M1861
18.5" Fanless Medical Infotainment Terminal

User's Manual
Version 1.0

CE

P/N: 4018186100100P

2019.08

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Revision History

Version	Release Time	Description
1.0	2019.08	Initial release

Copyright

Disclaimer

About This Manual

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

We recommend that you keep one copy of this manual for the quick reference for any necessary maintenance in the future. Thank you for choosing ARBOR products.

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Declaration of Conformity

CE

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

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.

Any changes or modifications not expressly approved by the guarantee of this device could void the user's authority to operate the equipment.

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%), Ag(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)

Intended Use

This product is intended for use in a medical system.

Symbol Descriptions

This "CAUTION" symbol 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 (for models with battery)

This symbol of "Electrical Safety" indicates electrical warning of specific electrical hazards.

Refer to the user manual for more information.

Important Safety Instructions

Read these safety instructions carefully:

1. Read all cautions and warnings on the equipment.

2. 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. To avoid risk of electric shock, this equipment must only be connected to a supply mains with protective earth.

5. For pluggable equipment, the socket outlet should be near the equipment and should be easily accessible.

6. Keep this equipment away from humidity.

7. Disconnect this equipment from the A/C outlet before cleaning it. Use a moist cloth. Do not use liquid or sprayed detergent for cleaning.

8. To fully disengage the power to the unit, please disconnect the power from the AC outlet.

9. Do not scratch or rub the screen with a hard object.

10. Never use any of the solvents, such as Thinner Spray-type cleaner, Wax, Benzene, Abrasive cleaner, Acid or Alkaline solvent, on the display. Harsh chemicals may cause damage to the cabinet and the touch sensor.

11. Remove dirt with a lightly moistened cloth and a mild solvent detergent. Then wipe the cabinet with a soft dry cloth.

12. The openings on the enclosure are for air convection and protect the equipment from overheating. DO NOT COVER THE OPENINGS.

13. Position the power cord so that people cannot step on it. Do not place anything over the power cord.

14. If the equipment will not be used for a long time, disconnect it from the power source to avoid damage by transient overvoltage.

15. Never pour any liquid into openings. This may cause fire or electrical shock.

16. Never open the equipment. For safety reasons, the equipment should be opened only by qualified service personnel.

17. No modification of the equipment is allowed.

18. Only personnel authorised by the manufacturer may carry out technical operations on the equipment.

19. The sound pressure level at the operator's position, according to IEC 704-1:1982, is no more than 70dB(A).

20. Keep this User's Manual for later reference.

21. 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.

22. 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.

⚠ Do not use the power adapter that isn't made for the equipment. Supplying the equipment with inappropriate voltage may cause harm to the battery (if any) or, even worse, burn the equipment.

⚠ Risk of explosion if RTC (Real-Time Clock) battery is replaced by an incorrect type. Dispose of used batteries according to the instructions.

⚠ To prevent possible hearing damage, do not listen at high volume levels for long periods.

General Cleaning Tips

You may need the following precautions before you begin to clean the device. When you clean any single part or component for the device, please thoroughly read and understand the details below.

1. We strongly recommended that you should shut down the system before you start to clean any single components.

2. When you need to clean the device, please rub it with a piece of dry cloth.

3. Be cautious of the tiny removable components when you use a vacuum cleaner to absorb the dirt on the floor.

4. Never drop the components inside the device or get circuit board damp or wet.

5. Be cautious of all kinds of cleaning solvents or chemicals when you use it for the sake of cleaning. Some individuals may be allergic to the ingredients.

6. Try not to put any food, drink or cigarette around the device.

Cleaning Tools

Although many companies have created products to help improve the process of cleaning your devices and peripherals, users can also use household items to clean their devices and peripherals. Below is a listing of items you may need or want to use while cleaning your devices or peripherals. Keep in mind that some components in your device may only be able to be cleaned using a product designed for cleaning that component, if this is the case it will be mentioned in the cleaning.

- **Cloth:** A piece of cloth is the best tool to use when rubbing up a component. Although paper towels or tissues can be used on most hardware as well, we still recommend you to rub it with a piece of cloth.

- **Water or rubbing alcohol:** You may moisten a piece of cloth a bit with some water or rubbing alcohol and rub it on the device. Unknown solvents may be harmful to the plastics parts.

- **Vacuum cleaner:** Absorb the dust, dirt, hair, cigarette particles, and other particles out of the device can be one of the best cleaning methods. Over time, these items can restrict the airflow in a device and cause circuitry to corrode.

- **Cotton swabs:** Cotton swaps moistened with rubbing alcohol or water are excellent tools for wiping hard to reach areas in your keyboard, mouse, and other locations.

- **Foam swabs:** Whenever possible, it is better to use lint-free swabs such as foam swabs.

Recommended Cleaning Procedures

1. Close all application programs

2. Close operating software

3. Turn off the equipment

4. Remove all peripherals

5. Disconnect the power cable

6. Proceed to clean.

Disposing of the Equipment

- **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.

  This 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.

Additional Information & 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 the terminal will provide the reliability and ease of operation. Your satisfaction is our primary concern. We want you to get the maximum performance from the terminal. So if you run into technical difficulties, we are here to help. For the most frequently asked questions, you can easily find answers in the terminal's 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 the terminal. 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. Do not hesitate to contact us using the following contact information:

Website: http://www.arbor-technology.com

E-mail: info@arbor.com.tw

TEL: 886-2-8226-9396

Add: 10F., No.700, Zhongzheng Rd., Zhonghe Dist., New Taipei City 235, Taiwan

Warranty

This product is warranted to be in good working order during the warranty period. 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.

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Chapter 1

Introduction

1.1 Product Highlights

The medical infotainment terminal, M1861, is designed for patient care and bedside infotainment. With low power consumption soldered onboard processor and fanless design, the terminal is suitable for the uses in hospitals and clinics. The M1861 is also an entertainment and information terminal for patients during their stay in hospital. The 18.5" touch screen, definable function keys and abundant expansions make it more convenient for clinicians and patients to operate. For networking, the M1861 supports Bluetooth and WLAN, which gives it great accessibility for eHealthcare medical care. Other integrated vertical application functions include 1D/2D barcode scanner, 5.0 megapixel camera, RFID &NFC reader, smart card reader.

- Flush front bezel ID design
- ARM Quad-Core Cortex-A17 CPU 1.8G Hz, Android-based
- 18.5" LCD with 10-point projected capacitive multi-touch
- Applicable for bedside infotainment and self-registration
- IEC & EN 60601-1 (Edition 3.1) and IEC & EN 60601-1-2 (Edition 4th) certified
- Ventless design, water-proof and dust resistant
- Patient identification through Integrated RFID & NFC, barcode scanner and smart card reader
- Light bar indicator for incoming call, reading light or nurse call alarm (optional)

1.2 Package Contents

Upon opening the package, carefully inspect the contents. If any of the items is missing or appears damaged, contact your local dealer or distributor. The package should contain the following items:

1 x M1861

1 x User's manual
1 x Driver CD

1 x 65W medical-grade AC/DC adapter kit

1.3 Ordering Information

M1861	18.5" fanless ARM Quad-Core Cortex-A17 CPU 1.8G Hz, Medical PC with flush-mounted projected capacitive multi-touch screen

1.3.1 Optional Accessories

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.

Phone-1858
VoIP phone with RJ-11 cable

Remote Controller-1861
Wired remote controller with VoIP phone and function-key keypad

ARM-Kits
VESA-75/100 medical arms

1.3.2 Optional Configuration (Configure-to-Order Service)

RFID & NFC-1860
RFID & NFC module kit

BarC-1860
Barcode scanner module kit

1.4 Dimensions

499.7

410.8

231.4

45.3

336.4

100

100

80.7
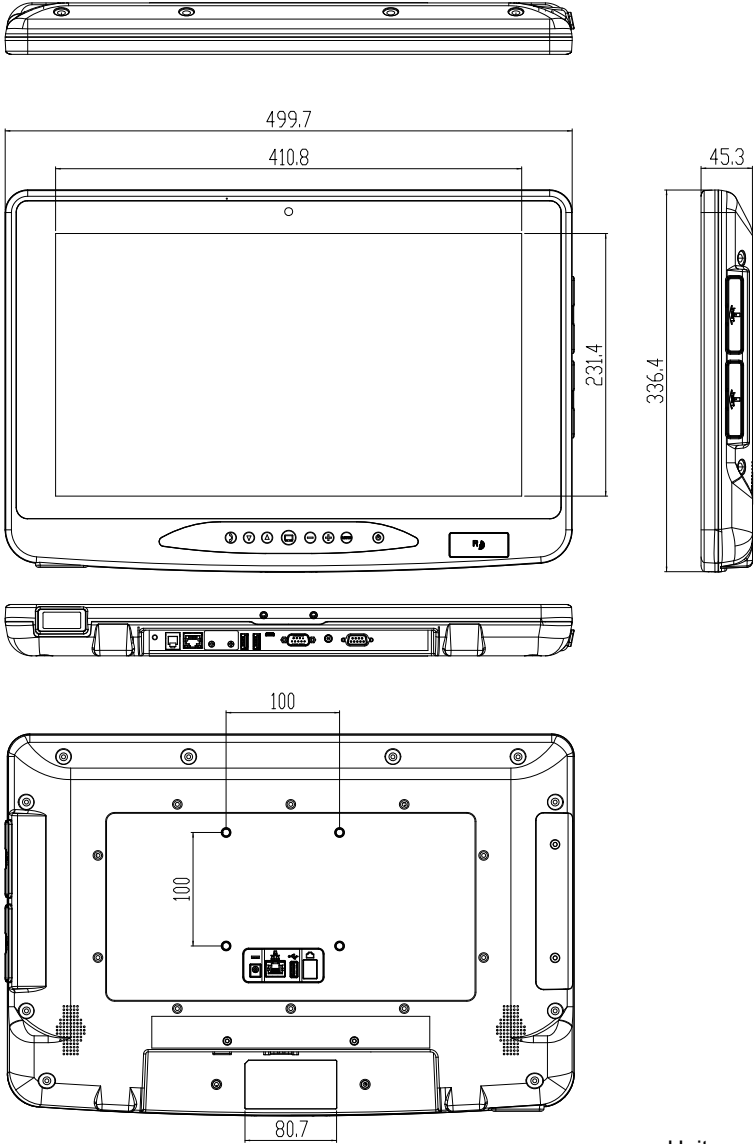
Unit:mm

1.5 Specifications

System	
CPU	ARM Quad-Core Cortex-A17 CPU 1.8G Hz, Android-based
GPU	Mali-T764
Memory	2GB DDR3L memory soldered on board
Storage	16GB eMMC Flash soldered on board
Peripherals and Devices	
WLAN & Bluetooth	1 x WLAN 802.11 a/b/g/n & Bluetooth 4.0 + BLE
Smart Card Reader	1 x Smart Card Reader slot
Camera	1 x 720P front-facing CCD camera
Barcode Scanner	1 x 1D/2D Barcode Scanner (optional)
Phone	1 x VoIP phone blower (optional)
Remote Controller	1 x wired remote controller with VoIP phone and function-key keypad (optional)
RFID & NFC	1 x 13.56MHz RFID & NFC reader with ISO 14443A/14443B/15693 support (optional)
I/O Interface	
Audio	2 x 3W speakers, 1 x built-in microphone
	1 x Mic-in, 1 x speaker-out on bottom Line
LAN	2 x RJ-45 GbE connectors
Serial Port	1 x RS-232 port on bottom line (DB-9 connector)
USB Port	3 x USB 2.0 ports
	1 x Micro USB 2.0 port
SD Slot	1 x SD card slot (Max. 32GB)
HDMI Port	1 x HDMI in port (optional)
Button & Indicator	
Button	1 x Power on/off button 1 x Channel up button 1 x Home button 1 x Channel down button 1 x Volume up button 1 x Phone on/off button 1 1 x Volume down buton 1 x Reset button 1 x LCD on/off button
Indicator	1 x Light bar indicator for incoming call, reading light or/and nurse call alarm (optional)

Touch Screen	
Type	10-point Projected Capacitive Multi-Touch (Flush-mounted)
Light Transparency	80% (typ.)
LCD Display	
Size/Type	18.5" TFT color LCD
Max. Resolution	1366 x 768 (WXGA) with 16.7M colors
Luminance	250 nits (typ.)
Contrast Ratio	1000 : 1 (typ.)
Backlight Type	LED
View Angle (U/D/R/L)	80°/80°/85°/85° (typ.)
Power Requirement	
Adapter Input	100 ~ 240 VAC (full range)
Adapter Output	DC 12~24V, 3.25A, 65W (Max.) with medical certificate
Mechanical & Environmental	
Operating Temp.	0 ~ 40ºC (32 ~ 104ºF)
Storage Temp.	-20 ~ 60ºC (-4 ~ 140ºF)
Operating Humidity	10 ~ 95% @ 40ºC (non-condensing)
Dimensions (WxHxD)	500 x 337 x 45 mm (19.69" x 13.27" x 1.77")
Net Weight	3.9 kg (8.59 lb)
Vibration	1 Grms/ 5 ~ 500Hz/ random operation
Shock	10G/peak (11ms)
Mounting	VESA-100 compatible (M6)
IP Rating	Compliance design with IP65 (front touch panel)
Operational Altitude	Below 2000m
Regulatory	CE, FCC Part 18 Subpart C
	IEC & EN 60601-1 Safety (Edition 3.1),
	IEC & EN 60601-1-2 EMC (Edition 4th)
OS Support	
Android™ 5.1.1 / Android™ 7.1	

Chapter 2

Getting Started

2.1 Getting to Know the Terminal

Understanding the terminal helps you jump seamlessly from component to component when using the terminal. This section will quickly familiarize you with the terminal.
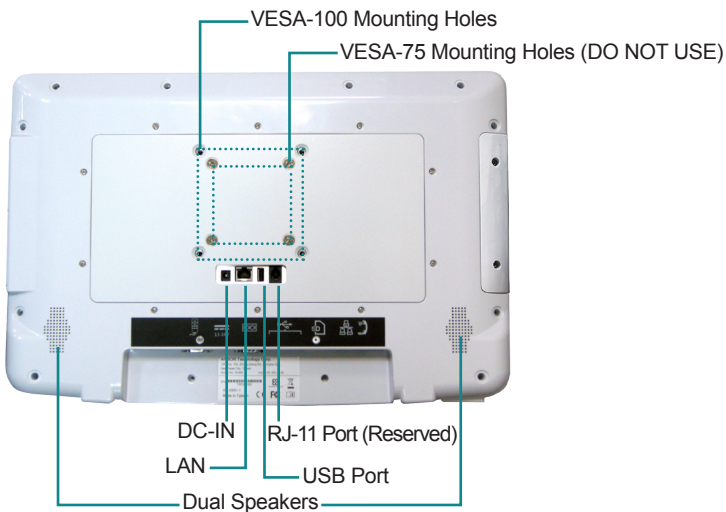
2.1.1 Front View

Built-in Mic — 5.0 Camera

Projected Capacitive Multi-Touch Screen

RFID & NFC (optional)

Phone on/off
Channel down/up
Screen on/off

Power on/off
Home
Volume down/up

Function Key	Graphic	Default Function
Power on/off		Press the button to: ▶ Turn on/off the terminal. ▶ To wake the terminal from sleep mode. **Power Status LED** ▶ **Off:** The terminal is disconnected from a power source. ▶ **Lights green:** The terminal is turned on or in sleep mode. ▶ **Lights amber:** The terminal is turned off but connected to a power source.
Home	(MENU)	To return to Home screen.
Volume up/down	⊖ ⊕	To decrease/increase volume.

Function Key	Graphic	Default Function
Channel down/up	▽ △	To move to the next/previous channel.
Screen on/off	▢	Turns on/off the display.
Phone on/off	☽	Turns on/off the phone handset audio.

Caution: To power off the power completely, disconnect the plug of the AC power cord from the electrical outlet only when the power LED lights amber. If you disconnect it while the power LED lights green, data might be lost or corrupted, and the system might be damaged.

2.1.2 Rear Side

VESA-100 Mounting Holes

VESA-75 Mounting Holes (DO NOT USE)

DC-IN

RJ-11 Port (Reserved)

LAN

USB Port

Dual Speakers

Item	Descriptions
VESA 100 mounting holes	To attach VESA 100-compatible mounting kit using M6 x 40 screws.
	Warning: DO NOT use the VESA 75 mounting holes, or you might risk the danger of damaging the terminal.

Item	Descriptions
DC-IN	DC-IN Power jack. To connect the terminal to a power source through provided AC power adapter.
LAN	Gigabit Ethernet port. To connect the terminal to a network through an Ethernet cable. **Note:** The terminal comes with two Ethernet ports - One on the bottom line, and the other on the rear panel. Only one works at a time.
RJ-11 Port	Function reserved.
USB Port	USB 2.0 Type-A port. To connect to USB device
Dual Speakers	Integrated 3W stereo speakers for audio output.

Warning: The terminal's rear plate is highly heated when the terminal is operating. As the temperature might reach up to 60°C (140ºF), DO NOT touch the rear plate during operating.

2.1.3 Bottom Side

Barcode Scanner (optional) · Incoming Call LED (optonal) · Mic-in · Speaker-out · Reset Button

Phone Jack · LAN · SD Card Slot · USB Ports · Micro USB port · Serial Port (RS-232) · DB-9 Port (Reserved) · HDMI Port (optional)
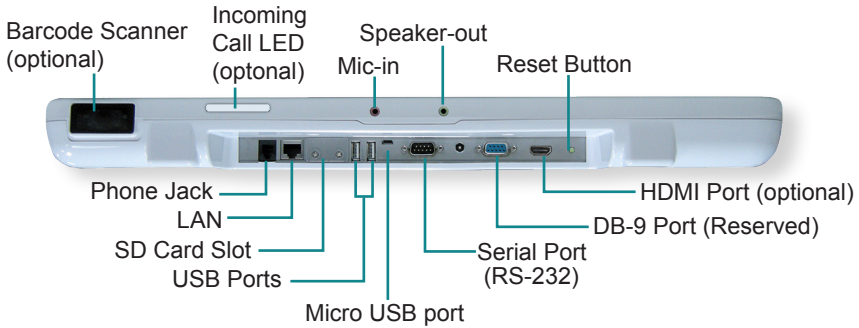
Item	Descriptions
Barcode Scanner	1D/2D barcode scanner (optional).
Incoming Call LED	LED for incoming call. The LED flashes when an incoming call is received (optional).
Mic-in	3.5mm phone jack. To connect to a microphone to capture sound and voice when used with a program capable of recording audio.
Speaker-out	3.5mm phone jack. To connect to a headphone for audio output.
Reset Button	Press to reset the computer.
HDMI Port	HDMI input port. To connect to an HDMI output port of video source equipment (optional).
DB-9 Port	DB-9 female connector. Function reserved.
Serial Port	DB-9 male connector for RS-232. To connect to a serial device.
Micro USB Port	Micro USB 2.0 port supporting OTG connection (covered by a sheet metal). To connect to a USB device. .
USB Ports	2 x Type-A USB 2.0 ports. To connect to USB device(s).
SD Card Slot	SD card slot (hidden).
LAN	Gigabit Ethernet port. To connect the terminal to a network through an Ethernet cable. **Note:** The terminal comes with two Ethernet ports - One on the bottom line, and the other on the rear panel. Only one works at a time.
Phone Jack	RJ-11 phone jack. To connect to a phone handset (optional).

2.1.4 Side View

Item	Descriptions
Smart Card Reader Slot	Smart card reader slot with hinged rubber cover. Allows to insert a smart card.

Smart Card
Reader Slot

2.2 Installing the SD Card

The SD card slot is on the bottom of the terminal covered by a sheet metal with screws. To install an SD card to the terminal:

1. Use a screwdriver to loosen and remove the screws securing the sheet metal.
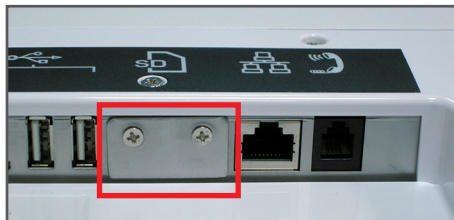
2. Locate the SD card slot and insert your SD card in the direction as indicated by the icon. Firmly insert the card until it is all the way in. The card only fits one direction as shown below.

Make sure to fully insert the card until it is all the way in to ensure the card can be detected.

3. To verify if the card is successfully inserted, tap the **File Manager** App and you should find the SD Card item.

4. Restore the sheet metal cover and secure it with the two screws.

2.3 Connecting to a Local Area Network

The terminal comes with two LAN ports, one on the rear of the terminal while the other on the bottom line, allowing you to connect the terminal to a wired local area network.

Duet to that only one LAN port works at a time, **always use only one connection at a time**. To connect the terminal to a wired network:

1. Using a Ethernet cable, connect one end to either one of the the LAN ports on the the terminal.

2. Connect the other end of the Ethernet cable to a hub, switch or router.

With the LAN port connected to a network, you should configure the network settings as needed according to your network environment. For more information, see .

2.4 Connecting to a Power Source

To connect the terminal to AC power:

1. Locate the **DC-IN** jack on the rear or the **12-24V** jack on the bottom of the terminal. Plug the DC cord of the power adapter into the jack.

2. Plug one end of the AC power cord into the AC adapter and the other end into an electrical outlet.

Make sure to use the AC power adapter supplied with the terminal. The power adapter specification is as below:

Item	Descriptions
Brand	FSP GROUP INC.
Model	FSP065-DCBM1
Input	100~240V, 50~60Hz
Output	20V, 3.25A , 65W Max.

Warning: Use only the power adapter that comes with your terminal. Using a different power adapter may damage the terminal and invalidate warranty applying to the terminal.

2.5 Periodic Cleaning & Disinfection

This medical computer is generally employed in medical environment, for example, hospitals, as bedside infotainment. 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 using standard computer screen solution.

4. Use dry cloth to clean the rear panel and bottom, especially the areas around the connectors.
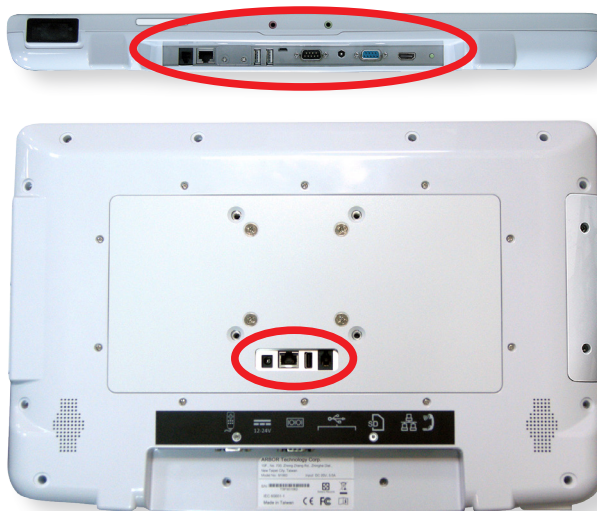
Caution:
- Do not spill liquids on or around the medical computer.
- Do not use other solutions than the ones mentioned above.
- Do not touch, press or rub the display panel with abrasive cleaning compounds, instruments, brushes, or rough-surface materials.
- Never spray cleaning liquids or foam onto the medical computer 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 computer; 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.

Chapter 3

Using the Computer

3.1 Using the Touch Screen

The terminal comes with a projected capacitive multi-touch screen. Touch control is the main way to interact with the terminal. Users are able to manipulate icons, graphic buttons, menus, the on-screen keyboard or any on-screen items with touch control. This chapter will walk you through the basic operations.

3.1.1 Basic Operations

The table below provides instructions on how to use the multi-touch screen:

Operation	Descriptions
Tap	Tap an item and quickly release to select an item, launch an application, or open a menu.
Tap and hold	Tap and hold an item or a blank area on the screen for a few seconds until a menu opens or an option appears.
Drag	Tap and hold on an item, such as an image or an icon, then move it to the target position. While dragging, do not release until you have reached the target position.
Swipe	Move your finger horizontally or vertically across the screen to scroll through the screen, App menu, pages, lists and so on.
Zoom in / out	Move two fingers closer together on an item, such as a picture, web page, or map, to zoom out, or move two fingers apart to zoom in.
Double Tap	For some applications, quickly tap twice on an item to zoom in and double-tap again to zoom out.

3.1.2 Text Input

The terminal doesn't have a physical keyboard to receive user's text input. To input text on the device, it relies on the "on-screen keyboard" featured by the operating system. An "on-screen keyboard" is a virtual keyboard with most of the standard keys.

To open the on-screen keyboard, simply tap a text input field and the keyboard appears.
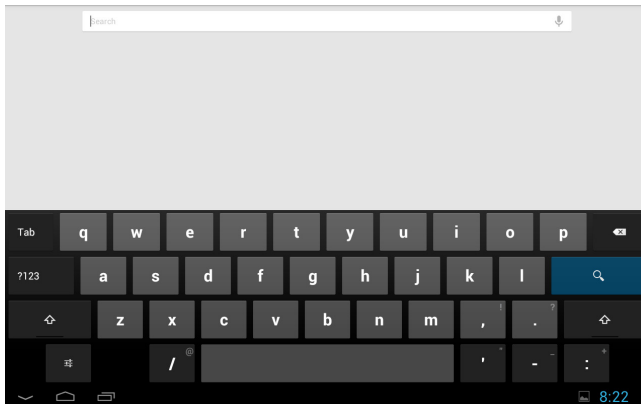
3.2 Home Screen

The **Home** screen provides you with an instant access to device status, notifications, application shortcuts, folders and widgets. Simply tap an item and you can launch the associated application. You can also add desired items to the **Home** screen, extend the **Home** screen or personalize the wallpaper to tailor it to your personal needs.

When you power on the terminal for the first time, a typical **Home** screen might look like the example below:
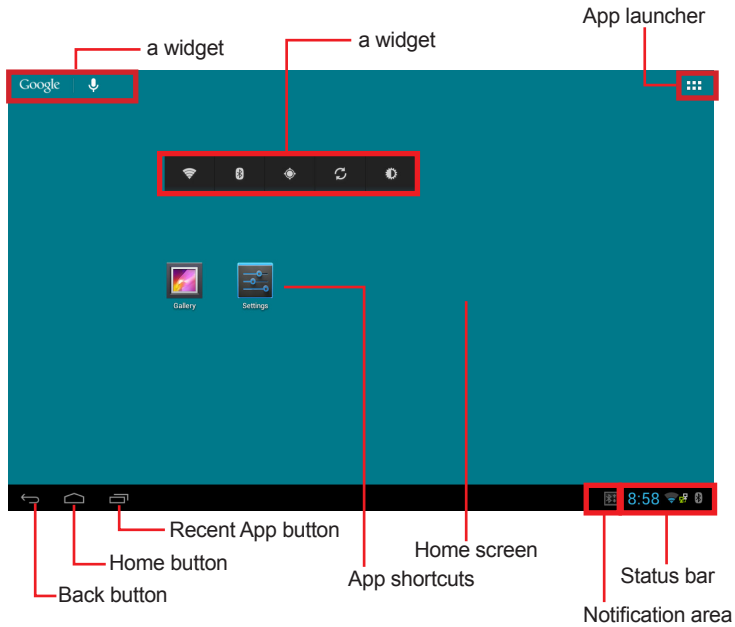
The table below describes the elements on a typical **Home** screen:

Element	Descriptions
Status Bar	The **Status Bar** displays these information: • The system time • Wi-Fi signal strength • Ethernet connection status • Bluetooth connection status You can access the notification panel to see more information by swiping up the status bar.
Notifications Area	The **Notifications Area** informs you of new messages, events, alarms, and activities in progress. Applications you install on your device may show their own icons or messages in the area. You can turn off the notifications via the **Quick Settings** panel. See <u>3.3 Accessing the Settings Screen</u> on page <u>22</u> for details.
Home Screen	Tap an item on this screen to launch that item. To delete an icon or widget, tap and hold that item until the remove symbol **X** appears on the top of the screen. Then move the icon to the **X** symbol. Tap and hold any empty spot on this screen to customize your home screen.
Widget	The miniature of an application that functions directly on the **Home** screen.
App Launcher	Tap it to open the **App Launcher** where all applications and widgets installed on the terminal can be viewed and launched. You can also touch and hold an application's icon to drag and drop it onto the **Home** screen.
Back Button	Tap to go to previous screen.
Home Button	Tap to return to Home screen.
Recent App Button	Tap to view your recent Apps and touch an App to reopen it. To remove an App from the list, swipe it left or right.

3.2.1 Extending Home Screen

The **Home** screen is extended beyond the screen width to provide more space for adding application shortcuts and widgets.

To access the extended **Home** screen, swipe on the **Home** screen to the left or right.

To add application icons or widgets to the extended **Home** screen:

1. Tap the **App Launcher** icon ▦ on the **Home** screen to locate the target application icon or widget.

2. Tap and hold the target icon or widget until the extended **Home** Screen appears.

3. Move the icon or widget to desired screen and then release.

3.3 Accessing the Settings Screen

Tapping the status bar will bring up a **Notification** panel where you can quickly access recent notifications. On the panel tap the settings icon ⇄ to bring up the **Quick Settings** panel where you can perform these tasks:

*   Turn on/off airplane mode

*   Tap the Wi-Fi icon to access the Wi-Fi settings screen

*   Turn on/off auto-rotate screen function

*   Adjust the screen brightness or tap **AUTO** to auto-adjust the brightness

*   Turn on/off notification. When notification is turned off, you can still tap the status bar to view recent notifications.

*   Tap **Settings** to access the **Settings** screen.

Quick Settings Panel

Notification Panel

Tapping this icon brings up the **Quick Settings** panel.

Tapping the status bar brings up the **Notification** panel.
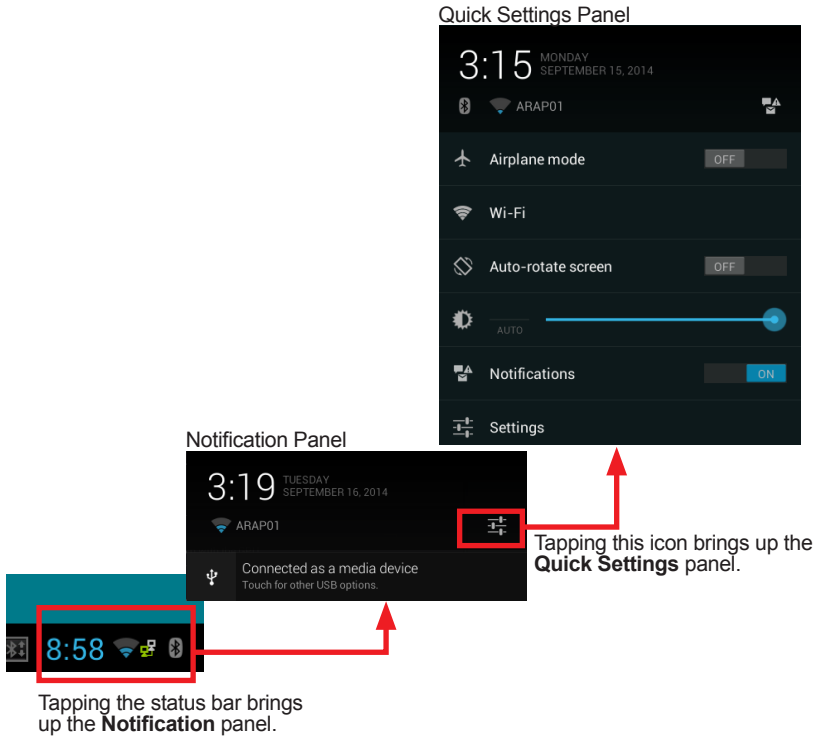
3.4 Using the Ethernet Feature

If the terminal is connected to a network through the LAN port, you will need to configure the network settings according to your network environment. To configure the network settings:

1. Tap the status bar and then the settings icon ⬛ to bring up the **Quick Settings** panel. Tap **Settings** and then **Ethernet** to access the **Ethernet** settings page.

2. Configure the network settings as needed:

   To use a static IP address, tab **Enable Static IP** and then configure the settings. When you're done with the settings, tap **Save**. Make sure the **Enable Static IP** check box is selected.
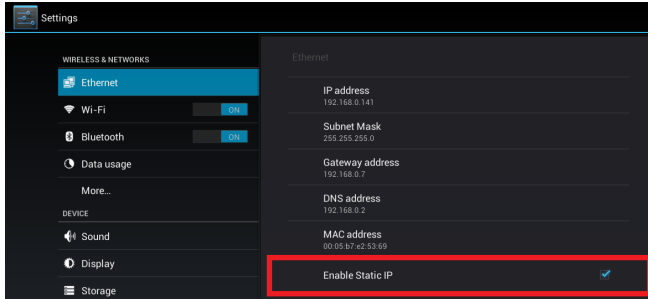
To obtain a dynamic IP address from a DHCP server, uncheck the **Enable Static IP** check box.
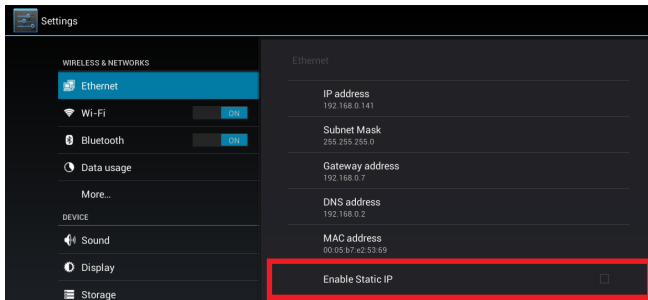
3. When you're done with the network settings, the terminal will connect to the network and displays the 📇 icon in the status bar.

3.5 Using the Wi-Fi Feature

The terminal is capable of Wi-Fi networking. Wi-Fi is a wireless networking technology that uses an access point, also known as the "hotspot", to connect to an Internet service provider over the wireless local area network (WLAN). Some hotspots are open to connect while others request you to present a key to authenticate your connection. The terminal needs to be configured including such key to connect to a hotspot.

Follow the guide below to connect the terminal to your wireless local area network:

3.5.1 Enabling Wi-Fi and Connecting to a WLAN

1. Tap the status bar and then the settings icon ⇄ to bring up the **Quick Settings** panel. Tap **Wi-Fi** to access the Wi-Fi settings page.

2. Switch on Wi-Fi if it isn't enabled yet. The status bar displays the ▽ icon when the Ethernet function is enabled.

    The device then proceeds to scan for available Wi-Fi networks in range and displays the names of those found. Secured networks are displayed with waves denoting signal strength plus a lock on them 🛜 while the open networks don't.

    To re-scan for available Wi-Fi networks, tap the menu icon ⁝ in the upper right corner to open the context menu and then tap **Scan**.
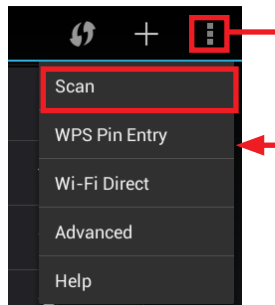
    Tap a network to connect to it. To connect to a secured network, you're prompted to enter a password or other credentials. (Ask your network administrator for details.)

    If the terminal detects a network previously connected to, the terminal auto-connects to it.

    Once a Wi-Fi network is connected, it displays as "connected" on the Wi-Fi settings screen. Tap it to see the details about the speed, security, address, and related info. On the status bar, the 🛜 icon will be displayed with waves denoting signal strength.

3.5.2 Adding a Wi-Fi Network

Under the following situations, you may need to manually add a Wi-Fi network:

- When a Wi-Fi network doesn't broadcast its name (SSID)

- When a Wi-Fi network is out of range and you want the terminal to remember it and auto-connect to it as soon as it gets in range.

To add a Wi-Fi network:

1. Tap the status bar and then the settings icon ⇄ to bring up the **Quick Settings** panel. Tap **Wi-Fi** to access the Wi-Fi settings page.

2. Switch on Wi-Fi if it isn't enabled yet.

3. Tap the plus sign icon in the upper right corner to open the **Add network** dialog box.
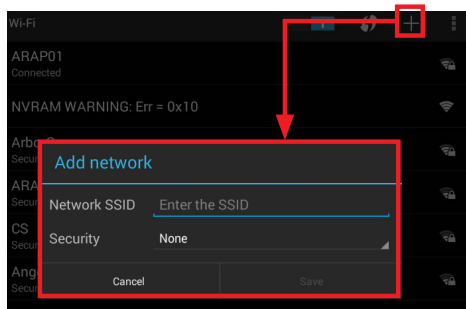
4. Enter the SSID (name) of the network. If the network is secured, tap the triangle at the right of the **Security** field to select the type of security deployed on the network and enter any required security credentials.

5. Tap **Save**.

The terminal then proceeds to connect to the Wi-Fi network. Any credentials entered are saved so the terminal automatically connects it the next time the terminal gets it within the range.

3.5.3 Connecting to a Wi-Fi Network by WPS

Wi-Fi Protected Setup (WPS) is a feature that allows WPS-compliant devices to connect to each other instantly in a secure way. As the WPS devices automatically configure the SSID and WPA security key, it eliminates the need for users to manually enter the SSID and password. WPS works in two methods: Push or personal identification number (PIN). To connect to a Wi-Fi network via WPS:

1. Tap the status bar and then the settings icon ⇄ to bring up the **Quick Settings** panel. Tap **Wi-Fi** to access the Wi-Fi settings page.

2. Switch on Wi-Fi if it isn't enabled yet.

3. Use either of the following methods to make the connection:

   To use Push button, tap the WPS icon 🔄 in the upper right corner and a prompt message will appear. Then press the WPS button on your WPS router within two minutes
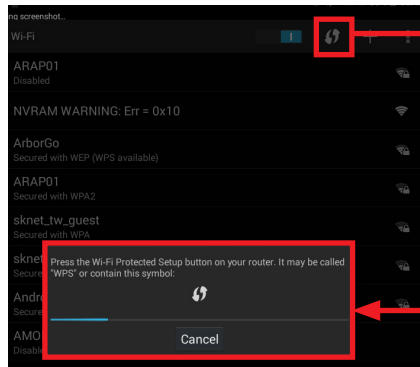
To use PIN method, tap the menu icon ⁝ in the upper right corner to open the context menu and then tap **WPS Pin Entry**. You will be prompted with a PIN. Enter that PIN on your Wi-Fi router within two minutes.
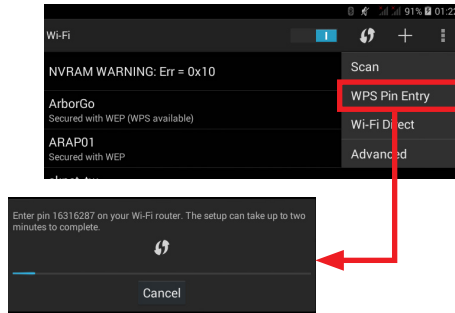
4. WPS authentication process will start. When the authentication is done, you will be prompted that connection is successful.

3.5.4 Forgetting/Modifying a Wi-Fi Network

When you don't want the terminal to "auto" connect to a Wi-Fi network or when it is a network that you no longer use, remove the Wi-Fi network by the steps below:

1. Tap the status bar and then the settings icon ⇄ to bring up the **Quick Settings** panel. Tap **Wi-Fi** to access the Wi-Fi settings page.

2. On the Wi-Fi settings page, tap and hold the name of the network to forget.

    A context menu then opens.

3. Tap **Forget network**.

Some Wi-Fi networks may periodically change their passwords to enhance the network security. When this occurs, you need to change the saved login credentials. To change the password, follow the steps above to access the context menu of the intended network. Then tap **Modify network** to make the changes.

3.6 Using the Bluetooth Feature

Bluetooth enables the wireless connection over a short distance about 8 meters. It is specified as a "wireless personal area network" (WPAN). The terminal is Bluetooth-capable to synchronize data with other Bluetooth-capable devices such as PCs, laptops, hands-free, headsets, printers, PDAs and cell phones.

Before the terminal can connect a Bluetooth device, it needs to pair with that device. Such "pairing" involves the authentication between them to justify their accesses to each other. Once they are paired, they stay paired unless they are unpaired.

3.6.1 Enabling Bluetooth and Pairing with Bluetooth Device

To enable or disable the Bluetooth function:

1. Tap the status bar and then the settings icon to bring up the **Quick Settings** panel. Tap **Settings** and then **Bluetooth** to access the **Bluetooth** settings page.

2. Switch on Bluetooth if it isn't enabled yet. The status bar displays the icon when the Bluetooth function is enabled.

3. The terminal proceeds to scan for any Bluetooth device in range. Then it displays the names of the device(s) found.

    If the Bluetooth device you want to pair with is not displayed in the **AVAILABLE DEVICES** list, tap **SEARCH FOR DEVICES** in the upper right corner.
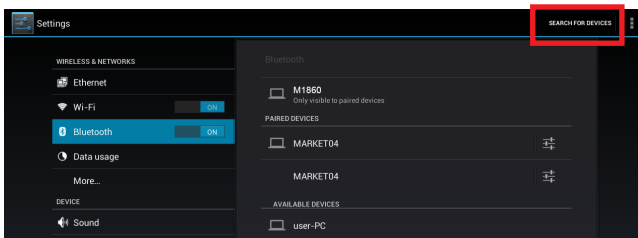
    If the terminal stops scanning before the other device becomes discoverable, tap **SEARCH FOR DEVICES** again.

> **Note:** If the device to pair with isn't displayed after the scan, check if it is configured to be discoverable.

4. Tap the device you want to pair with. When the **Bluetooth pairing request** dialog box appears, tap **Pair**. The terminal will then send a connection request to the device you want to pair with.

> **ⓘ Bluetooth pairing request**
>
> To pair with:
> user-PC
>
> Make sure it is showing this passkey:
> **909141**
>
> Cancel   Pair
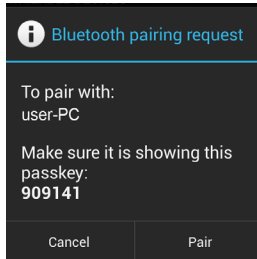
On the device to pair with, a dialog box appears requesting to enter or verify the pairing code. The passkey entered or shown on the terminal and the Bluetooth device must be the same.

If you're prompted to enter a pin code, try entering 0000 or 1234 (the most common pin code), or look up in the documentation that came with the other Bluetooh device to learn its pin code.

Then the devices proceed to pair with each other.

3.6.2 Configuring Bluetooth Features to Use

A "Bluetooth profile" defines the features supported by a Bluetooth device. For two Bluetooth devices to share files with each other, they need to both support the right profile. Some Bluetooth devices have multiple profiles. A profile can provide the ability to transmit phone conversations, to play music in stereo, or to transfer files or other data.

After you have paired a Bluetooth device with the terminal, you can select which profile you want to use with your tablet.

1. Go to the **Bluetooth** settings page and find the paired device that you want to configure the profiles. Tap the ⚏ icon of the paired device.
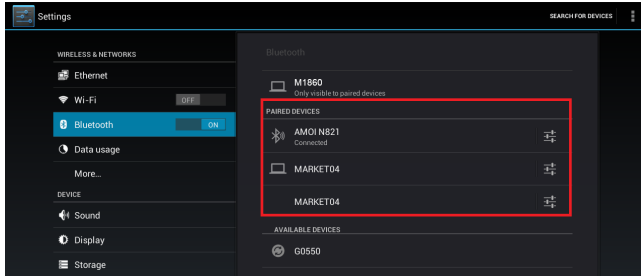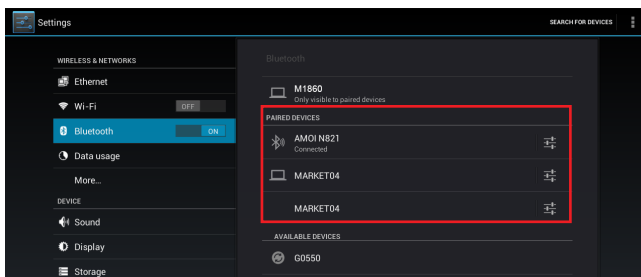
2. A page opens for that paired device. Select or deselect a profile as needed.
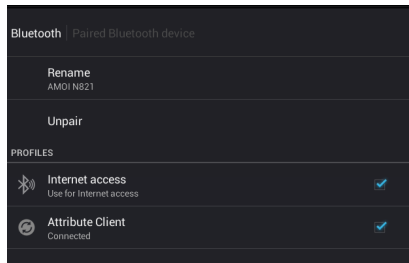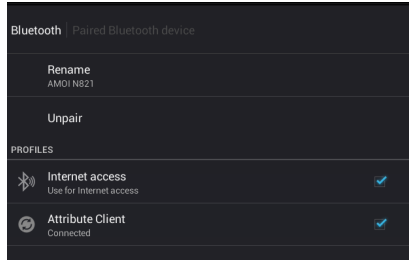

3.6.3 Disconnect from a Bluetooth Device

To disconnect the terminal from a Bluetooth device:

1. Go to the **Bluetooth** settings page, find the paired device that you want to disconnect. Tap the ⇄ icon at the right of the device.

2. A page opens for that paired device. Tap **Unpair**.


3. The selected device is unpaired and disconnected.

3.6.4 Making Your Bluetooth Device Discoverable

To allow other Bluetooth-enabled device to find the terminal, you have to make sure the terminal is visible to other devices in addition to enabling Bluetooth feature. After you configure the terminal to be visible, by default the visibility will be turned off after 2 minutes. If you want to extend the visibility time or make it discoverable at all times, you have to configure the timeout value as needed. To make your terminal visible to nearby Bluetooth devices:

1. Go to the **Bluetooth** settings page. Tapping the Bluetooth device name of your terminal repeatedly to switch between visibility options: **Not visible to other Bluetooth devices**, **Only visible to paired devices** or **Visible to all nearby Bluetooth devices**.
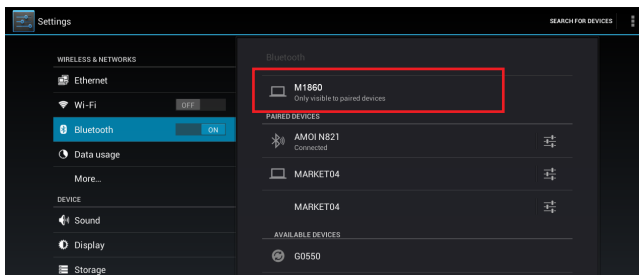
2. You can further configure the time of the visibility. To do so, tap the menu icon ⋮ . When a context menu opens, tap **Visibility timeout**.
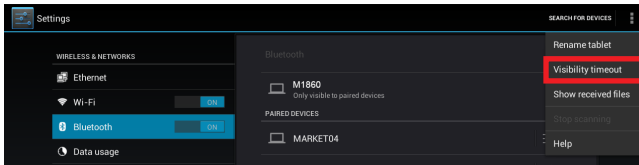
3. Adjust the timeout your device uses when you configure it to be visible. If you want the terminal to be discoverable at all times, tap **Never time out**.

3.6.5 Additional Bluetooth Settings

From the Bluetooth settings page, tap the menu icon ⋮ and a context menu opens providing the following options:

1. **Rename tablet:** Allows you to edit the Bluetooth name of the terminal that will be shown to others when they try to search for it.

2. **Visibility timeout:** Allows you to configure the time of the visibility when you configure the terminal it to be visible.

3. **Show received files:** Open the location where downloaded and uploaded Bluetooth files are stored.

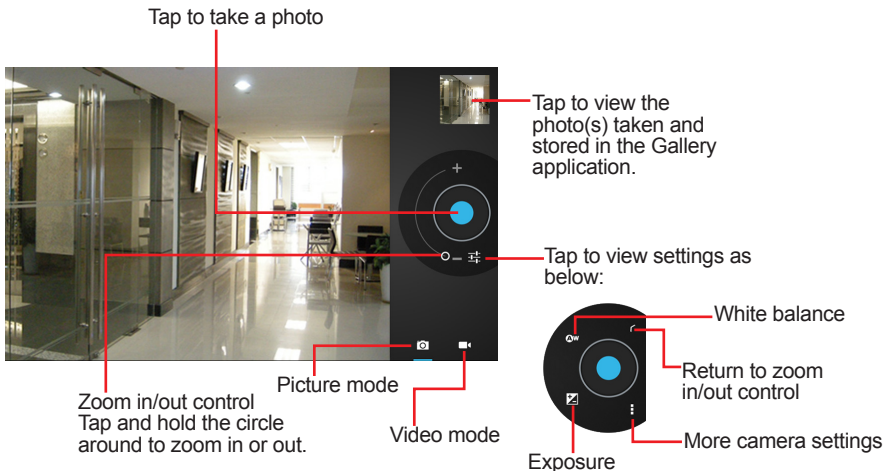4. **Stop Scanning:** Allows you to stop scanning if scanning is in process.

3.7 Using the Camera Feature

The device is equipped with a front-facing camera. It is fixed-focus and there is a LED flash. Using the native camera application that comes with the terminal, you can take pictures or videos.

3.7.1 Taking a Photo

To take a photo:

1. On the main screen tap the **App Launcher** icon ▓▓▓ and then tap the camera App icon 🔵.

2. The camera application then opens. A typical screen is as shown below:

Tap to take a photo

Tap to view the photo(s) taken and stored in the Gallery application.

Tap to view settings as below:

White balance

Return to zoom in/out control

More camera settings

Zoom in/out control Tap and hold the circle around to zoom in or out.
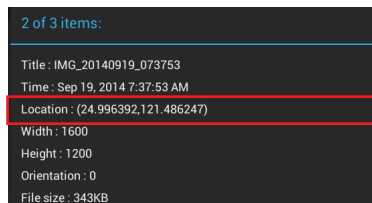
Picture mode

Video mode

Exposure

3. To zoom in and out:

- Drag the zoom control circle toward the plus (+) end to zoom in.
- Drag the zoom control circle toward the minus (-) end to zoom out.

4. To take a photo, tap the blue circle.

5. To view the last photo taken, tap the thumbnail in the upper right corner.

To access camera settings:

1. Tap the settings icon ⇄ and you can adjust the white balance, exposure settings.

2. Tap the icon ⋮ and you can view more camera settings where you can:

   • Use the **Store location** setting: If the terminal's location function is enabled, this setting allows you to record the location where each photo is taken. Use the **Off/On** switch to turn **Store location** on or off.

   When switched on, view the details of a photo and you will see the location information.

   2 of 3 items:

   Title : IMG_20140919_073753
   Time : Sep 19, 2014 7:37:53 AM
   Location : (24.996392,121.486247)
   Width : 1600
   Height : 1200
   Orientation : 0
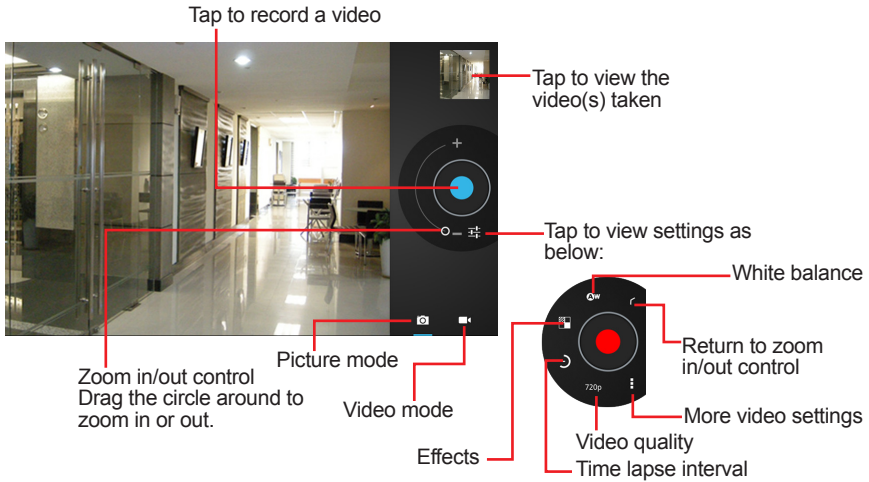   File size : 343KB

   • Change the picture size.
   • Change the Jpeg quality.

## 3.7.2 Recording a Video

To record a video:

1. On the **Home** screen tap the **App Launcher** icon ▦ and then tap the camera App icon 🔵.

2. The camera application then opens. Tap the video icon ◼◀ to switch to video mode. A typical video-taking screen is as shown below:

Tap to record a video

Tap to view the video(s) taken

Tap to view settings as below:

White balance

Return to zoom in/out control

More video settings

Picture mode

Zoom in/out control
Drag the circle around to zoom in or out.

Video mode

Video quality

Effects

Time lapse interval

3. To zoom in and out:

- Drag the zoom control circle toward the plus (+) end to zoom in.

- Drag the zoom control circle toward the minus (-) end to zoom out.

4. To record a video, tap the red circle. During the recording, you may zoom in or out as needed. When you're done with the recording, tap the stop icon.

Tap the stop recording

Elapsed time indicator

00:13
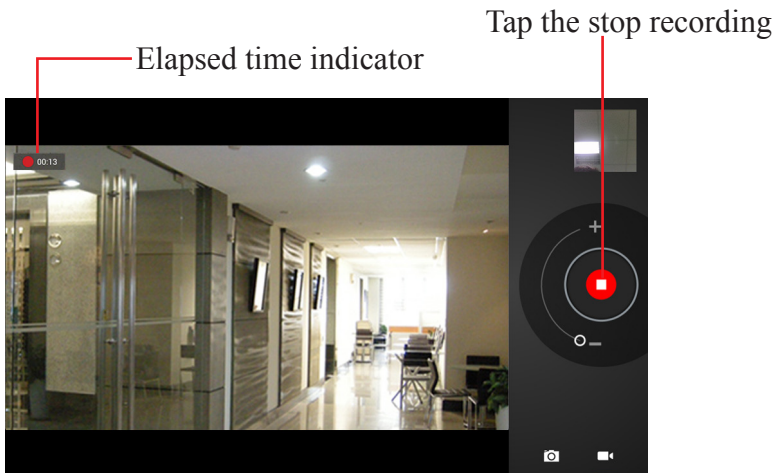
5. To view the last video taken, tap the thumbnail in the upper right corner.

To access video settings:

1. Tap the settings icon ⇅ and you can adjust the white balance, effects, time lapse interval settings and change the video quality.

2. Tap the icon ⋮ and you can view more video settings where you can:

    - Use the **Store location** setting: If the terminal's location function is enabled, this setting allows you to record the location where each video is recorded. Use the **Off/On** switch to turn **Store location** on or off.

      When switched on, view the details of a video and you will see the location information.

3.8 Using the RFID&NFC Reader (CTOS)

The RFID&NFC reader is a Configure-to-Order Service (CTOS) on the terminal and can be identified by a label on the lower right corner of the front bezel. To use the reader, tap the RFID/NFC card to the reader and then read and decoded data will be displayed.
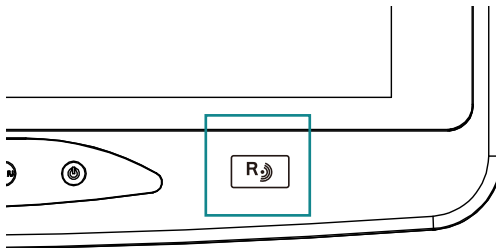
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Appendix

Optional Connections

A. Medical Arm

This medical computer can be mounted on a wall-mount, desktop-stand, or hospital arm for convenient operation. To mount it on a hospital arm, you need cross-headed screwdriver, and M6x40 size screws. Due to mechanical design, we don't suggest you screw arm via VESA 75 holes (inner square), or you may risk the danger of damaging the computer in serious case. Please take advantage of VESA 100 holes.

1. Align the screw holes of arm's VESA bracket with corresponding holes on the rear panel of the medical computer.

2. Secure provided M6x40 screws to the 4 aligned screw holes. Make sure you screw them firmly.
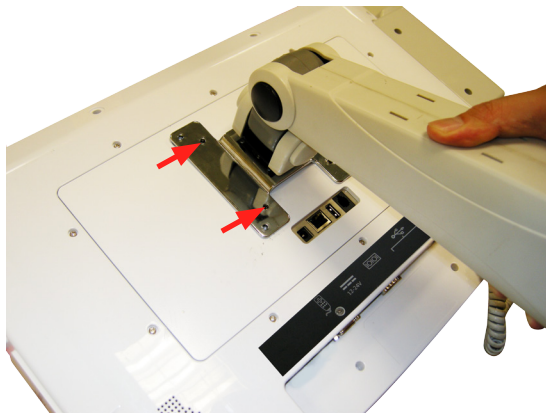
B. Installing the Handset and Holder

If you are going to use the phone handset (optional), install the holder to the terminal as described below.

1. Place the terminal face-down on a soft flat surface.

2. Remove the two screws securing the bezel on the right side and remove the bezel.

   Please keep the bezel and screws in a safe place for reuse in the future.

3. To use the buzzer function (optional), connect the 2-pin wire connector to the buzzer connector of the terminal. If your vendor doesn't provide the related functionality, skip this step.

4. Secure the holder to the terminal with two screws included in the holder accessory pack.

5. Using the RJ-11 phone cable included in the handset pack, connect one end to the handset and the other end to the **PHONE** jack on the rear of the terminal.
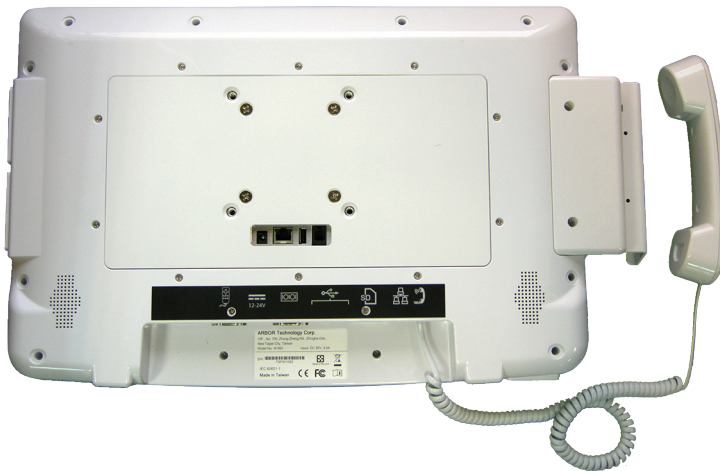
C. Using the Handset

Note: The audio of this medical computer switches between the phone and the speaker/headset of the medical computer. For instance, when you lift the phone, the audio is switched to the phone so that phone conversation can be carried out. When the phone is hung off, the audio is automatically switched to the system.

To use the phone handset:

1. Launch the voice communication software. When you lift the handset, the audio automatically switches to the phone so that conversation can be carried out.

2. Hang off the phone when the conversation finishes. When the phone is hung off, the audio automatically switches back to the system.

You can also use the phone key on the front panel to toggle the phone mode on and off. The Phone LED light also change accordingly to reflect current phone status as described in the following table.

If you want to...	Then...	Phone LED Status
Use the handset as the audio device	Lift the handset to go off-hook, or press the phone button ⓢ.	Light green
Switch the audio to the system.	Replace the handset in the holder to go on-hook, or press the phone button ⓢ. Then the audio will automatically switch to the system.	Off
Adjust the handset volume	Press the ⊖ or ⊕ button on the front panel to decrease or increase the volume	-