

GT78-VN

Rugged Android™ Handheld Device

User's Manual

Version 1.0



2021.10.28.

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Revision History

Version	Release Time	Description
1.0	2021.10.28.	Initial release

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

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 AMobile products.

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Declaration of Conformity

CE

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

This product has passed the CE test for environmental specifications when shielded cables are used for external wiring. We recommend the use of shielded cables. This kind of cable is available from AMobile. 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.

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

AMobile Intelligent Corporation 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.

AMobile Intelligent Corporation hereby states that the listed products do not contain unintentional additions of lead, mercury, hexachrome, PBB or PBDE that exceed a maximum concentration value of 0.1% by weight or for cadmium exceed 0.01% by weight, per homogeneous material. Homogeneous 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, AMobile 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 AC 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 solventdetergent. Then wipe the cabinet with a soft drycloth.
11. Theopeningsontheenclosureareforairconvectionandprotectthe equipmentfromoverheating.DONOTCOVERTHEOPENINGS.
12. Positionthepowercordsothatpeoplecannotsteponit.Donotplace anything over the powercord.
13. Iftheequipmentwillnotbeusedforalongtime,disconnectitfromthe power source to avoid damage by transientovervoltage.
14. Neverpouranyliquidintoopenings.This maycausefireorelectrical shock.
15. Never open the equipment. For safety reasons, theequipment should be opened only by qualified servicepersonnel.
16. Ifoneofthefollowingsituationsarises,gettheequipmentcheckedby servicepersonnel:
 - a. The power cord or plug isdamaged.
 - b. Liquid has penetrated into theequipment.
 - c. The equipment has been exposed tomoisture.
 - d. Theequipmentdoesnotworkwell,oryoucannotgettowork according to the user'smanual.
 - e. The equipment has been dropped ordamaged.
 - f. The equipment has obvious signs ofbreakage.
17. Thesoundpressurelevelattheoperator'sposition,accordingtoIEC704- 1:1982, is no more than70dB(A).
18. Keep this User's Manual for laterreference.
19. DO NOT LEAVE THIS EQUIPMENT IN AN UNCONTROLLED ENVIRONMENT WHERE THE STORAGE TEMPERATURE ISBELOW -20° C (-4° F) OR ABOVE 60° C (140° 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

Laser Safety

The device's barcode scanner that uses laser lights is a class 2 laser product. **DONOT** stare into the laser beams or point the laser beam at anyone's eyes when the barcode scanner is in operation.



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 in water or fire, or put them near heat sources such as 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 plastic 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://amobile-solutions.com/web_en/contact.php

E-mail: support@amobile.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.

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Chapter 1



Introduction

1.1 Product Highlights

- Fully rugged for warehousing / transportation / medical / mPOS applications
- MIL-STD-810G & IP-65 certified, 1.2M (4ft.) drop resistance
- 8" TFT color LCD 800x1280 resolution
- Projected capacitive multi-touch panel with anti-reflection Corning® Gorilla® glass
- High mobility with multiple connectivities including WLAN, Bluetooth and WWAN
- Optional built-in 2D barcode imager
- Field replaceable battery with optimized battery life up to 8 hours
- G-sensor, gyroscope, light sensor, E-compass, GPS navigation & barometer
- System access control via NFC reader

1.2 PackageContents

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:



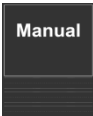
Rugged Android™ Handheld Device



Rechargeable Li-ion Battery Pack (Pre-installed)



USB Cable



User Manual

1.3 Parts of theDevice



1	Power button	9	Scan key
2	Barcode scanner	10	Speaker
3	Pogo pin	11	Battery
4	USB connector	12	Camera flshlight
5	Front Camera	13	Rear Camera
6	Light sensor	14	NFC
7	Touch panel	15	Volume key
8	Microphone	16	SD card slot

1.4 Dimension



1.5 Specifications

Durability Features	
MIL-STD-810G & IP-65 certified	
1.2M (4ft.) drop-resistance	
Raised bezel for LCD impact protection	
I/O ports with hinged rubber covers	
System	
CPU	8*Cortex-Quad Core A73 2.0GHz/ Quad Core A53 2.0GHz
OS	Android™ 11
Memory	4GB
Storage	64GB
Audio	Integrated microphone
	Integrated speaker
Peripherals and Devices	
Camera	Front: 8.0 megapixel camera
	Rear: 13.0 megapixel 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 a/b/g/n/ac
	Wi-Fi certified Miracast™
Bluetooth	Integrated Bluetooth 4.0 LE + EDR class 2, with HID input, A2DP, DUN, HFP, SPP & PBAP supported
WWAN	EDGE/GPRS/GSM: 1900/850 MHz HSPA+/HSPA+/HSPA/WCDMA B2 /B5 TDD-LTE (B41) FDD-LTE (B2 /B4/B5/B7/B12/B17)
Navigation	GPS, AGPS & digital compass
Barcode Scanner	2D barcode reader with physical trigger buttons
I/O Interface	
USB Port	1 x micro USB 2.0 port
SD Slot	1 x microSD card slot (up to 128GB)

SIM Socket	1 x SIM card slots
Expansion	microSDHC
LCD Display	
Size/Type	8" TFT LCD
Resolution	800x1280
Touch Screen	
Type	5-point Projected Capacitive Touch screen
	Corning® Gorilla® glass coating w/ anti-reflection coating
Power Supply	
Power System	External AC power adapter
Battery Type	Lithium-ion rechargeable battery
	Field replaceable (for maintenance)
Battery Capacity	3.7V, 6200mAh, 22.94Wh
Battery Life	Up to 8 hours battery life with the following operations:
	1. Continuous audio playback of 160-Kbps encoded MP3files 2. Internet browsing by Wi-Fi while: a. Browsing snapshot versions of 20 separate webpages 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/2.1A
Mechanical & Environmental	
Operating Temp.	-10°C ~ 35°C (14°F ~ 95°F)
Storage Temp.	-20°C ~ 60°C (-4°F ~ 140°F)
Operating Humidity	95% (non-condensing)
Dimensions (W x H x D)	147 x 220 x 20.9 mm (5.71" x 8.58" x 0.78")
Weight	550g (1.35lb) (with battery)

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Chapter 2



Getting Started

2.1 Installing microSD and SIMCard

To install the microSD card and/or SIM card:

2.1.1 Installing microSD card



Figure 2-1Screw off and remove the cover.

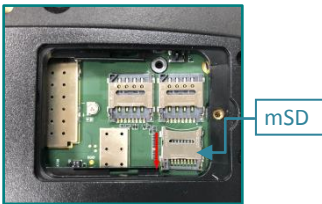


Figure 2-3Follow the direction of red arrow to open the lid of mSD slot.



Figure 2-4unlock the card slot cover and insert the microSD card into the slot.



Figure 2-5Close the lid and follow the direction to lock cover.

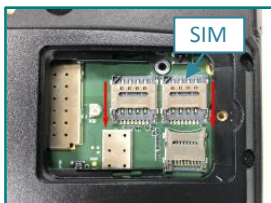


Figure 2-6Follow the direction of red arrow to unlock the card slot cover(s) and open the cover(s).



Figure 2-7 unlock the card slot cover(s) and insert the SIM card into the slot.

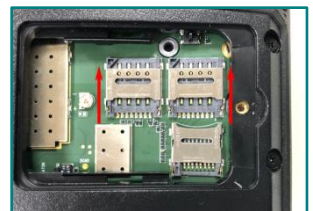


Figure 2-8Close the lid and follow the direction to lock cover(s).

2.2 Charging the Battery

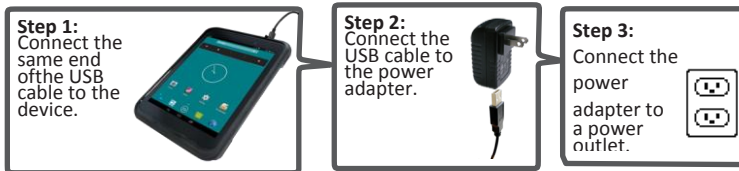
Due to shipment, the battery is partially drained when the package is delivered to you. Be sure to charge the battery to full when you are recharging it for the first time.

Caution: Do not charge the GT78-VN via computer USB connection due to that the voltage output from computer USB is not enough to charge the device.

2.2.1 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.



Warning: Use only the power adapter that comes with your device. Using a different power adapter may damage your device and may result in poor performance. It may also invalidate warranty applying to the device.

2.2.2 Checking the Battery Level

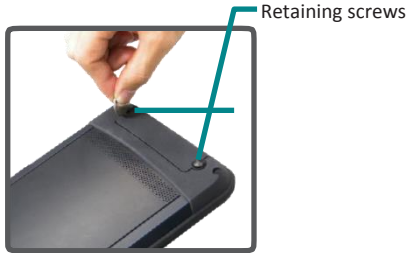
When the charging is in process, a battery indicator will appear in the status bar showing the charging percentage. Unplug the USB cable from the device when the battery is fully charged.

2.3 Installing/Replacing the Battery

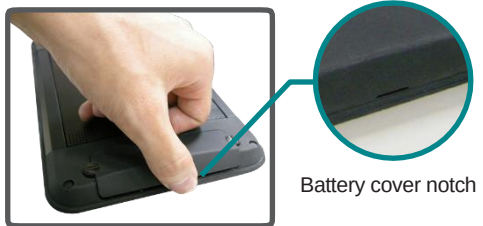
In case you need to install or replace the battery, follow the steps below to access the battery chamber and replace the battery.

2.3.1 Accessing BatteryChamber

1. Place the device on a flat surface, with the rear side facing up. Loosen the retaining screws on the battery cover with a coin.



2. Remove the battery cover using the notch located on the bottom edge.



3. The battery is in a compartment inside. Its opening is covered by a protective lid. Insert the tip of your finger on to the top of the cover and remove it.

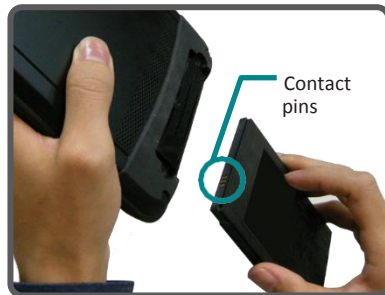


4. Then you can remove the battery from the chamber.



2.3.2 Installing Battery

1. To install the battery, orient the battery so that the contact pins faces towards the compartment opening.



2. Slide the battery into the battery chamber.



3. To restore the protective lid, make sure the lid is oriented as shown in the photo to the right.



4. Align the top edge of the lid with the top of the opening.



5. Press the lid firmly into place to ensure it is secured.



6. Replace the battery cover and secure the retaining screws with a coin.



2.4 Optimizing BatteryLife

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

- Decrease the LCD display brightness.
- Set a short time out 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 Wi-Fi, Bluetooth or GPS function if you are not using it.
- Disable the App that heavily drains the battery if you are not using it.

To view the battery usage by individual App, swipe down the Status Bar in the upper right corner and tap the **CHARGING** tile.



- Disconnect USB devices such as USB flash drive if it is not in use.

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Chapter 3



Using the Rugged Handheld Device

3.1 Using TouchScreen

The GT78-VN comes with a projected capacitive multi-touch screen. Touch control is the main way to interact with the GT78-VN. 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 BasicOperations

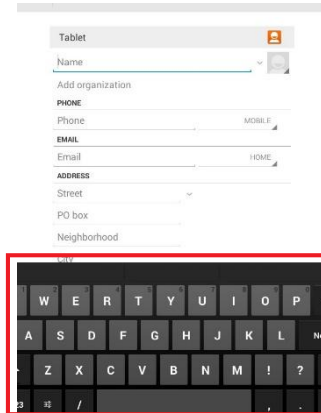
The table below provides instructions on how to use the multi-touch screen:

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 GT78-VN 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.



3.1.3 Sleep Mode

When the device suspends to sleep mode, it enters a low power state and the display is off to save the battery power. You can manually force the device to enter sleep mode or specify a period of inactivity before it automatically enters sleep mode. While the device is in sleep mode, it is still capable of receiving messages and calls and processing tasks like downloading.

To switch to sleep mode, press and hold the **Power** key until the screen is turned off.

To wake up the device from sleep mode, press and hold the **Power** key until the screen is turned on. If the screen is locked, swipe the lock icon to the outer circle to unlock the device.

To specify the period of inactivity, swipe down the **Status Bar** in the upper right corner and tap **Settings | Display | Sleep**. Then select a time of inactivity before the device enters sleep mode.

3.2 HomeScreen

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.



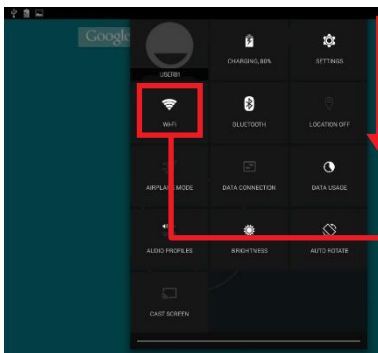
The table below describes the elements on a typical **Home** screen:

Element	Descriptions
Notification Area	The Notification Area is visible across the Home screens. This area informs you of new messages, events, alarms, and activities in progress. Applications you install on your device may show their own icons or messages in the area. You can access the notification panel to see more information by swiping down the Notification Area.
Status Bar	The Status Bar is visible across the home screens. It shows the time, signal strength, battery status, and other information. Applications you install on your device may show their own icons in this area. You can swipe down the Status Bar to access a Quick Settings panel where you can quickly access some most commonly used settings and features.
Home Screen	• Tap an item on this screen to launch that item. • To delete an icon or widget, tap and hold that item until the Remove 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	The miniature of an application that functions directly on the Home screen.
App Launcher	Tap it to open the " App Launcher " where all applications installed on the GT78-VN can be viewed and launched.
Bottom Dock	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.
Back Button	Tap to go to the previous screen.
Home Button	Tap to return to Home screen.
Recent App Button	Tap to view show your recent Apps and touch an App to reopen it. To remove an App from the list, swipe it left or right.

3.2.1 Using the Quick SettingsPanel

Swiping down the **Status Bar** will bring up a **Quick Settings** panel where you can quickly access some most commonly used settings and features. To enable/disable a feature or switch between available options, simply tap the intended tile. It appears dimmed when disabled and brightened when enabled.

For some features such as Wi-Fi, Bluetooth, location, Audio Profiles, you can also tap and hold the tile to directly access the settings page.



Swipe down the **Status Bar** to access the **Quick Settings** panel.

For some feature tiles, you can

- tap to enable/disable afeature
- tap and hold to quicklyaccess its settingspage

3.2.2 Extending HomeScreen

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.

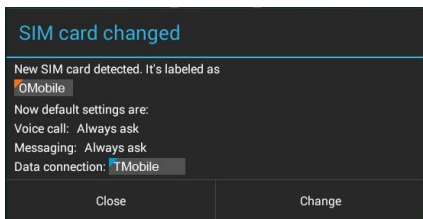
To add application icons or widgets to the extended **Home** screen:

1. Tapthe**AppLauncher**icononthe**Home**screenolocatethetarget application icon orwidget.
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 thenrelease.

3.3 Using CellularNetwork

After you insert the SIM card(s) to the GT78-VN for the first time and power on the GT78-VN, 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 GT78-VN, contact your cellular network carrier for the default PIN.

When a new SIM card is detected by the GT78-VN, you will be prompted to configure its usage, including voice call, messaging and data connection. You can configure it now or change the settings later.



Featuring dual-SIM card slots, the GT78-VN supports dual-SIM mobile connection, allowing you to enjoy constant and seamless Internet connection. Two cellular network icons will be displayed in the **Status Bar** 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 GT78-VN adopts the fastest mobile network available for data. However, in order to extend the battery life, you can configure the GT78-VN to use only a slower 2G network for data. You can also configure the GT78-VN to access a different set of networks entirely, or to behave in special ways when roaming.

If there is no SIM card, the GT78-VN 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 GT78-VNauto-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.

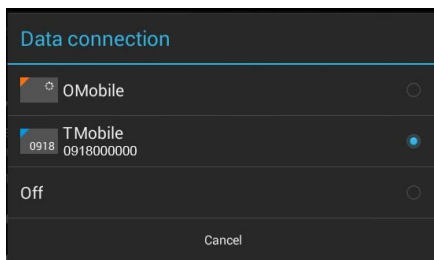
To use the device for phone service, it is suggested that you connect a wired headset to the device's headset connector or use a wireless Bluetooth headset or car kit. For instructions on how to connect to a Bluetooth device, see [3.5 Using the Bluetooth Feature](#) for details.

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. Swipe down the **Status bar** and tap **DATA CONNECTION**.
2. Enable data connection for a desired SIM card or tap **Off** to disable data connection.

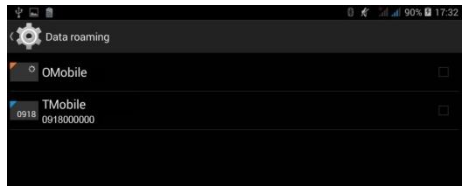


3.3.3 DataRoaming

When the GT78-VN moves to where your cellular network is not available, data roaming connects the GT78-VN 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. Swipedownthe**Statusbar**andtap**Settings | WIRELESS&NETWORKS | SIM management | Roaming | Data roaming**.
2. On the target cellularnetwork, tick/untick the check box to enable/disable dataroaming.



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](#).for more information.

3.4 Using the Wi-Fi Feature

The GT78-VN 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 GT78-VN needs to be configured including such key to connect to a hotspot.

Follow the guide below to connect the GT78-VN to your wireless local area network:

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

The **Status Bar** displays the following icons that shows Wi-Fi status.

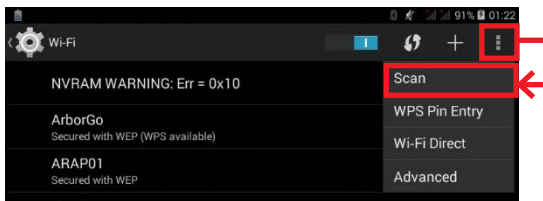
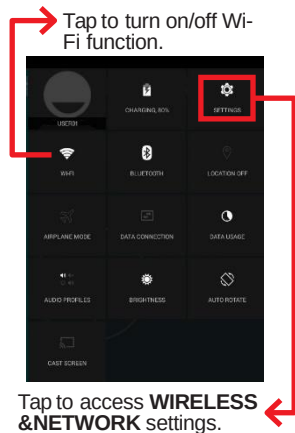
Icon	Description
	Notifies that an open Wi-Fi network is in range.
	Notifies that a Wi-Fi network is connected. Waves indicate signal strength.

3.4.1 Enabling Wi-Fi and Connecting to aWLAN

1. Swipedownthe**Statusbar**andtapthe**WI-FI** tile to enable Wi-Fi if it isn't enabled yet.
2. Inthe**QuickSettings**panel,tapandholdthe **WI-FI** tile to access the Wi-Fi settings page.

TheGT78-VNthen 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 while the open networksdon't.

To re-scan for available Wi-Fi networks, tap the menu  in the upper right corner to open the context menu and then tap**Scan..**



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

If the GT78-VNdetects a network previously connected to, the GT78-VNauto-connects to it.

OnceaWi-Finetworkisconnected,itdisplaysas“connected”ontheWi-Fi settingssscreen.Tapittoseethedetailsaboutthespeed,security,address, and relatedinfo.

3.4.2 Adding a Wi-FiNetwork

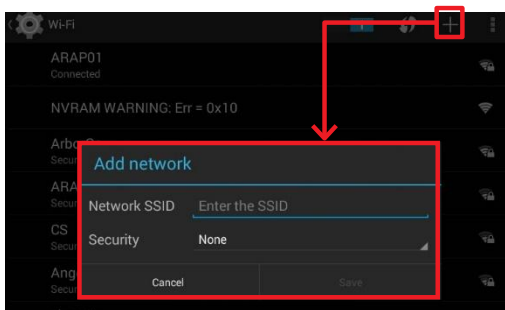
Under the following situations, you may need to manually add a Wi-Fi network:

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

- When a Wi-Fi network is out of range and you want the GT78-VN to remember it and auto-connect to it as soon as it gets in range.

To add a Wi-Fi network:

1. Swipe down the **Statusbar** and tap the **Wi-Fi** tile to enable Wi-Fi if it isn't enabled yet.
2. In the **Quick Settings** panel, tap and hold the **Wi-Fi** tile to access the Wi-Fi settings page.
3. Tap the plus sign icon in the upper right corner to open the **Add network** dialog box.



4. Enter the SSID (name) of the network. If the network is secured, tap the triangle at the right of the **Security** field to select the type of security deployed on the network and enter any required security credentials.
5. Tap **Save**.

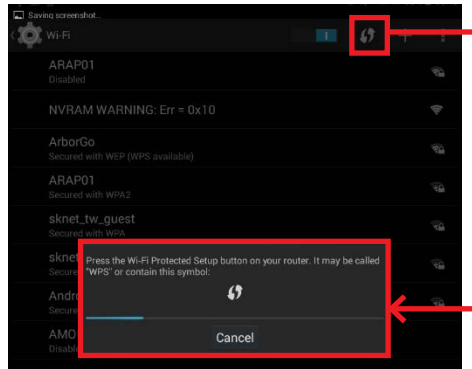
The GT78-VN then proceeds to connect to the Wi-Fi network. Any credentials entered are saved so the GT78-VN automatically connects to it the next time the GT78-VN gets it within the range.

3.4.3 Connecting to a Wi-Fi Network by WPS

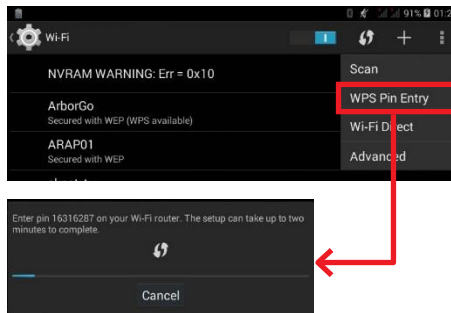
Wi-Fi Protected Setup (WPS) is a feature that allows WPS-compliant devices to connect to each other instantly in a secure way. As the WPS devices automatically configure the SSID and WPA security key, it eliminates the need for users to manually enter the SSID and password. WPS works in two methods: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

1. Swipe down the **Statusbar** and tap the **Wi-Fi** tile to enable Wi-Fi if it isn't enabled yet.
2. In the **Quick Settings** panel, tap and hold the **Wi-Fi** tile to access the Wi-Fi settings page.
3. Use either of the following methods to make the connection:

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



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



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

3.4.4 Forgetting/Modifying a Wi-Fi Network

When you don't want the GT78-VN 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. Swipe down the **Statusbar** and tap the **WI-FI** tile to enable Wi-Fi if it isn't enabled yet.
2. In the **QuickSettings** panel, tap and hold the **WI-FI** tile to access the Wi-Fi settings page.
3. On the Wi-Fi settings screen, tap and hold the name of the network to forget.

A context menu then opens.

4. Tap **Forget network**.

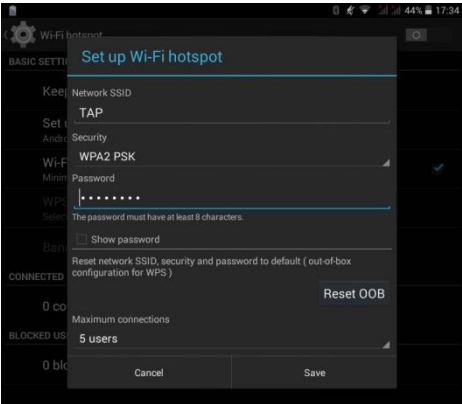
Some Wi-Fi networks may periodically change their passwords to enhance the network security. When this occurs, you need to change the saved login credentials. To change the password, follow the steps above to access the context menu of the intended network. Then tap **Modify network** to make the changes.

3.4.5 Making Your Device a Wi-Fi Hotspot

When the GT78-VN is connected to a 3G network, you can share the connection with your laptop or other devices by making your GT78-VN a Wi-Fi hotspot. To do so:

1. Swipe down the **Statusbar** and tap **SETTINGS | WIRELESS & NETWORKS | More | Tethering & portable hotspot**.
2. Tap Wi-Fi hotspot slider to enable the hotspot function.
3. Tap **Setup Wi-Fi hotspot** to configure the settings as needed:
 - **Network SSID:** Enter a name to identify the wireless network created by the GT78-VN.
 - **Security & password:** To prevent your device from being accessed by unauthorized users, it is strongly recommended that you set up a password to protect your network.

When Wi-Fi hotspot is enabled, a Wi-Fi hotspot icon  will appear in the **Notification Area**. You can swipe down the icon to see the connection information.



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 GT78-VN 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 GT78-VN 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.

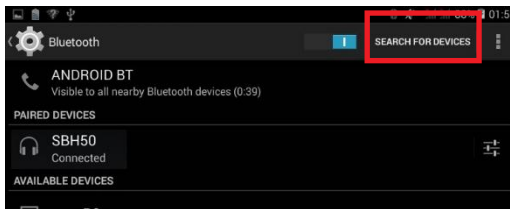
The **Status bar** displays the following icons that indicate Bluetooth status.

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

3.5.1 Enabling Bluetooth and Pairing with BluetoothDevice

To enable or disable the Bluetooth function:

1. Swipedownthe**Statusbar**andtapthe**BLUETOOTH**tiletoenable Bluetooth if it isn't enabledyet.
2. Inthe**QuickSettings**panel,tapandholdthe**BLUETOOTH**tiletoaccess the Bluetooth settingspage.
3. If the Bluetooth device you want to pair with is not displayed in the **AVAILABLE DEVICES** list, tap **SEARCH FOR DEVICES** intheupper right corner.

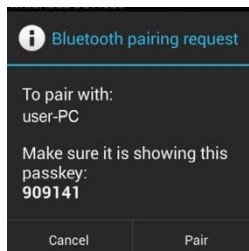


The GT78-VNproceeds to scan for any Bluetooth device in range. Then it displays the names of the device(s) found.

If the GT78-VNstops scanning before the other device becomes discoverable, tap **SEARCH FOR DEVICES** again.

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

4. Tap the device you want to pair with. When the**Bluetooth pairing request** dialog box appears, tap **Pair**. The GT78-VNwill then send a connection requesttothedeviceyouwanttopairwith.



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 GT78-VN 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.

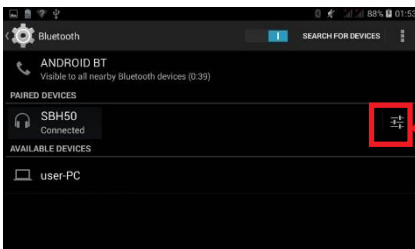
3.5.2 Configuring Bluetooth Features to Use

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 GT78-VN.

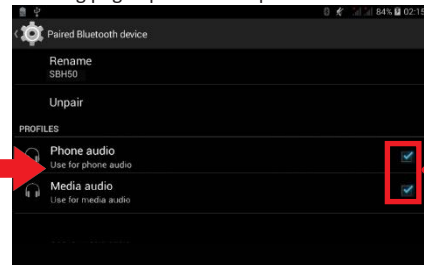
1. Swipedownthe**Statusbar**andtapthe**BLUETOOTH**tiletoenable Bluetooth if it isn't enabledyet.
2. Inthe**QuickSettings**panel,tapandholdthe**BLUETOOTH**tiletoaccess the Bluetooth settingspage.
3. Tapthe  iconattherightofapaireddevice.

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

Tapthe  icon at the rightendof a paired (and connected)device.



A setting page opens for the paired device.



Select/deselect a feature to use it

4. Select or deselect a profile to use it.

3.5.3 Disconnect from a Bluetooth Device

To disconnect the GT78-VN from a Bluetooth device:

1. Swipedown the **Statusbar**. In the **QuickSettings** panel, tap and hold the **BLUETOOTH** tile to access the Bluetooth settings page.
2. In the **PAIRED DEVICES** list, find the device to disconnect.
3. Tap the  icon at the right of the device.
A "Paired Bluetooth device" page opens for that paired device.
4. Tap **Unpair**.

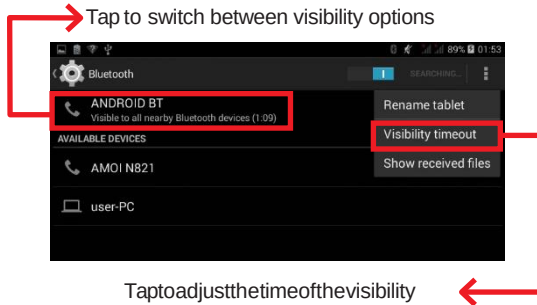
The selected device is unpaired and disconnected.

3.5.4 Making Your Bluetooth Device Discoverable

To allow other Bluetooth-enabled device to find the GT78-VN, you have to make sure the GT78-VN is visible to other devices in addition to enabling Bluetooth feature. After you configure the GT78-VN 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 GT78-VN visible to nearby Bluetooth devices:

1. Swipedown the **Statusbar** and tap the Bluetooth icon to enable Bluetooth.
2. Tap **Settings** | **WIRELESS & NETWORKS** | **Bluetooth** to access the Bluetooth page.
3. Tapping the Bluetooth device name of your TITAN7 repeatedly to switch between visibility options: **Not visible to other Bluetooth devices, Only visible to paired devices** or **Visible to all nearby Bluetooth devices**.
4. You can further configure the time of the visibility. To do so, tap the menu button . When a context menu opens, tap **Visibility timeout**.
5. Adjust the timeout your device uses when you configure it to be visible. If you want the GT78-VN to be discoverable at all times, tap **Never timeout**.



3.5.5 Additional Bluetooth Settings

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

1. **Rename tablet:** Allows you to edit the Bluetooth name of the GT78-VN 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 GT78-VN to be visible.
3. **Show received files:** Open the location where downloaded and uploaded Bluetooth files are stored.

3.6 Using the LocationFeature

The GT78-VN features positioning function to identify your location. It allows location-based Apps to collect and use your location information to provide location-related service. For example, a third-party App might want to pinpoint a vehicle's location so as to provide a more efficient route for the driver upon traffic congestion. For a location-based App, you can individually configure whether it is allowed to access to location services when the service is on.

Note: When you turn off the location service, you also turn it off for the Apps that use this service. That means location-based service will stop and not be available.

3.6.1 Enabling/Disabling LocationService

To turn on or off location service, swipe down the **Status bar** to bring up the **Quick Settings** panel. Then tap the **LOCATION** tile to turn it on or off.

3.6.2 LocationMode

In addition to GPS satellite method, the GT78-VN also supports Assisted GPS (A-GPS), a method using Wi-Fi and cellular networks to speed up startup positioning performance. According to the position mode, the battery drain and position accuracy varies.

To select a location position mode when the location service is on,

1. Swipe down the **Status bar** and tap the **LOCATION** tile to enable the location service if it isn't enabled yet.
2. In the **Quick Settings** panel, tap and hold the **LOCATION** tile to access the location settings page.
3. Tap **Mode** and select a mode:
 - **High accuracy:** This mode uses GPS, Wi-Fi and cellular networks to determine location. It drains the battery faster yet higher accuracy is achieved compared to the other two modes. Select this mode if precise location matters to you.

- **Battery saving:** This mode uses Wi-Fi and cellular networks to determine your location. Select this mode if you need to extend the battery life.
- **Device only:** This mode determines your location using GPS only. Without using Wi-Fi and cellular networks to improve the startup process, it takes longer to determine the location.

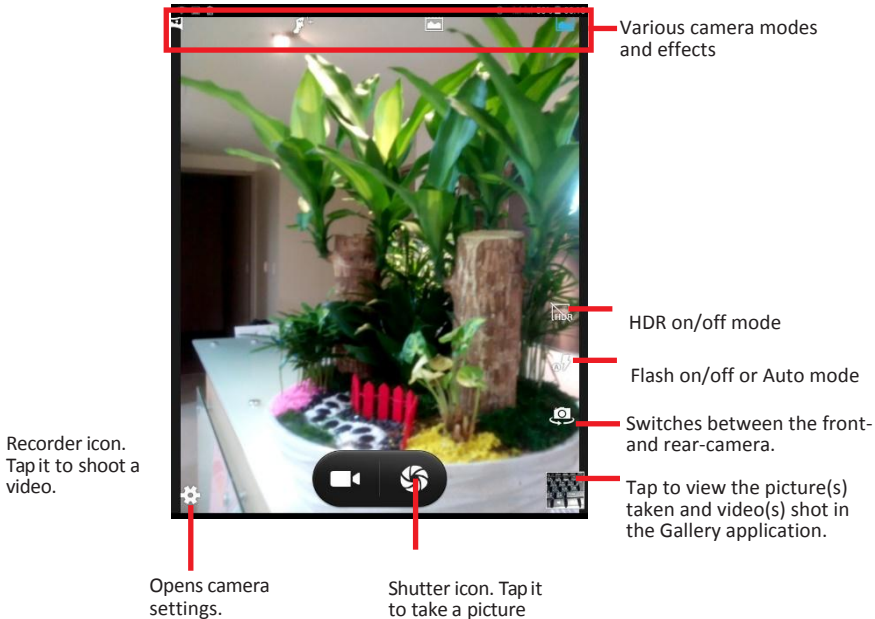
3.7 Using Camera

The device is equipped with two cameras: a front-facing camera and a back-facing camera with LED flash. 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.

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 the video icon.
- To start the recording, tap the Recorder icon and the timer starts.
- To stop the recording, tap the Recorder icon again.

3.8 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 backside of the GT78-VN. When you tap another NFC device, tags, or readers, the NFC areas of both devices should be close to one another so that the connection can be established.

3.8.1 Enabling/Disabling NFC

To enable or disable the NFC function:

1. Swipe down the **Statusbar** and tap **Settings | WIRELESS & NETWORKS | More...** to access the **Wireless & networks** page.
2. Tap the NFC slider to its position to turn it on or off.



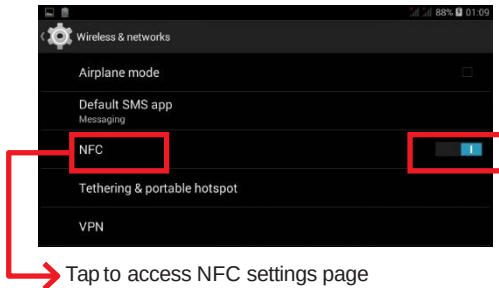
3. When NFC is enabled, its icon  will be displayed in the **Notification Area**.

3.8.2 Configuring NFC Modes

The GT78-VN supports three NFC modes: P2P, TAG and CARD EMULATION modes.

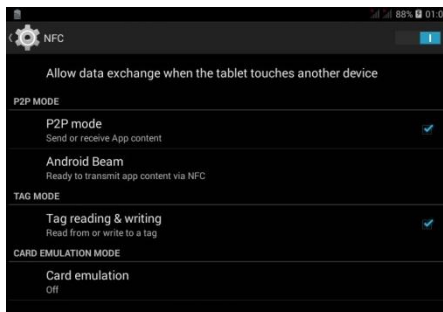
To configure the NFC settings:

1. Swipe down the **Statusbar** and tap **Settings | WIRELESS & NETWORKS | More...** to access the **Wireless & networks** page.
2. Tap the NFC slider to its position to turn it on if it isn't enabled yet. Then tap NFC to access the settings page.



3. Enable the modes asneeded:

- **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-EnabledDevice](#) for moreinformation.
- **Tag Reader/Writer:** Allows the GT78-VN to read and write to NFC tags. For example, working as a tag reader the TITAN7 can read the NFC tag of a smartposterto retrieve information like product or promotion information.Asatagwriter,youcanwritetoaNFCtagtospecifywhich associated actions will be triggered when the tag is read. The reading/writingapplicationsdependontheNFCtagApps.
- **Card Emulation:** This mode enables the GT78-VN to work as a contactless card in applications like payment, ticketing or access control. This mode is disabled by default as the availability depends onyourcellularnetworkcarrierandyoumustsubscribetotheseservices before you can use this functionality. Third-party transaction Apps will be also needed



to make thetransaction.

3.8.3 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 GT78-VN to another NFC device:

1. Make sure both devices are NFC-enabled. For your GT78-VN, enable NFC as described in [3.7.1 Enabling/Disabling NFC](#) if it isn't enabled yet.
2. On the GT78-VN, access the 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 GT78-VN, you will hear a sound and be prompted a message "**Touch to beam**". Touch the screen of the GT78-VN to begin the beaming process.
6. The content will appear on the other device's screen.

3.9 Using the BarcodeScanner

Barcode scanner is an optional feature on the GT78-VN. Depending on your models, your GT78-VN might be equipped with 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.

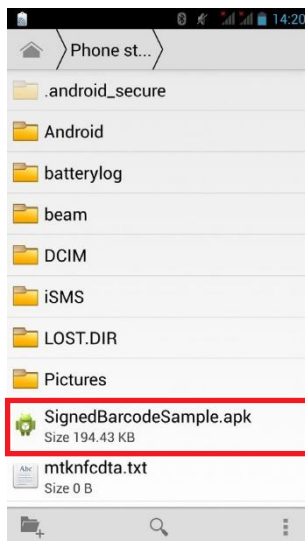
Caution: The barcode scanner uses laser lights to scan barcodes. DO NOT stare into the laser beams or point the laser beam at anyone's eyes when the barcode scanner is in operation.



3.9.1 Installing APKFile

As of the time of release, the GT78-VN may not have the barcode scanner software installed. If this is the case, you must install the APK file on your GT78-VN first in order to activate the scanner function.

1. Download the APK file (**SignedBarcodeSample.apk**) from the PartnerZone of our website and save the file to your computer first.
2. Connect the GT78-VN to that computer using a USB cable. The GT78-VN will prompt you to choose a USB option. Select "**USB storage**" to transfer files between your computer and the GT78-VN.
3. Copy the APK file from your computer to the GT78-VN's internal USB storage or SD card. Then disconnect your computer from the GT78-VN.
4. On the GT78-VN, 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.

3.9.2 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 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.



Scan key

3.9.3 Supported BarcodeFormats

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)

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

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.

This Product meets the government's requirements for exposure to radio waves. The guidelines are based on standards that were developed by independent scientific organizations through periodic and thorough evaluation of scientific studies. The standards include a substantial safety margin designed to assure the safety of all persons regardless of age or health.

FCC RF Exposure Information and Statement the SAR limit of USA (FCC) is 1.6 W/kg averaged over one gram of this Device GT78-VN (FCC ID: 2ACHW-GT78VN) has been tested against this SAR limit. SAR information on this can be viewed on-line at <http://www.fcc.gov/oet/ea/fccid/>. Please use the device FCC ID number for search. This device was tested for typical operations 0mm from the body. To maintain compliance with FCC RF exposure requirements, 0mm separation distance should be maintained to the user's bodies

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.

FCC ID: 2ACHW-GT78VN

RF Specification:

Function	Operation Frequency	Max RF output power:	Limit
BLE	2402MHz~2480MHz	2.36 dBm	20 dBm.
BT(BR+EDR)	2402MHz~2480MHz	8.94 dBm	20 dBm.
WIFI 802.11b/g/n(HT20/40)	802.11b/g/n(20MHz): 2412~2472MHz; 802.11n(40MHz):2422~2462MHz	13.24 dBm	20 dBm.
Wi-Fi 5.2G(802.11a/n20/ n40/ac20/ac40/ac 80)	802.11a/ n20/ac20:5180MHz~5240MHz 802.11 n40/ac40:5190MHz~5230MHz 802.11 ac80:5210MHz	10.15dBm	23 dBm.
Wi-Fi 5.3G(802.11a/n20/ n40/ac20/ac40/ac 80)	802.11a/ n20/ac20:5260MHz~5320MHz 802.11 n40/ac40:5270MHz~5310MHz 802.11 ac80:5290MHz	9.09dBm	23 dBm.
Wi-Fi 5.6G(802.11a/n20/ n40/ac20/ac40/ac 80)	802.11a/ n20/ac20:5500MHz~5700MHz 802.11 n40/ac40:5510MHz~5670MHz 802.11 ac80:5530MHz	10.61dBm	23 dBm.
Wi-Fi 5.8G(802.11a/n20/ n40/ac20/ac40/ac 80)	802.11a/n20/ac20 :5745-5825MHz band ; 802.11 n40/ac40 : 5755-5795MHz band ; 802.11 ac80 : 5775MHz band ;	9.55 dBm	13.98dBm
GSM/GPRS/EGP RS 900	TX(Uplink):880M - 915MHz; RX(Downlink):925M - 960MHz	32.20 dBm	class 4 (33±3dBm)
GSM/GPRS/EGP RS 1800	TX(Uplink):1710M - 1785MHz; RX(Downlink):1805M - 1880MHz	29.85 dBm	class 1 (30±3dBm)
WCDMA B1	TX(Uplink):1920-1980MHz; RX(Downlink):2110-2170MHz	22.97 dBm	24 (dBm) +1,7/-3,7 (dB)
WCDMA B8	TX(Uplink): 880-915MHz; RX(Downlink):925-960MHz	22.22 dBm	24 (dBm) +1,7/-3,7 (dB)
LTE FDD B1	TX(Uplink):1920-1980MHz; RX(Downlink):2110-2170MHz	23.99 dBm	23(dBm) ±2,7(dB)
LTE FDD B3	TX(Uplink) :1710-1785MHz; RX(Downlink):1805-1880MHz	23.97dBm	23(dBm) ±2,7(dB)
LTE FDD B7	TX(Uplink) :2500-2570MHz; RX(Downlink):2620-2690MHz	23.93 dBm	23(dBm) ±2,7(dB)
LTE FDD B8	TX(Uplink): 880MHz to 915 MHz RX(Downlink): 925 MHz to 960 MHz	23.10 dBm	23(dBm) ±2,7(dB)
LTE FDD B20	TX(Uplink) 832MHz~862MHz; RX(Downlink)791MHz~821MHz	23.04 dBm	23(dBm) ±2,7(dB)
LTE FDD B28	TX(Uplink): 703 MHz to 748MHz RX(Downlink): 758 MHz to 803 MHz	23.45 dBm	23(dBm) ±2,7(dB)
LTE TDD B38	Uplink & Downlink: 2570 MHz to 2620 MHz	24.05 dBm	23(dBm) ±2,7(dB)
LTE FDD B40	Uplink & Downlink: 2300 MHz to 2400 MHz	23.16 dBm	23(dBm) ±2,7(dB)
GPS	Rx(Downlink): 1.57542GHz	--	--
NFC	13.56MHz	18.4dBuA/10m	60 dBuA/10m

Warning:

- 1. Use carefully with the earphone maybe possible excessive sound pressure from earphones and headphones can cause hearing loss.
- 2. CAUTION: RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE. DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS.
- 3. The product shall only be connected to a USB interface of version USB2.0.
- 4. Adapter shall be installed near the equipment and shall be easily accessible.
- 5. Operation temperature:-10~35°C.
- 6. The plug considered as disconnect device of adapter.
- 7. SAR: The device complies with RF specifications when the device used at 0cm from your body (SAR limit 2.0 W/Kg). The device is in compliance with the requirements.



Restrictions in the 5 GHz band:

According to Article 10 (10) of Directive 2014/53/EU, the packaging shows that this radio equipment will be subject to some restrictions when placed on the market in Belgium (BE), Bulgaria (BG), the Czech Republic (CZ), Denmark (DK), Germany (DE), Estonia (EE), Ireland (IE), Greece (EL), Spain (ES), France (FR), Croatia (HR), Italy (IT), Cyprus (CY), Latvia (LV), Lithuania (LT), Luxembourg (LU), Hungary (HU), Malta (MT), Netherlands (NL), Austria (AT), Poland (PL), Portugal (PT), Romania (RO), Slovenia (SI), Slovakia (SK), Finland (FI), Sweden (SE), Turkey (TR), Norway (NO), Switzerland (CH), Iceland (IS), and Liechtenstein (LI).

The WLAN function for this device is restricted to indoor use only when operating in the 5150 to 5250 MHz frequency range.

	ES	LU	RO	CZ	FR	HU	SI
	DK	HR	BE	BG	DE	EE	IE
	EL	IT	Cy	LV	LT	SK	MT
	NL	AT	PL	PT	FI	SE	TR
	NO	CH	IS	LI			