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# **Gladius G1056**

## **10.4" AMD Fusion™ G-series T56N Rugged Tablet PC**

# **User's Manual**

## **Version 1.1**

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## Revision History

Version	Release Time	Description
1.0	November 2012	Initial release
1.1	November 2013	<ul style="list-style-type: none"><li>▶ To cover the use of the wall-mount cradle, Appendix <a href="#">D. Wall-mount Cradle (Optional)</a> is added to the manual.</li><li>▶ The computer newly supports Windows 8.1, which gives rise to the change in section <a href="#">2.4. Install Driver &amp; Utilities</a>.</li></ul>

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## **Copyright Notice**

All Rights Reserved.

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

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

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

## **Declaration of Conformity**

### **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 swabs 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

## Introducing the Rechargeable Battery Pack

With very little care, you can maximize the life and lifespan of your G1056 battery. Most importantly, only use your G1056 in its ideal operating temperature (See “G1056 Specifications”) – do not leave it in a hot trunk during the summer.

- **Important Terms to Understand**

“Battery life” means the time your G1056 will run before it must be recharged (sometimes this is also called “playtime” or “runtime”).

“Battery lifespan” means the total amount of time your battery will last before it must be replaced.

- **Using Your G1056 for the First Time**

Be sure to fully charge (approx. 4 hours) your G1056 when you plug it in for the first time.

- **Long-Term Storage & Maintenance**

If you do not plan to use your G1056 battery for more than three months, it is recommended that you store the battery separately, fully charged, and then recharge it every three month. If you store an uncharged battery, it could fall into a deep worn-out state which would render it incapable of holding any charge. Be sure to store your G1056 and battery at the proper temperature. (See “G1056 Specifications.”)

- **Battery Lifespan**

The removable batteries for G1056 are designed to retain up to 80% of their original capacity after 300 charging and recharging cycles when properly maintained. You may choose to replace your battery when it no longer holds sufficient charge to meet your needs.

## 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](mailto: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 G1056



User's Manual, Driver DVD



1 x Power Adapter



1 x Digitizer Pen



External Battery  
2 x Black 2500mAh External Battery Kits

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

G1056	10.4" AMD Fusion™ APU G-T56N rugged tablet PC with WiFi, Bluetooth, Digitizer and Rear Camera
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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.



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### 1.2.1. Optional Accessories

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eBATB-1056 R1.0  
Black 2500mAh External Battery Kit

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PEN-1056  
Battery-free Digitizer Pen Kit

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SST-1056  
128\*3.7cm, Shoulder Strap

---



CHR-1056  
Battery Charger for G1056

---



WMC-1056  
Wall-mount Cradle for G1056

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### 1.2.2. Optional Configuration (Configure to Order Service)

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CAMF50-1056  
5.0M Front CMOS Camera Kit

---



RFID-1056  
13.56MHz RFID Kit

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HSUPA-1056  
3.75G HSUPA Wireless Kit

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### 1.3. Specifications

System	
<b>CPU</b>	AMD Fusion™ APU G-T56N 1.65GHz processor
<b>Graphics Controller</b>	AMD Radeon™ HD 6320
<b>Memory</b>	4GB DDR3 SO-DIMM memory module installed
<b>Chipset</b>	AMD Platform Control Hub A50M
<b>BIOS</b>	AMI Aptio® UEFI BIOS
<b>Audio</b>	1 x Integrated microphone 2 x Integrated 2W speakers 1 x Earphone jack
<b>Storage</b>	1 x 32GB 1.8" SATA SSD installed
Peripherals & Devices	
<b>Serial Port</b>	1 x RS-232 (optional, sharing the same location with the VGA port)
<b>Camera</b>	1 x 5.0 megapixel front AF CMOS camera (optional) 1 x 5.0 megapixel rear AF CMOS camera
<b>USB Port</b>	4 x USB 2.0 ports
<b>Ethernet</b>	1 X RJ45 GbE LAN
<b>RFID</b>	Integrated 13.56MHz, ISO 15693/14443A/14443B RFID Reader (optional)
<b>Wi-Fi</b>	Integrated WLAN 802.11 a/b/g/n
<b>Bluetooth</b>	Integrated Bluetooth 2.1 + EDR
<b>GSM/UMTS</b>	Integrated HSUPA module (3.75G) for GSM/GPRS/EDGE, EV-DO networks (optional)
<b>Expansion</b>	1 x 35-pin pogo connector for docking connection
<b>Video Port</b>	1 x VGA, 1 x mini Displayport
Button & Indicator	
<b>Function Key</b>	1 x 5-way function key
<b>Power Button</b>	1 x Power on/off button
<b>LED*</b>	4 x LEDs (Power, Battery Status, Wi-Fi/RFID, Bluetooth)

\*Note: See [2.2. Tour the Computer](#) for more information concerning Status LEDs and function keys.

<b>LCD Display</b>	
<b>Size/Type</b>	10.4" AFFS+ TFT Active Matrix Panel
<b>Max. Resolution</b>	1024 (H) x 768 (V)
<b>Luminance</b>	340 cd/m <sup>2</sup>
<b>Contrast Ratio</b>	600:1
<b>Viewing Angle</b>	178° (H) / 178° (V)
<b>Backlight Type</b>	LED
<b>Touch Screen</b>	
<b>Type</b>	Analog Resistive
<b>Controller Interface</b>	USB Interface
<b>Digitizer</b>	Electromagnetic digitizer with batter-free pen
<b>Power Supply</b>	
<b>Adapter Input</b>	100 ~ 240VAC (Full Range)
<b>Adapter Output</b>	19VDC, 4.74A, 90W
<b>Battery Type</b>	Li-battery pack
<b>Battery Capacity</b>	2 x 2500mAH 4-cell external battery packs
<b>Battery Operating Time</b>	6 hours
<b>Mechanical &amp; Environmental</b>	
<b>Discharging Temp.</b>	-20 ~ 40°C (-4 ~ 104°F)
<b>Charging Temp.</b>	0 ~ 40°C (32 ~ 104°F)
<b>Storage Temp.</b>	-20 ~ 60°C (-4 ~ 140°F)
<b>Storage Humidity</b>	5 to 25% (non-condensing)
<b>Dimensions (W x D x H)</b>	266.8 x 257.7 x 67.7 mm (10.5" x 10.1" x 2.7")
<b>Gross Weight</b>	1.8 kg (3.9 lb)
<b>Vibration</b>	3 Grms/ 5 ~ 500Hz/ random operation
<b>Shock</b>	40G peak acceleration (11 ms duration)
<b>Transit Drop</b>	90cm (3ft.), except the front side
<b>IP Rating</b>	IP54 (Front panel only)
<b>Regulatory</b>	CE/FCC Class B, VCCI certified

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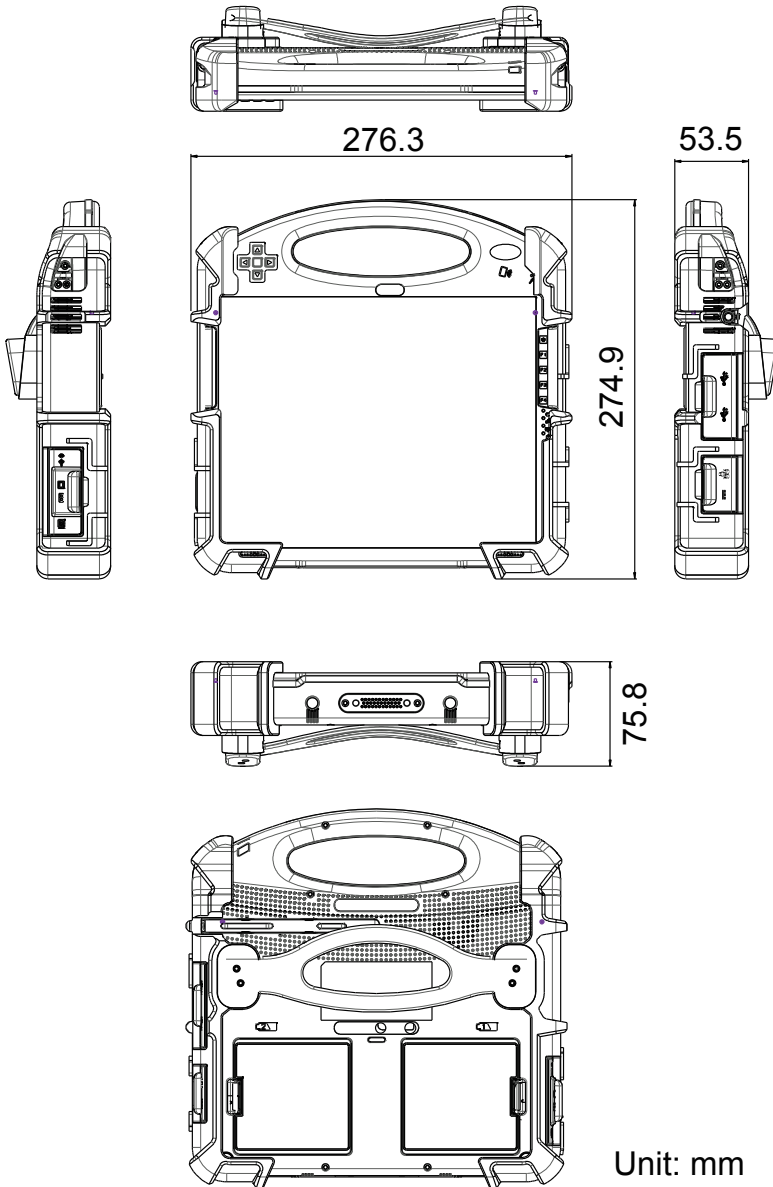
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# Chapter 2

## Getting Started

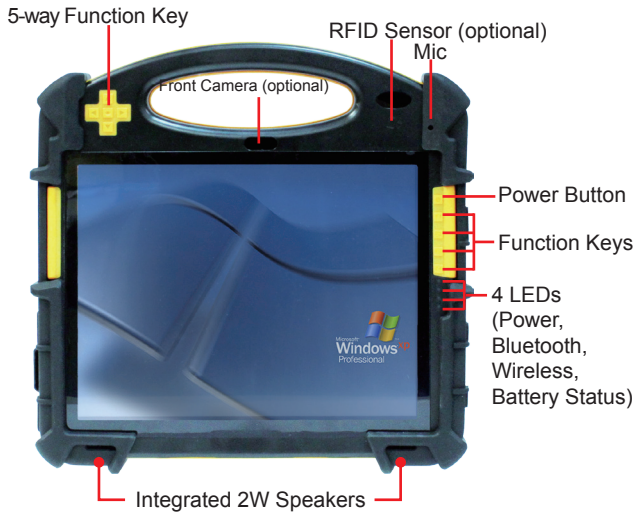
## 2.1. Dimensions



## 2.2. Tour the Computer

This section will familiarize you with the computer by guiding through the external components.

### Front Side









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

### Function Keys

The four function keys (F1 ~ F4) and 5-way function key on front panel are available after users successfully install all necessary drivers. These keys can also be re-defined by users. Should you want to change its settings, refer to Section 2.7.1 for details.

Key	Default Function
F1	Bluetooth On/Off
F2	WiFi On/Off
F3	On-screen Keyboard On/Off

	Display Arbor System Suite Setup
	Lock Screen
	Adjust Volume
	Show Battery & WiFi Status
	Camera On/Off
	Adjust Brightness

### Status LEDs

On the right side are 4 system status LEDs. They have different meanings individually. From top to bottom, they are:

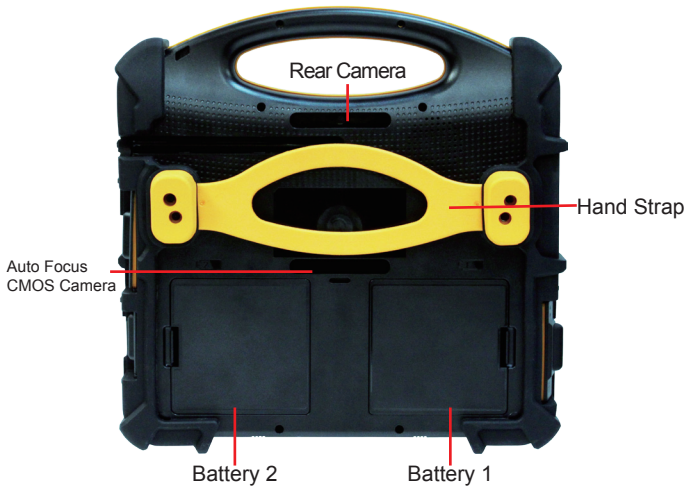
LED	Color	Description
<b>Power</b>	Green	illuminated as the tablet is turned on
<b>Bluetooth</b>	Blue	illuminated as Bluetooth is activated
<b>WiFi</b>	Green	illuminated as WiFi is activated
<b>Battery</b>	Green-Red	check the next table

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

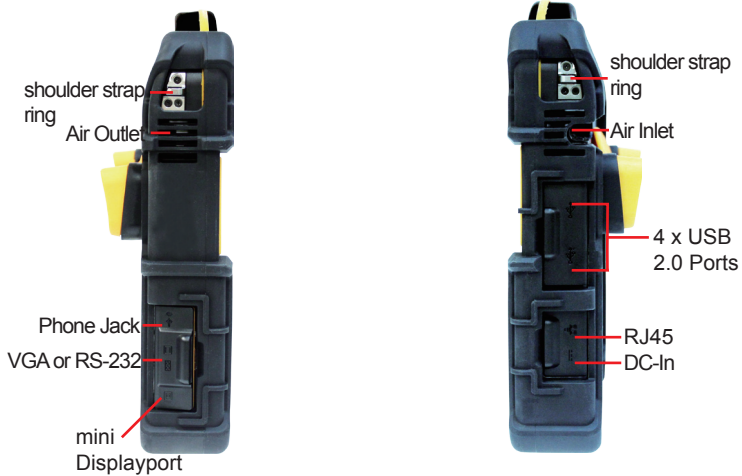
	Power Left / Indicator Color & Status			
	0% ~ 15%	16% ~ 49%	50% ~ 99%	100%
Discharger w/o Adapter	Solid Red	Solid Orange	Solid Green	
Charger w/ Adapter	Flashing Red	Flashing Orange	Flashing Green	Solid Green



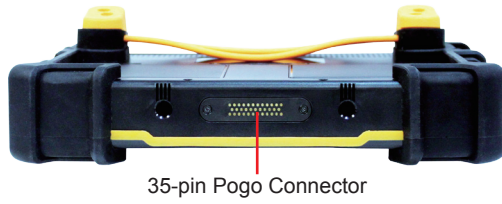
## Rear Side



## Left & Right Sides



## Bottom Side



## 2.3. Replace Batteries

The tablet PC is equipped with two rechargeable 4S1P external batteries. When you want to replace the external battery, follow these steps:

1. Disconnect the DC power plug; turn off the computer (the tablet PC allows to replace one of the battery directly when another still has enough power without the need to shut G1056 down).
2. Remove any peripheral devices connected to G1056.
3. Press two battery locks as arrows direct.
4. Place another battery into battery compartment in right direction and redo the procedure.





### Instructions for Rechargeable Battery Pack

#### How to recharge:

- To recharge the lithium-ion battery, install it 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 3-4 hours (depending on the capacity of the battery). When finished charging, the power indicator on the front panel will turn from blinking light to steady 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 battery or, even worse, burn the computer.



power input plug



**How to use:**

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

### **How to store:**

- Don't expose the battery to elevated heat situations such as under direct sunlight in a car or near fire.
- Don't disassemble the battery, or the battery leakage might cause skin or eye injury. If electrolyte leaking from the battery 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 battery 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 battery such as a paper box. Do not allow a metal object to touch the terminal of the battery.
- When storing for a long period of time, keep the battery approximately at the charging state of 60 ~ 80% and regularly use it. The battery should be completely discharged and recharged once per month to condition the cells inside the battery and to ensure the battery delivers the most available capacity.
- The battery consists of precise electrical components and cells. Do not drop or hit the battery.

## 2.4. Install Driver & Utilities

The **G1056** supports **Windows XP, Windows 7 and Windows 8.1**. Find the necessary device drivers on the CD that comes with your purchase. The following instructions take **Windows 7** as the exemplary OS. Different OS may vary slightly regarding driver/AP installation, but generally they are similar.

Before running driver CD, prepare a USB keyboard, USB DVD-ROM drive, USB hub and the power adapter/cable included in the accessory box.



**G1056 Rugged PC**



**Power Adapter & Power Cord**



**USB Keyboard**



**USB DVD-ROM Drive**



**Driver DVD**



**USB Mouse**



**USB Hub**

### 2.4.1. Installation Sequence

**Always** follow the sequence below to install the drivers to prevent errors:

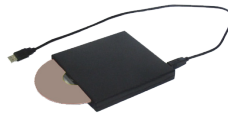
**CPU** (Windows XP only) → **DirectX 9.0c** → **VGA & Chipset** →  
**.NET Framework 4.0** → **Audio** → **LAN** → **Touch Screen / Digitizer** → **Wi-Fi**

The other drivers and software can be installed by random sequence as long as the afore-listed drivers are installed first.

### 2.4.2. Start to Install

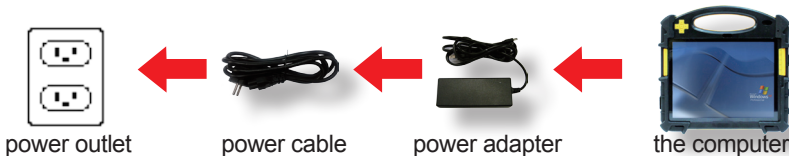
Before installing the drivers (and utilities), prepare the following:

1. a USB keyboard
2. a USB CD-ROM drive



Follow the guideline below to install device drivers and utilities:

1. Connect the computer to external power by the power cable and adapter included in the accessory box.





2. Have the USB CD-ROM drive. Connect the CD-ROM drive to the computer (, and sometimes the connection to power supply is also needed depending on the feature of your CD-ROM drive).

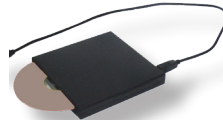


Connect the USB CD-ROM drive to the computer



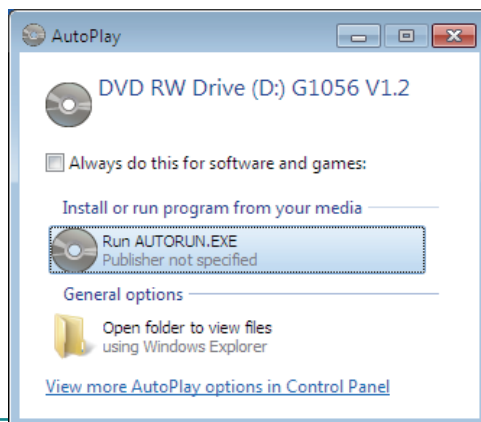
Sometimes it is necessary to connect the USB CD-ROM drive to power supply (depending on the feature of your CD-ROM drive).

3. Power on the computer if it isn't powered on yet.
4. Insert the driver CD to the CD-ROM drive.



Insert the driver CD to the CD-ROM drive

In a few seconds, a dialog opens asking whether to auto-run the driver CD or open the CD contents in **Windows Explorer**.



5. Click/tap **Run AUTORUN.EXE** to launch the installer, which allows easier installation of drivers.

The installer then opens.



- ▶ See [2.4.3. Install CPU Driver \(Windows XP only\)](#) on page [22](#) to install **CPU** driver (for **Windows XP** only).
- ▶ See [2.4.4. Install DirectX 9.0c Driver](#) on page [24](#) to install **Direct 9.0c** driver, which is needed to install **VGA & Chipset** driver.
- ▶ See [2.4.5. Install VGA & Chipset Driver](#) on page [26](#) to install **VGA & Chipset** driver.
- ▶ See [2.4.6. Install .NET Framework 4.0 Driver](#) on page [28](#) to install **.NET Framework 4.0** driver, which is needed to install **function keys** driver.
- ▶ See [2.4.7. Install Audio Driver](#) on page [30](#) to install **Audio** driver.
- ▶ See [2.4.8. Install LAN Driver](#) on page [32](#) to install **LAN** driver.
- ▶ See [2.4.9. Install Touch Screen Driver](#) on page [34](#) to install **resistive touch** driver.
- ▶ See [2.4.10. Install Digitizer Driver](#) on page [36](#) to install **digitizer touch** driver.
- ▶ See [2.4.11. Install WiFi Driver](#) on page [38](#) to install **WiFi** driver.

- ▶ See [2.4.12. Install Function-Keys Driver](#) on page [40](#) to install **function keys** driver.
- ▶ See [2.4.13. Install Bluetooth Driver & Utility](#) on page [42](#) to install **Bluetooth** driver and the application program.
- ▶ See [2.4.14. Install RS-232 Driver](#) on page [44](#) to install **RS232** driver.
- ▶ See [2.4.15. Install Camera Driver](#) on page [46](#) to run **camera codec**.
- ▶ See [2.4.16. Install 3G Driver & Utility \(Configure-to-Order\)](#) on page [48](#) to install **3G** driver and the application program.
- ▶ See [2.4.17. Install Cradle LAN Driver \(Optional\)](#) on page [50](#) to install **Cradle LAN** driver.
- ▶ See [2.4.18. Install RFID Reader Driver \(Configure-to-Order\)](#) on page [53](#) to install **RFIC** driver and the demo application.
- ▶ See [2.4.19. Install AHCI Driver](#) on page [55](#) to install **AHCI** driver (for **Windows XP** and **Windows 7** only).

### 2.4.3. Install CPU Driver (Windows XP only)

Note only **Windows XP** needs to install the CPU driver. If your system runs **Windows 7** or **Windows 8.1**, skip this section.

To install the CPU driver for **Windows XP**:

1. Launch the driver installer as described in [2.4.2. Start to Install](#) on page [18](#).

The installer then opens.



2. Click **XP Driver Install**.



A list of device drivers then opens onscreen.



3. Click/tap the **CPU** icon .



CPU driver is available in the **Windows XP** installer only.

4. Follow the onscreen instructions to proceed.

### 2.4.4. Install DirectX 9.0c Driver

Note to install **DirectX 9.0c** driver before installing **VGA & Chipset** driver. The **VGA & Chipset** driver cannot be installed without **DirectX 9.0c** driver being installed first.

To install **DirectX 9.0c** driver:

1. Launch the driver installer as described in [2.4.2. Start to Install](#) on page [18](#).

The installer opens onscreen.



2. Click/tap the **Utilities** icon .

The utility list opens onscreen.



3. Click/tap the **DirectX 9.0c** icon  .



4. Follow the onscreen instructions to proceed.

### 2.4.5. Install VGA & Chipset Driver

To install **VGA & chipset** driver:

1. Launch the driver installer as described in [2.4.2. Start to Install](#) on page [18](#).

The installer opens onscreen.



2. Click **XP Driver Install** to install the driver for Windows XP.  
**OR** Click **Win7 Driver Install** to install the driver for Windows 7.  
**OR** Click **Win8 Driver Install** to install the driver for Windows 8.1.

A list of device drivers then opens onscreen.





3. Click/tap the **VGA & Chipset** icon .



4. Follow the onscreen instructions to proceed.

### 2.4.6. Install .NET Framework 4.0 Driver

The function key driver cannot be installed without **.NET Framework 4.0**. Be sure to install **.NET Framework 4.0** first to be able to install the function-keys driver. (To install the function keys driver, see [2.4.12. Install Function-Keys Driver](#) on page [40](#).)

Start to install **.NET Framework 4.0**:

1. Launch the driver installer as described in [2.4.2. Start to Install](#) on page [18](#).

The installer opens onscreen.



2. Click/tap the **Utilities** icon .

The utility list opens onscreen.



3. Click/tap the **.NET Framework 4.0** icon .



4. Follow the onscreen instructions to proceed.

Note the **.NET Framework 4.0** installation takes a while. Please be patient.

### 2.4.7. Install Audio Driver

To install the audio driver:

1. Launch the driver installer as described in [2.4.2. Start to Install](#) on page [18](#).

The installer opens onscreen.



2. Click **XP Driver Install** to install the driver for Windows XP.  
**OR** Click **Win7 Driver Install** to install the driver for Windows 7.  
**OR** Click **Win8 Driver Install** to install the driver for Windows 8.1.

A list of device drivers then opens onscreen.



3. Click/tap the **Audio** icon .



4. Follow the onscreen instructions to proceed.

## 2.4.8. Install LAN Driver

To install the LAN driver:

1. Launch the driver installer as described in [2.4.2. Start to Install](#) on page [18](#).

The installer opens onscreen.



2. Click **XP Driver Install** to install the driver for Windows XP.  
**OR** Click **Win7 Driver Install** to install the driver for Windows 7.  
**OR** Click **Win8 Driver Install** to install the driver for Windows 8.1.

A list of device drivers then opens onscreen.



- Click/tap the **LAN** icon .



- Follow the onscreen instructions to proceed.

### 2.4.9. Install Touch Screen Driver

To be able to use resistive touch control on the computer, the **Touch Screen** driver needs to be installed. To install this driver:

1. Launch the driver installer as described in [2.4.2. Start to Install](#) on page [18](#).

The installer opens onscreen.



2. Click **XP Driver Install** to install the driver for Windows XP.

**OR** Click **Win7 Driver Install** to install the driver for Windows 7.

**OR** Click **Win8 Driver Install** to install the driver for Windows 8.1.

A list of device drivers then opens onscreen.





3. Click/tap the **Touch Screen** icon 



4. Follow the onscreen instructions to proceed.

Note: When installing the touch screen driver, if you think the installation stops progressing, check the task bar of the operating system to see if there is any dialog to be managed. See the illustration below:



Once the installation is through, the resistive touch control is ready-to-use. See [3.5. PenMount Control Panel](#) on page [71](#) to know how to calibrate the touch screen.

### 2.4.10. Install Digitizer Driver

To be able to use digitizer touch control on the computer, the **Digitizer** driver needs to be installed. To install this driver:

1. Launch the driver installer as described in [2.4.2. Start to Install](#) on page [18](#).

The installer opens onscreen.



2. Click **XP Driver Install** to install the driver for Windows XP.

**OR** Click **Win7 Driver Install** to install the driver for Windows 7.

**OR** Click **Win8 Driver Install** to install the driver for Windows 8.1.

A list of device drivers then opens onscreen.



3. Click/tap the **Digitizer** icon .



4. Follow the onscreen instructions to proceed.

Once the installation is through, the digitizer touch control is ready-to-use.

### 2.4.11. Install WiFi Driver

To install the WiFi driver:

1. Launch the driver installer as described in [2.4.2. Start to Install](#) on page [18](#).


The installer opens onscreen.



2. Click **XP Driver Install** to install the driver for Windows XP.  
**OR** Click **Win7 Driver Install** to install the driver for Windows 7.  
**OR** Click **Win8 Driver Install** to install the driver for Windows 8.1.

A list of device drivers then opens onscreen.



- Click/tap the **WiFi** icon , either **WiFi (x64)** or **WiFi (x86)**. (Select **x64** if the computer's got more memory.)



- Follow the onscreen instructions to proceed.

### 2.4.12. Install Function-Keys Driver

The function key driver cannot be installed without **.NET Framework 4.0**. Be sure to install **.NET Framework 4.0** first as described in [2.4.6. Install .NET Framework 4.0 Driver](#) on page 28 to be able to install the function-keys driver.

To install the function keys driver:

1. Install **.NET Framework 4.0** driver as described in [2.4.6. Install .NET Framework 4.0 Driver](#) on page 28 .
2. Run the installer again.

The installer opens onscreen.



3. Click **XP Driver Install** to install the driver for Windows XP.

**OR** Click **Win7 Driver Install** to install the driver for Windows 7.

**OR** Click **Win8 Driver Install** to install the driver for Windows 8.1.


A list of device drivers then opens onscreen.



- Click/tap the function keys icon  from the driver list.



- Follow the onscreen instructions to proceed.

Once the installation is through, an **ArborFunKey** shortcut  shows up on the desktop and also at **Start** button | **All Programs** | **ArborFunKey** | **ArborFunKey** and the physical function keys are ready-to-use. See [3.1. Function Key Configuration](#) on page [60](#) to know how to use them.

### 2.4.13. Install Bluetooth Driver & Utility

To install the Bluetooth driver & utility

1. Launch the driver installer as described in [2.4.2. Start to Install](#) on page [18](#).

The installer opens onscreen.



2. Click **XP Driver Install** to install the driver for Windows XP.

**OR** Click **Win7 Driver Install** to install the driver for Windows 7.

**OR** Click **Win8 Driver Install** to install the driver for Windows 8.1.

A list of device drivers then opens onscreen.






- Click/tap the **Bluetooth** icon .



- Follow the onscreen instructions to proceed.

Once the Bluetooth driver and utility are installed, a Bluetooth icon  will show up in the notification area and also the desktop with the Bluetooth feature enabled. See [3.3. Bluetooth](#) on page [67](#) to know how to use Bluetooth.

## 2.4.14. Install RS-232 Driver

When the computer you purchase is equipped with an RS-232 port, install the driver to make it function:

1. Launch the driver installer as described in [2.4.2. Start to Install](#) on page [18](#).

The installer opens onscreen.



2. Click/tap the **Utilities** icon .

The utility list opens onscreen.



3. Click/tap the **RS-232** icon .



4. Follow the onscreen instructions to proceed.

## 2.4.15. Install Camera Driver

To be able to use the camera, the camera codec needs to be run. To run the camera codec:

1. Launch the driver installer as described in [2.4.2. Start to Install](#) on page [18](#).

The installer opens onscreen.



2. Click/tap the **Utilities** icon .

The utility list opens onscreen.



3. Click/tap the **Camera Codec** icon .



4. Follow the onscreen instructions to proceed.

## 2.4.16. Install 3G Driver & Utility (Configure-to-Order)

To install the 3G driver and utility:

1. Launch the driver installer as described in [2.4.2. Start to Install](#) on page [18](#).


The installer opens onscreen.




2. Click **XP Driver Install** to install the driver for Windows XP.  
**OR** Click **Win7 Driver Install** to install the driver for Windows 7.  
**OR** Click **Win8 Driver Install** to install the driver for Windows 8.1.

A list of device drivers then opens onscreen.




3. Click/tap the **3G** icon .



4. Follow the onscreen instructions to proceed.
5. Once the 3G driver installation is through, proceed to install the application program, i.e. the utility for 3G connection. Click/tap the **3G AP** icon  from the driver list.



6. Follow the onscreen instructions to proceed.

Once the installation is through, an **AirCard Watcher** shortcut  shows up on the desktop and also at **Start** button | **All Programs** | **Sierra Wireless** | **AirCard Watcher**.

See [3.7. HSUPA \(Optional\)](#) on page [80](#) to know how to use the 3G module.

### 2.4.17. Install Cradle LAN Driver (Optional)

If you have purchased a cradle for the computer, install the cradle LAN driver on the computer so the computer is able to network with the cradle's LAN port.

To install the cradle LAN driver:

1. Connect the cradle to power supply.



2. Seat the computer in the cradle.





- Power on the computer. Launch the driver installer onscreen as described in [2.4.2. Start to Install](#) on page [18](#).

The installer opens onscreen.



- Click **XP Driver Install** to install the driver for Windows XP.  
**OR** Click **Win7 Driver Install** to install the driver for Windows 7.  
**OR** Click **Win8 Driver Install** to install the driver for Windows 8.1.

A list of device drivers then opens onscreen.



5. Click/tap the **LAN (Cradle)** icon 



6. Follow the onscreen instructions to proceed.

## 2.4.18. Install RFID Reader Driver (Configure-to-Order)

If the computer has an RFID reader built in, proceed to install the driver for the RFID reader:

1. Launch the driver installer onscreen as described in [2.4.2. Start to Install](#) on page [18](#).

The installer opens onscreen.



2. Click **XP Driver Install** to install the driver for Windows XP.  
**OR** Click **Win7 Driver Install** to install the driver for Windows 7.  
**OR** Click **Win8 Driver Install** to install the driver for Windows 8.1.

A list of device drivers then opens onscreen.



3. Click/tap the **RFID** icon .



4. Follow the onscreen instructions to proceed.

Once the RFID driver is installed, an **RFID NFC Demon** shortcut  will show up on the desktop and also at **Start** button | **All Programs** | **RFID** | **NFC\_Demo** | **DemoAP**. See [3.2. RFID \(Optional\)](#) on page [63](#) to know how to read an RFID tag using the RFID reader.

## 2.4.19. Install AHCI Driver

The **AHCI** driver is only needed when the O.S., **Windows XP** or **Windows 7**, is reinstalled. And this driver isn't needed as well if the O.S. is **Windows 8.1**.

To install the **AHCI** driver:

1. Launch the driver installer as described in [2.4.2. Start to Install](#) on page [18](#).

The installer opens onscreen.



2. Click/tap the **Utilities** icon .

The utility list opens onscreen.



3. Click/tap the **AHCI Driver Disk for Windows XP** or **AHCI Driver Disk for Windows 7** icon .



The AHCI drivers are only available for **Windows XP** and **Windows 7**.

4. Follow the onscreen instructions to proceed.



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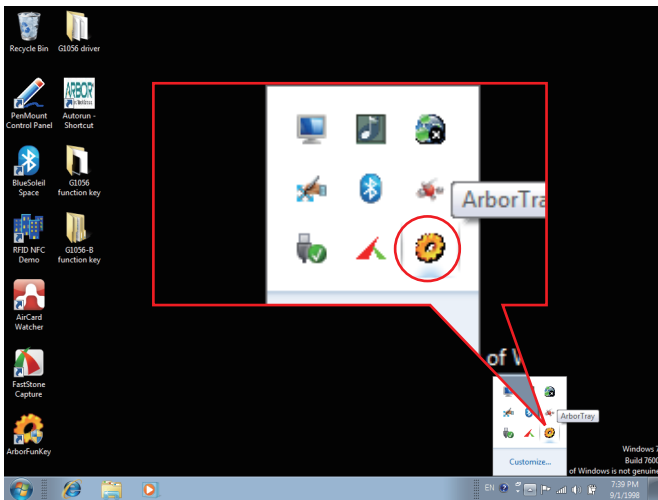
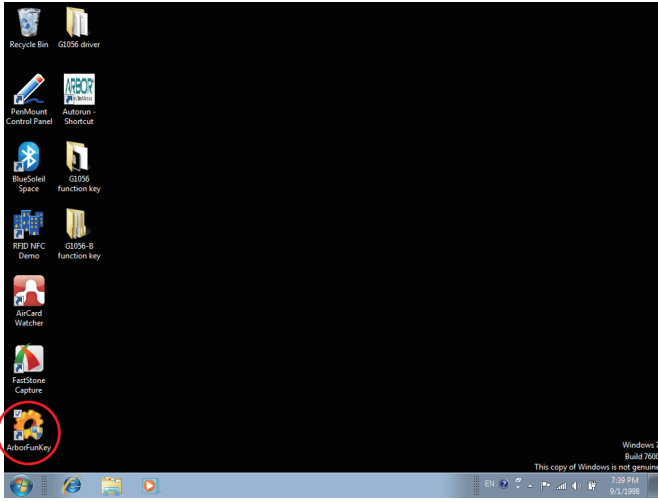
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# Chapter 3

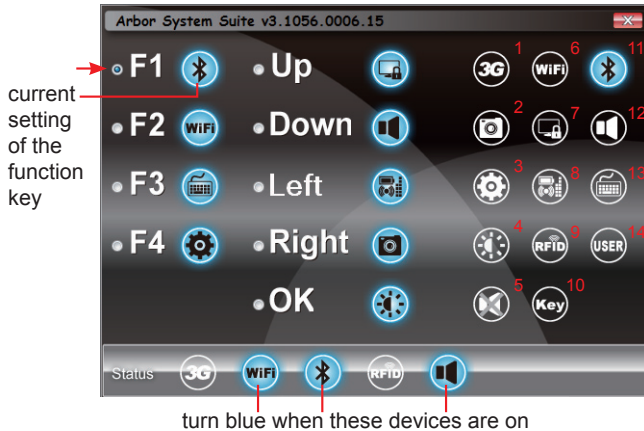
## Utilities

### 3.1. Function Key Configuration

1. Applications in this chapters are based on Windows 7 OS. Some of them can be replaced by users' own programs. Ignore parts of these sections if you prefer your own applications. Once everything is installed properly, execute **ArborFunKey** on desktop or under **All Programs** to configure function keys. Single-click its icon in system tray to open the program.



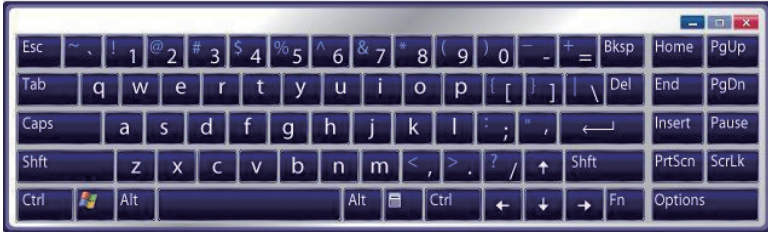
2. From F1-F4 to 5-way function key, choose which one you want to configure. OK means the central key of 5-way function key.



3. You can change their default setting. (See Section 1.6 for individual default function.) According to the number beside each icon, they are:

1	3G (optional) On/Off
2	Camera On/Off (See Section 2.7.4)
3	Display Arbor System Suite Setup
4	Adjust Brightness
5	Mute
6	WiFi On/Off
7	Lock Screen
8	Show Battery & WiFi Status
9	RFID (optional) On/Off
10	*Set Hotkey
11	Bluetooth On/Off
12	Adjust Volume
13	*On-screen Keyboard On/Off
14	User-defined. This is used for setting hotkey of designate .exe, .com, .bat or .cmd file. Set this button as function key and choose your preferred file type and file location.

\*On-screen Keyboard is illustrated below. It is worth mentioning that Windows 7 also has another built-in monitor keyboard. Touch screen with digitizer to call the built-in program. Two keyboards don't conflict when called at the same time.

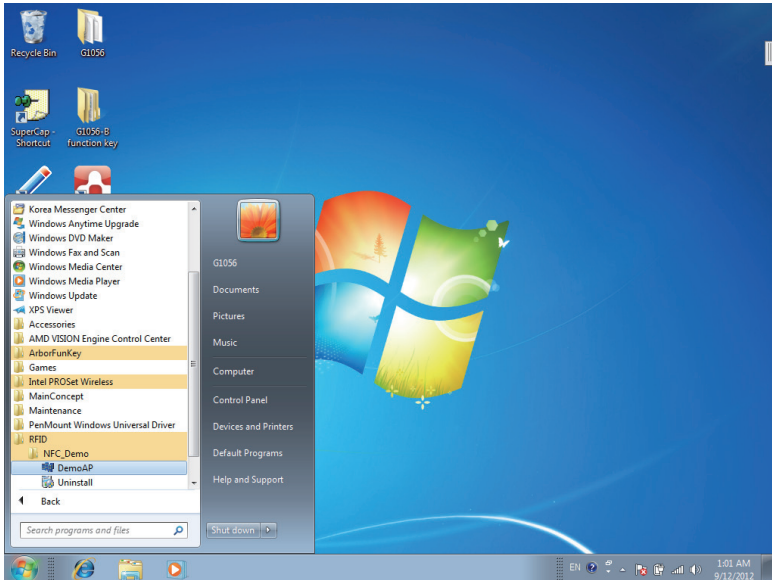


\*Set Hotkey is different from User-defined. The former means to set one of function keys as key(s) on keyboard. For instance, you may set F1 as “Ctrl + C” to replace “copy” operation most software defines.

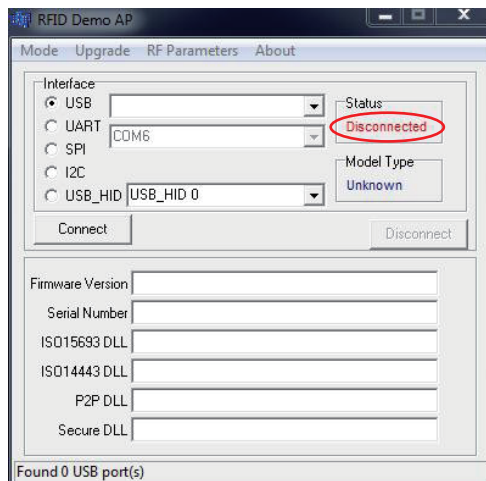


### 3.2. RFID (Optional)

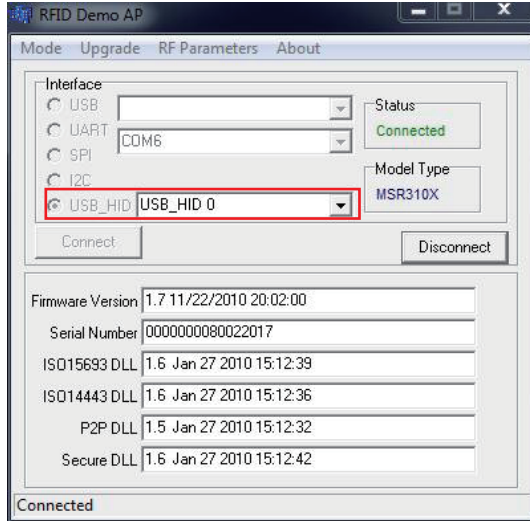
1. Once you've installed RFID driver properly, a software named **DemoAP** will appear in **All Programs** or desktop. This is a test program. You may install your own RFID program, too. But now, we want to introduce how to test your RFID function through this application program.



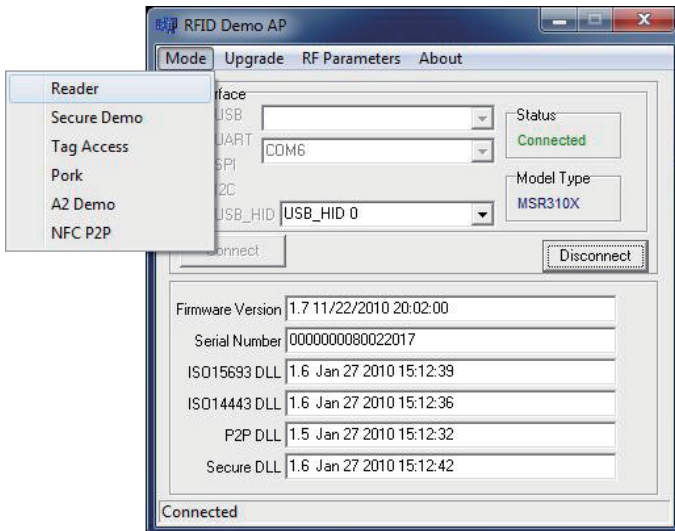
2. In the beginning, the **Status** column reveals **Disconnected**.



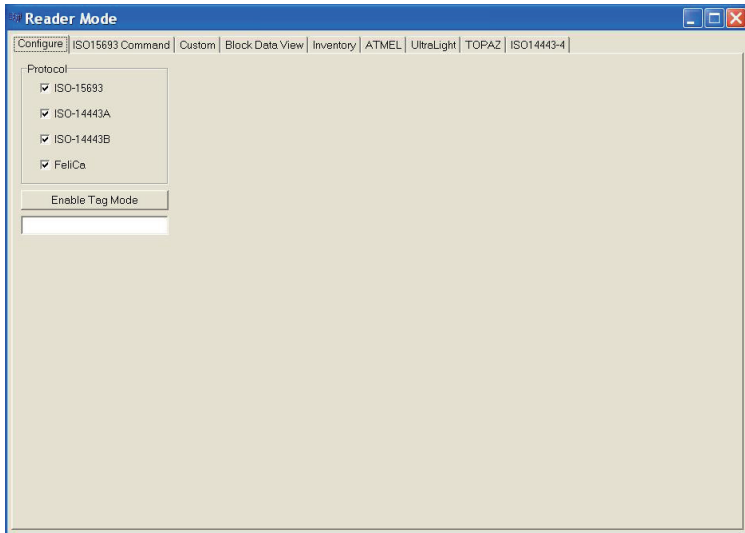
- Turn on RFID by pressing one of the function keys already set as RFID On/Off (see Section 2.7.1). Select **USB\_HID** as below, and then, **Status** will become **Connected**, meaning your RFID is working.



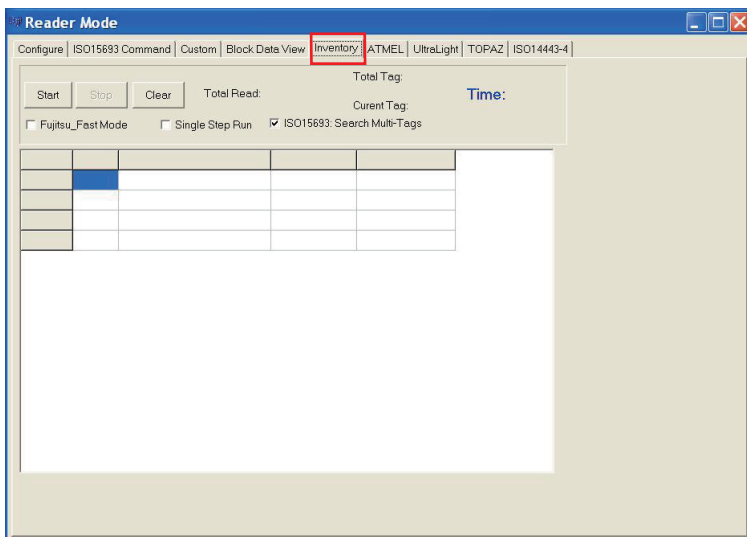
- To demo test the RFID, please go to **Mode > Reader**.



## 5. Reader Mode.



## 6. Select *Inventory* on the top menu bar.







### 3.3. Bluetooth

1. After installing bluetooth driver successfully, its icon will appear on desktop. This is bluetooth program, you may also install your own program. Turn on bluetooth by pressing one of the function keys already set as Bluetooth On/Off (see Section 2.7.1) and execute **BlueSoleil Space** on desktop.

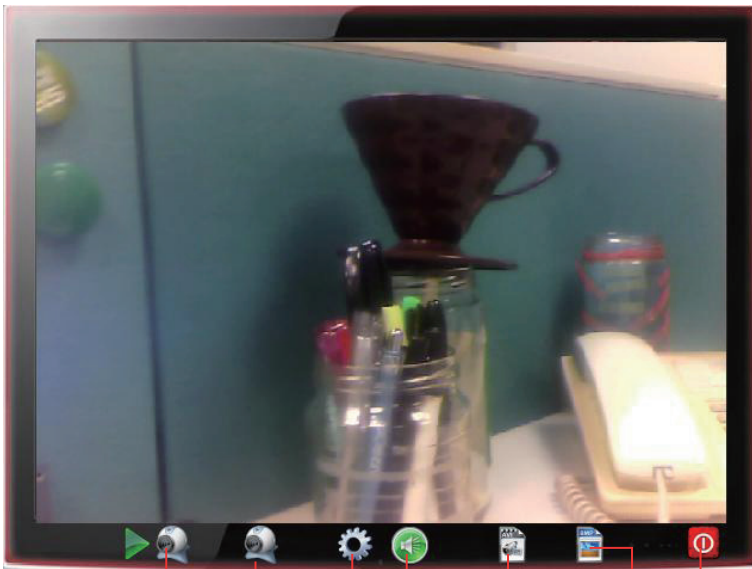
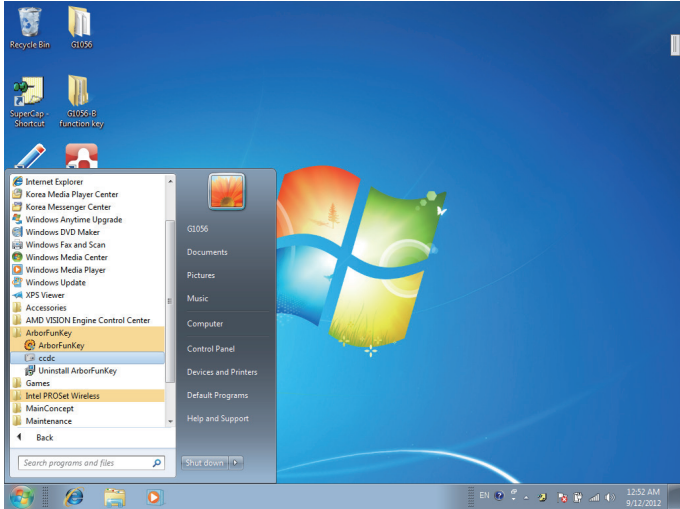


2. Double-click the central golden ball to start/stop searching for surrounding bluetooth devices. Wait for seconds. If any device around this PC is detected, its icon will appear around the central ball. Drag scrollbar to show more bluetooth devices. Click any detected item and upper icons to execute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



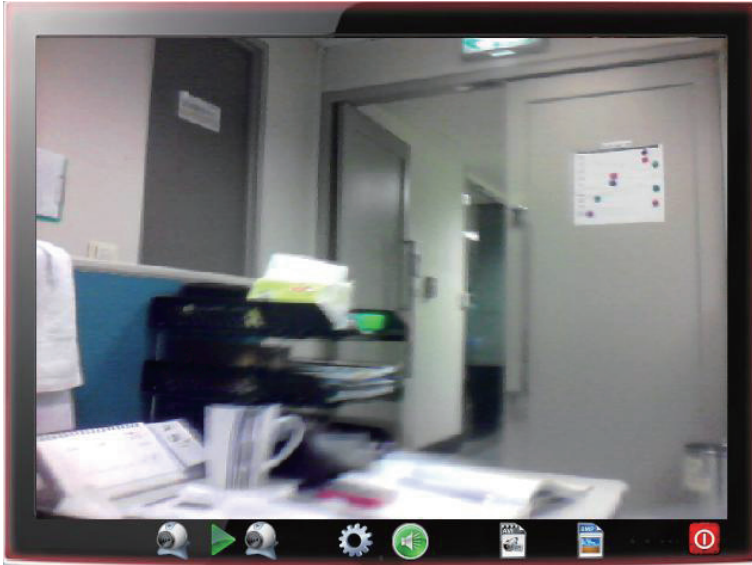
### 3.4. Camera

1. Execute **ccdc** program in **All Programs** to test camera function. You may also install your own camera application. Besides, you can set one of the functions as Camera On/Off. (See Section 2.7.1)

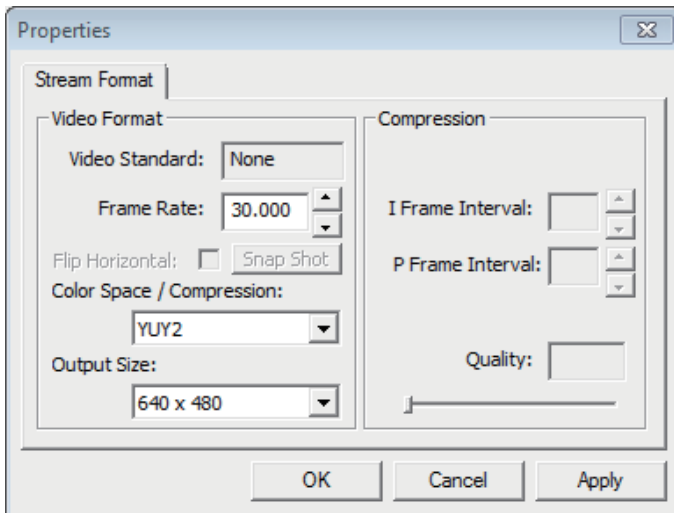


Rear Camera — Front Camera (optional) — Set Format — Mute — Record Film — Take Picture — Close

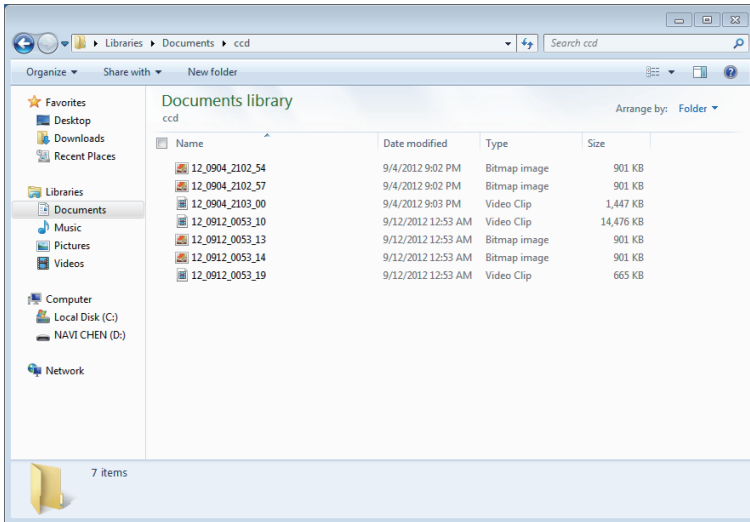
2. Press **Rear** or **Front Camera** icon to switch between cameras.



3. Press **Set Format** to set further video format.

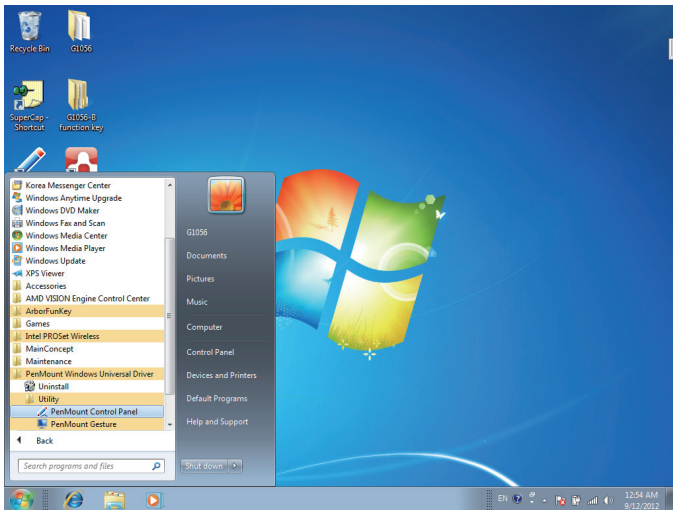


4. Press **Record Film** or **Take Picture** icon to execute these works. Files are saved under **ccd** folder in **Documents**.

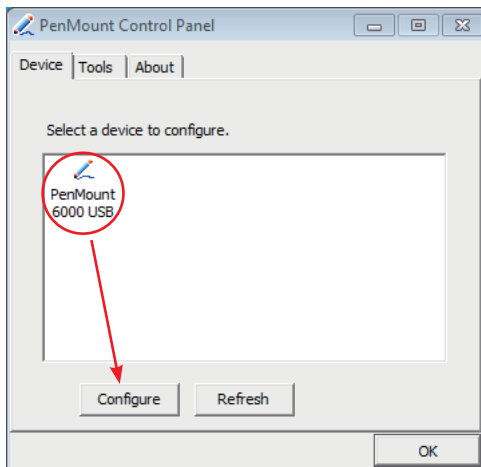


### 3.5. PenMount Control Panel

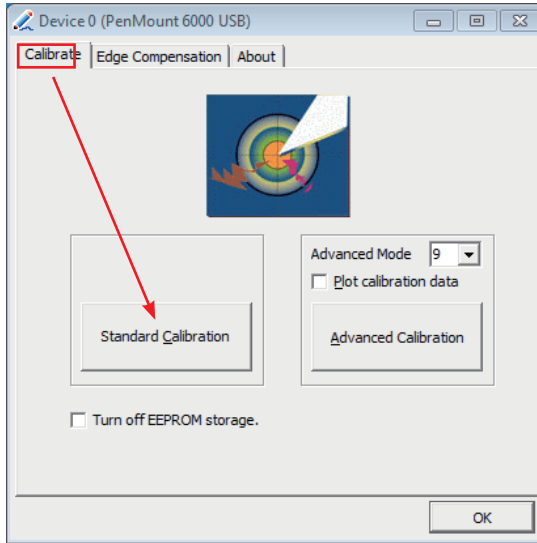
After everything is installed properly, there will be a touch screen application named **PenMount Control Panel** in **All Programs**. Execute this application.



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



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



## Device Calibration Dialog

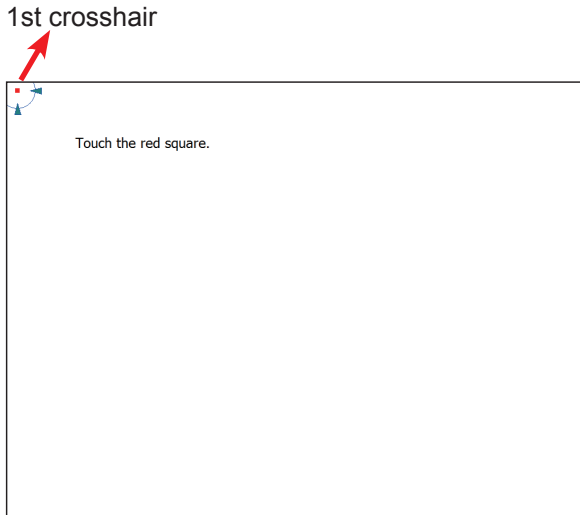
### A. The Calibrate Tab

This function offers two ways to calibrate your touch screen. ‘**Standard Calibration**’ adjusts most touch screens while ‘**Advanced Calibration**’ adjusts agyng touch screens.

#### a. Standard Calibration

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

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



### **b. Advanced Calibration**

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

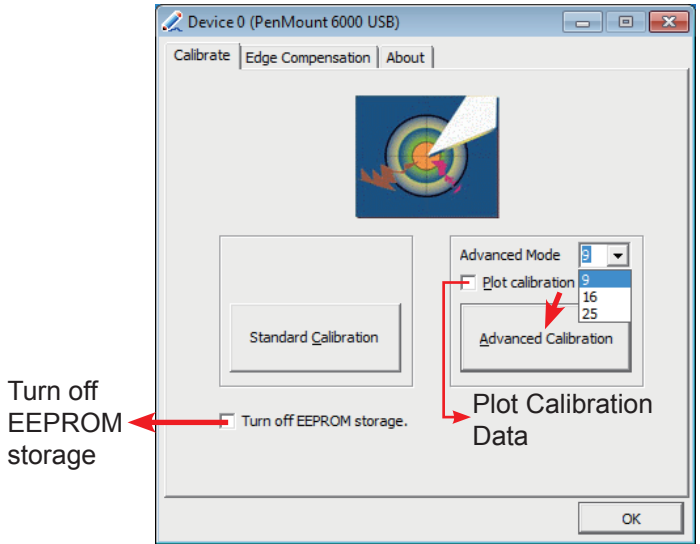
#### **Plot Calibration Data**

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

#### **Turn off EEPROM storage**

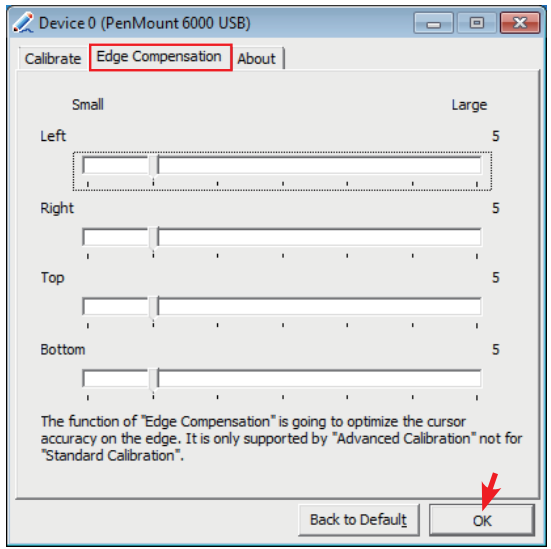
Tick this function to disable the write-in of calibration data in Controller.

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



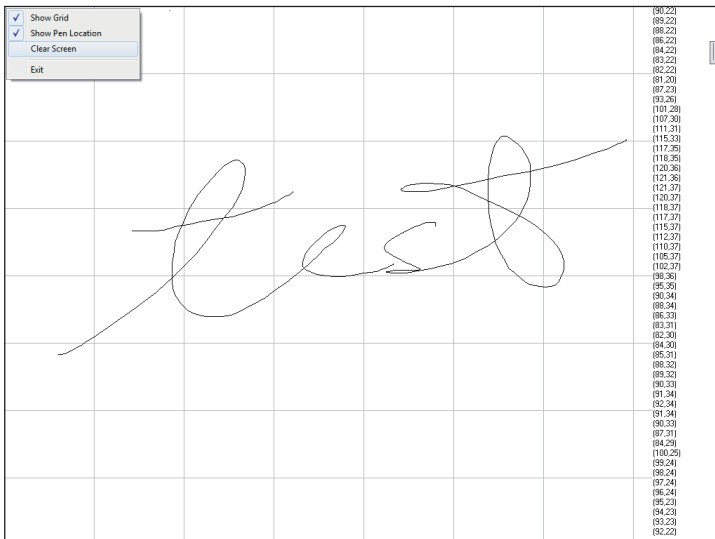
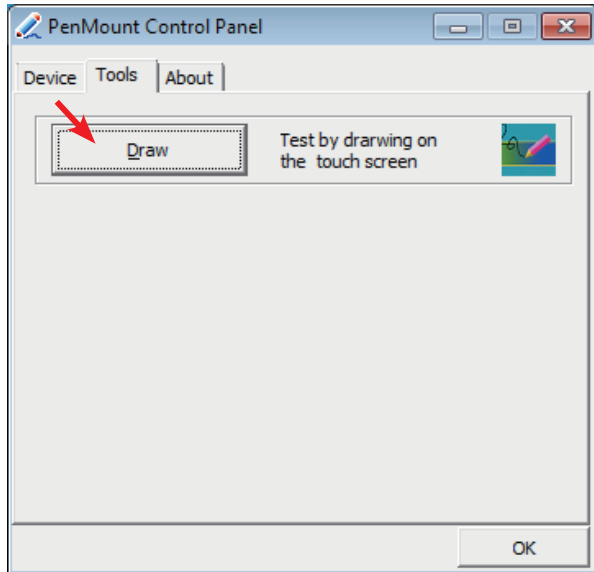
## B. The Edge Compensation Tab

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



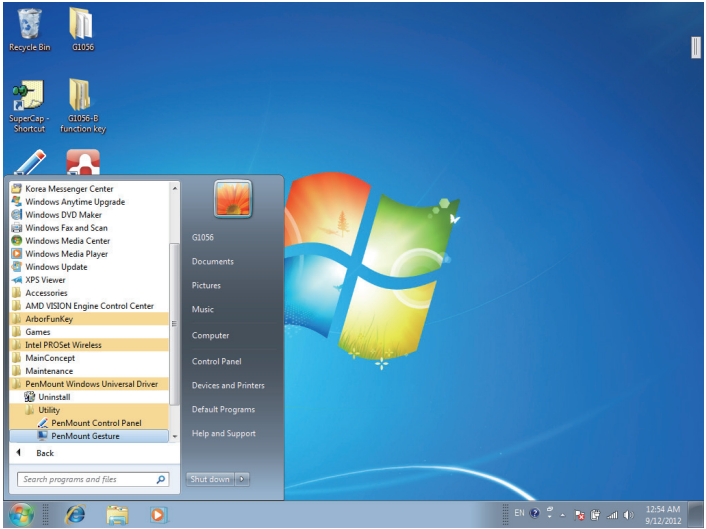


3. Press **OK** to close former window and back to upper level. As mentioned before, the program consists of 3 tabs, and the central one is **Tool**, switch to it. and click **Draw** to test PenMount touch screen operation.

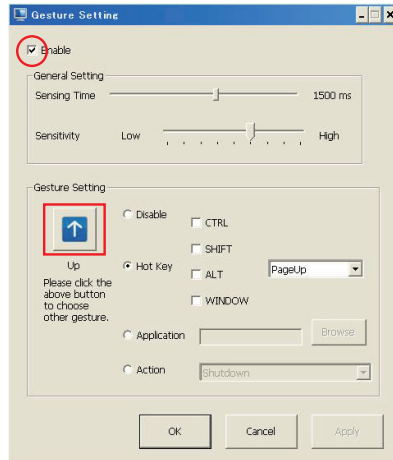


### 3.6. PenMount Gesture

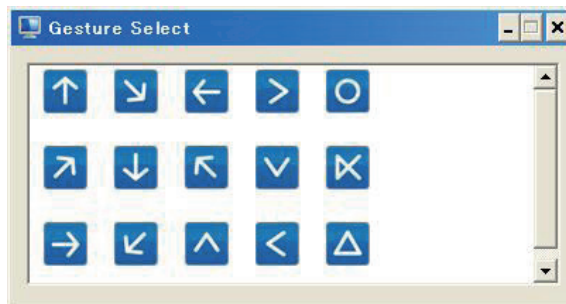
1. Now that this tablet PC supports touchscreen function, you may take advantage of that to set hotkey or do other settings. Single-click a small icon like a monitor in system tray. If it's absent, you can recall it from **All Programs**. The default setting is inactive, so you need to click "Gesture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



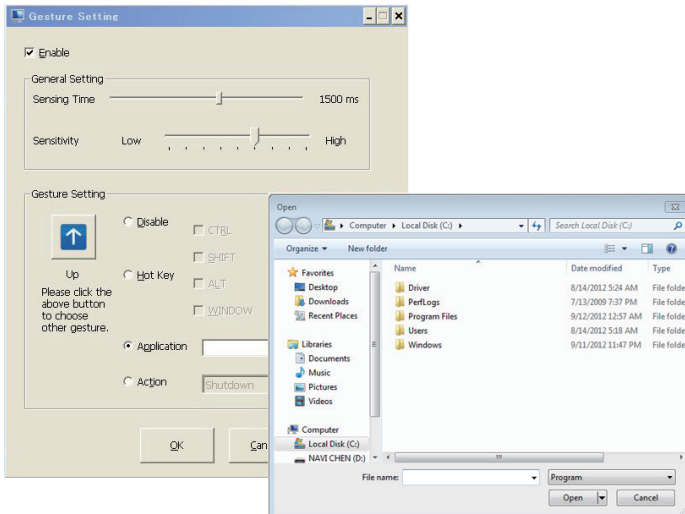
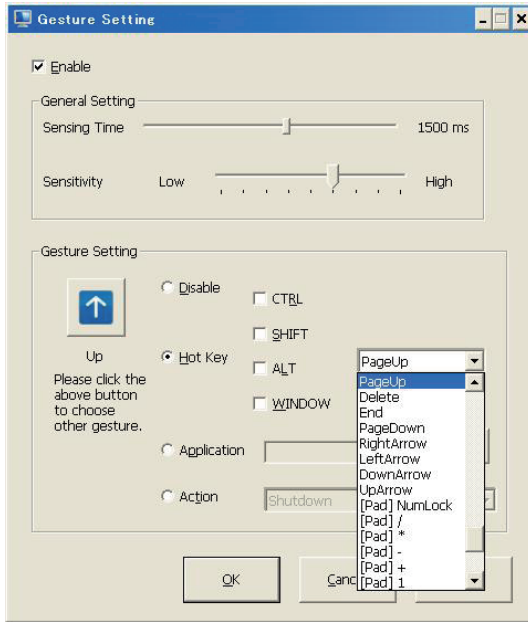
2. Check "Enable" and click the upward arrow in red square. You may also disable gesture function by canceling "Enable" box.

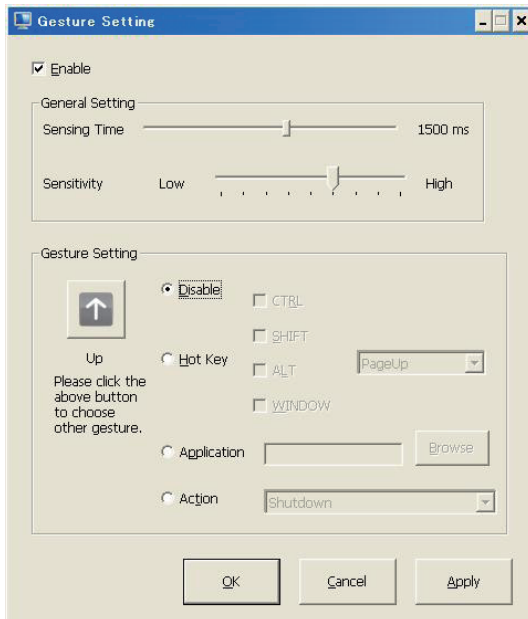
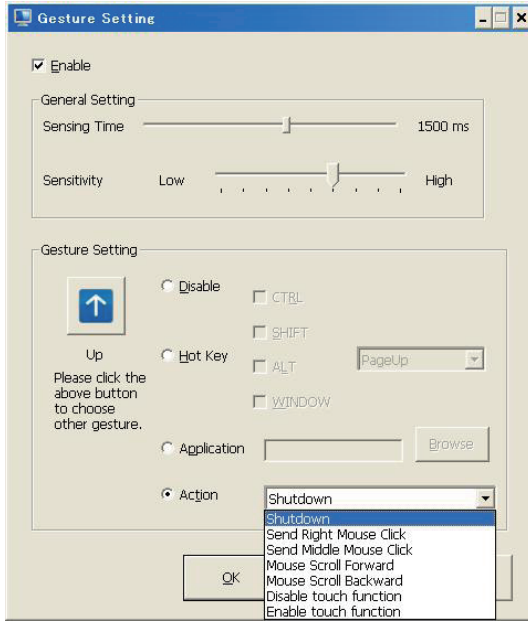


3. And then another **Gesture Select** window will pop up. Each mark in this menu represents your gesture on screen. For example, the upward arrow indicates that you move your finger across the touch screen from bottom to top. The rest are similar. You may use your gesture applied on the touchscreen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



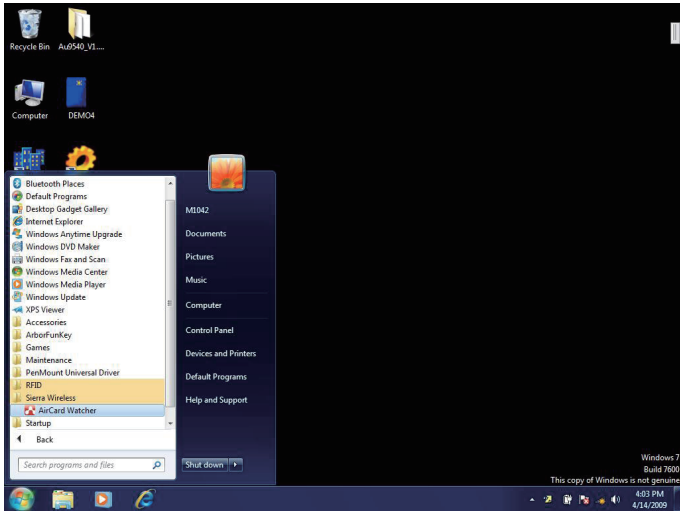
4. Then again, choose **Hot Key**, **Action** or **Application** to set each gesture's corresponding function. You may disable respective gesture, too. And remember to press **Apply** after all.



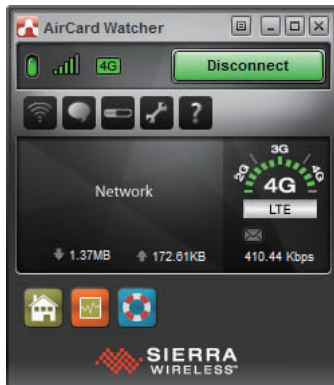


### 3.7. HSUPA (Optional)

1. After everything is installed successfully, **AirCard Watcher** icon will appear in **All Programs**. This is HSUPA program, you may also install your own program. To use this program, you must install SIM card before all (see Section 2.5); then, turn on HSUPA by pressing one of the function keys already set as 3G On/Off (see Section 2.7.1) and execute **AirCard Watcher**.



2. **Sierra Wireless AirCard Watcher** Connection Manager software connects you to the Internet with a single click, and keeps you informed of your wireless connection, location and other information using clear indicators for modem status, network status, and more.



---

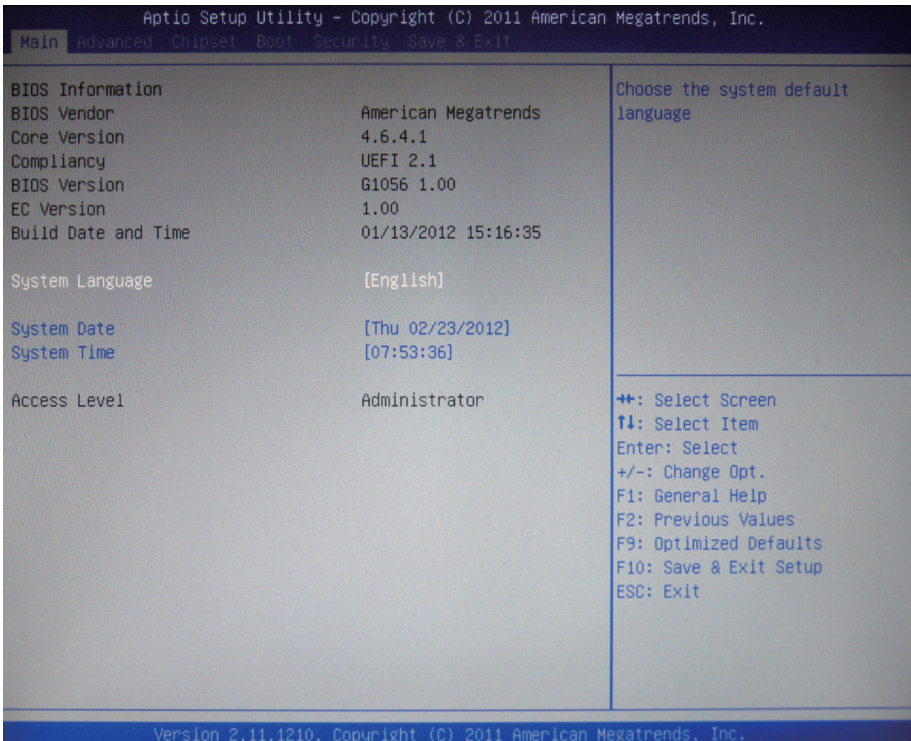
# Chapter 4

## BIOS

### 4.1. BIOS Main Setup

The AMI BIOS provides a setup utility program for specifying the system configurations and settings which are stored in the BIOS ROM of the system. When you turn on the computer, the AMI BIOS is immediately activated. After you have entered the setup utility, use the left/right arrow keys to highlight a particular configuration screen from the top menu bar or use the down arrow key to access and configure the information below.

NOTE: In order to increase system stability and performance, our engineering staff are constantly improving the BIOS menu. The BIOS setup screens and descriptions illustrated in this manual are for your reference only, and may not completely match what you see on your screen.





## BIOS Information

Display the BIOS information.

### System Language

Choose the system default language.

### System Date

Set the system date. Note that the 'Day' automatically changes when you set the date.

The date format is:

- Day** : Sun to Sat
- Month** : 1 to 12
- Date** : 1 to 31
- Year** : 1998 to 2099

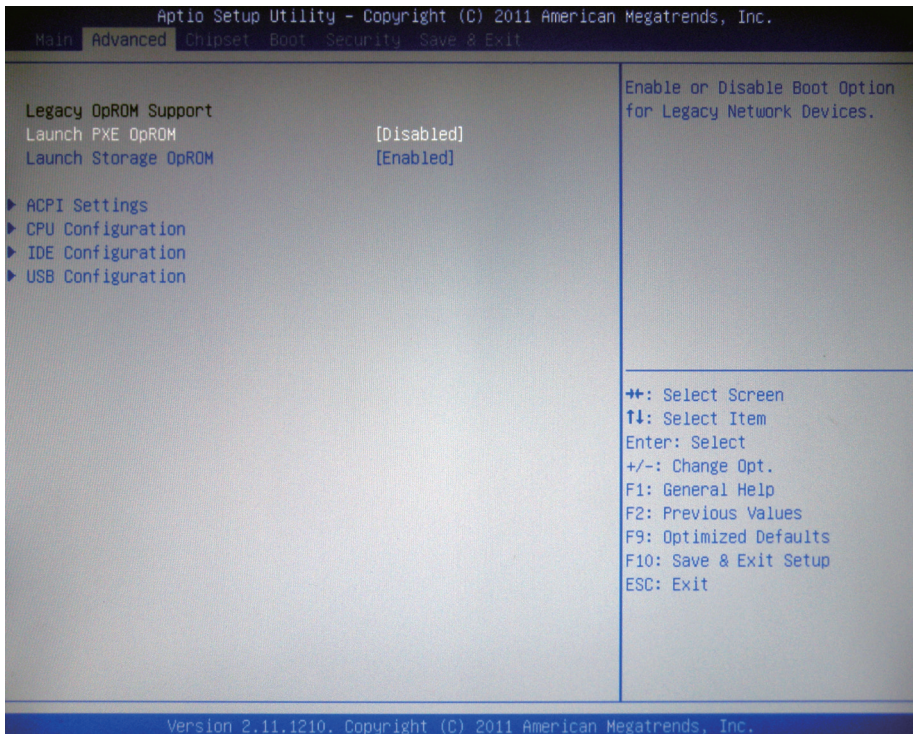
### System Time

Set the system time.

The time format is:

- Hour** : 00 to 23
- Minute** : 00 to 59
- Second** : 00 to 59

## 4.2. Advanced Settings



### Legacy OpROM Support

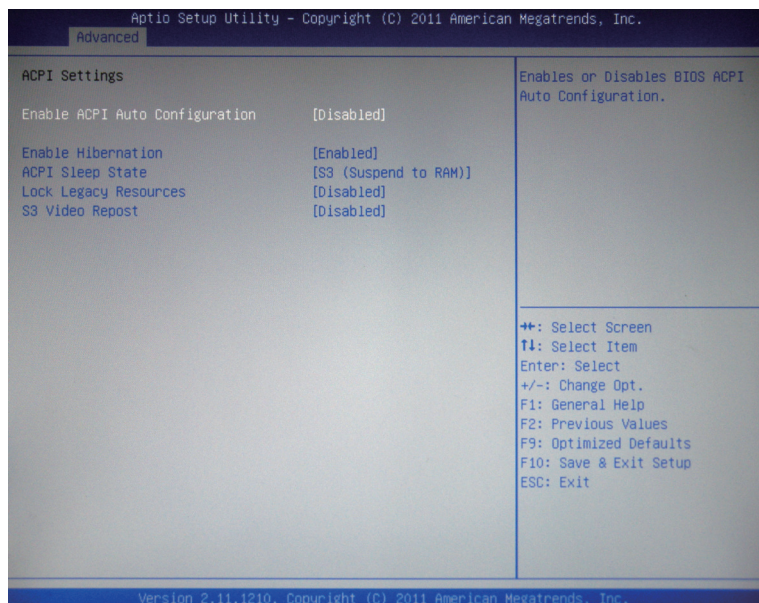
#### Launch PXE OpROM

Enable or disable the boot option for legacy network devices.

#### Launch Storage OpROM

Enable or Disable Boot Option for Legacy Mass Storage Devices with Option ROM.

## 4.2.1. ACPI Settings



### Enable ACPI Auto Configuration

This item allows you to enable/disable ACPI (Advanced Configuration and Power Interface) Auto Configuration.

The choice: Disabled (Default), Enabled.

### Enable Hibernation

Enable or disable the Hibernation function. This allows the operating system to control power to the computer's disk, monitor and peripheral devices.

The choice: Enabled (Default), Disabled

### ACPI Sleep State

This item allows you to select ACPI Sleep State.

ACPI sleep state enables you to send the system in a low-power consuming sleep mode.

The choice: Suspend Disabled, S1 (CPU Stop Clock), S3 (Suspend to RAM)

### Lock Legacy Resources

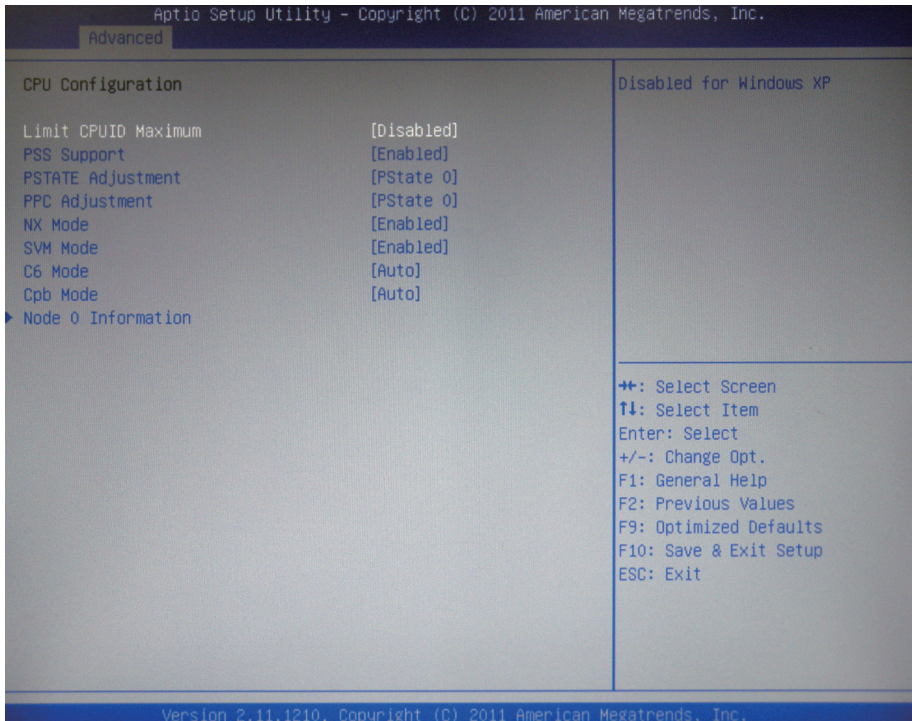
Enable or Disable system lock of legacy resources.

### S3 Video Repost

Enable or Disable S3 Video Repost.

## 4.2.2. CPU Configuration

The CPU Configuration setup screen varies depending on the installed processor.



### Limit CPUID Maximum

Disabled for Windows XP.

### PSS Support

Enable/Disable the generation of ACPI \_PPC, \_PPS, and \_PCT objects.

### PSATATE Adjustment

Provide to adjust startup P-state level.

The choice: PState 0, PState 1, PState 2

### PPC Adjustment

Provide to adjust \_PPC object.

The choice: PState 0, PState 1, PState 2

### NX Mode

Enable/Disable No-execute page protection Function.

## SVM Mode

Enable/Disable CPU Virtualization.

## C6 Mode

Enable/Disable C6.

## Cpb Mode

Auto/disable CPB.

## Node 0 Information

```
Aptio Setup Utility - Copyright (C) 2011 American Megatrends, Inc.
Advanced

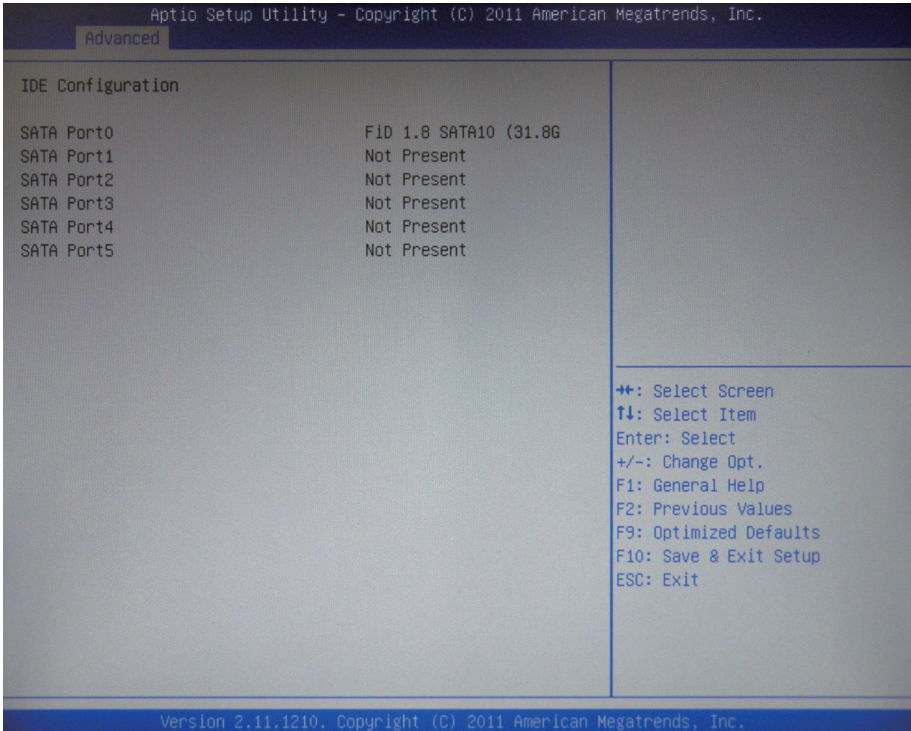
Node0: AMD G-T56N Processor
Dual Core Running @ 1674 MHz 1350 mV
Max Speed:1650 MHZ  Intended Speed:1650 MHZ
Min Speed:825 MHZ
Microcode Patch Level: 5000101

----- Cache per Core -----
L1 Instruction Cache: 32 KB/8-way
  L1 Data Cache: 32 KB/2-way
  L2 Cache: 512 KB/16-way
No L3 Cache Present

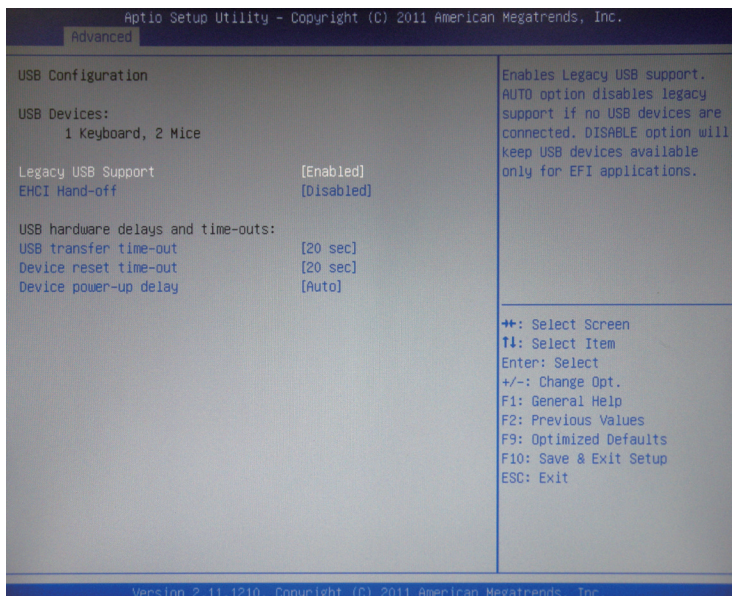
**: Select Screen
↑↓: Select Item
Enter: Select
+/-: Change Opt.
F1: General Help
F2: Previous Values
F9: Optimized Defaults
F10: Save & Exit Setup
ESC: Exit

Version 2.11.1210. Copyright (C) 2011 American Megatrends, Inc.
```

### 4.2.3. IDE Configuration



## 4.2.4. USB Configuration



### Legacy USB Support

Enable support for legacy USB. AUTO option disables legacy support if no USB devices are connected.

The choice: Enabled (Default); Auto; Disabled

### EHCI Hand-Off

Allow you to enable support for operating systems without an EHCI hand-off feature. Do not disable the BIOS EHCI Hand-off option if you are running a Windows® operating system with USB device.

The choice: Enabled (Default); Disabled

### USB hardware delays and time-outs

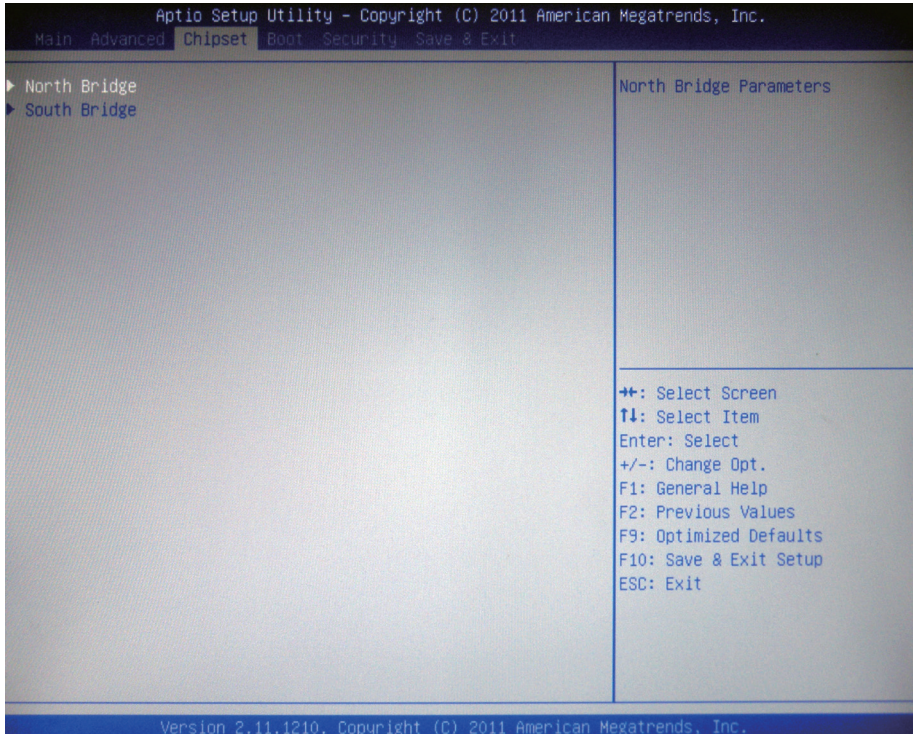
USB transfer time-out — The time-out value for control, bulk, and interrupt transfers. Default setting: 20 sec

Device reset time-out — USB mass storage device start unit command time-out. Default setting: 20 sec

Device power-up delay — Maximum time the device will take before it properly reports itself to the host controller. 'Auto' uses default value: for a Root port it is 100ms, for a Hub port the delay is taken from hub descriptor. The choice: Auto (Default); Manual

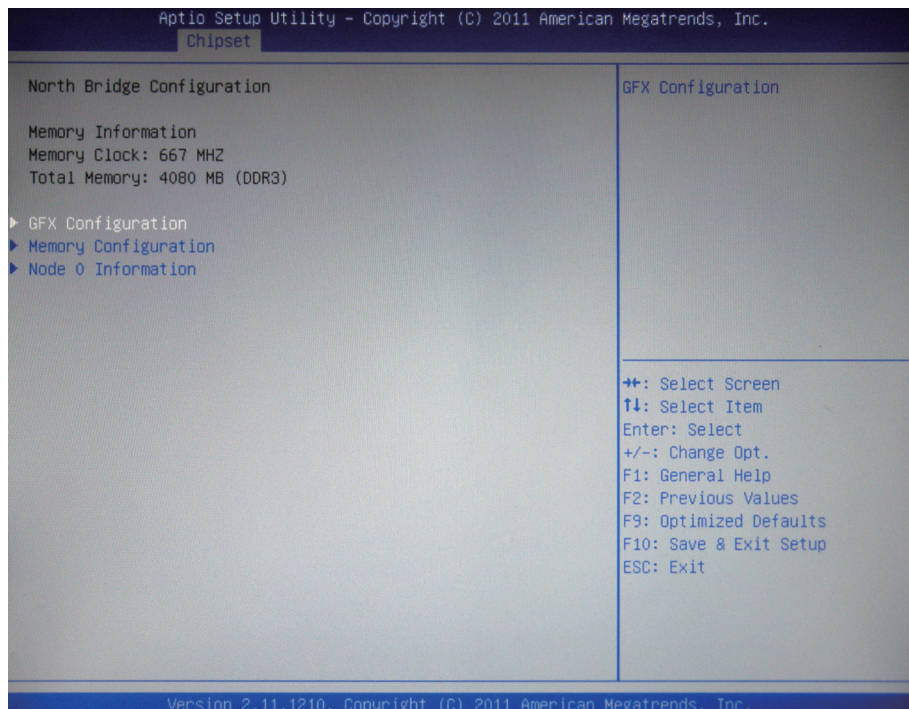
### 4.3. Chipset

This section allows you to configure and improve your system; also, set up some system features according to your preference.

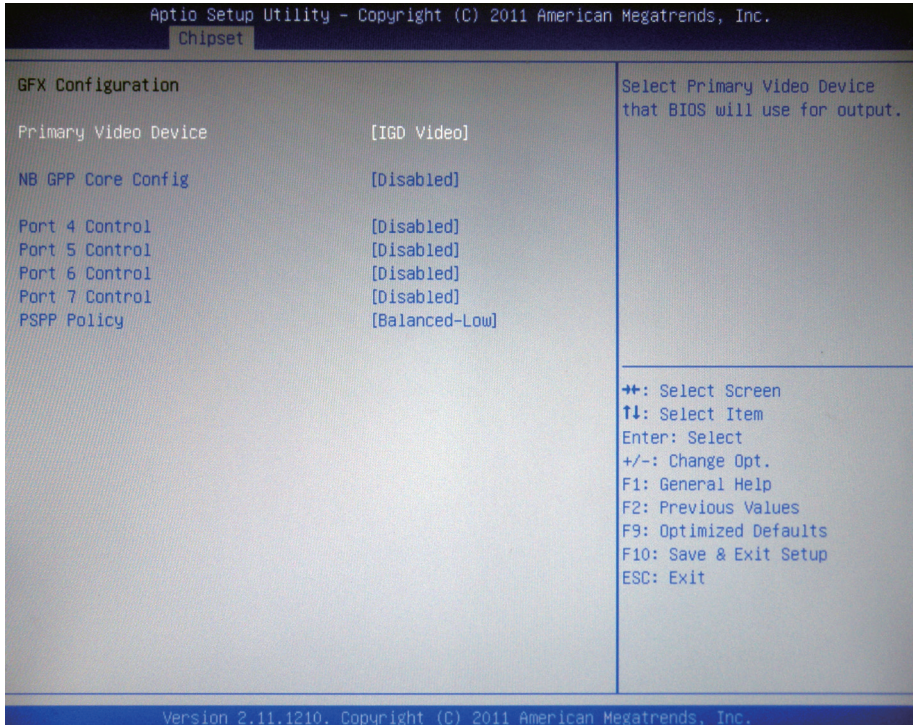




### 4.3.1. North Bridge



## GFX Configuration



### Primary Video Device

Select Primary Video Device that BIOS will use for output.

### NB GPP Core Config

Configure NB GPP Core.

The choice: Disabled, GPP\_CORE\_x4x4, GPP\_CORE\_x4x2x2, GPP\_CORE\_x4x2x1x1, GPP\_CORE\_x4x1x1x1

### Port 4~7 Control

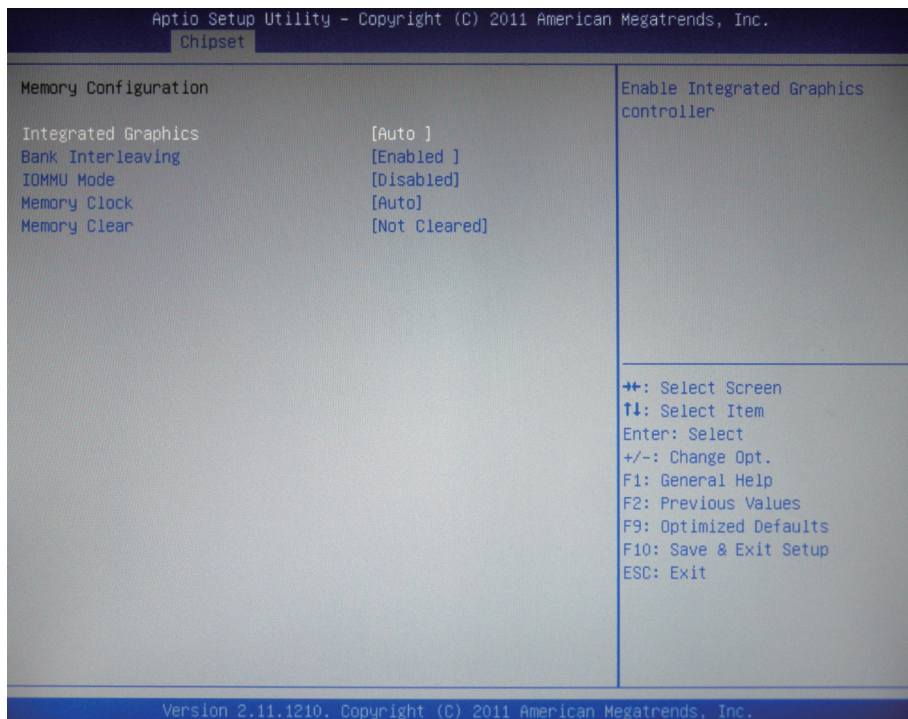
Enable/Disable Port 4~7.

### PSPP Policy

Set PCIe speed power policy.

The choice: Disabled, Performance, Balanced-High, Balanced-Low, Power Saving

## Memory Configuration



### DIMM profile

Select DIMM timing profile that should be used.

The choice: Default DIMM profile, XMP profile 1, XMP profile 2

### Memory Frequency

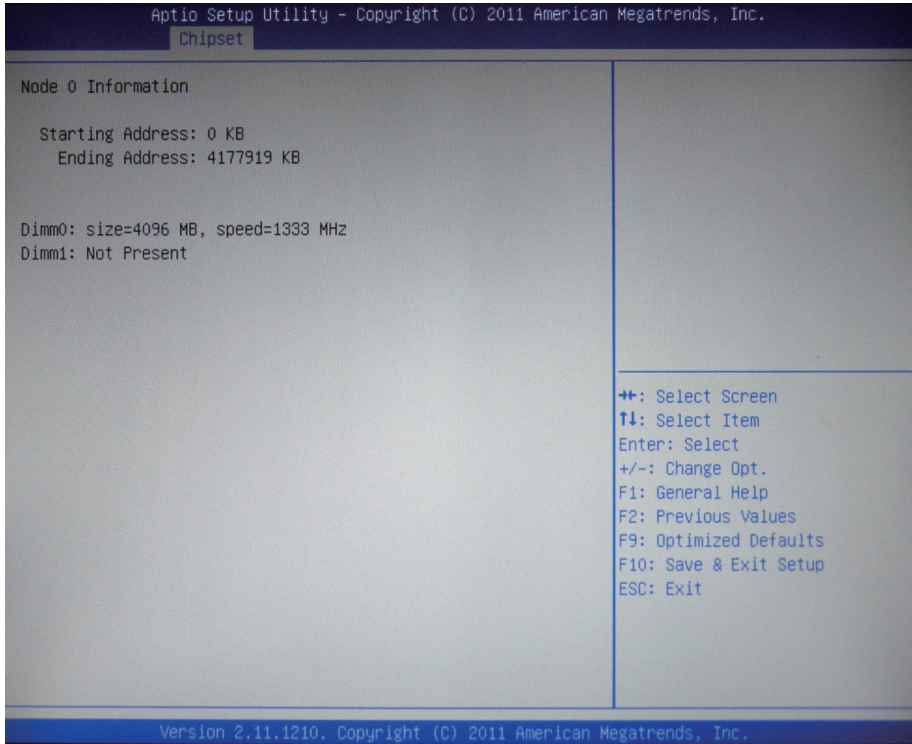
Maximum Memory Frequency Selections in Mhz.

The choice: Auto, 1067, 1333, 1600, 1867, 2133

### ECC Support

Enable or disable DDR Ecc Support.

## Node 0 Information



Aptio Setup Utility - Copyright (C) 2011 American Megatrends, Inc.  
Chipset

Node 0 Information

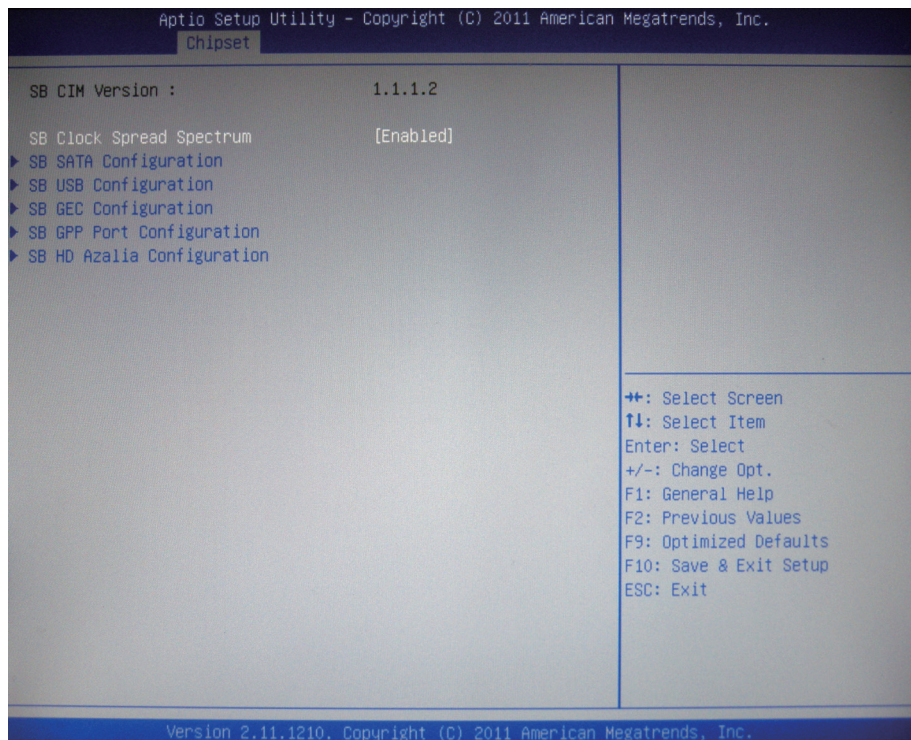
Starting Address: 0 KB  
Ending Address: 4177919 KB

Dimm0: size=4096 MB, speed=1333 MHz  
Dimm1: Not Present

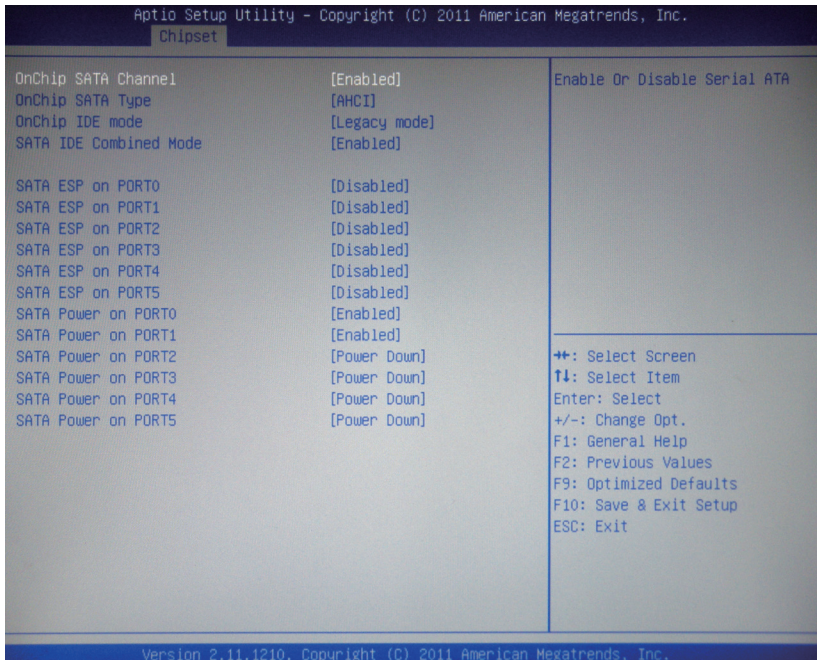
←+: Select Screen  
↑↓: Select Item  
Enter: Select  
+/-: Change Opt.  
F1: General Help  
F2: Previous Values  
F9: Optimized Defaults  
F10: Save & Exit Setup  
ESC: Exit

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### 4.3.2. South Bridge



## SB SATA Configuration



### OnChip SATA Channel

Enable/Disable Serial ATA.

### OnChip SATA Type

The choice: Native IDE, RAID, AHCI, Legacy IDE, IDE→AHCI, AHCI as ID 0x4394, IDE→AHCI as ID 0x4394

### OnChip IDE mode

OnChip IDE mode Select.

The choice: Legacy mode, Native mode

### SATA IDE Combined Mode

Enable/Disable SATA IDE Combined Mode.

### SATA ESP on PORT0~5

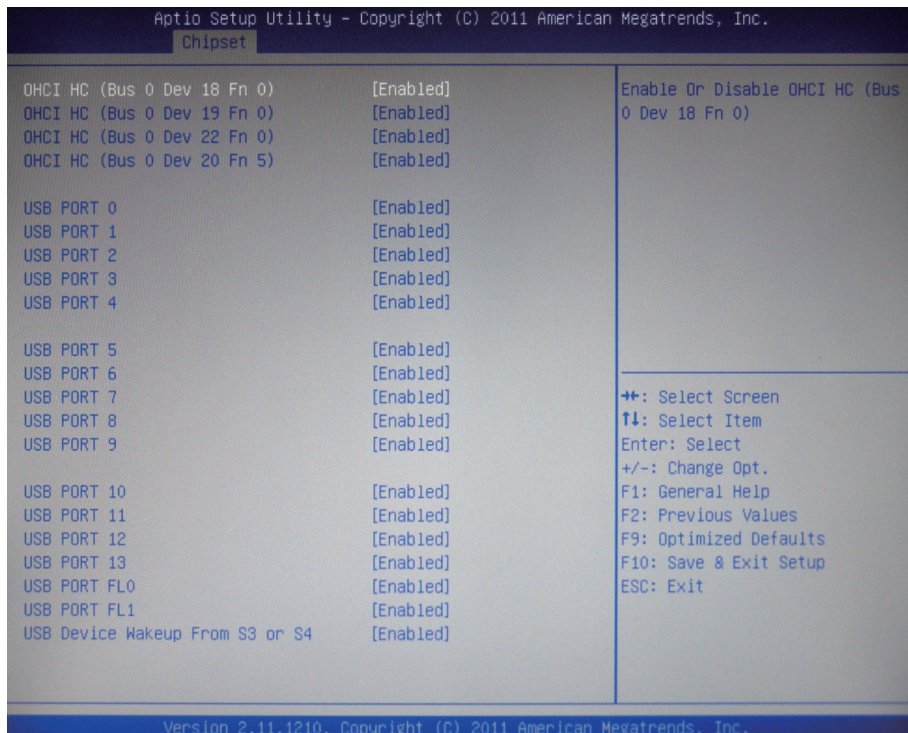
Enable/Disable SATA ESP on PORT0~5.

### SATA Power on PORT0~5

Enable/Disable SATA Power on PORT0~5 .

The choice: Enabled, Power Down

## SB USB Configuration



### OHCI HC (Bus 0 Dev 18/19/22/20 Fn 0/5)

Enable/Disable OHCI HC (Bus 0 Dev 18/19/22/20 Fn 0/5).

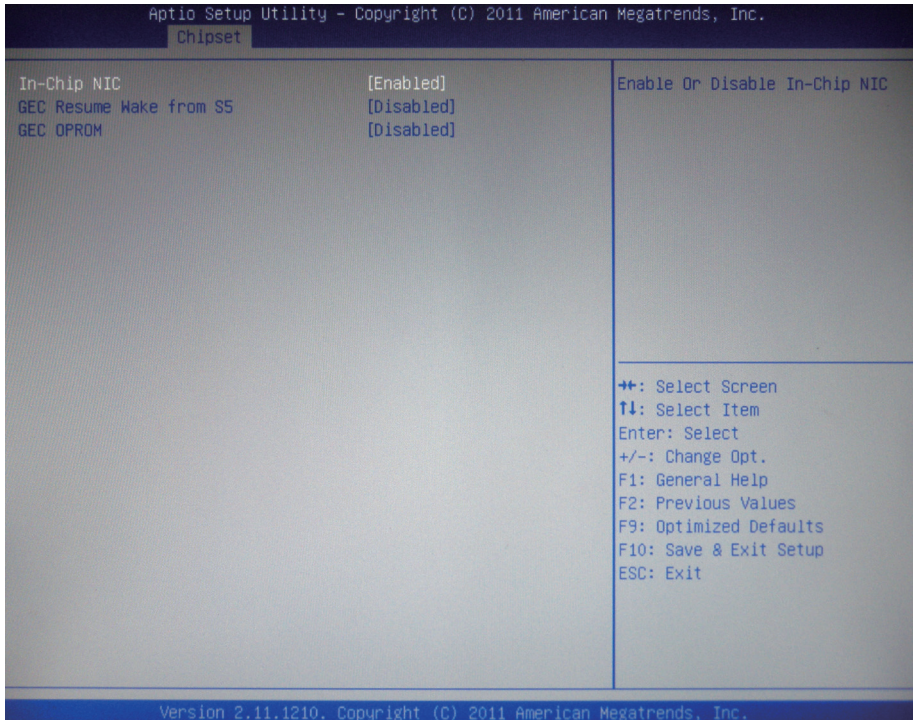
### USB PORT 0~13/FL0~1

Enable/Disable USB PORT 0~13/FL0~1.

### USB Device Wakeup From S3 or S4

Enable/Disable USB Device Wakeup From S3 or S4.

## SB GEC Configuration



### In-Chip NIC

Enable/Disable In-Chip NIC.

### GEC Resume Wake from S5

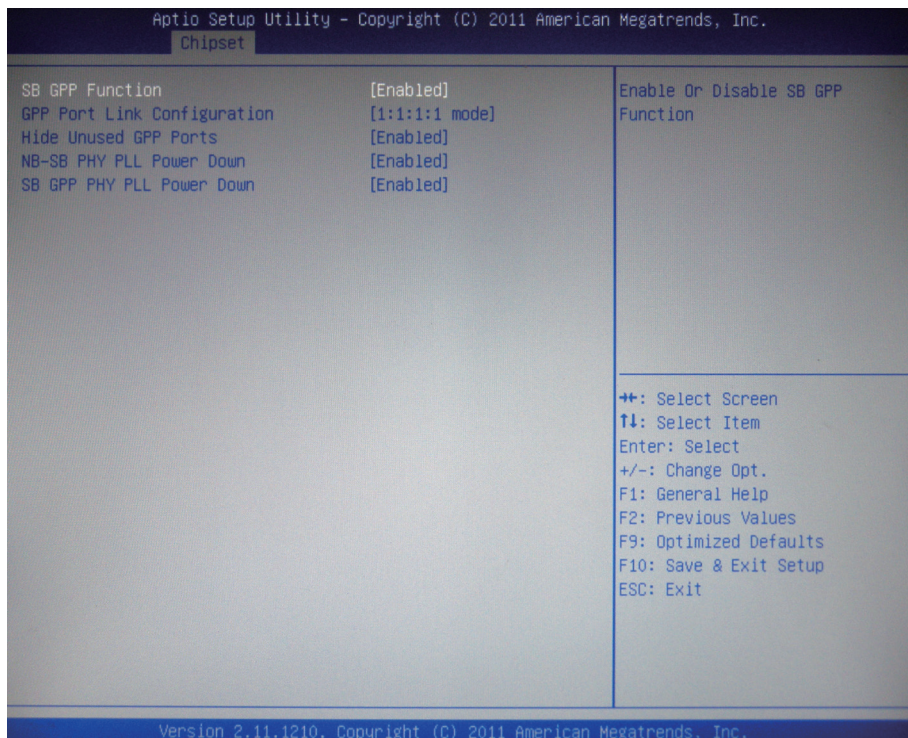
Enable/Disable GEC Resume Wake from S5.

### GEC OPROM

Enable/Disable GEC OPROM.



## SB GPP Port Configuration



### SB GPP Function

Enable/Disable SB GPP Function.

### GPP Port Link Configuration

Select GPP Port Link Configuration.

### Hide Unused GPP Ports

Enable/Disable Hide Unused GPP Ports.

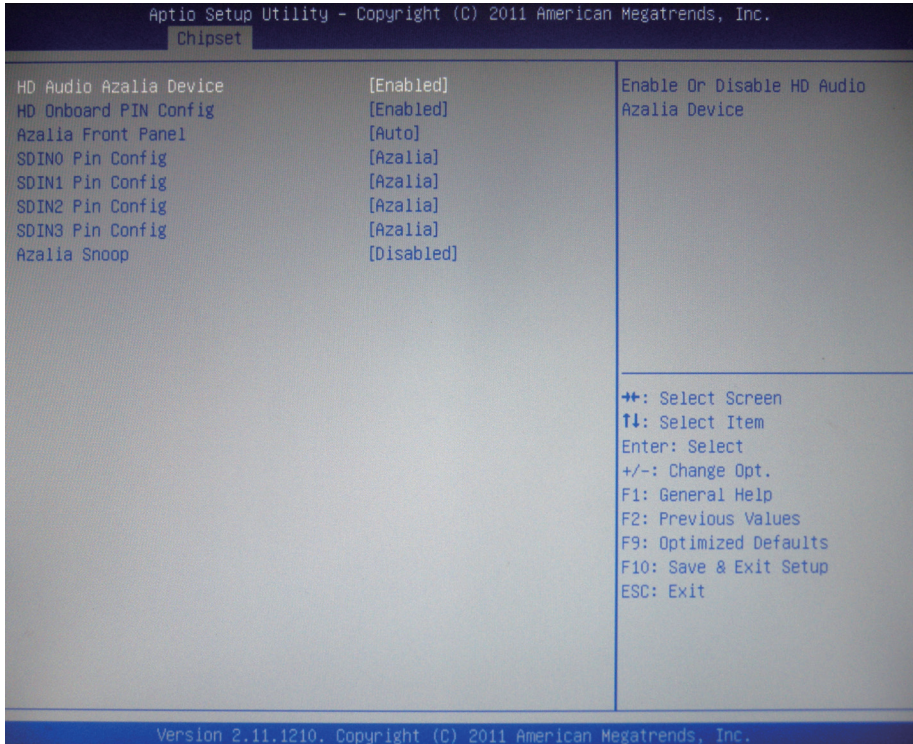
### NB-SB PHY PLL Power Down

Enable/Disable NB-SB PHY PLL Power Down.

### SB GPP PHY PLL Power Down

Enable/Disable SB GPP PHY PLL Power Down.

## SB HD Azalia Configuration



### HD Audio Azalia Device

The choice: Auto, Disabled, Enabled

### HD Onboard PIN Config

The choice: Disabled, Enabled

### Azalia Front Panel

The choice: Auto, Disabled

### SDINO~3 PIN Config

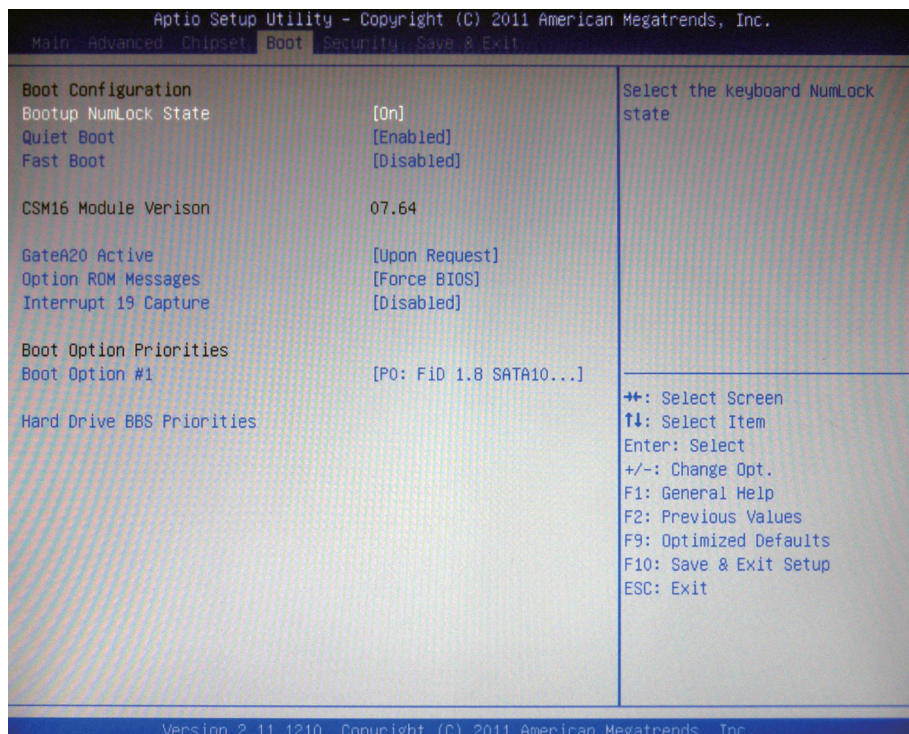
The choice: GPIO, Azalia

### Azalia Snoop

The choice: Disabled, Enabled

## 4.4. Boot Settings

The Boot menu items allow you to change the system boot options.



### Boot Configuration

#### Bootup NumLock State

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

#### Quiet Boot

This allows you to select the screen display when the system boots.

#### Fast Boot

Enable/Disable boot with initialization of a minimal set of devices required to launch active boot option. Has no effect for BBS boot options.

#### GateA20 Active

This item is to set the Gate A20 status.

### Option ROM Messages

This item is to set display mode for Option ROM.

### Interrupt 19 Capture

When enabled, it allows the optional ROM to trap interrupt 19.

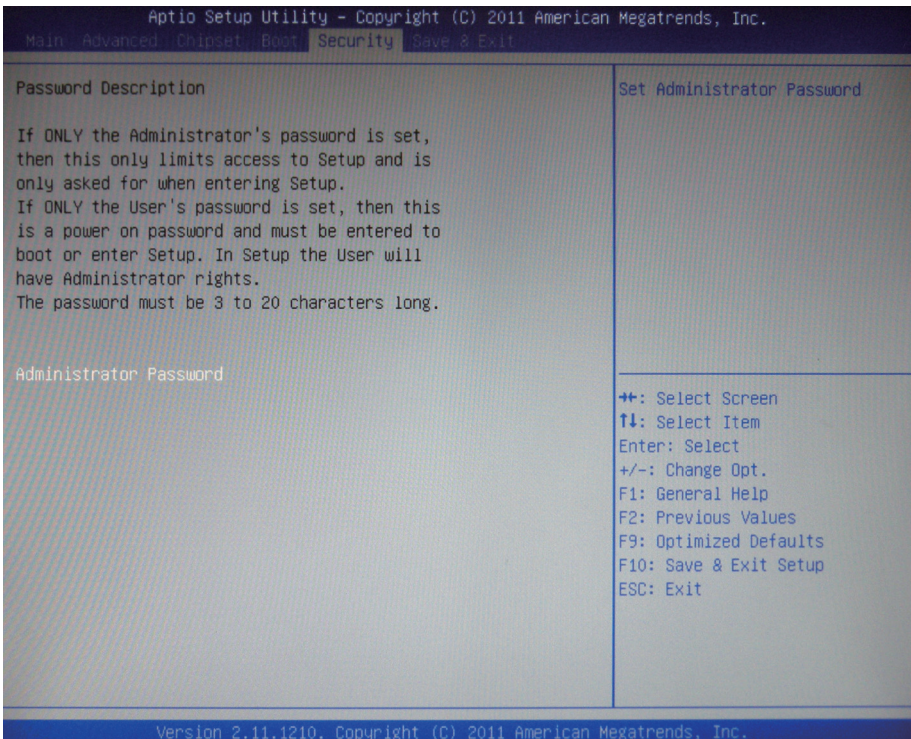
### Boot Option Priorities

Select the boot sequence of the hard drives.

### Hard Drive BBS Priorities

This allows you to set the hard drive boot priority. The BIOS will attempt to arrange the hard disk boot sequence automatically. You can also change the booting sequence. The number of device items that appears on the screen depends on the number of devices installed in the system.

## 4.5. Security



## **Administrator Password**

Use the Administrator Password to set or change a administrator password.

### **ENTER PASSWORD**

Type the password, up to eight 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.

To disable a password, just press <Enter> when you are prompted to enter the password. A message will confirm the password will be disabled. Once the password is disabled, the system will boot and you can enter Setup freely.

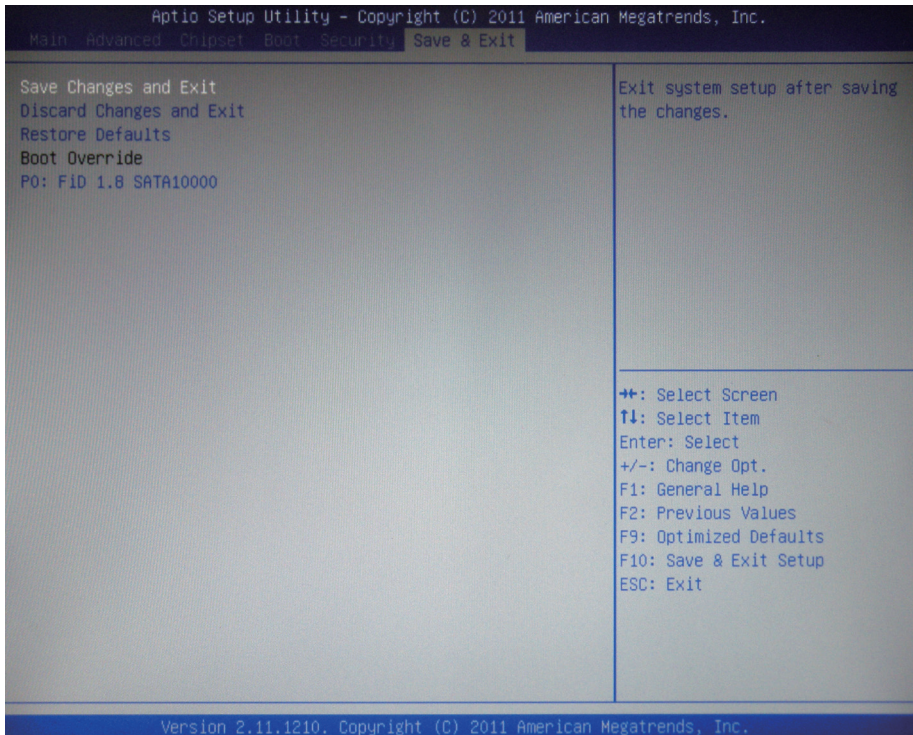
### **PASSWORD DISABLED**

When a password has been enabled, you will be prompted to enter it every time you try to enter Setup. This prevents an unauthorized person from changing any part of your system configuration.

Additionally, when a password is enabled, you can also require the BIOS to request a password every time your system is rebooted. This would prevent unauthorized use of your computer.

You can determine when the password is required within the BIOS Features Setup Menu and its Security option. If the Security option is set to "System", the password will be required both at boot and at entry to Setup. If it's set to "Setup", prompting only occurs when trying to enter Setup.

## 4.6. Save & Exit



### Save Changes and Exit

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

Save configuration changes and exit setup?

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

### Discard Changes and Exit

Exit system setup without saving any changes.

<ESC> key can be used for this operation.

**Restore Defaults**

Restore system to factory default.

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

**Boot Override**

This group of functions includes a list of tokens, each of them corresponding to one device within the boot order. Select a drive to immediately boot that device regardless of the current boot order.

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# Appendix

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## A. Battery Charger (Optional)

Except G1056 itself, you may also charge batteries via battery charger. The CHR-1056 comes in as an accessory option for G1056. You can charge more 4S1P external batteries via this battery charger. Go through this section to find out more about CHR-1056.

### A.1 Specifications

Features & Peripherals	
Color & Material	Gray, Plastic
I/O Ports	1 x DC Plug (Back side)
Mechanical & Environmental	
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)	101 x 121 x 46.1 mm (3.97" x 4.76" x 1.81")
Weight (Net)	0.30 kg (0.66 lb)
Vibration	1 Grms/ 5 ~ 500Hz/ random operation
Shock	10G peak acceleration (11 ms duration)
Power	
Requirement	19V, DC In
Ordering Information	
CHR-1056	Dual Bay External Battery Charger for Gladius G1056

Note: Practically, the charger can operate within the range of -10 to 45°C, but will malfunction over 45°C. When that occurs, you must put it in the environment lower than 35°C, or it can't normally work again. Similarly, this charger stops working below -10°C and is able to re-operate when it's warmer than -10°C.

Battery Capacity	Indicator Color & Status			
	0% ~ 19%	20% ~ 69%	70% ~ 94%	95% ~ 100%
Charging	Solid Red	Flashing Red	Flashing Green	Solid Green

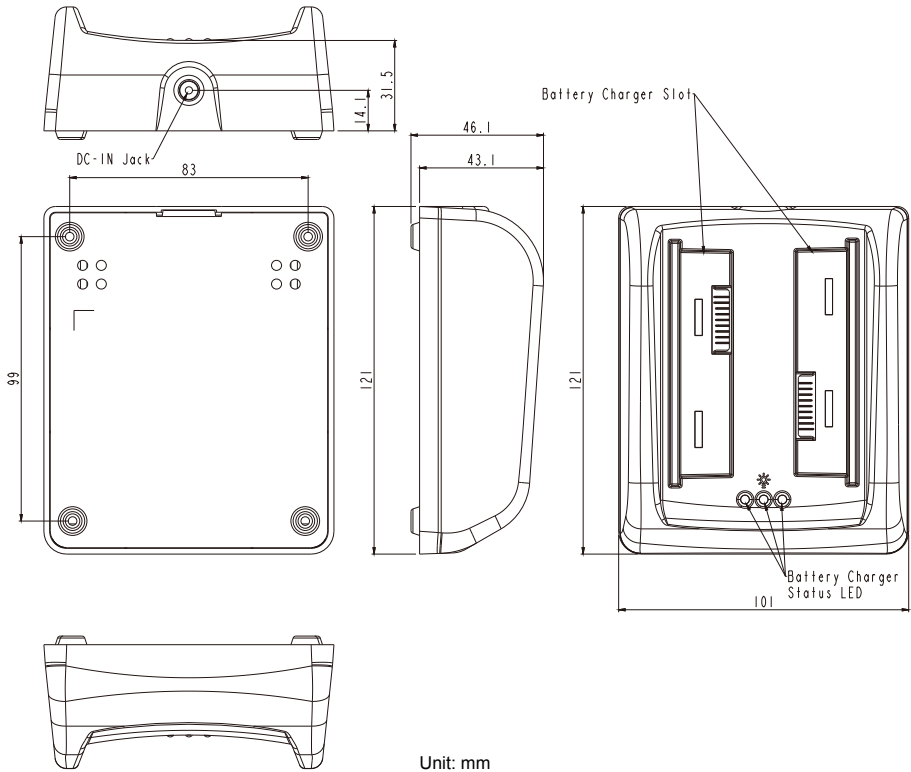
## A.2. Overview



- When charging batteries, simply insert the same adapter for G1056 into the DC-IN Jack.



### A.3. Dimensions



### A.4. How to Use

Follow subsequent guide to charge batteries via CHR-1056.

1. Insert adapter into DC plug. The middle indicator will turn light green immediately.
2. Put the first battery into one socket. Be sure the metallic parts meet each other. Indicator near it will turn on right away. Check the previous table for its meaning.
3. Repeat the same procedure to charge another battery.

In addition, the battery charger doesn't have the function of discharging. So just take off batteries when indicators become solid green light.





## B. Shoulder Strap (Optional)

Except hand strap, this tablet PC also provides shoulder strap in its accessories kit. Install as below.



1. Use thumb to open clasp and fasten it with the metal ring on one side. Repeat the same step to fasten another side.

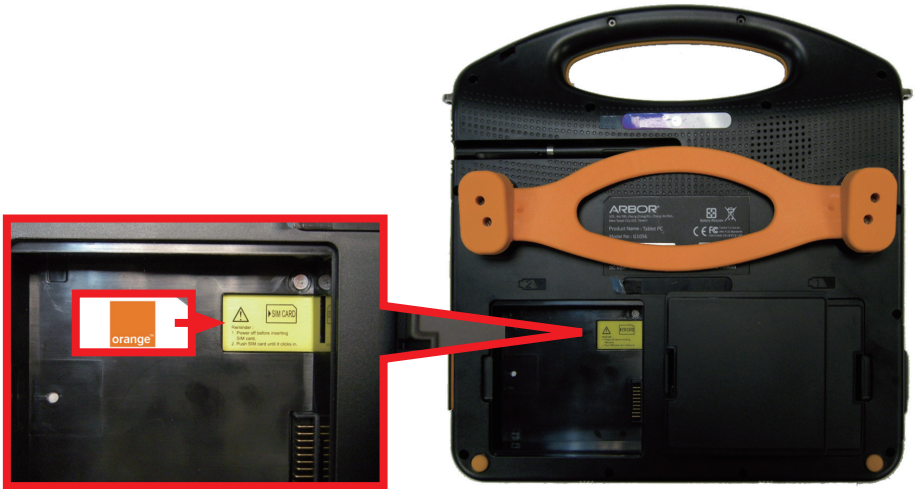


2. Lift the tablet PC as illustration.



### C. SIM Card (Configure-to-Order)

The rugged PC supports 3G telecommunication network function, but it's optional. You should power off firstly, and then, refer to illustration below to remove battery 2. Inside the battery compartment is a SIM socket lying beside pin header. Insert your 3G SIM card with its chip facing down into the socket until you hear a click. To take off SIM card, push it inwards softly to have it ejecting from the socket.



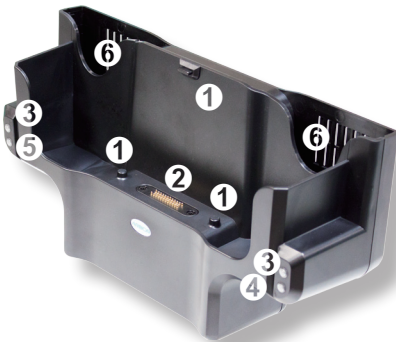


## D. Wall-mount Cradle (Optional)

The (optional) wall-mount cradle, **WMC-1056**, is developed for **G1056** computer to extend the computer's battery charging and networking features. The wall-mount cradle features the following connectors:

- Two additional battery charging channels (for spare batteries)
- Two USB 2.0 (host) ports
- One RJ-45 Ethernet port

Front-right View



Rear View



Bottom View






- Note: (1) For the cradle's status LEDs to function, connect the cradle to external power.  
 (2) For the cradle's rear I/O connectors to function, connect the cradle to external power.

No.	Description	No.	Description
1	Docking bolts for the computer	7	75mm VESA-mount holes
2	Contact pins for the computer	8	Power Jack
3	Spare battery charging status LED	9	RJ-45 Ethernet port
4	Cradle power status LED (See <a href="#">D.1. Status LED.</a> )	10	USB 2.0 host ports
5	Unit detection LED (See <a href="#">D.1. Status LED.</a> )	11	3W speaker (See <a href="#">D.2. Speaker.</a> )
6	Spare battery charging channels		

## D.1. Status LED

The wall-mount cradle is provided with four status LEDs help users monitor the status of the wall-mount cradle.

Printed Graphic	Subject	State	Color	Description
	Cradle power status	On	Green	External power connected.
	Spare batteries charging status	Blinking	Red	The battery level remains 0%~15%.
		Blinking	Orange	The battery level is 16%~49%.
		Blinking	Green	The battery level reaches 50%~99%.
		On	Green	The battery is fully charged.
	Unit detection	On	Green	The computer is properly seated inside the cradle.
		Off	N/A	The computer is not properly seated inside the cradle.

Note: For the cradle's status LEDs to function, connect the cradle to external power.

## D.2. Speaker

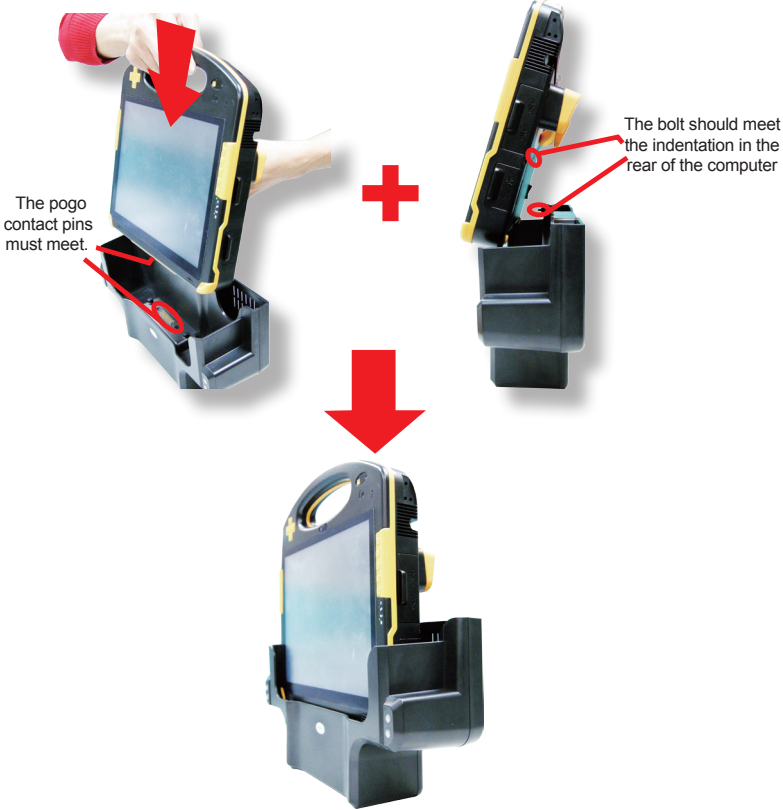
The wall-mount cradle has a speaker on its bottom, which makes the cradle a speaker dock to facilitate the computer's sound output without using any additional cables.

The G1056 computer is able to switch its sound output from the built-in speaker to the wall-mount cradle's speaker as soon as it is seated into the cradle.

To know how to seat the computer into the wall-mount cradle, see [D.3. Seat/Dismount the Computer](#) on page .

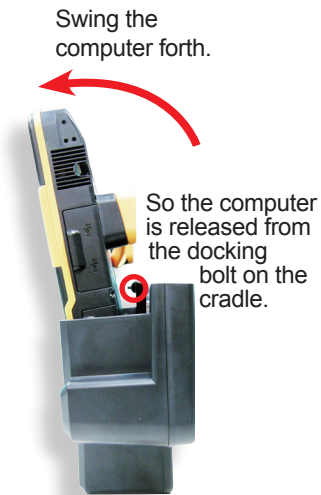
### D.3. Seat/Dismount the Computer

To use the wall-mount cradle to charge the batteries or to network with other devices, seat the computer into the cradle first:



To dismount the computer from the cradle:

1. By the top side of the computer, swing the computer forth so the computer is released from the docking bolt on the cradle.

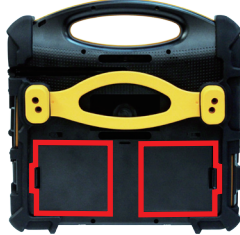


2. Dismount the computer from the cradle.

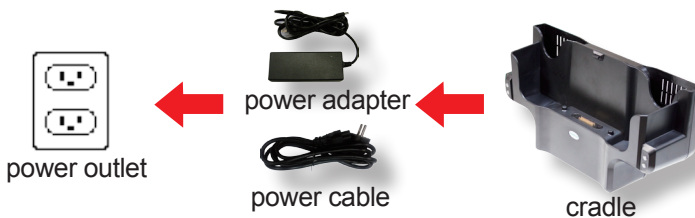
## D.4. Charge Batteries


To use the wall-mount cradle to charge the batteries which are installed on the computer:

1. Install one or both batteries to the computer.



2. Connect the wall-mount cradle to power supply.




The cradle's power status LED  then lights green to signify that power is connected.

Note: **DO** use the adapter that goes with the wall-mount cradle instead of the adapter that goes with the G1056 computer.

3. Seat the computer into the wall-mount cradle as described in [D.3. Seat/Dismount the Computer](#) on page [117](#).



Seat the computer.

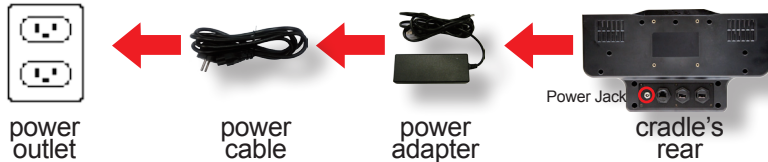
The computer's battery charging status LED  then blinks red/orange/green to signify the batteries are being charged. Normally it takes about 3 to 4 hours to charge the battery to full (depending on the power level of the battery)


When the charging finishes, the said status LED turns green and stays on to signify the battery is fully charged. See also [Status LEDs](#) on page [10](#) to monitor the computer's battery charging.

## D.5. Charge A Spare Battery

To charge a spare battery using the wall-mount cradle:

1. Connect the cradle to external power by the power adapter and power cable.




The cradle's power status LED  then lights green to signify that power is connected.


Note: **DO** use the adapter that goes with the wall-mount cradle instead of the adapter that goes with the G1056 computer.

2. Place a spare battery into the cradle's battery channel. Note the contact pins on the battery should meet the contact pins inside the charging channel.



The cradle's battery charging status LED  then blinks red, orange or green to signify the battery is being charged. Normally it takes about 3 to 4

hours to charge the battery to full.

When the charging finishes, the status LED  will turn green and stay on to signify the battery is fully charged. See also [D.1. Status LED](#) on page [116](#) to monitor the cradle's battery charging.

And also note the following:

- It's recommended not to recharge intermittently, which means not to plug and unplug the power adapter frequently in a short period of time.
- See also [Instructions for Rechargeable Battery Pack](#) on page [14](#) to know how to store and use the batteries.



## D.6. Network with Other Devices

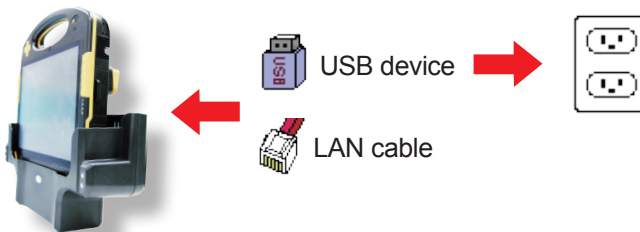
Using the cradle to network with other devices saves you from the perpetual plugging and unplugging of devices/cables.

To use the wall-mount cradle to network with other devices:

1. Seat the computer into the wall-mount cradle as described in [D.3. Seat/Dismount the Computer](#) on page [117](#).



2. Connect the USB device or LAN cable to the cradle's rear ports.



Note:

- ▶ For the cradle's rear LAN ports and USB port to function, connect the cradle to external power.
- ▶ In order to use the cradle's LAN port, install the cradle LAN driver first as described in [2.4.17. Install Cradle LAN Driver \(Optional\)](#) on page [50](#).
- ▶ Depending on the feature of the peripheral device, sometimes it is necessary to connect the device to external power.