
Gladius 5

5.5" Rugged IoT Handheld Device with Quad-core Processor

User's Manual

Version 1.1

This page is intentionally left blank.

Revision History

Version	Release Time	Description
1.0	2014.08	Initial release
1.1	2014.10	<p>1.1 Product Highlights</p> <ul style="list-style-type: none">• Updated touch screen spec to Corning® Gorilla® Glass 3 <p>1.5 Specifications</p> <ul style="list-style-type: none">• Added Durability Features• Updated touch screen spec to Corning® Gorilla® Glass 3• Modified wireless recharge descriptions under battery type• Added wireless charger compatibility warning message <p>2.3.2 Wireless Charging</p> <ul style="list-style-type: none">• Added supported wireless charger models and compatibility warning message <p>3.7 Using the NFC Feature</p> <ul style="list-style-type: none">• Added photo to indicate NFC detection area• Modify Tag Reader/Writer mode descriptions <p>Appendix A Accessories</p> <ul style="list-style-type: none">• Added wireless charger compatibility warning message

Copyright

Copyright © 2014 ARBOR Technology Corp. All Rights Reserved.

This document contains proprietary information protected by copyright. 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.

Disclaimer

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.

About This Manual

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

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

Contents

Preface	v
Declaration of Conformity.....	v
CE.....	v
FCC Class B.....	v
RoHS.....	vi
SVHC / REACH.....	vi
Safety Symbols.....	vii
Important Safety Instructions.....	vii
Rechargeable Battery Pack Safety.....	ix
General Cleaning Tips.....	x
Cleaning Tools.....	xi
Recommended Cleaning Procedures.....	xii
Disposing of the Equipment.....	xii
Additional Information & Technical Support.....	xiii
Warranty.....	xiii
Chapter 1 Introduction	1
1.1 Product Highlights.....	2
1.2 Package Contents.....	2
1.3 Parts of the Device.....	4
1.4 Dimensions.....	5
1.5 Specifications.....	6
Chapter 2 Getting Started	9
2.1 Accessing Battery Chamber.....	10
2.2 Installing microSD and SIM Card.....	12
2.3 Charging the Battery.....	13
2.3.1 Charging the Battery.....	13
2.3.2 Wireless Charging.....	13
2.4 Installing/Replacing the Battery.....	14
2.5 Optimizing Battery Life.....	15
Chapter 3 Using the Rugged Handheld Device	17
3.1 Using Touch Screen.....	18
3.1.1 Basic Operations.....	18
3.1.2 Text Input.....	18
3.2 Home Screen.....	19

Contents

3.2.1 Extending Home Screen	20
3.3 Using Cellular Network.....	22
3.3.1 Making/Receiving Calls.....	22
3.3.2 Data Connection	22
3.3.3 Data Roaming	23
3.3.4 Limiting Mobile Data Connection to 2G.....	24
3.4 Using the Wi-Fi Feature	25
3.4.1 Enabling Wi-Fi and Connecting to a WLAN	25
3.4.2 Adding a Wi-Fi Network.....	26
3.4.3 Connecting to a Wi-Fi Network by WPS	27
3.4.4 Forgetting/Modifying a Wi-Fi Network	28
3.5 Using the Bluetooth Feature	29
3.5.1 Enabling Bluetooth and Pairing with Bluetooth Device	29
3.5.2 Configuring Bluetooth Features to Use.....	31
3.5.3 Disconnect from a Bluetooth Device	32
3.5.4 Making Your Bluetooth Device Discoverable	32
3.5.5 Additional Bluetooth Settings	33
3.6 Using the Camera	34
3.7 Using the NFC Feature	35
3.7.1 Enabling/Disabling NFC	36
3.7.2 Configuring NFC Modes.....	36
3.7.3 Exchanging Data with NFC-Enabled Device.....	37
3.8 Using the Barcode Scanner	38
3.8.1 Installing APK File	38
3.8.2 Scanning the Barcode.....	39
3.8.3 Supported Barcode Formats	40
Appendix A Accessories.....	41
A.1 Using the Desktop Cradle (Optional).....	42
A.1.1 Parts of the Desktop Cradle.....	42
A.1.2 Charging the Device	43
A.2 Using the In-Vehicle Docking (Optional).....	45
A.2.1 Parts of the In-Vehicle Docking.....	45
A.2.2 Charging the Device	45

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.

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

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)

Safety Symbols



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.



This symbol indicates that a potential hazard to personal safety exists from a laser source. When this symbol is displayed in this manual, pay special attention to the specific safety information associated with the symbol

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 -55° C (-67° F) OR ABOVE 75° C (167° F). THIS MAY DAMAGE THE EQUIPMENT.**



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



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

Rechargeable Battery Pack Safety

With very little care, you can optimize the battery life and maximize the lifespan of the battery. Most importantly, use only the equipment in its ideal operating temperature (as described in [1.5 Specifications](#)) – do not leave it in a hot trunk during the summer.

- **Important Terms to Understand**

“Battery life” means the time the equipment 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 the Equipment for the First Time**

Be sure to fully charge (approx. 4 hours) the equipment when charging the equipment for the first time.

- **Long-Term Storage & Maintenance**

If you are putting away the battery for more than three months, it is recommended that the battery should be stored separately and fully charged, and get recharged every three months. 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 the equipment and battery at the proper temperature (as described in [1.5 Specifications](#)).

- **Battery Lifespan**

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

- 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.
- 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.
- If you are putting away the battery for more than three months, it is recommended that the battery should be stored separately and fully charged, and get recharged every three months. 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 the equipment and battery at the proper temperature (as described in [1.5 Specifications](#)).
- 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.
- The battery consists of precise electrical components and cells. Do not drop or hit the battery.

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.

Recommended Cleaning Procedures

1. Close all application programs
2. Close operating software
3. Turn off the equipment
4. Remove all peripherals
5. Disconnect the power cable
6. Proceed to clean.

Disposing of the Equipment

- **Within the European Union**



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

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

- **Outside the European Union**

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

Additional Information & Technical Support

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/contact.htm>

E-mail: info@arbor.com.tw

Warranty

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

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

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

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

This page is intentionally left blank.

Chapter 1

Introduction

1.1 Product Highlights

- Fully rugged for warehousing / transportation / medical / mPOS applications
- MIL-STD-810G & IP-65 certified, 1.5m (5ft.) drop resistance
- 5.5" TFT color LCD 1280 x 720 HD resolution
- Projected capacitive multi-touch panel with anti-reflection Corning® Gorilla® Glass 3
- High mobility with multiple connectivities including WLAN, Bluetooth and WWAN
- Built-in 1D barcode reader or 2D barcode imager
- Field replaceable battery with optimized battery life up to 8 hours
- Wireless charge supported
- G-sensor, gyroscope, light sensor, E-compass, GPS navigation & barometer
- System access control via RFID/NFC reader



1.2 Package Contents

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



1 x Gladius 5 5.5" Rugged IoT Handheld Device with Quad-core Processor



Rechargeable Li-ion battery pack (Pre-installed)



Universal power adapter with USB cable



Earphone



User Manual

Optional Accessories

D.Dock-G5 Desktop cradle w/ wireless charger



V.Dock-G5 In-vehicle docking w/ wireless charger

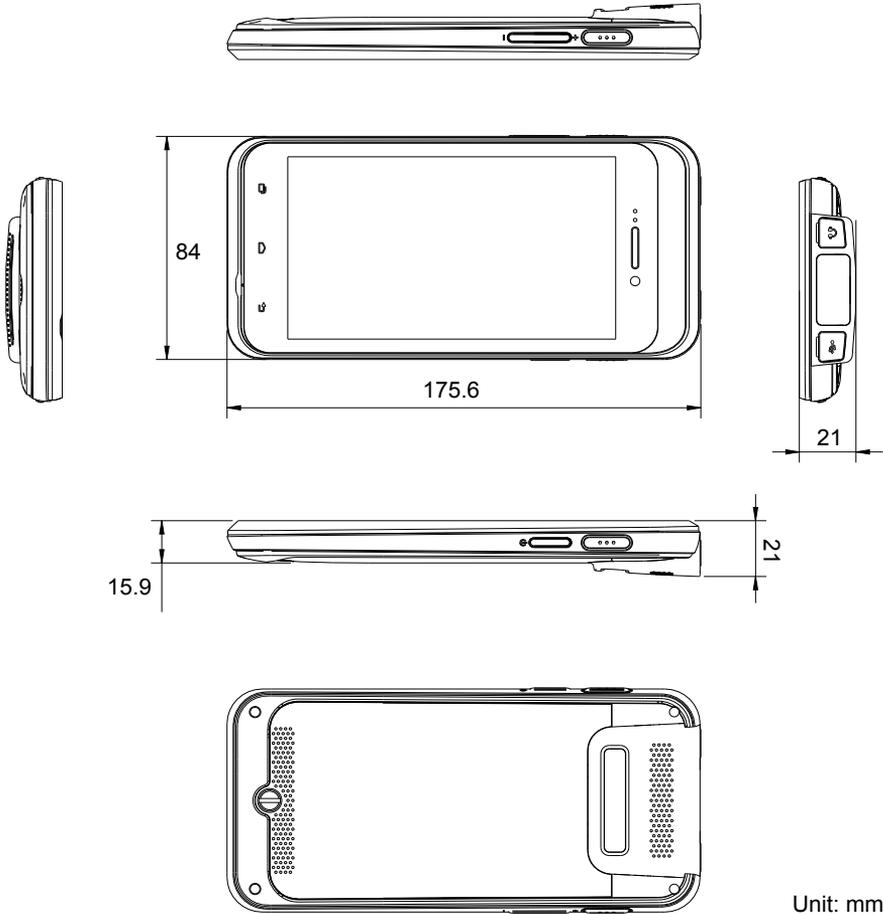


1.3 Parts of the Device



1	Front camera	9	(OS) Back button 
2	Receiver	10	Power key  * Press-and-hold this key to power on/off the device. * Press this key to turn on/off the display.
3	Scan key		
4	Volume rocker		
5	Projected Capacitive Multi-Touch Screen * See 3.1 Using Touch Screen to know how to use touch control and input text.	11	USB connector with hinged rubber cover
		12	Scan window
		13	Headset jack with hinged rubber cover
		14	LED Flash
6	(OS) Menu button 	15	Rear camera
7	(OS) Home button 	16	Battery chamber
8	Microphone	17	Speaker

1.4 Dimensions



1.5 Specifications

Durability Features	
MIL-STD-810G & IP-65 certified	
1.5m (5ft.) drop-resistance	
Raised bezel for LCD impact protection	
I/O ports with hinged rubber covers	
System	
CPU	MTK MT6589 Quad-core Cortex™A7 1GHz CPU PowerVR™ Series5XT GPU
OS	Android™ v4.2
Memory	1GB
Storage	8GB
Audio	Integrated microphone
	Integrated speaker
	1 x 3.5mm stereo headphone jack
Peripherals and Devices	
Camera	Front: 2.0 MP camera (Model with 2D barcode reader is not equipped with front-camera)
	Rear: 8.0 MP AF camera with LED
Sensor	Accelerometer (G-sensor)
	3-axis digital gyroscope
	Barometer
Light Sensor	Ambient light sensor
NFC	ISO/IEC 21481 Type A, Type B, Felica
WLAN	Integrated IEEE 802.11 b/g/n
Bluetooth	Integrated Bluetooth 4.0 + EDR class 2, with HID input, A2DP, DUN, HFP, SPP & PBAP supported
WWAN	WCDMA UMTS 850/900/1900/2100M
Navigation	GPS, AGPS & digital compass
Barcode Scanner	1D/2D barcode reader with physical trigger buttons (optional)
LCD Display	
Size/Type	5.5" TFT LCD

Resolution	1280 x 720
Touch Screen	
Type	5-point Projected Capacitive Touch screen Corning® Gorilla® Glass 3 w/ anti-reflection coating
I/O Interface	
USB Port	1 x Micro USB 2.0 port
SD Slot	1 x microSD card slot
SIM Socket	2 x SIM card slots
Expansion	microSDHC
Power Supply	
Power System	External AC power adapter
Battery Type	Lithium-ion rechargeable battery
	Field replaceable (for maintenance)
	Wirelessly rechargeable*
Battery Capacity	3.7V, 3600mAh, 13.32Wh
Battery Life	Up to 8 hours battery life with the following operations: <ol style="list-style-type: none"> 1. Continuous audio playback of 160-Kbps encoded MP3 files 2. Internet browsing by Wi-Fi while: <ol style="list-style-type: none"> a. Browsing snapshot versions of 20 separate web pages b. Using hourly push-email
	Continuous video playback for 6 hours
Adapter Input	Input: AC100~240C, 50~60 Hz
Adapter Output	DC power output: 5V/1.5A
Mechanical & Environmental	
Operating Temp.	-20°C ~ 60°C (-4°F ~ 140°F), Charging 0°C ~ 45°C (32°F ~ 113°F)
Storage Temp.	-40°C ~ 70°C (-40°F ~ 158°F)
Operating Humidity	95% (non-condensing)
Dimensions (WxDxH)	84.0 x 175.6 x 15.9 mm (3.31" x 6.91" x 0.63")
Weight	280g (0.62lb) (with battery)

*Only works with ARBOR wireless cradle and docking.

This page is intentionally left blank.

Chapter 2

Getting Started

2.1 Accessing Battery Chamber

It is essential to open the battery chamber door before the battery, the microSD card and the SIM card(s) can be installed. To open the battery chamber door:

1. Place the device on a flat surface, with the rear side facing up. Find the battery chamber door and door lock.



2. Use a coin to loosen the screw on the battery chamber door.



3. Detach and remove the battery chamber door.



The battery chamber looks like the image below:

Double-stacked SIM
card slots



microSD card slot
Battery contact pins

A 3.7V / 3600 mAh Li-ion battery is pre-installed to the Gladius 5's battery chamber. The battery supports the Gladius 5 to work up to 8 hours. (However the actual working time depend on the Gladius 5's working state.)

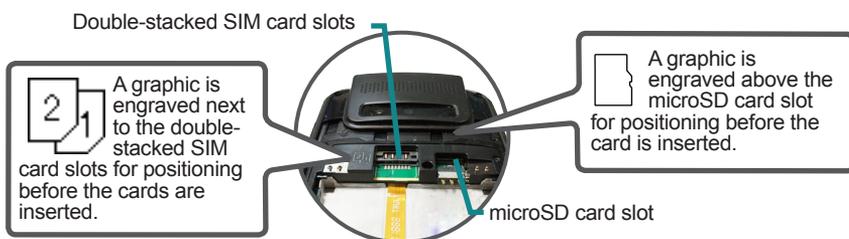
To install or replace the battery, see [2.4 Installing/Replacing the Battery](#) for more information.

To install the SIM card and microSD card, see [2.2 Installing microSD and SIM Card](#) for more information.

2.2 Installing microSD and SIM Card

To install the microSD card and/or SIM card:

1. Remove the battery chamber door as described in [2.1 Accessing Battery Chamber](#).
2. Remove the battery from the chamber before install the SIM card and microSD.
3. Find the double-stacked SIM card slots and the microSD card slot and also the graphics next to them. See the illustration below:



4. Have the SIM card(s) or the microSD card to install. Position the card as the graphic directs, and fully insert the card into the slot until it cannot be inserted any more.
5. Restore the battery chamber door.

After the SIM card is installed, the Gladius 5's 3G data and 2G voice (phone) are ready to use. See [3.3 Using Cellular Network](#) to know how to use them.

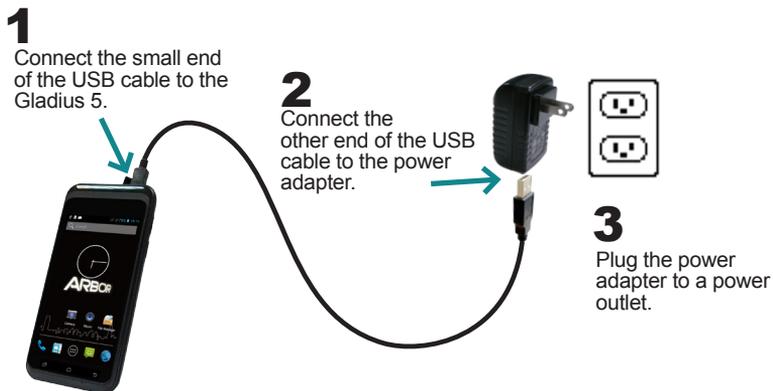
2.3 Charging the Battery

Due to shipment, the battery is partially drained when the package is delivered to you. Be sure to charge the battery to full when you are charging it for the first time.

2.3.1 Charging the Battery

To charge the battery using a electrical outlet:

1. Using the USB cable that comes with the device, connect the small end of the cable to the USB port on the device.
2. Then connect the other end of the USB cable to the power adapter.
3. Connect the power adapter to an electrical outlet.



2.3.2 Wireless Charging

The Gladius 5 also supports wireless charge using the following optional accessories:

D.Dock-G5 Desktop cradle w/ wireless charger



V.Dock-G5 In-vehicle docking w/ wireless charger



For instructions on using the wireless charge function, see [Appendix A Accessories](#).

Warning: The Gladius 5 wireless charge function ONLY works with ARBOR D.Dock-G5 and V.Dock-G5. Do not use other wireless charger to charge the device.

2.3.3 Checking the Battery Level

When the charging is in process, a battery indicator will appear in the **Notification Area** showing the charging percentage. Unplug the USB cable from the device when the battery is fully charged.

2.4 Installing/Replacing the Battery

In case you need to install or replace the battery, follow the steps below to access the battery chamber and replace the battery.

1. Remove the battery chamber door as described in [2.1 Accessing Battery Chamber](#).
2. After the battery chamber door is removed, find the battery contact pins inside the battery chamber. And also find the battery contact pins on the battery pack.



3. Place the battery into the battery chamber by an angle the contact pins can meet.



4. Snugly fit the battery inside the battery chamber.



5. Restore the battery chamber door.

2.5 Optimizing Battery Life

To optimize the operating time of the battery, it is recommended that you do the following:

- Decrease the LCD display brightness.
- Set a shorter timeout of inactivity to allow the screen enter sleep mode.
- Turn off the display if you are not using it.
- Always exit the applications if it is not in use.
- Disable the Wireless LAN function if you are not using it.
- Disable the Bluetooth function if you are not using it.
- Disconnect USB devices such as USB flash drive if it is not in use.

This page is intentionally left blank.

Chapter 3

Using the Rugged Handheld Device

3.1 Using Touch Screen

The Gladius 5 comes with a projected capacitive multi-touch screen. Touch control is the main way to interact with the Gladius 5. Users are able to manipulate icons, graphic buttons, menus, the onscreen keyboard or any onscreen items with touch control. This chapter will walk you through the basic operations.

3.1.1 Basic Operations

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

3.1.2 Text Input

The Gladius 5 doesn't have a physical keyboard to receive user's text input. To input text on the device, it relies on the "onscreen keyboard" featured by the operating system. An "onscreen keyboard" is a virtual keyboard with most of the standard keys.

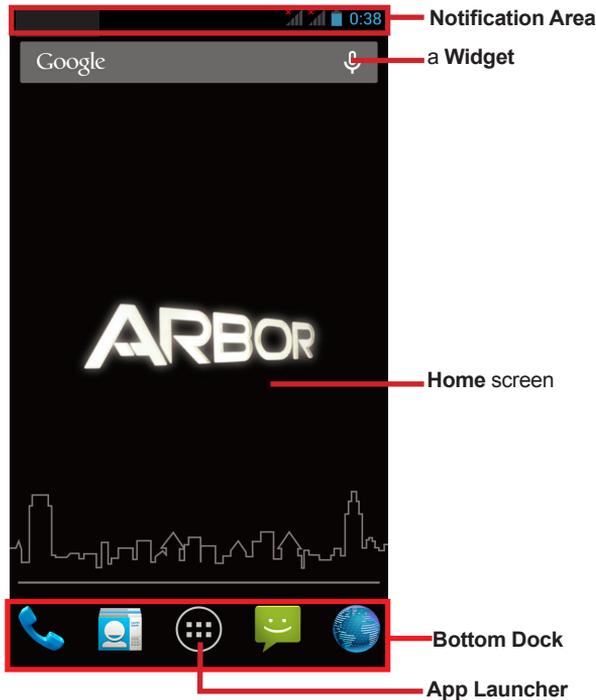
To open the onscreen keyboard, simply tap a text input field and the keyboard appears.



3.2 Home Screen

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

When you power on the device for the first time, a typical **Home** screen looks like the example below.



Element	Descriptions
Notification Area	<p>The Notification Area is visible across the Home screens. The icons on the left side inform you of new messages, events, alarms, and activities in progress, while the icons on the right side shows the time, signal strength, battery status, and other information.</p> <p>Applications you install on your device may show their own icons in this area.</p> <p>You can access the notification panel to see more information by swiping down the Notification Area.</p>
Home Screen	<ul style="list-style-type: none">• Tap an item on this screen to launch that item.• To delete an icon or widget, tap and hold that item until the Remove bar appears on the top of the screen. Then move the icon to the Remove bar.• Tap and hold any empty spot on this screen to customize your Home screen.
Widget	<p>The miniature of an application that functions directly on the Home screen.</p>
App Launcher	<p>Tap it to open the "App Launcher" where all applications installed on the Gladius 5 can be viewed and launched.</p>
Bottom Dock	<p>The dock is visible across the Home screens. It shows the most commonly used App icons for quick access. You can change the icons as needed.</p>

3.2.1 Extending Home Screen

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

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

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

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

2. Tap and hold the target icon or widget until the extended **Home** Screen appears.
3. Move the icon or widget to desired screen and then release.

3.3 Using Cellular Network

After you insert the SIM card(s) to the Gladius 5 for the first time and power on the Gladius 5, depending on your mobile network carrier you might be guided to activate the account and connect to your mobile network. If you are asked for a PIN to unlock the SIM card when powering on the Gladius 5, contact your cellular network carrier for the default PIN.

Featuring dual-SIM card slots, the Gladius 5 supports dual-SIM mobile connection, allowing you to enjoy constant and seamless Internet connection. Two cellular network icons will be displayed in the **Notification Area** to indicate the connectivity and signal strength.

Icon	Description
	No signal or no SIM card inserted.
	Connected to a cellular network. (The more bars are lit, the stronger the wireless signal is)

Different locations may have different mobile networks available. The Gladius 5 adopts the fastest mobile network available for data. However, in order to extend the battery life, you can configure the Gladius 5 to use only a slower 2G network for data. You can also configure the Gladius 5 to access a different set of networks entirely, or to behave in special ways when roaming.

If there is no SIM card, the Gladius 5 isn't capable of 3G voice and data services; however it is still able to connect to a Wi-Fi network to log into a wireless local area network. To learn more, see [3.4 Using the Wi-Fi Feature](#).

3.3.1 Making/Receiving Calls

After you activate your SIM card(s), the Gladius 5 auto-connects to your cellular network when it powers on. You can start to use the phone service.

Using phone service, e.g., making or answering a call, is similar to the way you use a mobile phone.

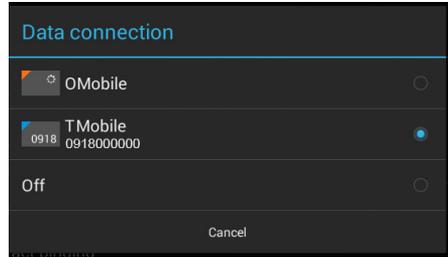
3.3.2 Data Connection

Connecting to a cellular network enables you to use voice service as well as data connection service, e.g., the Internet connection. However, in most cases

using Wi-Fi for data connection is faster and less expensive than using a cellular network and you may want to disable data connection of your SIM card when Wi-Fi is available. On the other hand, you may want to enable cellular data connection when Wi-Fi is not available.

To enable or disable data connection:

1. On the **Home** screen, tap the menu button . Select **System settings | SIM management | Data connection**.
2. Enable data connection for a SIM card or tap **Off** to disable data connection.

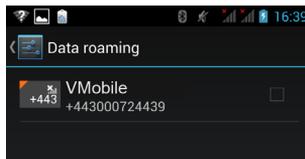


3.3.3 Data Roaming

When the Gladius 5 moves to where your cellular network is not available, data roaming connects the Gladius 5 to other service providers. This is often useful abroad if you want to keep receiving data across networks. However, the mobile rates can substantially increase as the costs for accessing the Internet are particularly high. Under such situation you may want to disable the data roaming function of the SIM card.

To enable or disable data roaming:

1. On the **Home** screen, tap the menu button . Select **System settings | SIM management | Roaming | Data Roaming**.
2. On the target cellular network, tick/untick the check box to enable/disable data roaming.



While data roaming is disabled, you can still use Wi-Fi connection to access the Internet data. See [3.4 Using the Wi-Fi Feature](#).

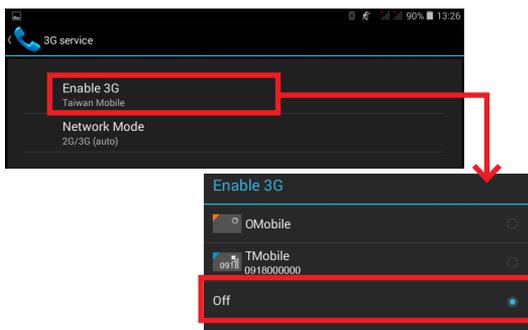
3.3.4 Limiting Mobile Data Connection to 2G

Due to that slower network connection consumes less power, in order to preserve battery life when you are unable to charge a low-power battery, you can limit the mobile data connection to 2G networks (GSM or EDGE). However, as 2G network loads data slower, you might want to postpone the activities that transmit a lot of data until a you can charge the battery and reconnect to a 3G network.

When 3G service is turned off, the Gladius 5 will still access the 2G network for data. If you need to turn off all data, you will need to block all data connection from the cellular network.

To limit the mobile data connection to 2G networks:

1. On the **Home** screen, tap the menu button . Select **System settings** | **WIRELESS & NETWORKS** | **More** | **Mobile networks** | **3G service** | **Enable 3G service**.
2. Tap **Off** and you will be prompted that video call service will be turned off. Tap **Continue** to proceed.



3. After the 3G service is turned off, the cellular icon in the **Notification Area** will change accordingly to indicate it connects to 2G network.

3.4 Using the Wi-Fi Feature

The Gladius 5 is capable of Wi-Fi networking. Wi-Fi is a wireless networking technology that uses an access point, also known as the “hotspot”, to connect to an Internet service provider over the wireless local area network (WLAN). Some hotspots are open to connect while others request you to present a key to authenticate your connection. The Gladius 5 needs to be configured including such key to connect to a hotspot.

Follow the guide below to connect the Gladius 5 to your wireless local area network:

Note: Turn off Wi-Fi when it isn't used to extend battery life.

The **Notification Area** displays the following icons that shows Wi-Fi status.

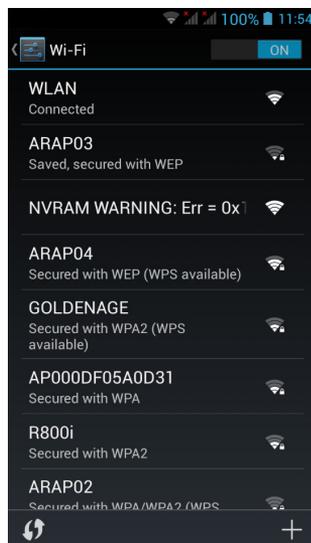
Icon	Description
	Notifies that an open Wi-Fi network is in range.
	Notifies that a Wi-Fi network is connected. Waves indicate signal strength.

3.4.1 Enabling Wi-Fi and Connecting to a WLAN

1. On the **Home** screen, tap the menu button . Select **System settings | WIRELESS & NETWORKS | Wi-Fi**.
2. Tap the **Wi-Fi** slider to **ON** to enable it.
3. Select/tap **Wi-Fi**.

The Gladius 5 then proceeds to scan for available Wi-Fi networks in range and displays the names of those found. Secured networks are displayed with waves denoting signal strength plus a lock on them  while the open networks don't.

To re-scan for available Wi-Fi networks, press the menu key  to open the context menu and then tap **Scan**.



Tap a network to connect to it. To connect to a secured network, you're prompted to enter a password or other credentials. (Ask your network administrator for details.)

If the Gladius 5 detects a network previously connected to, the Gladius 5 auto-connects to it.

Once a Wi-Fi network is connected, it displays as "connected" on the Wi-Fi settings screen. Tap it to see the details about the speed, security, address, and related info.

3.4.2 Adding a Wi-Fi Network

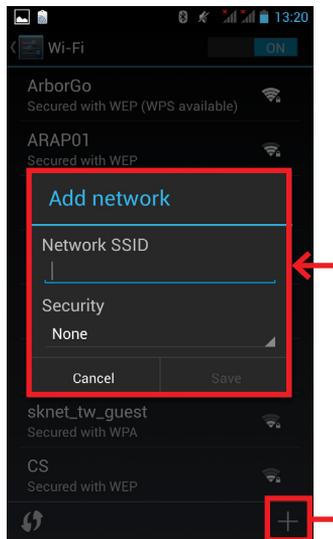
Under the following situations, you may need to manually add a Wi-Fi network:

- when a Wi-Fi network doesn't broadcast its name (SSID)
- when a Wi-Fi network is out of range and you want the Gladius 5 to remember it and auto-connect to it as soon as it gets in range.

To add a Wi-Fi network:

1. Enable Wi-Fi and access the Wi-Fi settings page as described in [3.4.1 Enabling Wi-Fi and Connecting to a WLAN](#).
2. Tap the plus sign in the lower right corner to open the **Add network** dialog box.
3. Enter the SSID (name) of the network. If the network is secured, tap the triangle at the right of the **Security** field to select the type of security deployed on the network and enter any required security credentials.
4. Tap **Save**.

The Gladius 5 then proceeds to connect to the Wi-Fi network. Any credentials entered are saved so the Gladius 5 automatically connects it the next time the Gladius 5 gets it within the range.



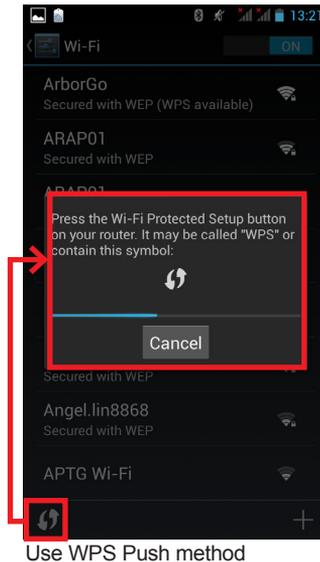
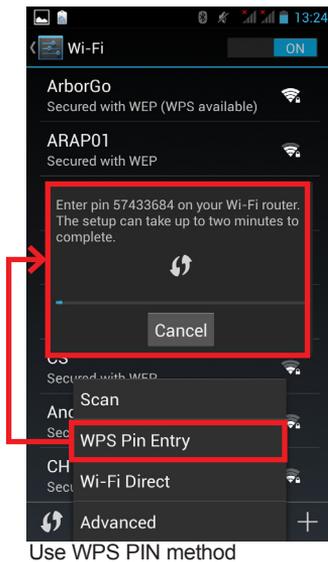
3.4.3 Connecting to a Wi-Fi Network by WPS

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

1. Enable Wi-Fi and access the Wi-Fi settings page as described in [3.4.1 Enabling Wi-Fi and Connecting to a WLAN](#).
2. Use either of the following methods to make the connection:

To use Push method, tap the **WPS** icon  in the lower left corner and a prompt message will appear. Then press the WPS button on your WPS router within two minutes

To use PIN method, press the menu key  to open the context menu and then tap **WPS Pin Entry**. You will be prompted with a PIN. Enter that PIN on your Wi-Fi router within two minutes.



3. WPS authentication process will start. When the authentication is done, you will be prompted that connection is successful.

3.4.4 Forgetting/Modifying a Wi-Fi Network

When you don't want the Gladius 5 to "auto" connect to a Wi-Fi network or when it is a network that you no longer use, remove the Wi-Fi network by the steps below:

1. Enable Wi-Fi and access the Wi-Fi settings page as described in [3.4.1 Enabling Wi-Fi and Connecting to a WLAN](#).
2. On the Wi-Fi settings screen, tap & hold the name of the network to forget.

A context menu then opens.

3. Tap **Forget network**.

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

3.5 Using the Bluetooth Feature

Bluetooth enables the wireless connection over a short distance about 8 meters. It is specified as a "wireless personal area network" (WPAN). The Gladius 5 is Bluetooth-capable to synchronize data with other Bluetooth-capable devices such as PCs, laptops, hands-free, headsets, printers, PDAs and cell phones.

Before the Gladius 5 can connect a Bluetooth device, it needs to pair with that device. Such "pairing" involves the authentication between them to justify their accesses to each other. Once they are paired, they stay paired unless they are unpaired.

The **Notification Area** displays the following icons that indicate Bluetooth status.

Icon	Description
	Bluetooth is on.
	Connected to a Bluetooth device.

3.5.1 Enabling Bluetooth and Pairing with Bluetooth Device

To enable or disable the Bluetooth function:

1. On the **Home** screen, tap the menu button . Select **System settings | WIRELESS & NETWORKS**.
2. Tap the **Bluetooth** slider to **ON** to enable it.
3. Select/tap **Bluetooth** to access the Bluetooth page.
4. If the Bluetooth device you want to pair with is not displayed in the **AVAILABLE DEVICES** list, tap **SEARCH FOR DEVICES** to discover available Bluetooth devices.

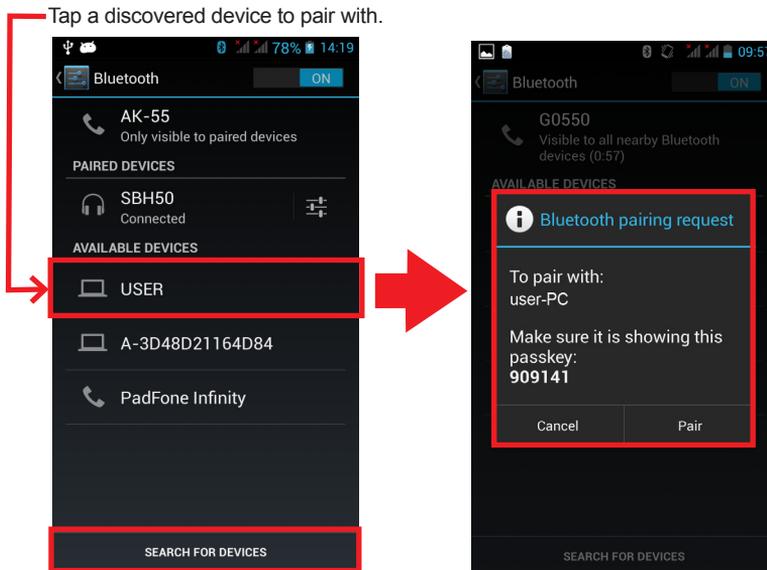
The Gladius 5 proceeds to scan for any Bluetooth device in range. Then it displays the names of the device(s) found.

If the Gladius 5 stops scanning before the other device becomes discoverable, tap **SEARCH FOR DEVICES** again.

Using the Rugged Handheld Device

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

5. Tap the device you want to pair with. When the **Bluetooth pairing request** dialog box appears, tap **Pair**. The Gladius 5 will then send a connection request to the device you want to pair with.



Tap **SEARCH FOR DEVICES** to discover available Bluetooth device(s) in range.

On the device to pair with, a dialog box appears requesting to enter or verify the pairing code. The passkey entered or shown on the Gladius 5 and the Bluetooth device must be the same.

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

Then the devices proceed to pair with each other.

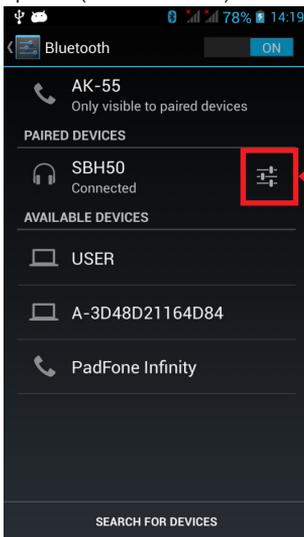
3.5.2 Configuring Bluetooth Features to Use

A "Bluetooth profile" defines the features supported by a Bluetooth device. For two Bluetooth devices to share files with each other, they need to both support the right profile. Some Bluetooth devices have multiple profiles. A profile can provide the ability to transmit phone conversations, to play music in stereo, or to transfer files or other data. The operating system allows you to configure the profiles you want to use on the Gladius 5.

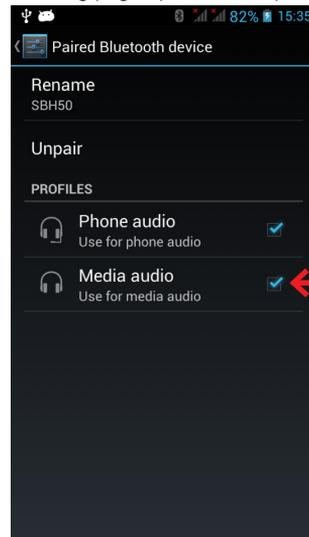
1. On the **Home** screen, tap the menu button . Select **System settings | WIRELESS & NETWORKS | Bluetooth**.
2. Tap the  icon at the right of a paired device.

A "Paired Bluetooth device" page opens for that paired device.

Tap the  icon at the right end of a paired (and connected) device.



A setting page opens for the paired device.



Select/deselect a feature to use it.

3. Select or deselect a profile as needed.

3.5.3 Disconnect from a Bluetooth Device

To disconnect the Gladius 5 from a Bluetooth device:

1. On the **Home** screen, tap the menu button . Select **System settings | WIRELESS & NETWORKS | Bluetooth**.
1. In the **PAIRED DEVICES** list, find the device to disconnect.
2. Tap the  icon at the right of the device.
A "Paired Bluetooth device" page opens for that paired device.
3. Tap **Unpair**.
The selected device is unpaired and disconnected.

3.5.4 Making Your Bluetooth Device Discoverable

To allow other Bluetooth-enabled device to find the Gladius 5, you have to make sure the Gladius 5 is visible to other devices in addition to enabling Bluetooth feature. After you configure the Gladius 5 to be visible, by default the visibility will be turned off after 2 minutes. If you want to extend the visibility time or make it discoverable at all times, you have to configure the timeout value as needed. To make your Gladius 5 visible to nearby Bluetooth devices:

1. On the **Home** screen, tap the menu button . Select **System settings | WIRELESS & NETWORKS | Bluetooth**.
2. Tapping the Bluetooth device name of your Gladius 5 repeatedly to switch between visibility options: **Not visible to other Bluetooth devices**, **Only visible to paired devices** or **Visible to all nearby Bluetooth devices**.
3. You can further configure the time of the visibility. To do so, tap the menu button . When a context menu opens, tap **Visibility timeout**.
4. Adjust the timeout your device uses when you configure it to be visible. If you want the Gladius 5 to be discoverable at all times, tap **Never time out**.

3.5.5 Additional Bluetooth Settings

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

1. **Rename tablet:** Allows you to edit the Bluetooth name of the Gladius 5 that will be shown to others when they try to search for it.
2. **Visibility timeout:** Allows you to configure the time of the visibility when you configure the Gladius 5 it to be visible.
3. **Show received files:** Open the location where downloaded and uploaded Bluetooth files are stored.

3.6 Using the Camera

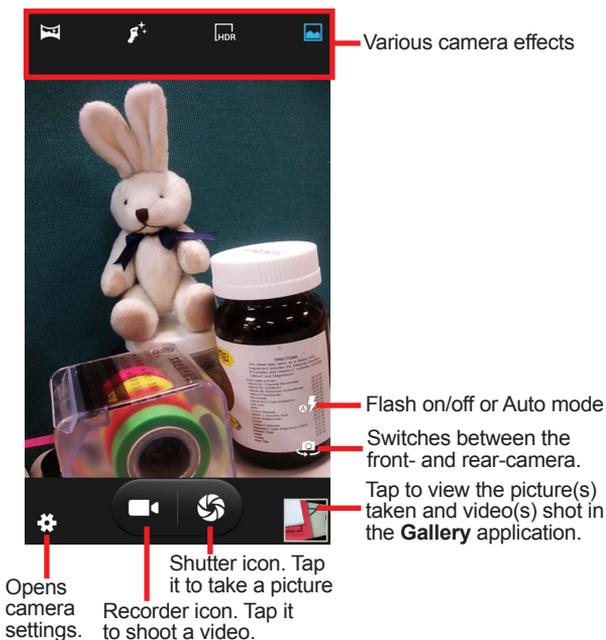
The Gladius 5 comes with a back-facing camera with LED flash. According to the model you purchased, your Gladius 5 may also come with a front-facing camera*. Using the native camera application that comes with the operation system, you can switch between the front and rear cameras and perform other camera operations.

*Front-facing camera is not available for models with 1D/2D barcode scanner.

To access the camera application, on the **Home** screen tap the camera icon



The camera application then opens.



When taking a photo:

- To zoom in and out, place two fingers apart or together.

- When you frame your subject on the screen, the camera will Auto Focus on the center of the screen with a focus indicator. To manually make a focus, tap the target or area that you want to focus on.
- To take a photo, press the shutter icon.

When recording a video:

- To enable/disable the microphone, tap the **Settings** icon and then video icon.
- To start the recording, tap the **Recorder** icon and the timer starts.
- To stop the recording, tap the **Recorder** icon again.

3.7 Using the NFC Feature

Near Field Communication (NFC) is a short-range wireless communication technology that enables NFC-capable devices to exchange data such as contacts, photos, music, or web address over a short distance less than 4 centimeters.

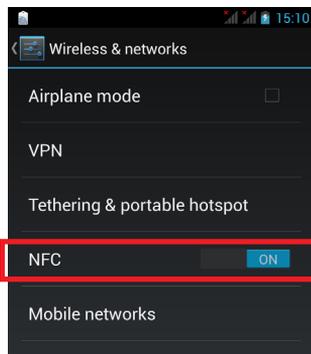
The NFC detection area is at the back side of the Gladius 5 as shown below. When you tap other NFC devices, tags, or readers, the NFC areas of both devices should be close to one another so that the connection can be established.



3.7.1 Enabling/Disabling NFC

To enable or disable the NFC function:

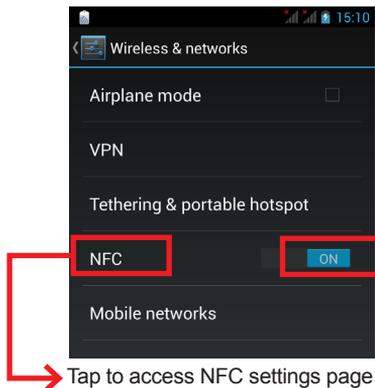
1. On the **Home** screen, tap **Settings** | **WIRELESS & NETWORKS** | **More**.
2. Tap the NFC slider to turn it **ON** or **OFF**.
3. When NFC is enabled, its icon  will be displayed in the **Notification Area**.



3.7.2 Configuring NFC Modes

The device supports three NFC modes: P2P, TAG and CARD EMULATION modes. To configure the NFC settings to configure the modes:

1. On the **Home** screen, tap **Settings** | **WIRELESS & NETWORKS** | **More**.
2. Tap the NFC slider to turn it **ON** and then tap NFC to access the settings page.



3. Enable the modes as needed:
 - **P2P:** Peer-to-Peer mode utilizes Android Beam feature to exchange App contents such as contacts, photos, music, or web address as long as the App supports Android Beam function. To use this mode to exchange data, see [3.7.3 Exchanging Data with NFC-Enabled Device](#) for more information.

- **Tag Reader/Writer:** Allows the Gladius 5 to read and write to NFC tags. For example, working as a tag reader the Gladius 5 can read the NFC tag of a smartposter to retrieve information like product or promotion information.
- **Card Emulation:** This mode enables the Gladius 5 to work as a contactless card in applications like payment, ticketing or access control. This mode is disabled by default as the availability depends on your cellular network carrier and you must subscribe to the services before you can use this functionality. Third-party transaction Apps will be also needed to make the transaction.

3.7.3 Exchanging Data with NFC-Enabled Device

To use NFC to exchange App contents, both sending and receiving devices must be NFC-enabled and unlocked. The following describes how to beam App content from the device to another NFC device:

1. Make sure both devices are NFC-enabled. For your Gladius 5, enable NFC as described in [3.7.1 Enabling/Disabling NFC](#) if it isn't enabled yet.
2. On the Gladius 5, access NFC settings page and make sure P2P mode check box is ticked.
3. Open the content you want to exchange.
4. Make sure the screen of both devices are unlocked, then touch the devices together, back to back.
5. On the Gladius 5, you will hear a sound and be prompted a message "**Touch to beam**". Tap the screen of the Gladius 5 to begin the beaming process.
6. The content will appear on the other devices's screen.

3.8 Using the Barcode Scanner

Barcode scanner is an optional feature on the Gladius 5. Depending on your models, your Gladius 5 might be equipped with 1D or 1D/2D barcode scanner. This section will walk you through the basic operations. To get the information on supported barcode formats, see [3.8.3 Supported Barcode Formats](#) for details.

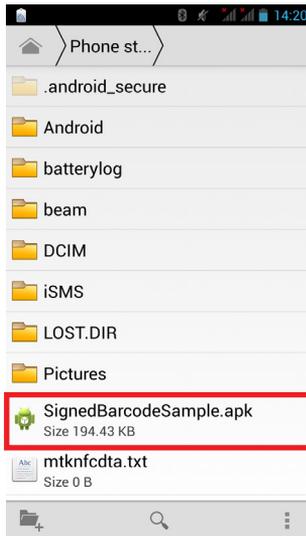
Caution: For the laser-type barcode scanner (G551BA), DO NOT stare into the laser beams or point the laser beam at anyone's eyes when the barcode scanner is in operation.



3.8.1 Installing APK File

As of the time this manual was released, the Gladius 5 may not have the barcode scanner software installed. If this is the case, you must install the APK file to your Gladius 5 first in order to activate the scanner function.

1. Download the APK file (**SignedBarcodeSample.apk**) from the Partner Zone of our website and save the file to your computer first.
2. Connect the Gladius 5 to that computer using a USB cable. The Gladius 5 will prompt you to choose a USB option. Select "**USB storage**" to transfer files between your computer and the Gladius 5.
3. Copy the APK file from your computer to the Gladius 5's internal USB storage or SD card. Then disconnect your computer from the Gladius 5.
4. On the Gladius 5, use the **File Manager** App to navigate to the APK file.
5. Tap the APK file and then follow the prompts to install the application.



3.8.2 Scanning the Barcode

Generally a third-party barcode application will be used to process the data read by the scanner. This user manual will not cover these applications. The following steps serve as an example only to show the basic operation of the barcode scanner.

1. To scan a 1D barcode: Launch an App with text input box such as web browser and tap the text input field.

To scan a 2D barcode like QR code: Launch the web browser.

2. Point the scanner window at the barcode and press either of the two **Scan** keys. The scanner will project an aiming beam.
3. According to the barcode scanned, the scanned data is displayed in the text field or an action is triggered .



3.8.3 Supported Barcode Formats

1D Model

Type	Formats
Linear	Code 39 (USD-3, Code 3 of 9), Code 128, Code 93, Interleaved 2/5(ITF, ITF14), CODABAR(NW-7 (in Japan), USD-4, Rationalized Codabar), UCC 128, UPC-A, UPC-E , EAN-13 (JAN-13), EAN-8 (JAN-8)

1D/2D Model

Type	Formats
Linear	UPC/EAN/JAN, GS1 DataBar, Code 39, Code 128, Code 32, Code 93, Codabar/NW7, Interleaved 2 of 5, Code 2 of 5, Matrix 2 of 5, MSI, Telepen, Trioptic, China Post;
2D Stacked	PDF417, MicroPDF417, GS1 Composite;
2D Matrix	Aztec Code, Data Matrix, QR Code, Micro QR Code, MaxiCode, Han Xin Code;
Postal	Intelligent Mail Barcode, Postal-4i, Australian Post, British Post, Canadian Post, Japanese Post, Netherlands (KIX) Post, Postnet, Planet Code;
OCR Option	OCR-A, OCR-B, E13B (MICR)



Appendix A

Accessories

The Gladius 5 provides the following optional wireless charging docks enabling you to operate and charge the device at the same as it being docked. This section describes how to use the Gladius 5 with these optional accessories.

D.Dock-G5 Desktop cradle w/ wireless charger



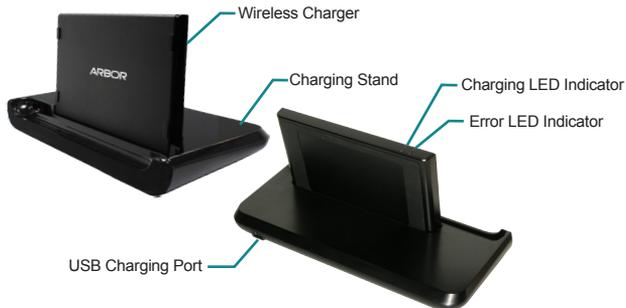
V.Dock-G5 In-vehicle docking w/ wireless charger



Warning: The above wireless chargers ONLY work with the Gladius 5. Do not use them to charge other devices.

A.1 Using the Desktop Cradle (Optional)

A.1.1 Parts of the Desktop Cradle



LED Indicator Light Status

LED \ Status	Standby	Charging	Fully Charged	Error
Charging LED (Blue)	Off	Blinking	Blinking	Blinking
Error LED (Red)	Off	Off	Off	Blinking

A.1.2 Charging the Device

To charge your device, follow the steps below:

1. Plug the wireless charger into the charging stand.



2. Using the USB cable comes with the device, connect the small end of the USB cable to the USB charging port on the back of the charging stand.

Connect the other end of the USB cable to the power adapter (if not connected).



3. Insert the device into the slot of the charging stand.



4. Connect the power adapter to a power source, e.g., a power outlet.



5. While charging is in progress, the blue LED will be blinking. The blue LED keeps blinking when charging is complete. To verify current battery charge level, check the battery indicator in the **Notification Area**.

If the red LED is lit, it means a problem is detected. When an error occurs or the charge doesn't start:

- Make sure you are using the correct power adapter that comes with the device.
- Make sure the device is inserted properly into the slot of the charging stand.
- If the device is too warm, charging will not start and the red LED will be lit. Wait a moment for the device to cool down and charging will start again.

A.2 Using the In-Vehicle Docking (Optional)

A.2.1 Parts of the In-Vehicle Docking



A.2.2 Charging the Device

To charge your device, follow the steps below:

1. Mount the in-vehicle docking to your vehicle securely.
2. Connect the small end of the USB cable to the USB charging port of the in-vehicle docking.



3. Place your device into the in-vehicle docking and secure it into place using the upper holder.



4. Connect the other end of the USB cable to the USB car charger that connects to your car's cigarette lighter socket. Then charging will start. To verify current battery charge level, check the battery indicator in the **Notification Area**.