

P9II

User manual

(V1.0)

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Chapter 1 P9II Introduction

This chapter introduces P9II appearance.

1.1 Front view



Figure 1-1 Handheld front view

Table 1-1 Handheld front side description

Num.	Item	Description
①	WIFI/Bluetooth indicator	Green always on: WIFI is on Blue always on: Bluetooth is on Aqua blue (green & blue) always on: WIFI and Bluetooth are both on
②	GPS indicator	Green always on: position information is on
③	Power indicator	Red always on: power lower than 15% Red & green always on: power between 15%-90% Green always on: power over 90%
④	Touch screen	Displays the output of your device and responds to your tapping.
⑤	Keypad	Includes keys for numbers and specific functions.

1.1.1 Keypad
















Figure 1-2 Handheld keypad



Figure 1-3 Handheld side view

Table 1-2 Handheld keypad description

Num.	Item	Description	
①	Numeric Keys	Enter numbers (majorly for models with the phone function)	
	Alternative Function Keys	Provide functions as indicated by the red icons when Fn lock is on.	
			Moves up, down, left and right within the screen or menu.
			Volume keys
	F1~F6	User-defined function keys	
②	Power Button 	Turns on or off your device.	

③	Shift 	When using physical keyboard, shifts among number, small letters and capital letters
④	Fn key 	When it is switched on, it opens alternative function (red font) and its icon shows in the navigation bar.
⑤	Survey key 	Not in SurPad interface, it opens or turns to SurPad; in SurPad interface, it starts data collection. It supports user-defined.
⑥	Menu 	System settings
⑦	Home 	Return to main interface.
⑧	Return 	Return to last interface.
⑨	Backspace 	Backspaces over one character when in a text input field.
⑩	Tab 	Tabulate
⑪	Enter 	Confirm or line feeds
⑫	Side key 	User-defined function key

1.2 Back view

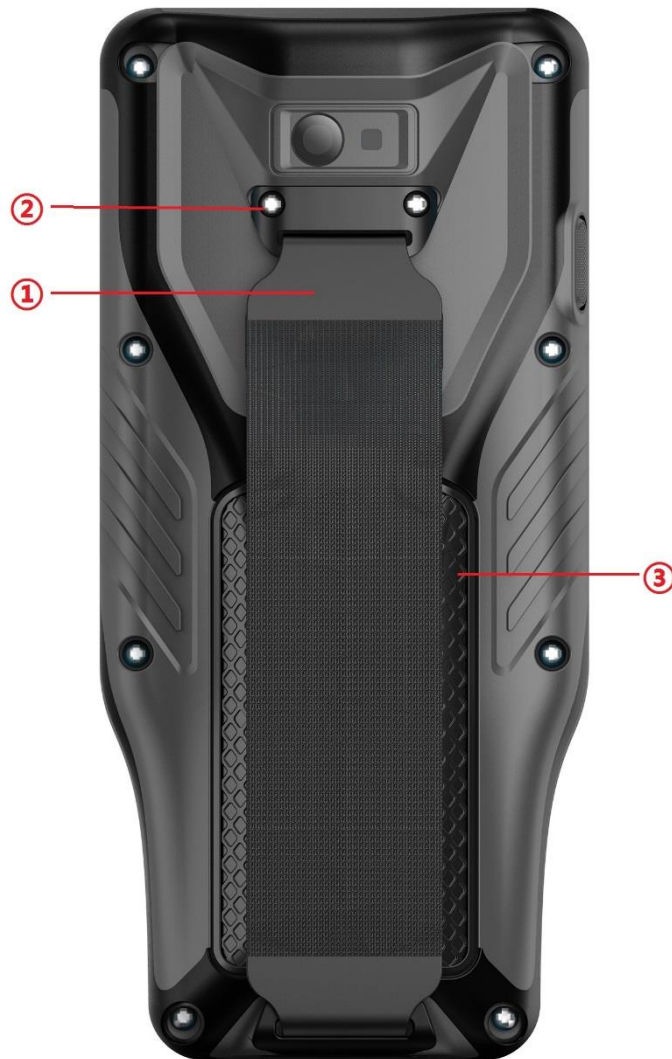


Figure 1-4 Handheld back view

Table 1-3 Handheld back side description

Num.	Item	Description
①	Speaker (under the strap)	Plays music, sounds and voices.
②	Hand Strap Holders	The hand strap attaches here.
③	Battery Cover	Inside is the battery.

1.3 Bottom view



Figure 1-5 Handheld bottom view

Table 1-4 Handheld bottom description

Num.	Item	Description
①	Microphone	Records voices. Serves as the mouthpiece during a call.
②	USB Type-C	Charing and data transition. Supports USB OTG.

1.4 Accessory

1.4.1 Battery BP-5S

Battery BP-5S is lithium ion battery, as shown in Figure 1-6. Its charging time is 4 hours and supports over 20-hour continuous operation time. Slightly press the battery button and it would show current power by four indicators. Four indicators all on means power between 75%-100%; only one indicator on means power below 25%.



Figure 1-6 Handheld battery

1.4.2 Charging cable CTMM-1.5

P9II is charged by charging cable and adaptor. Charging cable is Type-C male to Type-C male and 1.5 meters long, as shown in Figure 1-7.



Figure 1-7 Charging cable



Figure 1-8 Adaptor

1.4.3 Adaptor DSA-45PPA

Adaptor's output voltage/current is 15V/3A, as shown in Figure 1-8.

1.4.4 Data cable CUTM-1.5

Data cable is Type-C to USB and 1.5 meters long, as shown in Figure 1-9.



Figure 1-9 Data cable

Chapter 2 Basic operation

This chapter introduces basic operation of P9II handheld.

2.1 Turning on, Standby, Turning off

2.1.1 Turning on

Long press the power button till the handheld vibrates for once. It takes about 33 seconds to turn on the handheld.

2.1.2 Standby

Press the power button for one second when the handheld is on and let go, then the handheld would enter Standby mode.

Note: If the handheld is already in use and it enters Standby mode during operation (screen dims), to resume operation, press anywhere on the screen and it would come back to where you left off.

2.1.3 Turning off

If the handheld needs turning off, press and hold the power button for at least 3 seconds until the screen appears a dialog box as shown in Figure 2-1. Then click “OK” to turn off the handheld.

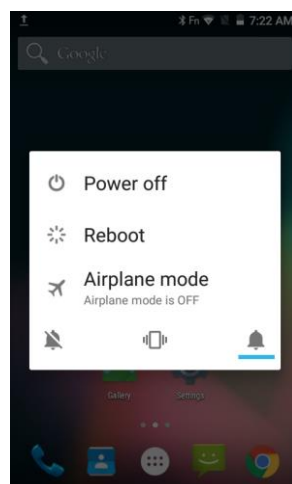


Figure 2-1

2.2 Installation & Uninstallation of SIM card, TF card and battery

- (1) Rotate the battery cover lock counterclockwise to disassemble the battery cover.
- (2) Taking out the battery, it shows two card slots at the compartment bottom. The upper one is TF card slot and the below one is SIM card slot.
- (3) Follow its left instruction to unlock the card slot and install the TF card/SIM card into the card slot (Please note the card shape), and lock the card slot.
- (4) Battery installation: place the battery bottom into the compartment at an angle and press its top down to engage the connector.

Note: when installing battery, if firstly place the battery top into the compartment and then press its bottom down, it's quite possible to cause battery stuck and damaged.

2.3 Battery charging

Since battery hasn't charged when it has been sent out from factory, it needs to charge the battery completely before using it for the first time. Charging lasts for four hours and battery supports over 20-hour continuous operation. The charger has overcharge protection function.

Note: For optimal performance of the lithium battery, please take note of the following:

- Use the included AC adapter and charger only.
- There is no need to fully discharge the battery before charging. You can charge the battery before it is discharged.
- Do not charge the battery where the temperature is high(higher than 50°C) or low(less than 0°C).
- If the handheld would not be used for long, please fully charge the battery at least once every two weeks. Over discharge of battery would affect the charging performance.
- It has risk of explosion if battery is replaced by an incorrect type. Please follow the instructions to deal with the dead batteries.

2.4 Fitting the Hand Strap

Align the upper hand strap bracket with the two mounting holes behind the device and then use a screwdriver to tighten the screws. The other side is fixed to the hand strap holders at the bottom of the device. Correct installation is as shown in Figure 2-2.

2.5 Screen capture

With Fn functions open, simultaneously press power button and volume keys for about 2 seconds and then the handheld would capture current screen and save in the Gallery.



Figure 2-2

Chapter 3 Data Transmission

3.1 Data connection

3.1.1 P9II disk

Connect P9II to PC via USB cable, and then it shows P9II disk in Computer on PC. Open the disk and it can transmit data.

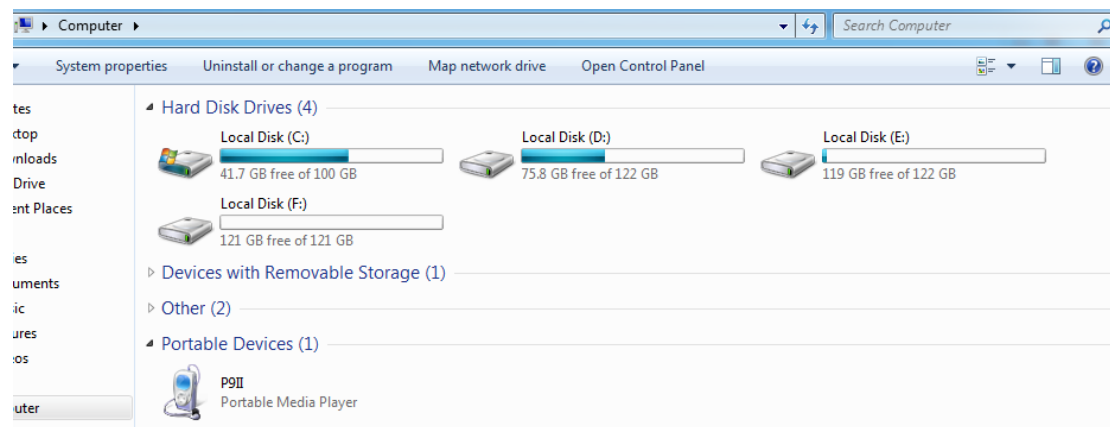



Figure 3-1

3.1.2 Bluetooth

Steps for Bluetooth transmission between Windows 10 and P9II:

1. Select file on P9II and press  left bottom. Select Bluetooth as Send selection and press [SEND].
2. Open Bluetooth receiver file dialog box on PC.
3. When P9II find the target Bluetooth device, select the target device.
4. File transmission starts and it can set save path after transmission.

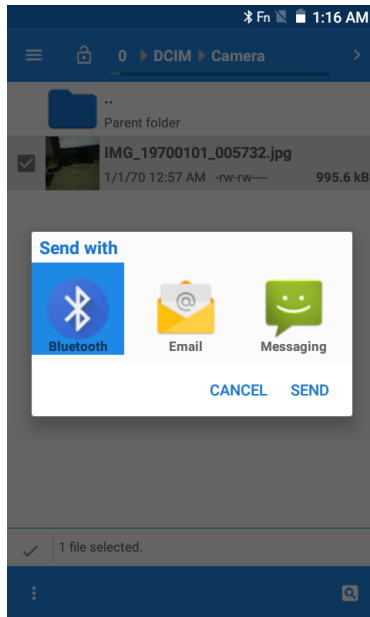


Figure 3-2

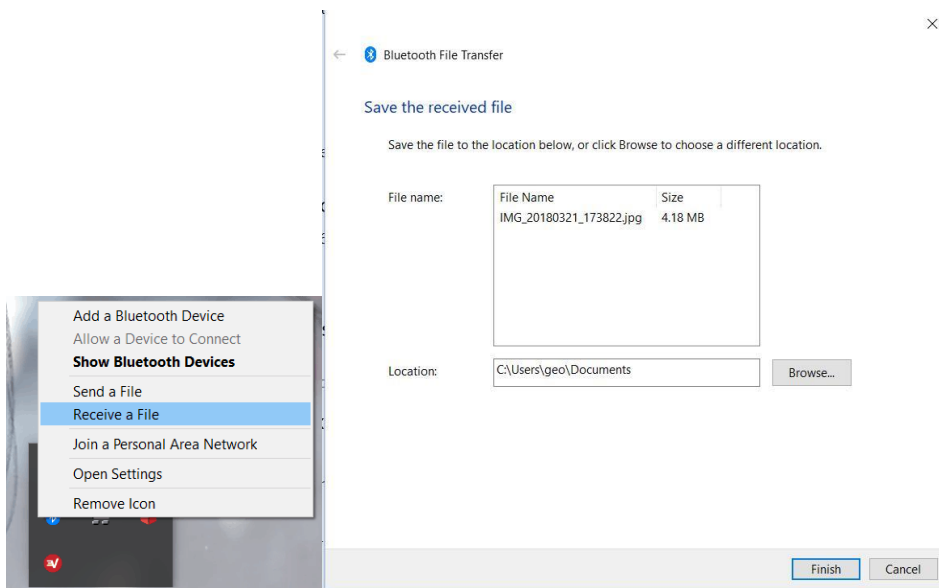


Figure 3-3

Figure 3-4

Steps for Bluetooth transmission between Windows 7 and P9II:

1. Search Bluetooth in Start on PC, and then click to Change Bluetooth Settings and change settings as shown in Figure 3-6.

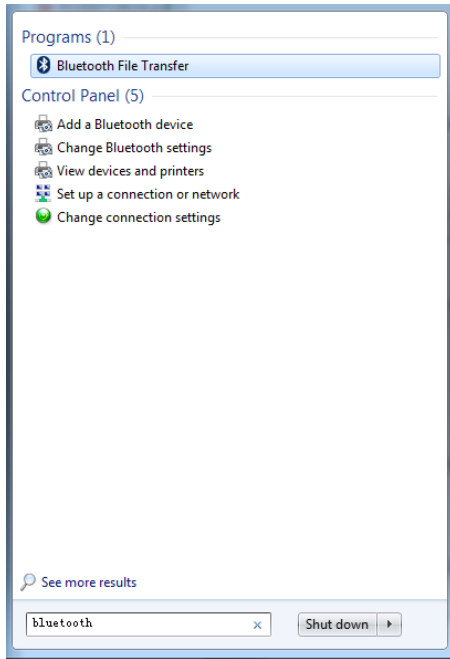


Figure 3-5

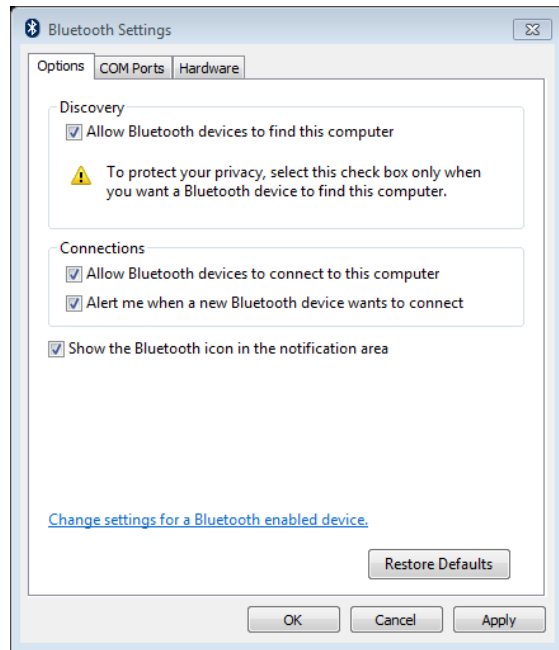



Figure 3-6

2. Select file on P9II and press  left bottom. Select Bluetooth as Send selection and press [SEND].
3. When P9II find the target Bluetooth device, select the target device to complete transmission.

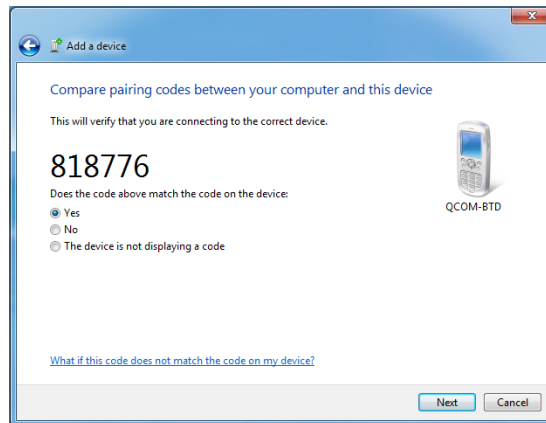


Figure 3-7

3.2 Data file path

Taking SurPad data file as example:

1. SurPad file is in <File Manager-SurPad>.
2. Project file of SurPad is in <File Manager-SurPad-Project>.
3. Output data of SurPad is in <File Manager-SurPad-Export>.

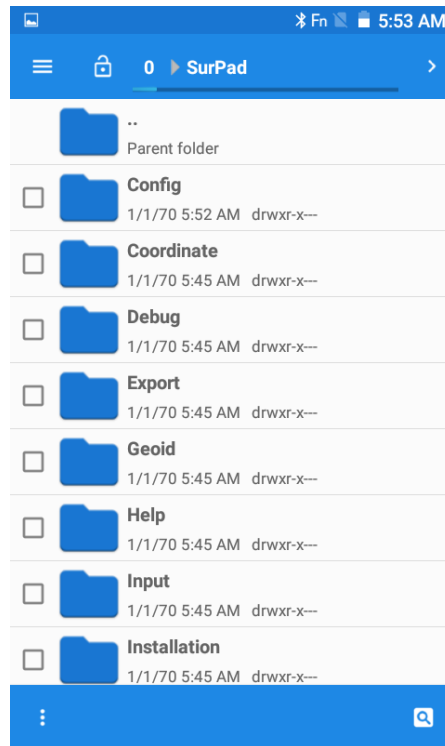


Figure 3-8

3.3 File copy and paste

3.3.1 File copy

Find the data file in File Manager, select it and it is copied, as shown in Figure 3-9.

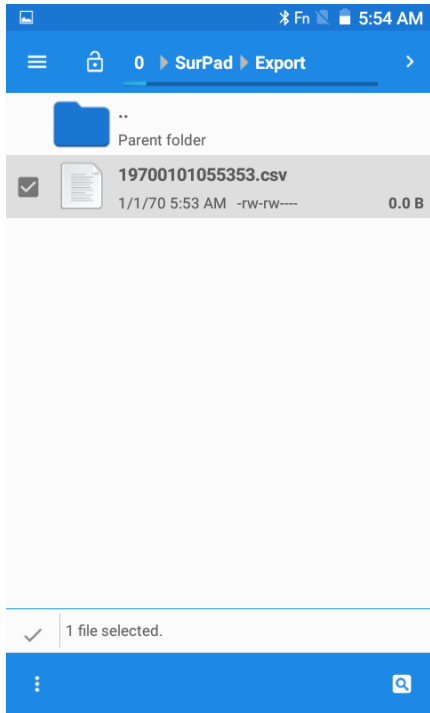


Figure 3-9

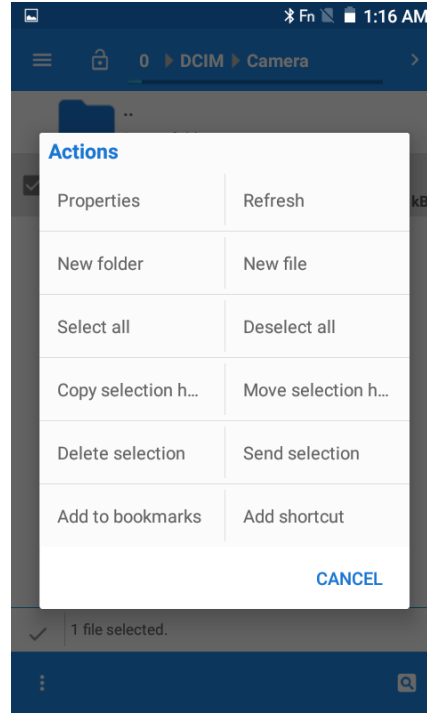



Figure 3-10

3.3.2 Paste

After file selection, switch to directory path where to paste file, press  to open operation option, and select [Copy selection here] to paste file, as shown in Figure 3-10.

3.4 Open Developer options

If it needs to open Developer options, following is the operation steps:

1. Enter system Settings menu, find and press to enter About phone, press Build number consecutively four times and it would open Developer options.
2. Enter Developer options and open USB debugging.

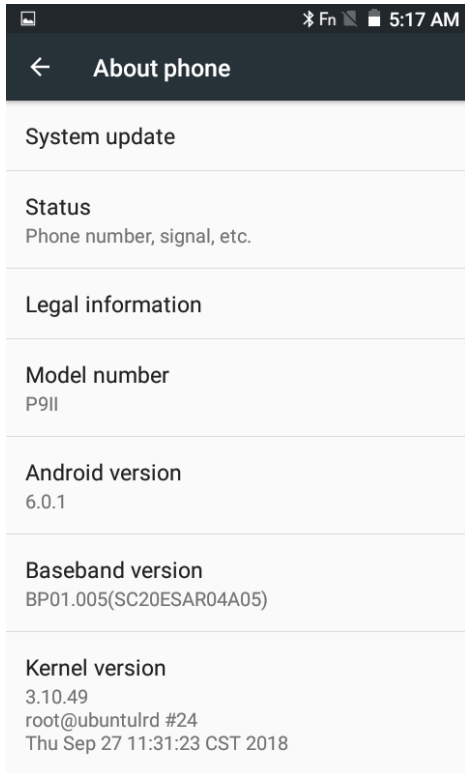


Figure 3-11

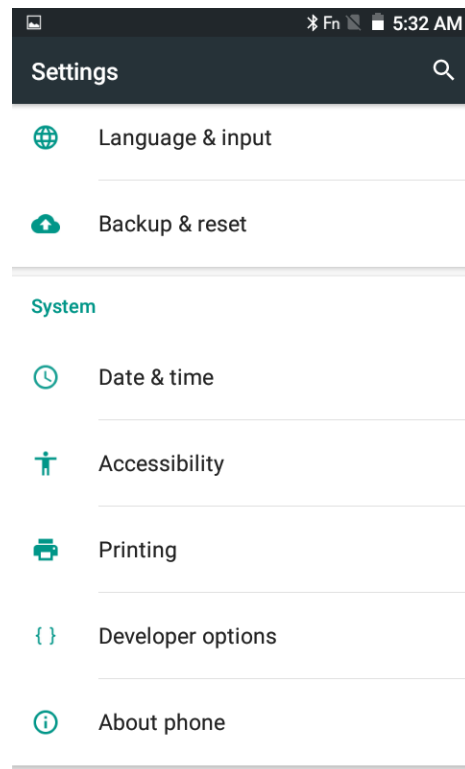


Figure 3-12

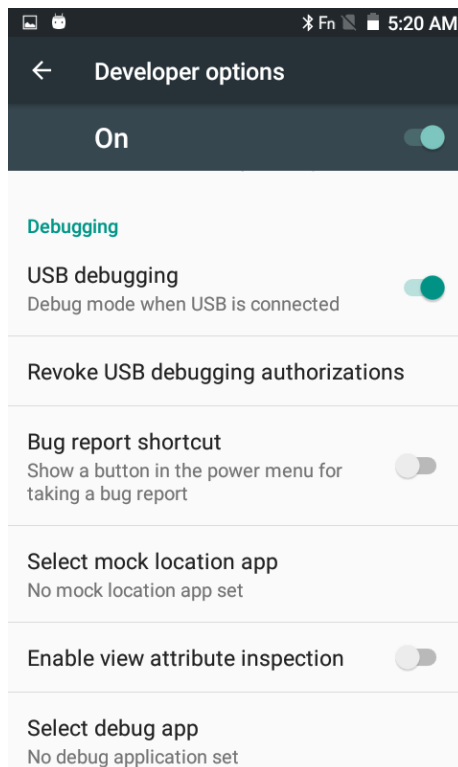


Figure 3-13

Chapter 4 Brief introduction of operating system

4.1 System Main Interface and Start Menu

Long press power button to switch on handheld and enter lock screen as shown in Figure 4-1. Slide the screen upward to unlock and enter system main interface as shown in Figure 4-2.

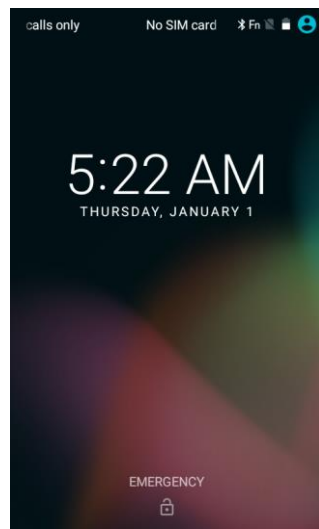



Figure 4-1



Figure 4-2

Press  at screen bottom to enter APP menu as shown in Figure 4-3. Here it can check all APP installed. Long press the APP icon till it pop up and it can move to anywhere as needed.

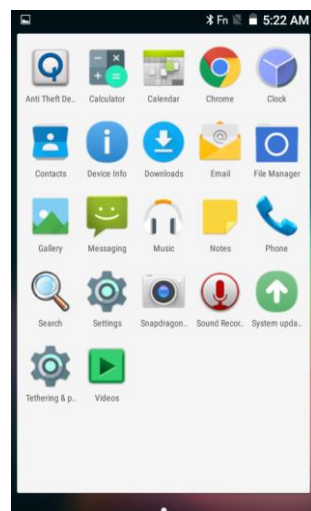


Figure 4-3

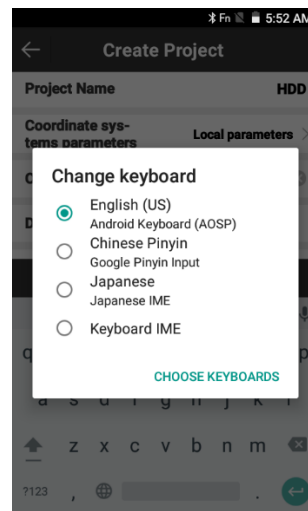


Figure 4-4

4.2 Navigation Bar

Navigation bar is on the screen top. It displays certain information of current handheld setting, including time, power, SIM card status, WIFI, Bluetooth, Airplane mode and so on.

4.3 Pre-installed APP

There are certain basic APPs pre-installed in handheld to ensure basic operation, including Phone, Email, Calendar, Android Keyboard and so on.

4.4 Interacting with the handheld

Press items on screen or move up/down screen with finger to interact with the handheld.

4.5 Input methods

4.5.1 Physical keyboard IME

User can input message with physical keyboard. It can switch input type by Shift key: lowercase letter, uppercase letter and number. Navigation bar would display current input type. When inputting letters, pressing number 1 right after letter inputting could confirm inputting immediately.

4.5.2 Other input method

P9II supports installation of third-party input method. User can install other input method as needed. During handheld inputting message, it can pull down screen, press [Change keyboard] to change input method, as shown in Figure 4-4.

4.6 Settings

In the Settings interface, it can set up Wireless & network, Device, Personal and

System items.

4.6.1 Wireless & networks

It can set up WLAN and Bluetooth, and check Data usage and set up SIM card and perform other settings, as shown in Figure 4-5.

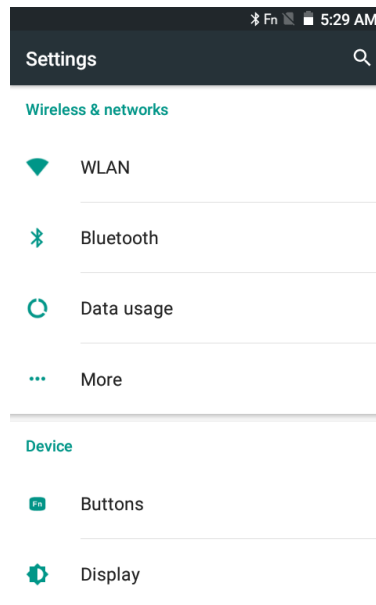


Figure 4-5

4.6.2 Device

It can set up Buttons, Display, Sound & notification, and check Storage & USB, Battery, Apps, Memory and switch User, as shown in Figure 4-6.

Note: in [Settings]-[Device]-[Buttons], it supports customized settings for Survey button, Side button and F1-F6 buttons as shown in Figure 4-7. Users can set up these buttons as needed.

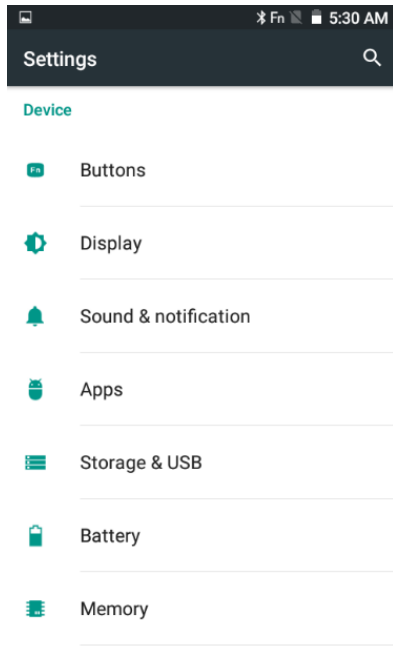


Figure 4-6

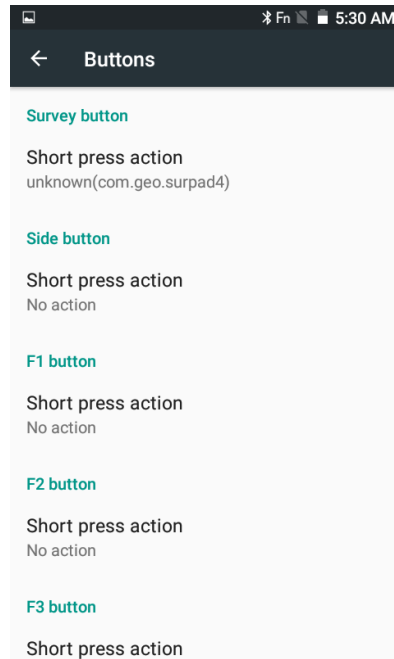


Figure 4-7

4.6.3 Personal

It can set up Location, Mode, Security, Accounts, Language & input, and Backup & reset data as shown in Figure 4-8.

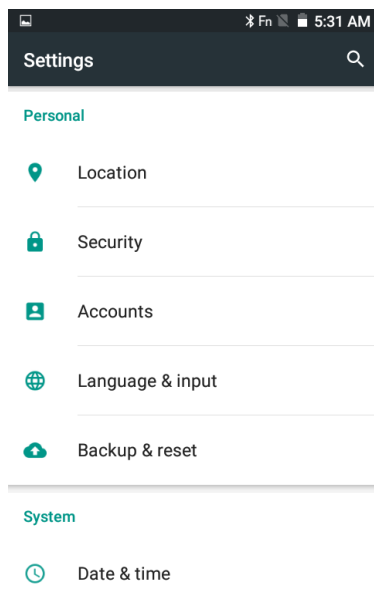


Figure 4-8

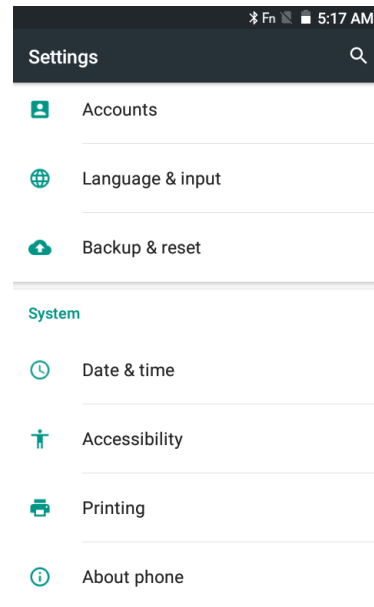


Figure 4-9

4.6.4 System

It can set up Date & time, Printing, and Accessibility, and check Device version information as shown in Figure 4-9.

4.7 Other features

1. Supports hands-free calls.
2. Connects to specified network and supports user-defined APN.
3. Supports online system update.

Chapter 5 Software operation

In addition to pre-installed Apps, it can also install other Apps as needed.

5.1 Software installation

1. Download the App as needed.
2. Connect the handheld and PC, and copy the App to handheld when it has established the connection between handheld and PC. Find the App in the File Manager and run it. Install the App following the instruction.

Taking SurPad4.0 installation as example.

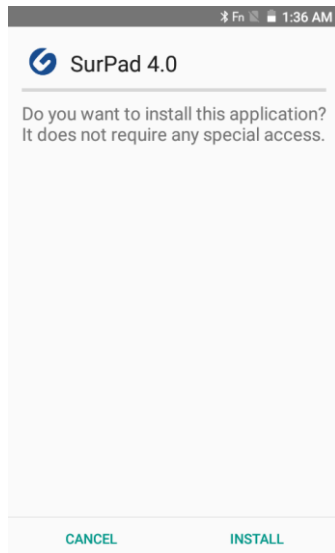


Figure 5-1

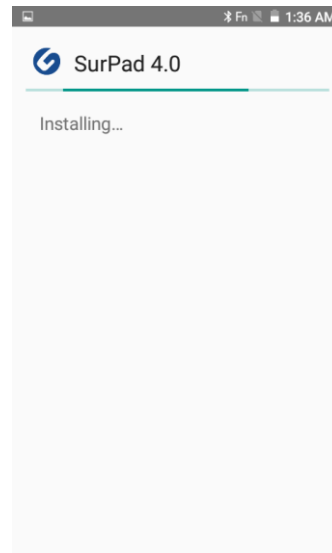


Figure 5-2

Note: a. If it prompts to restart the handheld, then follow the instruction.

b. Apps can also be downloaded from internet via handheld network.

5.2 Software uninstallation

In APP menu, drag the App to screen top left and prompt pops up, press [OK] to uninstall the App.

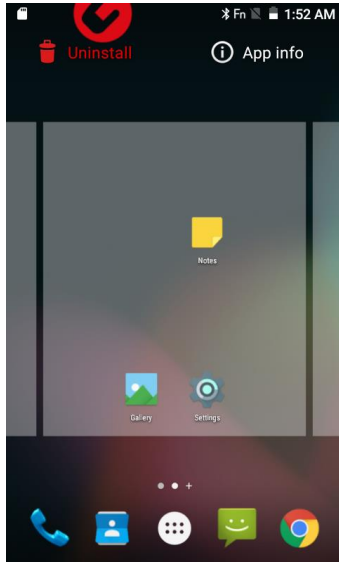


Figure 5-3

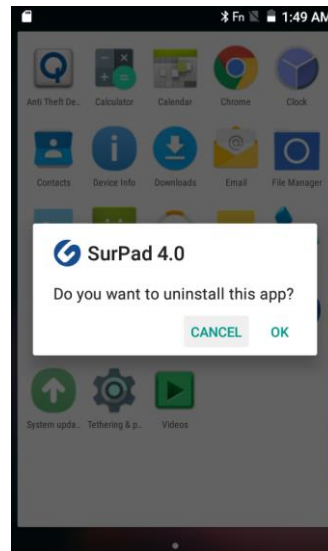


Figure 5-4

5.3 System update

In APP menu press System update icon as shown In Figure 5-5. There are two ways to update system.

a. Online update

With network connection, press [Check update]. If there is new system version, then follow the instruction to update system.

b. Install update from SD-Card

Install the SD-Card with update file in handheld, press [Install update from SD-Card], find the update file in File manager and follow the instruction to update system as shown in Figure 5-6.

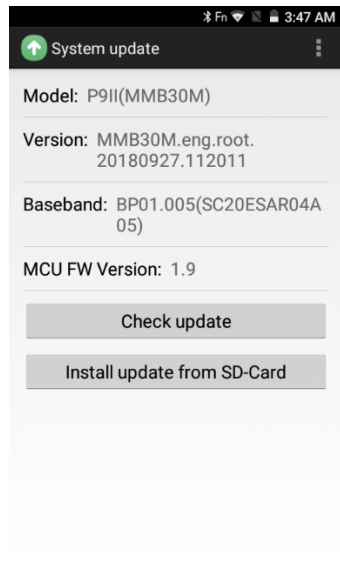


Figure 5-5

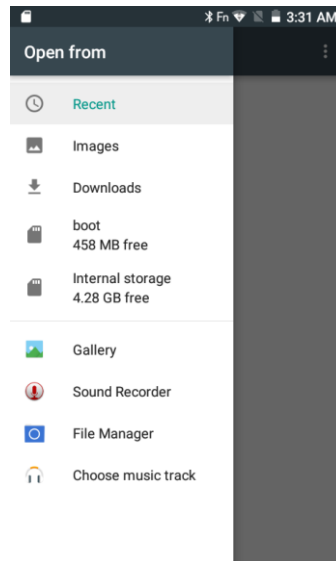


Figure 5-6

Chapter 6 Troubleshooting and Maintenance

This chapter gives solutions to common problems users may encounter. It also provides guidelines on taking care of the handheld.

If you have any questions, please contact with technical personnel

6.1 Troubleshooting

Problem	Solution
Power does not switch on when using battery power.	The remaining battery power may be too low to run the handheld. Charge the battery.
Screen responds slowly.	Make sure that the handheld is not running out of battery power. If the problem persists, restart the handheld.
Screen freezes.	Restart the handheld.
Cannot establish a connection with PC via USB.	Make sure that the handheld and PC are both switched on before trying to establish a connection.
	Make sure that the cable is securely plugged into the USB port on PC and on the handheld. Connect the USB cable directly to PC—do not run the cable through a USB hub.
	Restart the handheld before connecting the cable. Always disconnect the handheld before restarting the handheld.
A warning message of not enough memory appears.	Delete files unneeded.
	Remove Apps unneeded.
	Delete all files and clear history in Internet Explorer.
	Stop Apps not currently using. To check the state of the active Apps, long-press main menu button and it would show all active Apps.
	Restart the handheld.

6.2 Caring for the handheld

Taking good care of the handheld will ensure trouble-free operation and reduce the risk of damage.

- Keep your device away from extreme temperatures and excessive moisture.
- Avoid exposing your device to direct sunlight or strong ultraviolet light for extended periods of time.

-
- Do not drop the handheld or hit it hard.
 - Never privately attempt to disassemble, repair or make any modifications to the handheld.
 - Do not store or carry flammable liquids, gases or explosive materials in the same compartment as the handheld, its parts or accessories.

Chapter 7 FCC & IC Warnings

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.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses 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.

SAR test distance 0mm.

For body worn operation, this phone has been tested and meets the FCC RF exposure guidelines when used with an accessory that contains no metal.

Warnings:

This device complies with Industry Canada's licence-exempt RSSs

Operation is subject to the following two conditions:

(1) This device may not cause interference and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

(1) l'appareil ne doit pas produire de brouillage, et

(2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that necessary for successful communication.

Conformément à la réglementation d'Industrie Canada, le présent émetteur radio peut fonctionner avec une antenne d'un type et d'un gain maximal (ou inférieur) approuvé pour l'émetteur par Industrie Canada. Dans le but de réduire les risques de brouillage radioélectrique à l'intention des autres utilisateurs, il faut choisir le type d'antenne et son gain de sorte que la puissance isotrope rayonnée équivalente (p.i.r.e.) ne dépasse pas l'intensité nécessaire à l'établissement d'une communication satisfaisante.

This radio transmitter (identify the device by certification number, or model number if Category II) has been approved by Industry Canada to operate with the antenna types listed below with the maximum permissible gain and required antenna impedance for each antenna type indicated. Antenna types not included in this list, having a gain greater than the maximum gain indicated for that type, are strictly prohibited for use with this device.

Le présent émetteur radio (identifier le dispositif par son numéro de certification ou son numéro de modèle s'il fait partie du matériel de catégorie I) a été approuvé par Industrie Canada pour fonctionner avec les types d'antenne énumérés ci-dessous et ayant un gain admissible maximal et l'impédance requise pour chaque type d'antenne. Les types d'antenne non inclus dans cette liste, ou dont le gain est supérieur au gain maximal indiqué, sont strictement interdits pour l'exploitation de l'émetteur SAR test distance 0mm.

Distance de test SAR 0mm.

For body worn operation, this phone has been tested and meets the ISED RF exposure guidelines when used with an accessory that contains no metal.

Pour un usage sur le corps, ce téléphone a été testé et respecte les directives d'exposition RF de la ISED lorsqu'il est utilisé avec un accessoire sans métal.

Appendix 1 P9II Specifications

Features	PRO	STD
Wireless LAN	√	√
Internal Bluetooth	√	√
Micro SD card slot	√	√
8 GB memory	√	√
22 keys	√	√
Programmable side key	√	√
Electronic bubble	√	√
Electronic compass	√	√
8M pixel autofocus camera	√	√
GNSS	Ublox M8T	Android original
4G LTE Cellular Modem	√	√

Physical specifications

Weight	570g (including battery)
Size	194*90*39.5mm
Operating temp.	-30°C to 60°C
Storage temp.	-40°C to 80°C
Protection class	IP67 dust and waterproof
Humidity	5%-95 %, non-condensing
Vibration	ASAE EP455 Section 5.15.1 Random, compass MIL-STD-810G, method 514.6E-I
Shock	Withstands 1.2 m drop onto hard surface

System platform

Operating system	Android OS 5.1(China) Android OS 6.0(International)
Processor	Qualcomm Snapdragon Quad Core
Memory	1GB LPDDR3
Storage	8GB
External storage	Micro SD SDXC

Interfaces

Display	4.3inch, Blanview TFT,480×800
Keypad	Alphanumeric keypad Programmable side key
Connectors	USB Type C (for charging and data transfer)
Communication	Bluetooth 4.1 + Bluetooth LE WLAN 802.11n 4G LTE, as below list. China: SC20-CE Europe: SC20-E America: SC20-A LTE FDD: LTE FDD: LTE FDD: B1/B3/B5/B8 B1/B3/B5/B7/B8/B20 B2/B4/B5/B7/ LTE TDD: LTE TDD: B38/B40/B41 B12/B13/B25/B26 B38/B39/B40/B41 WCDMA: B1/B5/B8 WCDMA: TD-SCDMA: GSM: B1/B2/B4/B5/B8 B34/B39 850/900/1800/1900MHz GSM: WCDMA: B1/B8 850/1900MHz CDMA: BC0 GSM: 900/1800MHz
Other	Micro SIM Micro SDHC

GNSS

Receiver	72 channels GPS/QZSS L1 C/A, GLONASS L10F, BeiDou B1 SBAS L1 C/A: WAAS, EGNOS, MSAS, GAGAN Galileo E1B/C
Update rate	1Hz
Position accuracy	2.5 m CEP (Autonomous) 2.0 m CEP (SBAS) 0.5 m CEP (RTK)
Cold start time	30 seconds
Hot start time	1 second

Power supply

Internal battery	Removable Li-Ion battery 3400mAh, 7.2V, 24.48Wh
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Input voltage	DC 5V-20V, 2A
Adaptor	AC-Input: 100V-240V 50-60Hz 1.5A
	DC-Output: 5V 3A / 9V 3A / 12V 3A / 15V 3A / 20V 2.25A
Operating time	Up to 10 hours
