



MT65 Beluga II

Portable Data Collector

User Guide

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Please read through the manual carefully before using the product and operate it according to the manual. It is advised that you should keep this manual for future reference.

Do not disassemble the device or remove the seal label from the device, doing so will void the product warranty provided by Fujian Newland Auto-ID Tech. Co., Ltd.

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Revision History

Version	Description	Date
V1.0.0	Initial release.	August 24, 2015
V1.0.1	<ol style="list-style-type: none">1. Added the Attaching the Pistol Grip to the MT65 and Removing the Pistol Grip sections in Chapter 2.2. Modified the Programming Scanner section in Chapter 4. <p>Note: You must have firmware version V1.00.014 or higher to have the new features described in the Programming Scanner section in Chapter 4.</p>	June 15, 2016
V1.0.2	<ol style="list-style-type: none">1. Updated the screenshots in Chapters 3, 4, 5, 6 and 7.2. Add the Wakeup Settings section in Chapter 4.3. Add Chapter 8 Admin Tool, Chapter 9 Whitelist Manager and Chapter 11 System Update.4. Add the Memory Cleanup section in Chapter 10. <p>Note: User Guide V1.0.2 or later is only applicable to MT65 (4G).</p>	November 11, 2016
V1.0.3	Modified Chapter 9.	December 13, 2016

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Chapter 1 About This Guide

Introduction

This guide provides instructions for programming and operating the NLS-MT65 portable data collector (hereinafter referred to as “**the MT65**” or “**the terminal**”).

Documentation Set

The documentation set for the MT65 includes:

- ✧ ***NLS-MT65 Portable Data Collector Quick Start:*** Describes how to get the NLS-MT65 up and running.
- ✧ ***NLS-MT65 Portable Data Collector User Guide:*** Describes how to program and use the NLS-MT65.

Chapter Descriptions

- ◇ *Chapter 1 About This Guide* Provides general description of this manual.
- ◇ *Chapter 2 Getting Started* Provides information on getting the MT65 up and running for the first time.
- ◇ *Chapter 3 Basics* Describes how to program the MT65 for the use of its basic features.
- ◇ *Chapter 4 Scanning Barcodes* Provides the instructions as to how to scan 1D/2D barcodes and how to program the scanner.
- ◇ *Chapter 5 Bluetooth* Explains how to use Bluetooth functionality.
- ◇ *Chapter 6 Wi-Fi* Explains how to use Wi-Fi functionality.
- ◇ *Chapter 7 Mobile Network* Explains how to use Mobile Network functionality.
- ◇ *Chapter 8 Admin Tool* Explains how to use the admin tool.
- ◇ *Chapter 9 Whitelist Manager* Explains how to use the whitelist management tool.
- ◇ *Chapter 10 Others* Explains how to use Camera, GPS and NFC functionalities.
- ◇ *Chapter 11 System Update* Explains how to update the system.
- ◇ *Chapter 12 App Development Guide* Describes the app development environment and the use of non-standard interfaces.
- ◇ *Chapter 13 Maintenance & Troubleshooting* Provides troubleshooting solutions for issues that might occur when using the MT65.

More Information

For more product and support information, please visit our web site: <http://www.nlscan.com> .

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Chapter 2 Getting Started

Introduction

This chapter lists the parts and accessories for the MT65 and explains how to install, remove and charge the battery, and power on the MT65 for the first time.

Unpacking

Carefully remove all protective material from the pack and verify that the following items are present:

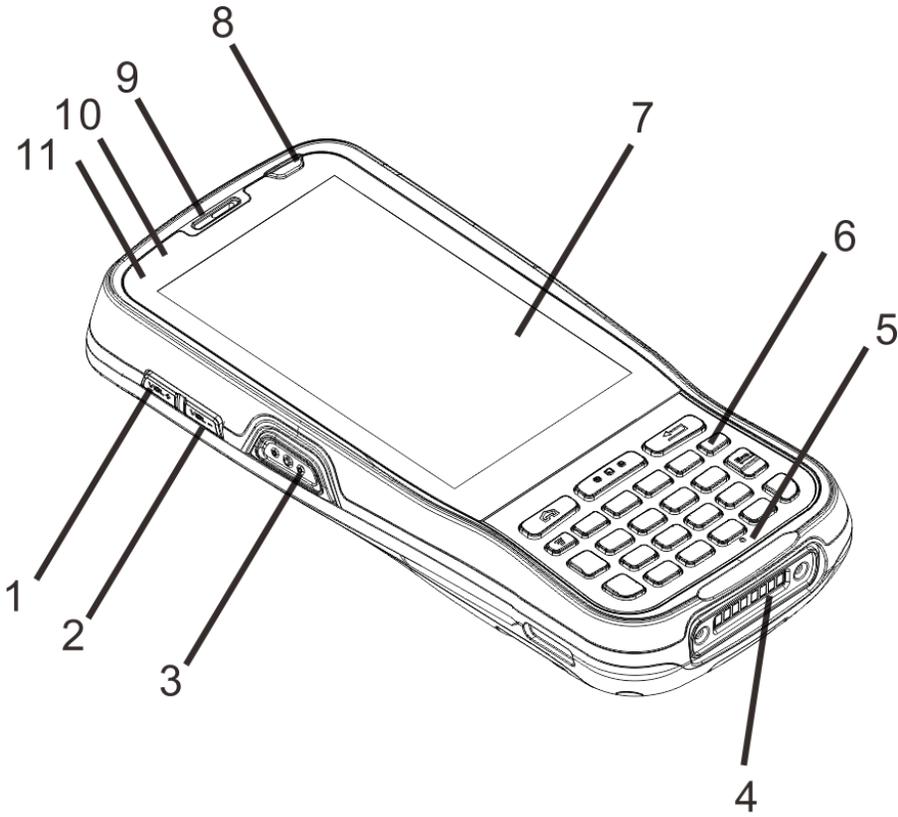
- ✧ 1 x NLS-MT65 portable data collector
- ✧ 1 x USB cable
- ✧ 1 x AC adapter for the MT65
- ✧ 1 x Li-Polymer battery
- ✧ 1 x Hand strap
- ✧ 1 x Quick Start manual

Accessories (Optional)

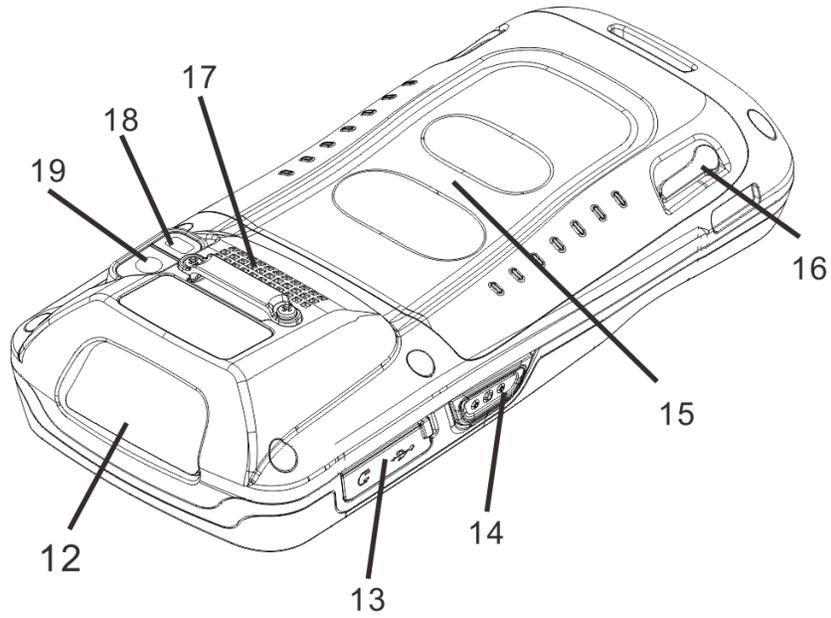
- ✧ Cradle for the MT65
- ✧ AC adapter for the cradle
- ✧ USB cable
- ✧ Pistol grip for the MT65

Getting Started

The MT65



1	Volume+	2	Volume-
3	Left Scan Key	4	Cradle Connector
5	Microphone	6	Keypad
7	Capacitive Touch Screen	8	Power Key
9	Earpiece	10	Blue LED
11	Red LED		



12 Scan Window

13 USB/Headset Connector Cover

14 Right Scan Key

15 NFC Detection Area (optional)

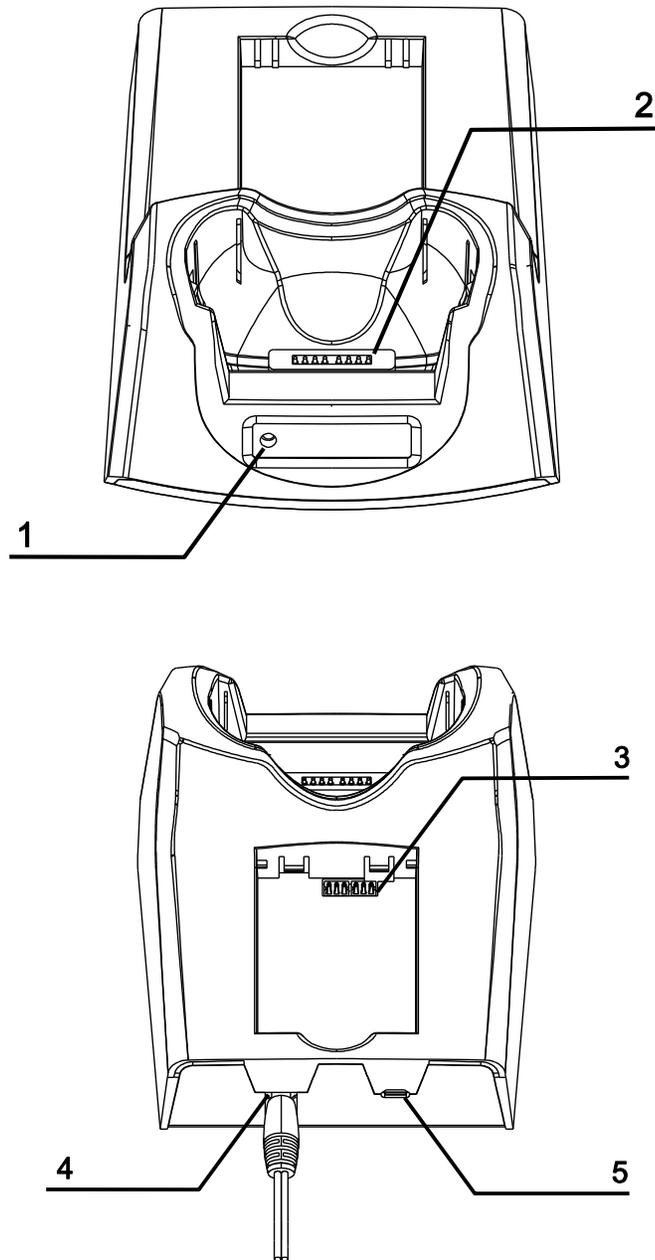
16 Battery Cover Latch

17 Speaker

18 Flashlight

19 Camera

Cradle



1 Charging LED

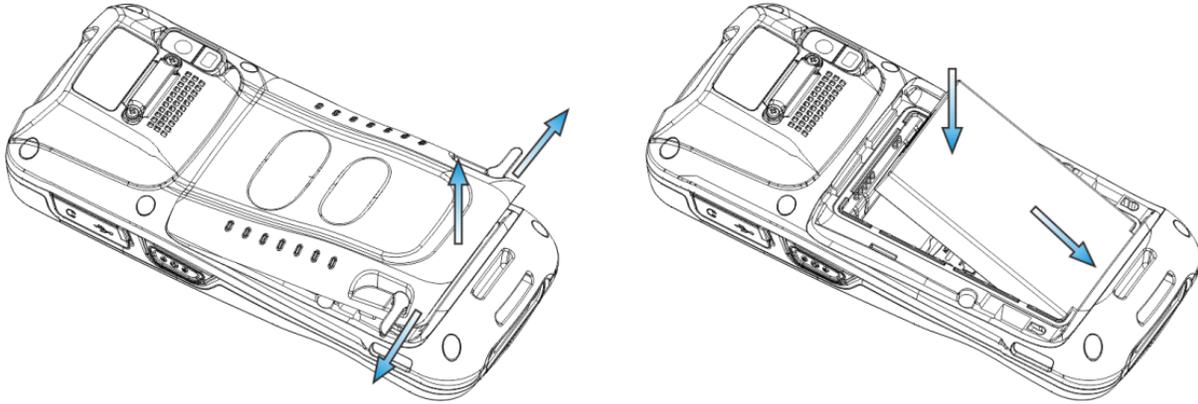
2 MT65 Connector

3 Battery Compartment

4 Power Jack

5 Micro USB Port

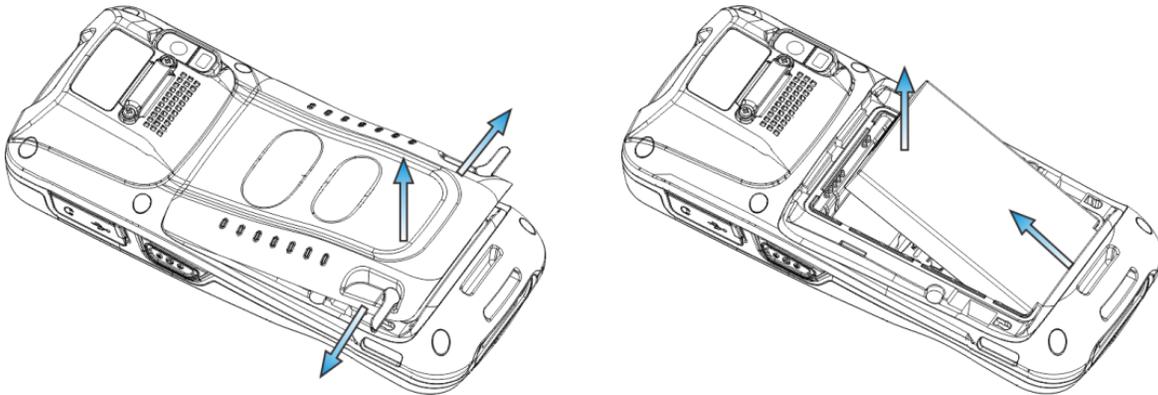
Installing the Battery



Step 1: Unlock the battery cover latches as shown in the figure above and then remove the cover.

Step 2: Insert the battery as indicated into the battery compartment, with its metal contacts facing down and lining up with the metal contacts on the inside of the terminal.

Removing the Battery



Step 1: Press and hold the Power key for 5 seconds to turn off the terminal. Unbuckle and loosen the hand strap. Unlock the battery cover latches and remove the cover.

Step 2: Remove the battery.

Charging the Battery

There are two methods to charge the battery:

- ✧ Charge with AC adapter: Connect the MT65 to a power outlet using the included AC adapter. It takes 4.5-5 hours to fully charge the terminal (The terminal is shut down or in sleep mode).



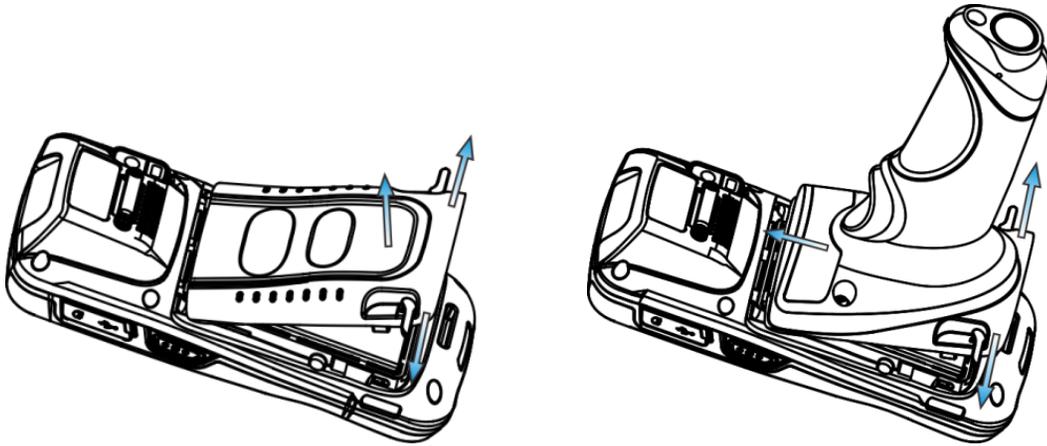
Note: Low battery may result in malfunction of the MT65. Before your first use, charge the battery for at least 8 hours.

- ✧ Charge with cradle: Insert the MT65 in the charging slot or put the battery into the battery compartment on the cradle. Connect the cradle to a power outlet using the included AC adapter (for the cradle).



Note: When the battery is dead or juice too low to power on the MT65, charge the terminal for 15 minutes before using it.

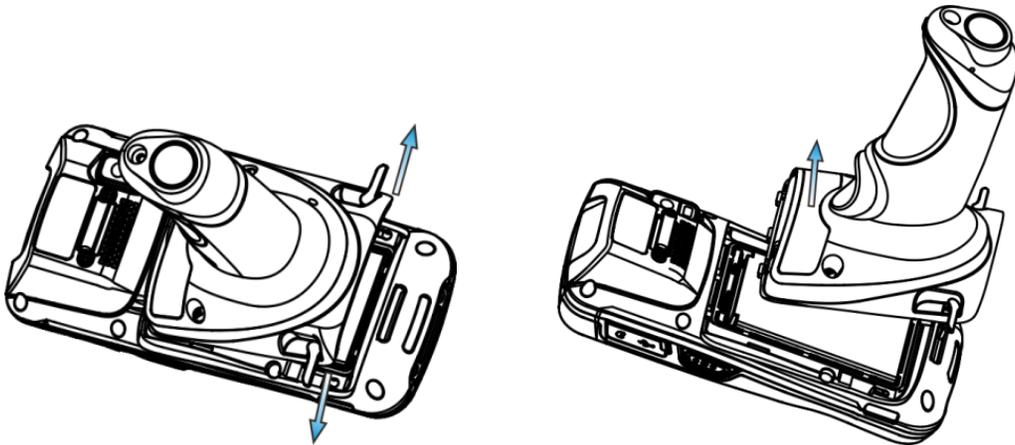
Attaching the Pistol Grip to the MT65



Step 1: Unlock the battery cover latches on the MT65 and then remove the cover.

Step 2: Unlock the latches on the pistol grip. Align the left edge of the top of pistol grip to the back of the MT65 and push the pistol grip into place. Then lock the latches on the pistol grip.

Removing the Pistol Grip

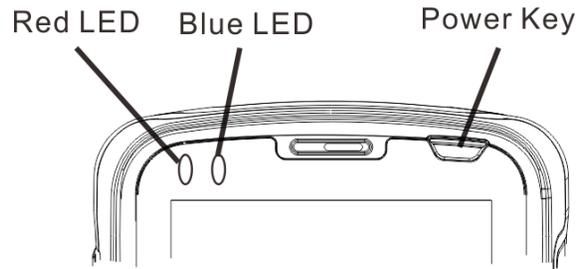


Step 1: Unlock the latches on the pistol grip.

Step 2: Lift the pistol grip.

Charging LED

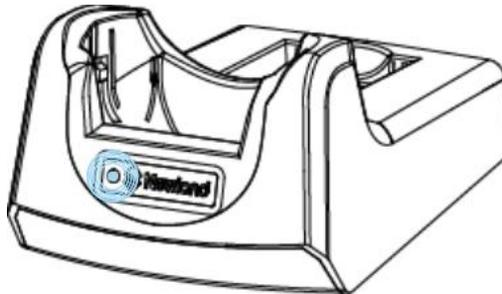
✧ Charge with AC adapter:



MT65's LEDs for indicating charging/battery statuses	
Blue LED on	Fully charged
Red LED on	Charging in progress
Red LED flashes constantly	Low-battery alert

Note: When the battery is dead or juice too low to power on the MT65, charge the terminal for 15 minutes before using it.

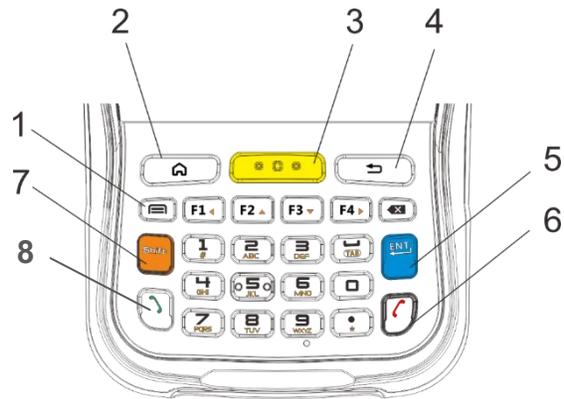
✧ Charge with cradle:



Indications of Charging LED on Cradle	
Green LED on	Fully charged
Red LED on	Charging in progress
LED off	Battery not found

Note: The cradle's Charging LED only indicates the charge statuses of the battery. When charging the MT65 with the cradle, the user is notified of charge statuses of the terminal by the LEDs on the terminal.

Keypad



1	Menu Key	2	Home Key
3	Scan Key	4	Return Key
5	Enter Key	6	End Call Key
7	Number-Function Switch	8	Call Key

The MT65 has 30 keys including function, alphanumeric, navigation and scan keys.

Home Key: Press it to go to the first Main Screen.

Press and hold the key to display the app(s) most recently used. Tap an app to open it.

Return Key: Press it to go back to the previous screen.

Menu Key: Press it to display the menu related to an on-screen item.

End Call Key: Press it to end a phone call.

Number-Function Switch: Press it to toggle between numeric (white) and function (orange) keys.

Call Key: Press it to view call history/ make a call/ receive a call.

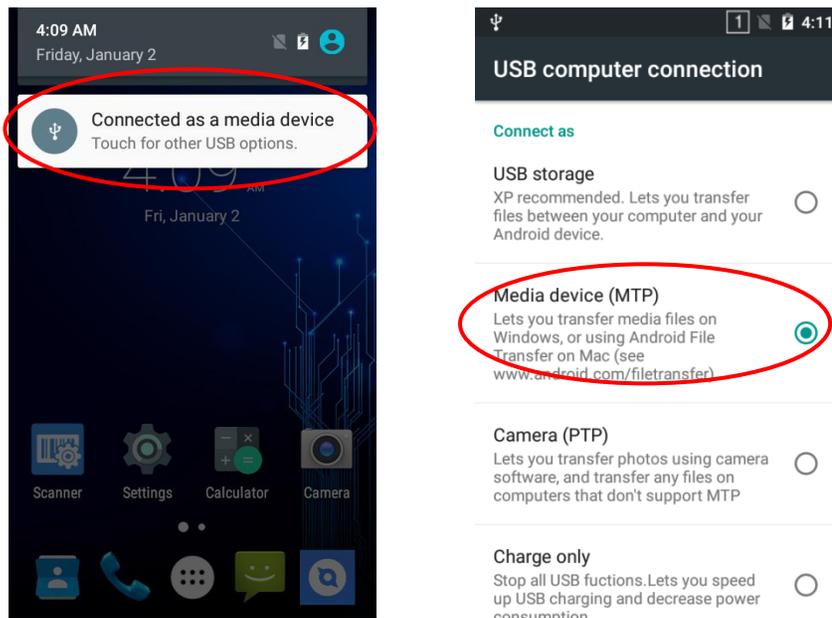
Communicating with PC

Step 1: Connect the Micro USB port on the MT65 to your computer with the included USB cable.

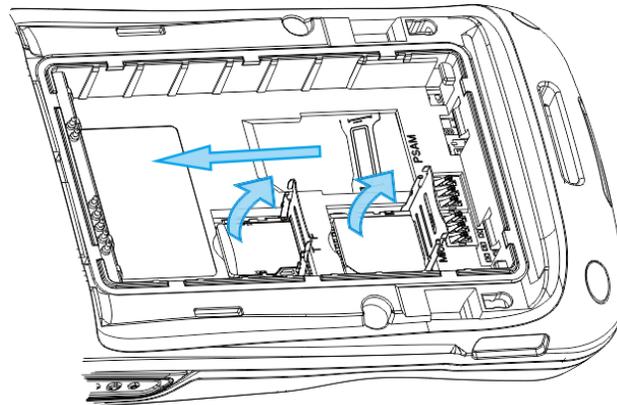
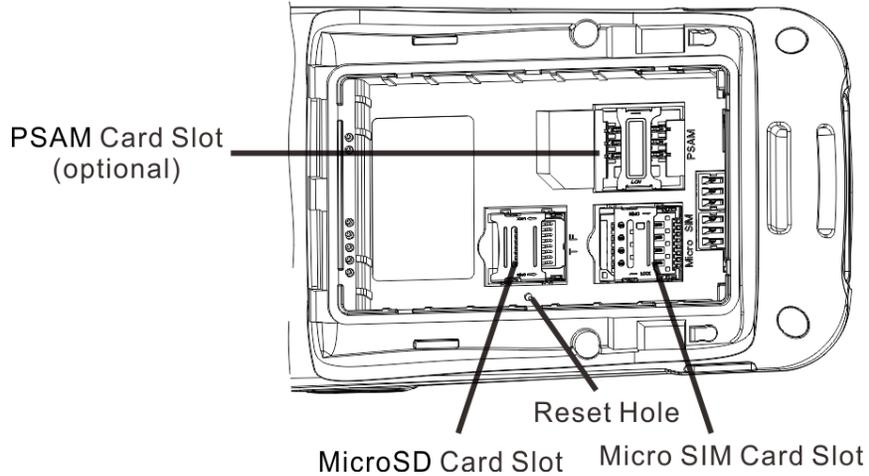
Step 2: Switch the MT65 on. On the Home screen, swipe from top to bottom with one finger in one smooth motion to reveal the notification bar as shown below.

Step 3: Tap “Connected as a media device”.

Step 4: Select “Media device (MTP)”. Navigate to the “My Computer” section of your computer and look for the newly added drive. Double-click it and you will be connected to the MT65. Then you may handle the files on the terminal through your computer.



Installing the Micro SD Card/Micro SIM Card/PSAM Card



Step 1: Unbuckle and loosen the hand strap. Unlock the battery cover latches and remove the battery cover and battery. Slide the slot cover rightward and lift the left end of it.

Step 2: Insert the Micro SD card/ Micro SIM card into the holder, with its metal contacts facing down.

Step 3: Close the slot cover and slide it leftward until it clicks.

Step 4: Insert the PSAM card from left to right into the corresponding card slot.

Note: If the terminal stops responding to input or runs abnormally, you may insert a pin or needle into the Reset hole and then press it in to reset the terminal.

Chapter 3 Basics

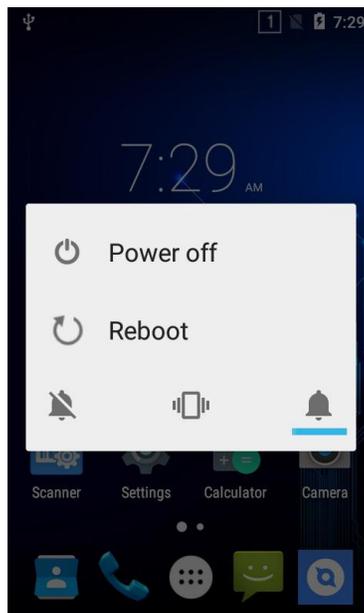
Switching On/ Rebooting/ Switching Off the MT65

After installing the SIM card and battery and having the MT65 fully charged, you may switch the terminal on.

Switch the MT65 on: Press and hold the Power Key  for a while. Note that the initialization is going to take some time before the MT65 displays the Home screen.

Reboot the MT65: Press and hold the Power Key  until the window below pops up, and tap “Reboot” then “OK”.

Switch the MT65 off: Press and hold the Power Key  until the window below pops up, and tap “Power off” then “OK”.



Locking/Unlocking the MT65

Lock the MT65: Briefly press the Power Key . If no operation is performed on the MT65 for a preset period of time, the MT65 locks automatically. You can change how long it takes the screen to lock.

Unlock the MT65: Briefly press the Power Key , then drag  on the screen rightwards.

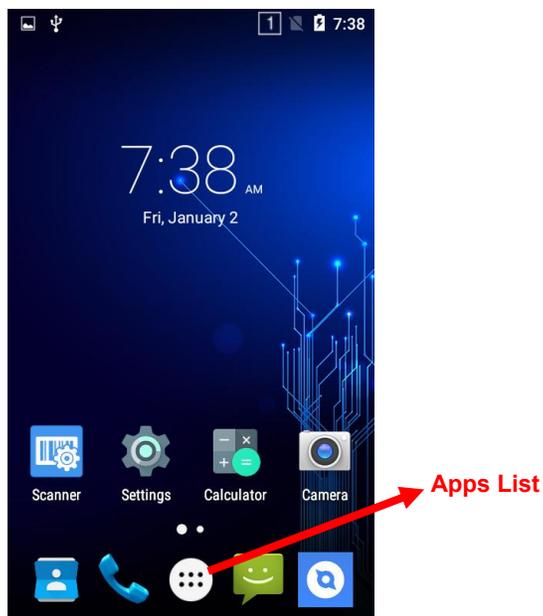
Home Screen

View another home screen: Swipe left or right.

Go to the Home screen: Press the Home Key.

Open an app: Tap it.

View all apps/Open apps list: Tap .



Add an app icon to the Home screen: Tap  on the Home screen. Tap and hold your desired app until it appears on the Home screen and then drag it into a blank area.

Delete an app icon on the Home screen: Tap and hold your desired app on the Home screen until "X Remove" appears, then drag the app into it. Note that this operation only removes the icon from the Home screen. To remove the app from the MT65, see the **Uninstalling App** section.

Status Icons

The icons in the status bar at the top of the screen give information about the MT65.

Status Icon	Description	Status Icon	Description
	WLAN		signal strength
	Bluetooth		Airplane mode
	USB connected		USB debugging
	Missed calls		Battery charging in progress
	New messages		Battery fully charged
	Mute mode		Vibrate ON

Installing App

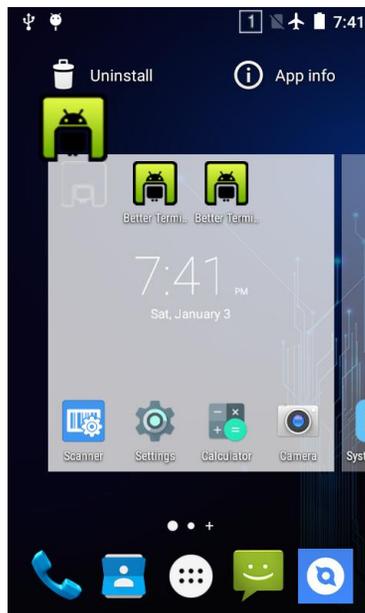
Use one of the following methods to install a new app on the MT65:

1. Download an APK file from online app store and install it.
2. Download software package onto a MicroSD card or PC and copy it to your terminal. Then install it with File Manager.
3. Connect the MT65 to PC with the supplied USB cable. Install a new app using the mobile assistant (such as Baidu Mobile Assistant) installed on the PC.

Uninstalling App

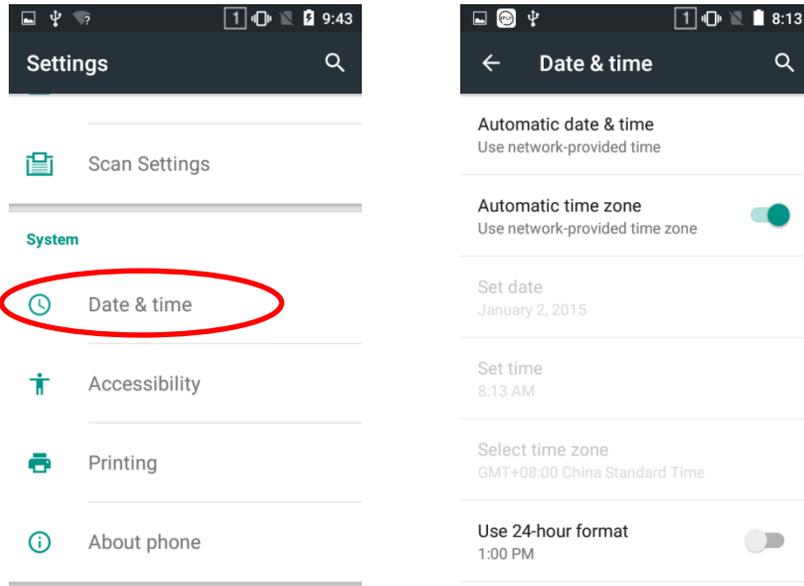
Follow the procedure below to remove an app from the MT65:

Tap  on the Home screen to view all apps. Tap and hold your desired app until a trash bin appears at the top left corner of the screen, then drag it into the trash bin.



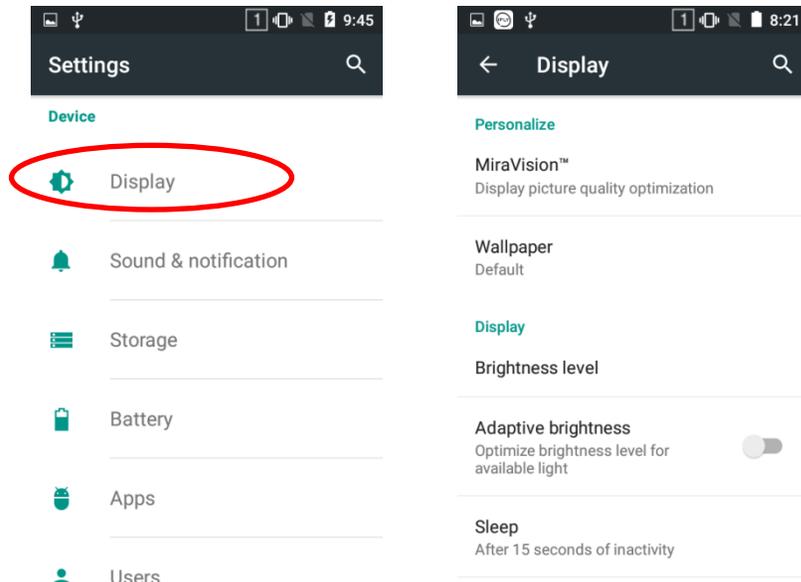
Date & Time

Set the date and time: Tap the app icon  and then “Date & time”, and set the date and time on the screen shown below as per your needs.



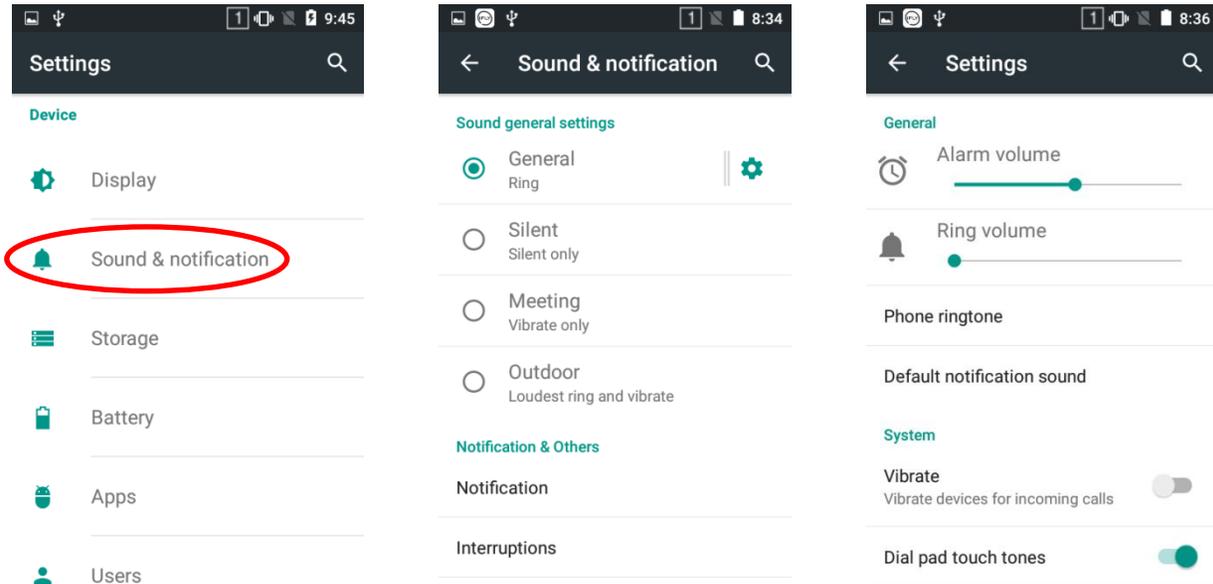
Display

Tap the app icon  and then “Display”, and set the brightness, wallpaper, sleep timer, front size and other item on the screen shown below as per your needs.



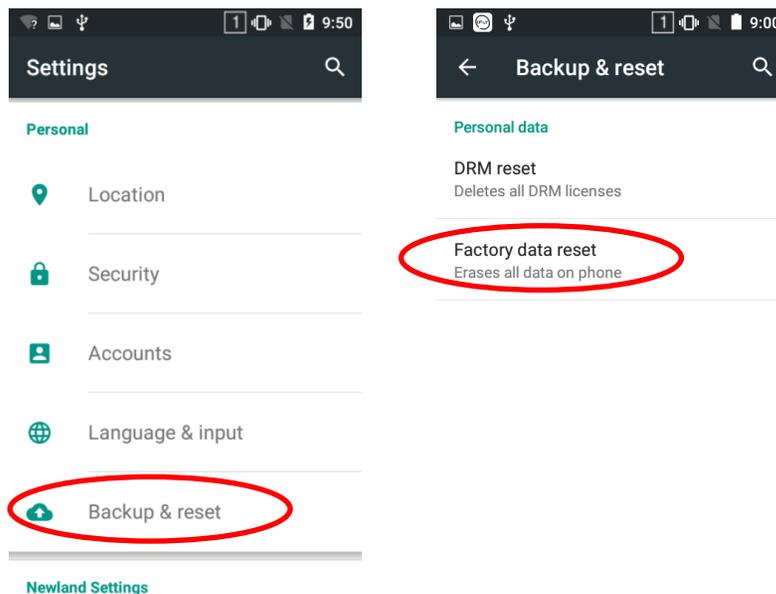
Ringtones

Tap the app icon  -> "Sound & notification" -> "General" -> . Then set the ringtones and other notification sounds as per your needs.



Restoring Factory Settings

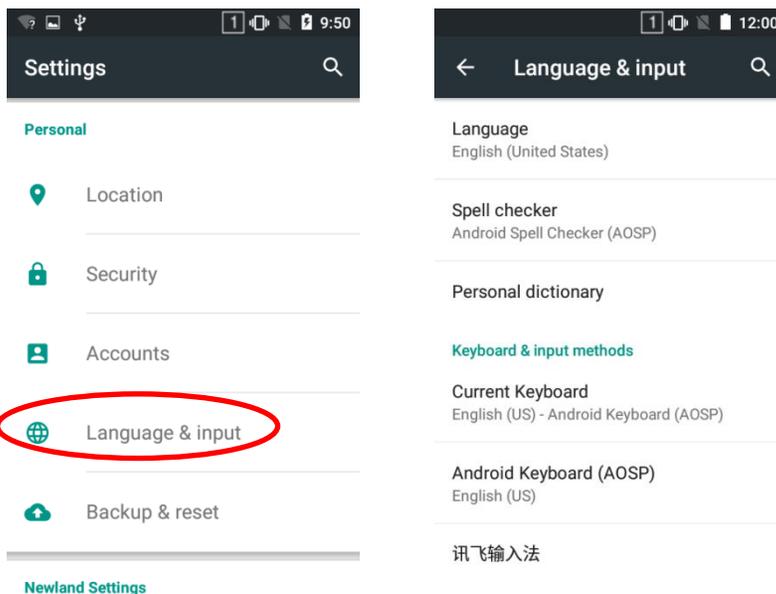
Tap the app icon  -> "Backup & reset" -> "Factory data reset" -> "RESET PHONE" -> "ERASE EVERYTHING".



To restore the terminal to factory settings and delete all the data on the internal storage, such as music, photos, select "Erase phone storage" before tapping "RESET PHONE".

Language & Input Method

Tap the app icon  -> "Language & input". Then set the language and input method as per your needs.



Shortcuts to Apps

Create a shortcut to an app on your Home screen: Tap  on the Home screen. Tap and hold your desired app and then drag it into the home screen.

Widgets

View all widgets: Tap and hold the Home screen and then tap  .

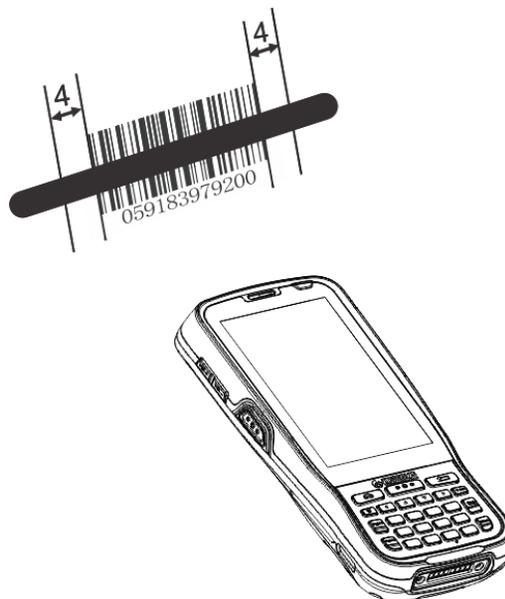
Open a widget: Tap it.

Add a widget icon to the Home screen: Tap and hold the Home screen and then tap  . Tap and hold your desired widget and then drag it into the home screen.

Chapter 4 Scanning Barcodes

Scanning 1D Barcode

Adjust the scan angle or the distance between the MT65 and the target barcode to ensure the length of laser beam is roughly 8mm greater than that of the barcode, as shown below.

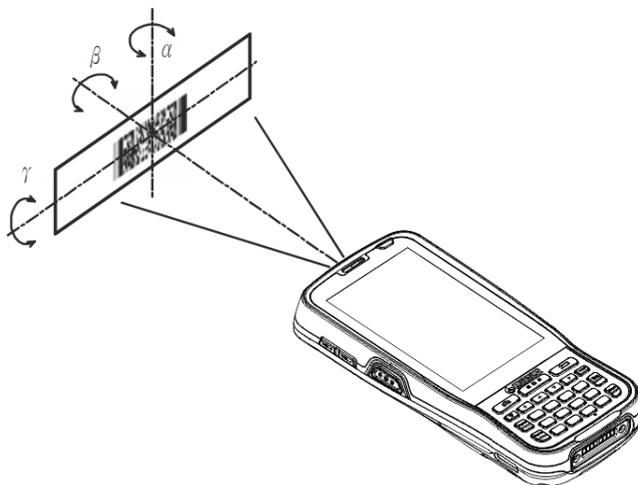


Correct	Wrong
	
	
	

Scanning 2D Barcode

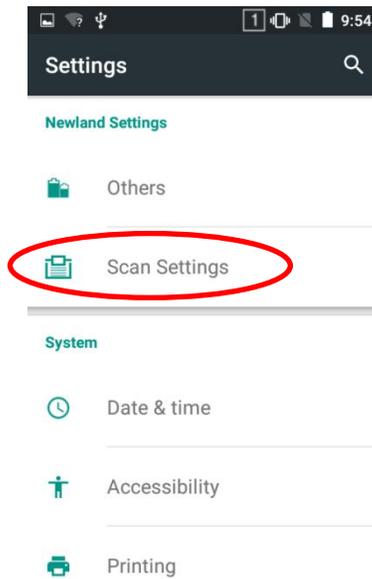
Adjust the scan angle and the distance between the MT65 and the target barcode to make them fall into the following ranges:

- 1) Point the MT65's focus lamp at the center of the barcode.
- 2) Move the MT65 until you find the appropriate scan distance.
- 3) Optimum scan angles:
Skew (α) < 45° (0° preferably)
Pitch (γ) < 45° (5° - 20° preferably)
Roll (β) = 0° - 360°



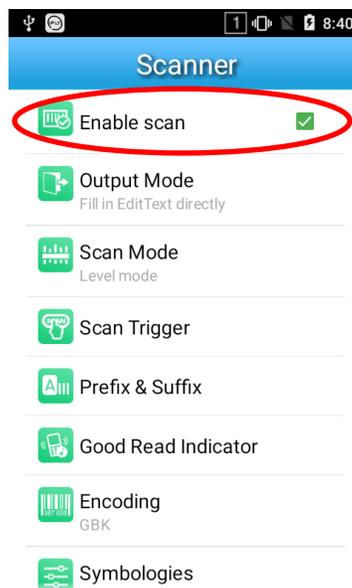
Programming Scanner

Tap the app icon  then “Scan Settings” or simply tap the app icon  . Then set the following items as per your actual needs..



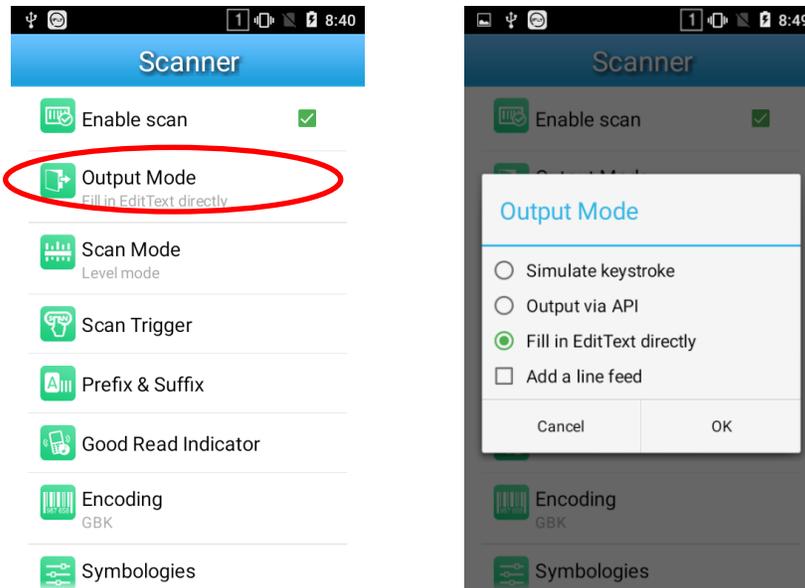
✧ Enable scan

Check or uncheck the “Enable scan” item to enable or disable the scanning feature of the MT65.



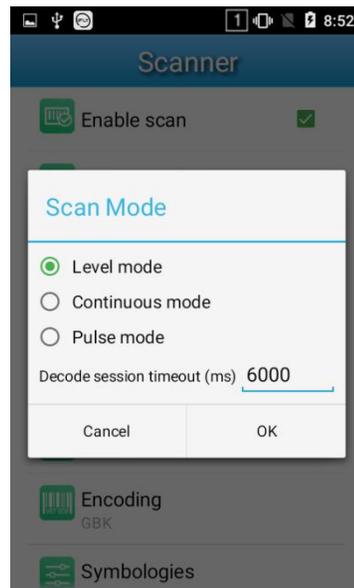
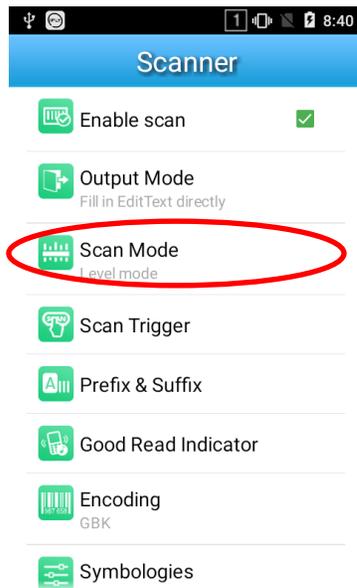
✧ Output Mode

1. **Simulate keystroke:** Output scanned data to keyboard buffer to simulate keyboard input.
2. **Output via API:** Application acquires scanned data by receiving system broadcasts.
3. **Fill in EditText directly:** Output scanned data at the current cursor position in EditText.
4. **Add a line feed:** Add a line feed after each barcode.



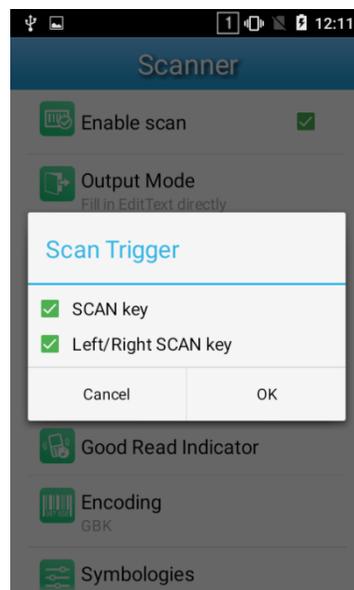
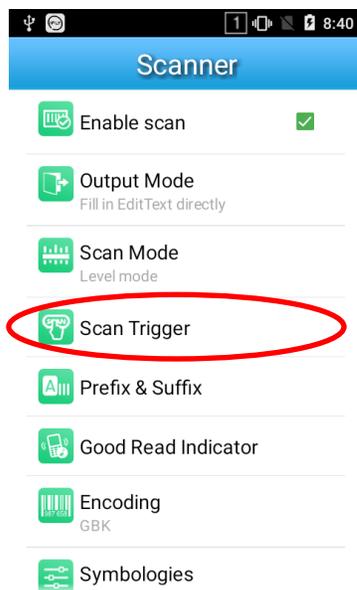
✧ Scan Mode

1. **Level mode:** Press the scan trigger to start a decode session which continues until the key is released or the decode session timeout expires or a barcode decodes.
2. **Continuous mode:** Press the scan trigger to continuously read barcodes. To suspend or resume scan operation, simply press the Scan key.
3. **Pulse mode:** Press the scan trigger to start a decode session which continues until the decode session timeout expires.
4. **Decode session timeout (ms):** This parameter sets the maximum time decode session continues during a scan attempt. To set it, enter a desired value and then tap "OK".



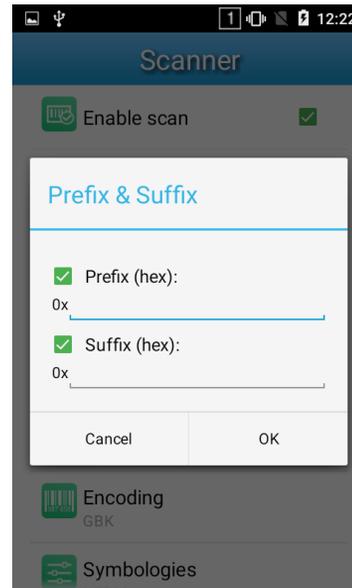
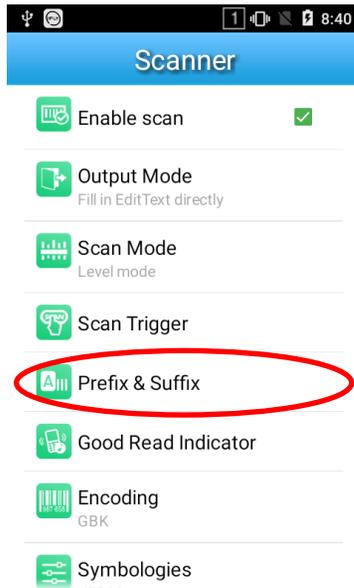
✧ **Scan Trigger**

1. **SCAN key:** Use the Scan key on the keypad as scan trigger.
2. **Left/Right SCAN key:** Use the Scan key on the left/right side as scan trigger.



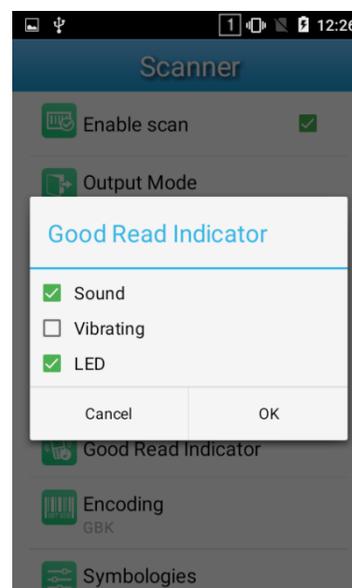
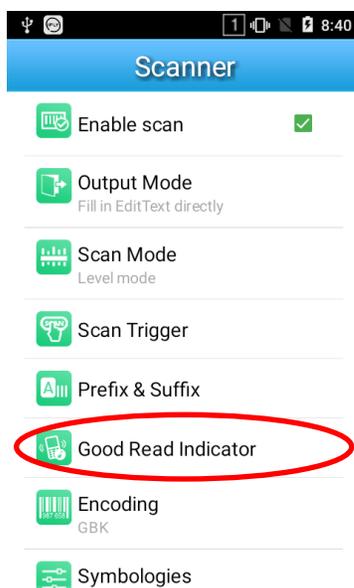
✧ Prefix & Suffix

To set the prefix/suffix, enter the hexadecimal value of a desired prefix/suffix and then tap “OK”. For example, if you want to add a Line Feed character after each barcode, set the suffix to “0A”; if you want to add a Carriage Return character after each barcode, set the suffix to “0D”.



✧ Good Read Indicator

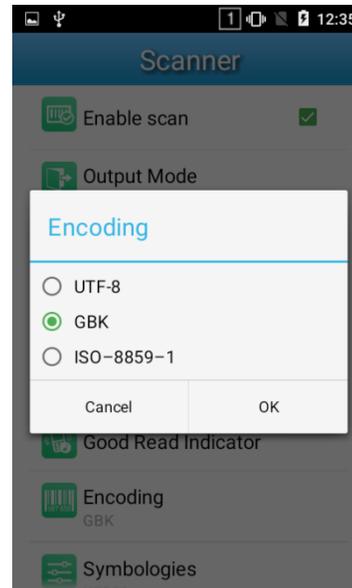
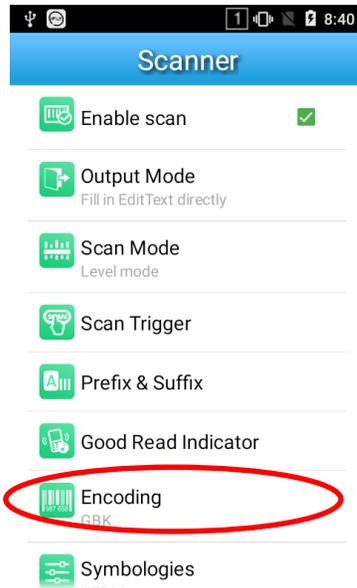
1. **Sound:** The MT65 issues a short beep to indicate a good read.
2. **Vibrating:** The MT65 vibrates to indicate a good read.
3. **LED:** The blue LED on the MT65 flashes once to indicate a good read.



✧ Encoding

Choose a character encoding to interpret barcode data.

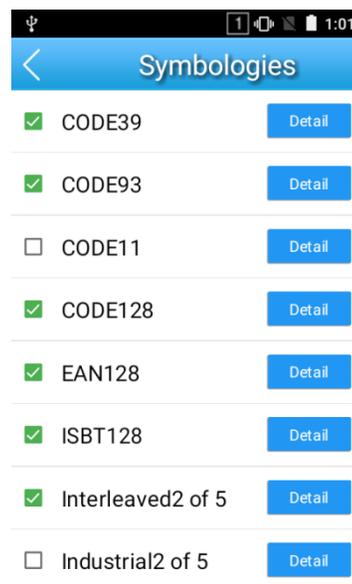
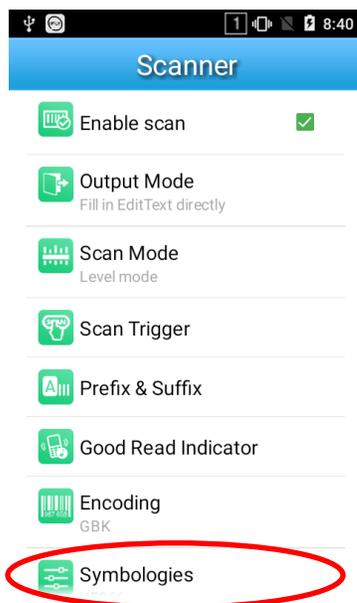
1. **UTF-8**: Dominant Unicode encoding.
2. **GBK**: A character encoding for Chinese characters.
3. **ISO-8859-1**: A common character encoding which covers Western European languages.



◇ Symbologies

Enable or disable the barcode symbologies and set other barcode parameters.

1D	CCD (≥ 4 mil)	Code 128, UCC/EAN-128, AIM 128, EAN-8, EAN-13, ISBN/ISSN, UPC-E, UPC-A, Interleaved 2 of 5, ITF-6, ITF-14, Deutsche 14, Deutsche 12, Matrix 2 of 5, Industrial 25, Standard 25, Code 39, Codabar, Code 93, Code 11, Plessey, MSI-Plessey, RSS-14, RSS-Limited, RSS-Expand.
	Laser (≥ 4 mil)	Code 128, UCC/EAN-128, AIM 128, EAN-8, JAN-8, EAN-13, ISBN/ISSN, UPC-E, UPC-A, Interleaved 2/5, ITF-6, ITF-14, Deutsche 14, Deutsche 12, COOP 25, Matrix 25, Industrial 25, Standard 25, Code 39, Codabar/NW7, Code 93, Code 11, Plessey, MSI/Plessey, GS1 Databar.
2D	CMOS (≥ 5 mil)	Code 128, GS1-128 (UCC/EAN-128), AIM-128, EAN-8, EAN-13, ISSN, ISBN, UPC-E, UPC-A, Interleaved 2 of 5, ITF-14, ITF-6, Matrix 2 of 5, Industrial 2 of 5, Standard 2 of 5, Code 39, Codabar, Code 93, GS1-Databar (RSS), Code 11, Plessey, MSI-Plessey, PDF417, QR Code, Data Matrix, Chinese Sensible Code.

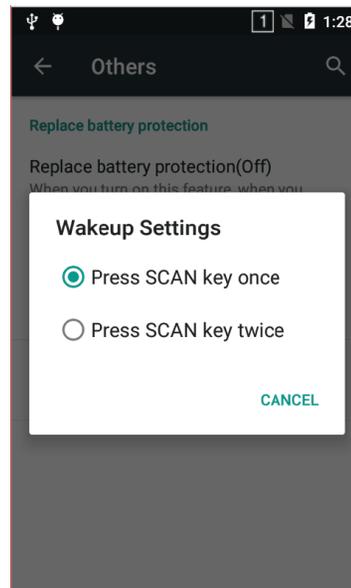
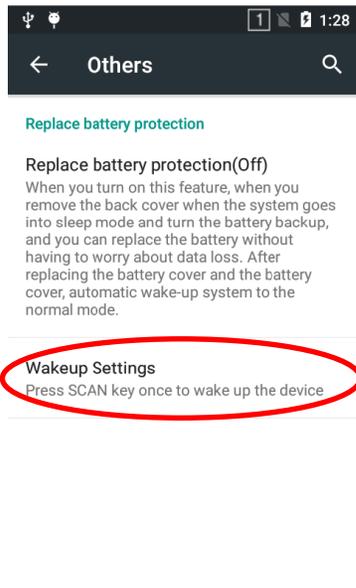


Wakeup Settings

Tap the app icon  then “Others”, and choose “Press SCAN key once” or “Press SCAN key twice”.

Press SCAN key once: Press the SCAN key on the keypad once to wake up the terminal.

Press SCAN key twice: Press the SCAN key on the keypad twice to wake up the terminal.



Chapter 5 Bluetooth

You can set up a Bluetooth connection between the MT65 and other Bluetooth devices, such as PC, mobile phone. Note that Bluetooth connection works better if there are no obstacles between them.

Before you can use a Bluetooth device with the MT65, you must first pair them.

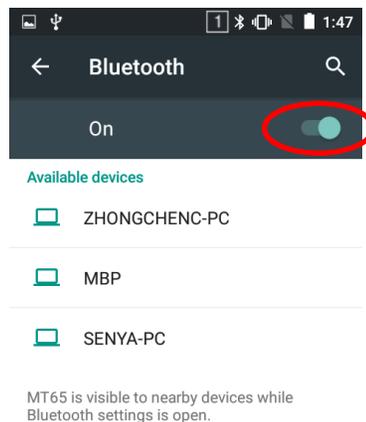
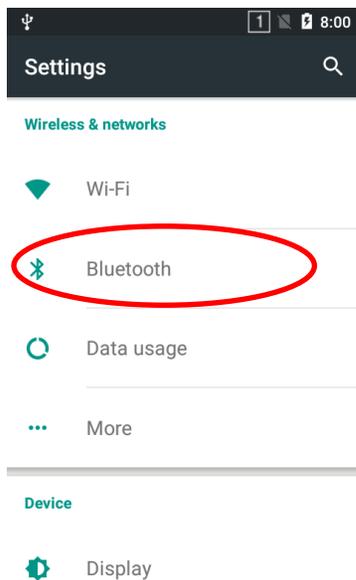
1. Make the Bluetooth device visible to the MT65.

2. Tap the app icon  then “Bluetooth”, and turn Bluetooth on to search for available Bluetooth devices.

3. Select the device from the search results to pair.

4. If prompted, input the pairing code and then tap “OK”; or if the pairing code is given automatically, then tap “PAIR”.

Unpair/rename a paired Bluetooth device: Tap the app icon  then “Bluetooth”, and turn Bluetooth on. Tap  beside the paired Bluetooth device, choose “Unpair”/ “Rename”, then follow the instructions on the screen to complete the operation.

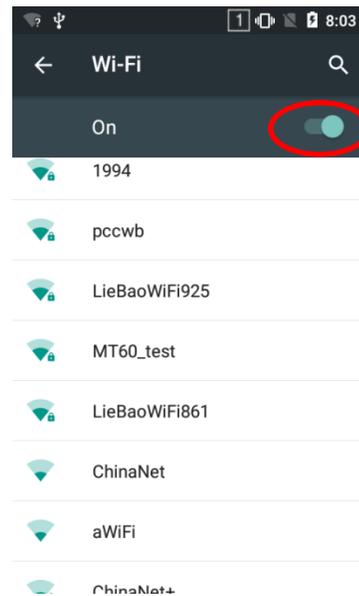
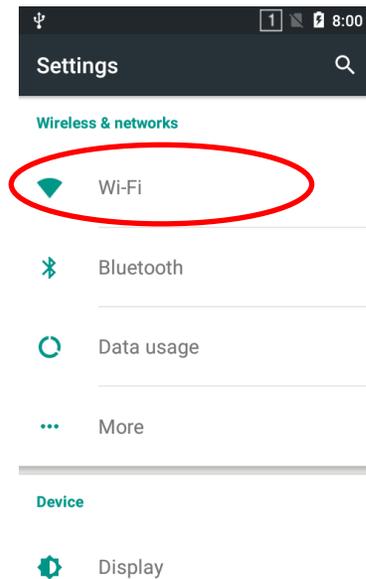


Chapter 6 Wi-Fi

Wi-Fi Settings

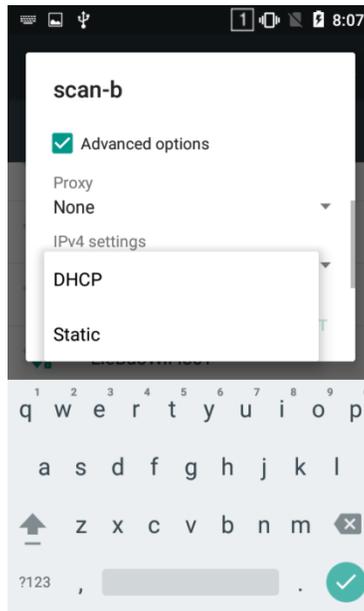
Join a Wi-Fi network:

1. Tap the app icon  then “Wi-Fi”, and turn Wi-Fi on to find available Wi-Fi networks. If Wi-Fi is already ON, then the terminal will automatically scan for available networks.
2. Tap a network and then enter the password.
3. Tap “CONNECT”.



IP Settings

To set the IP, follow the first two steps of joining a Wi-Fi network, check the “Advanced options” item, tap “DHCP” and choose your desired option.



Chapter 7 Mobile Network

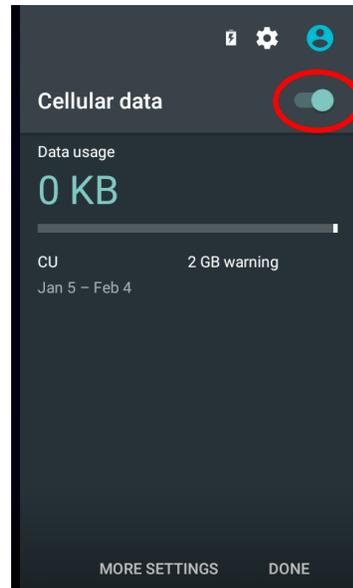
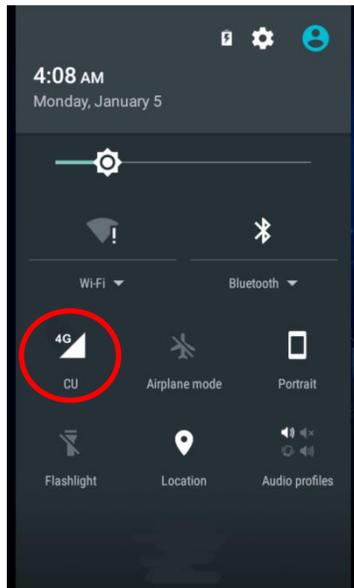
Introduction

The MT65 can also use 4G network to connect to the Internet. To establish 4G connection, you must have a Micro SIM card installed in your MT65.

Mobile Network Settings

If no Wi-Fi networks are available, or if you've turned Wi-Fi off, then the MT65 connects to the Internet via your cellular data network when available.

Turn on cellular network: Tap  and then turn Cellular data on.



Chapter 8 Admin Tool

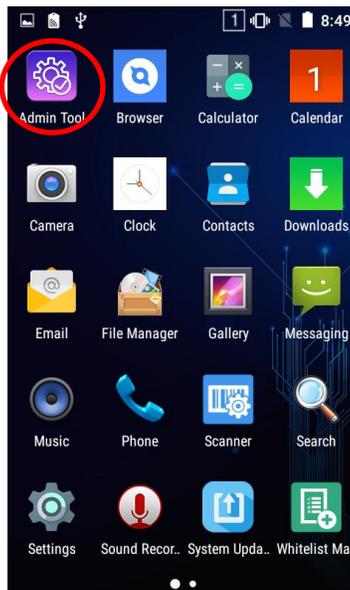
Introduction

The Admin Tool app is used to specify the apps that users can run on the MT65.

Setting the Admin Password

When you use the admin tool for the first time, you will be asked to set the admin password.

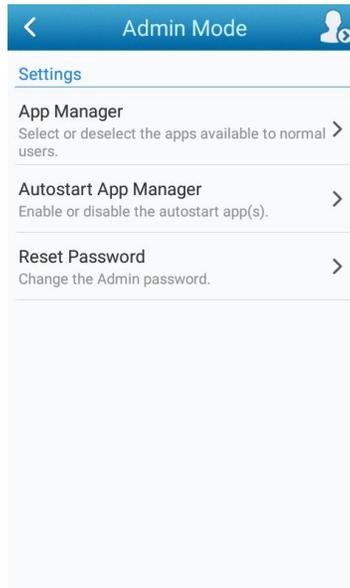
Tap  on the home screen then . Enter and re-enter the password, input the answer to the security question and tap “OK”. Then you will log into the admin tool.



Setting the Admin Mode

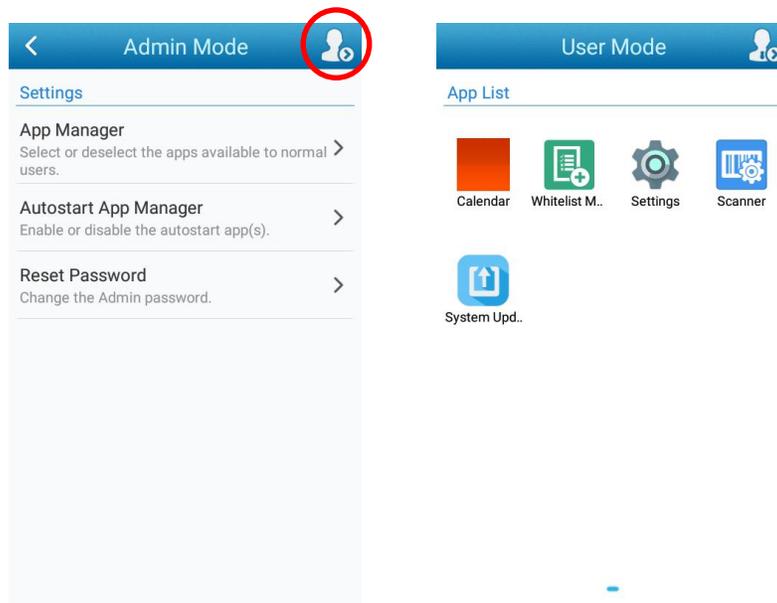
After logging into the admin tool, you may set the following parameters as per your actual needs.

1. **App Manager:** Select or deselect the apps available to normal users.
2. **Autostart App Manager:** Enable or disable the autostart apps.
3. **Reset Password:** Change the Admin password.

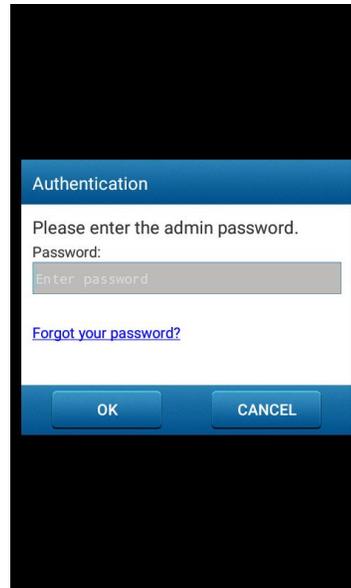


Entering/Exiting the User Mode

To enter the User mode, tap  in the top right corner of the screen.



To exit the User mode, press the Return key on the keypad, enter the Admin password and tap “OK”.



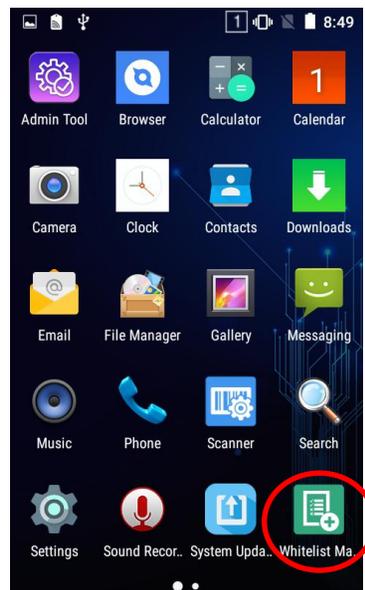
Chapter 9 Whitelist Manager

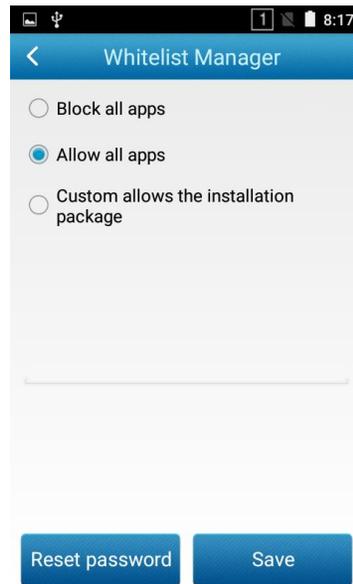
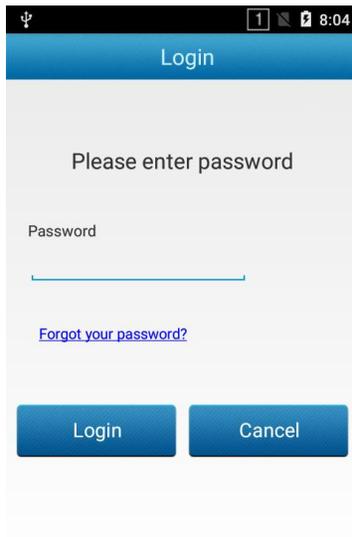
Introduction

The Whitelist Manager app is used to specify the apps that users can install on the MT65.

Logging in Whitelist Manager

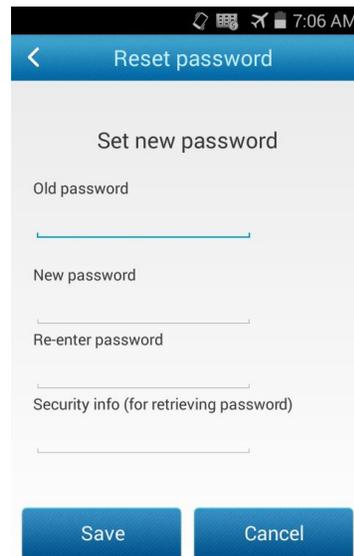
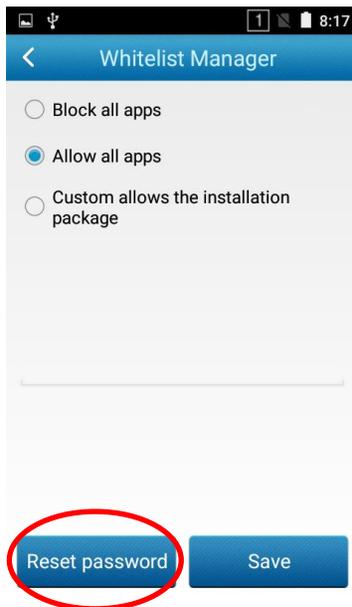
Tap  on the home screen then  enter the password (default: 112233) and tap “Login” to log in the whitelist manager.





Changing the Password

After logging in the whitelist manager, tap “Reset password”. Then fill in information as per the on-screen instructions and tap “Save”.

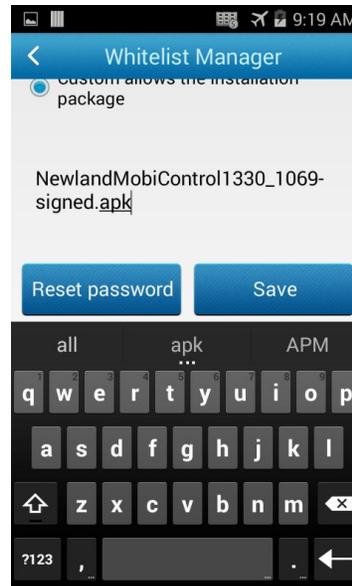
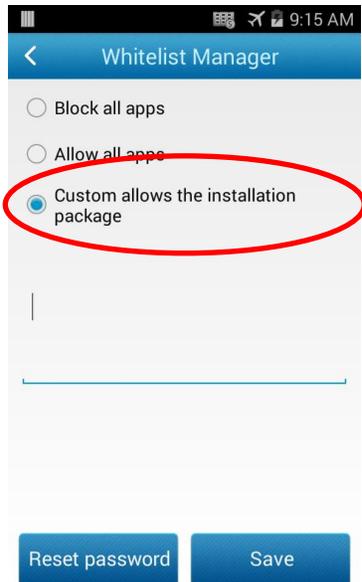


Setting the Whitelist

Block all apps: Block users from installing Android app on the MT65.

Allow all apps: Allow users to install any Android app on the MT65.

Custom allows the installation package: Allow users to install specific Android app(s) on the MT65. To specify the app(s) that users can install, follow the steps below: After logging in the whitelist manager, check the “Custom allows the installation package” item, tap the blank area below that item to open the on-screen keyboard, enter the name of the desired APK file (To add another app, tap  on the on-screen keyboard and enter the name of that APK file), and then tap “Save”.



Chapter 10 Others

Camera

Tap the app icon  to launch the Camera app.



: Tap it to reveal the parameters such as GPS location info, face beauty, exposure, scene mode and white balance and set those parameters as per your needs.

: Tap it to take a photo.

: Tap it to start/stop a video recording.

: Tap the thumbnail image in the bottom right corner of the screen to view the photo or video saved.

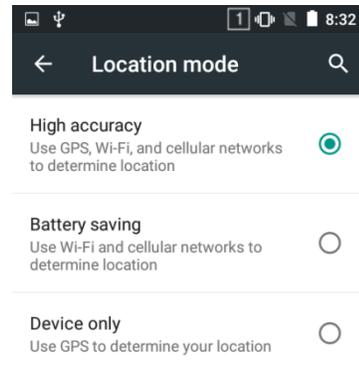
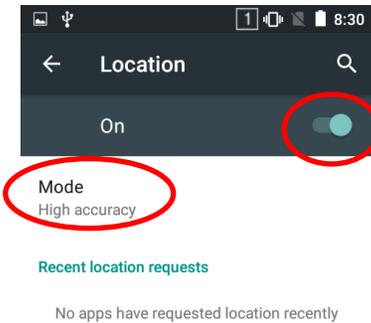
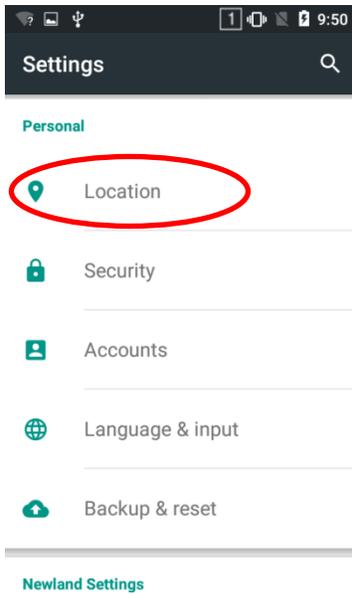
You can also download a camera app from the Internet or develop an app for the camera feature.

GPS



Tap the app icon  then “Location”, and then:

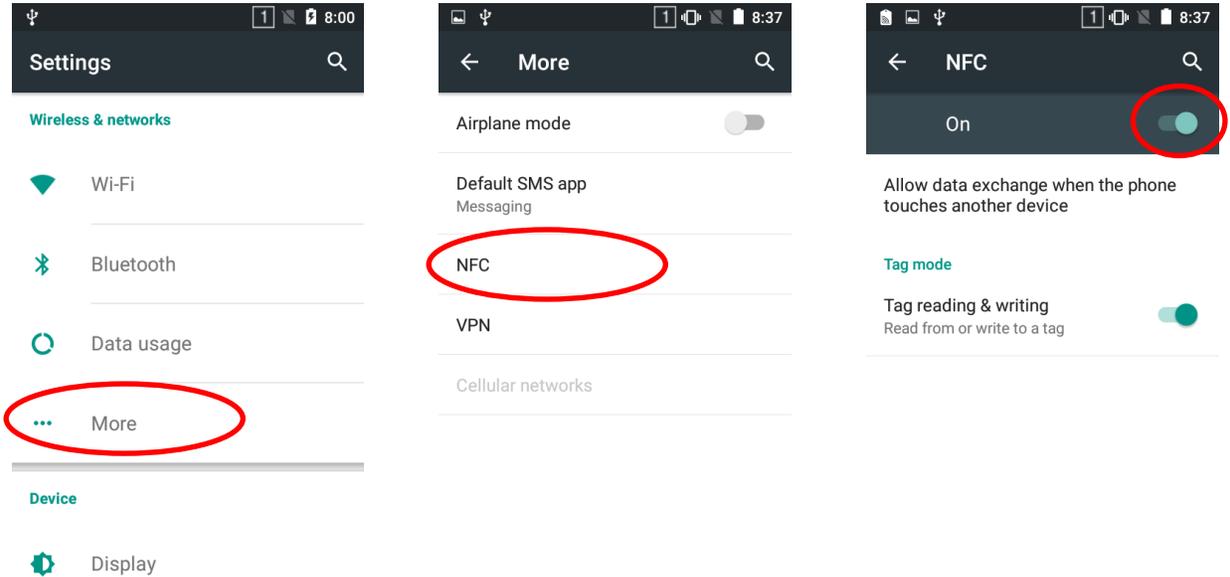
1. Turn Location on.
2. Tap “Mode” and then choose a location mode as per actual need.
3. Use a third-party map app or other GPS app to obtain location information.



NFC (optional)

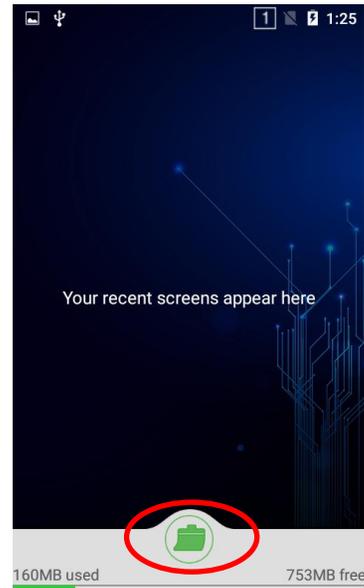
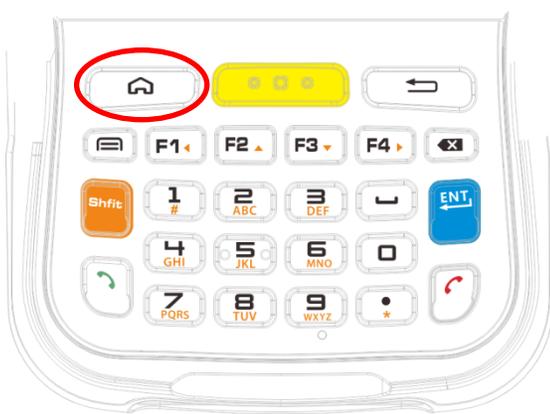
To enable the NFC feature, tap the app icon  -> "More" -> "NFC", and then turn on NFC.

Then you can install an NFC writer on the MT65 to read and write NFC tags.



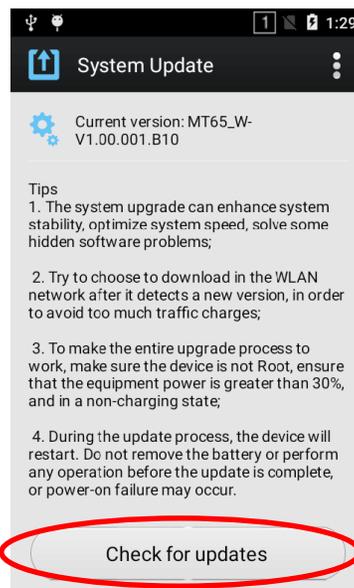
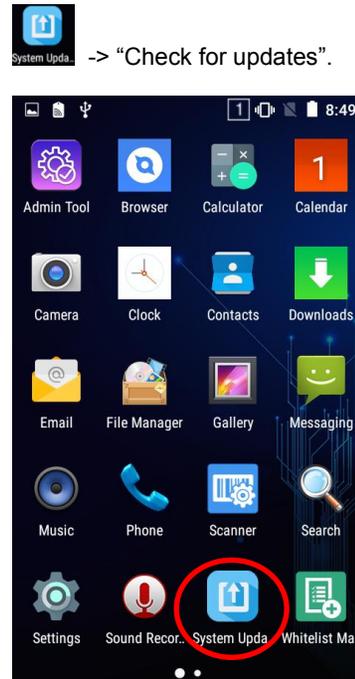
Memory Cleanup

Press and hold the Home key on the keypad until the terminal displays the following screen and then tap  to clean up the memory.



Chapter 11 System Update

Update the system online: Tap  on the home screen ->  -> "Check for updates".



Chapter 12 App Development Guide

Development Environment

The MT65 runs on Android 5.1 operating system, so you should use Android SDK 5.1 or lower when developing apps for the MT65.

Use of Non-standard Interfaces

See *NLS-MT65 (4G) SDK Handbook*.

Chapter 13 Maintenance & Troubleshooting

Introduction

This chapter includes important safety and handling information and provides troubleshooting solutions for issues that might occur when using the terminal.

Important Safety & Handling Information

Disassembly and Retrofit

Do not disassemble or retrofit the terminal by yourself. Unauthorized disassembly or retrofit will void the warranty.

External Power Supply

Use only the included AC adapter. Otherwise there is a risk of damage to the terminal.

Abnormal Situation

Keep the terminal away from fire or heat sources. If there is unusual odor, overheating or smoke during charging, immediately cut off the power and disconnect the AC adapter, and contact your dealer or Newland customer service center. Continued use in this case may result in fire or electric shock.

Drop Damage

If the terminal is damaged due to a drop from high place, immediately cut off the power and contact your dealer or Newland customer service center.

LCD Screen

Do not press against or strike the LCD screen. Otherwise it may damage the screen. When handling a cracked or shattered screen, do not touch the liquid that has leaked from it to avoid skin burn or infection.

Stacking Heavy Objects

Do not place heavy objects on the terminal as those objects may fall and cause injury.

Mounting Location

Do not place the terminal on unstable or uneven surfaces as it may fall and cause injury. Do not expose the terminal to humidity or dust as this may cause fire or electric shock. Do not expose the terminal to direct sunlight for extended periods.

Wireless Functionalities

Do not use the terminal's wireless functionalities where wireless device use is prohibited or where it may cause interference or danger, such as in aircrafts, petrol stations.

Use & Maintenance

- ✧ If the terminal cannot be switched on after experiencing a sudden or unexpected power loss or other abnormalities, remove and then reinstall its battery to reset the terminal.
- ✧ Do not throw, drop or strike the terminal. Doing so may damage the LCD display, interrupt running programs, cause data loss in memory and result in malfunction.
- ✧ Clean the scan window regularly. Do not touch it with hands. Scratched or smudged window may degrade reading performance.
- ✧ Do not tap the touch screen with sharp objects. Doing so may damage the screen or cause internal short circuits.
- ✧ Use only a dry soft cloth to clean the terminal. Cleaning it with wet cloth or benzene/ thinner/ other volatile chemicals may deform and shorten the service life of the keypad and shell of the terminal.
- ✧ Do not place the terminal facedown on any surface, or there might be misoperations.
- ✧ Sudden temperature drops may cause condensation on the shell which could cause malfunction. Care should be taken to avoid condensation. If condensation occurs, dry the terminal before use.

Battery Safety Guidelines

- ✧ **Do not dispose of batteries in a fire as they may explode.**
- ✧ The battery can be charged and discharged over 500 times. If the battery life is unreasonably short, please replace the battery with a new one.
- ✧ Use only the included battery and AC adapter.
- ✧ Do not continue to charge a battery that is fully charged. Overcharging will shorten battery lifespan. If a fully charged battery is not used, it will discharge slowly, which does not affect its normal use.
- ✧ Do not use damaged or dysfunctional AC adapters or batteries.
- ✧ **Properly dispose of and recycle batteries. Do not dispose of them as household garbage.**

Troubleshooting

Problem		Possible Cause & Solution
Type	Description	
Keypad	Unresponsive keypad or incorrect response to any key entry.	This problem may be caused by unreliable cable connection between keypad and mainboard or keypad malfunction. Please contact Newland after-sales service.
Battery	Charging LED is OFF when charging.	Ensure the AC adapter is plugged in properly.
	Noticeably short battery life.	<ol style="list-style-type: none"> 1. Check the battery level. If the battery is almost depleted, recharge it. 2. Replace the battery if it is dysfunctional.
	Fully charged battery is depleted after the terminal is switched on.	If the battery is dysfunctional, replace it with a new one.
USB	USB communication failure	<ol style="list-style-type: none"> 1. Ensure that the USB cable connections are secure. 2. Ensure that there is no contaminant inside the Micro USB port. 3. If the problem still remains, please contact the after-sales service center.
LCD Screen	No display	<ol style="list-style-type: none"> 1. Ensure the terminal is switched on. 2. If the terminal is in sleep mode, press the Power key to wake it up. 3. Check the battery level. If the battery is depleted, recharge it. 4. Ensure that the battery is properly installed. 5. Replace the battery if it is dysfunctional. 6. If the problem still remains, please contact the after-sales service center.
System	Cannot switch on	<ol style="list-style-type: none"> 1. Check the battery level. If the battery is depleted, recharge it. 2. Switch the terminal on after using the included AC adapter to connect it to a power outlet. If the problem disappears, then continue to charge the terminal. If the problem remains after charging the terminal for a while, replace the battery with a new one.
	System halted	<ol style="list-style-type: none"> 1. The problem may be caused by bugs of downloaded apps. Ensure that only reliable apps are used. 2. The problem may be caused by a sudden or unexpected power loss. Remove and then reinstall its battery to reset the terminal.



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