
Gladius G0720/G0820

**7"/8" Intel® Atom™ Z530P
Rugged Tablet PC**

User's Manual

Version 1.1

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Copyright Notice

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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.

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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 Class B

This device complies with Part 15 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 15 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.

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)

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. 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 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.

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.

We recommend you to follow the cleaning steps:

1. Close all application programs
2. Close operating software
3. Turn off power switch
4. Remove all peripherals
5. Pull out power cable

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.

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.

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



This symbol indicates electrical warning.



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

About User's Manual

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 User's Manual, please consult your vendor before further handling.

Warning

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

Additional Information & Technical Support

You can download the related technical documents such as datasheet and user's manual as well as driver on our website.

Please do not hesitate to call or e-mail our customer service when you still cannot get the information you need.

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

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.

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Chapter 1

General Information

1.1 Packing List



1 x G0720 or G0820



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



1 x Power Cord (Europe standard cordset)



1 x Power Cord (American standard cordset)



1 x Power Adapter



2 x External Battery Packs

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.

1.2 Ordering Information

G0720-Lite	7" Intel® Atom™ Z530P rugged tablet PC w/ camera, Bluetooth, WiFi, RFID
G0820	8" Intel® Atom™ Z530P rugged tablet PC w/ camera, Bluetooth, WiFi, Barcode, RFID, HSUPA
G0820-Medium	8" Intel® Atom™ Z530P rugged tablet PC w/ camera, Bluetooth, WiFi, RFID
G0820-Lite	8" Intel® Atom™ Z530P rugged tablet PC w/ WiFi

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



SST-0720
28*3.7cm, Shoulder Strap



HST-0720
G0720 Hand Strap



eBAT-0720
External Battery Pack Kit



VMC-0720
Vehicle Mount Cradle

Optional Configuration (Configure to Order Service)



BarC-0720
1D/2D Barcode Scanner Kit



HSUPA-0720
3.75G HSUPA Wireless Kit



BT-0720
Bluetooth 2.1 Kit



CAM-0720
2.0M CMOS Camera Kit



RFID-0720
13.56MHz RFID Kit



GPS-0720M
GPS Kit for G0720 & G0820

1.3 Specifications

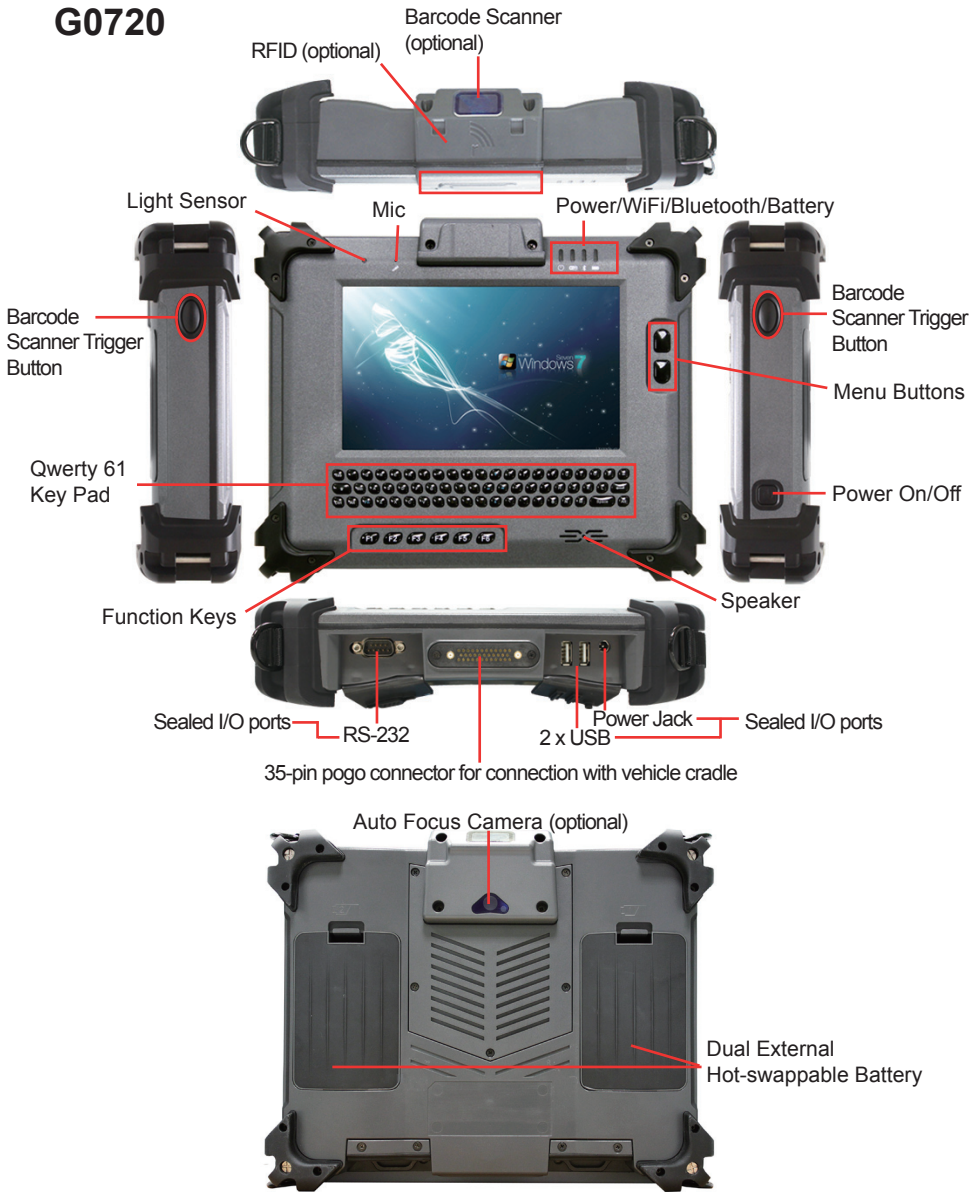
System	
CPU	Intel® Atom™ Z530P 1.6GHz with FSB 533MHz
Graphics Controller	GMA 500 integrated
Memory	2GB DDR2-800 SDRAM
Chipset	Intel® System Controller Hub US15WPT

BIOS	AMI BIOS
Audio	Azalia HD Audio, 1 x Integrated microphone, 1 x Integrated 1.5W speaker
Storage	1 x 32GB 1.8" SATA SSD
OS support	Windows XP (32-bit, SP2), Windows 7
Peripherals & Devices	
Serial Port	1 x RS-232
USB Port	2 x USB 2.0
Camera	1 x 2.0 megapixel Auto Focus CMOS camera (optional)
RFID	Integrated ISO 15693/14443A/14443B RFID Reader (distance: 3~5 cm; speed: 5 cards/sec) (optional)
Ethernet	1 x Realtek Gigabit Ethernet controller
Wi-Fi	Integrated WLAN 802.11 b/g/n
Bluetooth	Integrated Bluetooth 2.1 + EDR (optional)
GSM/UMTS	Gobi 3000 HSPA module (3.75G) for GSM/GPRS/EDGE, networks (optional)
GPS	1 x GPS module (Vehicle cradle function) (optional)
Barcode Scanner	1 x 1D/2D Barcode Scanner (optional)
Expansion	1 x 35-pin pogo connector for connection with vehicle cradle
SIM Socket	1 x SIM socket (located underneath the battery pack)
Hand Strap	1 x Black elastic hand strap
Button & Indicator	
Function Key	6 x Function keys
	2 x Menu buttons on the front
	2 x Barcode Scanner Trigger button on the sides
Power Button	1 x Power on/off button on the right side
Keypad	1 x 61-key keypad (G0720 only)
LCD Display	
Size/Type	7" wide active matrix TFT (G0720) 8" wide active matrix TFT (G0820)
Max Resolution	1024 x 600 (WVGA) w/ 262,144 colors (G0720) 1024 x 768 (XGA) w/ 16.2M colors (G0820)

Luminance	300 cd/m ² (typ.) (G0720) 700 cd/m ² (typ.) (G0820)
Contrast Ratio	400 : 1 (G0720) 700 : 1 (G0820)
Backlight Type	LED
Touch Screen	
Type	Analog resistive
Light Transparency	80% (typ.) (G0720) / 76% (typ.) (G0820)
Controller Interface	USB interface
Power Supply	
Adapter Input	100 ~ 240VAC (Full Range)
Adapter Output	19VDC, 3.42A, 65W
Battery Type	Li-battery pack
Battery Capacity	2 x 2500mAh 3-cell
Battery Operating	8 hours (Max.)
Mechanical & Environmental	
Operating Temp.	0 ~ 50°C (32 ~ 122°F)
Operating Humidity	5 ~ 95% (non-condensing)
Dimensions (W x D x H)	240 x 47 x 188 mm (9.45" x 1.85" x 7.4")
Gross Weight	1.7 kg (3.7 lb) (G0720) 1.8 kg (3.9 lb) (G0820)
Vibration	3 Grms/5 - 500Hz/random operation
Shock	75G peak acceleration (11 ms duration)
Transit Drop	182 cm (6 feet) drop to concrete
IP Rating	IP54 (whole unit)
Regulatory	CE/FCC Class B compliant

1.4 Overview

G0720

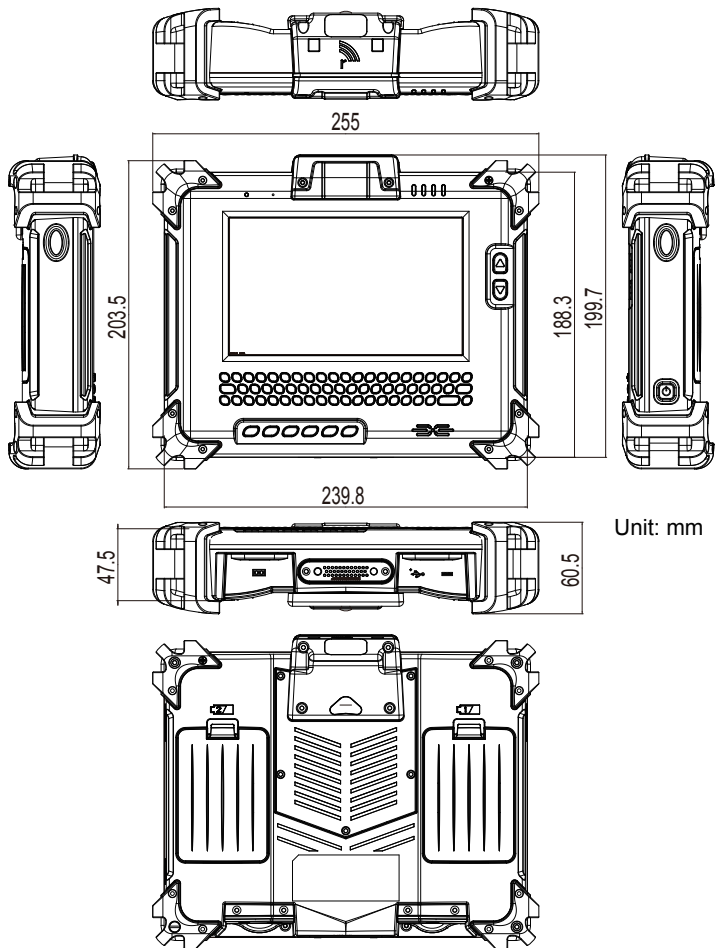


G0820

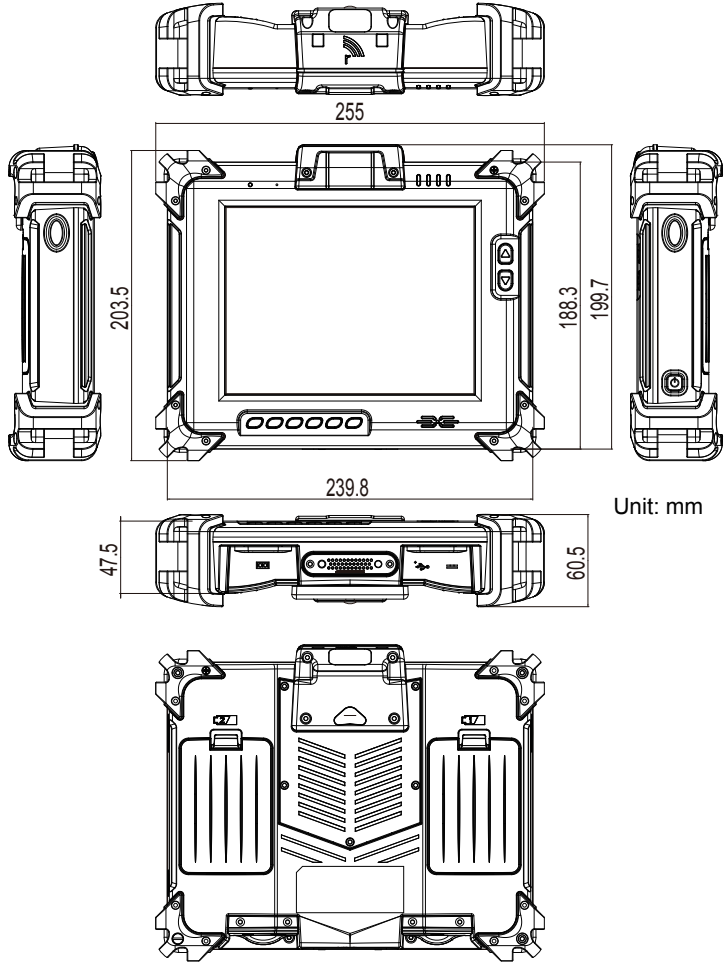


1.5 Dimensions

G0720



G0820



1.6 Bar Code Types

As following format, the barcode scanner (optional) of G0720/G0820 rugged tablet PC supports these 1D and 2D barcodes.

Linear	Matrix
BC412 (requires end-user license from IBM)	Aztec
China Post	Chinese Sensible Code (Han Xin Code)
Codabar (NW7)	Data Matrix
Code 11	Grid Matrix Code
Code 128	MaxiCode
Code 32	QR Code
Code 39	Micro QR Code
Code 93 and 93i	Postal
Code 2 of 5	Intelligent Mail Barcode
EAN	(formerly 4-state customer barcode)
Interleaved 2 of 5	Australian Post
Label Code	British Post
Matrix 2 of 5	Canadian Post
MSI	ID-tag (UPU 4-state)
Plessey	Japanese Post
PosiCode	Netherlands (KIX) Post
GS1 DataBar (formerly RSS)	Korea Post
Telepen	Planet Code
Trioptic Code	Postnet
UPC	OCR
Stacked	OCR-A
Codablock F	OCR-B
Code 16K	OCR MICR (E 13 B)
Code 49	
GS1 Composite (formerly EAN/UCC)	
MicroPDF417	
PDF417	
TCIF Linked Code 39 (TLC39)	

1.7 Introduction

Front Side

G0720



G0820



Note:

The six function keys (F1 ~ F6) and two menu buttons on the front panel are available after users have installed the Function Key utility. These keys can be defined by users. Please refer to **Section Function Key** for the default value of each function key. Should you want to change the settings, please select **Start > Settings > Control Panel** and then click the **Function Key Configure** icon to configure the functions of those keys.

On the front upper right corner are four system status LEDs for both G0720 and G0820. They have different meanings individually. From left to right, they are:

LED	Color	Status	Description
Power	Green	On	Power on
		Off	No power
WiFi	Green	On	WiFi enabled
		Off	WiFi disabled
Bluetooth (optional)	Blue	On	Bluetooth connection is active
		Off	Bluetooth connection is inactive
Battery	Green/ Red	On (Green)	Battery fully charged
		On (Red)	Low battery
		Blinking	Battery is charging

To be more specific, the Battery indicator's color varies according to the following table:

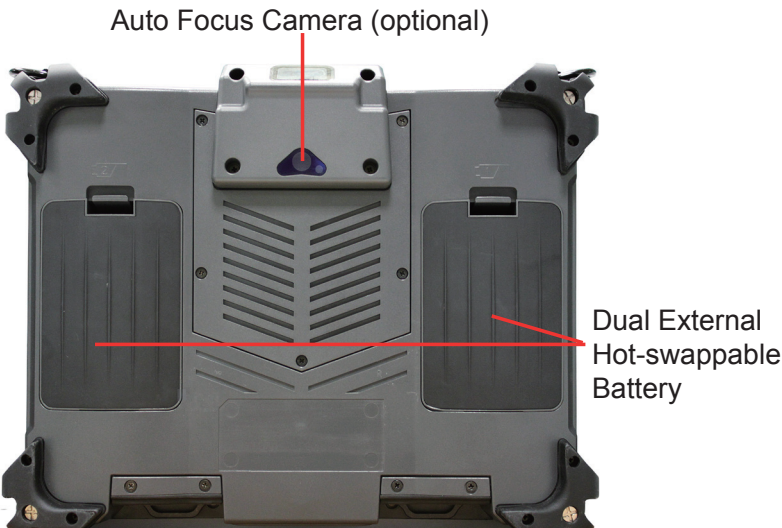
	Power Left / Indicator Color & Status			
	0% ~ 15%	16% ~ 49%	50% ~ 99%	100%
Discharger w/o Adapter	Red	Orange	Green	
Charger w/ Adapter	Red Blinking	Orange Blinking	Green Blinking	Green

Right & Left Sides

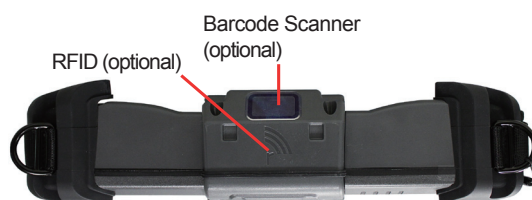


Power ON/OFF: the power button used to turn on/off the PC (must hold the button for about 2 seconds).

Rear Side



Top Side



Bottom Side





Chapter2

Installation and Configuration

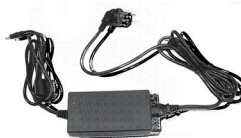
2.1 Getting Start

This chapter is intended to give users the information about how to utilize various functions of this rugged tablet PC. To be familiar with using the computer, please take a few minutes to read this manual.

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



G0720/G0820 Rugged Tablet PC



Power Adapter & Power Cord



USB Keyboard



USB CD-ROM Drive



Driver CD



USB Mouse

2.2 Battery Replacement

The tablet PC is equipped with two 3S1P rechargeable battery packs. When you want to replace the batteries or remove the left one for installing SIM card, please follow the steps below:

1. Disconnect the DC power plug and turn off the computer.
2. Remove any peripheral devices connected to the computer.
3. Press the plastic piece inwards and lift it upwards to remove the battery.
4. Push another battery into the right position of battery compartment until you hear a “click” sound.
5. Repeat step 1 to 5 to replace another battery.

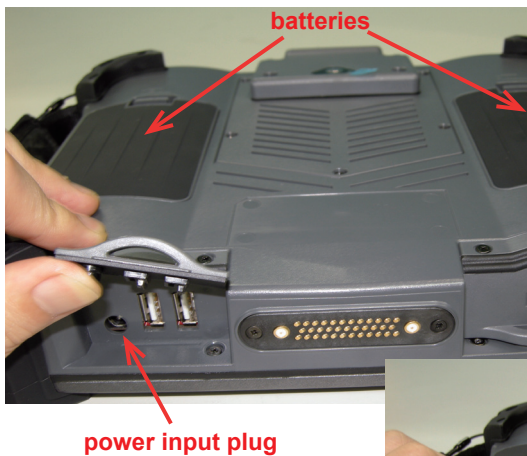




Instructions for Rechargeable Battery Pack

How to recharge:

- To recharge the lithium-ion battery packs, install them into the rugged PC and then connect the power adapter to the power input plug of the rugged PC.
- The battery will be fully charged within 2-4 hours (depending on the capacity of the battery). When finished charging, the charge indicator in the front will turn on steadily in green and then it's recommended to remove the adapter from the computer.
- It's recommended not to recharge intermittently, which means not to plug and unplug the power adapter frequently in short period of time.
- It's recommended to turn off the computer before charging.
- Do not use the power adapter that is not made for your computer. Supplying the computer with inappropriate voltage may cause harm to the batteries or, even worse, burn the computer.





How to use:

- It's recommended to supply power via the adapter without the batteries installed when you are to use the rugged PC for a long time. And reinstall the batteries in the contrary situations.
- The lithium-ion battery is currently one of the most popular battery pack. The best advantage is that it has no memory effect, so users needn't worry about that. Users can charge the battery anytime whether it is fully drained or not. However, it's recommended that users drain the batteries until the system shows power shortage warning and then recharge the batteries. Doing so is helpful to the reliability of your batteries.
- Don't use the battery pack as a power supply for other equipment.

How to store:

- Don't expose the batteries to elevated heat situations such as under direct sunlight in a car or near fire.
- Don't disassemble the batteries, or the battery leakage might cause skin or eye injury. If electrolyte leaking from the battery packs contacts your skin or clothing, immediately flush it with running water. If it splashes into eye, rinse the eye at least 15 minutes with clean water and then seek medical attention.
- To avoid battery leakage or explosion, don't discard the batteries into water or fire, or put them near a heat source such as a gas stove or an oven.
- Use the appropriate container to store the batteries such as a paper box. Do not allow a metal object to touch the terminals of the batteries.
- When storing for a long period of time, keep the batteries approximately at the charging state of 60 ~ 80% and regularly use it. The batteries should be completely discharged and recharged once per month to condition the cells inside the batteries and to ensure the batteries deliver the most available capacity.
- The batteries consist of precise electrical components and cells. Do not drop or hit the batteries.

2.3 SIM Card Installation

Only G0820 supports 3G telecommunication network function, but HSUPA module is optional. You should prepare a 3G SIM card firstly, and remove the Battery 2 in light of steps shown in the beginning of **Section Battery Replacement**. Underneath it is a SIM socket, insert your SIM card into the socket as the picture below, install the Battery 2 again, and then you can start to use its 3G network function.



2.4 DC Power Supply

Apart from the battery pack, this tablet PC can also be powered by the AC-to-DC power adapter. If the battery is running low, you can immediately plug the DC connector into the power jack of the computer. With the DC power being supplied, the battery pack attached to the unit charges. (Please refer to pictures in **Section Battery Replacement.**)

2.5 Driver & Utilities Installation

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

2.5.1 Chipset Driver Installation

1. After you put the disk into the CD-ROM drive, the driver & utility installation main menu will jump out automatically. Click **Chipset** of the main menu to install the chipset driver.



2. Make sure you have closed all programs which run behind and then click **Next** to continue.



3. Please read the license agreement first, and click **Yes** to continue.



4. Please read the Readme file for system requirements and installation information, and click **Next** to continue.



5. Click **Finish** to complete the setup process.

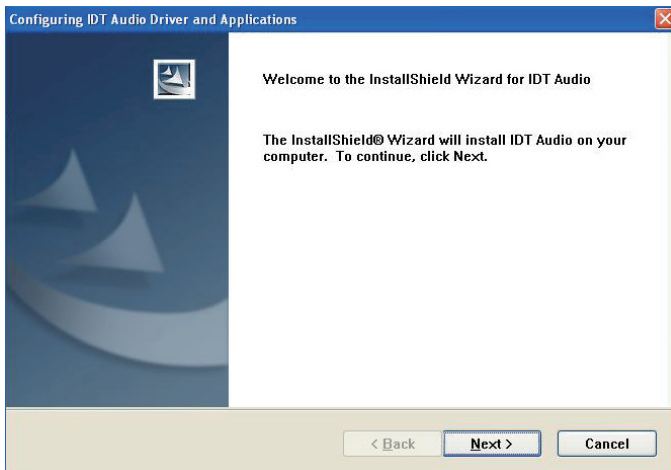


2.5.2 Audio Driver Installation

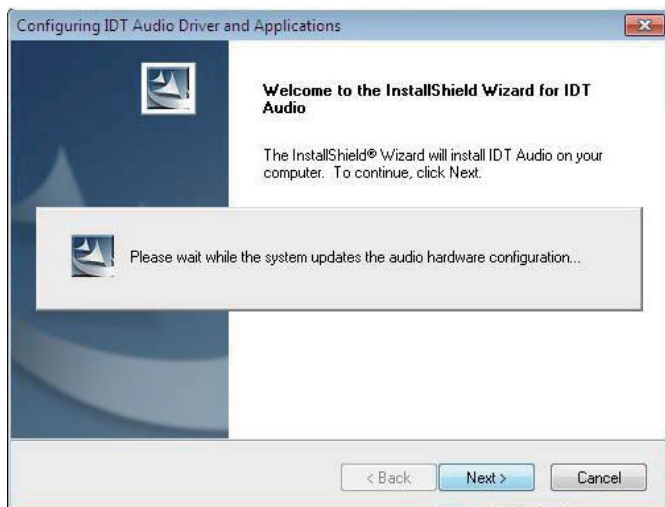
1. Click **Audio** of the main menu to install the audio device driver.



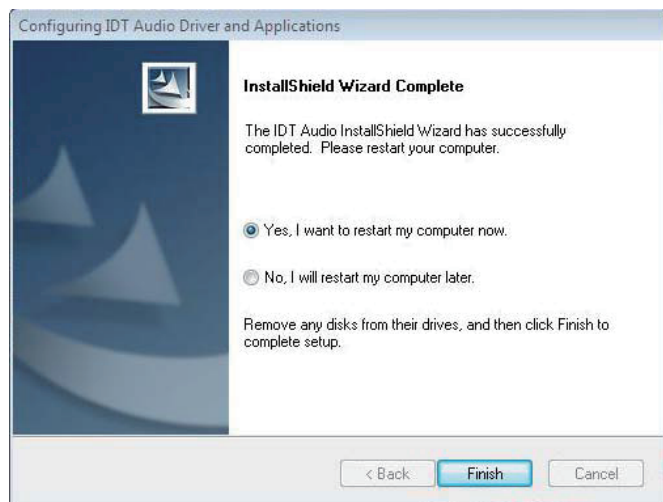
2. Click **Next** to continue.



3. Please wait for a short while to initiate the installation.



4. 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.



2.5.3 VGA Graphics Driver Installation

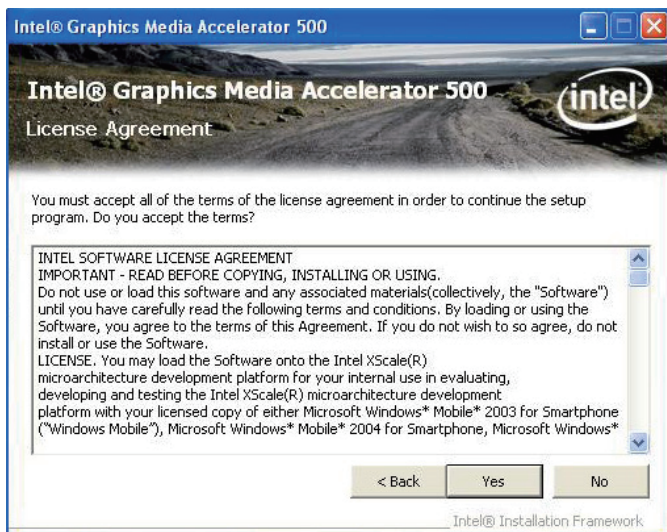
1. Click **VGA** of the main menu to install the device driver.



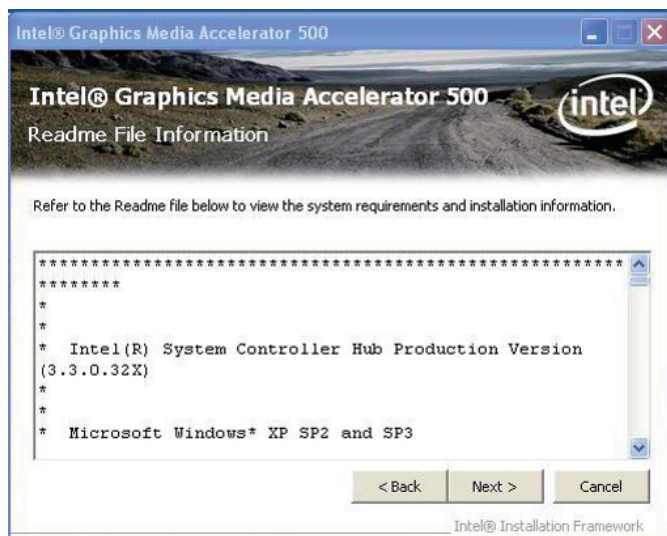
2. Make sure you have closed all programs which run behind and then click **Next** to continue.



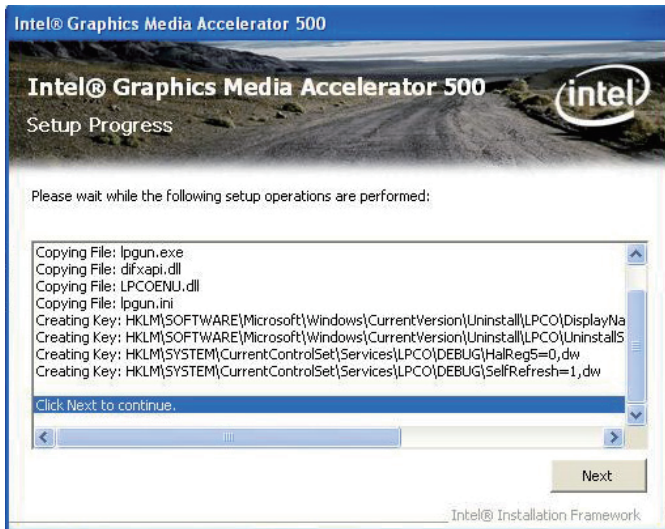
3. Please read the license agreement first, and click **Yes** to continue.



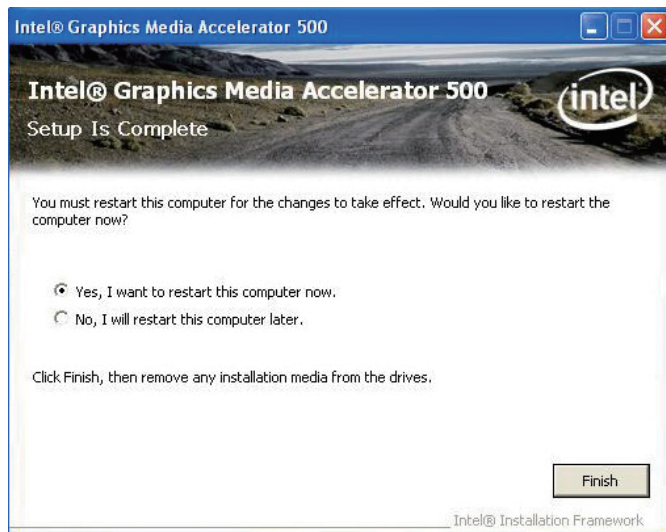
4. Please read the Readme file for system requirements and installation information, and click **Next** to continue.



5. Please wait for a while for the data extracting and file copying, , and click **Next** to continue.



6. After installing the graphics device 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.

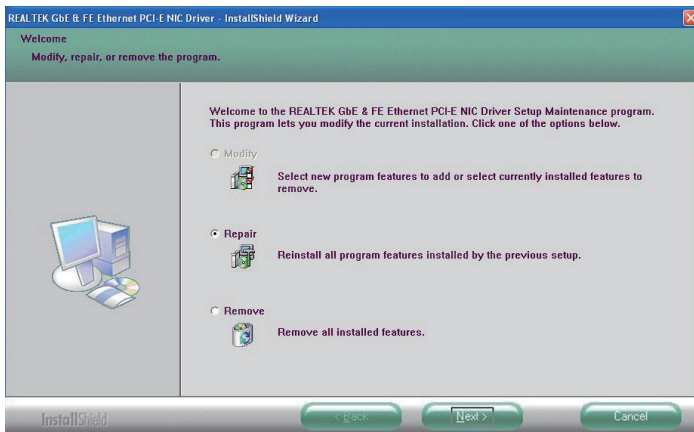


2.5.4 LAN Driver Installation

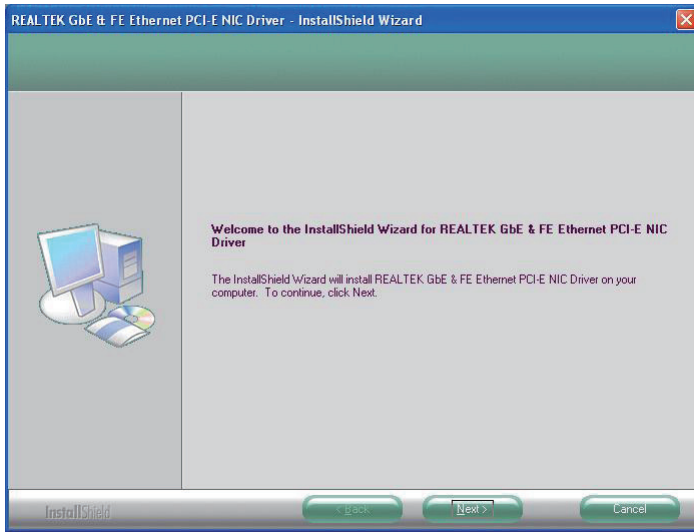
1. Click **LAN** of the main menu to install the LAN device driver.



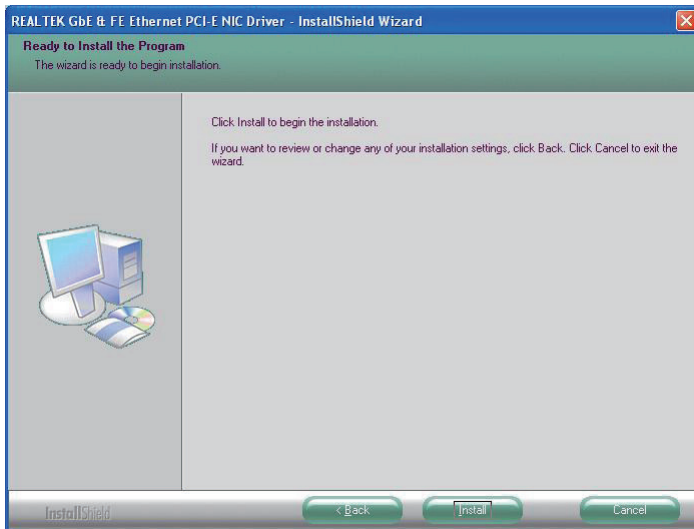
2. Click one of the options and then click **Next** to continue.



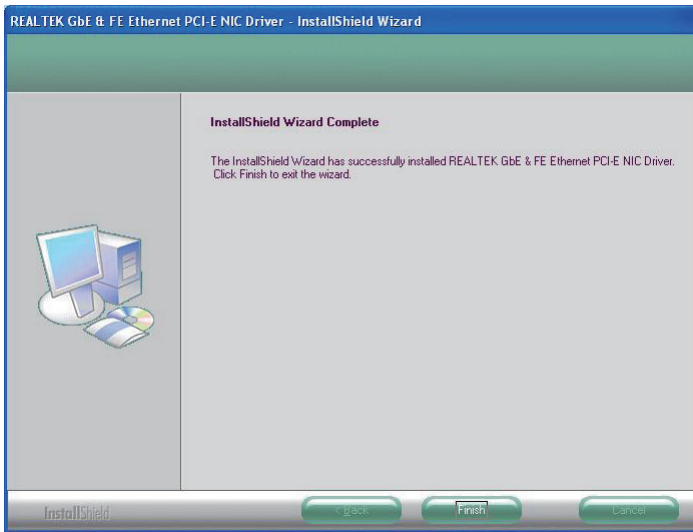
3. Click **Next** to continue.



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



5. Click ***Finish*** to close the wizard window.

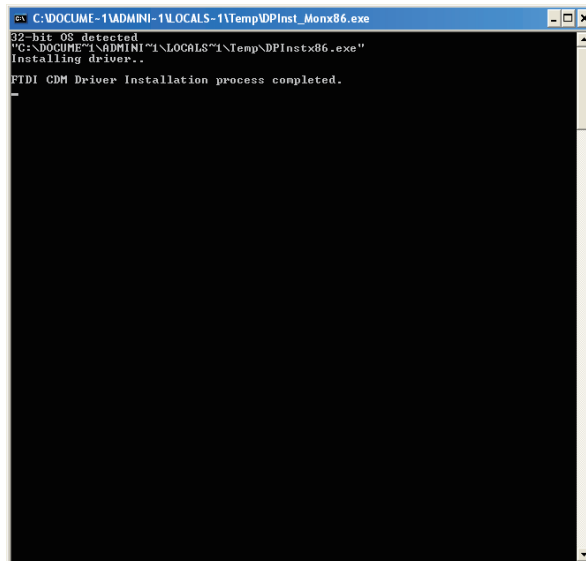


2.5.5 RS-232 Driver Installation

1. Click **RS-232** of the main menu to install the RS-232 device driver.



2. Wait for the process.

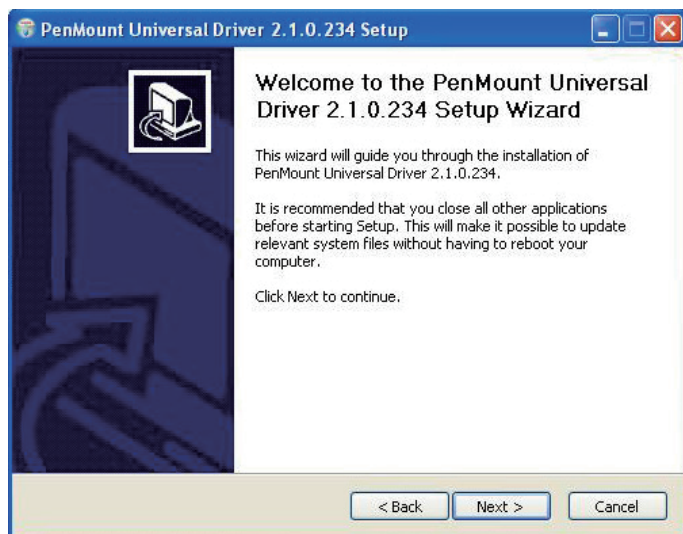


2.5.6 Touch Screen Driver Installation

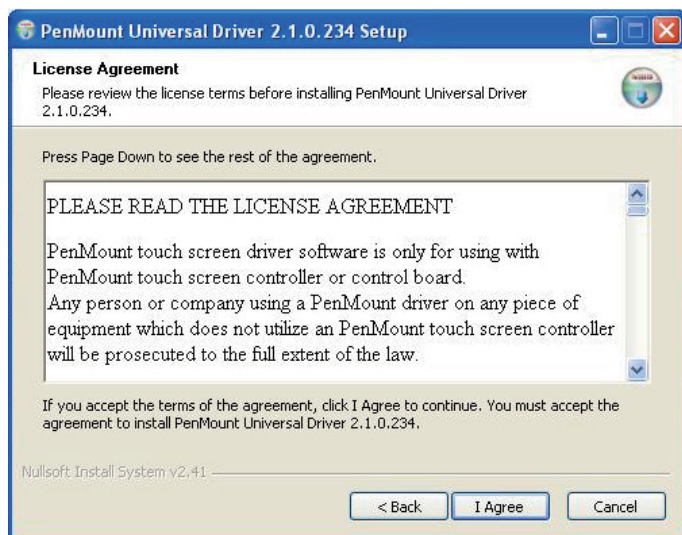
1. Click **Touch Screen** to install the driver for touch screen.



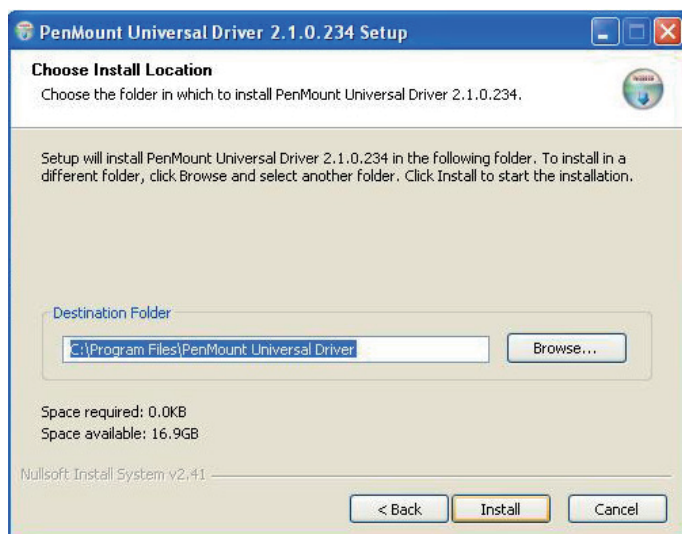
2. When you see the welcome wizard, click **Next** to continue.



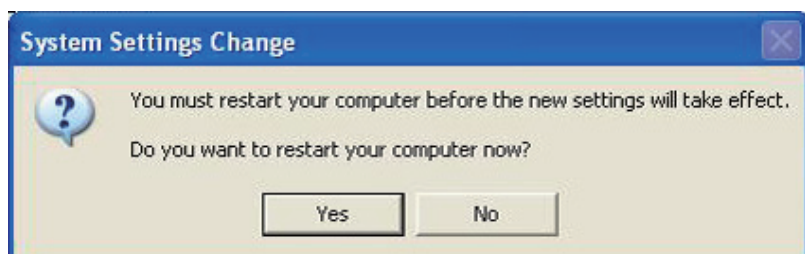
3. Click **I Agree** to continue the installing PenMount Universal Driver.



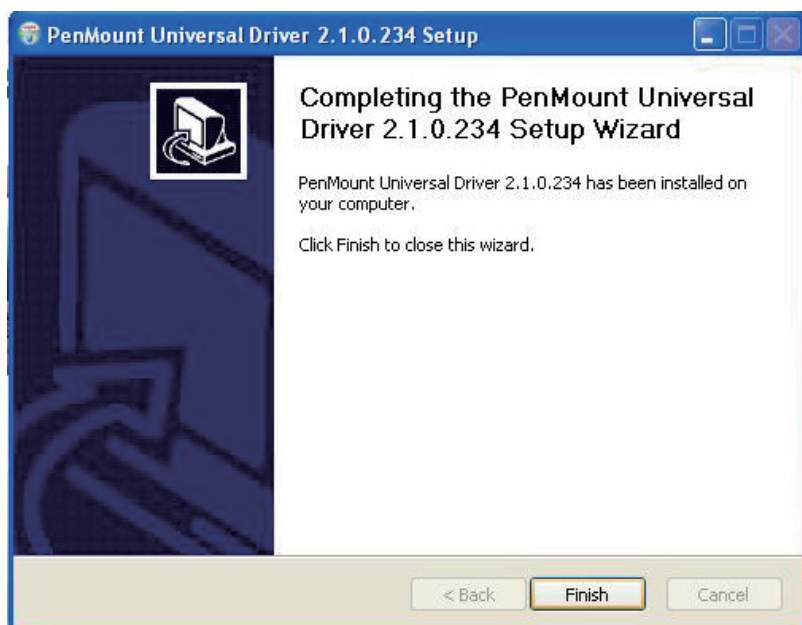
4. Click Browse to change the installation directory, or immediately click **Install** to continue.



- Click **Yes** to restart your computer to make the new settings take effect or click No to restart your computer later.



- Click **Finish** to close this wizard.

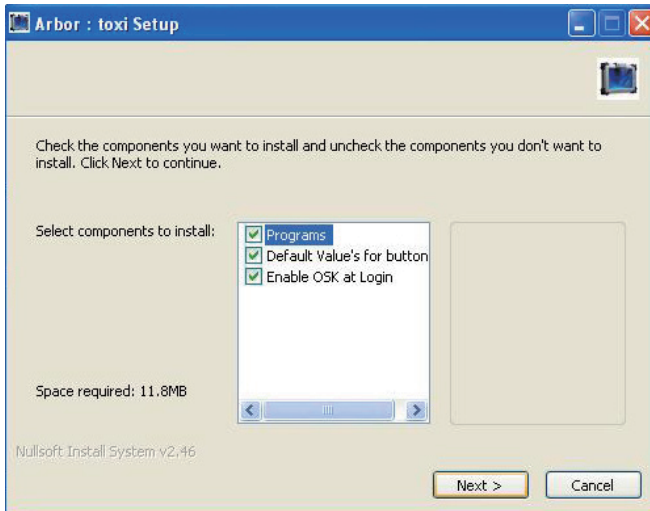


2.5.7 Function Key Installation

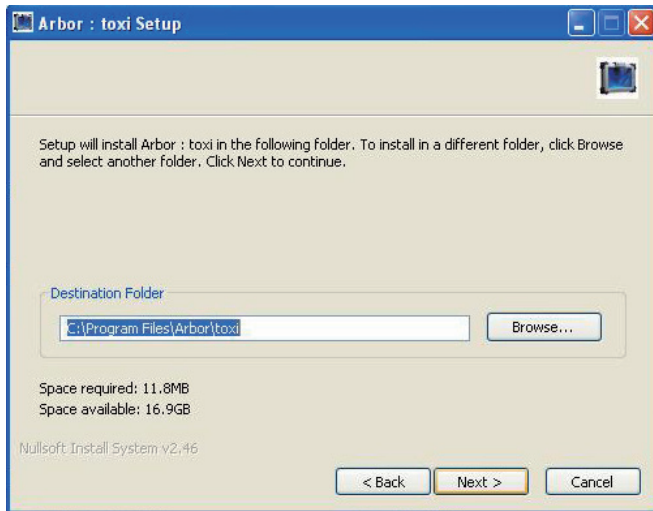
1. Click **Function keys** to install the function key configuration utility.



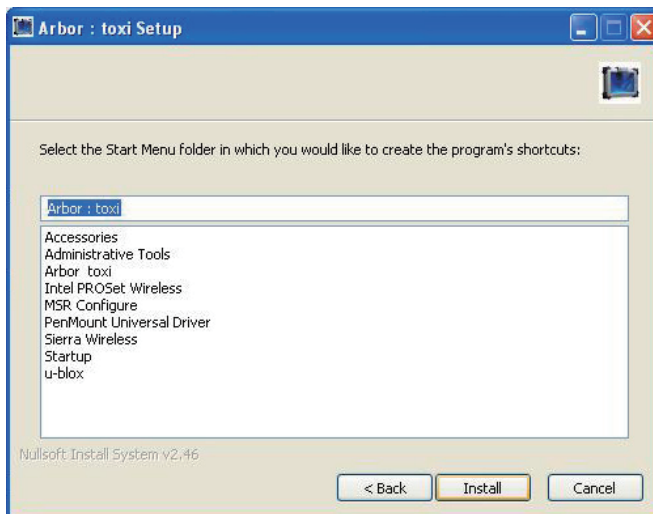
2. Click **Next** to continue.



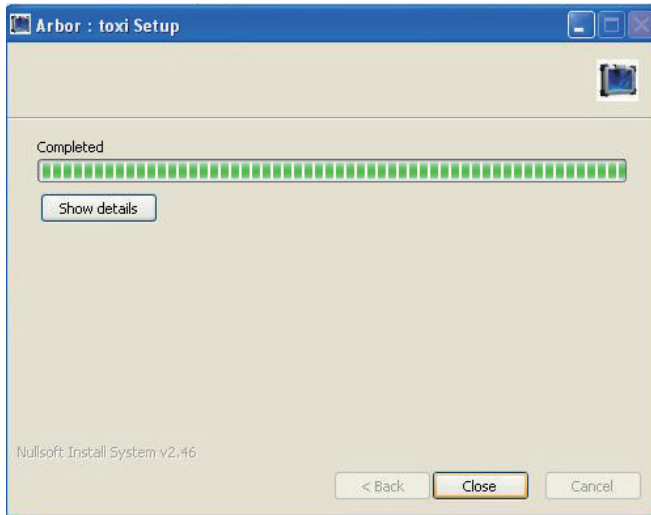
- Click Browse to change the installation directory, or immediately click **Next** to continue.



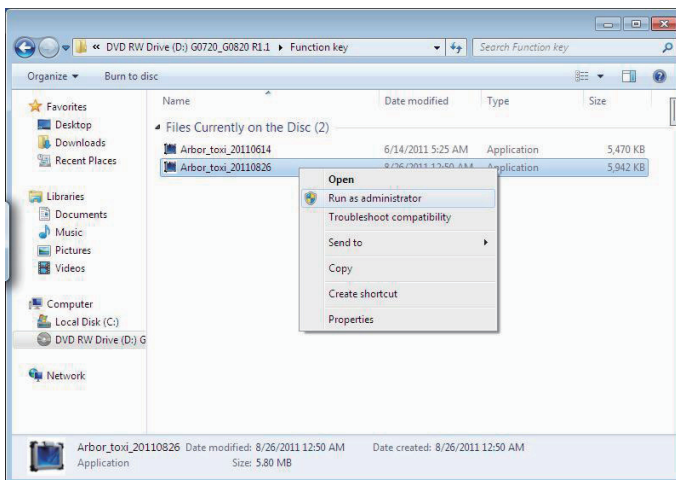
- Select the Start Menu folder in which you would like to create the program's shortcuts and then click **Install** to continue.



5. Arbor: toxi setup completed. Click **Close** to close this window.



Note: The example mentioned above takes Win XP as background environment. However, for Win 7, the installation steps are slightly different. Please follow these steps. Please execute `Arbor_toxi_20110826.exe` from the following path: `IDVD RW Drive\G0720_G0820 R1.1\Function Key`. Right-click the program and select **Run as administrator**. The rest steps are the same as forgoing step 2~5.

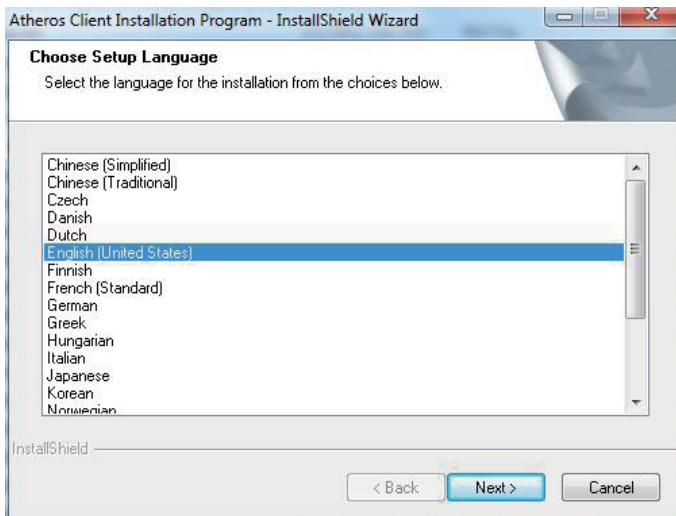


2.5.8 WiFi Driver Installation

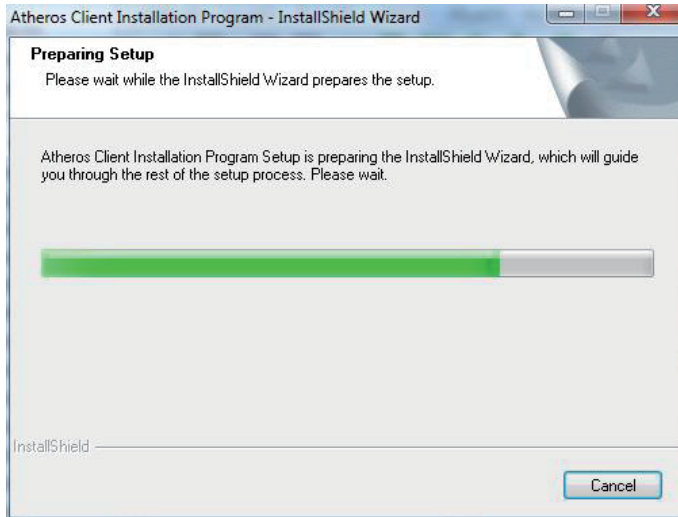
1. Click **WiFi** of the main menu to install the wireless WiFi driver.



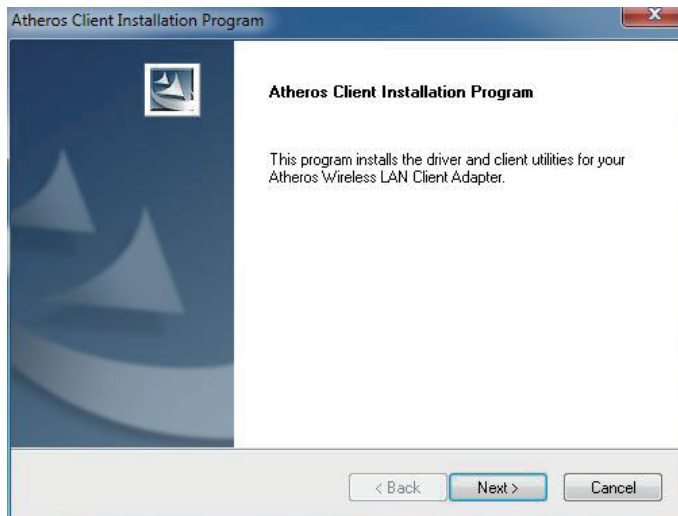
2. Select preferred language.



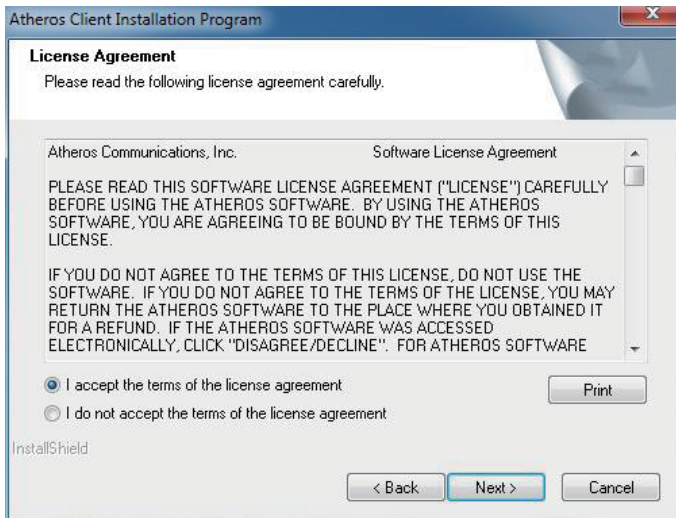
3. Wait for the process.



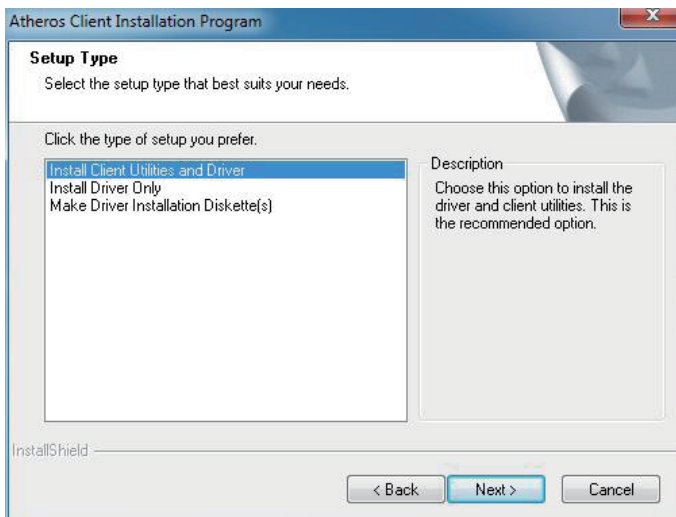
4. Click **Next**.

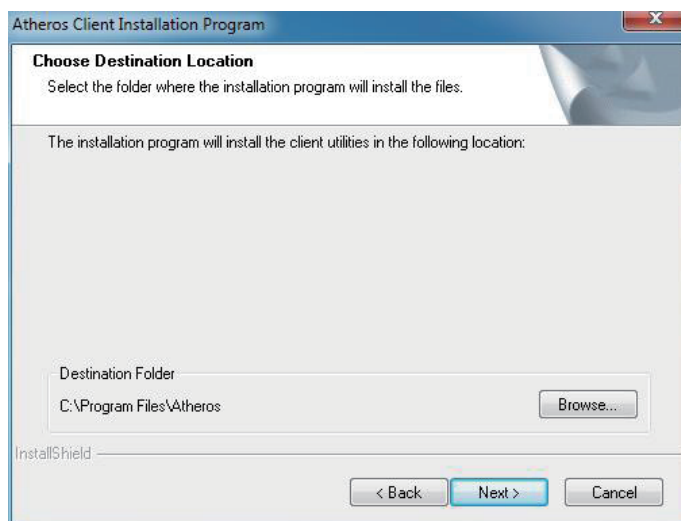


5. Choose “***I accept the terms of the license agreement***” and click ***Next***.

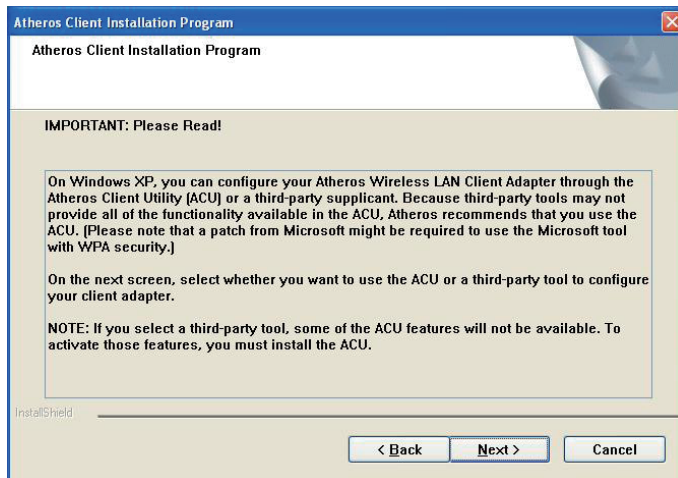


6. Select preferred type and Click ***Next***.

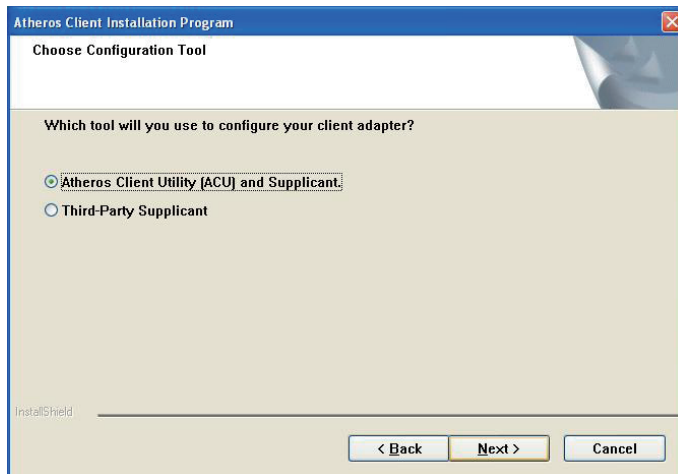


7. Click **Next**.8. Click **Next**.

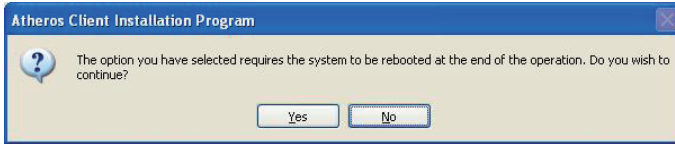
9. Read Important warning and click **Next** directly.



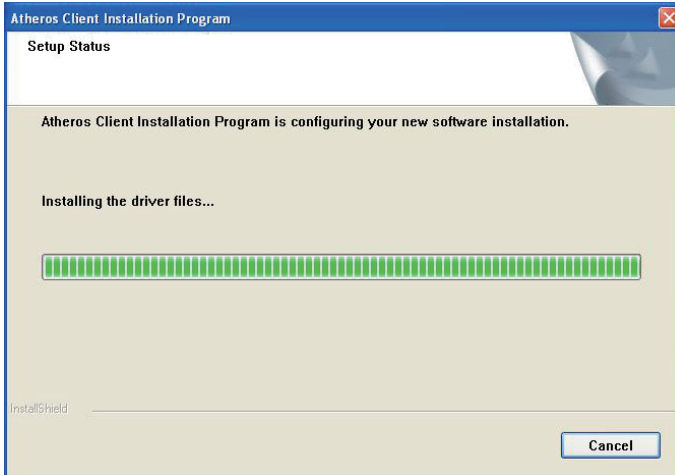
10. Select the first option as previous screenshot recommends since Third-Party Supplicant brings some restriction. Click **Next**.



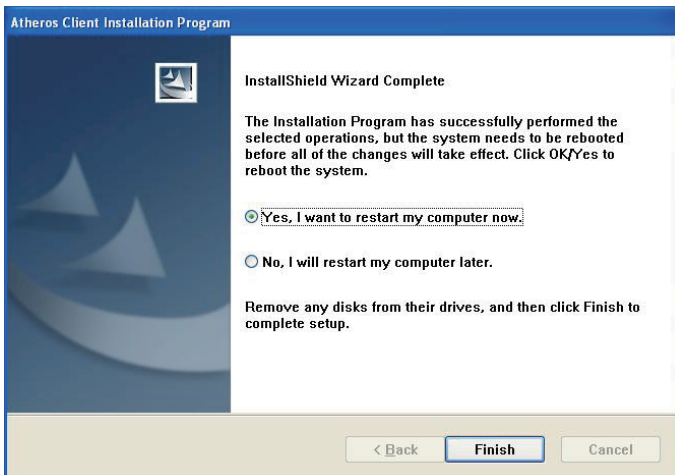
11. Click **Yes** to reboot later.



12. Wait for the process.



13. Choose **"Yes, I want to restart my computer now."** and click **Finish** to complete all process.

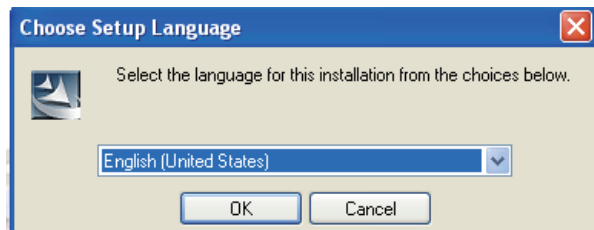


2.5.9 Bluetooth Driver Installation (optional)

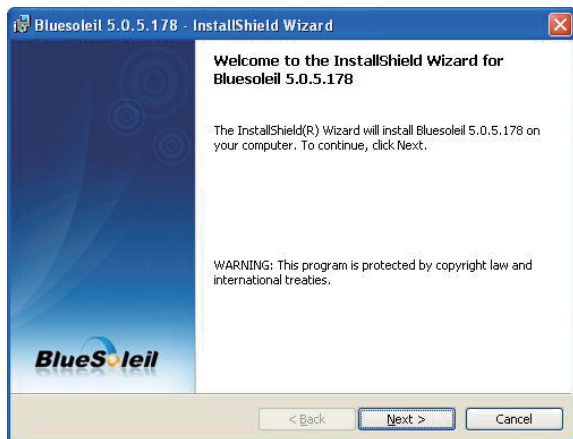
1. Click **Bluetooth** of the main menu to install the Bluetooth device driver.



2. Select your preferred language for installation.



3. Check the driver information and click **Next** to continue.



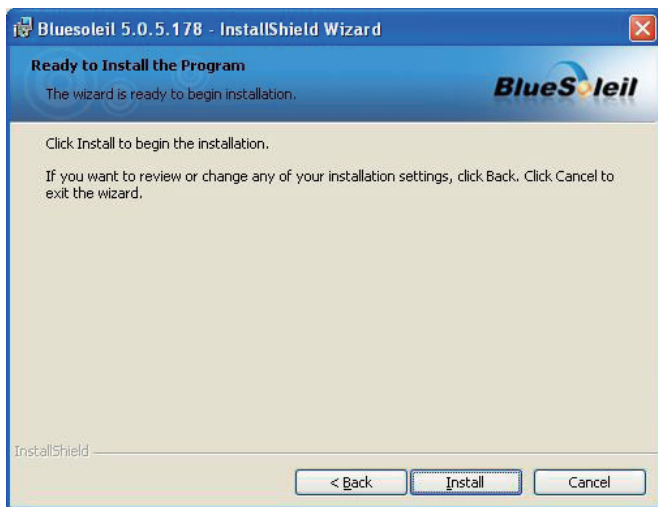
4. Please read the license agreement first; select ***I accept the terms in the license agreement*** and then click ***Next*** to continue.



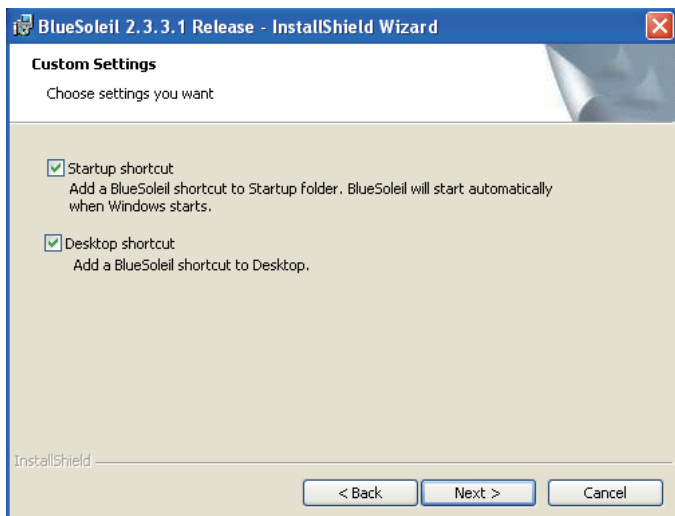
5. Click ***Next*** to install to this folder, or click ***Change*** to install to a different folder.



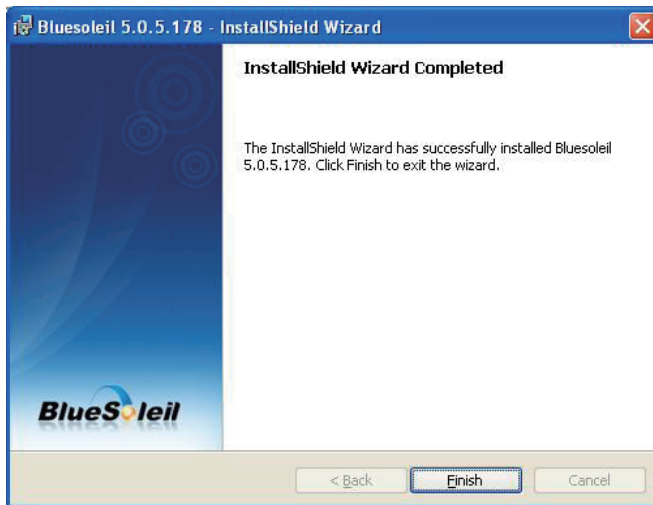
6. Click **Install** to start installation, or click **Back** to go back to the previous step.



Note: A “Custom Settings” window as the figure below will ask for your preference of whether to set the Bluetooth icon as a shortcut. You can choose either “Startup shortcut” or “Desktop shortcut” by checking the tickbox at the right hand side.



7. After the installation is completed, click **Finish** to close the window. And then a message box shows up asking whether you want to restart the computer right away or later.



2.5.10 RFID AP Installation (optional)

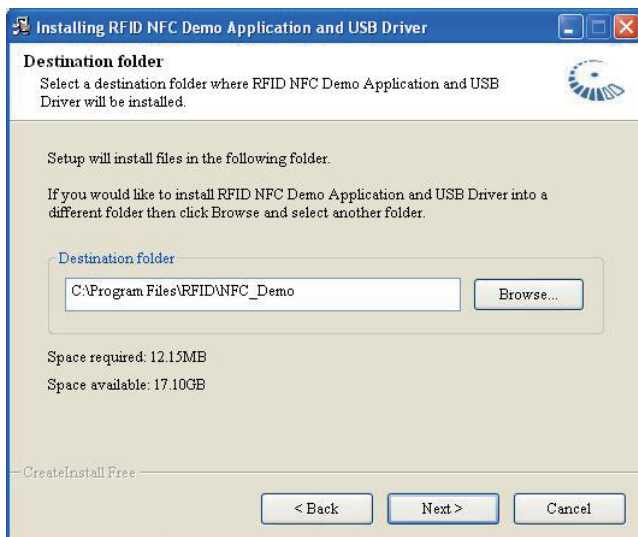
1. Click **RFID** on the main menu to install the RFID application. The “AP” letters on its icon imply this is an application, not driver. The same principle applies to **3G AP** and **GPS**.



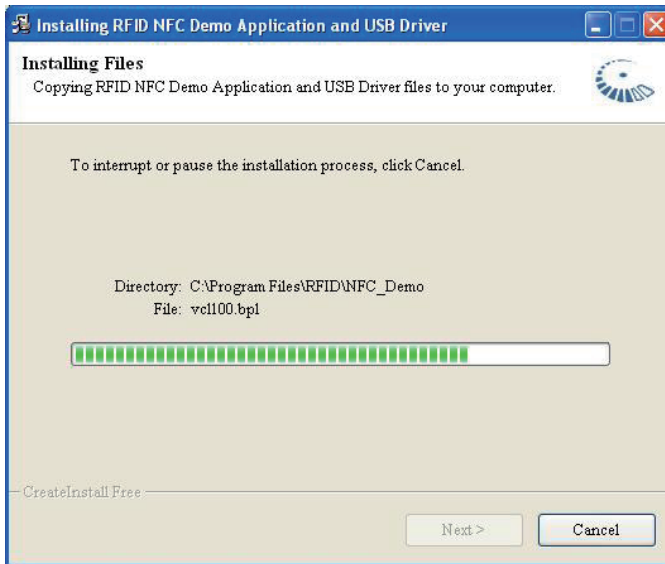
2. Read the information and then click **Next** to continue.



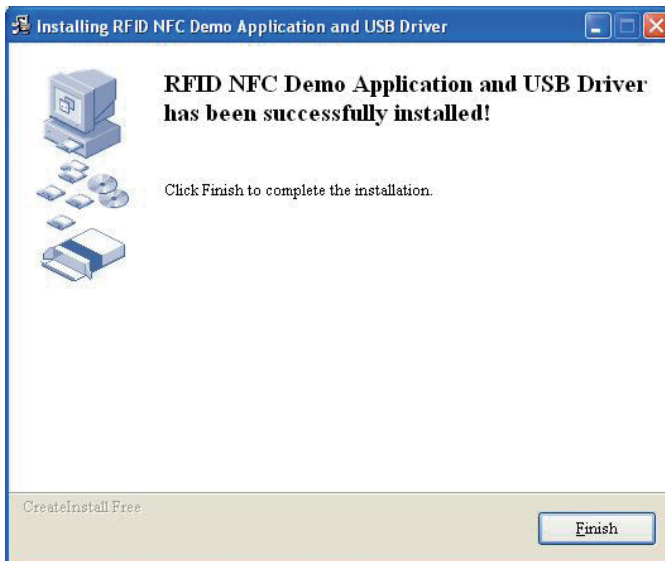
3. Click **Next** to install to this folder, or click **Browse** to install to a different folder.



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



5. Click **Finish** to complete the installation.



2.5.11 3G Driver Installation (optional)

Click **3G** of the main menu to install the device driver.



2. Click **Next** and the program will do the rest.



2.5.12 3G AP Installation (optional)

1. Click **3G AP** of the main menu to install the application.



2. Read the information and click **Next**.



3. Read warning and click **Next**.



4. Choose "**I accept the terms in the license agreement**" and press **Next**. Click **Change...** to designate another installation folder if you like.



5. Wait for the installation.

6. Click **Finish** to complete the installation.

2.5.13 GPS AP Installation (optional)

1. Click **GPS** of the main menu to install the GPS application.



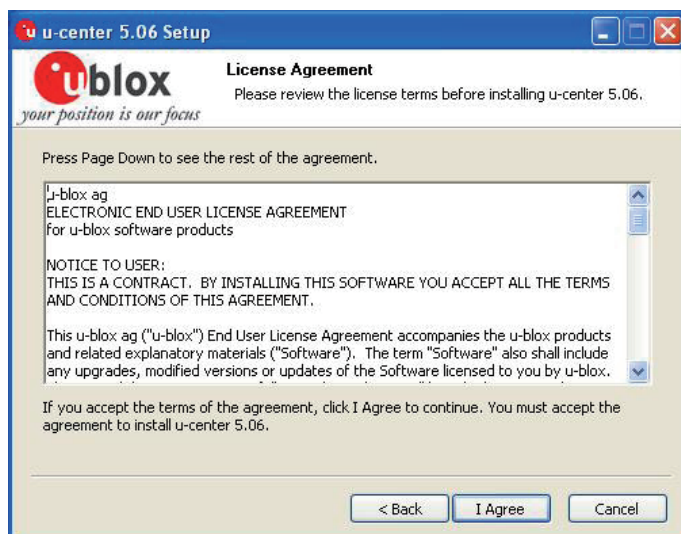
2. Select a language you prefer.



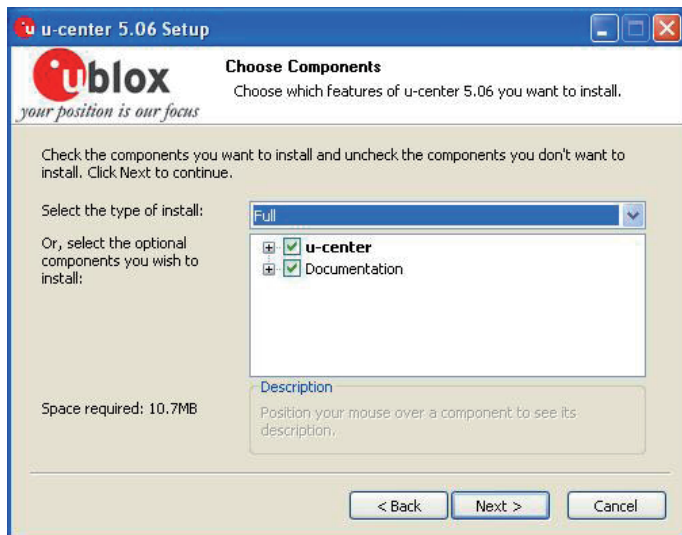
3. Read the information and click **Next** to continue.



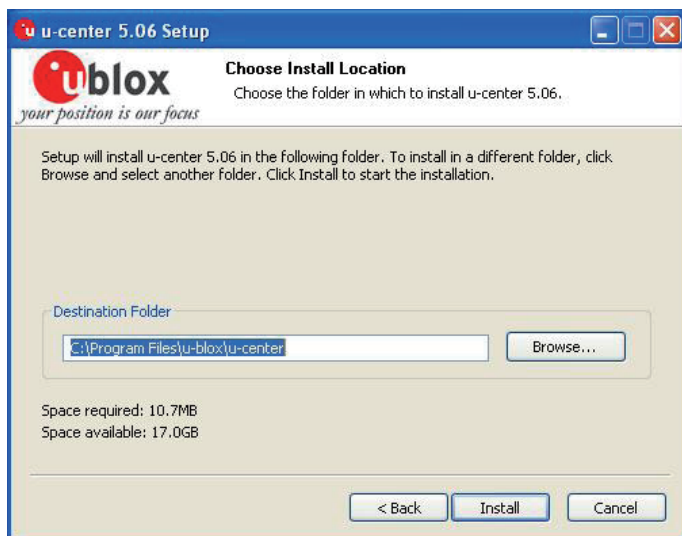
4. Read license agreement and click **Agree** to continue.



5. Choose the components you need and click **Next** to continue, or check all if you are not sure.



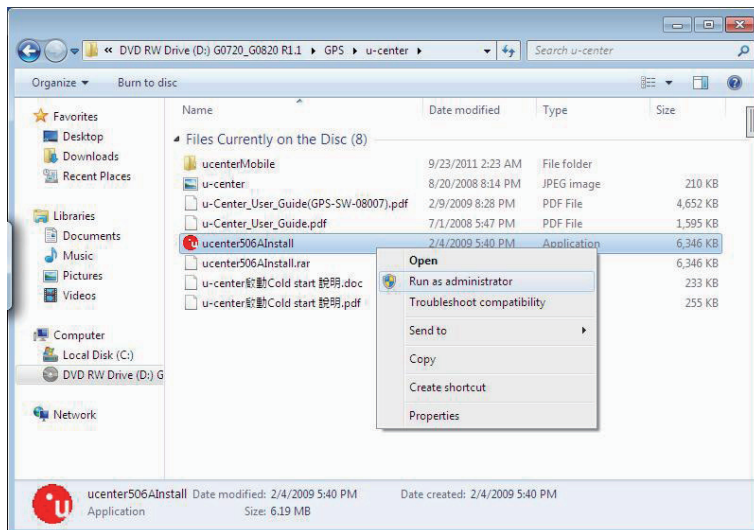
6. Click **Browse** to change the destination directory, or immediately click **Install** to continue.



7. Check **Launch u-center** to open the software and click **Finish** to complete the installation.

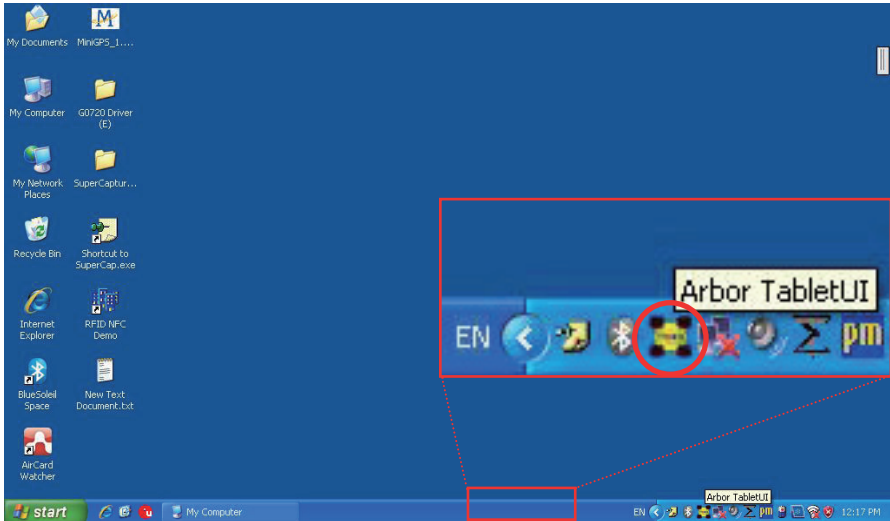


Note: The example mentioned above takes Win XP as background environment. However, for Win 7, the installation steps are slightly different. Please execute u-center.exe from the following path: \DVD RW Drive\G0720_G0820 R1.1\GPS. Right-click the program and select **Run as administrator**. The rest steps are the same as forgoing step 2~7.

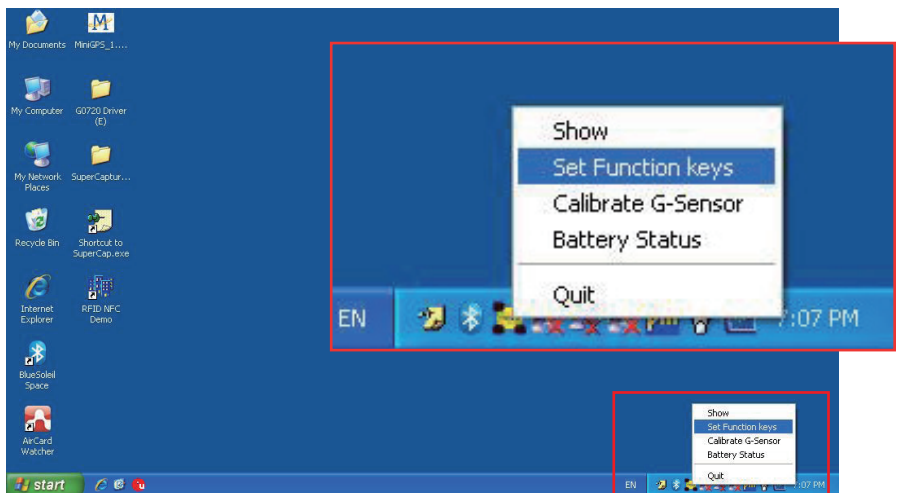


2.5.14 Function Key

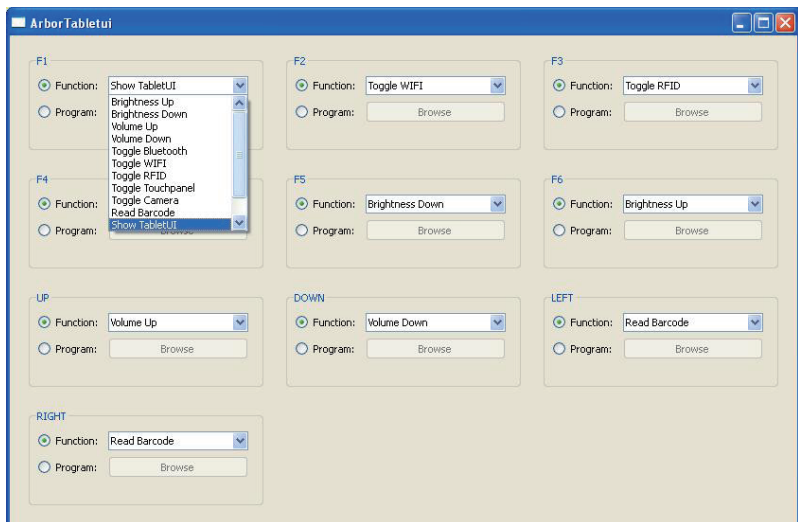
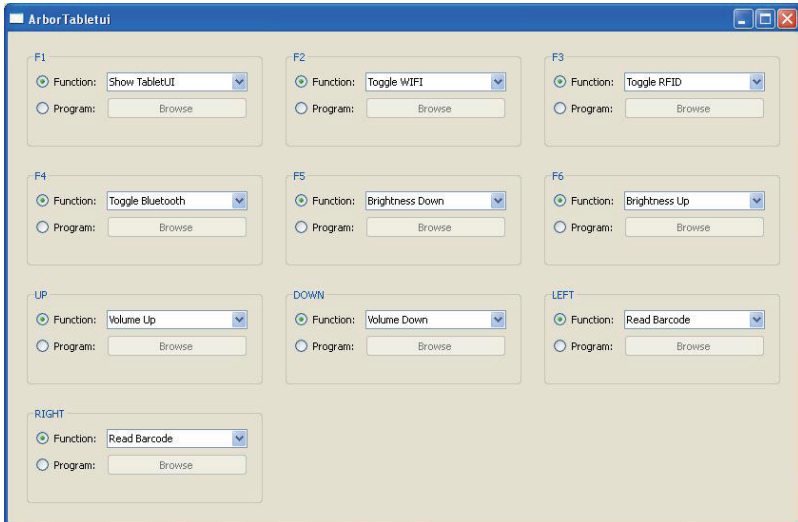
1. After installing function key driver, **Arbor Tablet UI** icon appears in the system tray at the bottom.



2. Right click the icon, and select **Set Function keys**.



3. A dialog box will pop up. You can designate desired function or program for each function key from F1 to F6, including Left, Right, Up, Down keys, or set program shortcut for each key. Since RFID, bluetooth and barcode-reading function are optional, you may set other functions or programs for the original F3, F4, left and right barcode trigger buttons.



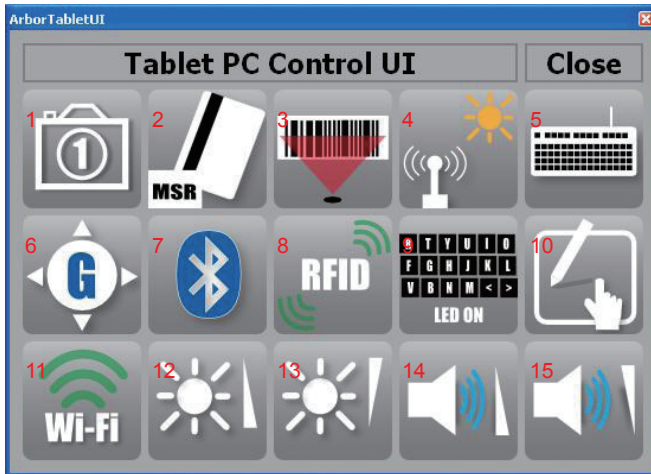
4. In addition, you can also use the physical function keys on the front and sides.



5. Their separate default functions are shown in the table below:

F1	Open/Close Tablet PC Control UI
F2	WiFi on/off
F3	RIFD on/off (optional)
F4	Bluetooth on/off (optional)
F5	Brightness down
F6	Brightness up
Up Key	Volume up
Down Key	Volume down
Left Key	Barcode scanner (optional) trigger
Right Key	Barcode scanner (optional) trigger

6. Press F1, and a window will pop up on screen instantly.



7. Some of their functions are the same as Function keys. For others, please consult the following table.

1	Auto Focus Camera on/off, the camera lens is located on the back panel (optional)
3	Barcode on/off (optional)
4	Light Sensor on/off. There are totally 8 light levels, from 0 to 7, the latter the brighter. But for default Auto Mode, there are only three levels, inclusive of level 0, 2 and 7.
5	Keyboard Lock/Unlock (only for G0720)
6	Display rotation on/off
7	Bluetooth on/off (optional)
8	RFID on/off (optional)
9	Keyboard LED on/off (only for G0720)
10	Touchscreen on/off
11	Wi-Fi on/off
12	Brightness up
13	Brightness down
14	Volume up
15	Volume down

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, hold on “**Delete**” key 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

System Overview

BIOS Version: displays the current version information of the BIOS

EC Version: displays the current version of Embedded Controller

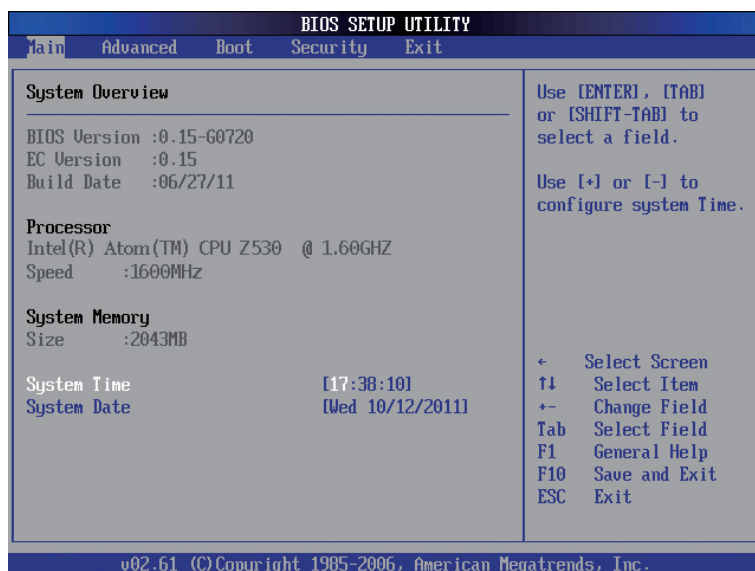
Build Date: the date that the BIOS version was made/updated

Processor (auto-detected if installed)

Speed: displays the processor speed

System Memory (auto-detected if installed)

Size: lists the memory size 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 : 1999 to 2099

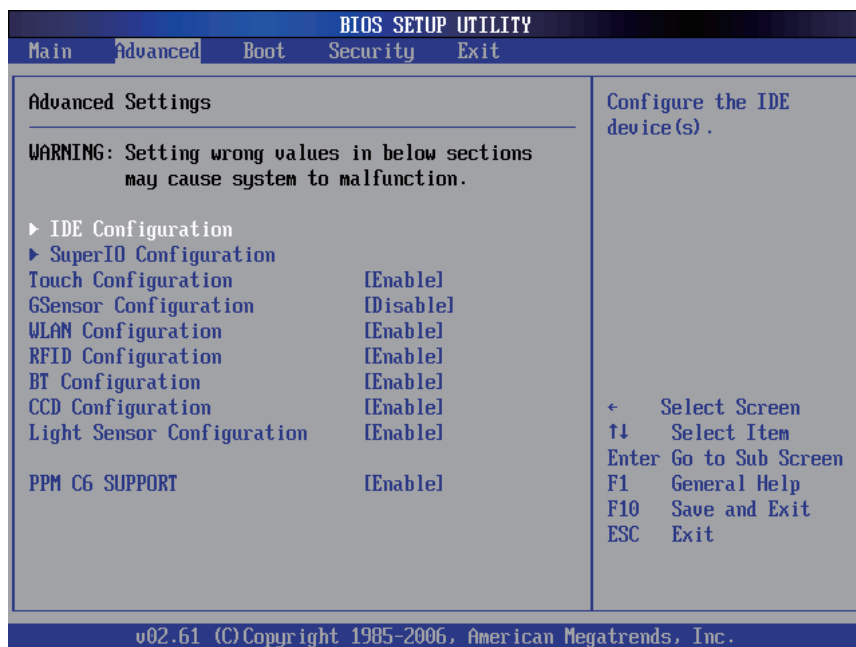
Key Commands

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

“←” “→”	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 item / 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 IDE, Super IO (input/output), Touch Screen, GSensor, WLAN, RFID, BT (Bluetooth), CCD and Light Sensor, etc.



Touch, GSensor, WLAN, RFID, BT, CCD, Light Sensor Configuration

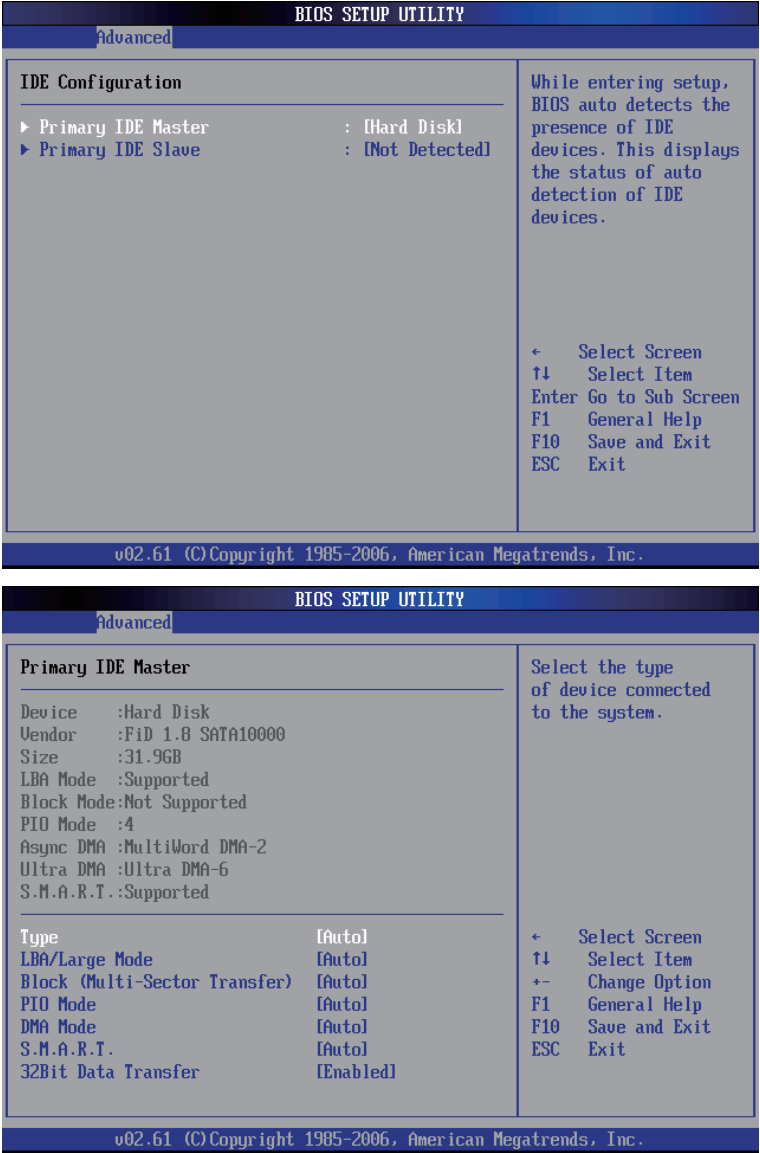
Attention, even though you set these configurations as enable or disable, after entering into OS, they still work according to Function Key setting described in **Section Function Key** instead of the configurations in BIOS Setup Utility here.

PPM C6 Support

Enable/Disable to save more power.

3.2.1 IDE Configuration

When entering the setup, BIOS automatically detects the presence of IDE devices. This item shows status of auto-detected IDE devices and allows you to configure subitems.



3.2.2 Super IO Configuration

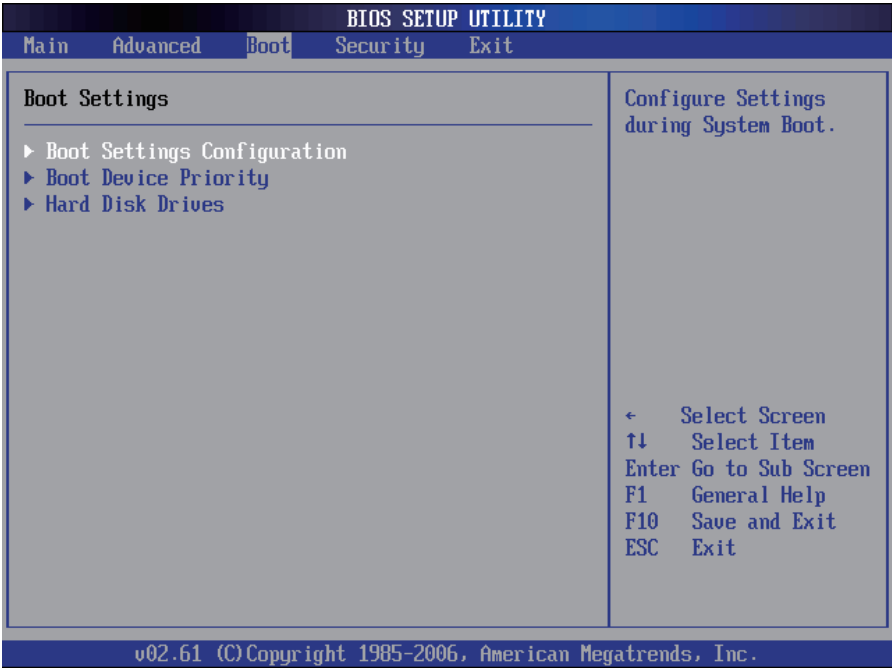
Configure Addresses & IRQs for Serial Port1~4.

Advanced		
Serial Port1 Address	[3F8]	Allows BIOS to Select Serial Port1 Base Addresses.
Serial Port1 IRQ	[4]	
Serial Port2 Address	[2F8]	
Serial Port2 IRQ	[3]	
Serial Port3 Address	[3E8]	
Serial Port3 IRQ	[11]	
Serial Port4 Address	[2E8]	
Serial Port4 IRQ	[10]	
		+ Select Screen
		↑↓ Select Item
		+ - Change Option
		F1 General Help
		F10 Save and Exit
		ESC Exit
v02.61 (C) Copyright 1985-2006, American Megatrends, Inc.		

3.3 Boot Settings

This item allows you to set your device's booting preferences. There are totally three submenus in it, including:

- Boot Settings Configuration
- Boot Device Priority
- Hard Disk Drives



3.3.1 Boot Settings Configuration

BIOS SETUP UTILITY	
Boot	
Boot Settings Configuration	
Quiet Boot	[Disabled]
Bootup Num-Lock	[On]
Wait For 'F1' If Error	[Enabled]
Disabled: Displays normal POST messages. Enabled: Displays OEM Logo instead of POST messages.	
← Select Screen ↑↓ Select Item +− Change Option F1 General Help F10 Save and Exit ESC Exit	
v02.61 (C) Copyright 1985-2006, American Megatrends, Inc.	

Quiet Boot

This setting determines if the BIOS should replace 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, the BIOS will display the normal POST messages instead of the full-screen logo.

Bootup Num-Lock

This setting determines whether the Num Lock key should be activated at boot up.

Wait For 'F1' If Error

To enable waiting for F1 key to be pressed if error occurs.

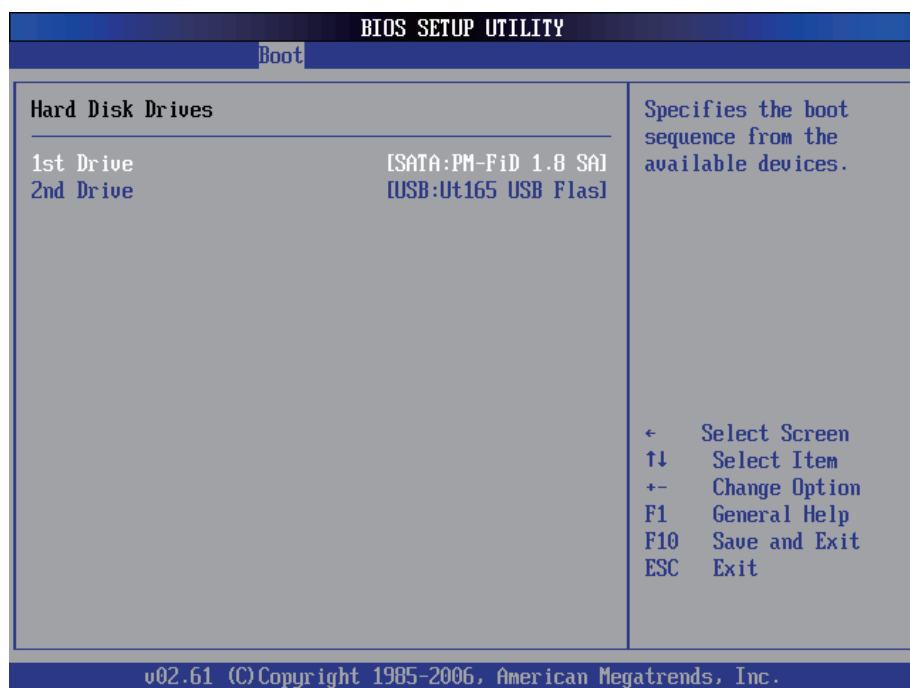
3.3.2 Boot Device Priority

This setting determines the priority that the BIOS uses to look for a boot device, from which the operating system is loaded during the DOS boot process.

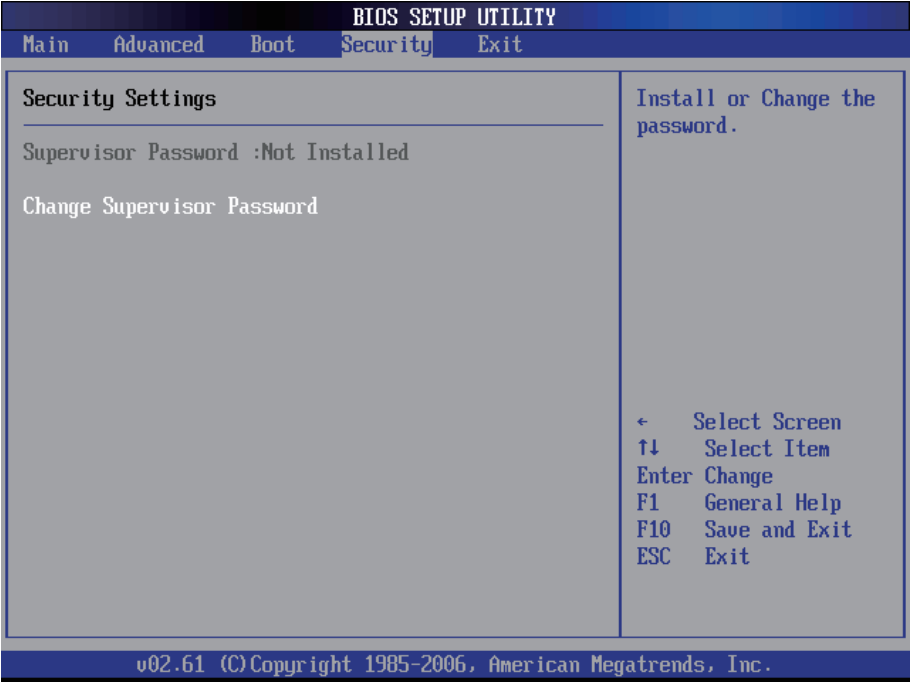
BIOS SETUP UTILITY	
Boot	
Boot Device Priority	
1st Boot Device	[SATA:PM-FiD 1.8 SA]
2nd Boot Device	[Network:Realtek Bo]
Specifies the boot sequence from the available devices.	
A device enclosed in parenthesis has been disabled in the corresponding type menu.	
 ← Select Screen ↑↓ Select Item +- Change Option F1 General Help F10 Save and Exit ESC Exit	
v02.61 (C) Copyright 1985-2006, American Megatrends, Inc.	

3.3.3 Hard Disk Drives

This function displays the information of HDD detected. Through it, you can also set boot sequence from available HDD detected.



3.4 Security



Supervisor Password

Set **Change Supervisor 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.

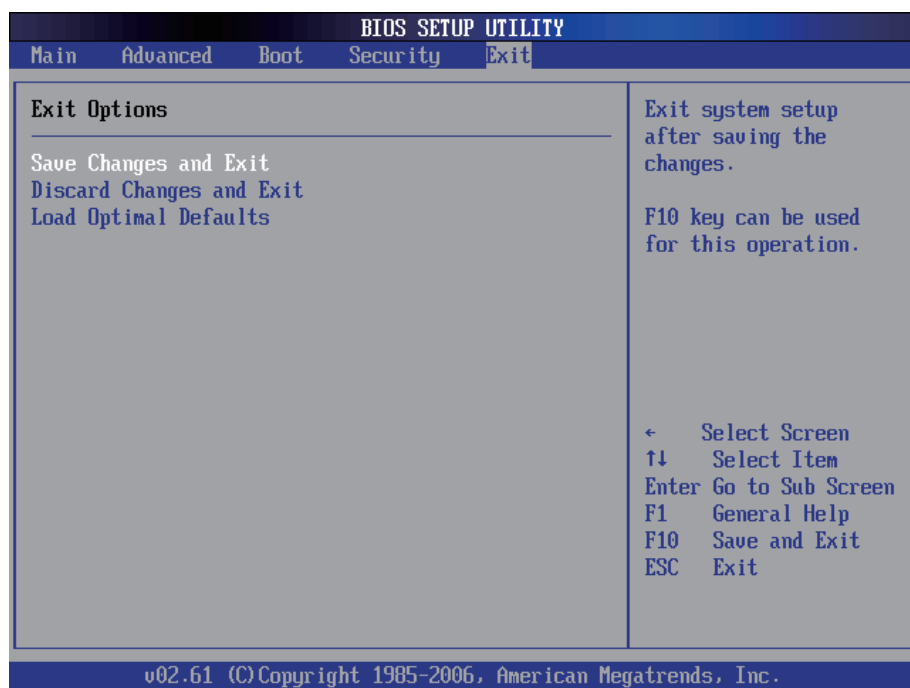
With a password created, a Password Check item appears. Set this item to **Setup**, you will be prompted to enter the password every time you try to enter the BIOS Setup utility. This prevents an unauthorized person from changing any part of your system configuration.

You can also have the BIOS 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.

3.5 Exit Options



Save Changes and Exit

Pressing <Enter> on this item. Then, a message will prompt you to confirm:

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 up your computer, the BIOS will configure your system according to the Setup selections stored in CMOS. After saving the values by clicking [OK], the system is going to restart again.

Discard Changes and Exit

Exit system setup without saving any changes.

Click [OK] to confirm.

Load Optimal Defaults

When you press <Enter> on this item, you get a confirmation dialog box containing a message as below:

Load Optimal Defaults?
[OK] [Cancel]

Pressing [OK] loads the BIOS Optimal Default values for all the setup configurations.

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Appendix

Vehicle Mount Cradle & Desktop Stand

1.1 Getting Start

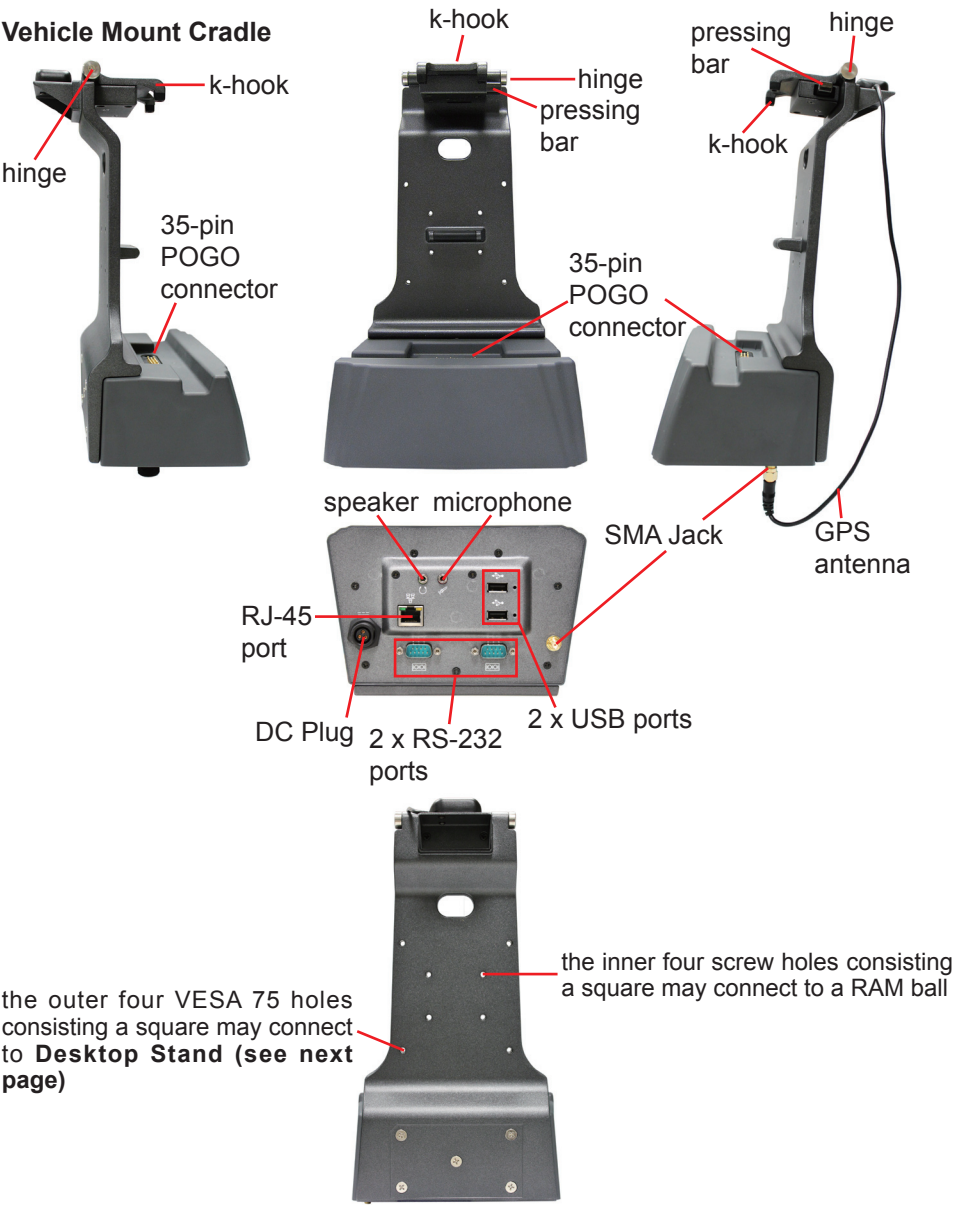
The VMC-0720 vehicle mount cradle with optional built-in GPS module comes in as an accessory option for G0720/G0820. G0720/G0820 can be installed on the cradle that can be mounted on a vehicle. The vehicle cradle provides extra I/O ports for the rugged PC so that it can be connected to additional peripherals. Please go through this chapter to find out more about this vehicle cradle.

1.2 Specifications

Features & Peripherals	
Color & Material	Gray, Plastic+Aluminum
GPS	1 x GPS Module with External Antenna (optional)
Mounting Compatibility	RAM mount; VESA-75
I/O Ports	2 x USB, 1 x RJ-45, 2 x RS-232, 2 x Audio (1 x Microphone, 1 x Speaker), 1 x DC Plug (bottom side)
Mechanical & Environmental	
Operating Temp.	-20 ~ 45°C (-4 ~ 113°F)
Charging Temp.	0 ~ 40°C (32 ~ 104°F)
Storage Temp.	-20 ~ 60°C (-4 ~ 140°F)
Operating Humidity	5 to 95% (non-condensing)
Dimensions (W x D x H)	112.4 x 171.3 x 275.1 mm (4.43" x 6.74" x 10.83")
Weight (Net)	1.4 kg (3.1 lb)
Vibration	3 Grms/ 5 ~ 500Hz/ Random operation
Shock	75G peak acceleration (11 ms duration)
Power	
Requirement	9 ~ 48V, DC In

1.3 Overview

Vehicle Mount Cradle

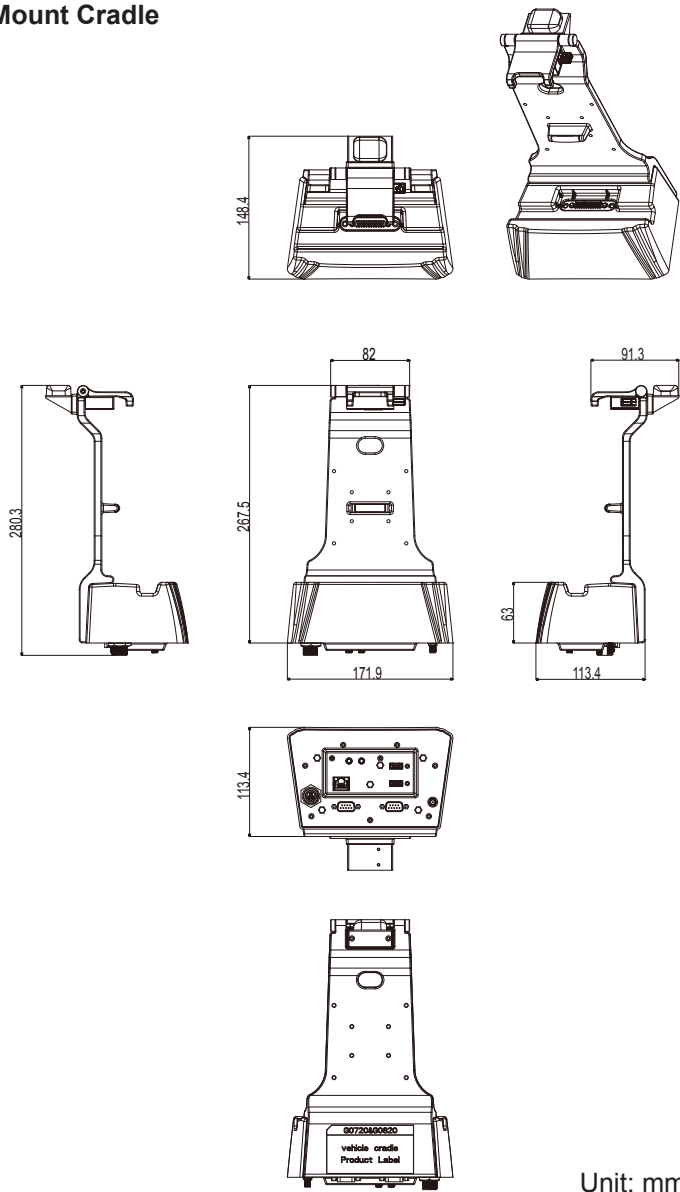


Desktop Stand



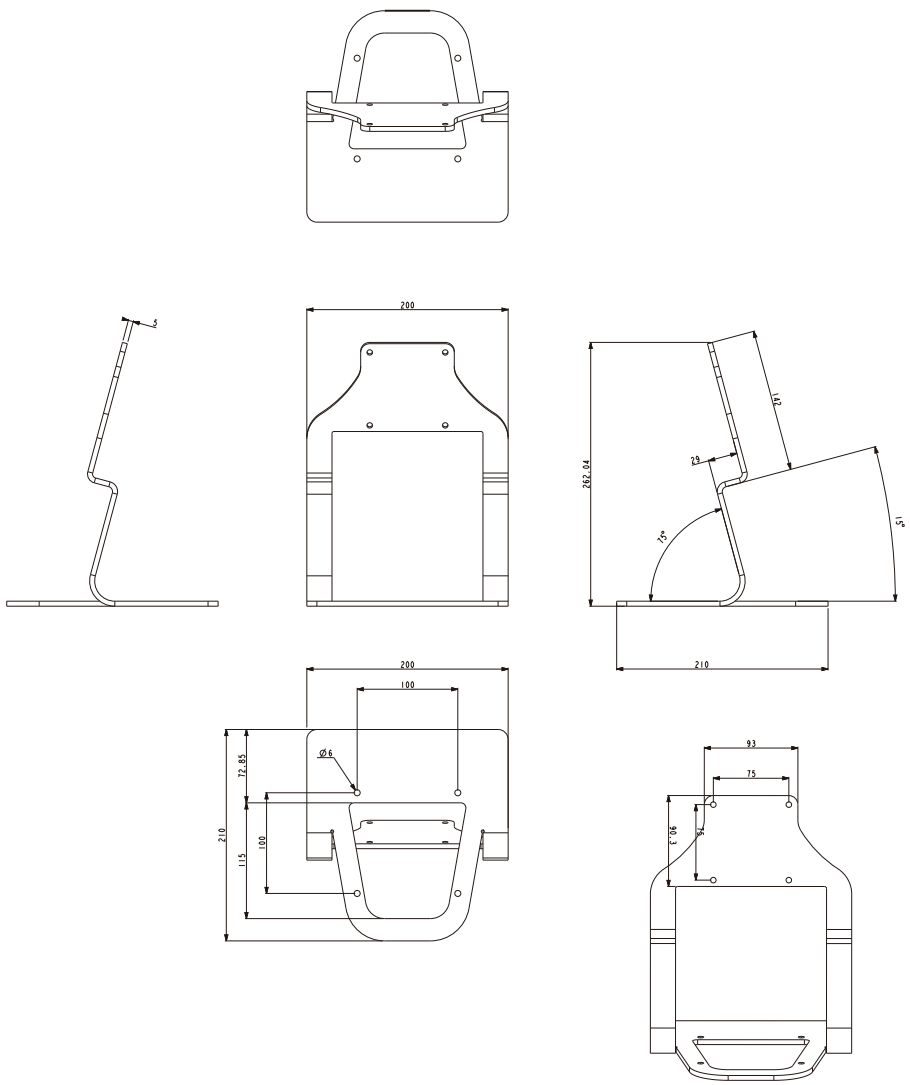
1.4 Dimensions

Vehicle Mount Cradle



Unit: mm

Desktop Stand



Unit: mm

1.5 Introduction

1.5.1 Installing on the Vehicle Mount Cradle

Please follow the guide in this section to install the G0720/G0820 rugged PC on the docking station.

1. When placing the rugged PC onto the vehicle cradle, please do it from a slanted direction.



2. Make sure you align the 35-pin POGO connectors on both the rugged PC and the cradle together.



3. Once the rugged PC has been correctly positioned on the vehicle cradle, flip the k-hook so that its claws can firmly catch on two square pits on the top of rugged PC.

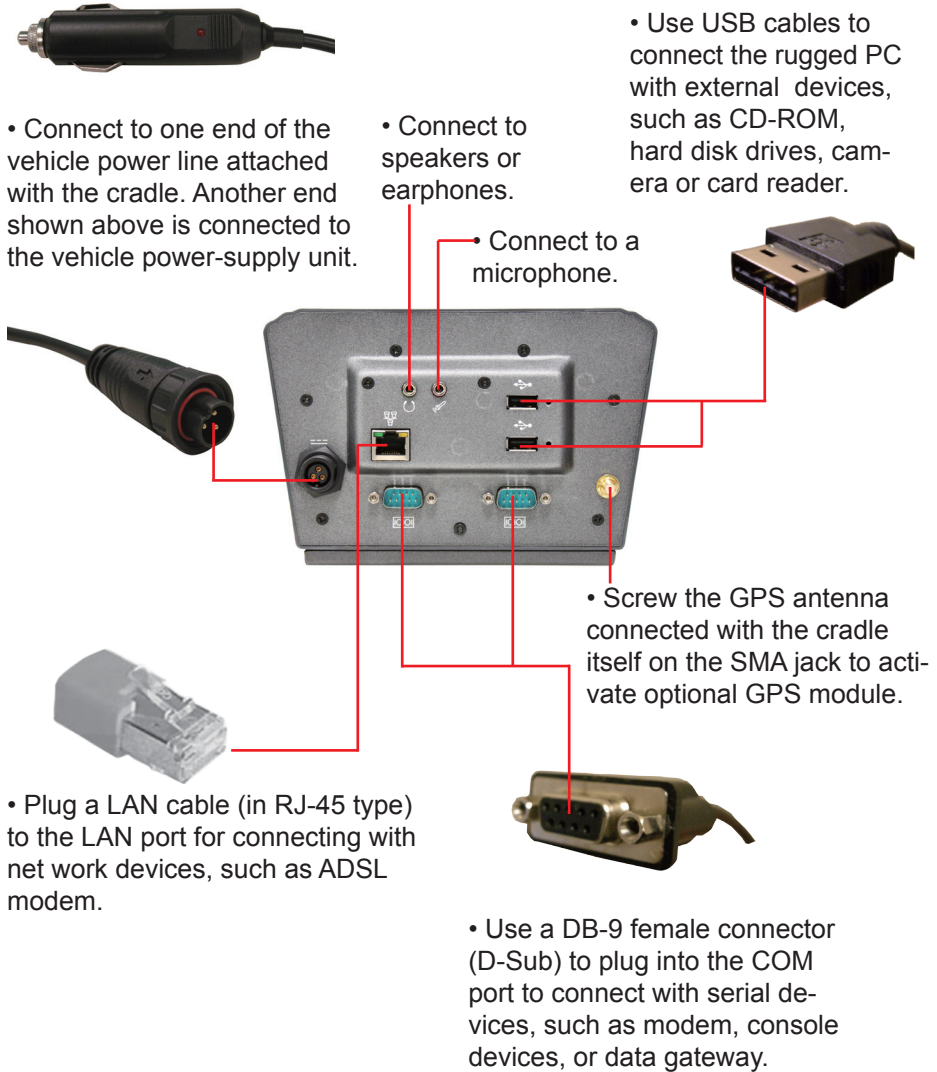


1.5.2 Removing from the Vehicle Mount Cradle

To remove the rugged PC from its cradle, use your thumb to press the metal bar and lift up the k-hook.



1.5.3 I/O ports



1.5.4 Connecting with the Desktop Stand

The vehicle mount cradle can be further mounted to a desktop stand via the VESA 75 x 75 compliant screw holes at the back. With desktop stand, you can put the cradle on a surface steadily since its bottom is not flat. Please take the images below as a reference for how to align the screw holes.

Recommended screw size: M4

