

MRT320 Wireless Hand-Held Retail Unit

User Manual

Version 1.0

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Preface

Welcome

Congratulations on your purchase of the MRT320 Wireless Hand-Held Retail Unit. This powerful, portable, and flexible device will change the way your enterprise accepts wireless payment transactions in the field, manages inventory, and incorporates mobility into retail operations.

Manual contents

This manual provides details and instructions on operating your device including how to connect your device to other machines, using optional devices, and troubleshooting.

Messages

Messages are used in this manual to bring important information to your attention. Each type of message is identified and shown below.

CAUTION: A caution informs you that improper use of the device or failure to follow instructions may cause data loss or damage to your device.

NOTE: Please read. A note is a hint or advice that helps you to make best use of your device.

Contact Us

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FCC Notice

Product Name: Wireless Hand-Held Retail Unit
Module Number: MRT320

This device 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.

Section 15.21

The user is cautioned that any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the device.

RF Safety Information

IMPORTANT NOTE: This device contains a low power transmitter. When device is transmitted, it sends out RadioFrequency (RF) signal. This device and its antenna must not be co-located or operating in conjunction with any other antenna or transmitter.

This Device complies with FCC RF radiation exposure limits set forth for an uncontrolled environment.

- This device should be installed and operated with minimum distance 20cm between the radiator and your body.
- Use only with supplied antenna. Unauthorized antenna, modification, or attachments could damage the transmitter and may violate FCC regulations.
- Avoid direct contact to the transmitting antenna during operation.

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Chapter 1 The Grand Tour

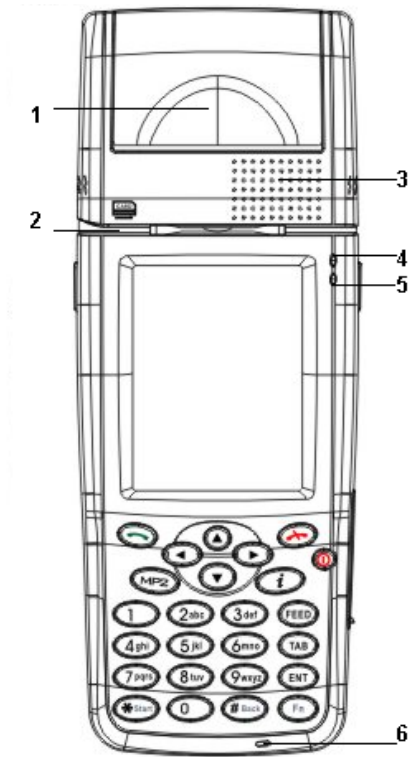
This chapter will identify the components of the device and briefly explain how they function.

What is in the Box

Check to make sure you have all the following items:

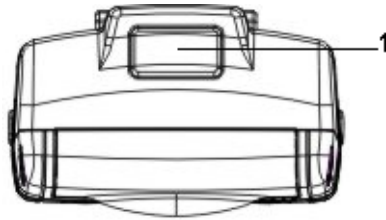
- MRT320 Wireless Hand-Held Retail Unit (including stylus and hand strap)
- USB Cradle
- AC Adaptor and Power Cord
- USB Synch Cable
- Lithium-ion Battery Pack (with screw cover)
- Roll Paper
- Companion CD

Front Side



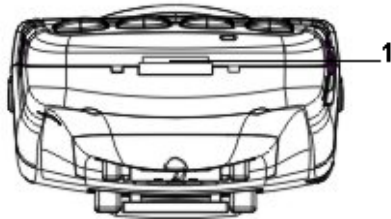
- 1** Thermal Printer
Refer to the “Using the Thermal Printer” section in Chapter 3.
- 2** Magnetic Stripe Reader (MSR)
Refer to the “Using the MSR Module” section in Chapter 3.
- 3** Speaker
Produces sound generated by software as well as audio alarms generated by the system.
- 4** CDMA Indicator (unavailable in this model)
- 5** Power Indicator
(green/amber) Refer to the “Indicators” section below in this chapter.
- 6** Microphone (unavailable in this model)

Top Side



- 1 Bar Code Scanner
Refer to the “Using the Bar Code Scanner” section in Chapter 3.

Bottom Side

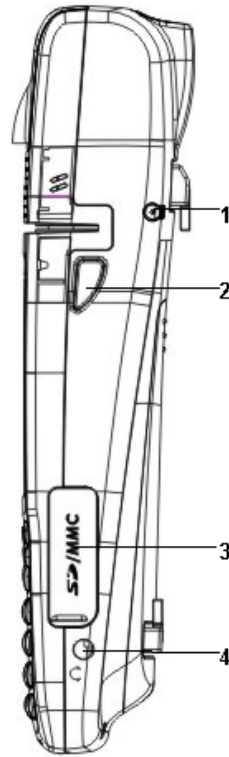


- 1 Docking Connector
Use it to connect with the USB cradle.

Left Side

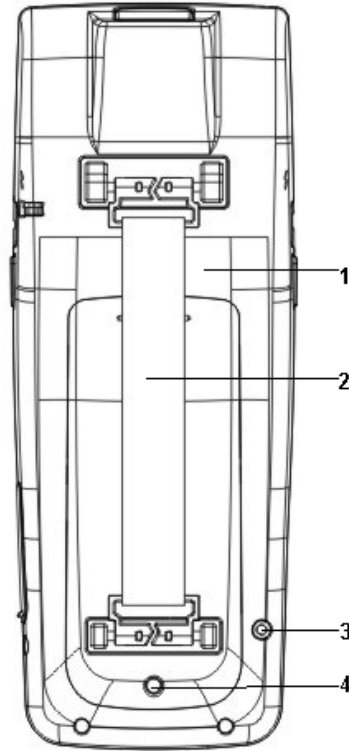
- 1 Scan Button
Refer to the “Using the Bar Code Scanner” section in Chapter 3.

Right Side



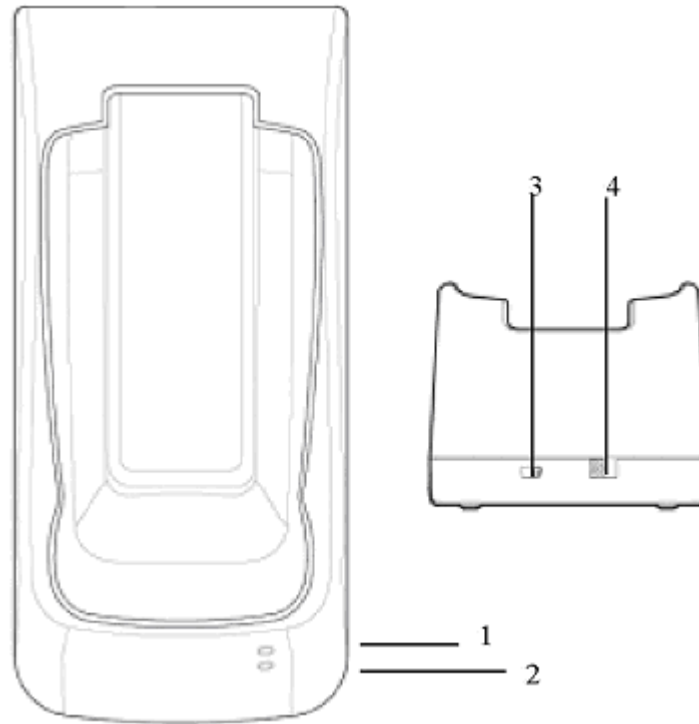
- 1** Stylus
Refer to the “Using the Stylus” section in Chapter 2.
- 2** Scan Button
Refer to the “Using the Bar Code Scanner” section in Chapter 3.
- 3** SD/MMC Slot
It can accommodate one memory card (SD/MMC).
- 4** Headphone Jack (with microphone)

Back Side



- 1** Battery Pack
Powers the device when the AC adaptor is not connected.
- 2** Hand Strap
Supports hand for steady use.
- 3** Reset Button
Pressing this button will restart the device and reallocate memory.
- 4** Screw
Secures the battery pack cover.

USB Cradle



- 1** Charging Indicator
(amber) Refer to the “Indicators” section below in this chapter.
- 2** DC-IN Indicator
(green) Refer to the “Indicators” section below in this chapter.
- 3** DC-IN Jack
Connect to external power via the AC adaptor.
- 4** USB Port
Connect to PC via the USB cable.

Indicators

Refer to the “Front Side” and “USB Cradle” section above in this Chapter to locate the indicators.

Indicators on the Front Side

Power Indicator: Indicates the power status.

- Amber: Indicates the AC adaptor is connected and charging the battery.
- Green: Indicates the AC adaptor is connected and the battery is fully charged.
- No light: During normal device use, the indicator light is not active.

Indicators on the USB Cradle

Charging Indicator: Indicates the battery status.

- Amber: Indicates the AC adaptor is connected and charging the battery.
- Green: Indicates the AC adaptor is connected and supplying proper power to the device.
- No light: During normal device use, the indicator light is not active.

Chapter 2 Operating Basics

This chapter gives useful information on basic operations including turning the device on/off, using the stylus, and keypad.

Turning On/Off and Standby

NOTE: The battery pack and the cover screw are removed from the device when shipped from the factory. When using the MRT320 for the first time, please install the battery pack. Refer to “Replacing the Battery Pack” section below.

Turning on the MRT320

To turn on your device, do one of the following:

- Place the device into the cradle, which will turn on the device automatically.
- Press the Power button for 1-2 seconds, which is located at the upper-right corner of the keypad.

Standby Mode (Temporary Off Position)

The MRT320 supports standby mode. In standby mode the device is on a low power consumption status. The display turns off, and all applications hibernate.

There are two ways for the MRT320 to enter standby mode:

- **Manually:** When the device is turned on, press the Power button to enter standby mode. Press the Power button once more to turn the device back on.
- **Automatically:** The device provides a battery save mode to conserve battery power. You may select a short delay for entering standby mode when the device is not in use. Refer to the “Managing the Power” section in Chapter 4.

Hard Rebooting and System Reset of the MRT320

In general, the device is either turned on or it is in standby mode. In order to prevent data loss, it is not recommended to turn off the MRT320 with a “hard reboot”.

To perform a hard reboot, the battery pack must be removed which will cause the device to return to its original factory settings.

CAUTION: Removing the battery pack will restore the device to its factory settings. All data and applications installed on the device will be lost. It is highly recommended to back up your data to the memory card or application safestore before turning off the MRT320.

Using the Stylus

The stylus for the MRT320 serves as a mouse or navigation tool. You can use it to select an item, open a program, and to input information.

- **Tap:** Touch the screen once with the stylus to open items and select options.
- **Drag:** Hold the stylus on the screen and drag across the screen to select text and images. Drag in a list to select multiple items.
- **Tap and hold:** Tap and hold the stylus on an item to see a list of actions available for that item. On the pop-up menu that appears, tap the action you want to perform.

NOTE: The stylus is designed to be attached to the device. Return the stylus to its proper position on the device when it is not in use. Refer to the “Right Side” section in Chapter 1.

Using the Keypad

This keypad can produce letters, numbers, special symbols, and perform some functions, such as turning on and off the device and launching applications.



KEY	FUNCTION
Power	Press it for 1-2 seconds to start the device. Press it to enter or exit standby mode. Press it for seconds to turn on/off the backlight.
Phone	(unavailable in this model)
Hang-up	(unavailable in this model)
i	Press it to activate Internet explore.
FEED	(unavailable in this model)
TAB	Press it to change the focus.
ENT	Press it to confirm or open the selected item.
FN	Press it to change key definition between "*" and "Start". Press it to change key definition between "#" and "Back".
MP2	Press it to start MP2 programs or applications.
arrow keys	Press them to move up/down/right/left.
0-9	Press them to input 0~9 or A~Z.
Start	Press it to input the symbol "". Press it to display the Start menu.
#Back	Press it to input the symbol "#". Press it to backspace.

Charging Your Device

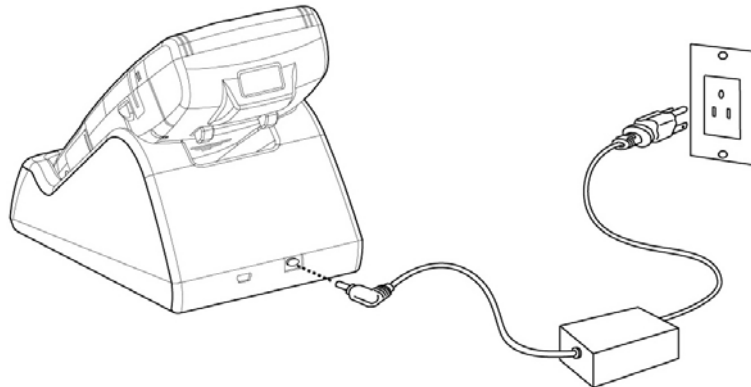
Connect the AC adaptor via the USB cradle to charge the battery pack or to operate the device with external power. It is also the fastest way to get started. The battery pack will need to be charged before you can operate from battery power.

To connect the AC adapter properly, follow the steps below:

1. Put the device into the cradle.

NOTE: To reduce damage to the connector, grasp the cradle with one hand while placing the device into the cradle or while removing..

2. Insert the AC adaptor plug into the DC-IN jack at the back of the cradle.
3. Connect the AC adaptor to an electrical outlet with the power cord. Please note that the AC power voltage should be within the range of 110~220V.
4. Notice the Charging indicator on the cradle and the Power indicator on the MRT320 for the status of charging. Refer to “Indicators” section in Chapter 1.



In general, it takes about 4~5 hours to charge the device fully. It is strongly recommended that this device be charged for 12 hours continuously when you use the device the first three times in order to extend the battery's life.

CAUTION: Use only AC adaptors recommended by us. Other AC adaptors may cause damage to the device.

Replacing the Battery Pack

Once the battery pack reaches the end of its operating life you will need to install a new one.

Removing the Battery Pack

To remove a battery pack properly, follow the steps below:

1. Save useful data on the memory card or PC.

CAUTION: Removing the battery pack will restore the device to factory setting. All the data and applications you installed in the memory of the MRT320 will be lost.

2. Turn the device upside down with the back of the device facing you.
3. Remove the screw on the battery cover with a screwdriver. Refer to the "Back Side" section in Chapter 1 to locate the screw.
4. Pull the hand strap away from the device to lift off the cover of the battery pack easily.
5. Take the battery pack out.

CAUTION: The battery pack is a lithium ion battery, which can explode if not properly replaced, used, handled, or disposed of. Dispose of the battery as required by local ordinances or regulations.

Installing the Battery Pack

NOTE: The battery pack and the cover screw are removed from the device when shipped out of the factory. When using the MRT320 for the first time, please install the battery pack.

To install the battery pack properly, follow the steps below:

1. Turn the device upside down with the back of the device facing you.

2. Pull the hand strap away from the device to remove the cover of the battery pack easily.
3. Insert the battery pack until it is firmly seated.

CAUTION: Use only the recommended battery packs as replacements.

4. Seat the battery cover and secure it with the screw. Refer to the “Back Side” section in Chapter 1 to locate the screw.

NOTE: Make sure the screw is tightened. This secures the battery pack in the case. Removal of the battery pack will cause data loss.

Aligning the Screen

When you turn on the screen of your device for the first time, you will be guided through the alignment process. Screen alignments are required if your device is not responding properly, or following a hard reset.

To align your screen, follow the steps below:

1. From the Start menu, tap the Settings > System > Screen icon > Align Screen button to begin the realignment process.
2. Tap the cross-hair object at each location to realign the screen properly.
3. Tap OK.

Resetting Your Device

If your device responds slowly, stops responding as expected, or “freezes”, try resetting it.

- **Soft Reset:** Use the stylus to press the Reset button on the back panel of the device. Refer to the “Back Side” section in Chapter 1 to locate the button.
- **Hard Reset:** If the device cannot be reset with the operation above, you may press and hold the Power key using the stylus to press the Reset button on the back panel of the device.

CAUTION: Unsaved data in running programs may be lost after a soft reset. The device will be restored to factory settings after a hard reset, and all the data and applications you installed in the memory of the device will be lost.

Chapter 3 Peripherals & Expansions

This chapter tells you how to use peripherals to expand the device's capabilities and its versatility. It includes using the thermal printer, MSR, bar code scanner and memory cards as well as connecting to your PC.

Using the Bar Code Scanner

There is an integrated bar code scanner on the top of the MRT320. Refer to "Top Side" section in Chapter 1.

To scan a bar code successfully, follow the steps below:

1. Press the MP2 key on the keypad to launch the scanning program.
2. Use the stylus to activate the corresponding command on the screen.
3. Aim the scanner at the bar code.
4. Press the scan button on the left or right side of your device. Refer to "Right Side" and "Left Side" section in Chapter 1.
5. Check the scanned record on the screen.

NOTE: Start scanning on one side of the bar code. Make sure that you scan the complete bar code.

CAUTION: The bar code scanner uses a laser to read bar codes. Although it uses a safety laser, avoid looking directly into the beam.

Using the MSR Module

There is a magnetic stripe reader (MSR) on the front of the MRT320. Refer to "Front Side" section in Chapter 1.

To read a magnetic card correctly, follow the steps below:

1. Press the MP2 key on the keypad to launch the reading program.
2. Insert the card into the reader.

NOTE: The side with the magnetic stripe should face the reader.

3. Swipe the card from left to right.

Using the Thermal Printer

There is an integrated thermal printer on the front of the MRT320. Refer to “Front Side” section in Chapter 1.

Inserting a Paper Roll

NOTE: Use the paper roll included in the packing box. The paper width is 58 mm.

To insert a paper roll properly, follow the steps below:

1. Pull the printer cover to open.
2. Insert a paper roll into the paper compartment.
3. Push the printer cover to close.

NOTE: Insert the paper roll carefully to make sure the paper is parallel to the printer.

CAUTION: When inserting a paper roll, be careful to avoid touching the sharp blade.

Printing Receipts

You may use the thermal printer to print bar codes, labels, and receipts following the steps below:

1. Check to make sure the paper is installed correctly in the paper compartment.
2. Press the MP2 key on the keypad to launch the printing program.
3. Use the stylus to activate the corresponding command on the screen.

NOTE: You may directly perform the Print command after scanning the bar code or reading magnetic stripes.

4. The paper will advance while printing. After the printing has been completed, tear off the paper along the blade.
5. Check the printed result.

Using the Memory Card

The device is equipped with a memory card slot. It can accommodate one memory card (SD/MMC). Refer to the “Right Side” section in Chapter 1.

NOTE: You may use the memory card to back up the data before a hard reset of your device.

Installing the Memory Card

To install a Memory card properly, follow the steps below:

1. Remove the card cover in the SD/MMC slot.

NOTE: The cover is attached to the device with a hook.

2. Insert the memory card, with the label-side facing down and the conductor side facing up.

NOTE: Refer to the icon at the right of the card slot for the proper direction.

3. Push the connection edge of the card firmly into the slot.
4. Replace the cover on the card.

Removing the Memory Card

1. Close all applications using this card.
2. Remove the card cover on the card.
3. Push down on the card to eject it out of the slot.
4. Grasp the card and gently pull it out.
5. Replace the card cover in the SD/MMC slot.

Connecting to your PC

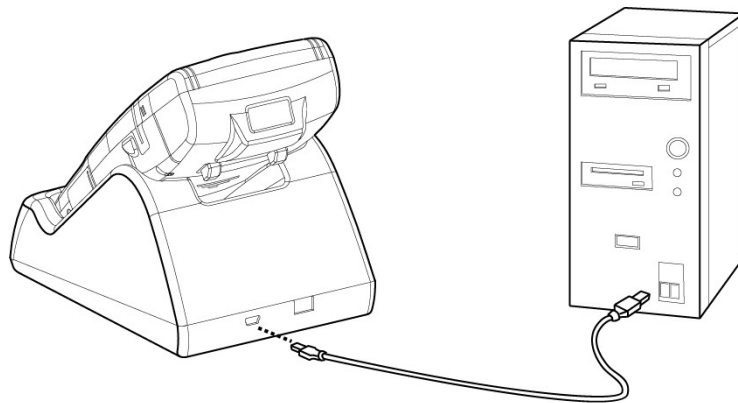
Connect the device to your PC using the USB cradle and cable. By this means, you may back up the data from the MRT320 to your PC and download necessary data or applications from the PC.

To connect to your PC properly, follow the steps below:

1. Place the device into the cradle.

NOTE: To reduce damage to the connector, grasp the cradle with one hand while placing the device into the cradle or while removing.

2. Connect the USB port on the cradle and PC with the USB cable.



NOTE: Microsoft ActiveSync program must be installed on the PC.

Chapter 4 Companion Programs

This chapter briefly introduces the operating system and applications built-into the MRT320.

Operating System

The device has internal Windows Mobile Pocket PC 2003, including Microsoft Pocket Word, Microsoft Excel, and Windows Media Player. Refer to online help on the device for details.

iBackup

iBackup is an effective and convenient tool to help you back up important data. To open, tap Start > Programs > iBackup. There are two modes to backing up or restoring information: Simple Mode or Advanced Mode.

Simple Mode

When running iBackup, Simple Mode is activated first. You can back up all data from the device to the selected storage card and restore backup file from the selected storage card to the device.

- In simple mode, you can only select two locations to back up or restore data: IPSM or SDMMC disk. The backup file is always named "FixBackup.kbf".
- In simple mode, you are not allowed to select the contents of the data; you must back up or restore all data in the device.

Advanced Mode

Advanced Mode is more flexible. You are able to back up parts of data from the device to the selected storage card or Main memory. You also have the ability to restore some or all of the backup files from these sources to the device.

- In advanced mode, you can name the backup file (*.kbf)
- In advanced mode, you can select three locations to back up or restore data: IPSM, SDMMC disk, or Main Memory.

- In advanced mode, you can select part of the data from the file system, PIM database, or registry to back up or restore.

Settings

You may configure the device using the Settings program. It also gives tips on protecting your device and data.

Managing the Power

To view the battery status and create settings to conserve battery power: Tap Start > Settings > System > Power, which will open the Power window to allow you to create settings. For example, you may check the box under “On battery Power”, and select “3 min” from the drop down list. The device will enter standby mode automatically while running on battery power, or when the device is not in use for 3 minutes.

Adjusting Backlight

To configure the settings for the backlight on your device, tap Start > Settings > System > Backlight to open the Backlight window.

In addition to the automatic adjustment of backlight, you may turn on or off the backlight manually.

- Press the Power button for several seconds to turn on and off the backlight.
- Pressing any key or performing any operation can turn on the backlight if it is configured in “Backlight Settings”. To configure, check the box reading “Turn on backlight when a button is pressed or the screen is tapped”.

Chapter 5 Troubleshooting

MP2 Solutions is devoted to the design of the Wireless Hand-Held Retail Unit for durability. However, should problems occur, the following procedures in this chapter can help increase the performance and solve some common problems.

When experiencing operational problems, it is strongly recommended that you check the following information first before contacting your service provider.

NOTE: If a problem persists and you cannot resolve it, contact our Authorized Service Provider.

Q: The screen backlight turns off itself.

A: If you are not operating the device for several minutes, the backlight will turn off to conserve power. You can press any key or use the stylus to tap the screen to turn the backlight back on. Refer to “Adjusting the Backlight” section in Chapter 4.

Q: I can't start the device.

A: Please check to make sure that the battery is properly installed and the battery is charged.

Q: The device is slow or is not responding.

A: You can press the Reset button to reset your device. If it still does not respond after the soft reset, press the Power key and the Reset button at the same time to perform a hard reset. Please note: All data in your device WILL BE LOST after a hard reset, so it is recommended that you back up your data regularly.

Q: The MSR cannot read a magnetic card.

A: Please check to make sure the card is active and you are swiping the card from left to right.

Q: The scanner reads an incomplete bar code.

A: Make sure the bar code is clear and the bar code is swiped fast enough.

Q: The printer will not print.

A: Please check to make sure the paper roll is inserted correctly.

Appendix Specifications

CPU	Intel Xscale PXA270, 520MHz
Memory	64MB SDRAM; 64MB NOR Flash
Audio	AC97 CODEC (UCB1400) speakers x 2; headphone jack x1
Display	3.5" QVGA TFT LCD, 64 color
Peripheral	Thermal Printer with paper width 58mm (UART) Barcode Scanner (UART) MSR (magnetic stripe reader) MMC/SD Slot USB Cradle built-in WiFi (802.11b)
Power	DC-IN Jack: 110/220V AC, 5V DC/6.0A Battery: lithium-ion, 3.7V, 4200mAh
Buttons	on panel: Reset button x 1; Scan button x 2 on keypad: Power on/off, OK, Cancel, 4-way direction, 0-9 number, FEED, TAB, ENT, Fn, MP2, Internet, Start, Back
Indicators	On panel: Power indicator (amber/green); CDMA indicator (unavailable in this model) on cradle: Charging indicator (amber); DC-IN indicator (green)
Dimension	about 239.32 (L) x 91.37 (W) x 57.51 (H) (mm)
Certification	UL, FCC