CipherLab Reference Manual

RS30 Mobile Computer
Android 4.4.2

Version 1.00



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CIPHERLAB CO., LTD.

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IMPORTANT NOTICES

FOR USA

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 communication. 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.

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.

FCC Caution:

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

FOR PRODUCT WITH LASER

CAUTION



This laser component emits FDA / IEC Class 2 laser light at the exit port. Do not stare into beam.

SPECIFIC ABSORPTION RATE (SAR) INFORMATION

The product complies with the FCC / Canada portable RF exposure limit set forth for an uncontrolled environment and are safe for intended operation as described in this manual. The further RF exposure reduction can be achieved if the products can be kept as far as possible from the user body or set the device to lower output power if such function is available.

1. FCC SAR Value (Standard limit is 1.6 W/Kg)

USA (1g): Max. 0.9 W/Kg.

2. CE SAR Value (Standard limit is 2 W/Kg)

CE (10g): Max. 0.339 W/Kg.

SAFETY PRECAUTIONS

RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE. DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS.

- ▶ The use of any batteries or charging devices, which are not originally sold or manufactured by CipherLab, will void your warranty and may cause damage to human body or the product itself.
- ▶ DO NOT disassemble, incinerate or short circuit the battery.
- ▶ DO NOT expose the scanner or the battery to any flammable sources.
- For green-environment issue, it's important that batteries should be recycled in a proper way.
- Under no circumstances, internal components are self-serviceable.

CARE & MAINTENANCE

- ▶ This mobile computer is intended for industrial use. The mobile computer is rated IP65, however, damage may be done to the mobile computer if it is exposed to extreme temperatures or soaked in water.
- When the body of the mobile computer gets dirty, use a clean, wet cloth to wipe off dust and debris. DO NOT use bleaches or cleaners.
- Use a clean, non-abrasive, lint-free cloth to wipe dust off the LCD touch screen. DO NOT use any pointed or sharp objects against the surface. Always keep the LCD dry.

- If you want to put away the mobile computer for a period of time, download the collected data to a host computer, and then remove the battery pack from the mobile computer's battery compartment. Store the mobile computer and battery pack separately.
- If you encounter malfunction on the mobile computer, write down the specific scenario and consult your local sales representative.

EUROPE - EU DECLARATION OF CONFORMITY

This device complies with the essential requirements of the R&TTE Directive 1999/5/EC. The following test methods have been applied in order to prove presumption of conformity with the essential requirements of the R&TTE Directive 1999/5/EC:

EN 60950-1: 2001
EN 60950-1/A1: 2010
EN 60950-1/A11: 2009
EN 60950-1/A12: 2011

Safety of Information Technology Equipment

- EN50360: 2001/A1:2012+AC:2006 / Article 3(1)(a)
 Product standard to demonstrate the compliance of mobile phones with the basic restrictions related to human exposure to electromagnetic fields (300 MHz 3GHz)
- EN 50566:2013/AC:2014
- Product standard to demonstrate compliance of radio frequency fields from handheld and body-mounted wireless communication devices used by the general public (30 MHz - 6 GHz)
- EN 62209-1: 2006

Human exposure to radio frequency fields from hand-held and body-mounted wireless communication devices – Human models, instrumentation, and procedures
Part 1: Procedure to determine the specific absorption rate (SAR) for hand-held devices used in close 13 proximity to the ear (frequency range of 300 MHz to 3 GHz)

- EN 300 330-1 V1.7.1: 2010
 Electromagnetic compatibility and Radio spectrum Matters (ERM); Short Range Devices (SRD); Radio equipment in the frequency range 9 kHz to 25 MHz and inductive loop systems in the frequency range 9 kHz to 30 MHz; Part 1: Technical characteristics and test methods
- EN 300 330-1 V1.5.1: 2010
 Electromagnetic compatibility and Radio spectrum Matters (ERM); Short Range Devices (SRD); Radio equipment in the frequency range 9 kHz to 25 MHz and inductive loop systems in the frequency range 9 kHz to 30 MHz; Part 2: Harmonized EN under article 3.2 of the R&TTE Directive

- EN 302 291-1 V1.1.1 : 2005

Electromagnetic compatibility and Radio spectrum Matters (ERM); Short Range Devices (SRD); Close Range Inductive Data Communication equipment operating at 13,56 MHz; Part 1: Technical characteristics and test methods

- EN 302 291-2 V1.1.1 :2005

Electromagnetic compatibility and Radio spectrum Matters (ERM); Short Range Devices (SRD); Close Range Inductive Data Communication equipment operating at 13,56 MHz; Part 2: Harmonised EN under article 3.2 of the R&TTE Directive

- EN 300 440-1 V1.6.1: 2010

Electromagnetic compatibility and Radio spectrum Matters (ERM); Short range devices; Radio equipment to be used in the 1 GHz to 40 GHz frequency range; Part1: Technical characteristics and test methods

- EN 300 440-2 V1.4.1: 2010

Electromagnetic compatibility and Radio spectrum Matters (ERM); Short range devices; Radio equipment to be used in the 1 GHz to 40 GHz frequency range; Part 2: Harmonized EN under article 3.2 of the R&TTE Directive

- EN 300 328 V1.8.1: 2012

Electromagnetic compatibility and Radio spectrum Matters (ERM); Wideband Transmission systems; Data transmission equipment operating in the 2,4 GHz ISM band and using spread spectrum modulation techniques; Harmonized EN covering essential requirements under article 3.2 of the R&TTE Directive

- EN 301 908-1 V6.2.1: 2013

Electromagnetic compatibility and Radio spectrum Matters (ERM); Base Stations (BS), Repeaters and User Equipment (UE) for IMT-2000 Third-Generation cellular networks; Part 1: Harmonized EN for IMT-2000, introduction and common requirements, covering essential requirements of article 3.2 of the R&TTE Directive

- EN 301 908-2 V6.2.1: 2013

Electromagnetic compatibility and Radio spectrum Matters (ERM); Base Stations (BS) and User Equipment (UE) for IMT-2000 Third Generation cellular networks; Part 2: Harmonized EN for IMT-2000, CDMA Direct Spread (UTRA FDD) (UE) covering essential requirements of article 3.2 of the R&TTE Directive

- EN 301 511 V9.0.2: 2003

Global System for Mobile communications (GSM); Harmonized standard for mobile stations in the GSM 900 and DCS 1800 bands covering essential requirements under article 3.2 of the R&TTE directive (1999/5/EC)

- EN 301 489-1 V1.9.2: 2008

Electromagnetic compatibility and Radio Spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 1: Common technical requirements

- EN 301 489-3 V1.6.1 2013

Electromagnetic compatibility and Radio Spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 3: Specific conditions for Short-Range Devices (SRD) operating on frequencies between 9 kHz and 40 GHz

- EN 301 489-7 V1.3.1: 2005

ElectroMagnetic compatibility and Radio spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment ad services; Part 7: Specific conditions for mobile and portable radio and ancillary equipment of digital cellular radio telecommunications systems (GSM and DCS)

- EN 301 489-17 V2.2.1: 2012

Electromagnetic compatibility and Radio spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 17: Specific conditions for 2,4 GHz wideband transmission systems and 5 GHz high performance RLAN equipment

- EN 301 489-24 V1.5.1: 2010

Electromagnetic compatibility and Radio Spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 24: Specific conditions for IMT-2000 CDMA Direct Spread (UTRA) for Mobile and portable (UE) radio and ancillary equipment

EN 62479:2010

Assessment of the compliance of low power electronic and electrical equipment with the basic restrictions related to human exposure to electromagnetic fields (10 MHz to 300 GHz)

C € 0560

©Česky [Czech]	[Jméno výrobce] tímto prohlašuje, že tento [typ zařízení] je ve shodě se základními požadavky a dalšími příslušnými ustanoveními směrnice 1999/5/ES.
daDansk [Danish]	Undertegnede [fabrikantens navn] erklærer herved, at følgende udstyr [udstyrets typebetegnelse] overholder de væsentlige krav og øvrige relevante krav i direktiv 1999/5/EF.
deDeutsch [German]	Hiermit erklärt [Name des Herstellers], dass sich das Gerät [Gerätetyp] in Übereinstimmung mit den grundlegenden Anforderungen und den übrigen einschlägigen Bestimmungen der Richtlinie 1999/5/EG befindet.
et Eesti [Estonian]	Käesolevaga kinnitab [tootja nimi = name of manufacturer] seadme [seadme tüüp = type of equipment] vastavust direktiivi 1999/5/EÜ põhinõuetele ja nimetatud direktiivist tulenevatele teistele asjakohastele sätetele.
English	Hereby, [name of manufacturer], declares that this [type of equipment] is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.
EsEspañol [Spanish]	Por medio de la presente [nombre del fabricante] declara que el [clase de equipo] cumple con los requisitos esenciales y cualesquiera otras disposiciones aplicables o exigibles de la Directiva 1999/5/CE.
el Ελληνική [Greek]	ΜΕ ΤΗΝ ΠΑΡΟΥΣΑ [name of manufacturer] ΔΗΛΩΝΕΙ ΟΤΙ [type of equipment] ΣΥΜΜΟΡΦΩΝΕΤΑΙ ΠΡΟΣ ΤΙΣ ΟΥΣΙΩΔΕΙΣ ΑΠΑΙΤΗΣΕΙΣ ΚΑΙ ΤΙΣ ΛΟΙΠΕΣ ΣΧΕΤΙΚΕΣ ΔΙΑΤΑΞΕΙΣ ΤΗΣ ΟΔΗΓΙΑΣ 1999/5/ΕΚ.
frFrançais [French]	Par la présente [nom du fabricant] déclare que l'appareil [type d'appareil] est conforme aux exigences essentielles et aux autres dispositions pertinentes de la directive 1999/5/CE.
itltaliano [Italian]	Con la presente [nome del costruttore] dichiara che questo [tipo di apparecchio] è conforme ai requisiti essenziali ed alle altre disposizioni pertinenti stabilite dalla direttiva 1999/5/CE.
Latviski [Latvian]	Ar šo [name of manufacturer / izgatavotāja nosaukums] deklarē, ka [type of equipment / iekārtas tips] atbilst Direktīvas 1999/5/EK būtiskajām prasībām un citiem ar to saistītajiem noteikumiem.
Lietuvių [Lithuanian]	Šiuo [manufacturer name] deklaruoja, kad šis [equipment type] atitinka esminius reikalavimus ir kitas 1999/5/EB Direktyvos nuostatas.
MNederlands [Dutch]	Hierbij verklaart [naam van de fabrikant] dat het toestel [type van toestel] in overeenstemming is met de essentiële eisen en de andere relevante bepalingen van richtlijn 1999/5/EG.
mt Malti [Maltese]	Hawnhekk, [isem tal-manifattur], jiddikjara li dan [il-mudel tal-prodott] jikkonforma mal-ħtiġijiet essenzjali u ma provvedimenti oħrajn relevanti li hemm fid-Dirrettiva 1999/5/EC.
Magyar [Hungarian]	Alulírott, [gyártó neve] nyilatkozom, hogy a [típus] megfelel a vonatkozó alapvető követelményeknek és az 1999/5/EC irányelv egyéb előírásainak.
Polski [Polish]	Niniejszym [nazwa producenta] oświadcza, że [nazwa wyrobu] jest zgodny z zasadniczymi wymogami oraz pozostałymi stosownymi postanowieniami Dyrektywy 1999/5/EC.
Português [Portuguese]	[Nome do fabricante] declara que este [tipo de equipamento] está conforme com os requisitos essenciais e outras disposições da Directiva 1999/5/CE.
slSlovensko [Slovenian]	[Ime proizvajalca] izjavlja, da je ta [tip opreme] v skladu z bistvenimi zahtevami in ostalimi relevantnimi določili direktive 1999/5/ES.
Slovensky [Slovak]	[Meno výrobcu] týmto vyhlasuje, že [typ zariadenia] spĺňa základné požiadavky a všetky príslušné ustanovenia Smernice 1999/5/ES.
fi Suomi [Finnish]	[Valmistaja = manufacturer] vakuuttaa täten että [type of equipment = laitteen tyyppimerkintä] tyyppinen laite on direktiivin 1999/5/EY oleellisten vaatimusten ja sitä koskevien direktiivin muiden ehtojen mukainen.
Svenska [Swedish]	Härmed intygar [företag] att denna [utrustningstyp] står I överensstämmelse med de väsentliga egenskapskrav och övriga relevanta bestämmelser som framgår av direktiv 1999/5/EG.



Declaration of Conformity

Manufacturer

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Type of Equipment

Mobile Computer

Model(s) Declared

RS30

Initial Year of Manufacture

2015

Reference to the specification under which conformity is declared in accordance with Council Directive- 2004/108/EC (EMC), 1999/5/EC (R&TTE), 2006/95/EC (LVD), 2011/65/EU (RoHS), 1999/519/EC (EMF).

EN 300 328 V1.8.1

EN 300 440-2 V1.4.1

EN 301 489-17 V2.2.1

EN 301 489-3 V1.6.1

EN 301 511 V9.0.2

EN 301 908-2 V6.2.1

EN 50566:2013 AC:2014

EN 61000-3-2 :2006/A1:2009/A2:2009

EN 55024: 2010

EN 302 291-1 V1.1.1

EN 300 440-1 V1.6.1

EN 301 489-1 V1.9.2

EN 301 489-24 V1.5.1

EN 301 489-7 V1.3.1

EN 301 908-1 V6.2.1

EN 62479:2010

EN 60950-1: 2006+A11+A1+A12:2011

EN 61000-3-3:2013

EN 55022: 2010 / AC:2011

EN 50360:2001 A1:2012

EN 302 291-2 V1.1.1

I the undersigned, hereby declare that the equipment specified above conforms to the above Directive(s) and Standard(s).

Signature

Title

Manager

2015/Feb./04

RELEASE NOTES

Version	Date	Notes
1.00	Feb 9, 2015	Initial release

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INTRODUCTION

The RS30 Mobile Computer, powered by Android 4.4.2, is light-weight, easy to use, and provides more powerful and handy tools to delivering flexibility in customization.

Specifically designed to work as an industrial PDA, the RS30 Mobile Computer provides rich options of data collection, voice and data communication, long-lasting working hours, and so on. Its large color transmissive display guarantees ease in reading in all lighting conditions. Integrated with Bluetooth v4.0, v2.1+EDR and 802.11b/g/n technologies, the mobile computer also includes a GSM/GPRS/EDGE/WCDMA/UMTS/HSDPA/HSPA+ module to gain greater speeds and optimal mobility. In particular, an integrated GPS receiver is made available for use with third-party location-based applications.

This manual serves to guide you through how to install, configure, and operate the mobile computer. The Care & Maintenance section is specifically crucial for those who are in charge of taking care of the mobile computer.

We recommend you to keep one copy of the manual at hand for quick reference or maintenance purposes. To avoid any improper disposal or operation, please read the manual thoroughly before use.

Thank you for choosing CipherLab products!

FEATURES

- ▶ Built tough to survive drop test and sealed against moisture/dust to industrial standard IP54
- Android 4.4.2 operating system with a powerful Cortex 1.3 GHz Quad-Core processor
- ▶ 8GB eMMC flash memory to store OS and software programs
- ▶ 1GB LPDDR2 RAM to store and run programs, as well as store program data
- ▶ One expansion slot for microSDHC memory card up to 32GB, SDXC supported
- ▶ Three reader options 1D linear, 1D laser or 2D imager
- Built-in 8.0 Megapixel CMOS digital camera with white LED for flash and auto focus
- Left and right side triggers for ambidextrous scanning
- ▶ Total wireless solution connectivity includes Bluetooth v4.0 and v2.1+EDR, 802.11b/g/n, GSM/GPRS/EDGE/WCDMA/UMTS/HSDPA/HSUPA/HSPA+, and near field communication (NFC)
- ▶ A 4.7" color transmissive display with 960x540 pixels to deliver excellent visibility in all lighting conditions
- Configurable feedback indicators including speaker and vibrator
- ▶ Built-in scan engine setting tool Reader Configuration which serves out-of-the-box keyboard wedge functionality
- ▶ Accessories and peripherals include USB Charging and Data Transfer Cable, Snap-on USB Charging Cable

INSIDE THE PACKAGE

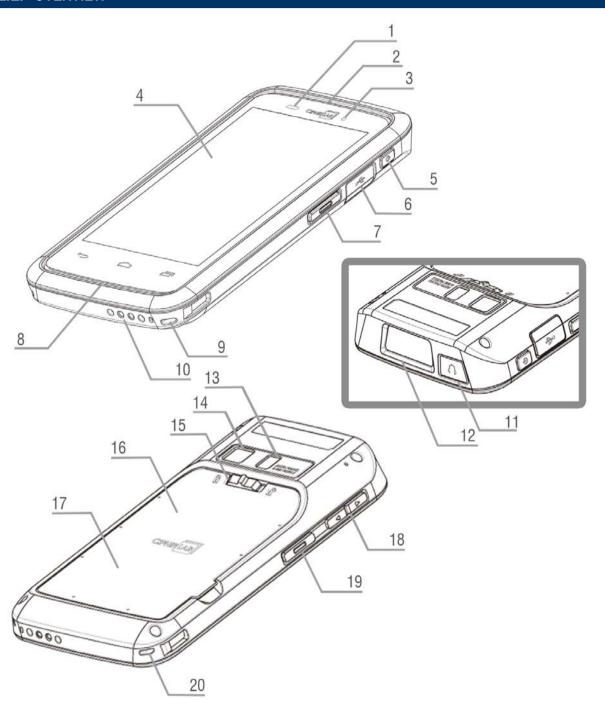
The following items are included in the kit package. Save the box and packaging material for future use in case you need to store or ship the mobile computer.

- ▶ RS30 Mobile Computer
- Rechargeable Li-ion battery pack
- Wrist Band
- Hardshell
- Micro USB Charging and Data Transfer Cable
- Snap-on USB Charging Cable
- AC Power Adaptor
- Quick Guide

Chapter 1

QUICK START

1.1. OVERVIEW



No.	Description	No.	Description
1	Light Sensor	2	Receiver
3	Status LED	4	Touchscreen
5	Power Button	6	Micro USB Port
7	Side Key	8	Speaker
9	Wristband Slot	10	Charging Pins
11	Headset Jack	12	Scan Window
13	Camera Flash	14	Camera
15	Battery Cover Latch	16	Battery Cover
17	NFC Detection Area	18	Volume Buttons
19	Side Key	20	Wristband Slot

1.1.1. INSTALLING BATTERY

For shipping and storage purposes, the mobile computer and the main battery are saved in separate packages.

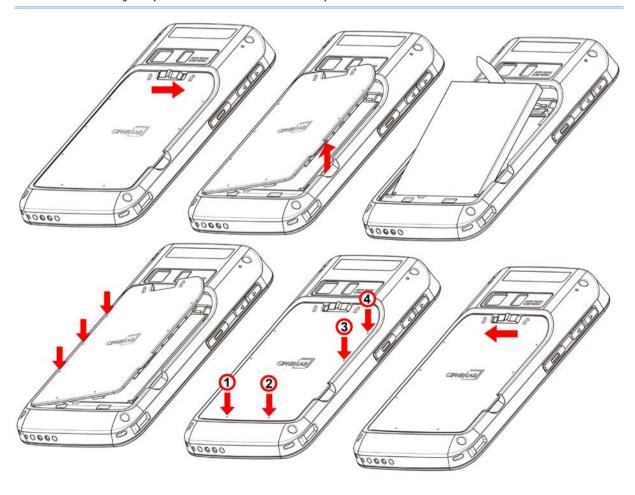
Note: Any improper handling may reduce the battery life.

To install the main battery:

- I) Push the battery lock at the top of the battery cover to the right in order to unlock.
- 2) Open the battery cover by pulling up the tab in the lower right corner.
- 3) Insert the main battery with the contact pins seated in the bottom left corner.
- 4) Fix the left edge of the battery cover first.
- 5) Press in the battery cover at the dotted sites.
- 6) Push the battery lock back to the lock position.

Warning:

- (1) Check that the battery lock is at the "lock" position before powering on the device.
- (2) For initial use, insert a charged battery, lock battery cover in place, then press the Power key to power on the mobile computer.

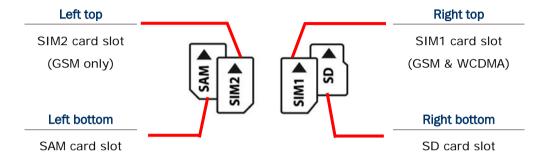


1.1.2. INSTALLING SIM CARD, SAM CARD AND MEMORY CARD

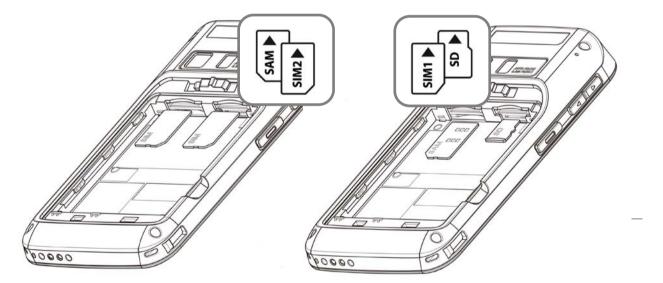
The RS30 Mobile Computer is equipped with two SIM card slots, one SAM card slot and one memory card slot.

Insert Cards

- I) Remove the battery cover as described in steps 1-3 of <u>Installing Battery</u>.
- 2) Insert the cards into their respective slots according to the directions indicated. Push the cards to lock them in.



The SIM 1 slot (on the right) supports both 2G and 3G networks, while the SIM 2 slot (on the left) supports only 2G networks. See <u>Data Connection Settings</u> for how to configure 2G and 3G networks.



3) Replace the battery cover and push the battery lock back to the lock position.

1.1.3. POWER ON/OFF MOBILE COMPUTER

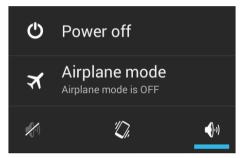
POWER ON

To power on the mobile computer, press and hold the power button \bigcirc located on the upper right side of the device. The mobile computer opens to show the <u>Home Screen</u>.

Note: For the mobile computer to power on, the battery cover must be secured in place.

POWER OFF

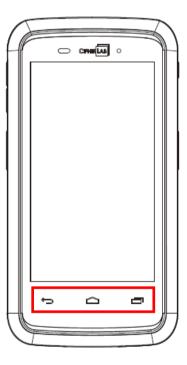
To power off the mobile computer, press and hold the power button \bigcirc for more than three seconds. A menu will appear on-screen which allows you to power off the device, switch to airplane mode, or set the system sound to mute or vibrate only. Make sure all user data and tasks have been stored before tapping **Power off**.



1.1.4. USING HARDWARE BUTTONS

On the bottom of the mobile computer are three hardware buttons that deliver the following functions:

Button	Function	Description
←	Back button	Returns to the previous screen or closes the active window or keyboard.
	Home button	Displays the Home screen. Tap and hold the Home button to open a list of recently used applications.
	Recent apps button	Opens a list of recently used applications.



1.1.5. CONNECTING HEADSET

The headset jack is located on the top of the mobile computer. You can use the headset for audio playback or communication via the phone application, audio instant messaging, etc.

- I) Flip up the rubber cover.
- 2) Connect the headset to the headset jack.
- 3) Replace the rubber cover.

1.2. CHARGING & COMMUNICATION

1.2.1. CHARGE MOBILE COMPUTER

The main battery may not be charged to full for shipment. When you first receive the kit package, you will need to charge the main battery to full before using the mobile computer. You may use the Snap-on USB Charging Cable along with a power adapter to charge the mobile computer.

Charging Time

- Main battery: The main battery powers the mobile computer to work. It takes approximately 4 hours to charge an empty main battery to full. The charging LED above the screen (located on the right) will light up in red while charging and will turn green when charging is complete.
- When the main battery is removed, RTC retention will be maintained.
- Backup battery: The backup battery is mounted on the main board. Its role is to temporarily keep the mobile computer in suspension when the main battery is drained out so data in DRAM will be retained. The backup battery takes approximately 3.5 hours to charge to full by the main battery or power adapter.

Charging Temperature

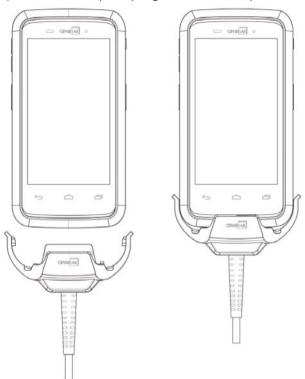
- It is recommended to charge the battery at room temperature (18°C to 25°C) for optimal performance.
- ▶ Battery charging stops when ambient temperature drops below 0°C or exceeds 40°C.

Operation on Battery Power

- When 802.11b/g/n, GSM/GPRS/EDGE/WCDMA/UMTS/HSDPA/HSUPA/HSPA+, Bluetooth v4.0 & v2.1+EDR and GPS are all enabled on battery power, the main battery level will drop down substantially. Prolonged use of the display and continued scanning of barcodes will also affect battery level.
- In order to prevent system shut down after the battery is drained out, we suggest that you keep a fresh battery for replacement at all times, or connect the mobile computer to an external power.

USING SNAP-ON USB CHARGING CABLE

- I) Fasten the Snap-on USB Charging Cable to the lower end of the mobile computer.
- 2) Connect the other end of the Snap-on USB Charging Cable to the adapter.
- 3) Fix the adapter plug onto the adapter, and plug in into an electrical outlet.



RS30 LED Indicator	Status	Description
Charging	Red, solid	Charging the mobile computer
	Green, solid	Charging complete
	No light	Charging error (charging will stop)

1.2.2. WIRED DATA TRANSMISSION

Use the micro USB cable to connect the mobile computer to your PC for data transmission.

1.2.3. USING WIRELESS NETWORKS

The mobile computer supports widely applied wireless technologies including Bluetooth v4.0 & v2.1+EDR, 802.11b/g/n and NFC, and is able to send/receive data in real time in an efficient way. Select GSM/GPRS/EDGE/WCDMA/UMTS/HSDPA/HSUPA/HSPA+ modules embedded for a total wireless solution for data and voice communication.

Chapter 2

USING THE RS30 MOBILE COMPUTER

This chapter explains the features and usage of the mobile computer.

2.1. BATTERY

Main Battery

The mobile computer is powered by a rechargeable 3.8V / 3000mAh Li-ion battery pack, and it takes approximately 4 hours to charge it to full from the power adaptor. However, the charging time may vary by your working condition.

Spare Battery

A spare battery pack is provided as an accessory. We recommend keeping a fully charged spare battery at hand in order to replace the main battery when it is nearly drained out.

Backup Battery

Settled on the main board is a backup battery that keeps the mobile computer in suspension when the main battery is depleted. The backup battery is a 60 mAh rechargeable Li-ion battery, and can retain data in the DRAM for 30 minutes when it is fully charged (as long as wireless modules on the mobile computer are inactive). The backup battery can be charged by the main battery or the power adapter, and takes approximately 3.5 hours to charge to full.

Warning:

- (1) The battery cover must be secured in position. If not, the mobile computer cannot turn on by pressing the power key.
- (2) For a new battery, make sure it is fully charged before using.
- (3) To avoid data loss, when replacing the main battery, make sure you replace it with a well-charged spare battery pack. Always prepare a spare battery at hand, especially when you are on the road.
- (4) When the mobile computer has been on backup battery for 30 minutes, the system will shut down. Be sure to replace the main battery as soon as possible in order to avoid data loss.

2.1.1. BATTERY STATUS INDICATORS

The main battery pack is the only power source for the mobile computer to work. Therefore, when the main battery level goes low, you need to replace the battery pack with a charged one or charge it as soon as possible. Most of all, you should backup important data on a regular basis.

By checking the battery status icon, you can tell the battery level remaining in the main battery.

Battery Icon	Description
5	External power source is connected and main battery is being charged.
	Main battery is fully charged.
	Main battery level is partially drained.
	Main battery level is low.
Ţ	Main battery level is very low and needs charging immediately.
Note: When	n the mobile computer is fully charged and battery level reaches 100%, the
batte	ry icon will change from 🗾 to indicate charging is completed.

Warning:

- (1) Once the battery level drops below 20%, the low battery notification will be displayed on the screen.
- (2) Data loss with RAM may occur when battery level is low. Always save data before the battery runs out of power or keep a fresh battery for replacement.
- (3) Constant usage of the mobile computer at low battery level can affect battery life. For maximum performance, recharge the battery periodically to avoid battery drain out and maintain good battery health.

2.1.2. MONITOR BATTERY LEVEL

MAIN BATTERY LEVEL

The main battery is the only source that feeds the mobile computer to work. It also supplies the backup battery on the main board in order to retain the data stored in DRAM. When main battery level gets low, recharge it or replace it as soon as possible. Most critically, back up the important data from time to time to protect your work.

To check main battery level:



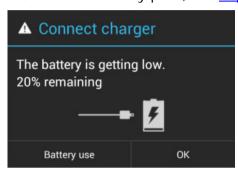
Battery level percentage is also shown to provide a clear grasp of the remaining battery power. The screen also shows the rate of battery discharge since the last battery charging session, how long the device has been running on battery power, and which applications are consuming the most battery power.



LOW BATTERY ALERT

When the main battery level drops to 20%, the mobile computer prompts a warning reminding you to charge the main battery. When the main battery level drops to 10%, the mobile computer prompts a second warning. When the main battery level drops to 4%, the mobile computer shuts down. When either of these situations occurs, connect the mobile computer to an external power source, or replace the main battery pack as soon as possible.

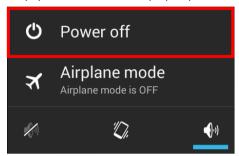
To replace the main battery pack, see Replace Main Battery.



2.1.3. REPLACE MAIN BATTERY

When main battery level is low, follow the steps below to replace the main battery.

- I) Press and hold the power button on the side of the mobile computer.
- 2) Tap power off in the pop-up menu. The mobile computer will power off.



- 3) Open the battery cover and insert a charged main battery as in **Installing Battery**.
- 4) Press the power button to power on the mobile computer.

Note:

- (1) Before replacing the main battery, make sure the backup battery is well-charged in order to avoid unnecessary data loss.
- (2) After removing the main battery, insert a well-charged battery as soon as possible.

2.1.4. POWER MANAGEMENT

For any portable device, power management is a critical issue especially when you are on the road. Below are some tips to help you save battery power.

Warning: Using backlight, wireless connectivity, and peripheral devices while on battery power will substantially reduce battery power.

- Bring an additional main battery pack with you on the road.
- ▶ End wireless connections (such as Bluetooth v4.0 & v2.1+EDR, 802.11b/g/n, GSM/GPRS/EDGE/WCDMA/UMTS/HSDPA/HSUPA/HSPA+, NFC and GPS) which are not in use.
- ▶ Shorten the screen turn off time. See <u>Screen Timeout Settings</u>.
- ▶ Reduce the screen brightness level. See <u>Screen Brightness</u>.
- ▶ Shut down automatic data syncing of applications (such as Email, Calendar, Contacts).

2.2. MEMORY

Flash Memory (ROM)

8GB flash memory for storing the OS (Android 4.4.2) and custom application programs.

Random-access Memory (RAM)

1GB RAM for storing and running programs, as well as storing program data.

Expansion Slot

The mobile computer is equipped with one microSDHC card slot which accommodates an SD card up to 32 GB (microSDXC is supported as well).

CAUTION OF DATA LOSS

When the main battery is removed or drained, the backup battery on the main board takes over to supply the mobile computer and keep it in suspension. A fully charged backup battery will retain the data in the RAM for 30 minutes. When the backup battery is drained out as well, the mobile computer will shut down, and only the contents of RTC will be retained. All other unsaved data will be lost.

If you want to put away the mobile computer for a couple of days, you should be aware that data loss occurs when the main battery and backup battery discharges completely. Therefore, it is necessary to backup data and files before putting away the mobile computer.

2.2.1. CHECK STORAGE SPACE

Tap Home | Settings | Storage to check usage of the internal and external storage spaces.



2.3. TOUCH SCREEN

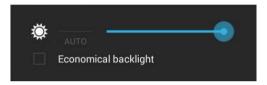
The mobile computer comes with a 4.7" transmissive LCD with 960 by 540 pixels resolution (qHD). The LED backlight of the screen, which helps ease reading under dim environments, can be controlled manually and automatically.

Warning: DO NOT use any pointed or sharp objects to move against the surface of the screen.

2.3.1. SCREEN BRIGHTNESS



Adjust screen brightness by dragging the slider to the right (to increase brightness) or left (to reduce brightness). Select the **Economical backlight** checkbox to enable automatic backlight adjustment with the mobile computer's built in sensor.



Note: To save battery power, dim the screen brightness while working in a well-lit area, or set a shorter sleeping plan for the screen backlight to go off.

2.3.2. SCREEN ROTATION

For the mobile computer to automatically adjust screen orientation:

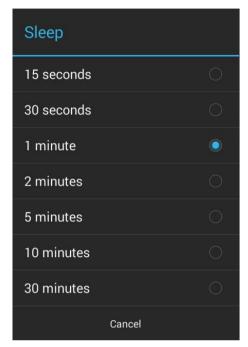


Note: The Home Screen does not rotate.

2.3.3. SCREEN TIMEOUT SETTINGS

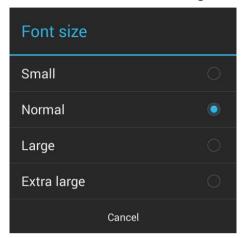
Tap Home | Settings | Display | Sleep.

Select the time for screen timeout.



2.3.4. TEXT SIZE

Tap Home | Settings | Display | Font Size. Select the font size between Small, Normal, Large and Extra Large.



2.4. NOTIFICATIONS

2.4.1. STATUS LED

An LED indicators located above the touch screen provide information about charging status, scanner light beam, and scanner "Good Read" during data collection.

Indicator	Status	Description
	Green, solid	Charging complete
Charging	Red, solid	Charging the mobile computer
or an gring	Red, blinking	Charging error (for instance, battery not in place)
Barcode or wireless tag decode	Green, flash once	Good read
Wireless radio	Blue, blinking	Wi-Fi, Bluetooth, or mobile data is in use

Note: For Scanner decode and Scanner beam LED to function, LED notification must be enabled in Reader Configuration. See <u>Notification Settings</u>.

2.4.2. AUDIO

The speaker is used to play sounds for events in windows and programs, or play audio files. In addition, it can be programmed for status feedback. In noisy environments, you may consider connecting a headset instead. A headset jack is provided on the top of the mobile computer, which is a 3.5 mm DIA stereo earphone jack. The mobile computer also supports using Bluetooth headsets.

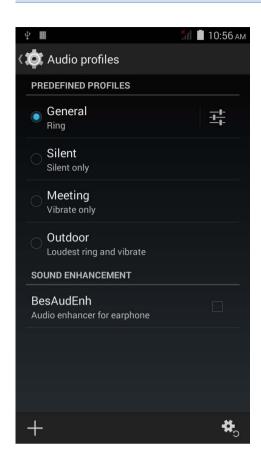
Supported audio file formats include: WAV, MP3, AAC, AAC+, Enhanced AAC+, AU (including ADPCM), Midi, XMF, AMR (NB and WB).

Use the volume buttons on the side of the mobile computer to adjust the system volume.

AUDIO PROFILE

Tap Home | Settings | Audio profiles |

Select the audio profile to suit your working environment.



2.4.3. VIBRATOR

The mobile computer is integrated with a vibrator, which is software programmable for tactile feedback. This can be helpful when working in noisy environments.

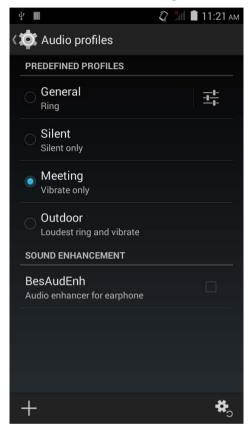
You may also set the mobile computer to vibrate only, in which all system sounds will be

muted and replaced by the vibrator. Tap **Home** | Settings | Audio profiles



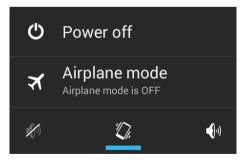


and select Meeting - Vibrate only.



OR

Press and hold the power key, and tap the vibrate mode icon in the menu.



2.5. DATE AND TIME

2.5.1. SET DATE, TIME AND TIME ZONE

By default, the mobile computer automatically synchronizes the date and time to the WWAN network (if connected).

To set the data and time manually:



- 2) Tap Automatic data & time and select Off to disable using network-provided time.
- 3) Deselect Automatic time zone.
- 4) Tap **Set date**. Use the sliders to select the correct month, date and year. Tap **Done** to save.
- 5) Tap **Set time**. Use the sliders to select the correct time. Tap **Done** to save.
- 6) Tap **Select time zone**. Select the correct time zone from the list.

2.6. LANGUAGE & KEYBOARD INPUT

Tap **Home** | Settings | Language & input to change the system language, default keyboard type, and configure keyboard input and speech settings.

2.6.1. ON-SCREEN KEYBOARD

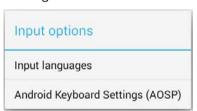
Tap a text input field to automatically open an on-screen keyboard.



ADJUST KEYBOARD SETTINGS

To configure keyboard settings, tap and hold the comma button until a settings

button appears. A menu will open allowing you to adjust input language (if you would like to use an input language different from the system language) or keyboard settings.



EDIT TEXT

Tap and hold text on the screen to enable a text editing menu for selecting all text, or cutting, copying and pasting text within or across applications. Some applications may use different ways to select or edit text.



ENTER NUMBERS AND SYMBOLS

The top row of keys on the on-screen keyboard have an ellipsis (...) below the character. Tap and hold one of the top row keys until a menu opens, and select a number.

ENTER UPPERCASE LETTERS

Tap and hold the Shift key, and tap a character key to enter an uppercase letter. The letters will return to lower case once an uppercase letter is entered.

ENTER SYMBOLS

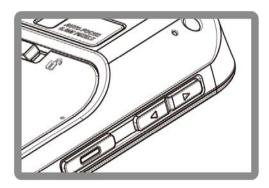
Tap to switch to a keyboard for entering numbers and symbols. On this keyboard,

tap to open a keyboard for entering special characters. Tap and hold a number or symbol key to open a menu of additional symbols related to that key.

Tap to switch back to the keyboard for entering lowercase letters.

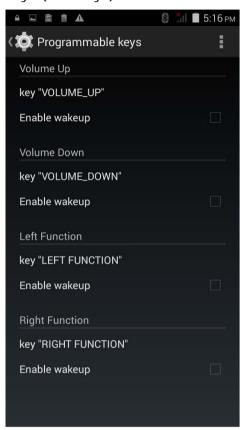
2.7. SOUND AND VOLUME

Use the volume buttons on the left side of the mobile computer to adjust system and ringer volume.

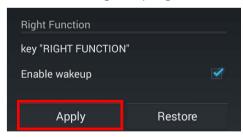


2.8. PROGRAMMABLE KEYS

Tap **Home** | Settings | Programmable Keys to assign specific functions to the four programmable keys: volume up, volume down, and the left and right function keys (side keys).



After redefining the programmable keys, tap **Apply** to allow the changes to take effect.

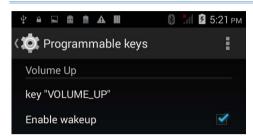


Note: The newly assigned function will not take effect until **Apply** is tapped.

ENABLE WAKEUP

Select the **Enable wakeup** checkbox to enable pressing the key to wake the mobile computer from suspend mode.

Note: This checkbox is automatically disabled if an application is selected for the key on the **Apps** tab page.



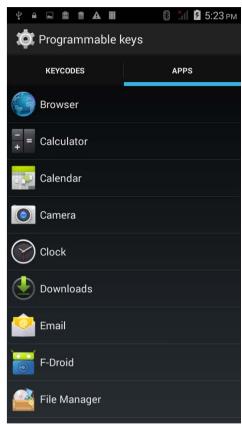
ASSIGN KEYCODE

Tap the key you would like to assign. A screen opens showing a list of available keycodes or applications. On the **Keycodes** tab page, scroll down to view the entire list of keycodes, and tap a keycode to apply.

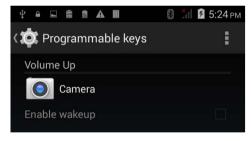


ASSIGN APPLICATION

Tap the key you would like to assign. Tap the **Apps** tab page to open a list of available applications. Scroll down to view the entire list of applications, and tap an application to apply.

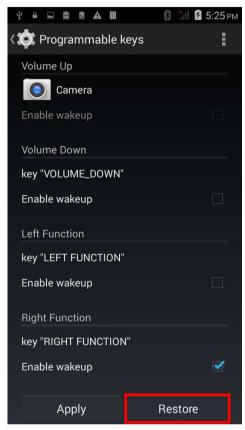


After an application is selected, an icon will appear next to the assigned key. Also, the **Enable wakeup** checkbox will be automatically disabled.



RESTORE FUNCTION

To restore a key to its previously assigned function, tap the ${\bf Restore}$ button in the bottom right corner.



2.9. DATA CAPTURE

2.9.1. BARCODE READER

A selection of scan engines is available for delivering flexibility to meet different requirements. Depending on the scan engine integrated, the mobile computer is capable of scanning barcodes of a number of symbologies that are enabled by default while running the ReaderConfig.exe utility. If you need to scan barcodes that are encoded in a different symbology, enable the symbology first.

2.9.2. DIGITAL CAMERA

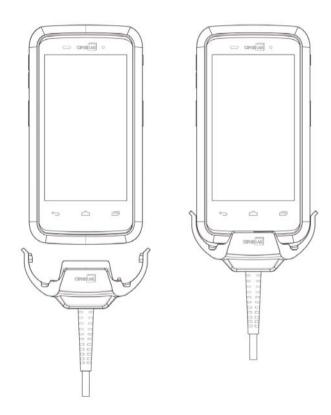
An integrated 8 megapixel camera in the mobile computer is specifically designed for collecting image data. You may use the image capture utility to turn on the camera and capture images.

2.10. SNAP-ON USB CHARGING CABLE

The Snap-on USB Charging Cable provides a convenient way to charge your mobile computer.

- ▶ Click the Snap-on USB Charging Cable on to attach; pull either side outwards to detach
- ▶ Connect USB to PC or adapter to charge mobile computer
- ▶ Cable completes charging in approximately 4 hours
- ▶ LED on mobile computer shows charging status
- Adapter input 100-240VAC, 50/60Hz; output 5VDC/2A

Note: The Snap-on USB Charging Cable is for charging only. For data communication, use the micro USB cable to connect the mobile computer to your PC or laptop.



Chapter 3

BASIC OPERATION OF THE RS30 MOBILE COMPUTER

This chapter describes the basic skills to work with the RS30 Mobile Computer, for instance how to operate the home screen, check system statuses and manage notifications. The add-on utilities for applications regarding data collection, processing, and transmission are introduced in the following chapters.

IN THIS CHAPTER

3.1	Home Screen	39
3.2	Widgets 4	4
3.3	Status Bar	7
3.4	Notifications Panel	0
3.5	Applications Menu 5	2
3.6	Manage Applications 5	4
3.7	Suspend & Lock	55
3.8	OS Update 5	6

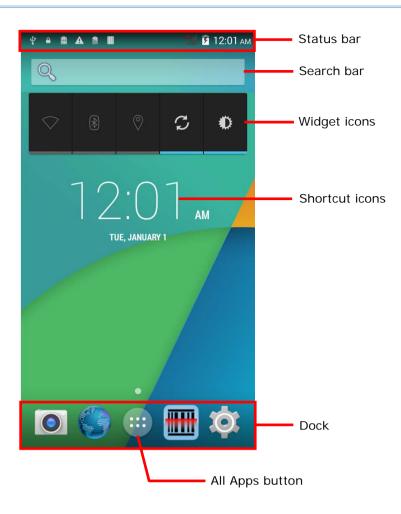
3.1. HOME SCREEN

When the mobile computer is fully charged, press the Power key for three seconds to turn on the mobile computer. A locked screen will appear. Slide the lock button in either direction to unlock the screen.





The **Home Screen** appears showing a status bar, shortcut icons, and a dock bar containing an All Apps button. The home screen allows up to four pages for placing shortcut icons and widgets. You may customize the home screen according to your preferences.



3.1.1. CUSTOMIZE HOME SCREEN

ADD APPLICATION SHORTCUT TO HOME SCREEN



- I) On the home screen you would like to customize, tap
- 2) Locate the application to add.
- 3) Tap and hold the application icon. The home screen will appear.
- 4) Drag the application icon to your preferred position and release to have it placed.

ADD WIDGET TO HOME SCREEN

- I) Tap and hold any empty spot on the home screen.
- 2) Tap Widgets in the menu that appears.
- 3) Tap and hold the widget to add. The home screen will appear.
- 4) Drag the widget to your preferred position and release to have it placed.

MOVE APPLICATION SHORTCUTS ON HOME SCREEN

- I) On the home screen you would like to customize, tap and hold the application shortcut you would like to move.
- 2) Drag the icon to the preferred position and release it to have it placed.

REMOVE APPLICATION SHORTCUT OR WIDGET FROM HOME SCREEN

- I) On the home screen you would like to customize, tap and hold the application shortcut or widget you would like to move.
- 2) Drag the icon to the top of the screen where the remove icon \times Remove



is located.

CREATE FOLDER

- I) On the home screen you would like to customize, tap and hold the application shortcut you would like to move.
- 2) Drag the icon on the top of another icon to create a folder.

NAME FOLDER

- I) Tap the folder you would like to name.
- 2) Tap **Unnamed Folder** and edit the folder name.
- 3) Tap **Done** on the on-screen keyboard.

REMOVE FOLDER

- I) Tap and hold the folder you would like to remove.
- 2) Drag the folder to the top of the screen where the remove icon located.



CHANGE HOME SCREEN WALLPAPER

- I) Tap and hold any empty spot on the home screen.
- 2) Tap **Wallpapers** in the menu that appears.
- 3) Select an image to apply as the wallpaper.
- 4) Tap **Set wallpaper** at the bottom of the wallpaper preview screen to apply it.

3.1.2. CUSTOMIZE WALLPAPER

I) Tap and hold any empty area on the Home Screen. A settings menu for the Home Screen will open at the bottom.



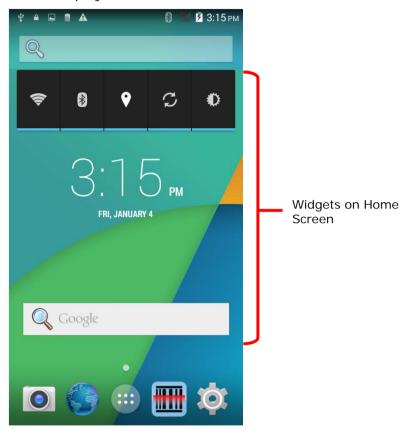
2) Tap **WALLPAPER** in the settings menu.



3) A wallpaper selection screen opens. Scroll through the wallpapers to select a wallpaper to apply.

3.2. WIDGETS

Widgets are designed for easy control of settings and viewing of status. Enabled widgets will be displayed on the Home Screen.



By default, two widgets are enabled, the power control widget and digital clock widget.

Default Widget	Icon	Description
	₹	Wi-Fi controlTap to <u>Power On/Off Wi-Fi</u> .
Power control	8	Bluetooth control. Tap to <u>Power On/Off Bluetooth</u> .
rower control	•	GPS control. Tap to set GPS mode between high accuracy and battery saving.
	S	Data syncing control. Tap to sync data of your Google account.



Screen brightness control. Tap to set the screen brightness profile between full, half, dim or auto.

Digital clock



Shows the current time, date and the set alarm.

3.2.1. ADD WIDGETS

To add a widget:

I) Tap and hold any empty area on the Home Screen. A settings menu for the Home Screen will open at the bottom.



- 2) Tap **WIDGETS** in the settings menu.
- 3) A widget menu opens. Tap and hold a widget and drag it to the Home Screen you would like to place it on.

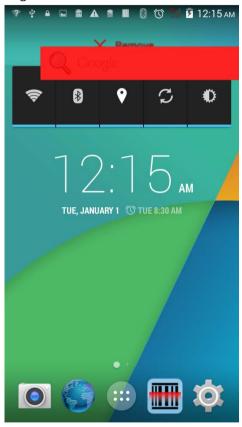


3.2.2. REMOVE WIDGETS

To remove a widget:

- I) Tap and hold a widget so it becomes highlighted. The widget is available for relocation.
- 2) Drag the widget to the top of the screen where a remove icon is located. The remove icon will change to red to indicate the widget is about to be removed.





3.3. STATUS BAR

The left side of the status bar shows notification icons, and the right side of the status bar shows status icons.



NOTIFICATION ICONS

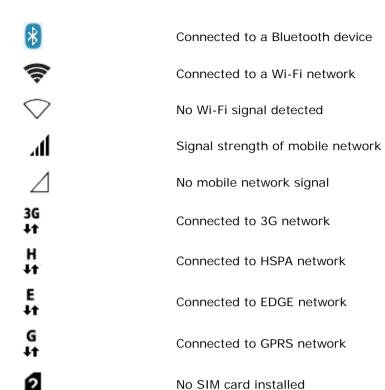
Icon	Description
Œ	More notifications are available, tap to show the <u>Notifications Panel</u>
1	Upcoming event
□ •• ••	Data is syncing
⊕	A problem has occurred with sign-in or data sync
	A song is currently playing
min ☆	Preparing storage card
.0 :	Storage card is almost full
<u>†</u>	Uploading data
<u>+</u>	Downloading data; when download is finished, icon stops flashing
. ♥ ± Ψ	Connected to PC via USB cable. Change the type of USB connection by viewing the notification in the ${\color{red} \underline{Notifications\ Panel}}$
A	No SIM card detected in either of the two SIM card slots
	NFC is enabled
ALL.	Multiuser feature is enabled
2	New user is logged in
F	Text message is received

č	Missed call
lacktriangle	Car mode is active
•	Connected to/disconnected from VPN network
*	Bluetooth tethering is active
Ψ	USB tethering is active
7	Wi-Fi network is available
	Wi-Fi hotspot is active

STATUS ICONS

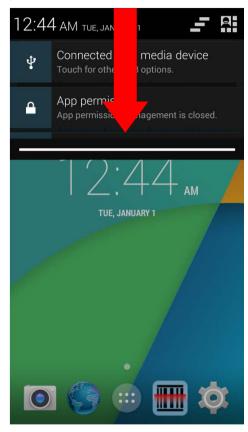
The icons at the top of the screen are explained below.

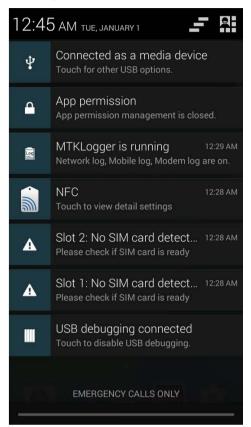
Icon	Description
•	GPS is active
\Diamond	Currently searching for location data
0	Alarm is active
"Di	Vibrate mode is active; all system sounds (except media and alarms) are muted
N	Phone ringer is muted
₽	Microphone is muted during a call
	Battery is fully charged
	Battery is partially drained
	Battery level is very low
Ţ.	Battery is almost completely drained and needs charging immediately
5	Battery is charging
×	Airplane mode is active
*	Bluetooth is active



3.4. NOTIFICATIONS PANEL

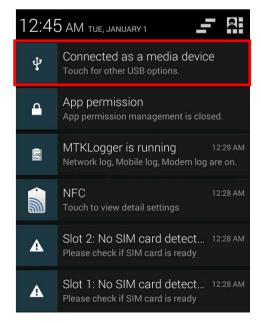
Use a downwards sliding motion from the top of the screen to open the notifications panel. To close the panel, slide the screen back upwards.





VIEW NOTIFICATIONS

Tap a notification message to enter a page for subsequent activity. The activity required for each notification will differ.





CLEAR NOTIFICATION

Slide each notification sideways to have it cleared. Some notifications will require subsequent activity to be cleared; tap the notification to enter a corresponding settings page for taking further steps.

CLEAR ALL NOTIFICATIONS

Tap on the status bar to clear all notifications. Ongoing notifications and notifications that require subsequent activity to be cleared will remain in the list.

3.5. APPLICATIONS MENU





on the Home screen to open the applications menu.

Icon	Name	Description
	Browser	Accesses the internet or intranet.
- +	Calculator	Performs mathematical calculations.
	Calendar	Creates and manages events, meetings and appointments.
	Camera	Takes pictures and shoots videos.
	Clock	Sets date, time, time zone according to your locale, and sets and manages alarms.
	Downloads	List all files downloaded on the mobile computer.
	Email	Sends and receives emails.
	F-Droid	Free market service for browsing, installing and keeping track of applications for Android platform.
	File Manager	Browses and manages files on the local storage and storage card.
	Gallery	Views photos and videos stored on the mobile computer.
	MAPS.ME	Provides map service for mobile devices.
	Messaging	Sends SMS and MMS messages.
030839	Movie Studio	Creates movies with the video files stored on the mobile computer.
•	Music	Plays music and audio files stored on the mobile computer and storage card.
9	People	Manages contact information, and shares or exports/imports the information to other devices or SD card.



Phone Places and receives calls, accesses voicemail, views call history,

manages phone contacts and adjusts phone settings.

Reader Config

der Config Sets scanner preferences, data output format and destination,

symbology settings, and reads barcodes.

Search se

engine.

Settings Opens settings to configure the mobile computer.

SIM Toolkit Additional services provided by your mobile carrier.

Sound Recorder Records and plays audio information.

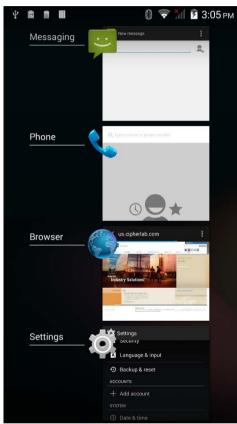
ToDo Manages tasks to do.

Videos Plays video files taken or stored on the mobile computer.

3.6. MANAGE APPLICATIONS

3.6.1. CURRENT APPLICATIONS

Tap and hold the Home button $\widehat{}$. The screen will show a list of recently used applications.



Actions to taks on this screen include the following:

SWITCH BETWEEN APPLICATIONS

Tap one of the listed applications to open it on the screen.

END APPLICATION

Slide an application to the left or right to close it.

Note: Close unused applications in order to release RAM. Remember to save your data or settings before closing any application.

3.7. SUSPEND & LOCK

3.7.1. SUSPEND DEVICE

The mobile computer operates continuously once it is powered on. To minimize power consumption and prevent unintended operation, suspend the mobile computer if you are not actively using it. The mobile computer can be quickly awoken from suspend mode to operate as needed. When the mobile computer enters suspend mode, the system is in a power-saving status, meaning the device will not respond to screen touch, and volume keys and side buttons will also be unavailable until the device is unlocked.

SUSPEND RS30

Press the power button to suspend the mobile computer. The mobile computer will automatically suspend when the time period set in <u>Screen Timeout Settings</u> has passed without any activity.

3.7.2. LOCK DEVICE

LOCK RS30

Tap Home | Settings | Security | Screen lock to change the lock method.

- None
- ▶ Slide: Uses the default slide gesture to unlock a locked screen.
- ▶ Voice Unlock: Select a voice command to use for unlocking the screen.
- Pattern: Enter a pattern to use for unlocking the screen.
- ▶ PIN: Uses the PIN code to unlock a locked screen.
- ▶ Password: Enter a password of at least 4 characters for unlocking the screen.

UNLOCK RS30

When the mobile computer is in suspend mode, pressing the power button will wake it up. If a lock method is set, follow the gestures below to unlock the screen:

- None
- ▶ Slide: Slide the lock icon in either direction so it relocates outside of the white circle.
- Voice Unlock: Say the voice command to unlock.
- Pattern: Swipe the set pattern to unlock.
- ▶ PIN: Enter the PIN code to unlock.
- Password: Enter the password unlock.

Warning: To save battery power, suspend the mobile computer when not in use.

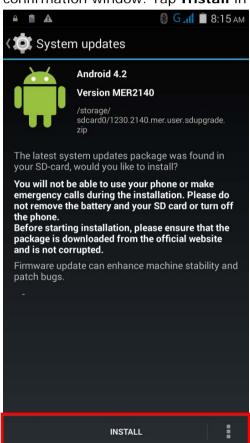
3.8. OS UPDATE

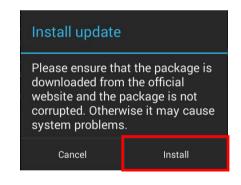
Follow the steps below to upgrade the OS:

- I) Obtain the latest OS image file, and copy the file onto the root storage of your SD card.
- 2) Insert the SD card into the card slot of the mobile computer and power it on.
- 3) Tap Home | Settings | About phone | System updates. The mobile computer will search for the OS image file stored on the SD card.

Note: Make sure the SD card is inserted in the mobile computer. If not, the screen will show that your system is currently up to date.

4) The file name and OS version will be shown on the screen. Tap **INSTALL** to open a confirmation window. Tap **Install** in the confirmation window to begin the installation.





5) Once complete, a notification will appear showing that the OS has been updated successfully. Tap **OK** to close



Chapter 4

WIRELESS RADIOS

The Wi-Fi module integrated on the mobile computer lets you configure and connect to network wirelessly.

IN THIS CHAPTER

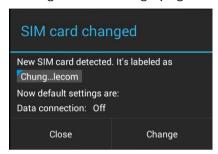
4.1	Use Wireless Wide Area Network	60
4.2	Use Wireless Local Area Network (Wi-Fi)	66
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4.4	Use Near Field Communications	78

4.1. USE WIRELESS WIDE AREA NETWORK

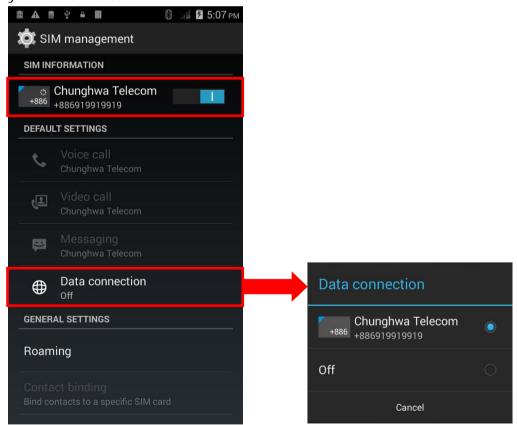
The mobile computer will be automatically configured to connect to your wireless service provider's network when you insert a SIM card and turn on data connection for the first time.

I) When a SIM card is inserted, a dialog will appear confirming the mobile carrier detected. By default, data connection is set as "off".

If you would like to change the default settings, tap **Change** to enter the SIM management settings page.



2) By default, phone power is turned "on", and data connection is turned "off". To enable mobile data connection, tap **Data connection**, and select the mobile carrier you would like to use.



EDIT ACCESS POINT NAME

You may need to change the access point name according to the information obtained from your mobile carrier.

- 1) Tap Home | Settings | Mobile networks.
- 2) On the Network settings page, tap Access Point Names.
- 3) Tap the settings button ., and tap **New APN** in the pop-up menu.
- 4) Tap each field to input the APN name and settings obained from your mobile carrier.
- 5) When finished, tap the settings button and tap Save.
- 6) Tap the radio button next to the APN you would like to apply.

4.1.1. SHARE WWAN DATA

The WWAN connection on the mobile computer can be shared to other devices. You may share internet connection with a computer or device through USB or Bluetooth tethering, or share with a maximum of eight devices by turning the mobile computer into a Wi-Fi hotspot.

BLUETOOTH TETHERING

To share data connection through Bluetooth tethering:

- I) Pair the mobile computer with the device of interest.
- 2) Tap Home | Settings | More... | Tethering & portable hotspot.
- 3) Tap **Bluetooth tethering**. The mobile computer will share its WWAN network with Bluetooth-connected devices.
- 4) To disable data connection through Bluetooth sharing, uncheck the **Bluetooth tethering** checkbox.

USB TETHERING

To share data connection through USB tethering:

- Connect the mobile computer with a USB cable. A USB icon will appear at the top of the screen, and in the Notifications panel, a description "Connected as USB Storage" will appear.
- 2) Tap Home | Settings | More... | Tethering & portable hotspot.
- 3) Tap **USB tethering**. The mobile computer will share its WWAN network with the connected host computer.

WI-FI HOTSPOT

To share data connection in the form of a Wi-Fi hotspot:

- Tap Home | Settings | More... | Tethering & portable hotspot.
- 2) Slide the **Wi-Fi hotspot** switch to the right to enable data sharing through Wi-Fi. The mobile computer will start broadcasting its SSID for other devices to connect.
- 3) Tap the **Wi-Fi hotspot** label to manage Wi-Fi hotspot settings: set when to turn the Wi-Fi hotspot off, change SSID and security settings, select whether to minimize battery usage when Wi-Fi hotspot is enabled, enable WPS mode and adjust bandwidth, and view connected users.

4.1.2. DATA USAGE

Data usage is the amount of data uploaded or downloaded on the mobile computer. Managing the data usage amount within a certain period of time is a recommended task, as an excess amount of data usage might incur additional fees from your service provider.

To check wireless data usage:

- I) Tap Home Settings I Data usage
- 2) The **Overview** tab page opens showing a summary of data usage for your mobile network and Wi-Fi connection. Open the tab page of your mobile carrier to view a chart of data usage on a monthly cycle.

SET DATA USAGE LIMIT

- I) Open the data usage tab page for your mobile carrier.
- 2) Slide the **Mobile data** switch to the right to enable data usage overview.
- 3) Select the **Set mobile data limit** checkbox to enable a limit for mobile data.
- 4) To adjust the limit level, tap the limit value on the chart to open a value selection box.
 - If a limit is set, when the data usage amount reaches the limit, mobile data connection will be automatically disabled.

ENABLE DATA USAGE DURING ROAMING

I) On the data usage tab page for your mobile carrier, tap the settings button



- 2) Select the **Data roaming** checkbox for your mobile carrier.
- 3) A dialog box appears confirming whether you would like to enable data roaming. Tap **OK** to confirm.

RESTRICT BACKGROUND DATA



- I) On the data usage tab page for your mobile carrier, tap the settings button
- 2) Select the **Restrict background data** checkbox.
- 3) A dialog box appears confirming whether you would like to enable data restriction. Tap **OK** to confirm.

The mobile computer conserves data usage by restricting background mobile data. Certain applications and services will be disabled unless the mobile computer is connected to a Wi-Fi network.

AUTO SYNC

- I) On the data usage tab page for your mobile carrier, tap the settings button
- 2) Select the Auto-sync data checkbox.
- 3) A dialog box appears confirming whether you would like to enable data auto-synchronization. Tap OK to confirm.
 Once auto-sync is enabled, any changes made to your personal account will be automatically reflected on the mobile computer.

4.1.3. DATA CONNECTION SETTINGS

TURN ON/OFF DATA CONNECTION

To manually turn on/off mobile data connection:

- Tap Home | Settings | More... | Mobile networks.
- 2) On the **Network settings** page, tap **Data connection** to show a dialog box for selection.
- 3) To turn on data connection, tap the radio button for the mobile carrier of interest. To turn off all data connection, tap **Off**.

3G DATA CONNECTION

To manually turn on/off 3G mobile data connection:

- Tap Home | Settings | More... | Mobile networks.
- 2) On the Network settings page, tap 3G service.
- 3) Tap Enable 3G to show a dialog box for selection.
- 4) To enable 3G data connection for a specific mobile carrier, tap the radio button for the mobile carrier of interest. To turn off all 3G data connection, tap **Off**. The mobile computer will thus be limited to 2G networks if data connection is enabled.

2G DATA CONNECTION

To manually turn on/off 2G mobile data connection:

- Tap Home | Settings | More... | Mobile networks.
- 2) On the **Network settings** page, tap **3G service**.
- 3) Tap Network Mode to adjust the network mode.
- 4) Select the network mode between 2G/3G or 3G only.

Note: To limit data connection to 2G networks, set Network Mode to **2G/3G**, and set Enable 3G to **Off**.

To limit data connection to 3G networks, set Network Mode to **3G only**, and for Enable 3G, select the mobile carrier you would like to use.

4.1.4. SIM CARD SETTINGS

LOCK SIM CARD

To lock the SIM card:

- I) Tap Home | Settings | Security |
- 2) Tap Set up SIM card lock.
- 3) Tap Lock SIM card.
- 4) Enter the PIN to enable SIM card lock. Once enabled, you are required to enter the PIN code in order to use the phone

CHANGE PIN CODE

To change the PIN code:

- Tap Home | Settings | Security |
- 2) Tap Set up SIM card lock.
- 3) Tap Change SIM PIN.
- 4) Enter your old PIN code to confirm your identity, and then input a new PIN code.

4.2. USE WIRELESS LOCAL AREA NETWORK (WI-FI)

4.2.1. POWER ON/OFF WI-FI

To power on Wi-Fi:

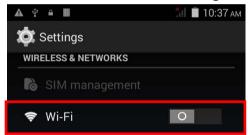
I) Tap the Wi-Fi icon on the power control widget.

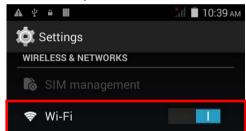




OR

- I) Tap Home Settings
- 2) Slide the Wi-Fi switch to the right to turn on Wi-Fi power.





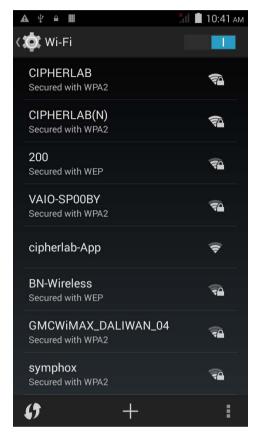
Slide the switch back to turn off Wi-Fi power.

4.2.2. CONNECT TO WI-FI NETWORK

To connect to a Wi-Fi network:

I) Tap Home | Settings | Wi-Fi

The Wi-Fi screen shows a list of available Wi-Fi hotspots.



2) Tap the network you would like to connect to.

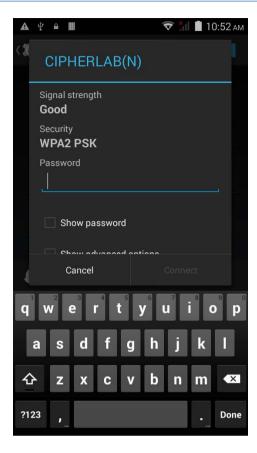
OR

Tap and hold the network to connect, and tap **Connect to network** in the pop-up menu.

3) If the network is an open one, the mobile computer will attempt to connect to it directly. When connected, the status will change to show "Connected".



If the network is a secured one, the mobile computer prompts a dialog to enter the password for connection.



- ▶ For WEP/WPA/WPA2 PSK connections: Enter the required password and tap **Connect**.
- ▶ For 802.1x EAP connections: Check the **Show advanced options** checkbox and select the **EAP method** in the drop-down box (PEAP, TLS, TTLS, PWD, SIM, AKA), and the **Phase 2 authentication** in the drop-down box (None, MSCHAPV2, GTC). Select a **CA certificate** and **User certificate** if required (certificates may be installed under **Home** | **Settings** | **Security**.) Enter your username in the **Identity** box and the password in the **Password** box if required.

4.2.3. MANUALLY ADD WI-FI NETWORK

If the network you would like to connect to does not broadcast its SSID, or if the network is out of range, you may add it manually.

- I) On the Wi-Fi screen, tap the add button + seated at the bottom.
- 2) In the dialog box, enter the name of the network in the **Network SSID** field, and select a security method in the **Security** field (None, WEP, WPA/WPA2 PSK, 802.1x EAP).
 - For WEP/WPA/WPA2 PSK connections: Enter the required password and tap **Save**.
 - ▶ For 802.1x EAP connections: Check the **Show advanced options** checkbox and select the **EAP method** in the drop-down box (PEAP, TLS, TTLS, PWD, SIM, AKA), and the **Phase 2 authentication** in the drop-down box (None, MSCHAPV2, GTC). Select a **CA certificate** and **User certificate** if required (certificates may be installed under **Home** | **Settings** | **Security**.) Enter your username in the **Identity** box and the password in the **Password** box if required.
- 3) If necessary, select the **Proxy** server and **IPv4** settings. By default, no proxy is set and IP settings are set to **DHCP**.

4.2.4. ADVANCED WI-FI SETTINGS

To configure advanced Wi-Fi settings:

- I) On the Wi-Fi screen, tap the settings button seated at the bottom right.
- 2) Select **Advanced** in the pop-up menu. Available settings are as below:

Icon	Description
Network notification	Notifies when an open network is available.
Keep Wi-Fi on during sleep	Sets when to turn Wi-Fi on during sleep.
Scanning always available	Allows location discovering applications to search for the device even when Wi-Fi is off.
Install certificates	Installs certificates recently downloaded or placed on the internal storage.
Wi-Fi optimization	Minimizes battery usage when Wi-Fi is on.
MAC address	Displays the MAC address of the device when connecting to Wi-Finetworks.
IPv6 address	Displays the IPv6 address of the device.
IPv4 address	Displays the IPv4 address of the device.

4.2.5. CONFIGURE PROXY SERVER

A proxy server acts as an intermediary between an endpoint device and another server from which the device is requesting a service.

To change the proxy settings for a connection:

- I) Tap a network in the available Wi-Fi hotspot list.
- 2) Check the **Show advanced options** checkbox.
- 3) Tap **Proxy** and select **Manual** in the pop-up menu.
- 4) Enter the address of the proxy server in the **Proxy hostname** field. Enter the port number for the proxy server in the **Proxy port**. Enter the addresses of websites which are allowed to bypass the proxy server in the **Bypass proxy for** field. (Use the separator | between addresses.)
- 5) Tap Connect.

4.2.6. USE STATIC IP ADDRESS

By default, the device uses DHCP to assign an IP address when connecting to a wireless network. You may set for the device to connect to a network using a static IP address.

- I) Tap a network in the available Wi-Fi hotspot list.
- 2) Check the **Show advanced options** checkbox.
- 3) Tap IPv4 settings and select Static in the pop-up menu.
- 4) Enter the IP address, gateway, network prefix length, DNS 1 address and DNS 2 address in the fields provided.
- 5) Tap Connect.

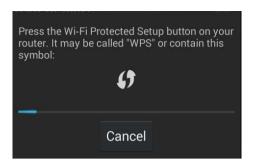
4.2.7. CONNECT WITH WI-FI PROTECTED SETUP (WPS)

Wi-Fi protected setup (WPS) allows easy establishment of a secure wireless network. The mobile computer supports WPS through push button configuration.

I) On the Wi-Fi hotspot scanning screen, tap the WPS button



2) A dialog will pop-up on the screen showing the remaining time allowed for pressing the WPS button on the router.



3) On your wireless router, press the WPS button. The device will connect to your router.

4.2.8. MODIFY WI-FI NETWORK

To change the settings for a connected network:

- I) Tap and hold a connected network in the Wi-Fi hotspot list.
- 2) Tap Modify network in the pop-up menu.
- 3) In the dialog box that opens, modify the network settings, and tap **Save**.

4.2.9. DISCONNECT WI-FI NETWORK

To disconnect a connected network:

- I) Tap and hold a connected network in the Wi-Fi hotspot list.
- 2) Tap Forget network in the pop-up menu.

4.3. USE BLUETOOTH

The RS30 Mobile Computer lets you configure Bluetooth settings and manage Bluetooth services provided on remote devices.

4.3.1. BLUETOOTH PROFILES

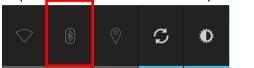
Bluetooth Profiles Supported

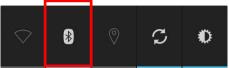
Generic Access Profile	(GAP)	For device discovery and authentication.
Serial Discovery Profile	(SDP)	Discovers services on remote devices.
Serial Port Profile	(SPP)	Sets up a virtual serial port to connect two Bluetooth devices.
Human Interface Device Profile	(HID)	Provides a low latency Bluetooth connection with keyboards, pointing devices, etc.
Object Push Profile	(OPP)	Pushes and pulls objects to and from a push server.
Dial-Up Networking Profile	(DUN)	Accesses the internet and other dial-up services.
Hands-Free Profile	(HFP)	Allows using a hands-free device to place and receive calls.
Advanced Audio Distribution Profile	(A2DP)	Streams stereo-quality audio to a wireless headset or speaker.
Audio/Video Remote Control Profile	(AVRCP)	Allows controlling of television and Hi-Fi equipment.
Generic Object Exchange Profile	(GEOP)	Provides a basis for other data profiles.
Personal Area Networking Profile	(PAN)	Uses Bluetooth Network Encapsulation Protocol for Bluetooth transmission.
General Audio/Video Distribution Profile	(GAVDP)	Provides a basis for A2DP and VDP.
Phone Book Access Profile	(PBAP)	Transfers Phone Book Objects to a car kit to display the information of an incoming call received on the mobile phone, or initiate a call.

4.3.2. POWER ON/OFF BLUETOOTH

To power on Bluetooth:

I) Tap the Bluetooth icon on the power control widget.

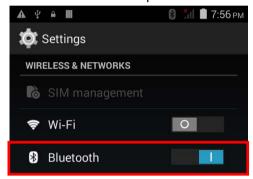




OR

- I) Tap Home Settings
- 2) Slide the Bluetooth switch to the right to turn on Bluetooth power.





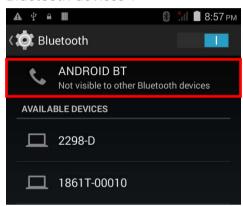
Slide the switch back to turn off Bluetooth power.

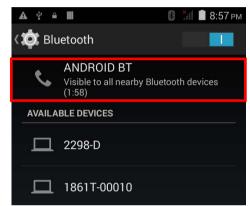
Note: After turned on, Bluetooth power is maintained even when the mobile computer is suspended. However, if the power mode is switched to Airplane Mode, Bluetooth power will be turned off regardless of the settings.

4.3.3. SET BLUETOOTH VISIBILITY

To pair Bluetooth devices:

- I) Tap Home | Settings | Bluetooth
- 2) Tap **Search For Devices** at the bottom of the screen. The screen shows a list of Bluetooth devices nearby.
- 3) By default, Bluetooth visibility is turned off. Tap **ANDROID BT** at the top of the screen to turn on Bluetooth visibility. The status will change to "Visibile to all nearby Bluetooth devices".





BLUETOOTH VISIBILITY TIMEOUT

To change the timeout period for Bluetooth visibility:

- I) On the available Bluetooth devices screen, tap in the bottom right corner.
- 2) Tap Visibility timeout in the pop-up menu.
- 3) Select a timeout period for Bluetooth visibility to be automatically turned off.

4.3.4. CHANGE BLUETOOTH NAME

To change the Bluetooth name to make the mobile computer more:

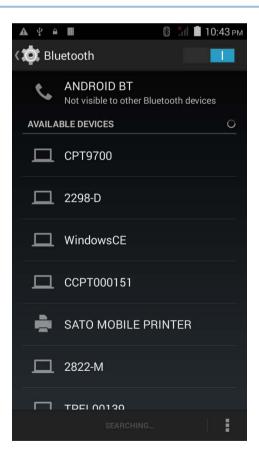
- I) On the available Bluetooth devices screen, tap in the bottom right corner.
- 2) Select **Rename phone** in the pop-up menu. Type a new name in the field and tap **Rename**.

4.3.5. PAIR BLUETOOTH DEVICE

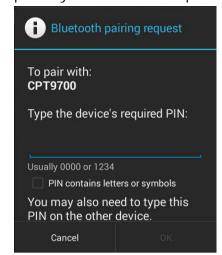
To pair Bluetooth devices:

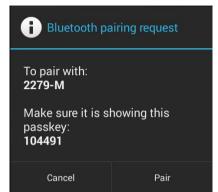
- I) Tap Home | Settings | Bluetooth
- Tap Search For Devices at the bottom of the screen. The screen shows a list of Bluetooth devices nearby.
- 3) Scroll throught the list and tap the device you would like to pair.

Note: If the device you would like to pair with is not listed, make sure Bluetooth visibility is enabled on the device.

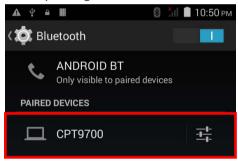


4) The **Bluetooth pairing request** window opens. Depending on the pairing settings of the Bluetooth device, you may need to enter a passkey, or confirm the assigned passkey on the device to pair if a smart pairing nethod is applied.





- 5) Enter/confirm the passkey on the device to pair.
- 6) Once pairing is done, the Bluetooth device will be listed in the Paired Devices list.



4.3.6. UNPAIR BLUETOOTH DEVICE

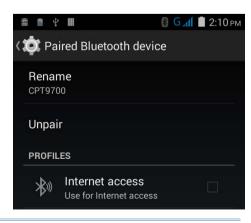
To unpair a paired device:

- I) In the **Paired Devices** list, tap the settings button next to the paired device.
- 2) On the Paired Bluetooth device screen, tap Unpair.

4.3.7. SELECT BLUETOOTH SERVICE

To select the service of a paired device:

- I) In the **Paired Devices** list, tap the settings button next to the paired device.
- 2) On the **Paired Bluetooth device** screen, check the profile to use.

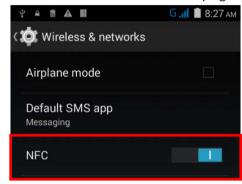


4.4. USE NEAR FIELD COMMUNICATIONS

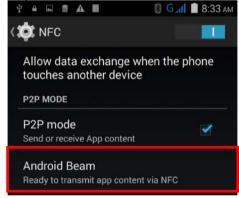
Near field communications (NFC) uses close proximity (4 cm or less) to establish radio communication through electromagnetic fields. With NFC enabled, the mobile computer can collect information from NFC tags, exchange information with other NFC supported devices, and even change information on the NFC tag if authorized.

Before starting to communicate through NFC, perform the following:

- I) On the mobile computer, tap **Home** Settings | More....
- 2) On the Wireless & networks page, make sure the NFC switch is enabled.



3) Tap the NFC label to enter the NFC settings page, and tap Android Beam.

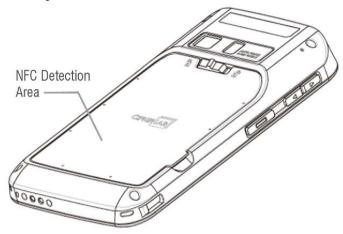


4) Make sure the **Android Beam** switch is enabled.



PAIR WITH NFC ENABLED BLUETOOTH DEVICES

- I) On the device you would like to pair with, make sure NFC is enabled and Bluetooth discovery is enabled.
- 2) Hold the mobile computer without covering the antenna area at the lower end of the battery cover.



3) Move the mobile computer in proximity with the device. A screen notification will appear to indicate that pairing is successful.

SHARE INFORMATION

- I) Open the web page, video, photo or contact info page you would like to transfer.
- 2) Place the back of the mobile computer in close proximity with the other device you would like to share data with.
- 3) When the two devices connect, a "Touch to beam" notification will appear on the screen.
- 4) Touch the screen to initiate data transfer.

Note: Once the data begins to transfer, the two devices only need to be held within a 10 m (32.8 ft.) range; they no longer have to be held within close range in order to transfer successfully.

COMMUNICATION WITH NFC

- I) On the mobile computer, launch an NFC enabled application.
- 2) Hold the mobile computer without covering the antenna area at the lower end of the battery cover.
- 3) Place the mobile computer close to the NFC tag or device until the application indicates data transfer is complete.

Chapter 5

USING THE PHONE

The RS30 Mobile Computer allows making phone calls and connecting to the network over Wideband Code Division Multiple Access (WCDMA). Insert the SIM card before turning on the power. Refer to Installing SIM Card.

Note: If the SIM card is not in position, you may make emergency calls if the service is supported.

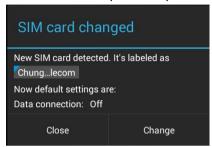
IN THIS CHAPTER

5.1 Phone Power	82
5.2 Phone Application	84

5.1. PHONE POWER

The mobile computer accommodates two SIM cards and supports dual standby of two different networks. Both networks will be monitored at the same time, and the phone will dynamically switch between the two networks during usage. Calls will be placed with either one of the networks; you cannot switch networks in the middle of a received call or placed call, or receive or place calls with both networks at the same time.

I) When a SIM card is installed for the first time, the phone power is turned on automatically when the mobile computer is powered on. A dialog box pops-up when the mobile computer is powered on notifying that a SIM card is detected.



Note: If only one SIM card is installed on the mobile computer, make sure it is installed in the first SIM card slot.

- 2) Tap **Change** in the dialog box.
- The SIM management screen opens showing the name of the mobile carrier and the current phone settings.
- 4) To open the SIM management screen from other screens, tap Home | Settings | Settings

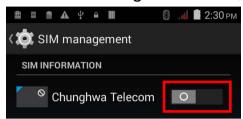
Note: If only one SIM card is installed on the mobile computer, make sure it is installed in the first SIM card slot.

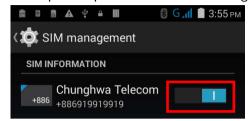


5.1.1. TURN ON/OFF PHONE POWER

To power on the phone:

1) On the **SIM management** screen, slide the phone power switch to the right.





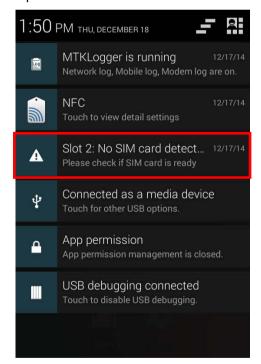
Slide the switch back to turn off Wi-Fi power.

5.1.2. SIM CARD MISSING

If either one of the SIM card slots is empty, a warning icon will be displayed on the status bar.



Open the Notifications list to check the notification.



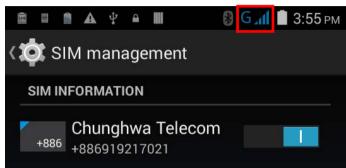
EMERGENCY CALLS

Depending on your service provider, the mobile computer might support making emergency phone call when the SIM card is locked, or even when no SIM card is inserted. Emergency phone numbers will vary by country.

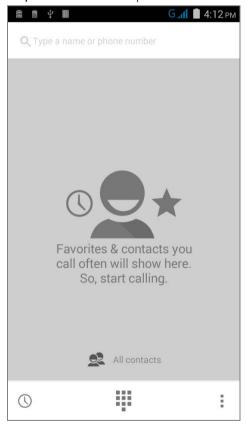
5.2. PHONE APPLICATION

5.2.1. PHONE INTERFACE

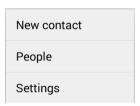
I) When a SIM card is installed on the mobile computer and the <u>Phone Power</u> is on, a signal icon appears on the status bar. The number of bars indicates the strength of the connection.



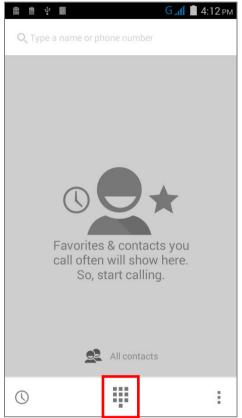
2) Tap **Home** | Phone . The Phone application opens.

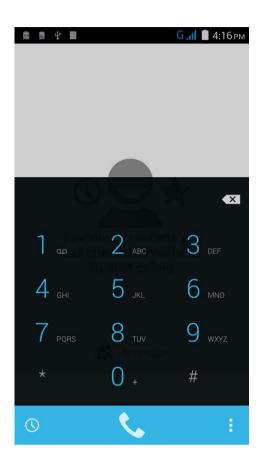


3) Tap the settings button to open the phone settings menu for adding a new contact, opening the People application, or configuring Phone Settings.



4) Tap to open the dial pad.



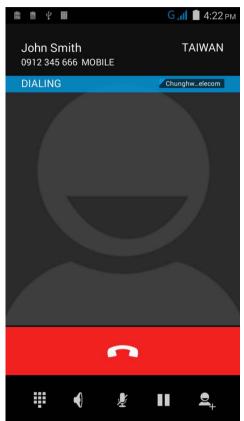


5) Tap to open the dialer menu for setting speed dial numbers and opening the People application.



5.2.2. PLACE CALL

Enter the phone number in the dial pad and tap to initiate the call.



The phone keypad features the following buttons:

Button	Description
#	Opens the dial pad.
•	Turns on the speaker.
¥	Mutes the call.
П	Places the call on hold.
9 ,	Adds another person to the call.

All contacts

PLACE CALL USING CONTACTS

To make a call using contacts:

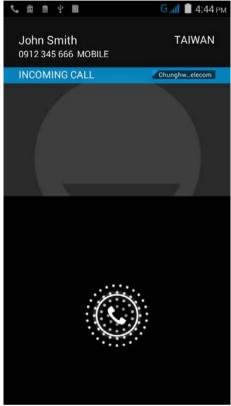
- I) In the phone application page, tap
- 2) Tap a contact to initiate a call.

5.2.3. RECEIVE INCOMING CALL



When a call is incoming on the mobile computer, tap

on the mobile computer, tap to pick it up.



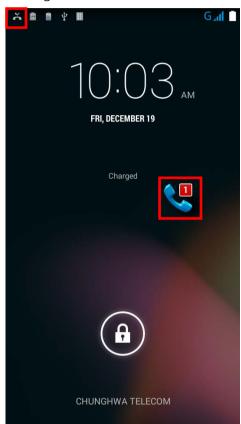
Incoming calls will be recorded in the **Phone** application; in the case of a missed call, a notification will be displayed. See <u>Check Missed Calls</u>.

To mute the ringtone of an incoming call, press the volume down button.

5.2.4. CHECK MISSED CALLS

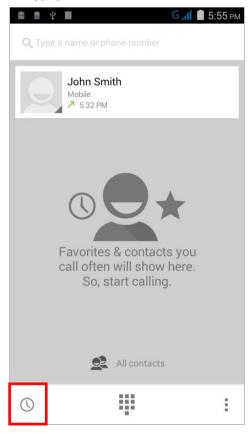
If you have a missed call, a notification icon will appear on the status bar, and a

missed call icon will appear on the lock screen. The LED on the top of the screen will also blink red for notification. Unlock the screen and use the <u>Notifications Panel</u> to manage the missed call.



5.2.5. VIEW CALL HISTORY

I) On the Phone application page, tap the History button to open a list of history calls.





2) Use the tabs at the top of the screen to sort out the type of call.



3) Tap the phone icon next to a call record to place back the call.

5.2.6. MAKE MULTI-PARTY CALLS

To make multi-party conference calls:

- I) On the Phone application page, enter the first number to call and tap initiate the call.
- 2) After the call has begun, tap to add another member. The first call will be put on hold.
- 3) Enter the second number to call and tap to initiate the call.
- 4) When the second call is connected, the first call will continue to be on hold. Tap the merge call button to add the first call to the conversation. A three-party conference call is initiated.
- 5) To add a fourth member, tap . The three-party call will be put on hold.
- 6) Enter another number to call and tap to initiate the call.
- 7) When the call is connected, the three-party call will continue to be on hold. Tap the merge call button to add the three-party call to the conversation. A four-party conference call is then initiated.
- 8) Tap Manage Conference to view all members of the call.
 - To remove a member, tap next to the member.

To speak with a member in private, tap the member, and the conference call will be put on hold. Tap to return back to the conference call.

5.2.7. AUDIO MODES

The mobile computer offers three different audio modes for phone calls:

HANDSET MODE

This is the default audio mode which uses the receiver above the touchscreen for audio output during calls.

SPEAKER MODE

This mode uses the built-in speaker for audio output during calls.

HEADSET MODE

Connect a Bluetooth headset or a wired headset to the mobile computer for audio output during calls.

USE BLUETOOTH HEADSET

See <u>Pair Bluetooth Device</u> to connect the mobile computer to a Bluetooth device. The speaker phone becomes muted when a Bluetooth headset is connected.

USE WIRED HEADSET

Insert a wired headset in the <u>Headset Jack</u>. The speaker phone becomes muted when a wired headset is connected.

5.2.8. IN-CALL VOLUME

Use the <u>Volume Buttons</u> to adjust the ringer volume and system sound level. When in the middle of a call, use the volume buttons to adjust in-call conversation volume.

5.2.9. PHONE SETTINGS

To open phone settings, tap the settings button it to on the phone application.

Indicator	Status	Description
Voice Call	Voicemail	Sets the carrier for voicemail service and the number for voicemail.
	IP prefix number	Sets prefix number for IP dial.
	Call forwarding	Sets when to forward calls.
	Call barring	Sets which types of outgoing and incoming calls to restrict, and the password for call barring.
	Additional settings	Sets whether to display caller ID in outgoing calls, or show new incoming calls during an existing call.
	Local video replacement	Sets a picture to display when the camera is off use.
	Display peer video	Sets whether to display a replacement picture when the peer video is unavailable.
	Peer video replacement	Sets the picture to display when the peer video is unavailable.
	Enable back camera	Sets to enable the back camera for video calling.
	Bigger Peer video	Sets the peer video at a larger size than the local video.
Video Call	Auto drop back	Sets to drop back voice call connecting automatically.
	Outgoing video call	Sets to display the local video when initiating a video call.
	Video incoming call	Sets to display the local video when accepting an incoming call.
	Call forwarding	Sets the call forwarding settings for video calls.
	Call barring	Sets the call barring settings for video calls.
	Additional settings	Sets phone number and call waiting settings for video calls.
Internet Call	Accounts	Sets to receive incoming calls, and adds an account for internet calling.
	Use Internet calling	Enables internet calling.
	Fixed Dialing Numbers	Enables fixed dialing numbers (FDN), PIN2 and the phone number list for FDN.
Other Settings	Minute reminder	Enables a reminder at the 50 th second of every minute.
	Quick responses	Sets a quick response for rejecting incoming calls.

TTY mode	Sets teletypewriter (TTY) mode.
International dialing assist	Enables international dialing assistance

Chapter 6

USING READER CONFIGURATION UTILITY

The **Reader Configuration utility** allows you to manage the barcode reader integrated on the mobile computer.

IN THIS CHAPTER

6.1 Configure Reader	96
6.2 Read Printed Barcodes	116

6.1. CONFIGURE READER

The mobile computer is capable of reading printed barcodes. The reader module can be a either a (laser) 1D reader or a 2D imager. The mobile computer is installed with a CipherLab utility Reader Config to configure the scan engine built inside. Use it to create a profile of settings that best suits your needs.

LAUNCH READER CONFIG

To launch Reader Config:

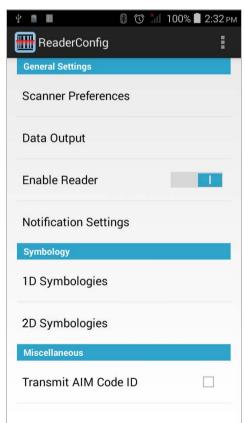


OR

Tap the Reader Config shortcut on the dock.



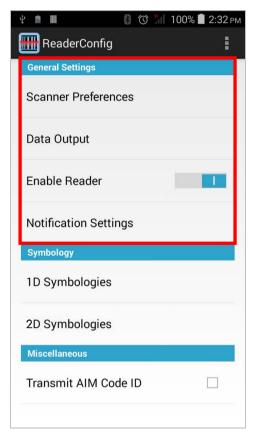
Reader Config launches in context with the reader module(s) on board the mobile computer. On the main settings page are three sections: **General Settings**, **Symbology** and **Miscellaneous**.



The following will guide to settings provided in each of the three sections.

6.1.1. GENERAL SETTINGS

General Settings is where all reader settings are accessed from. Tap each item to enter its sub-menu.



The functions under **General Settings** include:

- Scanner Preferences
- Data Output
- ▶ Enable Reader (enabled by default)
- Notification Settings

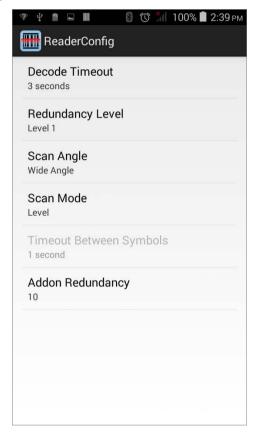
SCANNER PREFERENCES

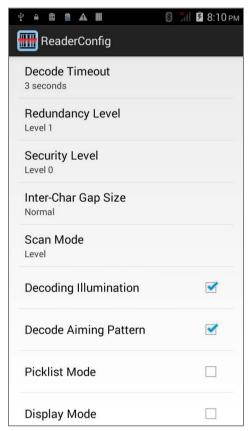
Options on the **Scanner Preferences** page differ according to the type of scan engine built within the mobile computer.

To open **Scanner Preferences** page:

- I) Open Reader Config as described in Launch Reader Config.
- 2) Tap Scanner Preferences.

Featured settings are different for the 1D linear imager, 1D (laser) reader and 2D imager:





1D LINEAR IMAGER SETTINGS

Setting	Description	on	Default	
Decode Timeout		Sets the maximum time (configurable from 1 to 9 sec) for the decoding process during a scan attempt.		
Redundancy Level	linear ba	Sets how many successful readings should be done before linear barcodes such as Codabar, MSI, and Interleaved 2 of 5 can be decoded. Levels 1 to 4 available. The readings needed for each level are as follows:		
	Level	Description		
	1	The following barcodes must be successfully read twice before being decoded: Codabar, MSI, Industrial 25 (Discrete 25), Interleaved 25.		
	2	All barcodes must be successfully read twice before being decoded.		
	3	All barcodes must be successfully read twice before being decoded, except for the following which must be read three times: MSI, Industrial 25 (Discrete 25), Interleaved 25.		
	4	All barcodes must be successfully read three times before being decoded.		
Scan Mode	• "Con deco	decode different barcodes in a continuous motion.		
Timeout Between Symbols	once mo	time for the barcode reader to resurrect its ability to re decode a barcode it just decoded. available for Continuous mode.	1 sec	

1D LASER READER SETTINGS

Setting	Description		Default
Decode Timeout	Sets the maximum time for the decoding process during a scan. Configurable between 1 sec to 9 sec.		3 sec
Redundancy Level	linear barco	many successful readings should be done before des such as Codabar, MSI, and Interleaved 2 of 5 ded. Levels 1 to 4 available. s needed for each level are as follows:	Level 1
	Level	Description	
	Level 1	The following barcodes must be successfully read twice before being decoded: Codabar, MSI, Industrial 25 (Discrete 25), Interleaved 25.	
	Level 2	All barcodes must be successfully read twice before being decoded.	
	Level 3	All barcodes must be successfully read twice before being decoded, except for the following which must be read three times: MSI, Industrial 25 (Discrete 25), Interleaved 25.	
	Level 4	All barcodes must be successfully read three times before being decoded.	
Scan Angle	Wide A Wide Ar	 Sets the scan angle for laser scan engine. Wide Angle: 47° (Extended range laser reader is fixed at Wide Angle) Narrow Angle: 35° 	
Scan Mode	Sets the reader's scanning behavior. Options available are Continuous and Level modes. Continuous: Used for continuous reading of barcodes. The scan engine remains on when this mode is activated. Level: Reads a barcode when the trigger is pressed.		Level
Timeout Between Symbols		ne for the barcode reader to resurrect its ability to decode the barcode it just decoded.	1 sec
	Only ap	plied in Continuous mode	

2D IMAGER SETTINGS

Setting	Description		Default
Decode Timeout	Sets the maximum time for the decoding process during a scan. Configurable between 1 sec to 9 sec.		3 sec.
Redundancy Level	Sets how many successful readings should be done before linear barcodes such as Codabar, MSI, and Interleaved 2 of 5 can be decoded. Levels 1 to 4 available.		Level 1
Security Level	Sets the considering Code 93 security i	Level 0	
	Level	Description	
	0	With this default, the scan engine is aggressive enough to decode most "in-spec" barcodes.	
	1	Select this level if misdecodes have occurred. It fixes most misdecodes.	
	2	Select this level if Level 1 should fail to eliminate misdecodes.	
	3	Select this level if Security Level 2 should fail to prevent misdecodes. However, as this level actually impairs the decoding ability of the decoder, a safer solution would be to improve the quality of the bar codes to read.	
Inter-Char Gap Size	Sets the Switch be	Normal	
Scan Mode	Sets the reader's scanning behavior. Options available are Level and Presentation Mode .		Level
	▶ Level: The decoding process is activated by a trigger event, and continues until the trigger event ends, a valid decode happens or decode session time-out is reached.		
	decod view. tap A will o trigge Deco	de a barcode when an object appears in its field of To enter this mode, select "Presentation Mode" and Apply. Once activated, the imager will stay on, and only be deactivated if one of the following occurs: the er is pressed, or the time interval specified in ode Timeout passes without any new object coming ts field of view.	
Decoding Illumination	Enables an LED light beam to aid barcode reading.		Selected (Enabled)
Decode Aiming Pattern		a crosshair at the center of the laser light beam to barcode reading.	Selected (Enabled)
Picklist Mode	When sel	lected, only barcodes aligned at the crosshair of the t beam will be decoded.	Deselected (Disabled)

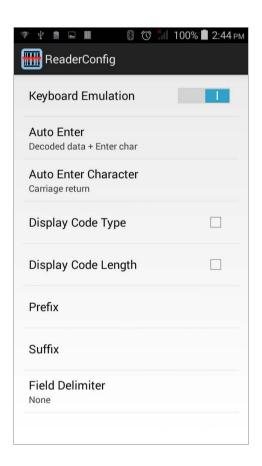
Display Mode	Enable improved performance for reading barcodes on electronic displays and mobile phones.	Deselected (Disabled)
Inverse Type	Decide whether to disable or enable decoding inverse barcodes, or set as auto.	Regular only
Addon Redundancy	Functions when "auto-discriminate" is applied for UPC/EAN addons. Decides the number of times of supplemental decoding of the same barcode in order to count as a valid read. Configurable between 2 and 30.	10

DATA OUTPUT

Data Output allows users to set the way to output decoded data.

To open **Data Output** settings page:

- I) Open Reader Config as described in Launch Reader Config.
- 2) Tap Data Output.



WHERE TO OUTPUT

Keyboard Emulation setting controls where the decoded data is to be output.

Setting	Descriptions	Default
Keyboard Emulation	Slide the switch open to enable. When enabled, the reader module treats decoded data as typed text and outputs it to the active application on the mobile computer.	Enabled

HOW TO OUTPUT

After the output destination is set, configure how to output decoded data, i.e. the "format" to present decoded data.

Setting	Description	Default
Auto Enter	Adds an ENTER character before or after each string of decoded data. The ENTER character can be defined in the "Auto Enter character" field below. This function saves the trouble of pressing a confirmation key to accept each string of decoded data. Options are:	Decoded data + Enter char
	Disable	
	Decoded data + Enter char	
	▶ Enter char + Decoded data	
Auto Enter character	Adds a key code before or after the decoded data. If [Auto Enter] is enabled, select the ENTER character to send. Options are:	Carriage Return
	None	
	Carriage Return	
	▶ Tab	
	▶ Space	
	Comma	
	Semicolon	
Display Code Type	Prefixes the output data with code type information.	Deselected (Disabled)
Show Code Length	Suffixes the output data with code length information.	Deselected (Disabled)
Prefix	Affixes 0 to 10 characters to the left of the output data. Tap the label to open a character table for entering the prefix.	
	Prefixes containing invisible characters are supported.	
Suffix	Affixes 0 to 10 characters to the right of the output data. Tap the label to open a character table for entering the suffix.	
	Suffixes containing invisible characters are supported.	
Field Delimiter	Sets the delimiter to separate the output barcode data to the following pieces: code type, decoded barcode data, and code length (if applicable). Options are:	None
	None	
	Comma	
	▶ Semicolon	
	▶ Full stop	

ENABLE READER

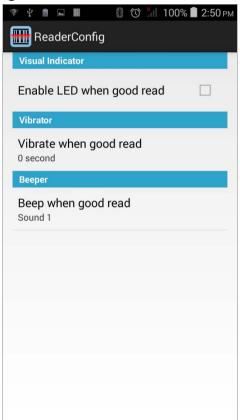
Features a switch to enable or disable reader scanning ability. When enabled, a light beam will be sent out from the scanning window each time the trigger (scan key) is pressed.

NOTIFICATION SETTINGS

Notification Settings enables audible, visible and tactile feedback for scanning good read, which helps notify the user of a successful decoding.

To open **Notification Settings** page:

- I) Open Reader Config as described in Launch Reader Config.
- 2) Tap Notification Settings.

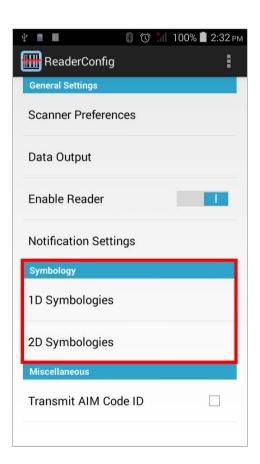


Setting		Description	Default
LED	Enable LED when good read	Selects to enable/disable LED light (left) for scanning good read. See Status LED for details.	Deselected (Disabled)
Vibrator	Vibrate when good read	Enables/disables tactile feedback (vibration) for good read and sets the duration to vibrate.	0 second (Disabled)
Beeper	Beep when good read	Sets the beeper sound for scanning good read. Users can choose to mute the beeper sound, or configure the beeper between sounds 1 to 9.	Sound 1

6.1.2. SYMBOLOGY

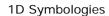
The Symbology page sets the symbologies to read, and also enables/disables some feature(s) for a symbology to read, such as:

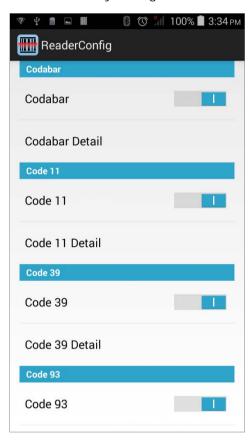
- Customize and transmit start/stop characters
- Verify/transmit check digits
- ▶ Enable/disable addon digits
- Convert to another symbology
- Transmit symbology ID



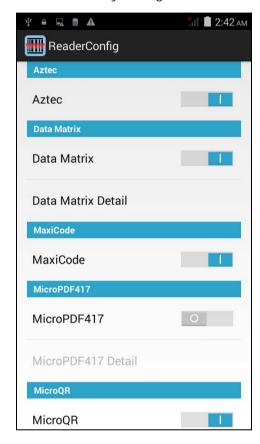
To open **Symbology** settings page:

- I) Open Reader Config as described in Launch Reader Config.
- 2) Tap 1D Symbologies or 2D Symbologies (in case of a 2D imager) to list all symbologies which can be decoded.



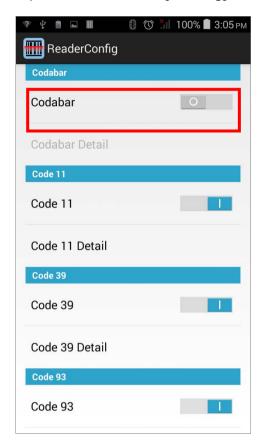


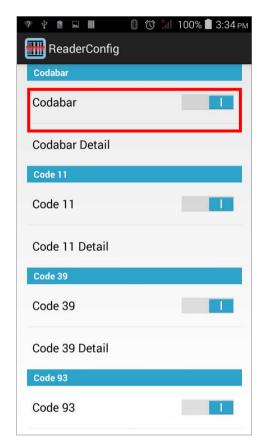
2D Symbologies



ENABLE/DISABLE SYMBOLOGY

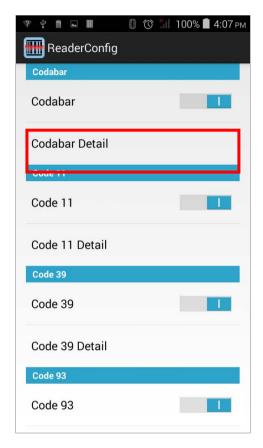
Tap the label of each symbology to enable or disable it.

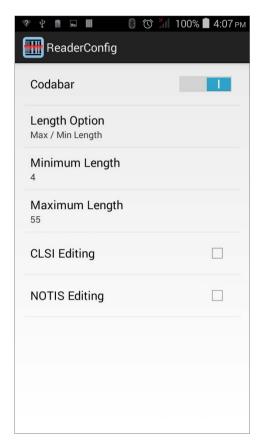




SYMBOLOGY SETTINGS

Tap the **Detail** label below each symbology to access detailed settings for the specific symbology.



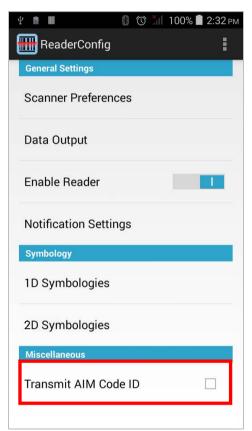


For details about the featured settings:

- ▶ See Appendix II: CCD Linear Imager 錯誤! 找不到參照來源。.
- ▶ See Appendix III: Laser Reader <u>錯誤! 找不到參照來源。</u>.
- ▶ See Appendix IV: 2D Imager <u>錯誤! 找不到參照來源。</u>.

6.1.3. MISCELLANEOUS

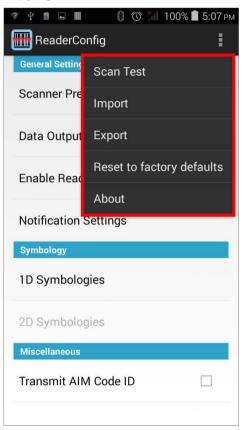
This section allows enabling code ID transmission for easy identification of the scanned barcode.



Setting	Description	Default
Transmit AIM Code	Sets whether to include AIM code ID character in the decoded data. For AIM code ID, see the following:	Deselected (Disabled)
	▶ Appendix II: CCD Linear Imager <u>錯誤! 找不到參照來源。</u> .	
	▶ Appendix III: Laser Reader <u>錯誤! 找不到參照來源。</u> .	
	▶ Appendix IV: 2D Imager <u>錯誤! 找不到参照來源。</u> .	

6.1.4. READER CONFIG OPTION MENU

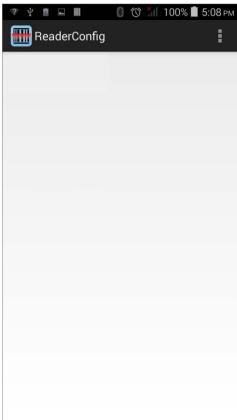
Reader Config provides an option menu which is accessible on the menu bar of the main settings page. This menu allows you to test scan barcodes, import/export all settings in a re-usable format, reset all settings back to factory default, and view copyright and version information.



SCAN TEST

To test scan a barcode:

- I) Open Reader Config as described in Launch Reader Config.
- 2) Tap the settings button on the menu bar to open the option menu.
- 3) Tap **Scan Test** in the option menu. A page opens for test scanning.



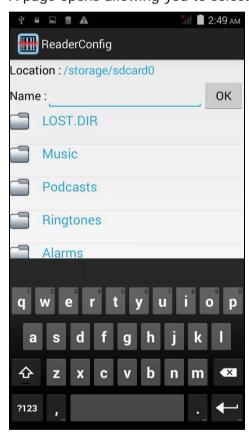
IMPORT AND EXPORT

Reader Config supports saving the settings and exporting them as an .xml file.

Previously exported symbology and scanner settings can be imported again on the mobile computer. This can also be used to implement identical Reader Config settings on multiple devices.

To import settings:

- I) Open Reader Config as described in Launch Reader Config.
- 2) Tap the settings button on the menu bar to open the option menu.
- 3) Tap Import in the option menu.A page opens allowing you to select a previously saved profile.



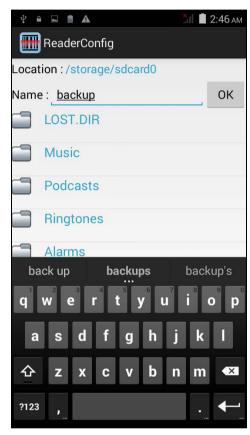
4) Tap **OK**. In a few seconds a prompt will appear on the mobile computer to indicate settings have been imported successfully.



To export settings:

- I) Open Reader Config as described in Launch Reader Config.
- 2) Tap the settings button **I** on the menu bar to open the option menu.
- 3) Tap Export.

An export page opens allowing you to enter the name and location of the profile to save.



4) Tap **OK** to export. A prompt will appear on-screen to notify that settings have been exported.



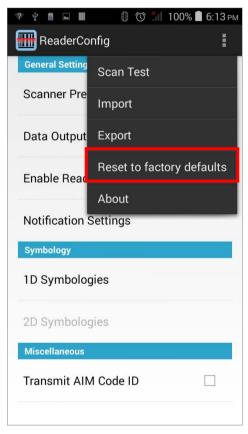
RESET TO FACTORY DEFAULTS

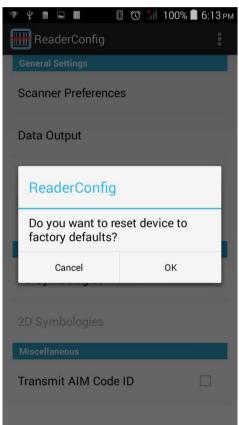
This function restores all settings in the **Reader Config** application to default.

To enable Factory Reset:

- I) Open Reader Config as described in Launch Reader Config.
- 2) Tap the settings button **I** on the menu bar to open the option menu.
- 3) Tap Reset to Factory defaults.

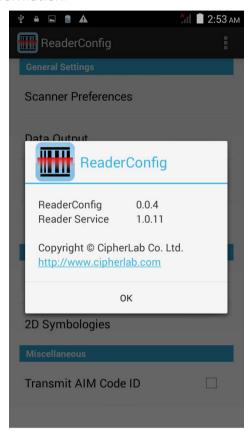
A warning dialog appears confirming whether to restore all application settings back to default. Tap **OK** to reset or **Cancel** to close the dialog.





ABOUT

Tap **About** in the Reader Config option menu to display software version and copyright information.

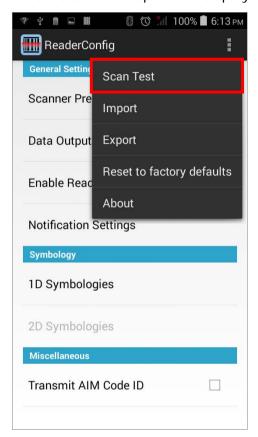


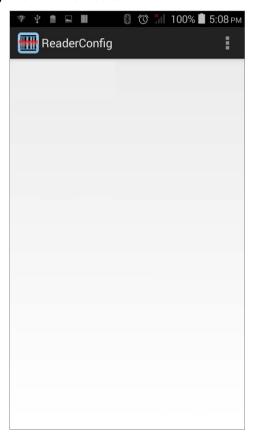
6.2. READ PRINTED BARCODES

Aside from output to destinations as per <u>Keyboard Emulation</u> settings, Reader Config provides a **Scan Test** feature for quick viewing of decoded data.

To perform test scanning of barcodes:

- I) Open Reader Config as described in Launch Reader Config.
- 2) Tap Scan Test on the menu bar.A Test Scan Form opens for displaying the scanned data.

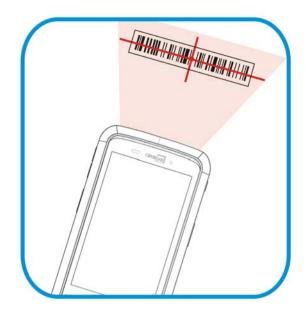




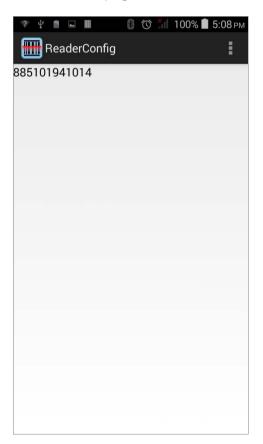
3) Aim the scanning window at the barcode to read and press any of the two side triggers.

The scanning light beams to read the printed barcodes.

The scanning light goes off once the data is decoded, or when the decode timeout period has passed.



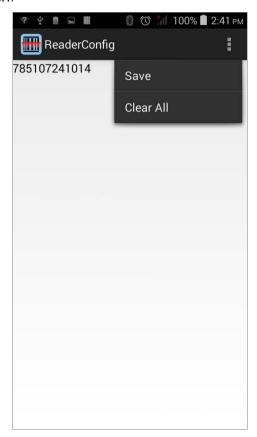
The decoded data will appear on the page. When finished viewing, tap to leave the test scan page.



To display more information such as barcode type and length, configure the reader as in $\underline{\text{Data Output}}.$

TEST SCAN MENU

Tap the settings button on the menu bar to save the decoded data as a .txt file or clear all data on the screen.



台灣NCC 注意事項

第十二條 經型式認證合格之低功率射頻電機, 非經許可, 公司、商號或使用者不得擅自變更頻率、加大功率或變更原設計之特性及功能。

第十四條 低功率射頻電機之使用不得影響飛航安全及干擾合法通信;經發現有干擾現象時,應立即停用,並改善至無干擾時方得繼續使用。

前項合法通信. 指依電信法規定作業之無線電通信。

低功率射頻電機需忍受合法通信或工業 科學及醫療用電波輻射性電機設備之干擾。

減少電磁波影響,請妥適使用。

HEARING AID COMPATIBILITY HAC FOR WIRELESS TELECOMMUNICATIONS DEVICES

WHAT IS HEARING AID COMPATIBILITY?

The Federal Communications Commission has implemented rules and a rating system designed to enable people who wear hearing aids to more effectively use these wireless telecommunications devices. The standard for compatibility of digital wireless phones with hearing aids is set forth in American National Standard Institute (ANSI) standard C63.19. There are two sets of ANSI standards with ratings from one to four (four being the best rating): an "M" rating for reduced interference making it easier to hear conversations on the phone when using the hearing aid microphone, and a "T" rating that enables the phone to be used with hearing aids operating in the telecoil mode thus reducing unwanted background noise.

HOW WILL I KNOW WHICH WIRELESS PHONES ARE HEARING AID COMPATIBLE? The Hearing Aid Compatibility rating is displayed on the wireless phone box. A phone is considered Hearing Aid Compatible for acoustic coupling (microphone mode) if it has an "M3" or "M4" rating. A digital wireless phone is considered Hearing Aid Compatible for inductive coupling (telecoil mode) if it has a "T3" or "T4" rating.

HOW WILL I KNOW IF MY HEARING AID WILL WORK WITH A PARTICULAR DIGITAL WIRELESS PHONE?

You'll want to try a number of wireless phones so that you can decide which works the best with your hearing aids. You may also want to talk with your hearing aid professional about the extent to which your hearing aids are immune to interference, if they have wireless phone shielding, and whether your hearing aid has a HAC rating.

To determine the compatibility of a WD and a particular hearing aid, simply add the numerical part of the hearing aid category (e.g. M2/T2=2) with the numerical part of the WD emission rating (e.g., M3=3) to arrive at the system classification for this particular combination of WD and hearing aid. A sum of 5 would indicate that the WD and hearing aid would provide normal use, and a sum of 6 or greater would indicate that the WD and hearing aid would provide excellent performance. A category sum of less than 4 would likely result in a performance that is judged unacceptable by the hearing aid user.

This phone has been tested and rated for use with hearing aids for some of the wireless technologies that it uses. However, there may be some newer wireless technologies used in this phone that have not been tested yet for use with hearing aids. It is important to try the different features of this phone thoroughly and in different locations, using your hearing aid or cochlear implant, to determine if you hear any interfering noise. Consult your service provider or the manufacturer of this phone for information on hearing aid compatibility. If you have questions about return or exchange policies, consult your service

THIS PHONE HAS A HAC RATING OF M3/T3