M1920 19" Fanless Intel® Medical Station

User's Manual

Version 1.1



P/N: 4012192000110P

This page is intentionally left blank.

Revision History

Version	Release Time	Description
1.0	November 2012	Initial release
1.1	December 2013	Add Windows 8.X Driver support Revise Driver Installation illustration in
		1.4 Specifications P.4 2.1 Getting Started P.10 2.4 Driver Installation P.17 P.25

Contents

Revision History	i
Preface	vi
Copyright Notice	vi
Declaration of Conformity	vi
About This User's Manual	viii
Technical Support	viii
Important Safety Instructions	ix
Classification	x
Disposing of Your Old Product	x
Symbols Description	xi
Warranty	xii
Chapter 1 General Introduction	1
1.1 Introduction	
1.2 Packing List	
1.3 Ordering Information	
1.4 Specifications	
1.5 Overview	
1.6 Dimensions	
Chapter 2 Installation and Configuration	9
2.1 Getting Started	
2.1.1 Locating Controls and Connecting Ports	
2.1.2 Periodic Cleaning & Disinfection	
2.2 Cable Cover Kit Installation	16
2.4 Driver Installation	17
2.4.1 Microsoft .NET 4.0	
2.4.2 DirectX 9.0c	
2.4.3 Camera Codec	
2.4.4 Chipset Driver Installation	
2.4.5 Management Engine Installation	
2.4.6 Audio Driver Installation	
2.4.7 Graphics Driver Installation	
2.4.9 WiFi Driver Installation	
4.7.0 III DIIVGI III GLAII ALIOII	

2.4.10 Bluetooth Driver Installation	47
2.4.11 RFID Driver Installation (optional)	51
2.4.12 Function Keys Installation	
2.4.13 Smart Card Reader Driver Installation	56
2.4.14 Touch Screen Driver Installation	58
2.5 How to use	60
2.5.1 Function Keys	60
2.5.2 Touch Screen Calibration	64
2.5.3 PenMount Gesture	69
2.5.4 Bluetooth	
2.5.5 Smart Card Reader	74
Chapter 3 BIOS	78
3.1 BIOS Main Setup	79
3.2 Advanced Settings	
3.2.1 ACPI Settings	
3.2.2 CPU Configuration	
3.2.3 SATA Configuration	
3.2.4 AMT Configuration	87
3.2.5 USB Configuration	88
3.2.6 F81216 Secondary Super IO Configuration	89
3.3 Chipset Settings	91
3.3.1 System Agent (SA) Configuration	92
3.3.2 PCH-IO Configuration	
3.4 Boot Settings	101
3.5 Security	102
3.6 Save & Exit Options	
Appendix	105
1. Arm Kit	
1.1 Wall-mount ARM (ARM-1552M)	
1.2 Wall-mount ARM w/ Power Box (ARM-1682M)	
1.3 Ceiling-mount ARM (ARM-1752M)	
2. RF Keyboard	
2.1 Specifications	
2.2 Overview	
2.3 Function Kev	

Contents

3.	Medical Arm Mounting	113
	How to use RFID	
5.	How to use Camera	117

This page is intentionally left blank.

Copyright Notice

All Rights Reserved.

The information in this document is subject to change without prior notice in order to improve the reliability, design and function. It does not represent a commitment on the part of the manufacturer.

Under no circumstances will the manufacturer be liable for any direct, indirect, special, incidental, or consequential damages arising from the use or inability to use the product or documentation, even if advised of the possibility of such damages.

This document contains proprietary information protected by copyright. All rights are reserved. No part of this manual may be reproduced by any mechanical, electronic, or other means in any form without prior written permission of the manufacturer.

Declaration of Conformity

The CE symbol on your product indicates that it is in compliance with the directives of the Union European (EU). A Certificate of Compliance is available by contacting Technical Support.

This product has passed the CE test for environmental specifications when shielded cables are used for external wiring. We recommend the use of shielded cables. This kind of cable is available from ARBOR. Please contact your local supplier for ordering information.

FCC Class B

This device complies with Part 18 of the FCC Rules. Operation is subject to the following two conditions:

- (1)This device may not cause harmful interference, and
- (2)This device must accept any interference received, including interference that may cause undesired operation.

NOTE:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 18 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and

on, the user is encouraged to try to correct the interference by one or more of the following measures:

- -- Reorient or relocate the receiving antenna.
- -- Increase the separation between the equipment and receiver.
- -- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- -- Consult the dealer or an experienced radio/TV technician for help.

IEC 60601-1/EN60601-1/EN60601-1-2

This product complies with the system standard IEC 60601-1 Medical Electrical Equipment Part 1: General Requirements for Safety. And therefore, the product is exclusively interconnected with IEC 60601-1 certified equipment in the patient environment.

Equipment connected to the analog or digital interfaces of the unit must comply with the respective IEC standards (e.g. IEC 60601-1 for medical equipment). Furthermore all configurations shall comply with the current version of the standard for SYSTEMS IEC 60601-1-1. Everybody who connects additional equipment to the signal input part or signal output part configures a medical system, and is therefore responsible that the system complies with current version of the requirements of the system standard IEC 60601-1-1. If in doubt, consult the technical service department or your local representative.

RoHS

ARBOR Technology Corp. certifies that all components in its products are in compliance and conform to the European Union's Restriction of Use of Hazardous Substances in Electrical and Electronic Equipment (RoHS) Directive 2002/95/EC.

The above mentioned directive was published on 2/13/2003. The main purpose of the directive is to prohibit the use of lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls (PBB), and polybrominated diphenyl ethers (PBDE) in electrical and electronic products. Member states of the EU are to enforce by 7/1/2006.

ARBOR Technology Corp. hereby states that the listed products do not contain unintentional additions of lead, mercury, hex chrome, PBB or PBDB that exceed a maximum concentration value of 0.1% by weight or for cadmium exceed 0.01% by weight, per homogenous material. Homogenous material is defined as a substance or mixture of substances with uniform composition (such as solders, resins, plating, etc.). Lead-free solder is used for all terminations (Sn(96-96.5%), Aq(3.0-3.5%) and Cu(0.5%)).

SVHC / REACH

To minimize the environmental impact and take more responsibility to the earth we live, Arbor hereby confirms all products comply with the restriction of SVHC (Substances of Very High Concern) in (EC) 1907/2006 (REACH --Registration, Evaluation, Authorization, and Restriction of Chemicals) regulated by the European Union. All substances listed in SVHC < 0.1 % by weight (1000 ppm).

About This User's Manual

This user's manual provides general information and installation instructions about the product. This User's Manual is intended for experienced users and integrators with hardware knowledge of personal computers. If you are not sure about any description in this booklet. Please consult your vendor before further handling.

Technical Support

All ARBOR products are built to the most accurate specifications to ensure reliable performance in the harsh and demanding conditions typical of industrial environments. Whether your new equipment is destined for the laboratory or the factory floor, you can be assured that your product will provide the reliability and ease of operation. Your satisfaction is our primary concern. We want you to get the maximum performance from your products. So if you run into technical difficulties, we are here to help. For the most frequently asked questions, you can easily find answers in your product documentation. These answers are normally a lot more detailed than the ones we can give over the phone. So please consult this manual first. If you still cannot find the answer, gather all the information or questions that apply to your problem, and with the product close at hand, call your dealer. Our dealers are well trained and ready to give you the support you need to get the most from your products. In fact, most problems reported are minor and are able to be easily solved over the phone. We are always ready to give advice on application requirements or specific information on the installation and operation of any of our products. Please do not hesitate to call or e-mail us at:

http://www.arbor.com.tw E-mail: info@arbor.com.tw

Contact Information

Add: 10F., No.700, Zhongzheng Rd., Zhonghe Dist., New Taipei City

235, Taiwan TEL: 886-2-8226-9396

Important Safety Instructions

Read these safety instructions carefully:

- 1. Read all cautions and warnings on the equipment.
- Place this equipment on a reliable surface when installing. Dropping it or letting it fall may cause damage
- 3. Make sure the correct voltage is connected to the equipment.
- 4. For pluggable equipment, the socket outlet should be near the equipment and should be easily accessible.
- 5. Keep this equipment away from humidity.
- 6. Disconnect this equipment from the A/C outlet before cleaning it. Use a moist cloth. Do not use liquid or sprayed detergent for cleaning.
- 7. To fully disengage the power to the unit, please disconnect the power from the AC outlet.
- 8. Do not scratch or rub the screen with a hard object.
- 9. Never use any of the solvents, such as Thinner Spray-type cleaner, Wax, Benzene, Abrasive cleaner, Acid or Alkaline solvent, on the Medical Display. Harsh chemicals may cause damage to the cabinet and the touch sensor.
- 10. Remove dirt with a lightly moistened cloth and a mild solvent detergent. Then wipe the cabinet with a soft dry cloth.
- 11. The openings on the enclosure are for air convection and protect the equipment from overheating. DO NOT COVER THE OPENINGS.
- 12. Position the power cord so that people cannot step on it. Do not place anything over the power cord.
- 13. If the equipment will not be used for a long time, disconnect it from the power source to avoid damage by transient overvoltage.
- 14. Never pour any liquid into openings. This may cause fire or electrical shock.
- 15. Never open the equipment. For safety reasons, the equipment should be opened only by qualified service personnel.
- 16. If one of the following situations arises, get the equipment checked by service personnel:
 - a. The power cord or plug is damaged.
 - b. Liquid has penetrated into the equipment.
 - c. The equipment has been exposed to moisture.
 - d. The equipment does not work well, or you cannot get it to work according to the user's manual.
 - e. The equipment has been dropped or damaged.
 - f. The equipment has obvious signs of breakage.
- 17. The sound pressure level at the operator's position, according to IEC

- 704-1:1982, is no more than 70dB(A).
- 18. Keep this User's Manual for later reference.
- 19. DO NOT LEAVE THIS EQUIPMENT IN AN UNCONTROLLED ENVIRONMENT WHERE THE STORAGE TEMPERATURE IS BELOW -20° C (-4° F) OR ABOVE 60° C (140° F). THIS MAY DAMAGE THE EQUIPMENT.



E322565

UL Class II Classification: With respect to electric shock, fire and mechanical hazards only, in accordance with UL-60601-1 and CAN/CSA C22.2 No. 601.1.

Classification

- Powered by Class II power supply
- · No applied part
- Degree of protection against the ingress of water: IPX0
- Mode of operation: Continuous
- The equipment is not suitable for use in the presence of a flammable anesthetic mixture with air or nitrous oxide: Not AP or APG Category.

Disposing of Your Old Product

• Within the European Union

EU-wide legislation, as implemented in each Member State, requires that waste electrical and electronic products carrying the mark (left) must be disposed of separately from normal household waste.

Inis includes monitors and electrical accessories, such as signal cables or power cords. When you need to dispose of your display products, please follow the guidance of your local authority, or ask the shop where you purchased the product, or if applicable, follow any agreements made between yourself. The mark on electrical and electronic products only applies to the current European Union Member States.

Outside the European Union

If you wish to dispose of used electrical and electronic products outside the European Union, please contact your local authority so as to comply with the correct disposal method.

Symbols Description



This symbol of "CAUTION" indicates that there is a danger of injury to the user or a risk of damage to the product, should warning notices be disregarded.



Battery Recycle



UL Classified Certification



Compliant with ISO 13485



Safety Requirements for Medical Electrical System



Power on/off



UL Class II safety symbol



Indoor Use Only



This symbol indicates electrical warning.



Change of electric current: Internal: positive current External: negative current



Refer to the operating instructions.



Activate the menu



Activate the phone



Volume up/down



Brightness up/down

Warranty

This product is warranted to be in good working order for a period of one year from the date of purchase. Should this product fail to be in good working order at any time during this period, we will, at our option, replace or repair it at no additional charge except as set forth in the following terms. This warranty does not apply to products damaged by misuse, modifications, accident or disaster.

Vendor assumes no liability for any damages, lost profits, lost savings or any other incidental or consequential damage resulting from the use, misuse of, or inability to use this product. Vendor will not be liable for any claim made by any other related party.

Vendors disclaim all other warranties, either expressed or implied, including but not limited to implied warranties of merchantability and fitness for a particular purpose, with respect to the hardware, the accompanying product's manual(s) and written materials, and any accompanying hardware. This limited warranty gives you specific legal rights.

Return authorization must be obtained from the vendor before returned merchandise will be accepted. Authorization can be obtained by calling or faxing the vendor and requesting a Return Merchandise Authorization (RMA) number. Returned goods should always be accompanied by a clear problem description.

This page is intentionally left blank.	

This page is intentionally left blank.	

Chapter 1

General Information

1.1 Introduction

The medical station, M1920, focuses on patient care application. With built-in low power consumption Intel® Core™ i7-2610UE or Celeron® 827E Processor, fanless and streamline design, which makes it suitable for using in hospitals and clinics. Moreover, M1920, as the expert medical station, is a terminal of excellent graphic computing to support quality image preocessing for diagnosis, PACS, ultrasound and endoscopy. The 19" touch screen, self-defined function key and abundant expansions make clinicians and patients operate more conveniently. Regarding mobile communication, the M1920 can connect to WLAN, which gives it accessibility for eHealthcare medical care. Other integrated vertical application functions include 5.0 Megapixel Camera, RFID Reader, SD/SDHC slot, Dual-slot Smart Card Reader and optional Slim DVD-RW.

- Fanless Design
- Applicable for Clinical Station, Vital Sign, PACS
- Soldered Onboard Intel® Core™ i7-2610UE or Celeron® 827E Processor
- 19 inch LCD with Resistive Touch
- EN60601-1, EN60601-1-2, UL60601-1 Certified
- Streamline Appearance 59mm in Thickness
- Multi-connectivity (Bluetooth, WLAN)
- RFID Reader, 5.0 Megapixel Camera, Smartcard Reader, RF Keyboard and Slim DVD-RW
- Isolated Serial Ports, USB and LAN Ports
- Multi-expansion (3 x RS-232, 4 x USB, 2 x LAN, 1 x Displayport and 1 x SD Card)
- Intel[®] SSD Compatible

1.2 Packing List



1 x M1920





Accessory Package: 1 x User's Manual 1 x Driver DVD





1 x Power Cord (Left, French standard cordset) 1 x Power Cord (Right, American standard cordset)



1 x 90W Power Adapter

Before up and running, please make sure the package contains all of above accessories. If any of the above items is damaged or missing, contact your vendor immediately.

1.3 Ordering Information

M1920-2610UE	19" Fanless Intel® Core™ i7-2610UE Medical Station with WiFi and Bluetooth
M1920-827E	19" Fanless Intel® Celeron® 827E Medical Station with WiFi and Bluetooth

The following items are normally optional, but some vendors may include them as a standard package, or some vendors may not carry all the items.

Optional Accessories

ARM Kit Hospital Arm (refer to Appendix)

Optional Configuration (Configure to Order Service) (Not Sold Separately)



*RFKB-185x

RF Keyboard remoter (refer to Appendix) and module



RFID-1920 RFID module kit

^{*}To activate RF keyboard, you must long-press "pairing key" the first time you use it in the process of booting up for pairing keyboard and computer.



CAM-1920 5.0MP CMOS camera module kit



DVDRW-1920 Slim DVD-RW Drive module kit



HDD-1920 2.5" 320GB SATAII HDD kit



80GB SSD Intel® 2.5" 80GB SATAIII SSD kit

1.4 Specifications

System	
CPU	Intel® Core™ i7-2610UE 1.5 GHz processor Intel® Celeron® 827E 1.4 GHz processor
Graphics Controller	Intel® HD Graphics 3000 for i7-2610UE Intel® HD Graphics for 827E
Memory	4GB DDR3 SO-DIMM memory module installed
Chipset	Intel® QM67 for i7-2610UE; Intel® HM65 for 827E
Storage	32GB mSATA SSD; 2.5" 320GB SATA HDD (optional); Intel® 40GB SSD (optional)
OS Support	Windows 8 Embedded / Windows 8 Professional Windows Embedded 7 / Windows 7 Professional Windows XP Embedded / Windows XP Professional Ubuntu and Fedora Linux compliant
Peripherals & Devices	
Camera	1 x 5.0 megapixel CMOS camera with autofocus (optional)

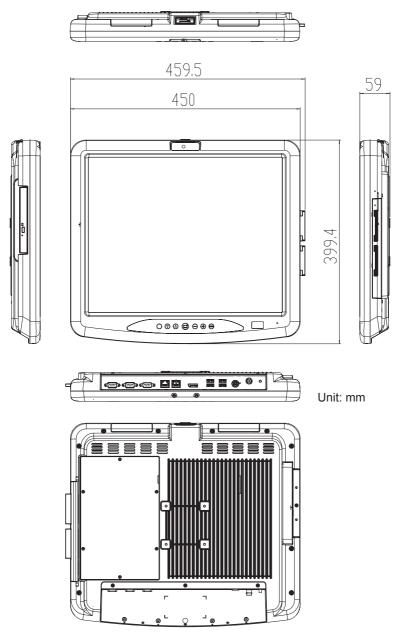
	40 FOMUL DEID
RFID	13.56MHz RFID reader with ISO 14443A/ 14443B/15693 support (optional)
WLAN	1 x Intel® Centrino® Advanced-N 6205 802.11 a/b/g/n Mini PCIe Wireless LAN card installed
Bluetooth	1 x Bluetooth 2.1 + EDR
RF Keyboard	1 x RF Keyboard (optional)
DVD-RW	1 x Slim DVD-RW (optional)
Docking Bay	For the alternative of External Battery or PCle x16 Expansion box (optional)
SD Card	1 x SD/SDHC slot
Smart Card Reader	Dual slots Smart Card Readers
I/O interface	
Audio I/O	1 x Integrated microphone, 2 x Integrated 3W speakers, 1 x Mic-in, 1 x Line-out
Video output	1 x DisplayPort
Video input	1 x SDI connector (optional)
LAN	2 x RJ45 connectors for GbE LAN with 4KV isolation
Serial Port	2 x RS-232 port with 4KV isolation, 1 x RS-232/422/485 with 4KV isolation
USB Port	4 x USB 2.0 ports 1 x USB 2.0 port with 4KV isolation (on the top)
Button & Indicator	
Function Key	1 x Menu button 1 x Touch and LCD on/off button 1 x Brightness up button 1 x Brightness down buton 1 x Voice up button 1 x Voice down button 1 x Programmable button 1 x Power on/off button
LCD Display	
Size/Type	19" TFT Active Matrix Panel
Max. Resolution	1280 x 1024 (SXGA) with 16.2M colors
Luminance	350 cd/m² (typ.)

Contrast Ratio	
	1000:1 (typ.)
Viewing Angle	+85° ~ -85° (H), +80° ~ -80°(V)
Backlight Type	LED
Touch Screen	
Туре	5 wire Analog Resistive Touch
Controller Interface	USB interface
Mechanical & Environment	tal
Operating Temp.	0 ~ 40°C (32 ~ 104°F)
Storage & Transportation Temp.	-20 ~ 60°C (-4 ~ 140°F)
Humidity	10 ~ 95% RH @ 40°C, non-condensing
Dimensions (W x D x H)	399.4 x 459.5 x 59 mm (15.72" x 18.09" x 2.32")
Gross Weight	7.5 Kg (16.53 lb)
Regulatory	CE, FCC Class B, EN60601-1, EN60601-1-2, UL60601-1 certified
Vibration	5 ~ 500Hz, 1G random operation (SSD only)
Shock	10G peak (11m/sec)
Operational Altitude	below 2000m
Power Requirement	
Adapter Input	100 ~ 240 VAC (Full Range)
Adapter Output	DC 18V, 5A, 90W with medical certificate

1.5 Overview



1.6 Dimensions



Chapter 2

Installation and Configuration

2.1 Getting Started

This chapter is intended to give users the information about how to utilize a variety of M1920's functions. To get familiar with the medical PC, take a few minutes to read this chapter.

Before installing the operating system and driver utilities, you should prepare your own USB keyboard, USB mouse, USB DVD-ROM drive, and the power adapter included in the accessory box. When the operating system on your computer is ready, use accompanying Driver DVD to install drivers and utilities for respective devices. M1920 supports Win7, Win XP and Window 8.X. The following sections will guide you through drivers and utilities installation step by step.

Before installing the drivers (and utilities), prepare the following:

1. a USB keyboard



2. a USB DVD-ROM drive



a USB Mouse



2.1.1 Locating Controls and Connecting Ports

Refer to below illustration for locations of I/O ports, function buttons and the external battery.

Front View



Function Keys (default) Description:

Programmable Button: set self-defined function **Volume Up/Down**: adjusts the volume up or down

Brightness Up/Down: adjust the brightness of the screen up or down

Menu: access to the Menu

Power On/Off: the power button to turn on/off the PC (must hold the

button for about 2 seconds)

Screen On/Off: used to turn on/off screen but the system itself is not influenced

Rear Side

The rear side contains one power jack, one LAN port and one USB port.

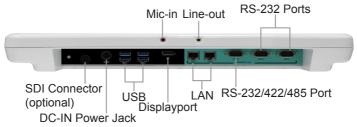


Warning:

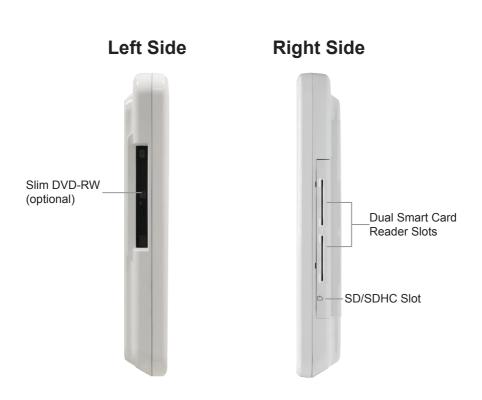
The aluminum plate on the rear panel is highly heated when the medical PC is operating. DO NOT touch it during operating.

*The temperature will reach up to 60°C.

Bottom Side



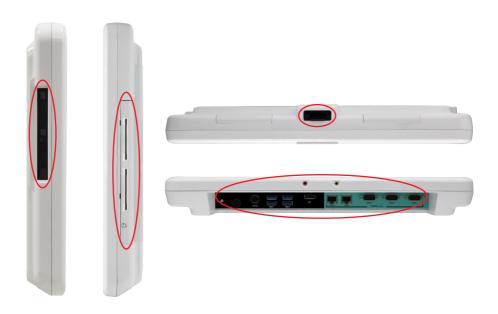




2.1.2 Periodic Cleaning & Disinfection

M1920 is generally employed in medical environment, for example, hospitals, as expert medical station. It is strongly recommended that users follow the cleaning and disinfection instructions described below to ensure proper maintenance activities.

- 1. Always power off your unit first when you clean or disinfect it.
- 2. To wipe the outer case, use lint-free cloth, lightly moistened with warm water and a mild, non-abrasive cleaning solution made of either:
 - 70% isopropyl alcohol
 - 10% bleach solution
 - Dimethyl ethylbenzyl ammonium chlorides 0.125%, dimethyl benzyl ammonium chlorides 0.125%, Isopropyl alcohol 14.850% (Sani-Cloth®)
 - Isopropanol 17.2%; Diisobutylphenoxyethyl dimethyl bezyl ammonium chlorides 0.28% (CaviCide®)
- 3. The touch screen can be wiped down (e.g. to remove fingerprints) during operation while powered on using standard computer screen solution.
- 4. Use dry cloth to clean the rear panel and bottom, especially the areas around the connectors.



Caution:

- Do not spill liquids on or around the medical PC.
- Do not use other solutions than the ones mentioned above.
- Do not touch, press or rub the display panel with abrasive cleaning compounds, instruments, brushes, or rough-surface materials.
- Never spray cleaning liquids or foam onto the medical PC or soak it for cleaning.
- Do not use solvents to clean the unit.
- Do not clean, disinfect, or sterilize any part of the system by autoclaving or with the use of ethylene oxide gas; doing so may damage the unit.
- Never spray or squirt any type of liquid onto the medical PC; if a spray, gel
 or foam is needed, spray the liquid onto a cloth and then use the cloth to
 wipe or rub down the component.
- Always avoid contamination to minimize the need for disinfectants.
- Do not spill, spray, or squirt liquids to the power block and the power cable.

2.2 Cable Cover Kit Installation

Cable cover kit included in accessory kit is used to cover input/output interface at the bottom, lock it as illustration below.





2.4 Driver Installation

Before installing drivers, you must make sure operating system (in this case, Windows 7) is installed correctly. The following instructions are based on Windows 7 system. Different OS, like Windows XP, may differ somewhat, but they are almost the same.

After you put the disk into DVD-ROM drive, the driver & utility installation main menu will jump out automatically as follows, or you may execute *autorun. exe* manually. Select *Utilities* before entering *Win7 Driver Install* to install necessary program for drivers. Remember, always choose *Yes* whenever system asks, "Do you want to allow the following program to make changes to this computer?"



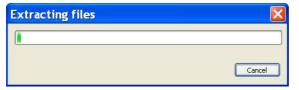


Note: AHCI under *Utilities* is used in the process of reinstalling OS while *SATA Mode Selection* is set as *AHCI* in BIOS (See Section 3.2.3). Ignore them if you don't want to install OS manually.

2.4.1 Microsoft .NET 4.0

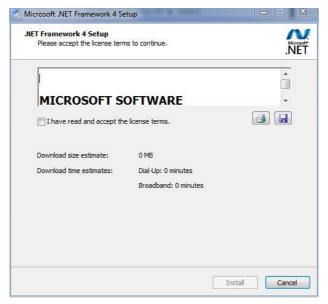
Caution: If your OS is **Windows XP 64 bit**, please install **Windows Imaging Component 64-bit** in advance before install **.Net 4.0 Framework**.

 Click Microsoft .NET 4.0 on the main menu under Utilities to install the necessary program for function keys driver. After that, a window will jump out immediately. Wait for extracting files.

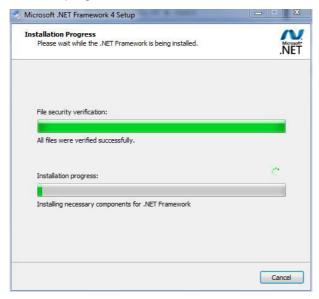




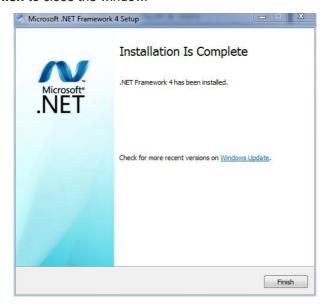
2. Read license terms, check "I have read and accept the license terms." and then click Install.



3. Wait for installation progress.



4. Click Finish to close the window.

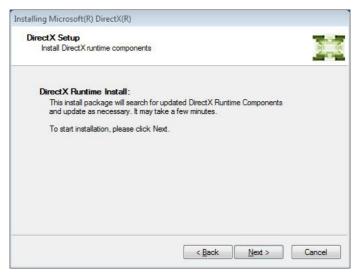


2.4.2 DirectX 9.0c

 Click *DirectX 9.0c* on the main menu under *Utilities* to install the necessary program for function VGA & chipset. After that, a window will jump out immediately. Choose "*I accept the agreement*" and click *Next>*.



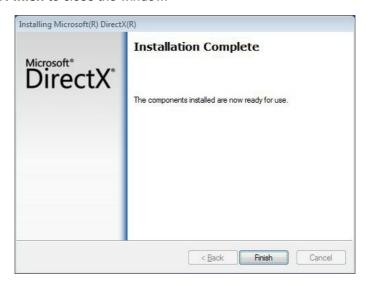
2. Read the information, and click Next>.



3. Wait for a while.

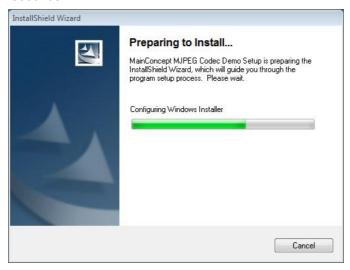


4. Click *Finish* to close the window.



2.4.3 Camera Codec

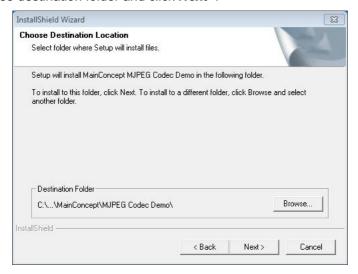
1. Click *Camera Codec* on the main menu under *Utilities* to install the necessary program for ccd. After that, a window will jump out immediately. Wait for seconds.



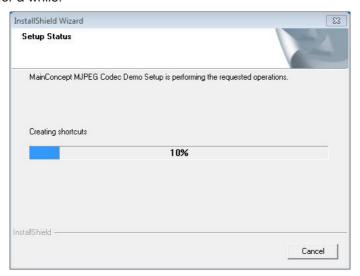
2. Read the information, and click Next>.



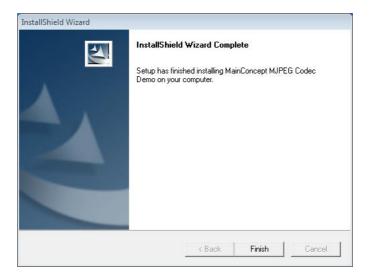
3. Choose destination folder and click Next>.



4. Wait for a while.



5. Click Finish to close the window.



2.4.4 Chipset Driver Installation

Now, back to upper level and select *Win7 Driver Install*. Still, always choose **Yes** whenever system asks, "Do you want to allow the following program to make changes to this computer?" Click *Chipset*.





1. Click Next> to continue.



2. Read License Agreement and click Yes to continue.



3. Read Readme File Information and click **Next>** to continue.



4. Click *Finish* to close the window.

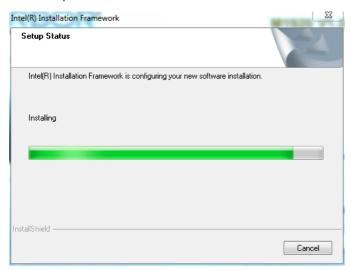




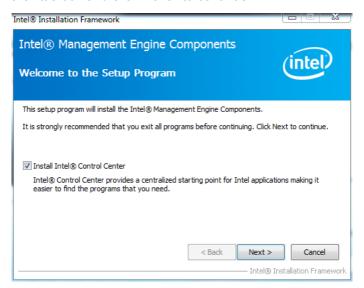
After chipset driver is installed, USB2.0 can be correctly recognized and SDHC/SD card slot is activated, too. However, when SDHC/SD card is removed from its slot, you have to reboot the system to reuse the device again.

2.4.5 Management Engine Installation

1. Click *Management Engine* of the main menu to install the driver for chipset, too. Wait for the process.



2. Check the little box and click *Next>* to continue.



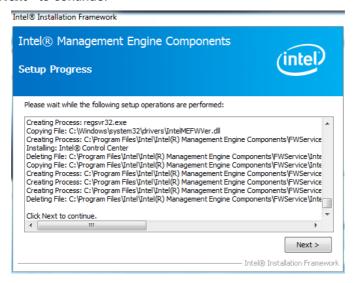
3. Read License Agreement and click Yes to continue.



4. Check the little box and click *Install*.



5. Click **Next>** to continue.

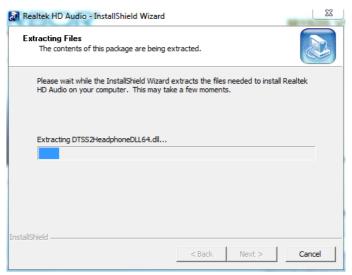


Choose Yes to reboot computer.

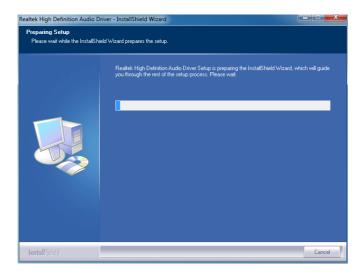


2.4.6 Audio Driver Installation

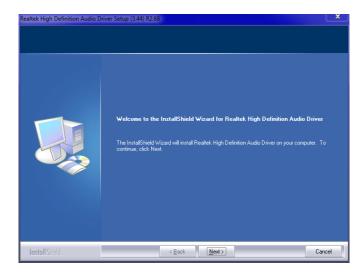
1. Click *Audio* of the main menu to install the audio device's driver. Please wait for a short while to initiate the installation.



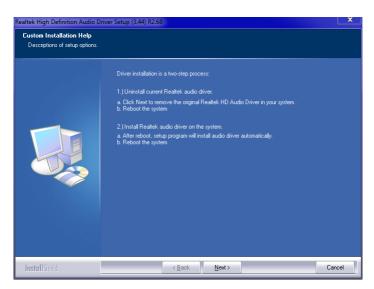
2. Wait.



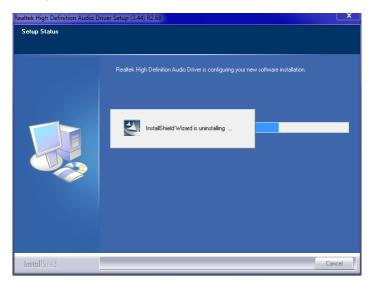
3. Click Next to continue.



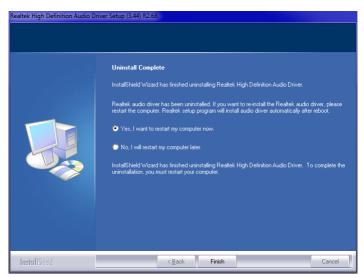
4. Click Next to continue.



Wait for the process.



6. After installing the audio device driver, you will be asked if you would like to restart the computer. It is required to select "Yes, I want to restart my computer now." in order to make sure the program will run properly. Then, click Finish to proceed.







While using the medical PC to record, make sure *Listen to this device* this option is not checked to avoid echo in recording file.

2.4.7 Graphics Driver Installation

1. Click *Graphic (32bit)* (for Win7-32bit or 64bit for 64bit) of the main menu to install the device driver. Check the box and then click *Next* to continue.



2. Please read the license agreement and click Yes to continue.



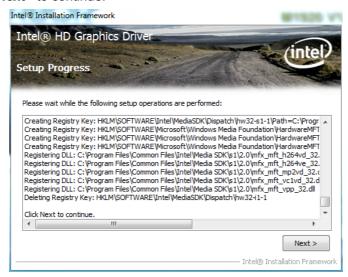
3. Please read the Readme File for system requirements and installation information, and click *Next>* to continue.



4. Wait for the process.



5. Click **Next>** to continue.

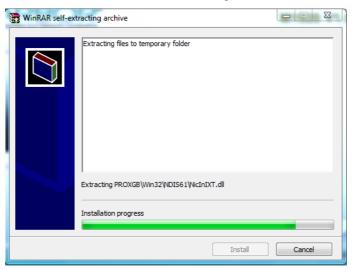


 After installing the graphics device's driver, click *Finish* with *Yes* radio button selected to restart your computer to have the changes take effect, or with *No* to restart this computer later.

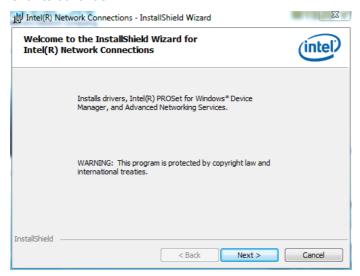


2.4.8 LAN Driver Installation

1. Click *LAN* (32bit) (for Win7-32bit or 64bit for 64bit) of the main menu to install LAN device's driver. Wait for extracting.



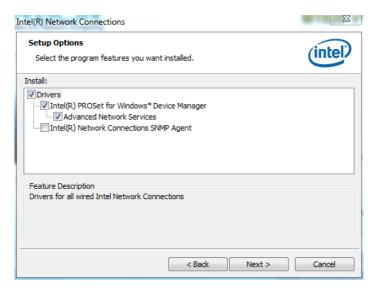
2. Click Next> to continue.



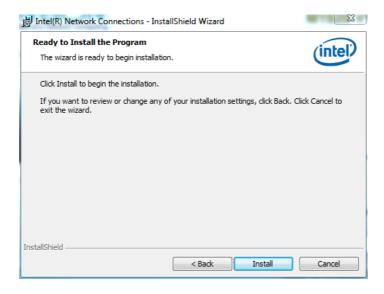
3. Accept the terms and click Next> to continue.



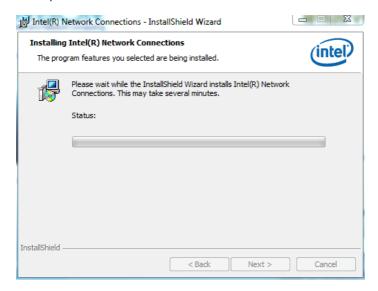
4. Click Next> to continue.



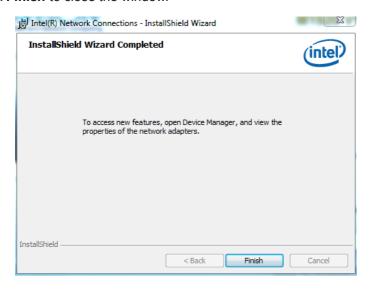
5. Click Install.



6. Wait for the process.

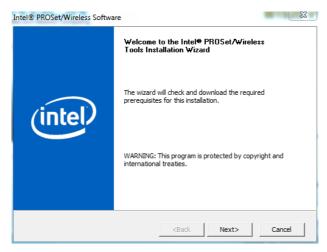


7. Click *Finish* to close the window.

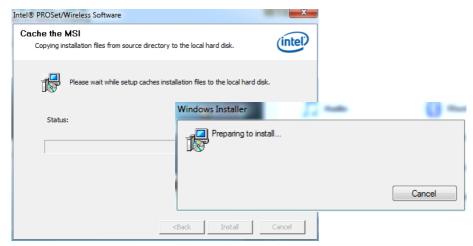


2.4.9 WiFi Driver Installation

1. Click *WiFi* (32bit) (for Win7-32bit or 64bit for 64bit) of the main menu to install the driver for WiFi. Click *Next>* to continue.



2. Wait for the process.



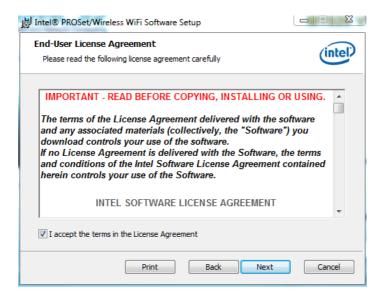
3. Keep waiting.



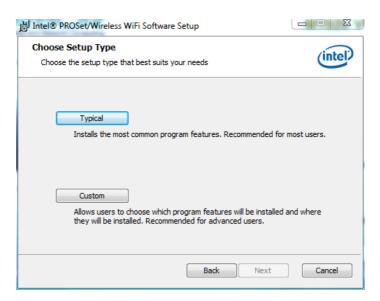
4. Click Next> to continue.



5. Check the box and click **Next>** to continue.



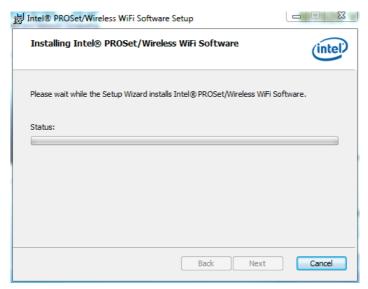
6. Select Typical.



7. Click Install to continue.



8. Wait for the process.



9. Click Finish to close the window.

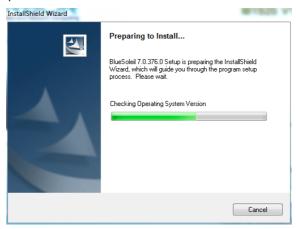


2.4.10 Bluetooth Driver Installation

1. Click *Bluetooth* of the main menu to install the driver for WiFi. Set language.



2. Wait for the process.



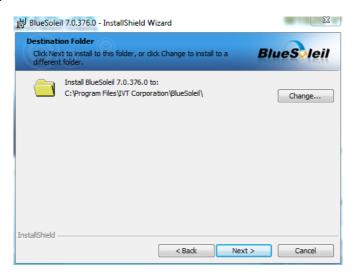
3. Click Next> to continue.



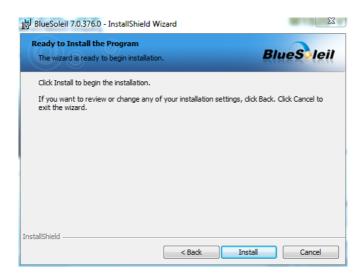
4. Please read the license agreement first; select *I accept the terms in the license agreement* and then click *Next>* to continue.



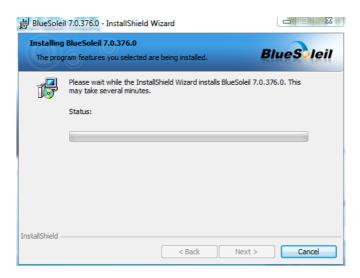
Click Next> to install to this folder, or click Change to install to a different folder.



6. Click *Install* to start installation, or click *Back* to go back to the previous step.



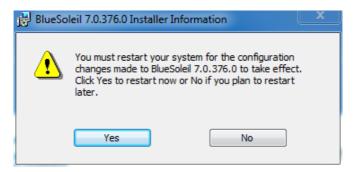
7. Wait for the process.



8. Click *Finish* to complete installation.



9. Decide whether you want to reboot right now.

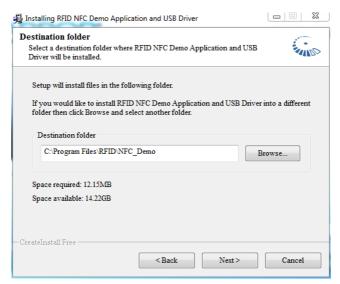


2.4.11 RFID Driver Installation (optional)

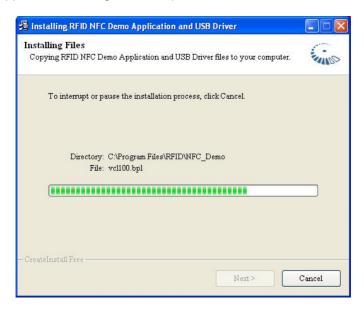
 Click RFID of the main menu to install the driver for RFID. Read the information and then click Next> to continue.



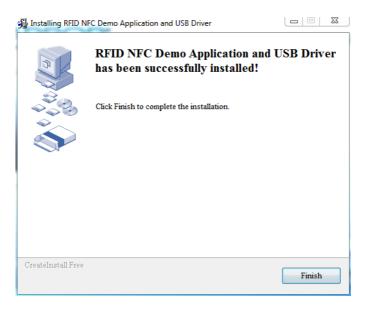
Click Next> to install in this folder, or click Browse to install in a different folder.



3. The application is being installed, please wait for a while.

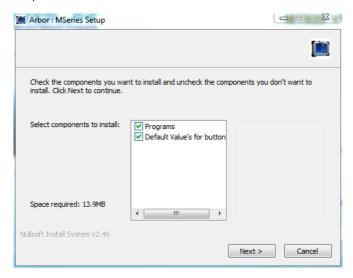


4. Click *Finish* to complete the installation.

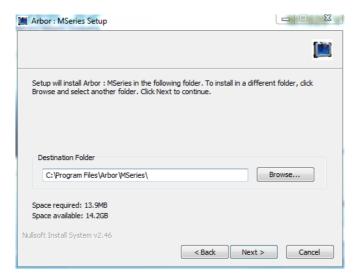


2.4.12 Function Keys Installation

1. Click *Function Keys* of the main menu to install the function key utility. Select components to install and click *Next*>.



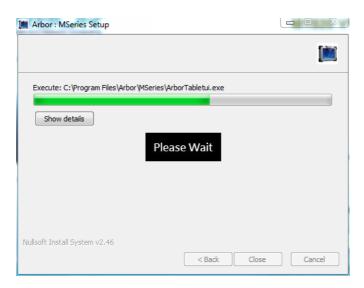
2. Set destination folder and click Next>.



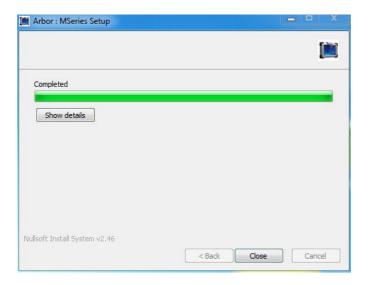
3. Click Install to continue.



4. Wait for the process.

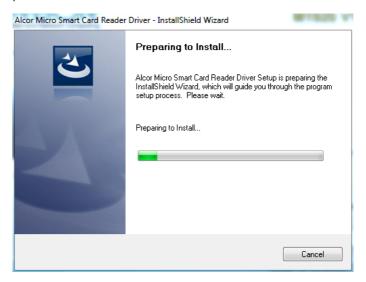


5. Click **Close** to finish installation.

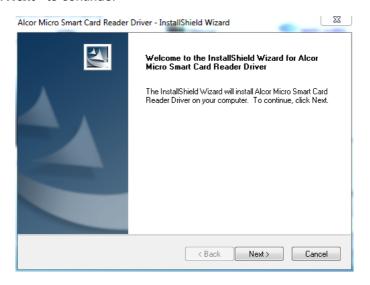


2.4.13 Smart Card Reader Driver Installation

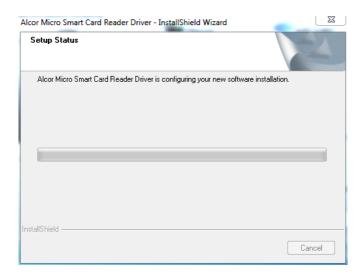
1. Click **Smart Card** of the main menu to install the driver for smart card. Wait for the process.



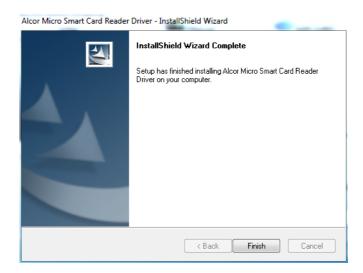
2. Click Next> to continue.



3. Wait for the process.

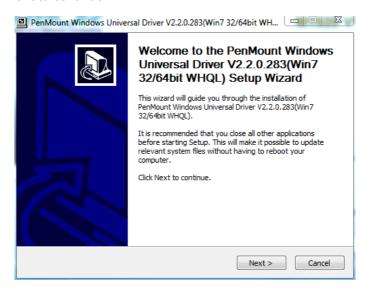


4. Click Finish to close the window.

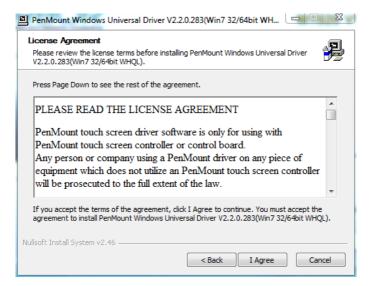


2.4.14 Touch Screen Driver Installation

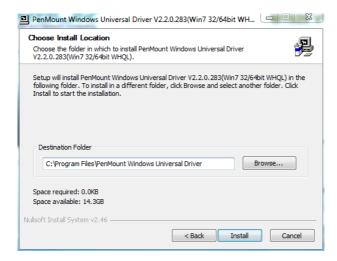
Click *Touch Screen* of the main menu to install the driver for touch screen.
 Click *Next* to continue.



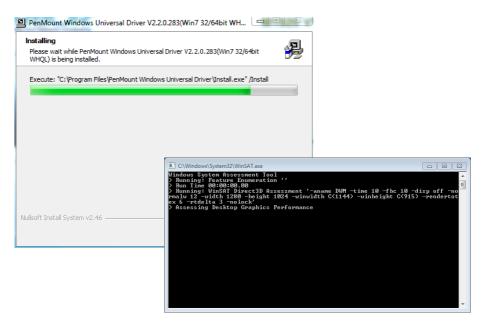
2. Read License Agreement and click *I Accept* to continue.



3. Set destination and click Install.



4. Wait for the process.



5. Choose reboot and click *Finish*.

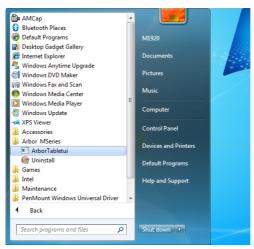


2.5 How to use

Once you have installed all drivers, you have right to use few useful applications. The following sections provide a brief instruction of how to use them..

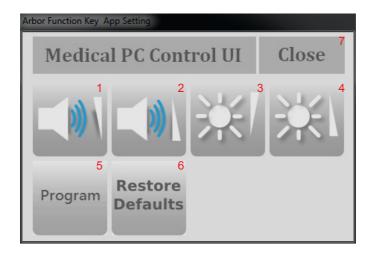
2.5.1 Function Keys

 Press Menu button on front panel (refer to Section 2.1.1 for its position) to activate the program, or activate it from *All Programs*. Click *ArborTabletui*.



2. An icon will appear in system tray immediately. Right-click the icon and select **Show** to call function key's program. Each symbol's function is listed below:



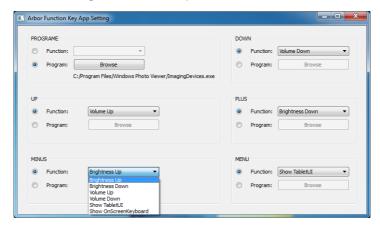


1	volume down
2	volume up
3	brightness down
4	brightness up
5	self-define program or function
6	restore defaults
7	close the window

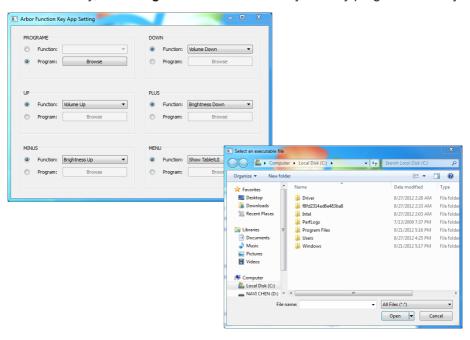
3. To be more precise, pressing Program on previous illustration allows you to change function key's default setting or designate specific program for P button on front panel. You may also choose **Set Function Keys** to display the same window as below.



4. Click inverted triangle to extend drop-down menu and choose new function.



5. Alternatively, click *Program* to set Function Keys as any program's hot key.



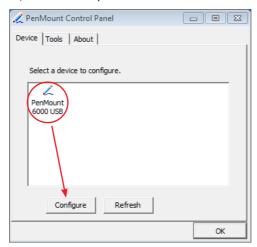
2.5.2 Touch Screen Calibration

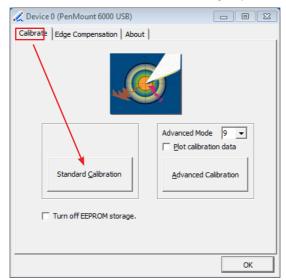
1. After installing the touch screen driver, a set of shortcuts will be generated in *All Programs*. Please click *PenMount Control Panel*.





2. The program consists of 3 tabs. The left one is **Device**, in it, you can find how many devices are detected in your system. Select one device icon and tap **Configure**, or double tap the device icon for touch screen calibration.





3. And then another window with **Calibrate** tab will jump out.

Device Calibration Dialog

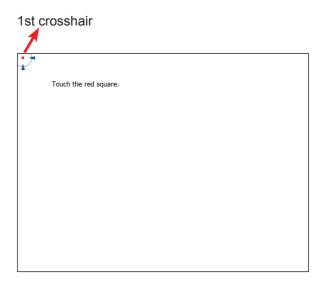
A. The Calibrate Tab

This function offers two ways to calibrate your touch screen. 'Standard Calibration' adjusts most touch screens while 'Advanced Calibration' adjusts aging touch screens.

a. Standard Calibration

The Standard Calibration function lets you match the touch screen to your display so that the point you touch is accurately tracked on screen. Standard Calibration only requires four points for calibration and one point for confirmation. Under normal circumstance, Standard Calibration is all you need to perform an accurate calibration.

- 1) Please tap the Standard Calibration button to start calibration procedures.
- 2) After that, the 1st crosshair will appear on white screen. Use your finger or stylus to touch the red center and hold down until the screen shows the message - "Lift off to proceed".
- 3) The 2nd crosshair follows immediately. Do the process again. After the fifth red point calibration is complete, the program will jump out automatically, or you may press ESC key to quit it during calibration process. Alternatively, doing nothing for a while equates to pressing ESC.



b. Advanced Calibration

The Advanced Calibration function improves the accuracy of calibration by using more involved engineering calculations. Use this function only if you have tried the Standard Calibration and there is still a discrepancy in the way the touch screen maps to the display. You can choose 9, 16 or 25 points to calibrate, though we suggest that you first try 9 points, if it is still not tracking well then try 16 or 25 points. The more points you use for calibration, the greater the accuracy is. Errors in calibration may occur due to viewing angle, or individual skill, and there may be little difference in using 16 or 25 points. Note that a stylus is recommended for most accurate results.

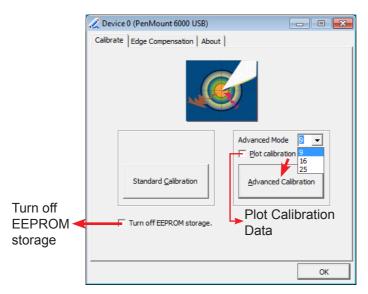
Plot Calibration Data

Check this function to have touch panel linearity comparison graph appear when you finish Advanced Calibration. The black lines reflect the ideal linearity assumed by PenMount's application program while the blue lines show the approximate linearity calculated by PenMount's application program as the result of user's execution of Advance Calibration.

Turn off EEPROM storage

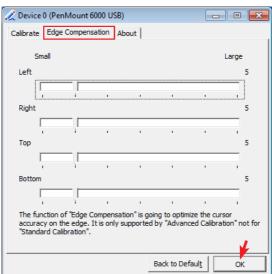
Tick this function to disable the write-in of calibration data in Controller.

Please tap the Advanced Calibration button to start calibration procedures and do the rest as explained in Standard Calibration.

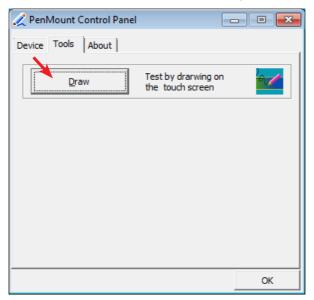


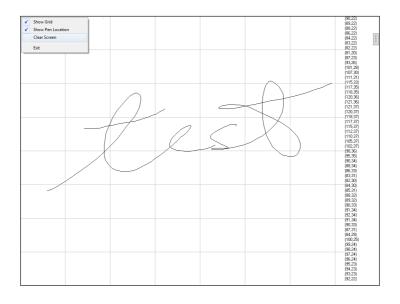
B. The Edge Compensation Tab

Under the same level where you calibrate your screen, you may find the tab. This tab is the edge compensation settings for the advanced calibration. You can adjust the settings from 0 to 30 for accommodating the difference of each touch panel.



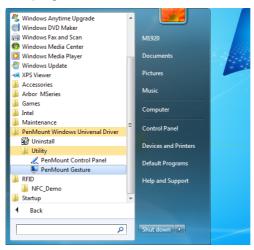
3. Press **OK** to close former window and back to upper level. As mentioned before, the program consists of 3 tabs and the central one is **Tool**, switch to it and click **Draw** to test PenMount touch screen operation.





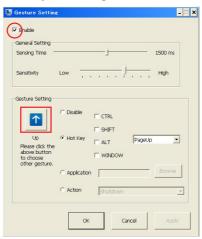
2.5.3 PenMount Gesture

1. Now that this medical PC supports touchscreen function, you may take advantage of that to set hotkey or do other settings. Single-click a small icon like a monitor in system tray. If it's absent, you can recall it from *All Programs*. The default setting is inactive, so you need to click *Gesture Setting* to start the program.

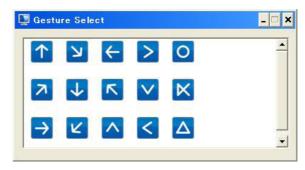




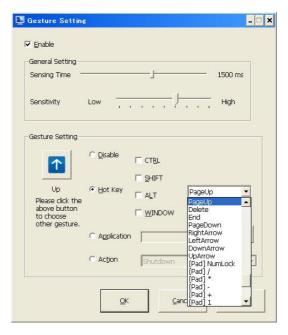
2. Check "Enable" and click the upward arrow in red square. You may also disable gesture function by canceling "Enable" box.

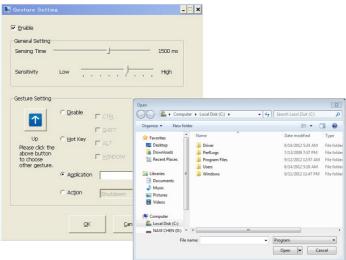


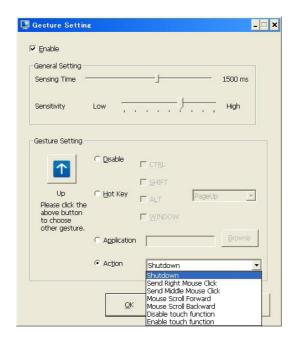
3. And then another Gesture Select window will pop up. Each mark in this menu represents your gesture on screen. For example, the upward arrow indicates that you move your finger across the touch screen from bottom to top. The rest are similar. You may use your gesture applied on the touchscreen to do further configuration. Select a gesture you would like to define.

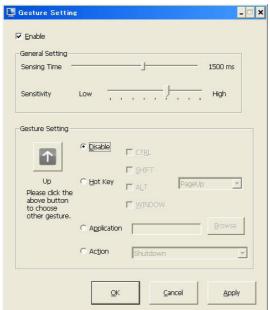


4. Then again, choose *Hot Key*, *Action* or *Application* to set each gesture's corresponding function. You may disable respective gesture, too. And remember to press *Apply* after all.









2.5.4 Bluetooth

1. In addition to the above, the medical PC supports Bluetooth as well. Once everything is installed, click the program icon named *Bluetooth Places* on desktop to turn on its application.

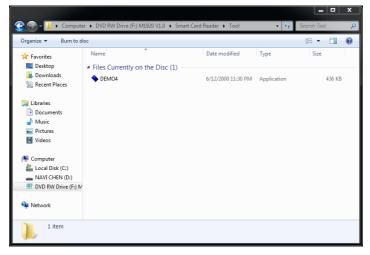


 Double-click the central golden ball to start/stop searching for surrounding Bluetooth devices. Wait for seconds. If any device around this PC is detected, its icon will appear around the central ball. Drag scrollbar to show more Bluetooth devices. Click any detected item and upper icons to execute further operation.



2.5.5 Smart Card Reader

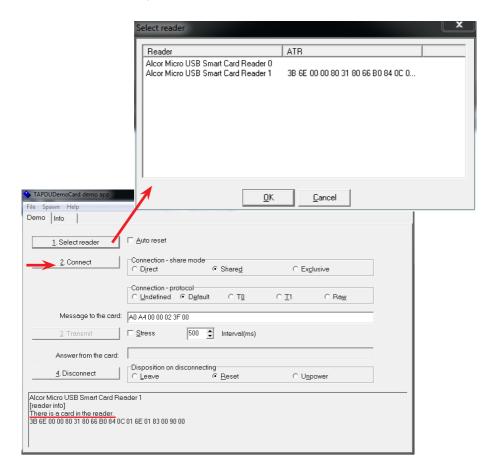
 You may install your own Smart Card Reader application; however, our driver DVD incorporates a program to test this device. Please execute DEMO4.exe from the following path: disk drive\Smart Card Reader\Tool



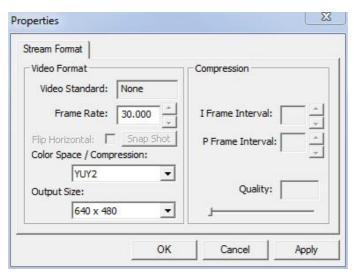
2. Insert a smart card into upper reader (Refer to Section 2.1.1 Right Side). Make sure the chip facing towards you.



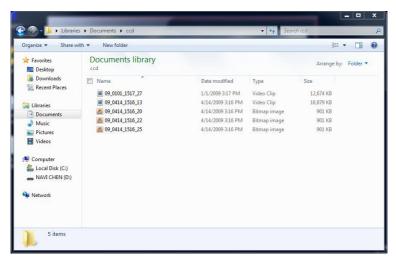
3. Click Select reader. A sub-window will jump out to ask which reader you want to test. Select Reader 1. Reader 0 represents the upper reader. Click OK to close the sub-window. Then, click Connect. If Reader 1 successfully detects smart card, its information will be shown in box below.



3. Press Set Format to set further video format.



 Press Record Film or Take Picture icon to execute these works. Files are saved under ccd folder in Documents.



This page is intentionally left blank.			

Chapter 3

BIOS

3.1 BIOS Main Setup

The AMI BIOS provides a Setup utility program for specifying the system configurations and settings. The BIOS RAM of the system stores the Setup utility and configurations. When you turn on the computer, the AMI BIOS is immediately activated. To enter the BIOS SETUP UTILITY, press "Delete" once the power is turned on. When the computer is shut down, the battery on the motherboard supplies the power for BIOS RAM.

The **Main Setup** screen lists the following information:

Aptio Setup Utility - Copyright (C) 2010 American Megatrends, Inc. Main Advanced Chipset Boot Security Save & Exit			
BIOS Information BIOS Vendor Core Version Compliency BIOS version Build Date and Time	American Megatrends 4.6.4.0 UEFI 2.1 M1920 0.14 08/09/2012 19:09:36	Set the Date. Use Tab to switch between Date elements.	
System Date System Time Access Level	[Tue 09/25/2012] [17:38:10] Administrator	→←: Select Screen ↓↑: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F9: Optimized Defaults F10: Save and Exit ESC: Exit	

Setting Description

BIOS Information

BIOS Vendor displays vendor name

Core Version displays current core version information

Compliency displays compliant format

BIOS Version displays current BIOS version information

Build Date and Time the date that the BIOS version was made/updated

Version 2.10.1208. Copyright (c) 2010 American Megatrendes, Inc.

EC Version	displays current EC version information	
System Time	Set the system time. The time format is: Hour: 00 to 23 Minute: 00 to 59 Second: 00 to 59	
System Date	Set the system date. Note that the 'Day' automatically changes when you set the date. The date format is: Day: Sun to Sat Month: 1 to 12 Date: 1 to 31 Year: 1998 to 2099	

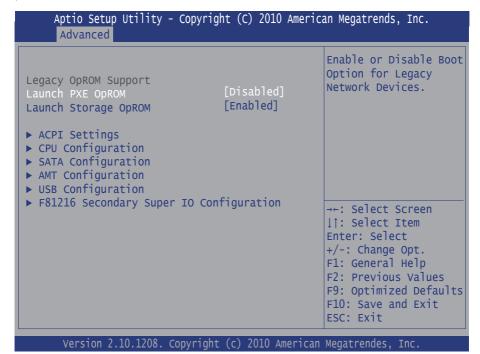
Key Commands

BIOS Setup Utility is mainly a key-based navigation interface. Please refer to the following key command instructions for navigation process.

Keystroke	Function	
∢ ►	Move to highlight a particular configuration screen from the top menu bar / Move to highlight items on the screen	
▼ ▲	Move to highlight previous/next item	
Enter	Select and access a setup item/field	
Esc	On the Main Menu – Quit the setup and not save changes into CMOS (a message screen will display and ask you to select "OK" or "Cancel" for exiting and discarding changes. Use "←" and "→" to select and press "Enter" to confirm) On the Sub Menu – Exit current page and return to main menu	
Page Up / +	Increase the numeric value on a selected setup item / make change	
Page Down - Decrease the numeric value on a selected setup i make change		
F1 Activate "General Help" screen		
F10	Save the changes that have been made in the setup and exit. (a message screen will display and ask you to select "OK" or "Cancel" for exiting and saving changes. Use "←" and "→" to select and press "Enter" to confirm)	

3.2 Advanced Settings

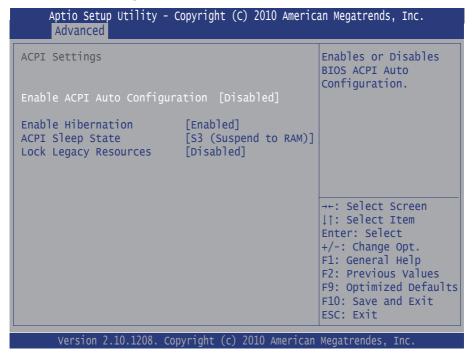
The "Advanced" setting page provides you the options to configure the details of your hardware, such as ACPI, CPU, SATA, AMT, USB and Secondary Super IO.



Setting	Description
Launch PXE OpROM	Enable or Disable (default) boot option for legacy network devices.
Launch Storage OpROM	Enable (default) or Disable boot option for legacy mass storage devices with Option ROM.
ACPI Settings	See Section 3.2.1
CPU Configuration	See Section 3.2.2
SATA Configuration	See Section 3.2.3

AMT Configuration	See Section 3.2.4
USB Configuration	See Section 3.2.5
Second Super IO Configuration	See Section 3.2.6

3.2.1 ACPI Settings



Setting	Description
Enable ACPI Auto Configuration	Enable or Disable (default) BIOS ACPI Auto Configuration.
Enable Hibernation	Enable (default) or Disable system ability to hibernation (OS/S4 Sleep State). This option may be not effective with some OS.

ACPI Sleep State	Select the highest ACPI sleep state the system will enter when the SUSPEND button is pressed. Detions: S1 (CPU Stop Clock), S3 (Suspend to RAM) (default) and Suspend Disabled.
Lock Legacy Re- sources	Enable or Disable (default) Lock of Legacy Resources

3.2.2 CPU Configuration

Aptio Setup Utility - Copyright Advanced	(C) 2010 Americ	an Megatrends, Inc.
CPU Configuration Intel(R) Core(TM) i7-2610UE CPU @ Processor Stepping	1.50GHz 206a7	
Microcode Revision Max Processor Speed Min Processor Speed Processor Speed Processor Cores Intel HT Technology EMT64	15 1500 MHZ 800 MHZ 1500 MHZ 2 Supported Supported	→+: Select Screen ↑: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F9: Optimized Defaults F10: Save and Exit ESC: Exit
Version 2.10.1208. Copyright (c) 2010 American	Megatrendes, Inc.

3.2.3 SATA Configuration

Aptio Setup Utility - Copyright (C) 2010 American Megatrends, Inc. Advanced Enable or Disable SATA [AHCI] SATA Mode Selection Device. [Enabled] Aggressive LPM Support ▶ Software Feature Mask Configuration Serial ATA Port 1 **Empty** Unknown Software Preserve [Enabled] Port 1 [Disabled] Hot Plug [Disabled] External SATA [Hard Disk Driver] SATA Device Type →←: Select Screen Spin Up Device [Disabled] |↑: Select Item Serial ATA Port 2 Empty Enter: Select Software Preserve Unknown +/-: Change Opt. [Enabled] Port 2 F1: General Help [Disabled] Hot Plua F2: Previous Values [Disabled] External SATA F9: Optimized Defaults SATA Device Type [Hard Disk Driver] F10: Save and Exit Spin Up Device [Disabled] ESC: Exit UGBA24IA32HOT1 (32.3G Serial ATA Port 3 NOT SUPPORTED Software Preserve [Enabled] Port 3 [Disabled] Hot Plug [Disabled] External SATA [Hard Disk Driver] SATA Device Type [Disabled] Spin Up Device Serial ATA Port 4 **Empty** Software Preserve Unknown [Enabled] Port 4 Hot Plua [Disabled] [Disabled] External SATA [Hard Disk Driver] SATA Device Type Spin Up Device [Disabled]

Version 2.10.1208. Copyright (c) 2010 American Megatrendes, Inc.

Setting	Description	
SATA Controller(s)	Enable (default) or Disable SATA device.	
SATA Mode Selection	Determines how SATA controller(s) operate. Options: IDE and AHCI (default).	
Aggressive LPM Support	Enable (default) or Disable PCH to aggressively enter link power state.	
Software Feature Mask Configuration	See Software Feature Mask Configuration tab	
Port 1-4	Enable (default) or Disable SATA Port	
Hot Plug	Designates this port as Hot Pluggable. Options: Enabled and Disabled (default).	
External SATA	Enable or Disable (default) external SATA support.	
SATA Device Type	Identify the SATA port is connected to Solid State Drive or Hard Dish Drive (default).	
Spin Up Device	On an edge detect from 0 to 1, the PCH starts a COMRESET initialization sequence to the device. • Options: Enabled and Disabled (default).	

Software Feature Mask Configuration

Aptio Setup Utility - Copyright (C) 2010 American Megatrends, Inc. Advanced			
RAIDO RAID1 RAID10 RAID5 Intel Rapid Recovery Technology OROM UI and BANNER HDD Unlock LED Locate IRRT Only on eSATA	[Enabled] [Enabled] [Enabled] [Enabled] [Enabled] [Enabled] [Enabled] [Enabled]	Enable or disable RAIDO feature.	
		→-: Select Screen ↑: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F9: Optimized Defaults F10: Save and Exit ESC: Exit	

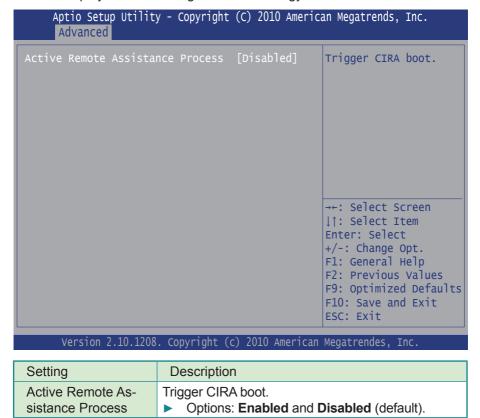
Varsion 2 10	1208 Con	vright (c)	2010 America	n Megatrendes. Inc.

Setting	Description
RAID0/1/10/5	Enable (default) or Disable RAID0/1/10/5 feature.
Intel Rapid Recovery Technology	Enable (default) or Disable Intel Rapid Recovery Technology.
OROM UI and BAN- NER	If enabled, then the OROM UI is shown. Otherwise, no OROM banner or information will be displayed if all disks and RAID volumes are Normal. Options: Enabled (default) and Disabled.
HDD Unlock	If enabled, indicates that the HDD password unlock in the OS is enabled. Options: Enabled (default) and Disabled.
LED Locate	If enabled, indicates that the LED/SGPIO hardware is attached and ping to locate feature is enabled on the OS. Options: Enabled (default) and Disabled.

	If enabled, then only IRRT volumes can span internal and eSATA drives. If disabled, then any RAID volume		
IRRT Only on eSATA	can span internal and eSATA drives. Options: Enabled (default) and Disabled.		

3.2.4 AMT Configuration

The tab displays Active Management Technology Parameters.



3.2.5 USB Configuration

Aptio Setup Utility - Copyright (C) 2010 American Megatrends, Inc. Advanced **USB** Configuration Enables Legacy USB support. AUTO option disables legacy USB Devices: support if no USB 1 Drive, 1 Keyboard, 2 Mice, 6 Hubs devices are connected. DISABLE option will keep USB devices Legacy USB Support available only for EFI EHCI Hand-off applications. USB Beep Switch [Disabled] [Enabled] Mass Storage Devices: →←: Select Screen Generic STORAGE DEVICE 9454 [Auto] 1↑: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F9: Optimized Defaults F10: Save and Exit ESC: Exit

Version 2.10.1208. Copyright (c) 2010 American Megatrendes, Inc.

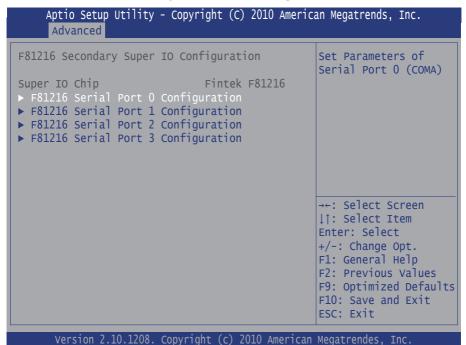
Setting	Description	
Legacy USB Support	Enables (default) support for Legacy USB. AUTO option disables legacy support if no USB devices are connected. DISABLE option will keep USB devices available only for EFI applications.	
EHCI Hand-off	This is a workaround for OSes without EHCI hand- off support. The EHCI ownership change should be claimed by EHCI driver. Options: Enabled and Disabled (default).	
USB Beep Switch	Enable (default) or Disable USB Beep sound.	

Generic STORAGE DEVICE 9454

Mass storage device emulation type. AUTO enumerates devices according to their media format. Optical drives are emulated as CDROM, drives with no media will be emulated according to a drive type.

Options: Auto (default), Floppy, Forced FDD, Hard Disk, CD-ROM

3.2.6 F81216 Secondary Super IO Configuration



Aptio Setup Utility - Copyright (C) 2010 American Megatrends, Inc. Advanced

F81216 Serial Port O Configuration

Device Settings

IO=2E0h; IRQ=4;

Change Settings [IO=2E0h; IRQ=4;]
Device Mode [Serial Port Functi...]

Enable or Disable Serial Port (COM)

→←: Select Screen ↓↑: Select Item

Enter: Select +/-: Change Opt.

F1: General Help F2: Previous Values

F9: Optimized Defaults F10: Save and Exit

ESC: Exit

Version 2.10.1208. Copyright (c) 2010 American Megatrendes, Inc.

Setting	Description
Serial Port	Enable (default) or Disable Serial Port (COM).
Change Settings	Select an optimal setting for Super IO device. ▶ Options: Auto IO=2E0h; IRQ=4; IO=2E0h; IRQ=3, 4, 5, 6, 7, 10, 11, 12; IO=2F8h; IRQ=3, 4, 5, 6, 7, 10, 11, 12; IO=3E8h; IRQ=3, 4, 5, 6, 7, 10, 11, 12; IO=2E8h; IRQ=3, 4, 5, 6, 7, 10, 11, 12;
Device Mode (only for Serial Port 0)	Change the Serial Port mode. Options: Serial Port Function Mode IR Mode, Pulse 1.6us, Full Duplex IR Mode, Pulse 1.6us, Half Duplex IR Mode, Pulse 3/16 Bit Time, Full Duplex IR Mode, Pulse 3/16 Bit Time, Half Duplex

3.3 Chipset Settings

Aptio Setup Utility - Copyright (C) 2010 American Megatrends, Inc.

Main Advanced Chipset Boot Security Save & Exit

System Agent (SA) Configuration

PCH-IO Configuration

Are: Select Screen

| 1: Select Item
| Enter: Select
| +/-: Change Opt.
| F1: General Help
| F2: Previous Values
| F9: Optimized Defaults
| F10: Save and Exit
| ESC: Exit

Version 2.10.1208. Copyright (c) 2010 American Megatrendes, Inc.

Setting	Description
System Agent (SA) Configuration	See Section 3.3.1
PCH-IO Configuration	See Section 3.3.2

3.3.1 System Agent (SA) Configuration

Aptio Setup Utility - Copyright (C) 2010 American Megatrends, Inc. Chipset System Agent RC version 1.2.0.0 Config Graphics VT-d Capability Supported Settings. ► Graphics Configuration ► Memory Configuration →←: Select Screen 11: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F9: Optimized Defaults F10: Save and Exit ESC: Exit

Version 2.10.1208.	Convright (c)	2010 American	Manatrandas	Tnc
AGI 2 I OII 5 ' TO ' T T OO'	CODVITUIL (C)	LUTO AIIIEI ICAII	i Meuati ellues	TIIC.

Setting		Description
Graphics Configuration		See Graphics Configuration tab
Memory Configuration		See Memory Configuration tab

Graphics Configuration

combine confirmation		colors which of reput
Graphics Configuration IGFX VBIOS Version	2120	Select which of IGFX/ PEG/PCI Graphics
IGfx Frequency	350 MHz	device should be
		Primary Display Or
Primary Display	[Auto]	Select SG for switchable Gfx.
▶ LCD Control		Switchable Gix.
		→+: Select Screen
		Enter: Select
		+/-: Change Opt.
		F1: General Help F2: Previous Values
		F9: Optimized Default
		F10: Save and Exit
		ESC: Exit

Version 2 10	.1208. Copyright	· (c) 2010	American	Megatrendes	Tnc

Setting	Description
Primary Display	Select which of IGFX/PEG/PCI Graphics device should be Primary Display Or Select SG for switchable Gfx. • Options: Auto (default), IGFX, PEG, PCI
LCD Control	See LCD Control tab

LCD Control

Aptio Setup Utility - Copyright (C) 2010 American Megatrends, Inc. Chipset LCD Control Select the Video Device which will be activated during POST. This has no effect if external graphics present. Secondary boot display selection will appear based on your selection. VGA modes will be supported only on primary display →←: Select Screen ↓↑: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F9: Optimized Defaults F10: Save and Exit ESC: Exit

Version 2.10.1208.	Copyright	(c)	2010	American	Megatrendes,	Inc.

Setting	Description
Primary IGFX Boot Display	Select the Video Device which will be activated during POST. This has no effect if external graphics present. Secondary boot display selection will appear based on your selection. VGA modes will be supported only on primary display. Deplication Default, CRT, Display Port, LVDS, CRT + LVDS, DP + LVDS (default)

Memory Configuration

```
Aptio Setup Utility - Copyright (C) 2010 American Megatrends, Inc.
               Chipset
Memory Information
Memory RC Version
                                  1.2.0.0
Memory Frequency
                                  1333 MHz
Total Memory
                                  4096 MB (DDR3)
DTMM#0
                                  Not Present
DTMM#1
                                  Not Present
DIMM#2
                                   4096 MB (DDR3)
DIMM#3
                                   Not Present
CAS Latency (tCL)
Minimum delay time
                                                  →←: Select Screen
    CAS to RAS (tRCDmin)
                                   9
                                                  ↓↑: Select Item
    Row Precharge (tRPmin)
                                                  Enter: Select
    Active to Precharge (tRASmin) 24
                                                  +/-: Change Opt.
                                                  F1: General Help
                                                  F2: Previous Values
                                                  F9: Optimized Defaults
                                                  F10: Save and Exit
                                                  ESC: Exit
```

Version 2.10.1208. Copyright (c) 2010 American Megatrendes, Inc.

3.3.2 PCH-IO Configuration

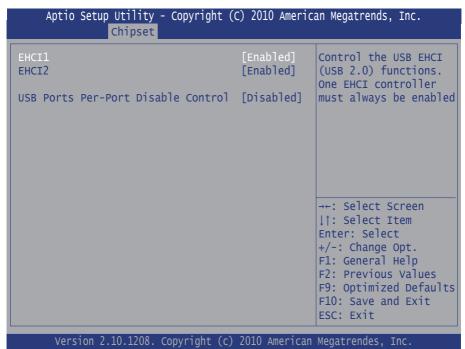
Aptio Setup Utility - Copyri Chipset	ght (C) 2010 Americ	an Megatrends, Inc.
Intel PCH RC Version Intel PCH SKU Name Intel PCH Rev ID	1.1.4.0 QM67 05/B3	Enable or disable onboard NIC.
PCH LAN Controller Wake on LAN Azalia	[Enabled] [Disabled] [Auto]	
SLP_S4 Assertion Width	[4-5 Seconds]	
► USB Configuration► PCI Express Configuration		→+: Select Screen ↑: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F9: Optimized Defaults F10: Save and Exit ESC: Exit

Version 2.10.1208. Copyright (c) 2010 American Megatrendes, Inc.

Setting	Description
PCH LAN Controller	Enable (default) or Disable onboard NIC.
Wake on LAN	Enable or Disable (default) integrated LAN to wake the system.
Azalia	Control Detection of the Azalia device. Disabled = Azalia will be unconditionally disabled Enabled = Azalia will be unconditionally enabled Auto (default) = Azalia will be enabled if present, disabled otherwise
SLP_S4 Assertion Width	Select a minimum assertion width of the SLP_S4# signal ➤ Options: 1-2 Seconds, 2-3 Seconds, 3-4 Seconds, 4-5 Seconds (default)
USB Configuration	See USB Configuration tab

PCI Express Configuration	See PCI Express Configuration tab
---------------------------	-----------------------------------

USB Configuration



Setting	Description
EHCI1/2	Control the USB EHCI (USB 2.0) functions. One EHCI controller must always be enabled. • Options: Enabled (default) and Disabled.
USB Ports Per-Port Disable Control	Control each of the USB ports (0~9) disabling. Options: Enabled and Disabled (default).

PCI Express Configuration

Aptio Setup Utility - Copyright (C) 2010 American Megatrends, Inc. Chipset Subtractive Decode [Disabled] PCI Express Root Port 1 Settings. ▶ PCI Express Root Port 1 ▶ PCI Express Root Port 2 ▶ PCI Express Root Port 3 PCIE Port 4 is assigned to LAN ▶ PCI Express Root Port 5 →+: Select Screen 1↑: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F9: Optimized Defaults F10: Save and Exit ESC: Exit Version 2.10.1208. Copyright (c) 2010 American Megatrendes, Inc.

Aptio Setup Utility - Copyright (C) 2010 American Megatrends, Inc. Chipset

PCI Express Root Port 1 PEG1 - Gen X ASPM Support URR FER NFER CER CTO SEFE SENFE SECE	[Enabled] [Gen1] [Auto] [Disabled] [Disabled] [Disabled] [Disabled] [Disabled] [Disabled] [Disabled] [Disabled] [Disabled]	Control the PCI Express Root Port.
PME SCI Hot Plug Extra Bus Reserved Reserved Memory Reserved I/O	[Enabled] [Disabled] 0 10 4	→+: Select Screen ↓↑: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F9: Optimized Defaults F10: Save and Exit ESC: Exit

Version 2.10.1208. Copyright (c) 2010 American Megatrendes, Inc.

Setting	Description
PCI Express Root Port 1/2/3/5	Control the PCI Express Root Port. Options: Enabled (default) and Disabled.
PEG1 - Gen X	Configure PEG1/2/3/5 B0 :D28 :F0/1/2/4 Gen1-Gen2 Options: Auto, Gen1 (default), Gen2
ASPM Support	Set the ASPM Level: Force L0 - Force all links to L0 State; AUTO - BIOS auto configure; DISABLE - Disable ASPM Options: Disabled, L0s, L1, L0sL1, Auto (default)
URR	Enable or Disable (default) PCI Express Unsupported Request Reporting.
FER	Enable or Disable (default) PCI Express Device Fatal Error Reporting.

NFER	Enable or Disable (default) PCI Express Device Non-Fatal Error Reporting.
CER	Enable or Disable (default) PCI Express Device Correctable Error Reporting.
СТО	Enable or Disable (default) PCI Express Completion Timer TO.
SEFE	Enable or Disable (default) Root PCI Express System Error on Fatal Error.
SENFE	Enable or Disable (default) Root PCI Express System Error on Non-Fatal Error.
SECE	Enable or Disable (default) Root PCI Express System Error on Correctable Error.
PME SCI	Enable or Disable (default) PCI Express PME SCI.
Hot Plug	Enable or Disable (default) PCI Express Hot Plug.
Extra Bus Reserved	Extra Bus Reserved (0-7) for bridges behind this Root Bridge.
Reserved Memory	Reserved Memory and Prefetchable Memory (1-20MB) Range for this Root Bridge.
Reserved I/O	Reserved I/O (4k/8k/12k/16k/20k) Range for this Root Bridge.

3.4 Boot Settings

Aptio Setup Utility - Copyright (C) 2010 American Megatrends, Inc. Main Advanced Chipset <mark>Boot</mark> Security Save & Exit			
Boot Configuration Setup Prompt Timeout Bootup NumLock State	1 [On]	Select the Keyboard NumLock state	
Quiet Boot	[Disabled]		
CSM16 Module Version	07.64		
GateA20 Active Option ROM Messages Interrupt 19 Capture	[Upon Request] [Force BIOS] [Disabled]		
Boot Option Priorities Boot Option #1 Boot Option #2 Hard Drive BBS Priorities Floppy Drive BBS Priorities	[P2: UGBA24IA32HOT1] [Generic STORAGE DE]	→+: Select Screen ↑: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F9: Optimized Defaults F10: Save and Exit	
		ESC: Exit	

Version 2.10.1208. Copyright (c) 2010 American Megatrendes, Inc.

Setting	Description	
Setup Prompt Time- out	Number of seconds to wait for setup activation key. 65535 (0xFFFF) means indefinite waiting.	
Bootup NumLock State	This setting determines whether the Num Lock key should be activated at boot up. Doptions: On (default), Off	
Quiet Boot	This setting determines if the BIOS should hide the normal POST messages with the motherboard or system manufacture's full-screen logo. When it is Enabled , the BIOS will display the full-screen logo during the boot-up sequence, hiding normal POST messages. When it is Disabled (default), the BIOS will display the normal POST messages instead of the full-screen logo.	

GateA20 Active	UPON REQUEST (default) – GA20 can be disabled using BIOS services. ALWAYS – do not allow disabling GA20; this option is useful when any RT code is executed above 1MB.	
Option ROM Mes- sages	 Set display mode for Option ROM. Options: Force BIOS (default) and Keep Current. 	
Interrupt 19 Capture	Allows Option ROMs to trap Int 19. Options: Enabled and Disabled (default).	
Boot Option	Set the system boot order.	
Hard Drive BBS Priorities	Set the order of the legacy devices in this group.	
Floppy Drive BBS Priorities	Set the order of the legacy devices in this group.	

3.5 Security

Aptio Setup Utility - Copyright (C) 2010 American Megatrends, Inc. Main Advanced Chipset Boot Security Save & Exit		
Password Description	Set Setup Administrator Password	
If ONLY the Administrator's password is set, then this only limits access to Setup and is only asked for when entering Setup. If ONLY the User's password is set, then this is a power on password and must be entered to boot or enter Setup. In Setup the User will have Administrator rights. The password must be 3 to 20 characters long.		
Administrator Password	→+: Select Screen ↑: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F9: Optimized Defaults F10: Save and Exit ESC: Exit	
Version 2 10 1208 Convright (c) 2010 American	Megatrendes Inc	

Administrator Password

Set **Change Administrator Password** to enter and change the options of the setup menus. When you select this function, the following message will appear at the center of the screen to assist you in creating a password.

Enter New Password:

Type the password, up to six characters in length, and press <Enter>. The password typed now will clear any previously entered password from CMOS memory. You will be asked to confirm the password. Type the password again and press <Enter>. You may also press <ESC> to abort the selection and not enter a password.

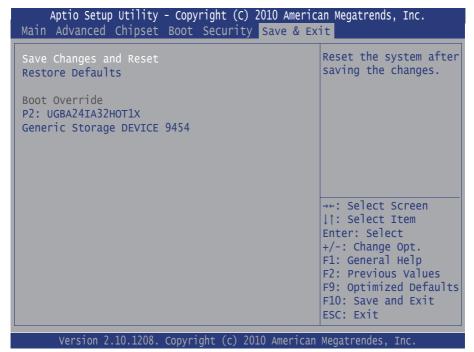
With a password created, a Password Check item appears. Set this item to **Setup**, you will be prompted to enter the password every time you try to enter the BIOS Setup utility. This prevents an unauthorized person from changing any part of your system configuration.

You can also have the BIOS to request a password every time your system is rebooted by setting it to **Always**. This would prevent unauthorized use of your computer.

To clear the password, just leave the field blank and press <Enter> when you are prompted to enter a new password. Once the password is cleared, the following message will appear at the center of the screen.

Password Uninstalled.

3.6 Save & Exit Options



Save Changes and Exit

Pressing <Enter> on this item and it asks for confirmation:

Save configuration changes and exit setup?

Pressing <OK> stores the selection made in the menus in CMOS - a special section of memory that stays on after you turn your system off. The next time you boot your computer, the BIOS configures your system according to the Setup selections stored in CMOS. After saving the values the system is restarted again.

Restore Defaults

Restore system to factory default.

Pressing <Enter> on this item and it asks for confirmation prior to executing this command.

Appendix

1. Arm Kit

Below are dedicated optional arm kits for this medical PC. You need the conversion bracket included in accessories kit to lock arm kit on M1920. Refer to Section 2.3 for how conversion bracket is mounted.

1.1 Wall-mount ARM (ARM-1552M)



Features	 Gas Spring Design for Free Movement Special Coating and Antiseptic Process to Meet Medical Requirements 100% Hidden Cable Management Makes Performance Under Security 		
Specifications			
Weight Capacity	6~12 kg (13.2~26.4 lb)		
T:14	20° up and 35° down (display)		
Tilt	20° up and 60° down (arm)		
Rotation	270° for portrait or landscape viewing		
Pivot	180° (wall), 370° (arm), 270° (display)		

Extension	1,907 mm	
Color & Material	Beige, Aluminum alloy and plastic cover	
Display Compatibility Wall-mount (VESA-75/100)		
Cable	1 x Power cable	
	1 x RJ-45 LAN cable	
Ordering Information		
ARM-1552M	Wall-mount hospital long arm	

1.2 Wall-mount ARM w/ Power Box (ARM-1682M)



 Gas Spring Design for Free Movement Special Coating and Antiseptic Process Meet Medical Requirements Hidden Cable Management Makes Performance Under Security

Specifications		
Weight Capacity	6~12 kg (13.2~26.4 lb)	
	20° up and 35° down (display)	
Tilt	20° down (first arm)	
	20° up and 60° down (second arm)	
Rotation	270° for portrait or landscape viewing	
Pivot	180° (wall), 370° (arm), 270° (display)	
Extension	1,847 mm	
Color & Material	Beige, Aluminum alloy and plastic cover	
Display Compatibility	Wall-mount (VESA-75/100)	
Cabla	1 x Power cable	
Cable	1 x RJ-45 LAN cable	
Ordering Information		
ARM-1682M	Wall-mount hospital long arm w/ power box w/o power adapter	



Features	 Gas Spring Design for Free Movement Special Coating and Antiseptic Process to Meet Medical Requirements Hidden Cable Management Makes Performance Under Security 	
Specifications		
Weight Capacity	6~12 kg (13.2~26.4 lb)	
Tilt	20° up and 35° down (display)	
TIIL	20° up and 60° down (arm)	
Rotation	270° for portrait or landscape viewing	
Pivot	270° (ceiling), 370° (arm), 270° (display)	
Extension	1,857 mm	
Color & Material	Beige, Aluminum alloy and plastic cover	
Display Compatibility	Wall-mount (VESA-75/100)	
Cable	1 x Power cable	
	1 x RJ-45 LAN cable	
Ordering Information		
ARM-1752M	Ceiling-mount hospital long arm	

2. RF Keyboard

2.1 Specifications

Dimensions (W x D x H)	135 x 45 x 10mm (21.97" x 13.27" x 2.6")	
Weight	90g (including CR2032 battery)	
Power Supply Voltage	2.5 ~ 3.6V	
Operating Temp.	-15 ~ 55°C (5 ~ 131°F)	
	>8m in recommend voltage and clearing	
Operating Range	>6m in low voltage voltage (85% recommend voltage) and clearing	

2.2 Overview



2.3 Function Key

Function Key		Definition	
Α		*pairing key	
В	Fn	function key I	
С		function key II	
D	Caps Lock	case conversion	
E	Alt 1	window switch = Alt +Tab	
F		switch direction key/mouse point	
G		window maximize or returned	

^{*}To activate RF keyboard, you must long-press "pairing key" the first time you use it in the process of booting up for pairing keyboard and computer.

Combination Keys			Definition
	N * 8		generate "8", and so on
Fn A	N #) (d)	generate "#", and so on
	Alt 1		desktop
	∑ in x		mute
			close window
		△	volume up
		▼	volume down
			right-click mouse
		ტ ▶	power off
		4 53	full-screen switch (Alt + Enter)

3. Medical Arm Mounting

This medical PC can be mounted on a wall-mount, desktop-stand, or hospital arm for convenient operation. To mount it on a desktop-stand, for example, you need cross-headed screwdriver, and M4 size screws.

 Lock VESA 75 conversion bracket included in accessories kit onto 4 screws at the back.



2. Mount M1920 onto desktop-stand through the conversion bracket covered in accessory kit as well.

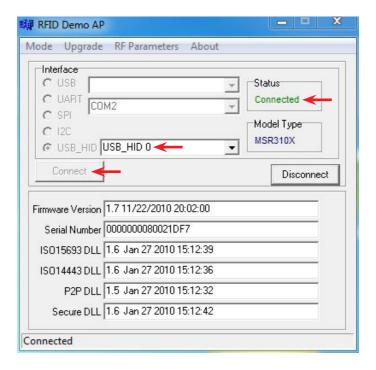




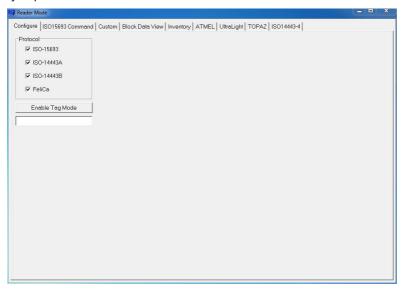
4. How to use RFID

 To activate RFID, double click or finger-tap below icon on desktop. Set in light of illustration and click connect. A green "Connected" in Status implies RFID is successfully connected.





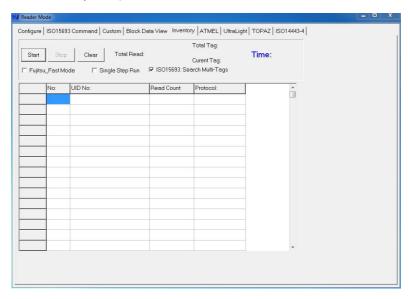
2. To demo test the RFID, please go to Mode > Reader. The following window will jump out.



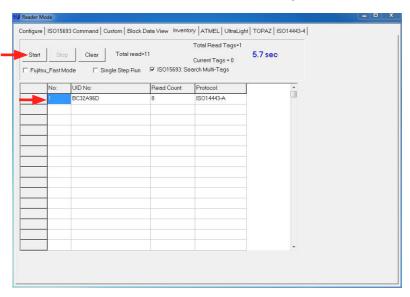
3. Put a test tag in place as below.



4. Select Inventory in top menu bar.



5. Click Start and test result will be shown in inventory list.



5. How to use Camera

After installing function key driver successfully, *ccdc* icon will appear in *All Programs*. Execute the camera program. You may also set hotkey for the program (See Section 2.5.1).

