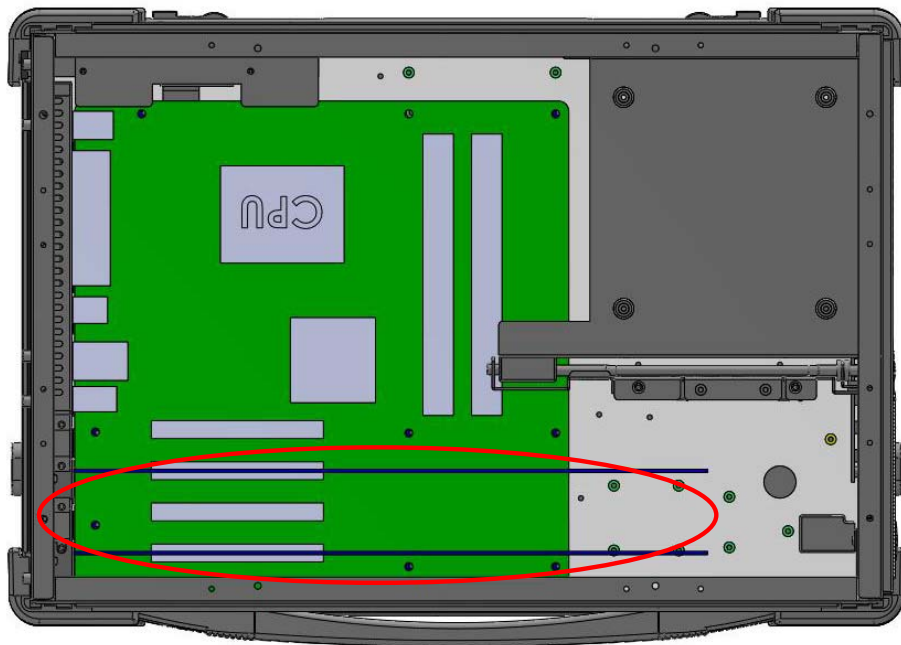
3.4 Next, remove the outer left cover to access the power supply screen and power supply mounting screws. The left cover consist of 5x hex screws. The power supply screen cover consists of 4x screws. The power supply itself has 4x screws.



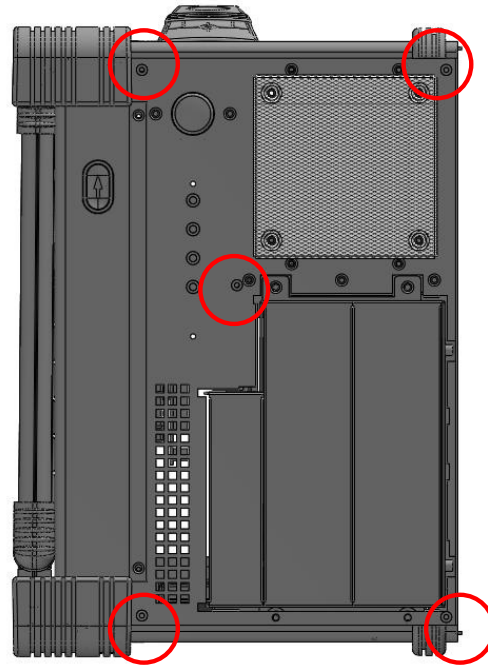
- 3.5 Install the proper stand-off matching the system board (Micro ATX) into the chassis and secure it the motherboard onto chassis.



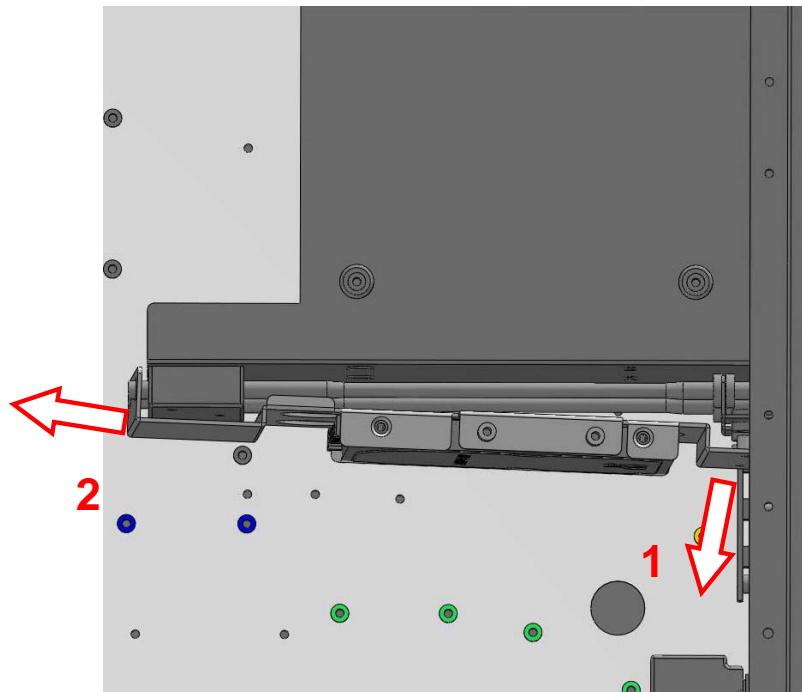
- 3.6 Install your add-in card into the appropriate slot matching the correct bus and secure the end with a screw.



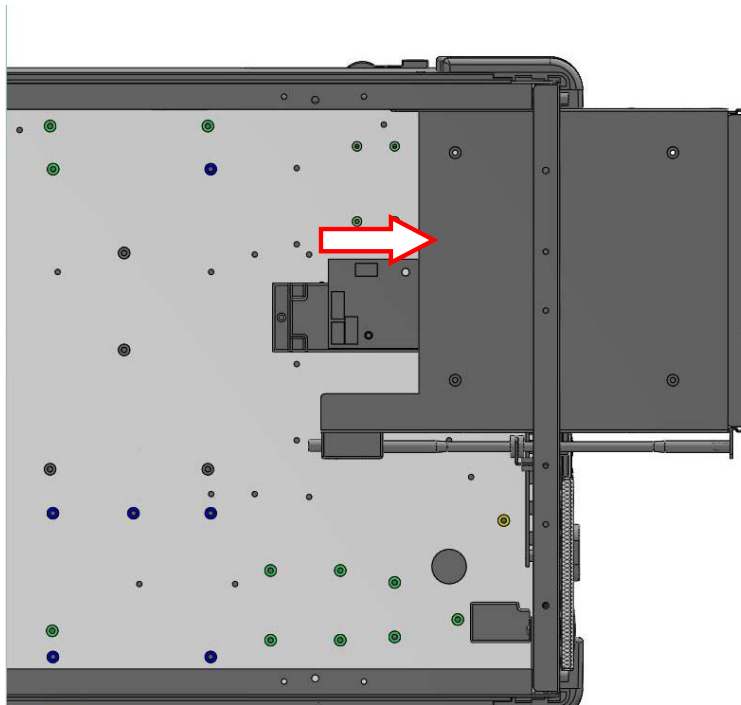
- 3.7 To mount drives onto the 5.25" and 3.5" drive bay first remove the right side outer cover first by removing the 5x hex screw.



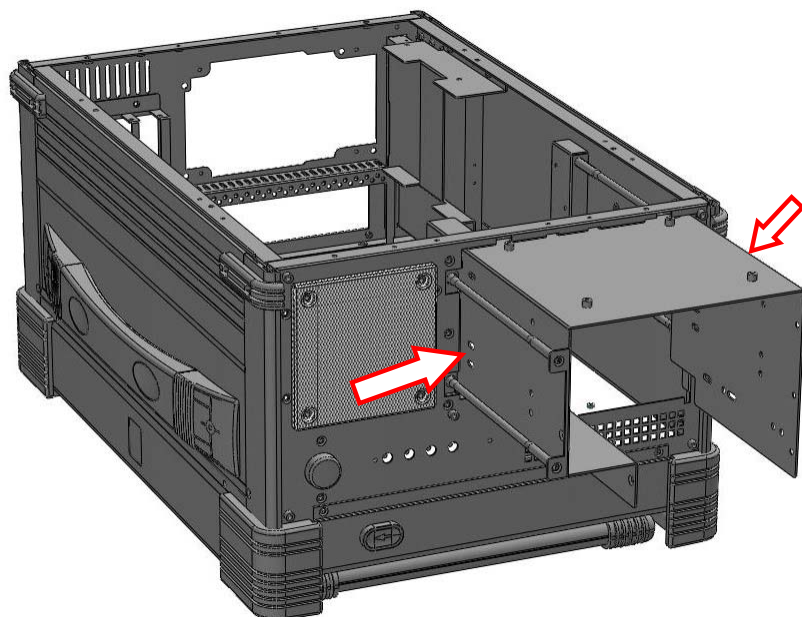
- 3.8 Next remove the internal 2.5" HDD mounting by tilting the bracket away slightly and then push inward to slide out the mounting.



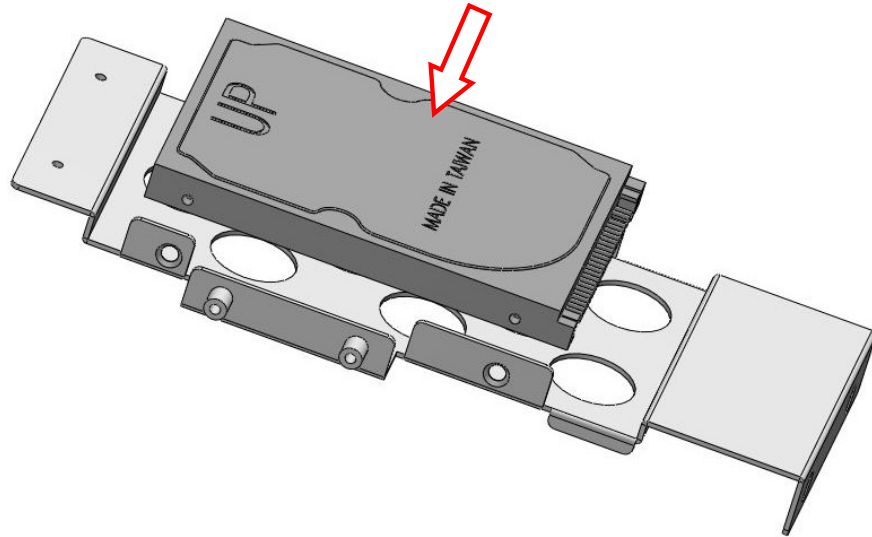
- 3.9 Push the drive cage outward to the outside of the chassis. The drive cage should slide along its rail so and secure without having to use any screw prior or afterward. Push the drive cage all the way fully to the end until it is fully secure.



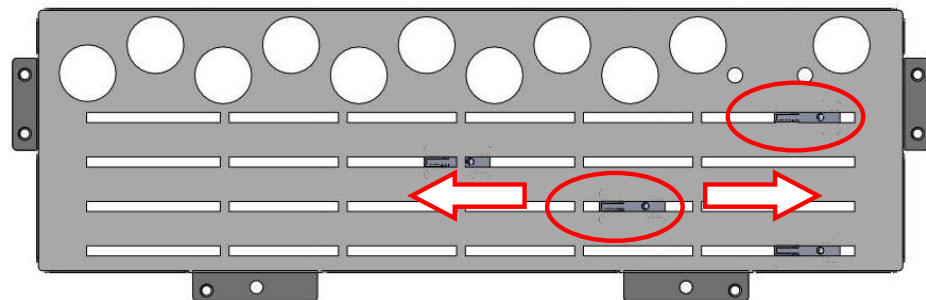
- 3.10 You can install the drives into its proper size and location by removing its cover plate first and sliding it into the drive cage. And secure the new drive with supplied screw on both side of the cage accordingly. \*\*Slide cage back into its original position after finish.



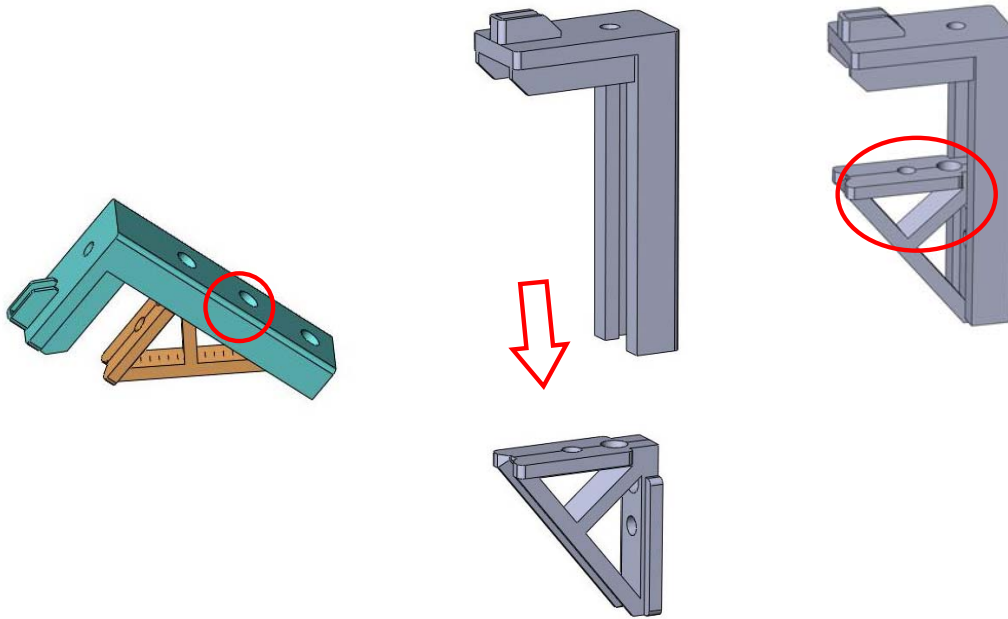
- 3.11 You can install the optional 2.5" HDD on the bracket on the mounting removed in step 3.8, by securing the HDD screws on each side. \*\*Replace back the mounting after completion reverse of the procedure of removal.



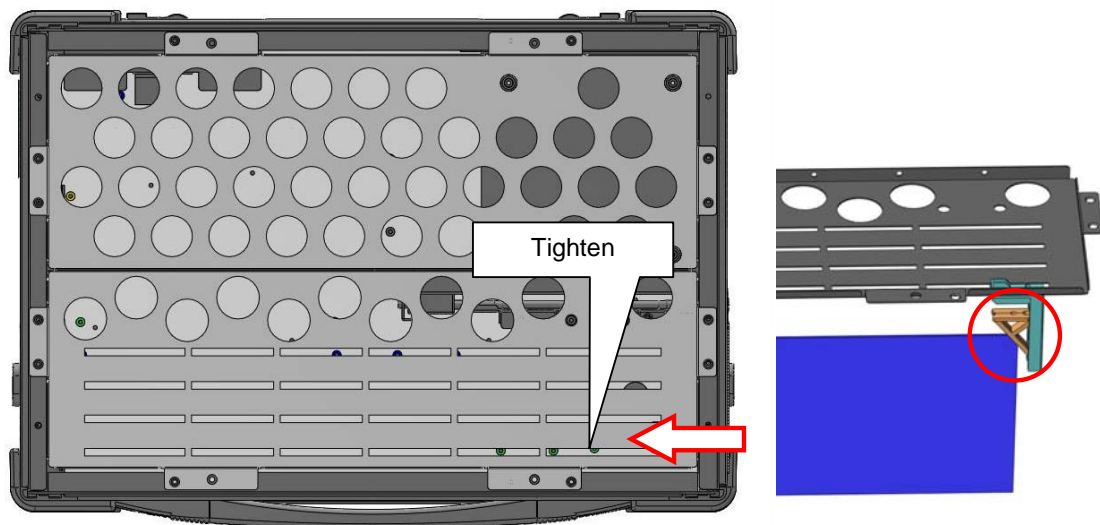
- 3.12 Adjust the card triangular holder into the appropriate length slot on the cover by removing and tightening at new location. You can loosen and slide the guide to adjust further.



3.13 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.



3.14 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.



## 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 Comrade:

You should always make sure the keyboard assembly is properly closed onto the Comrade 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 Comrade 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 Comrade 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 Comrade. Make sure your power source is reliable and of proper standard. The Comrade's power supply is capable of handling 100-240V and 50-60Hz. Do not use the Comrade 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:

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 Comrade.
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 SKD Accessory Kits

Package Content		Description	Qty
1	User's Manual	User's Reference Guide	1
2	ESD Bag	ESD Bag for additional packaging	1
3	110 Power Cord 220 Power Cord (Option)	110 Power Cord 220 Power Cord (Option)	1
4	Screw Pack	Screw Pack	1
5	Stabilizer Supports Pack	Additional clip for card holder to secure add-in card	1
6	Comrade 480 System	Main system unit chassis	1
7	Carrying Bag	Tow bag with wheel	1