HANDHELD COMPUTER

DF8A

USER'S GUIDE

Notice

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Revision History:

Revision	Date	Changes	Author
1.0.2	2017/09/29	Not distinguish between I and M model Add 90W AC Adapter info	Ben Lin
1.0.1	2017/08/22	Initial release	Ben Lin

Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

Regulatory Information/ Disclaimers

Installation and use of this computer must be in strict accordance with the instructions included in the user documentation provided with the product. Any changes or modifications (including the antennas) made to this device that are not expressly approved by the manufacturer may void the user's authority to operate the equipment.

The manufacturer is not responsible for any radio or television interference caused by unauthorized modification of this device, or the substitution of the connecting cables and equipment other than manufacturer specified. It is the responsibility of the user to correct any interference caused by such unauthorized modification, substitution or attachment. Manufacturer and its authorized resellers or distributors will assume no liability for any damage or violation of government regulations arising from failing to comply with these guidelines.

FCC (Federal Communications Commission) regulatory compliance

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Note:

This equipment has been tested and found to comply with the limits for a class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

I**mportant:**

Changes or modifications to this product not authorized by MilDef could void the electromagnetic compatibility (EMC) and wireless compliance and negate your authority to operate the product.

In order to maintain compliance with FCC regulations, compliant peripheral devices and shielded cables must be used with this equipment.

CE Declaration of Conformity

CE

The device is hereby confirmed to comply with the requirements set out in the Council Directive on the Approximation of the Laws of the Member States relating to Electromagnetic Compatibility Directive (2014/30/EC) and Complies with the essential requirements of Article 3 of the R&TTE 2014/53/EC Directive, if used for its intended use and that the following standards have been applied:

1. **Health (Article 3.1(a) of the R&TTE Directive)**

   Applied Standard(s):

   EN 50566

   EN 62479:2010

   IEC 62209-2:2010

2. **Safety (Article 3.1(a) of the R&TTE Directive)**

   Applied Standard(s):

   EN 60950-1:2006 /A11:2009 /A1:2010 /A12:2011 /A2:2013

3. **Electromagnetic compatibility (Article 3.1 (b) of the R&TTE Directive)**

   Applied Standard(s):

   EN 301 489-1 V2.1.1/ -17 V3.1.1

4. **Radio frequency spectrum usage (Article 3.2 of the R&TTE Directive)**

   Applied Standard(s):

   EN 300 328 V2.1.1

5. **Electromagnetic Compatibility Directive (2004/108/EC)**

   EN 55032: 2012

   EN 55022:2010

   EN 55024:2010+A1:2015

   EN 61000-3-2:2014

   EN 61000-3-3:2013

Power Conservation

This handheld computer consumes less power compared to conventional consumer computers. The power consumption may be further reduced by properly configuring the Power Management Setup.

It is recommended that the power saving features be enabled even when not running on battery power. Power Management features can conserve power without degrading system performance.

Power Safety

There are specific power requirements for your handheld computer:

- Only use an approved AC adapter designed for this handheld computer.
- There is a 3-prong grounded plug for the AC adapter. The 3rd prong is an important mechanism for ensuring product safety. Please do not neglect the importance of this mechanism. If you are unable to access a compatible outlet, please hire a qualified electrician to install a compatible outlet for you.
- When unplugging the AC power cord, please make sure to disconnect the cord by pulling from the plug head instead of pulling from the wire to prevent wire damage.
- Make sure the power outlet and any other extension cord(s) you use can support the total current load of all the connected devices.
- Before cleaning the handheld computer, please make sure it is disconnected from any external power source.

Warning

Before any upgrade procedures, make sure the power is turned off, and all the cables are disconnected. Also, it is advisable to remove your battery to prevent your handheld computer from accidentally turning on.

Battery Precautions

- Only use batteries designed for this handheld computer. Using incompatible battery types may cause explosion, leakage or damage to the computer.
- Do not remove the battery from the computer while the computer is powered on.
- Do not continuously use a battery that has been dropped, or that appears damaged (e.g. bent or twisted) in any way. Even if the computer is able to continuously work with a damaged battery, the circuit damage may occur and possibly cause fire.
- Always use the charger designed for this computer to recharge the battery. Incorrect recharging may cause the battery to explode.
- Do not try to repair a battery by yourself. For battery service or replacement, please contact with your service representatives.
- Please dispose damaged battery promptly and carefully. Explosion or leakage may occur, if the battery is improperly handled or discarded.

Notice:

For safety, charging will stop if the internal temperature of the battery is out of range(<0°C; >50°C). Please note that charging could have stopped before the ambient temperature reaching these boundaries because the internal temperature of the battery does not equal to the ambient temperature.

Battery Disposal & Caution:

The product that you have purchased contains a rechargeable battery. The battery is recyclable. At the end of its service life, under various state and local laws, it may be illegal to dispose of this battery into the municipal waste stream. Check with your local solid waste officials for details in your area for recycling options or proper disposal. Danger of explosion may possibly occur, if the battery is incorrectly replaced. Replace only with the same or the equivalent battery recommended by the manufacturer. Discard the used battery according to the manufacturer's instructions.

Environmental Information, Material Safety & Recycling

All materials used in the manufacturing of this equipment are recyclable or environmentally friendly. Please recycle the packing materials in accordance with local regulations at the end of the product's service life.

Notice:

- The equipment may contain insignificant amount of hazardous substances for health and environment below control level.
- To avoid spreading such substances into the eco system and to minimize the pressure on the natural environment, you are encouraged to reuse or recycle most of the materials in a safe way after an end of the product life.
- For more information on collection, reuse and recycle of materials, please consult local or regional waste administrations for more information. You can also contact your dealer for more information on the environmental details of the equipment.
- The symbol of the crossed out wheeled bin indicates that the product (electrical and electronic equipment) should not be placed in municipal waste. Please check local regulations for disposal of electronic products.

TABLE OF CONTENTS

Chapter 1 - Getting Started 1

Unpacking 1
Workplace 2
Ruggedness 2
Appearance Overview 3
Ready for Use 8

Chapter 2 - Operating Information 11

Start Using Your Handheld Computer 11
Suspend Mode 12
Factory Reset 12
Using the Touchscreen 13
Brightness Adjustment 16
Using Function Keys 17
Audio Features 18
Manage Micro SD Card 19
USB Connection 21
WiFi (Optional) 22
Bluetooth (Optional) 23
GPS (Optional) 25
Compass 26
Camera (Optional) 27

Chapter 3 - Managing Power 29

AC Adapter 29
Battery 30

Chapter 4 - Specifications 33

Processor 33

Memory 33
External Storage 33
OS 33
Audio 33
Display 34
Wireless Communication Devices 34
Camera (optional) 34
Sensors 34
I/O Ports 35
Battery 36
Double Capacity Battery (Optional) 36
AC Adapter 36
Dimensions & Weight 37
Operating & Storage Temperature 37
Case Materials and Color 37
Certification 38
Accessories (Optional) 38
Multi-Charger MCDF (Optional) 39

Chapter 5 - Maintenance and Service 40

Cleaning 40
Troubleshooting 40
RMA Service 42

Appendix: 43

Chapter 1 - Getting Started

Unpacking

The following list of items are packaged and shipped along with your handheld computer. If any of these items is missing or damaged, please notify your dealer immediately.

- Handheld Computer Unit
- 25W AC Adapter
- Quick Guide

Note:

- *The protective film attached on the screen is for shipping protection only. Please tear off the film before using to ensure that all of the functions can be operated normally.*

Workplace

A clean and moisture-free environment is preferred. Make room for air circulation. Remember to avoid areas from:

- Sudden or extreme changes in temperature.
- Extreme heat.
- Strong electromagnetic fields (Near television set, motor rotation area, etc.).
- Dust or high humidity.

If this handheld computer is required to work in a hostile environment, please maintain your handheld computer regularly by cleaning dust, water, and etc. to keep it in an optimal operating condition.

Ruggedness

This handheld computer is designed with rugged features, such as vibration, shock, dust, and rain/water protection. However, it is still necessary to provide appropriate protection while operating in hostile environments.

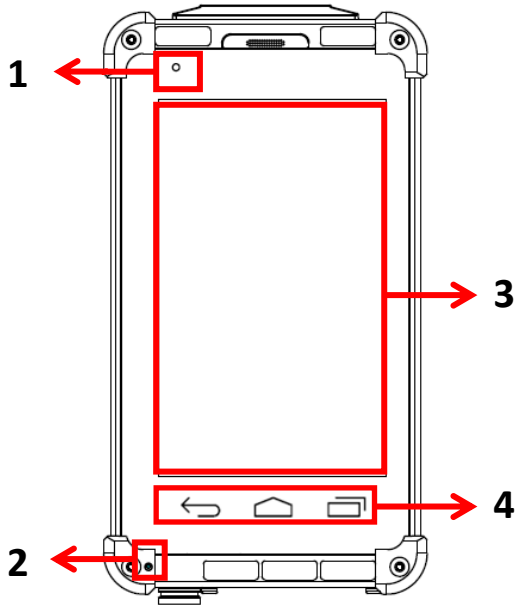
Appearance Overview

Before starting to use your handheld computer, it is advisable that you take a quick glance to familiarize yourself with the locations of your device's external buttons and components. Note, the following illustrations show optional devices which may not on your device.

Front View

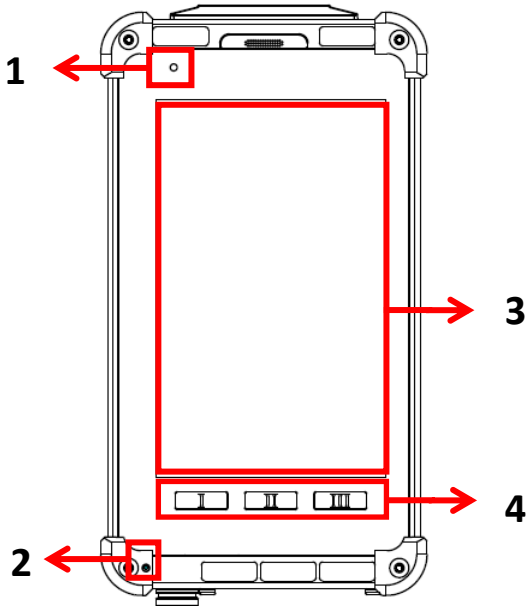
Standard

Capacitive Multi-Touch Screen



Optional

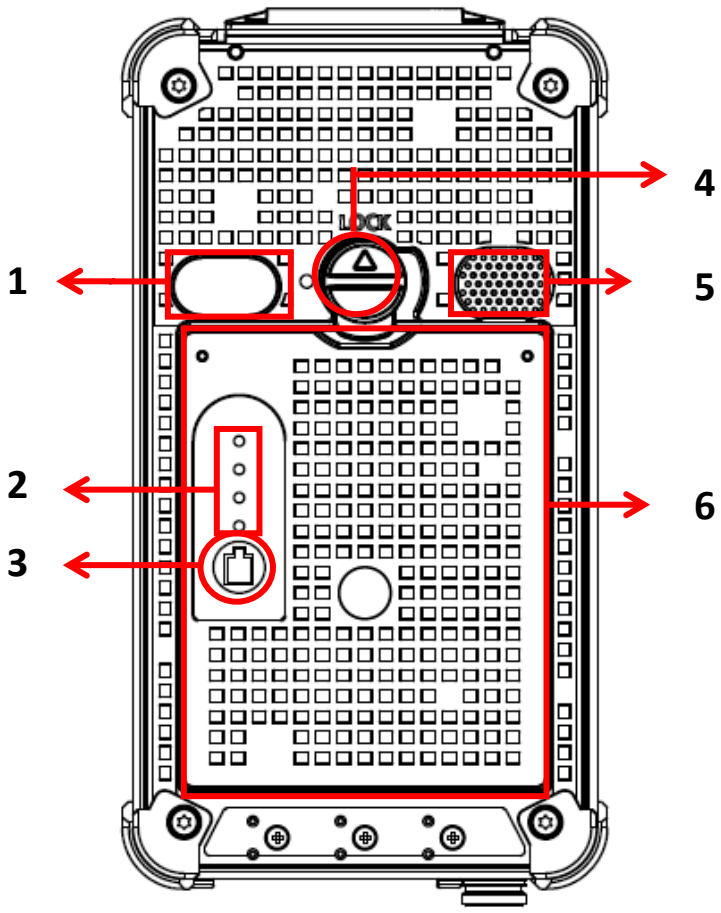
Resistive Single Touch Screen



No.	Feature	Functional Description	Remark
1	**Charge Indicator**	LED lights up (orange) when charging begins and off when charging is finished.	
2	**Built-in Mic**	Microphone for recording	
3	**Touch Screen**	Displays and receives information for the device. Std: Capacitive Multi Touch Screen Optional: Resistive Single Touch Screen	

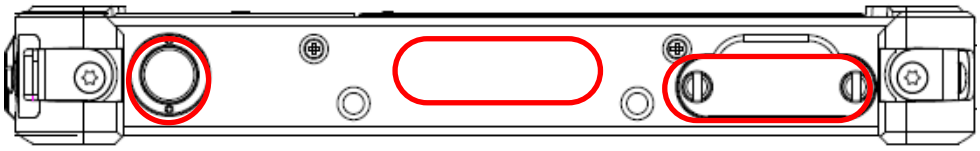
No.	Feature	Functional Description	Remark
4	**Function Keys**	Std.: Back/Home/Menu Back: Press to return to the previous screen. Home: Press to return to the Home screen. Press and hold to show applications recently used. Menu: Press to open the menu. Optional: I / II / III I: Press to return to the previous screen. II: Press to return to the Home screen. Press and hold to show applications recently used. III: Press to open the menu.	

Rear View



No.	Feature	Functional Description	Remark
1	**Optional Camera**	Takes still pictures or records video clips. The rear camera supports 5 MP (mega pixel).	
2	**Battery Indicators**	Show battery capacity. The number of indicators light up (green) depends on battery capacity.	
3	**Battery Button**	Trigger battery indicators to show battery capacity.	
4	**Battery Lock**	Slot-type head for locking the battery.	
5	**Speaker**	Mono Speaker for audio output.	
6	**Battery Pack**	Provides a power source to the device.	

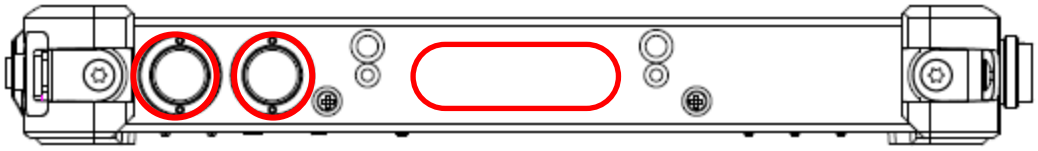
Right View



1 L3 2

No.	Feature	Functional Description	Remark
1	**Power Button**	Turn the device ON/OFF. Put the device to suspend mode.	
2	**Micro SD Card Slot**	Removable storage media.	
L3	**Optional Expansion POGO Connector**	For expanding functions.	

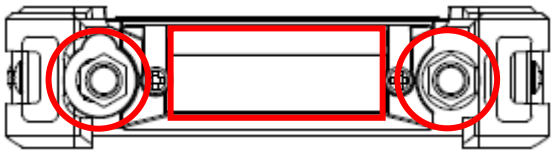
Left View



1 2 L4

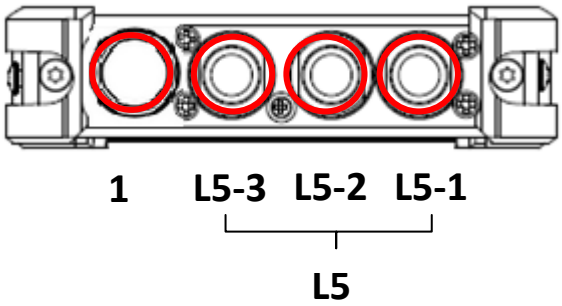
No.	Feature	Functional Description	Remark
1	**Volume up button**	Increases the sound volume.	
2	**Volume down button**	Decreases the sound volume.	
L4	**Optional Cradle POGO Connector**	For expanding functions.	

Top View



No.	Feature	Functional Description	Remark
1	**Optional Embedded ANT.**	Embedded GPS ANT.	
L1	**Optional SMA ANT.**	SMA ANT. function: WiFi & Bluetooth, GPS	**Refer to Appendix**
L2	**Optional SMA ANT.**	SMA ANT. function: WiFi & Bluetooth, GPS	**Refer to Appendix**

Bottom View



No.	Feature	Functional Description	Remark
1	**DC-in/USB OTG**	Standard: Sealed DC-in 5V with LEMO 8 pin Connector Optional: Sealed DC-in 10~32V (BVA) with LEMO 8 pin Connector	**Refer to Appendix**
L5	**Optional Fischer connector**	Choose 1 out of 5 for each connector: RS232, USB, MLAN, Audio, VGA	**Refer to Appendix**

Ready for Use

After taking a quick look at your handheld computer, the following illustrations will help you setup your handheld computer ready for operations.

Mounting the Battery

A. Mount the battery into the battery bay.

B. Turn clockwise and lock firmly with a slot screwdriver or a coin.

Connecting the AC Adapter

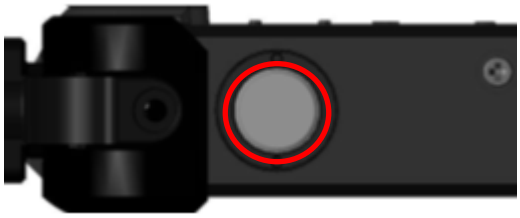
1. Insert the end of LEMO connector to the DC-in connector.

2. Plug the AC cord into the AC adapter, and firmly lock the connect clockwise.

3. Plug the AC power plug into an electrical outlet.

Turning ON the Power

1. Make sure the battery is securely mounted, or connect all power cords properly.
2. Turn on the power of your handheld computer by pressing and holding the Power Button for a few seconds.



Press and hold the Power Button a few seconds to turn on the power of your handheld computer.

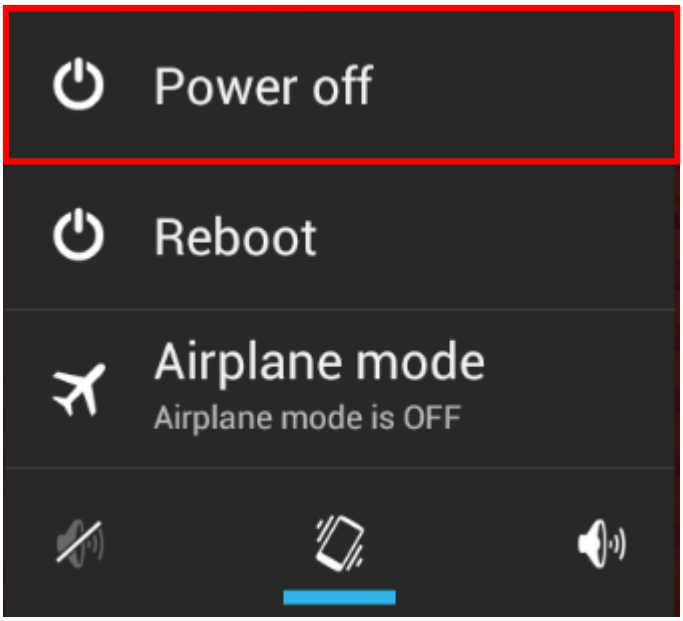
Note:

- *You can turn on the power of your handheld computer without a mounted battery if your handheld computer is directly attached to an external power source.*

Turning Off the Power

To power off your handheld computer,please follow the steps blow:

1. If the display is off, please press the Power Button to turn on the backlight, and then unlock the screen.
2. Press and hold the Power Button for about 2 seconds.
3. Tap “Power off” on options menu (as the image below), and then tap OK. Your handheld will be powered off.



On Power Off state, your handheld device is completely turned off. All applications are terminated, no wireless connectivity is established and all unsaved data are lost.

Power Off is an ideal state for your handheld device when you do not need to operate your device for an extended period of time.

Note:

- *If you lose power during operation (i.e. running out of battery), all unsaved work and data will be lost.*

Chapter 2 - Operating Information

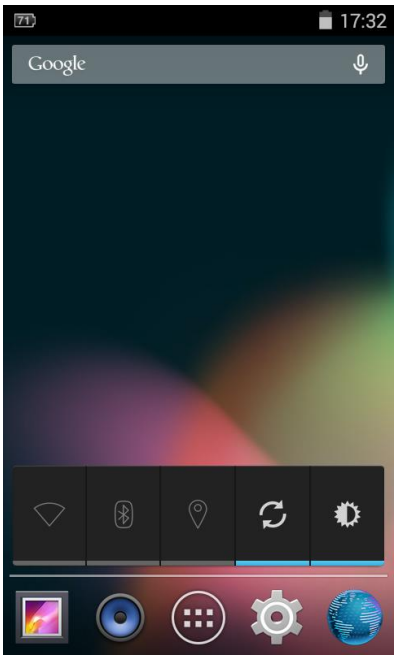
Start Using Your Handheld Computer

Turn on your handheld computer by pressing the power button few seconds until the display lights up. After turning on the power of your handheld computer, the device will boot up with Android system.

Boot Up

When turning on the power, your will see “LOADING” on the screen and your handheld computer will start to load the required boot up files and processes for operation. This start-up procedure is called “boot up”. Your handheld computer requires approximately 30 seconds of Boot Up time before the OS is fully loaded.

After boot up, you will be presented with the desktop screen as below. You can create shortcuts of applications to your desktop, change the background wallpaper, and modify the display font size, etc.



Suspend Mode

To conserve your device battery life, you may place your device into Suspend mode. By pressing the power button, the display of your handheld computer will be turned off, and the device will enter Suspend mode.

Suspend mode is an ideal state of your device when you want to conserve more battery life, do not need to stop wireless connectivity, and keep your device ready to resume back to work on a moment's notice.

To resume your device from Suspend mode, press the power button again.

Factory Reset

> ⚠ ***Caution***
>
> *Factory reset will delete the data, files and apps in your device. Before performing the factory reset, you are advised to back up data and files you would like to keep.*

In some conditions, you may encounter some unsolved issues on your handheld computer, or you would like to erase your personal data and files. Factory reset is a method to restore your device to the original manufacturer state. To perform the factory reset, please follow the instructions below:

1. Tap ***Settings***
2. Tap ***Backup & reset***
3. Tap ***Factory data reset***
4. Tap ***Reset tablet***
5. Tap ***Erase everything***
6. Tap ***OK***

Using the Touchscreen

Basic Operation

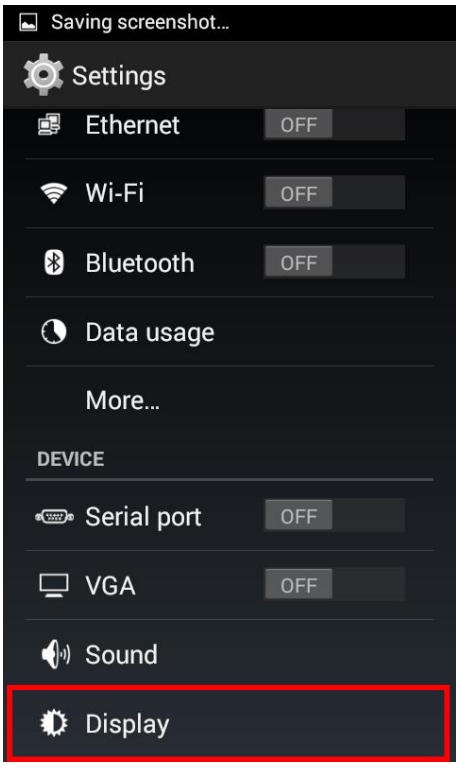
Your handheld computer is equipped with a highly sensitive touch screen, allowing you to navigate on the touch screen easily without using other external devices. A list of operating tips is provided below to help you operate the touch screen more effectively.

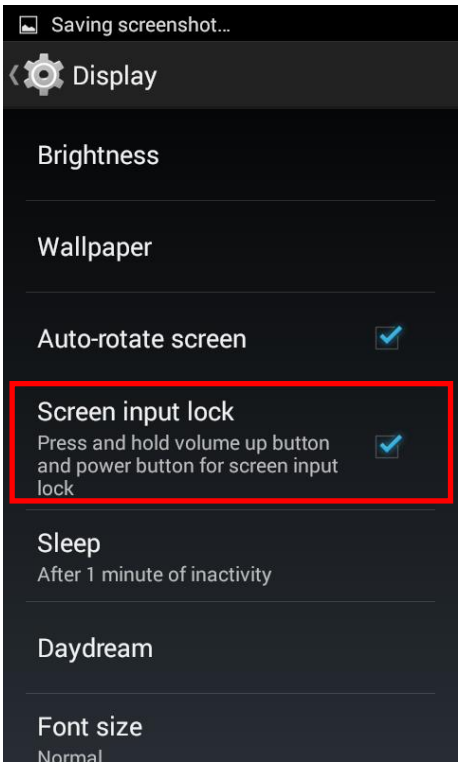
Desired Operation	Action
Tap	Tap the screen with your finger when you want to select onscreen items such as application, icons, or onscreen buttons.
Press and hold	To open the available options for an item (for example, a contact or link in a web page), just press and hold the item.
Swipe	Swiping your finger in light, quicker strokes, such as moving right and left of the tabs. It is an efficient way to navigate the apps.

Screen input lock

Your touch screen and function keys (Home/Back/Menu) can be locked to prevent from any accidental input. To activate screen input lock function, please follow the steps below:

Settings ➔ Display ➔ Activate Screen input lock



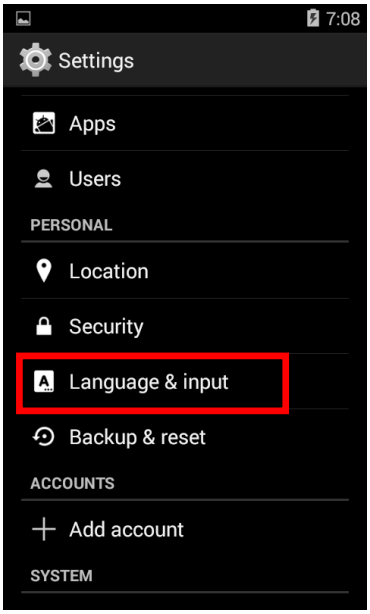


Then press “Volume up button” and “Power button” simultaneously to lock your touch screen and function keys. When screen input function is locked, an icon will appear on the task bar. Press the same buttons again to unlock the screen.

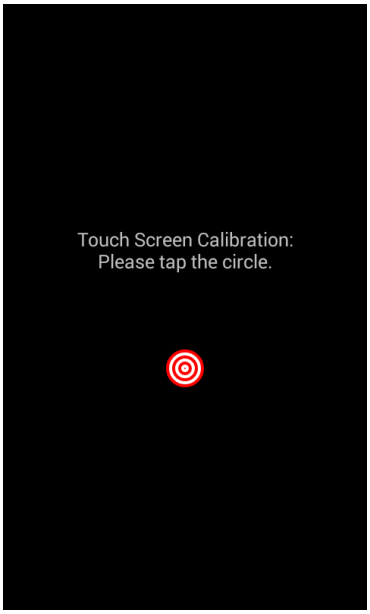
Touch Screen Calibration (Resistive Touch Screen Only)

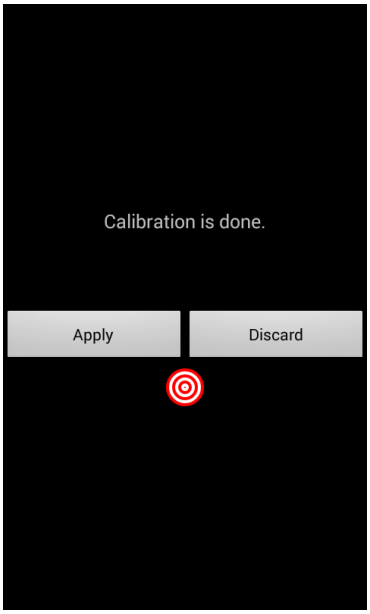
If the touch screen does not seem to react to your operation precisely, the touch screen calibration function may help. Please follow the instruction below to use it.

Settings ➔ Language and Input ➔ Calibration



You need to complete the calibration by tapping on different targets for 5 times. After that, you can choose “apply” to save the result or “discard” to cancel it.





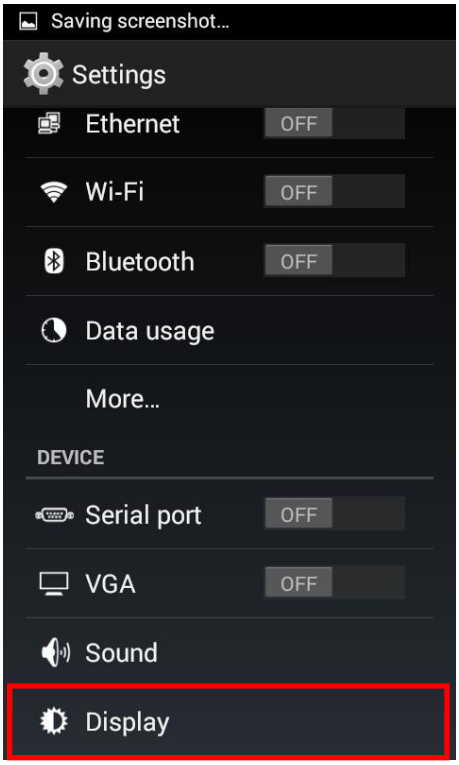
Note:

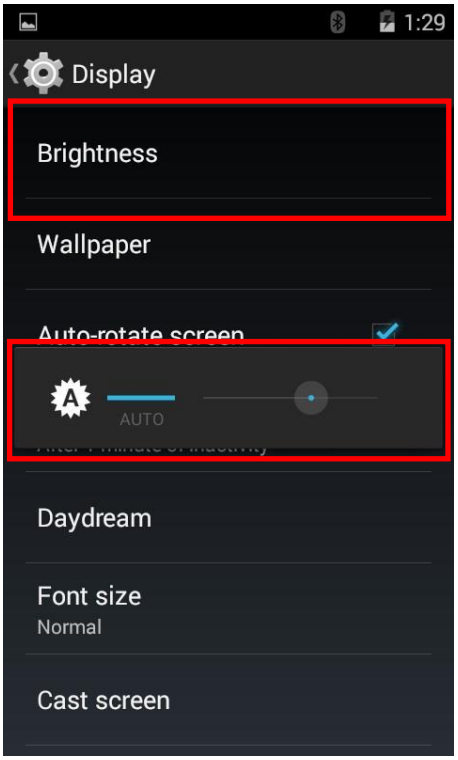
- *If your touch screen is capacitive, you will see a message and not be able to start.*
- *If you somehow tap on a spot which is far from the target, the calibration will restart again to prevent incorrect calibration.*

Brightness Adjustment

DF8A provides an alternative way to adjust the brightness by pressing the volume up/down buttons. Please follow the steps below to set up:

Settings ➔Display ➔ Brightness ➔ Tap AUTO or drag the bar to adjust the brightness





Note:

- *The range of brightness on DF8A is from 20 to 450 nits.*

Using Function Keys

DF8A provides three function keys. The following table shows the basic features of using function keys.

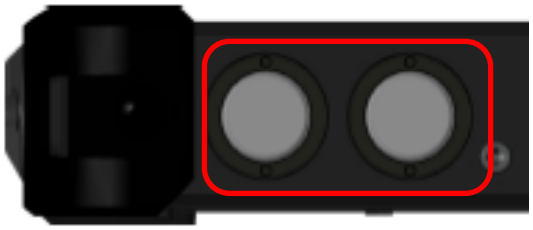
Function Keys	Functions
Back	Press to return to the previous screen.
Home	- Press to return to the Home screen. - Press and hold to show applications recently used.
Menu	Press to open the menu.

Note:

- *The Legends will be I / II / III for devices with Resistive Single Touch Screen and the functions are the same.*

Audio Features

Your handheld computer is equipped with an audio codec for sound playback. To adjust the volume of your device, please use the volume up/down button located at the upper left side of your device (as the image below).

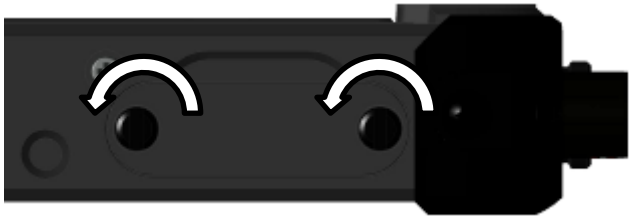


By pressing the volume up/down button, you can increase/lower the volume, or adjust to silent mode and vibration mode to suit your preference.

Manage Micro SD Card

Your handheld computer has a Micro SD card slot for storage expansion. The Micro SD card slot supports card capacity up to 32 GB with SDHC format.

The card slots are located at the bottom-right side of your handheld computer. To remove the card slot cover, please use a slot head screwdriver or a suitable sized coin. Turn counterclockwise to unlock.



***Note**:*

Turn counterclockwise to unlock

The location of micro SD card slot is shown as the image below.

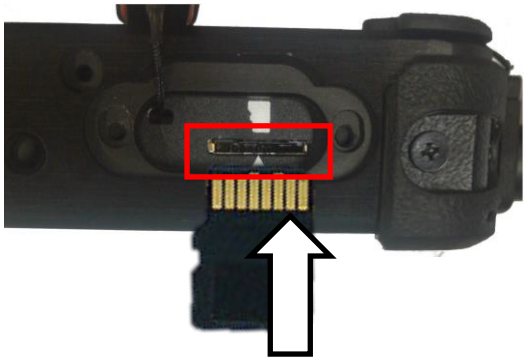
***Note**:*

Image shown with LCD facing down

Please notice the card slot differences to prevent the insertion of incompatible card types, and do not attempt to force the cards into wrong card slots to prevent your handheld computer from damages.

Inserting Micro SD Card

The design of micro SD card slots is foolproof; if you encounter difficulty in inserting the cards, please turn/reverse the cards and try again. When inserting micro SD card, the connector pins of your cards should be **facing up**.



Note:

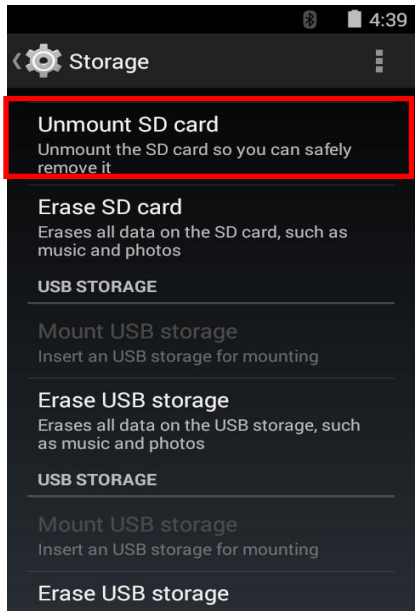
Insert Micro SD card into the bottom card slot with pins facing **up**.

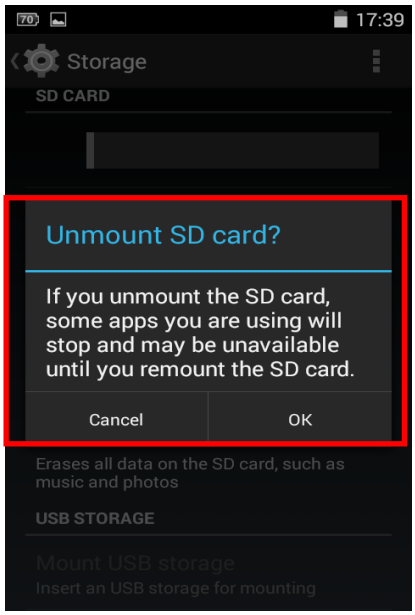
Removing Micro SD Card

To remove a micro SD card safely, please follow the steps below.

Tap *Settings* ➔ *Storage* ➔ *Unmount SD card* ➔ OK

➔Lightly press the card, then it will slip out





Note:

- *Do not suddenly remove SD cards when the device is turned on. Such an action may cause data loss.*

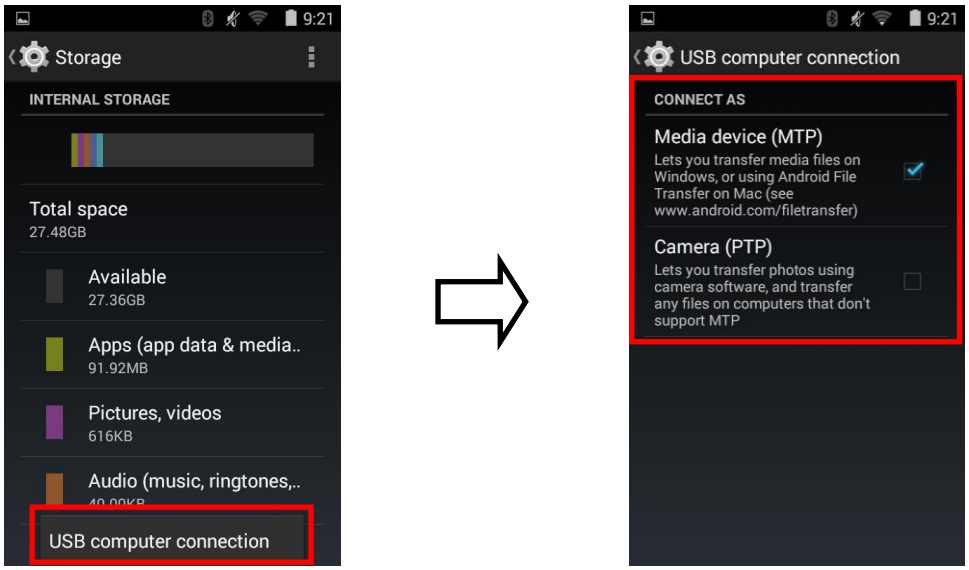
USB Connection

You can connect your DF8A to a computer by the optional LEMO to USB cable to transfer files. Before using the function, please follow the steps below to set up the connection.

1. **Connect the device to a computer with LEMO to USB cable.**

2. **Then, tap *Settings* ➔ *Storage* ➔ Press *Menu key*** **➔ Tap *USB computer connection* ➔ *Connect as Media device/camera***

3.



Now, the setting is completed and you can transfer files and data between the two devices.

Note:

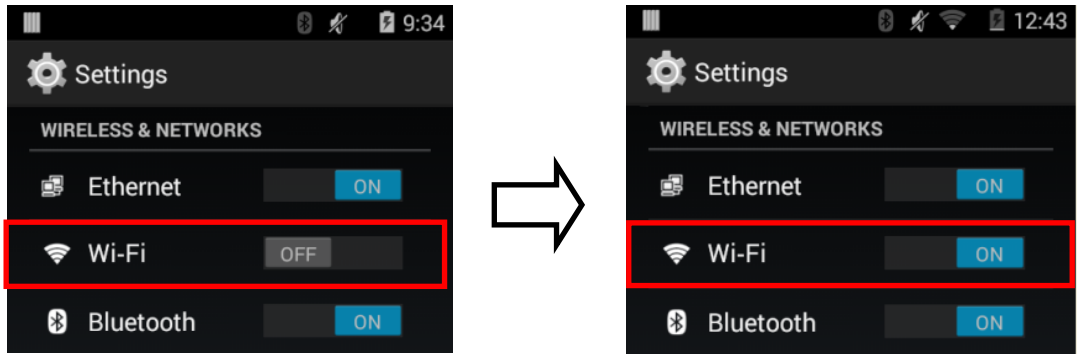
- *DF8A support USB OTG*
- *LEMO to USB cable is an optional accessory.*
- *Battery remaining capacity is suggested to be at least 30% when using USB connection to transfer data and files.*

WiFi (Optional)

The optional Wi-Fi module on your handheld computer supports IEEE 802.11 b/g/n. To activate your Wi-Fi function, please follow the steps below:

1. **Tap *Settings***

2. **Slide the bar to the ON position to turn on Wi-Fi connection.**



3. **Tap *Wi-Fi* to select a network for connecting**

   You may be required to insert passwords to set up and enable the connection, especially if you select a secured network.

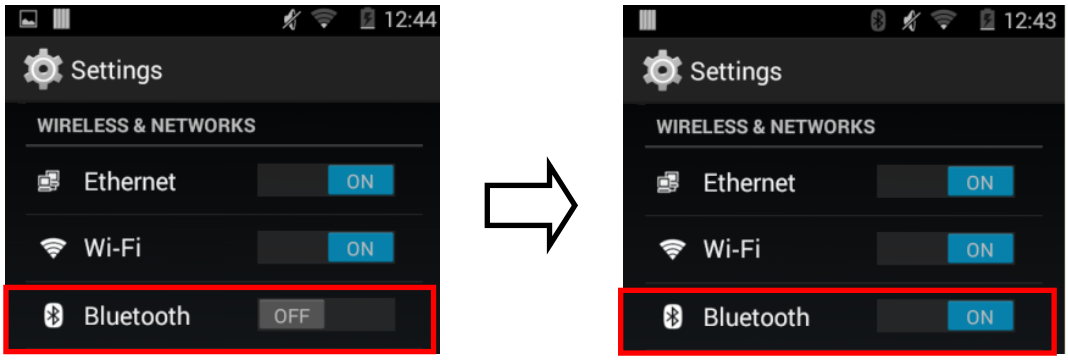
When your device is connecting to Wi-Fi, the Wi-Fi icon will appear on the Status bar. Slide the bar to OFF position in step 2 whenever you want to disconnect.

Bluetooth (Optional)

The optional Bluetooth module on your handheld computer supports Bluetooth® v4.0. It is also backward compatible with v1.1/1.2/2.0/2.1 devices and provides your handheld computer with a short-range wireless communication protocol to connect with other compatible devices. To activate your Bluetooth functions, please follow the instructions below.

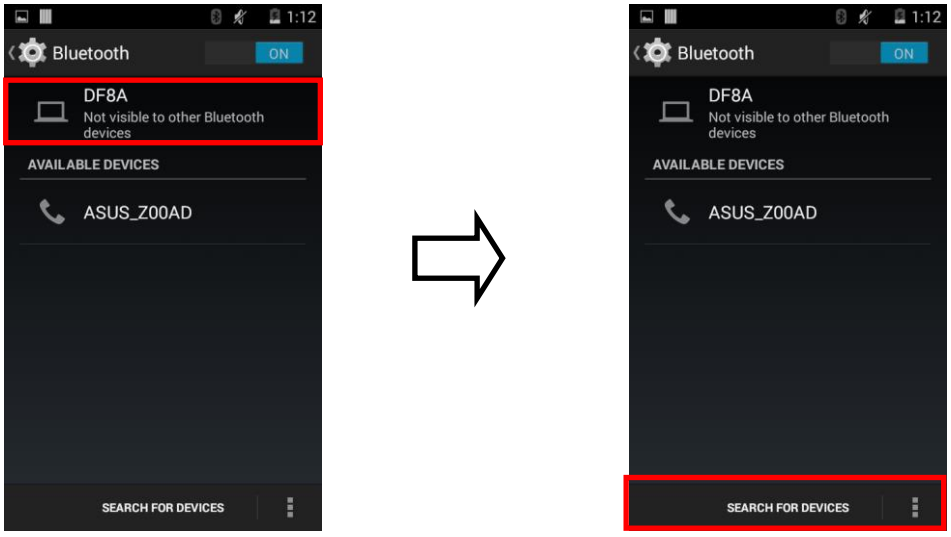
1. **Tap *Settings***

2. **Slide the bar to the ON position to turn on Bluetooth**

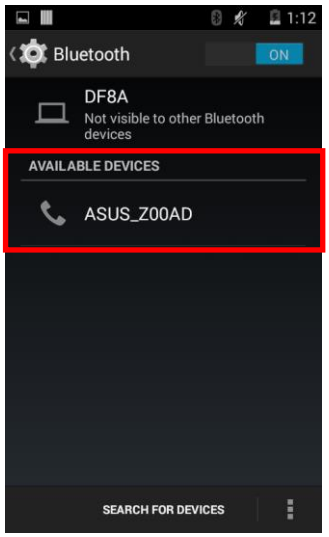


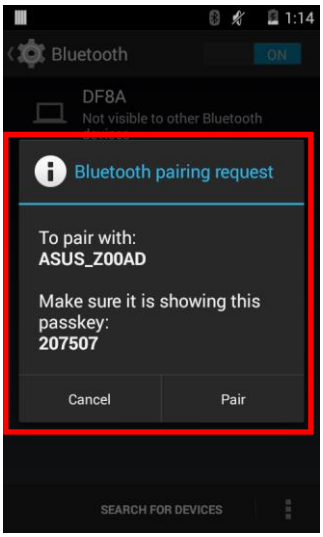
When turn on Bluetooth, the Bluetooth icon appears on the Status bar.

3. **Tap *Bluetooth* ➔ Tap *DF8A* to make your device visible ➔ Tap *SEARCH FOR DEVICES***



4. **Tap the name of the available device that you'd like to connect. Then check the passkey and start to pair them up.**





Note:

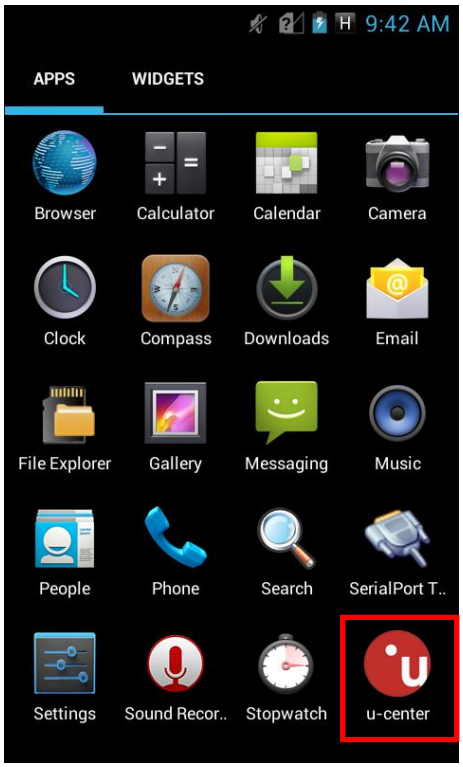
- *Please make sure that the device you'd like to connect is discoverable. Otherwise, it will not show on the available device list.*

5. **DF8A will automatically pair with the target device. Now, you can follow the on-screen instructions to connect devices and transfer data and files.**

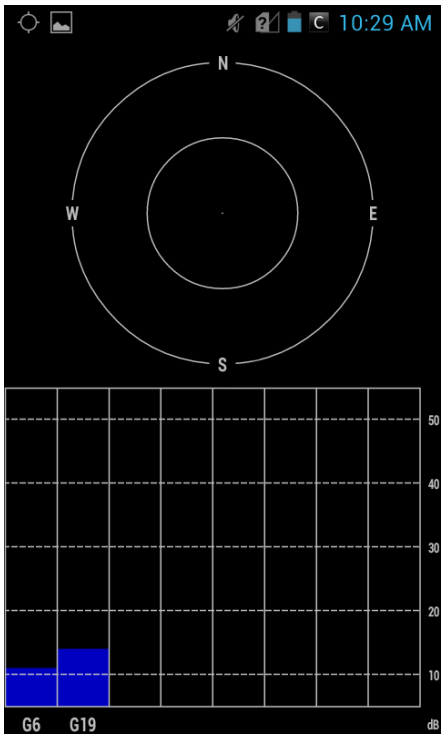
GPS (Optional)

GPS is an optional module for your handheld computer. The GPS module allows you to locate your position through satellites. To make sure that it can function normally, please use the device outside with a clear view of the sky and do not cover the antenna. To activate your GPS functions, please follow the instructions below.

1. **Tap *u-center* APP.**
   (It is a preloaded GPS APP)



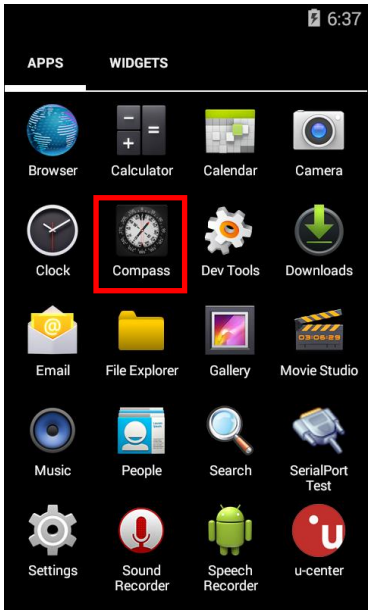
2. **The device will search satellites automatically.**



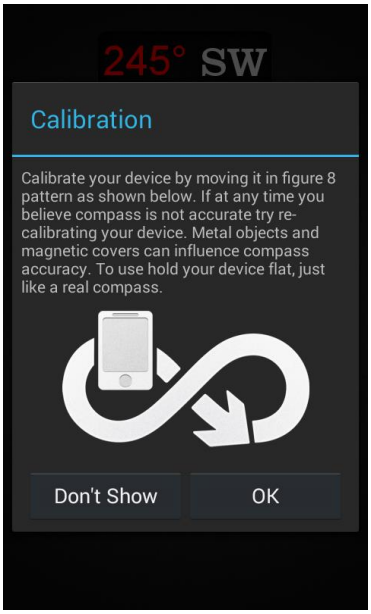
Compass

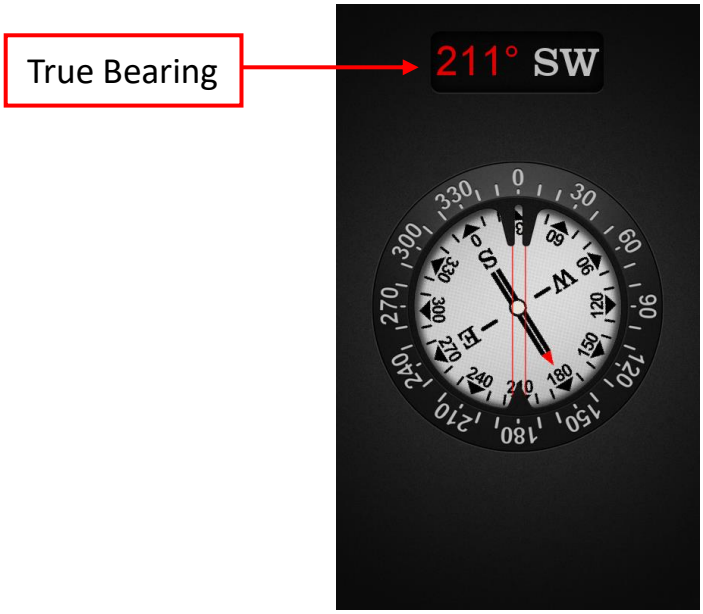
Compass is a preloaded navigation app benefited from the combination of magnetic, accelerometer and gyro sensor. To use compass app, please follow the instructions below.

Tap Compass



Calibrate your device as indicated

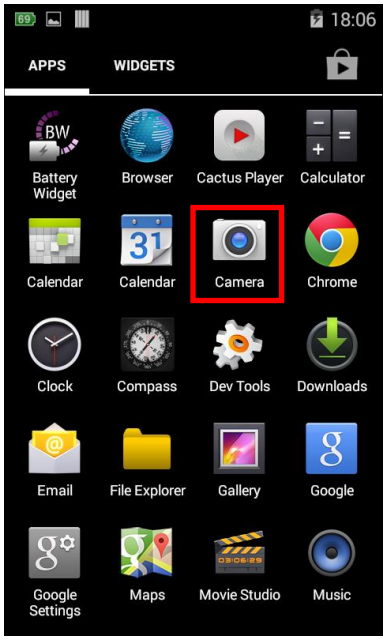




Camera (Optional)

Camera is an optional module for your handheld computer. The Camera application allows you to take pictures and shoot videos. To use the camera app, please follow the instructions below.

1. Tap *Camera* APP.

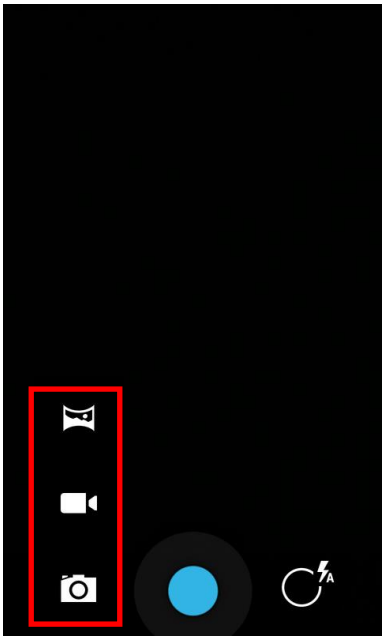


2. Tap to change mode

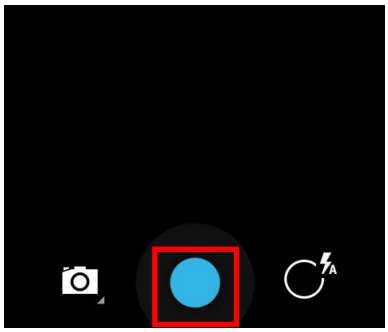
Pictures

Video

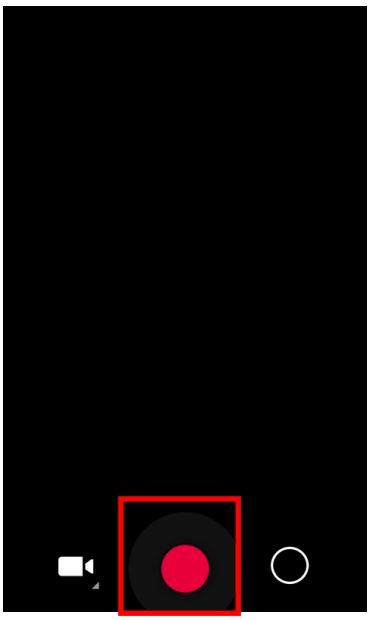
Panoramic

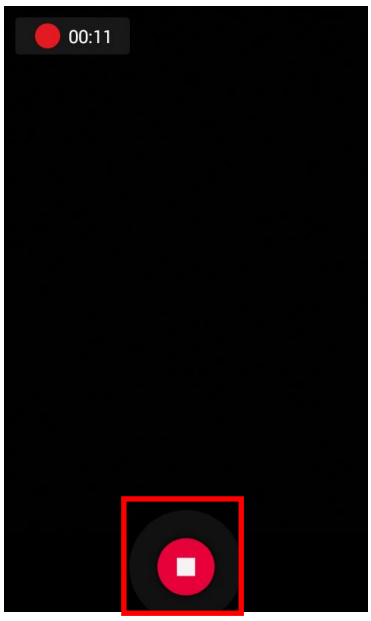


3. Taking pictures: Tap **to take pictures.**

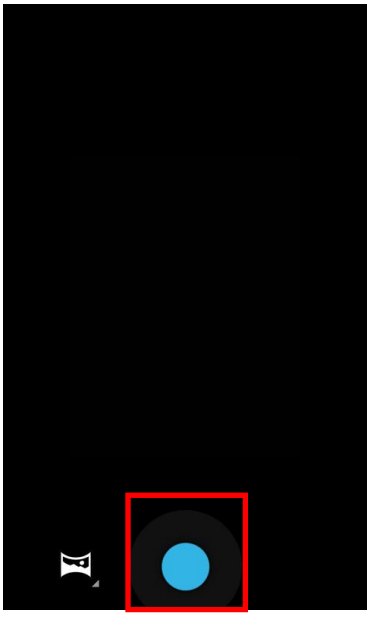


4. **Shooting videos: Tap** **to start shooting. To stop shooting tap** .





5. **Taking Panoramic Pictures: Tap** **to start. Slowly pan your device toward the other side. The status bar** **shows your progress. Tap** **to stop**.



Chapter 3- Managing Power

AC Adapter

The AC adapter performs two functions:

- It powers the computer from an external AC source.
- It charges the computer battery.

The adapter automatically detects the AC line voltage (100V or 240V) and adjusts accordingly.

The following are recommended when using the AC adapter:

- Use a properly grounded AC outlet.
- Use one AC outlet exclusively for the computer. Having other appliances on the same line may cause interference.
- Use a power strip with built-in surge protection.

Connecting the AC adapter:

- Insert the end of LEMO to the LEMO CONN.
- Connect the end of the AC cord to the AC adapter.
- Plug the AC cord into an electrical outlet.

AC Adapter Indicator:

The green LED indicates that AC power is ready.

Note:

- *To ensure system stability, please connect your computer to an external power source when operating at -20 °C ambient temperature.*
- *The battery will not be charged if an incompatible AC adapter is chosen.*

Battery

The power source of your handheld computer will automatically switch to battery when external power source (such as AC adapter or optional vehicle adapter) is disconnected. The following section provides battery related information, operation, as well as power-saving tips.

Battery Low

When the battery is nearly exhausted, “Battery Low” warning message will be shown and the battery charge indicator will flash. Once the Battery Low warning occurs, please:

- Save and close the files you are currently working on.
- Plug in the AC adapter to recharge the battery.

⚠ *Caution*

When battery capacity is very low, your handheld computer will shut down automatically and any unsaved data might be lost.

Charging the Battery

Plug in the AC adapter to start battery charging. If the battery is at full capacity, the internal sensing circuitry will stop high current charge within several minutes.

Additionally, if you would like to charge more than one battery at the same time, optional Multi-Battery Charger (MCDF) is a suitable choice.

Note:

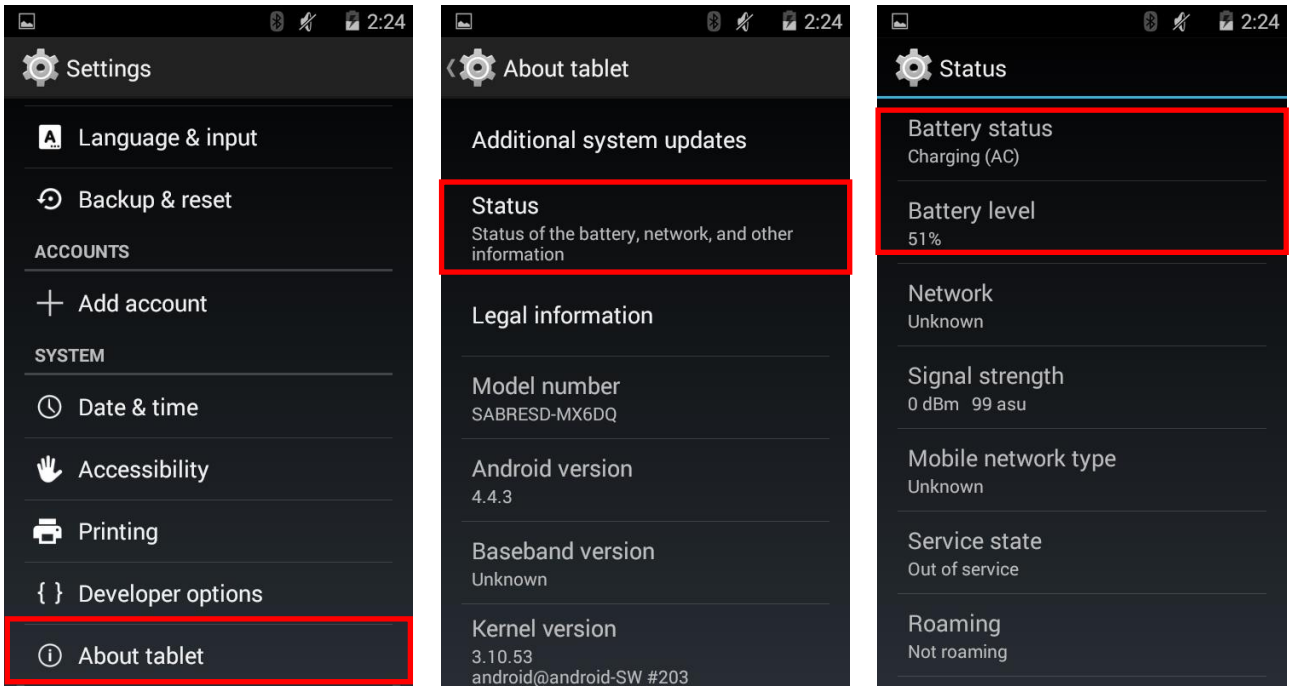
- *The battery will not be charged if an incompatible AC adapter is chosen.*
- *For more information about Multi-Battery Charger (MCDF), please refer to Multi-Battery Charger (MCDF) section.*
- *For safety reasons, battery charging will spontaneously stop if high temperature (around 45℃) occurs.*

Battery Gauge

To check battery status, please follow the steps below:

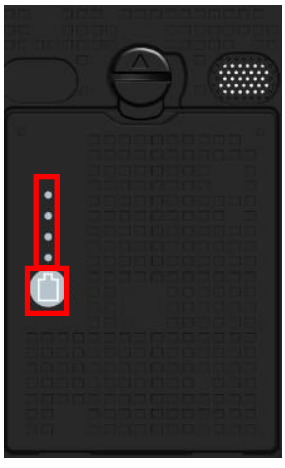
Tap *Settings* ➔ Tap *About tablet* ➔ Tap *Status*

Then, the remaining battery capacity will be shown.



There is a quick alternative way to check approximate battery level by using the battery button on the battery pack.

The indicators will light up (green) after pressing the battery button. (Each indicator corresponds to 25% battery level.)



Amount of light up indicators (From bottom)	Battery Capacity
1	<25%
2	25% ~ 50%
3	50% ~ 75%
4	>75%

Battery Power Saving Tips

You may extend the battery life of your handheld computer by:

- Lower the LCD display brightness using backlight control.
- Put your device into suspend mode by pressing the power button.
- Power off the handheld computer when the device will not be used for an extended period of time.

Replacing Battery

When the battery is nearly exhausted, you can continue operating your device by either connecting to an external power source (such as AC adapter), or replacing the battery.

Turn counterclockwise with a slot screwdriver or a coin to unlock the Battery Lock, and then replace the battery.

Note:

- *Always remember to turn OFF the power of your handheld computer before changing the battery.*

Chapter 4- Specifications

Processor

- Freescale i.MX6 Quad Core 1GHz

Memory

- RAM: 2 GB LPDDR2 RAM
- ROM: 32 GB (eMMC)

External Storage

- Micro SD Card (support SDHC, up to 32G)

OS

- Android™ 4.4.3 (KitKat)

Audio

- Mono Speaker (Back Side)
- Built-in Microphone for sound recording
- Headset (Optional)

Display

- 5” WVGA (480 x 800 pixels) with LED B/L
- Sunlight Readable screen
- Capacitive Multi Touch
  - Brightness (min.~Typ.): ≒348~417 nits
- Optional Resistive Single Touch
  - Brightness (min.~Typ.): ≒292~350 nits

Wireless Communication Devices

Optional Wi-Fi:

- IEEE 802.11b/g/n (2.4GHz)

Optional Bluetooth:

- IEEE 802.15.1 (2.4GHz)
- Bluetooth 4.0

Optional GPS:

- u-blox Neo-M8N

Camera (optional)

- 5M Pixel
- Auto Focus and LED Flash Camera

Sensors

The sensors provide 6 features:

- Magnetic, Accelerometer, Gyro, Light, Proximity, Compass

I/O Ports

Right:

- Micro SD card slot
- Optional Expansion POGO 20 pin (L3)

Left:

- Optional Cradle POGO 20 pin (L4)

Top:

- Optional SMA ANT for WLAN/BT, GPS.

Bottom:

- DC-in/USB OTG:
  - Standard: Sealed DC-in 5V with LEMO Conn. (8 pin)
  - Optional: Sealed DC-in 10~32V (BVA) with LEMO Conn. (8 pin)
- L5: Optional Sealed Fischer Connector L5-1~L5-3

  Choose 1 out of 5 for each connector
  - RS232 x 1
  - USB x 1
  - MLAN x 1
  - Audio x 1
  - VGA x 1

Note:

- *For sealed Fischer connectors, each function can only be chosen once.*
- *Connectors are no foolproof design.*
- *L3, L4, L5 trade-off with each other.*
- *When DC-in 10~32V (BVA) is chosen, it needs to work with 36W or 90W AC Adapter. Also, the BVA module will trade-off with L5-1.*

Battery

- 3.7V, 3520 mAh Lithium-ion Battery pack(BD61C)
- Battery button and indicators (For checking battery capacity)
- Overheat protection (stop charging if >45℃)
- Weight: 100g
- 4.5 hours Battery life (Depends on your usage and device settings)

Double Capacity Battery (Optional)

- 3.7V, 7040mAh Li-ion battery pack (BD61D)
- Battery button and indicators (For checking battery capacity)
- Overheat protection (stop charging if >45℃)
- Weight: 175g
- 9 hours Battery life (Depends on your usage and device settings)

AC Adapter

- Standard 25W AC Adapter:
  - Input: AC 100V-240V 50/60 Hz
  - Output: 5V/5A
- Optional 36W AC Adapter:
  - Input: AC 100V-240V 50/60 Hz
  - Output: 12V/3A
- Optional 90W AC Adapter:
  - Input: AC 100V-240V 50/60 Hz
  - Output: 19V/4.72A

Dimensions & Weight

- 169 mm (W) x 90 mm (D) x 24.5 mm (H) (w/o bumpers)
- 171 mm (W) x 94 mm (D) x 28 mm (H) (with bumpers)
- Weight: 405 g (Including WiFi and GPS module, but without battery)

Note:

➢ *Weight varies by configuration and manufacturing process.*

Operating & Storage Temperature

- Operating temp: Standard: -20°C to 60°C
  Optional: -30°C to 60°C
- Storage temp: -40°C to 70°C

Case Materials and Color

Antenna Cover:	Recyclable UL grade PC + ABS GE C2800 or C6200
Body:	Magnesium Alloy AZ91D + Recyclable UL grade PC + ABS GE C2800 or C6200
Buttons:	Silicon Rubber
PCB:	FR-4, UL 94V-0
Battery:	Rechargeable Lithium Ion (Electrochemistry system: LiCoO2+C=Li1-XCoO2+CLiX)
Packing:	Carton: Recycled/Recyclable Paper (unbleached) Cushion: Recyclable EPE Carrying Bag: Recyclable PE Fiber Quick Guide: Recycled/Recyclable Paper
Color:	Black

Certification

- CE
- FCC
- WEEE
- REACH
- RoHS2.0
- IP66
- MIL-STD-810G
- MIL-STD-461F
- Optional: G.A.*

Note:

➢ **BVA and 90W adapter are necessary for optional G.A.*

Accessories (Optional)

- 36W AC Adapter
- 90W AC Adapter
- 1M USB Cable (LEMO 8p to USB)
- Carry Bag (Same as DB6)
- 1M VGA Test Cable (Fischer 9p to DB15)
- 1M RS232 Test Cable (Fischer 9p to DB9)
- 1M MLAN Test Cable (Fischer 5p to RJ45)
- 20cm USB Test Cable (Fischer 5p to USB)
- 20cm Headset Test Cable (Fischer 5p to Audio Jack 3.5Φ)

Multi-Charger MCDF (Optional)

INDICATORS AND PORTS

- Indicators:
- Power Indicator: Show green light when attaching 90W AC Adapter.
- Charger Indicator: Show orange light when charging batteries, and OFF when fully charged.
- Battery Charging Ports x 4
- Applicable Batteries:
  - BD61C: 3.7V, 3520mAh Li-ion battery pack
  - BD61D: 3.7V, 7040mAh Li-ion battery pack

PHYSICAL CARACTERISTCS

- Dimension: 250(L) x 250(W) x 132(H) mm
- Weight: 795 g

ELECTRONIC CHARACTERISTICS

- DC Input Range: 12 ~ 32V
- DC Power Jack: DC-in 2-pin
- Charging Time:
  - 3 hours for BD61C
  - 7~8 hours for BD61D

CE/FCC Certified

ENVIRONMENTAL RATINGS

- Battery Charging Temperature: 0 ~ 40 °C

Chapter 5 - Maintenance and Service

Cleaning

ALWAYS turn off the power, unplug the power cord and remove the battery before cleaning.

The exterior of the device and display may be wiped with a clean, soft, and lint-free cloth. If there is difficulty removing dirt, apply non-ammonia, non-alcohol based glass cleaner to the cloth and wipe clean.

An air gun is recommended for cleaning water and dust. As for saltwater, please clean with fresh water and blow-dry with an air gun. Be sure not to turn the device up-side-down while there is water on it.

Troubleshooting

Should the computer fail to function properly, this section presents common problems and the solutions. If troubleshooting solutions are unsuccessful, please refer to RMA Service section below.

Power Problems

Power Problems	**When I turn on the Handheld computer, it does not respond.** - If you are using battery power, check if the battery is charged - If you are using AC power, ensure that the connection of AC adapter is correct. **I cannot return from Hibernation while on battery power** - The battery might be drained. Please plug the Handheld into AC power.

Networking Problems

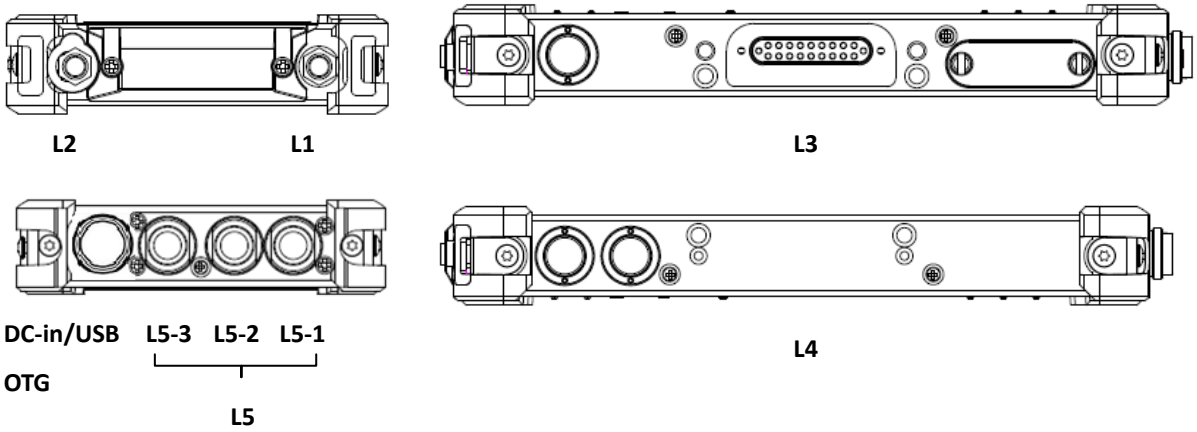
Wi-Fi	**I cannot connect to a wireless Wi-Fi network** • Make sure that: - Your handheld computer is within the range of a wireless access point. - Check if the Wi-Fi has been turned on.
Bluetooth	**I cannot connect to another device with Bluetooth network** • Ensure that: - Both devices have Bluetooth turned on. - The distance between the two devices is not over 10 meters/32 feet and that there are no large obstructions between the devices. - Both devices are compatible.
GPS	**I cannot connect to a mobile broadband network** • Do the following: - Check if GPS has been turned on. - If you are outdoors, please move away from buildings or obstructions, and expose your device to open sky. - If you are indoors, please move closer to a window.

RMA Service

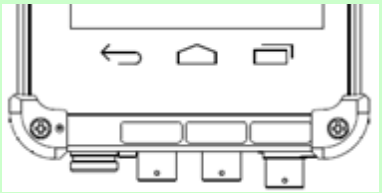
1. If troubleshooting steps are unsuccessful, consult your dealer for RMA.
2. Shipping instructions:
3. Remove any personal data.
4. Use the original shipping container and packing materials, if possible.
5. If the original packing materials are not available, wrap the equipment with soft material (e.g. PU/PE form) then put the wrapped equipment into a hard cardboard shipping box.
6. Include a sheet with the following information: (Note: Please keep a copy of this sheet for your records)
   - Name
   - Address
   - Unit serial number
   - Place and date of purchase or the original invoice number
   - Date of failure
7. A DETAILED Description of the problems you have encountered
8. A list of the hardware/software configuration, if applicable.
9. Clearly mark the outside of the shipping box with the RMA #. If RMA # is not present on the shipping box, receiving will be unable to identify it and it might be returned.
10. Unless prior arrangements have been made, the customer is responsible for all shipping costs. Unauthorized use of the company's shipping accounts is not permitted.

Appendix:

Options for the expansion of your handheld computer



Location	Feature	Functional Description
	DC-in/USB OTG	□Standard sealed DC-in 5V with LEMO □Optional sealed DC-in 10~32V (BVA) with LEMO Conn.
L1	SMA	Select one: □WiFi & BT ANT □GPS
L2	SMA	Select one: □WiFi & BT ANT □GPS
L3	POGO conn.	□Expansion POGO 20pin
L4	POGO conn.	□Cradle POGO 20pin
L5-1	Fischer connector (8 pin)	The following choices are for L5-1, L5-2, and L5-3 Fischer Connectors. Choose 1 out of 5 for each connector. **Each function can only be chosen once**. □RS232 □USB □MLAN □Audio □VGA
L5-2	Fischer connector (8 pin)	
L5-3	Fischer connector (8 pin)	

Note:

- *L3, L4, and L5 are trade-off with each other.*
- *If Fischer Connector is chosen for L5-1, .it will be a little extended than the other two Fischer Connectors, as the following illustration shows.*