Adamant 5100 User Reference Manual

Revision 3.0 (100113)

System Specification of Adamant 5100

Chassis	External Chassis	Aluminum Alloy
	Internal Chassis	Aluminum / Steel Frame
System	Chipset	Intel 5100
Display	LCD	17" TFT Panel
	Resolution	1440 x 900 (Option 1920x1200)
	Color	262K colors
Processor	Processor	2x Intel Xeon L5410 (2.33GHz Quad Core Processor)
	Cache	12MB L2 Cache (Per Processor)
Memory	RAM	8GB ECC REG DDR2 667Mhz
Integrated Peripherals	Hard Drive	1x 250GB 2.5"
	Optical Drive	8x DVD-RW Slim Slot-loading DVD burner
	FDD/Cardreader	N/A
Redundancy	RAID (Internal)	RAID 0, 1, 5, 10
Graphic Controller	Chipset	ATI ES1000 (PCIe Video Available Option)
	Memory	32MB
Drive Bay	2.5" Internal Mount	2x (1x Used)
	2.5” Drive Bay	2x (Removable SATA) *SAS compatible, SAS controller not Included
	Slim DVD-RW	1x (Used)
Expansion Slot	Option A	3x PCI-X 133/100/100MHz 1x PCI-E x8 1x PCI-E x8 (Factory Accessible)
	Option B	4x PCI-E x8 1x PCI-E x8 (Factory Accessible)
Audio Controller	Chipset	N/A
Communication	LAN	2x Intel 10/100/1000 LAN
Input Peripheral	Keyboard	Optional Wireless
	TouchPad	Optional Wireless
Integrated interface	USB	1x internal USB ports, USB 2.0 compliant 4x external USB ports, USB 2.0 compliant
	SATA	6x internal SATA 3Gb/s
	Serial Port	1x Fast UART Serial Port
	FDD	1x FDD connector
	VGA Port	1x VGA
Software	OS	Windows XP SP3 (Optional)

Environmental Specification Adamant 5100

Environmental Specification	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	FCC & CE / LVD
Power	Power supply	400W, 110VAC ~ 220VAC 60Hz
Dimensions	H	292.2mm (319.6mm with Handle)
	W	412.16mm
	D	193.9mm
Weight	Net weight	21LB (System Weight)
Transport Case	Carrying Case	Padded carrying bag with wheels

1.0 Introduction

Portable Case

The Adamant 5100 is a robust lunchbox computer built using rigid steel internal skeleton frame and aluminum alloy to provide tough, go-anywhere unit ideally suitable for test and measurement applications. Every Adamant comes equipped with high resolution LCD displays, vast amount of external ports and easy access to its expansion ports for immediate add-on or changes. Functional practicality combined with the simple and polished design, the Adamant 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. Adamant 5100 enable you to be up-and-running in seconds without complicated setup. Our all-in-one design with complete system, built-in LCD, optional touchscreen and keyboard/mouse are bundle into a total package for your convenience.

LCD Display Information

The Adamant 5100 has built-in high resolution LCD screens. With our engineering advancement, LCD is integrated seamlessly into the chassis with protective glass. The Adamant is integrated with high brightness, high contrast and fast response LCD screens with optional ultra high resolution display.

Processor Information

The Adamant 5100 system is available with ultra powerful Dual Intel Xeon Quad Core Processors. With revolutionary performance, ultra system responsiveness, and energy-efficiency, there is no slowing down for multiple computing intensive programs and processing. The available onboard integrated graphic provide the precise and intensive graphic for desktop and available slots can be used to install dedicated video card for further image processing with exception speed and accuracy.

Drive Configuration

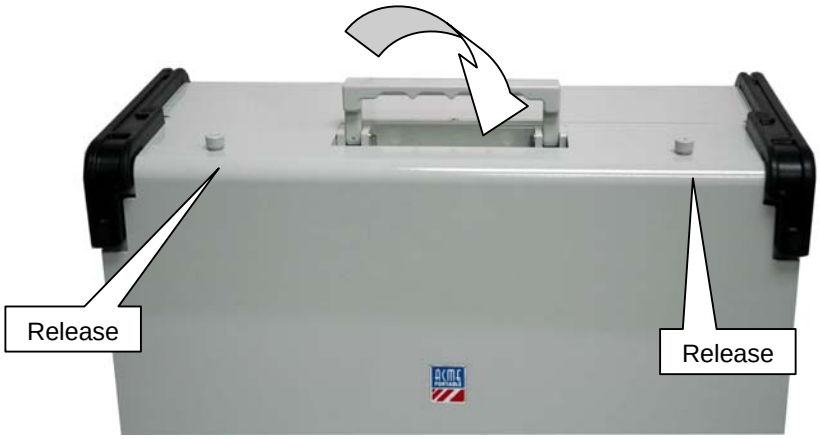
The Adamant 5100 is preinstalled with slot loading DVD-RW for both single and dual layer writing capability on reading. It has 2 removable 2.5” open drive bay that can be expanded further depending on your needs. Also available inside are 2 internal 2.5” HDD mounting. Whether is speed or capacity requirement that you needs, the flexibility of setting up with the drive configurations is available by your choosing.

Slot Configuration (A/B)

The Adamant 5100 special design allows the portable to be configured to different BUS interface to meet your needs. The Option A is configured with 3x PCI-X slots, operating at 133/100/100 MHz (133/133MHz if only 2 cards are used), 1x PCIe x8 and extra PCIe x8 factory installed depend on your preference. And the Option B is configured with 4x PCI-e and all operate at 8 Lanes (electronically and mechanically), and extra PCIe x8 factory installed slot. Both configurations offer industrial and commercial latest interface bus that are found only in servers or specialized board level system. We were able to incorporate these into a portable chassis to meet the demanding use of field computing.

2.0 Operation

2.1 You can fold the handle bar up for carrying or fold down for operation usage. The handle bar itself will store within the chassis itself and provide a smooth flush finish.



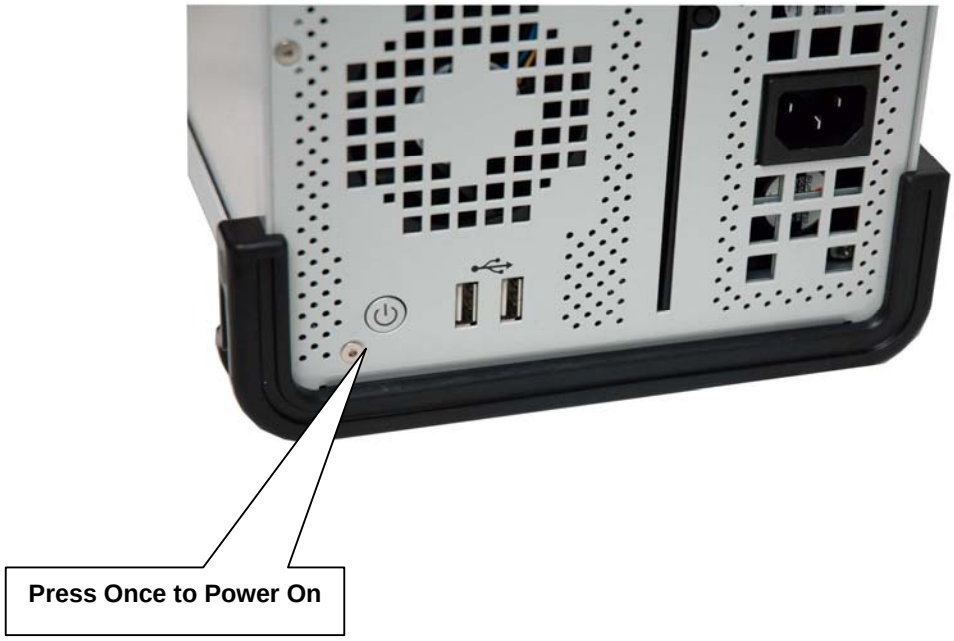
2.2 Remove the LCD protection cover plate from the chassis, by unscrewing the two thumb screws located on top of the chassis and pulling the plate forward and down.

2.3 You can connect the USB based keyboard/mouse to the main system by connecting the USB Type A connector(s) or receiver (if wireless) to the bottom right side of the chassis.

2.4 The two feet located underneath the chassis of the system can be folded out to provide tilting function as to better a better visual display angle for operation.

2.5 Connect the power cable outlet into the power supply unit in the main chassis on the right. The power supply can support both 110V and 220V power source.

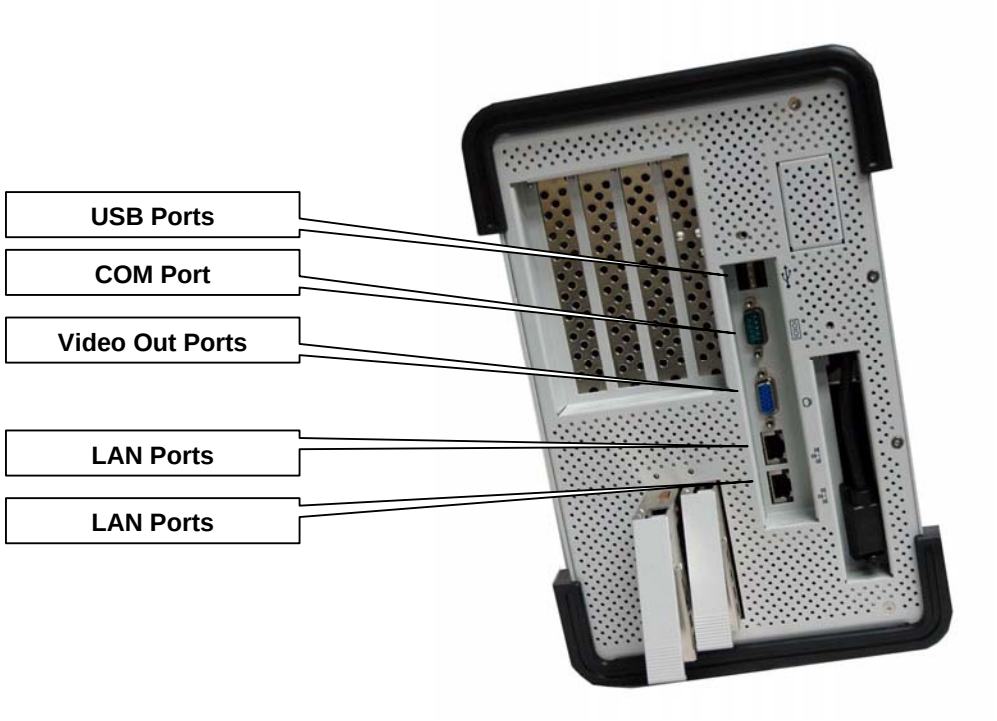
2.6 Press the round power button located on the bottom right of the chassis to power up the unit. The power button is illuminated blue when the system is OFF to help you locate it.



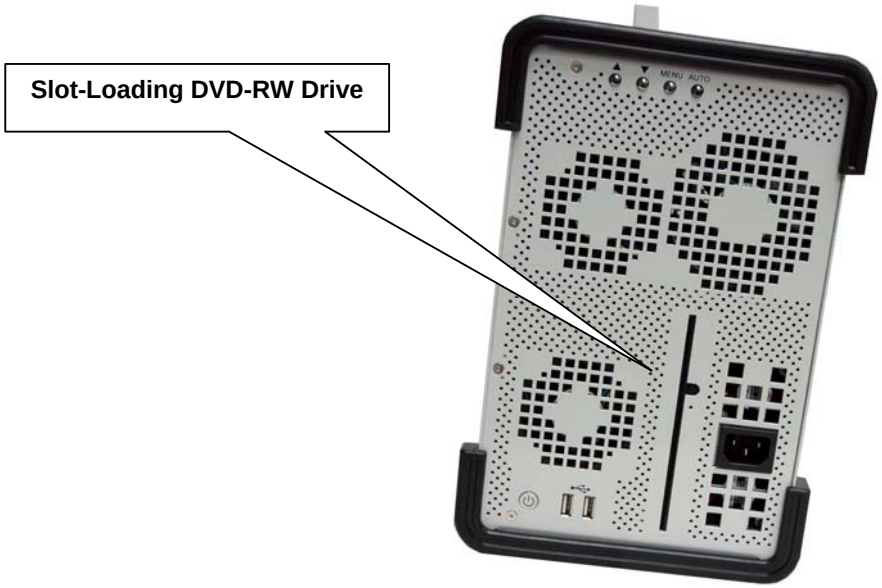
2.7 Front right side will have 1 indicator lights for Power (White) to indicate the system is ON.

2.8 Access the available expansion slots on the upper left side of the chassis. The factory installed slot is located on the lower portion of the left side.

2.9 Access the system I/O ports the middle left portion of the chassis. Available ports are USB, COM, and 2x 10/100/1000 LAN and VGA (if not used). *Keyboard and mouse connection will go through internally USB wiring to the right side



2.10 Acces the slim DVD-RW optical drive on the right side of the chassis.



2.11 Access the 2x removable SATA drive bay on the left side of the chassis. Release each by pushing the tab and release the latch and pull out. **Drive bay backplane is compatible with SAS interface, SAS controller not included

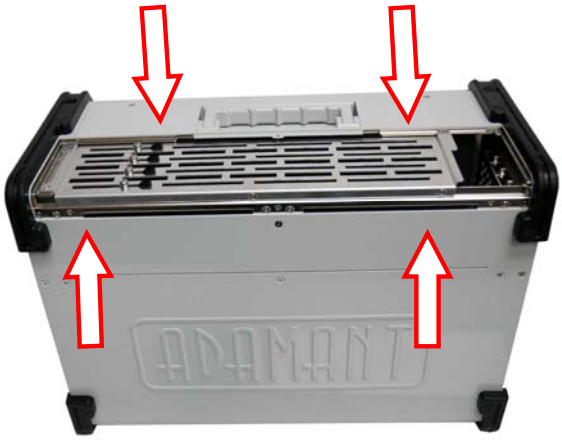
2.12 Capacitive or resistive touch screen surface act as input for the system is available as option.

3.0 Internal Hardware Access

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

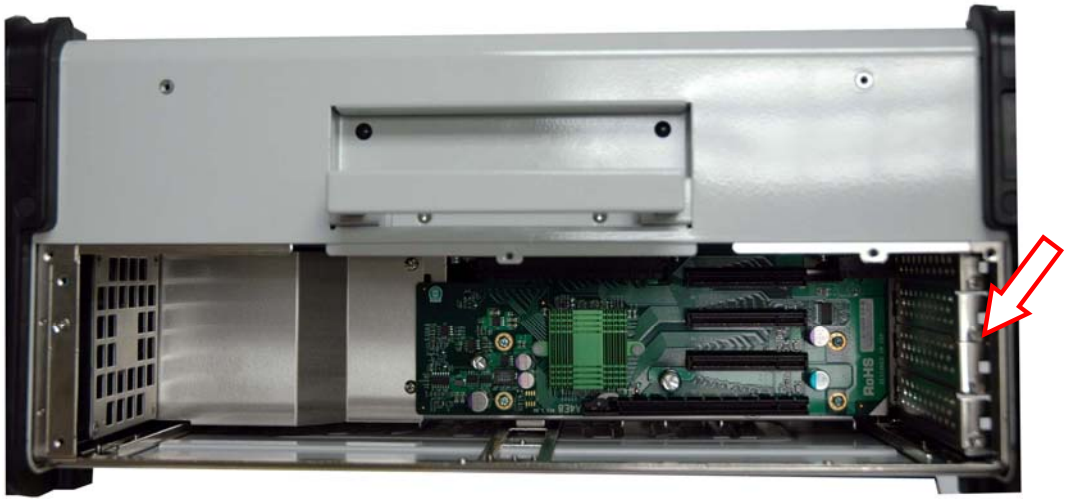
3.1 Unscrew the top 8 hex screw on the top rear portion of the chassis to remove the cover to access the expansion slots. Slide the cover toward the back to remove.

3.2 Unscrew the expansion card holder plate by removing the 4 screws from the plate to the chassis.



3.3 Once both covers are removed, you can access the internal slots (3x PCI-X + 1x PCI-E x8 for Option A, OR 4x PCI-E x8 for Option B). *Bus speed per slot is indicated on board

3.4 Install your add-in card into the appropriate slot matching the correct bus and secure the end with a screw. *4 bus slots available with 4 opening on chassis for additional mounting. **Option A Shown with PCI-e add-in cards



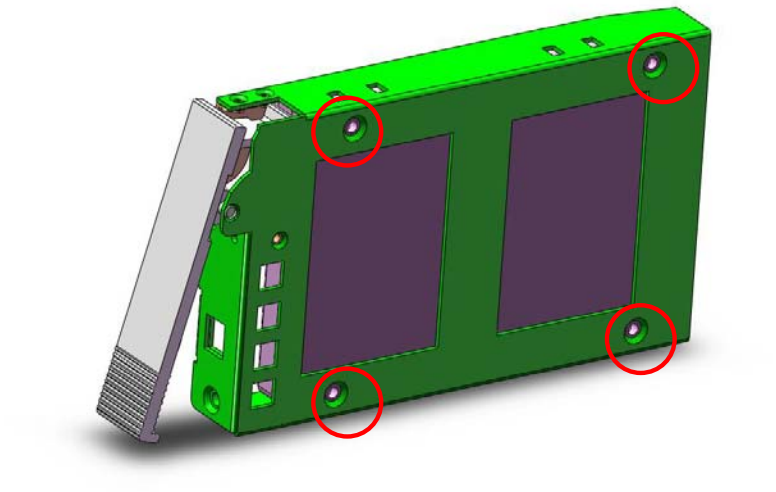
3.5 To support the add-in card, adjust the expansion card triangular holder into the appropriate length slot on the cover by removing and tightening at new location. You can loosen and slide the guide to adjust further.

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 expansion card 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 Reinstall the top chassis cover back by matching the 3 edge connector toward the front of the chassis at angle and push down while pushing 2x latches inward. It will snap into place, and secure it completely by tightening the 4x side screws.

3.9 To mount additional drives onto the removable 2.5” SATA drives cage. Remove the drives cage from the chassis as instructed with the pushing of individual tab. Mount drives and install 4 screws to secure.



3.10 Next insert the 2.5” SATA drives onto the removable kit and secure it with the correct screws to fix the drives onto cage. Reinsert the drives back into the chassis in the same orientation.

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. As in the Adamant, a copy of the Windows XP is optionally pre-installed in the machine.

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 Adamant:
You should always make sure the keyboard assembly (if available) is properly stored before transporting it. The LCD protector is recommended to be installed back to protect the LCD screen. You may transport the portable in its carrying case, or you can carry the Adamant 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 Adamant 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/Touchscreen:
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 Adamant. Make sure your power source is reliable and of proper standard. The Adamant power supply is capable of handling 100-240V and 50-60Hz. Do not use the Adamant on an already overloaded circuit.

5.5 Handling of K/B (If on model):
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 (If without protective glass):
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 (If on model):
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 on model):
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 Adamant.
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	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	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	Adamant 5100 System (A/B)	Main system unit chassis	1
9	Carrying Bag	Tow bag with wheel	1