ScanPal EDA50

Enterprise Hybrid Device

(Model EDA50-011/EDA50-111)

Android™ 4.4 & Android 7.1 OS version
Disclaimer

Honeywell International Inc. (abbr. HII) reserves the rights to modify the specifications and other information mentioned in this User Guide without prior notification. In any case, users should confirm with HII whether any changes were made. This publication does not represent any commitments of HII.

HII is not responsible for any technical or editing errors or omissions contained in this manual, nor for any incidents or indirect damages caused by providing, implementing or using this material. HII is not responsible for the softwares or hardwares selected or used in order to achieve the desired results.

The proprietary information contained in this article is protected by copyright. All rights reserved. Without prior written consent from HII, any form of photocopy, copy or translation into other languages is not allowed.

Trademark Rights

Android, Google and other marks are trademarks of Google Inc.

The Bluetooth trademarks are owned by Bluetooth SIG, Inc. U.S.A. and licensed to Honeywell International Inc.

Other product names mentioned in this manual may be trademarks or registered trademarks of their respective companies, which are owned by these companies.

Patents

For information on patents, please refer to www.hsmpats.com.

Copyright © 2018 Honeywell International Inc. All rights reserved.
Content

1 Features of ScanPal EDA50 Enterprise Hybrid Device ........................................... 1
   EDA50 Brief Introduction ....................................................................................... 2
   Battery .................................................................................................................. 6
   Charging ................................................................................................................. 6
   Replacing batteries ............................................................................................... 7
   Battery icon .......................................................................................................... 10
   Changing power indicators ............................................................................... 12
   Checking the remaining battery capacity ......................................................... 13
   Battery life and maintenance ........................................................................... 13
   Charging While in Use ..................................................................................... 15
   Enabling Airplane mode .................................................................................. 16
   Powering on ....................................................................................................... 17
   Unlocking the screen ......................................................................................... 17
   Scanning Indicator ............................................................................................ 18
   Setting screen backlight ................................................................................... 19
   Audio features ................................................................................................... 19
   Adjusting the ringtone volume for calls and messages .................................... 19
   Enabling vibration mode .................................................................................. 21
   Audio settings ................................................................................................... 22
   Inserting SD card ............................................................................................... 23
   File transfer ....................................................................................................... 24
   How to view files on EDA50 ............................................................................. 24
   EDA50's accessories ......................................................................................... 25

2 User interface and applications .......................................................................... 26
   User interface ...................................................................................................... 27
   The main interface ............................................................................................... 27
   Navigation and function keys ........................................................................... 28
   Status bar icons .................................................................................................. 28
   Key mapping ....................................................................................................... 29
   Viewing system messages ............................................................................... 30
   Managing system messages .......................................................................... 30
   Personalizing the main interface .................................................................... 31
   Customizing common applications ................................................................ 31
<table>
<thead>
<tr>
<th>Function</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Searching with Google™</td>
<td>31</td>
</tr>
<tr>
<td>Touch screen gestures</td>
<td>32</td>
</tr>
<tr>
<td>Setting timezones</td>
<td>32</td>
</tr>
<tr>
<td>Honeywell applications</td>
<td>33</td>
</tr>
<tr>
<td>Unlocking developer options</td>
<td>33</td>
</tr>
</tbody>
</table>

3 Scan Function .................................................. 34

Scan Function ................................................................ 35
  How to transfer data via Android keyboard input .......... 35
  Changing scan settings ............................................ 36
  Restoring default scan settings ......................... 37
  Scanner default settings ........................................ 37
  Scanning barcodes .................................................. 44

4 Using Telecommunication Function ................................. 45

Telecommunication Function ......................................... 46
  Activating UMTS calls ............................................ 46
  Making a call ...................................................... 47
  Answering a call .................................................. 48
  Switching applications during a call ..................... 48
  Making an emergency call ....................................... 48
  Configuring call settings ...................................... 48

5 Using Camera ........................................................... 49

Color camera .......................................................... 50
  Adjusting camera and video settings ....................... 50
    Zooming ............................................................. 50
    Changing camera settings .................................... 50
  Taking photos ........................................................ 50
  Shooting videos .................................................... 51
  Changing video settings ......................................... 51

6 Terminal configurations ............................................... 52

Terminal configurations .............................................. 53
  Start Application Settings ....................................... 53
  Structure of the Application Settings ...................... 53

Network communication ............................................... 57
  Connecting to Wi-Fi networks .................................. 57
  Connecting to a virtual private network ................. 60

Wireless Security ......................................................... 61
  Certificates .......................................................... 61

Bluetooth communication ............................................. 63
  Pairing with a Bluetooth-enabled device .................. 63
Configuring Bluetooth settings .......................................................... 65
Searching for EDA50 ........................................................................ 65
Renaming or disconnecting a paired device ....................................... 65
Communication via serial port and USB ........................................... 66
Near Field Communication ............................................................... 66

7 Management and maintenance .......................................................... 67

Upgrading system software ............................................................... 68
  Upgrading AutoInstall application .................................................. 68
  Upgrading composite key .............................................................. 68
  Manually upgrading Recovery Menu .............................................. 68
Restarting the terminal ..................................................................... 69
  Terminal resetting ......................................................................... 69
  Restore factory settings ............................................................... 70
Cleaning the terminal ........................................................................ 70
Terminal disinfection ........................................................................ 71

8 Specifications ................................................................................. 72

  Mechanical and environmental specifications ............................... 72
Technical Support

If you need installation or troubleshooting help, please contact us via:

Knowledge base: www.hsmknowledgebase.com

Honeywell knowledge base provides thousands of turnkey solutions. If the knowledge base can't help you solve your problems, you can submit your questions or ask question on Honeywell technical support website.

Technical support website: www.hsmsupportportal.com

Login Honeywell technical support website to search for knowledge base, submit your difficulties or questions, ask for call-back services or provide feedbacks. Please provide more detailed information when filling the forms. You can also upload attachments for explanation.

Contacts: www.honeywellaidc.com/locations

For the latest contacts, please visit our website.

Product Service and Maintenance

Honeywell International Inc. provide services for all of its products all over the world via its service centers. For information about the site of service centers, please visit www.honeywellaidc.com and select English as preferred language, then select Support > Contact Support > Service and Maintenance. Please contact our service center to get RMA (Return Material Authorization) numbers before sending the products for maintenance.

To get Honeywell service during warranty or out of warranty, please send the product together with the purchase date records to Honeywell service center (postage paid).

Limited Warranty

For information about the warranty, please visit www.honeywellaidc.com and select Chinese as preferred language, tap Resources > Warranty.

Feedback

Your feedback is very important for us to improve the quality of documentation. Please contact technical communication departments to submit your feedback on the User Guide: ACSHSMTEchnicalCommunications@honeywell.com.
1. Features of ScanPal EDA50 Enterprise Hybrid Device

EDA50 with Android operating system will be introduced in this chapter. Users can learn something about the main features, functions and accessories of this terminal from this chapter.
EDA50 Brief Introduction

Honeywell EDA50 enterprise hybrid device is a smart phone for enterprise users, delivering stable and secure enterprise data management and wireless communications through Android operating system. The main features of ScanPal EDA50 are: field-proven architecture, large-screen display, high-capacity battery, barcode imaging and ergonomic design.

- Android™ 4.4 or Android 7.1 OS
- 2 GB dynamic RAM, 16GB flash memory
- Large display with sensitive multi-touch screen.
- High-performance area imaging features with an ergonomic scan trigger.
- WCDMA / GSM wireless WAN communications ensure high-speed data transmission and high-fidelity sound support for all network technologies.
- IEEE 802.11a/b/g/n.
- Bluetooth 4.0.
- Near-field communication (NFC) technology for short-range wireless data transmission.
- High value-added software components support professional imaging and optical character recognition (OCR) features.
- IP54 rated protection.
- Convenient Micro SD slot that supports up to 32GB expansion.
- Integrated GPS receiver (support WAN wireless communications).
- 5 mega pixels color camera.
1. Features of ScanPal EDA50 Enterprise Hybrid Device

EDA50 front view

A Power Indicator
B Scan Indicator
C Display
D Function Key
E Home Key
F Return Key
1. Features of ScanPal EDA50 Enterprise Hybrid Device

**Left Side View**
- A: Power Button
- B: Reset Button
- C: Scan Button

**Right Side View**
- D: Volume Up
- E: Volume Down
- F: Scan Button

**The Bottom**
- G: Charging Contact
- H: USB Cover

EDA50 side and bottom view
1. Features of ScanPal EDA50 Enterprise Hybrid Device

EDA50 back view

A. Camera
B. Battery Cover Buckle Handle
C. Battery Cover
D. String Buckle
E. Scan Engine
F. Speaker
G. Battery Cover Safety Lock
H. Battery Cover Buckle
I. Battery Cover Safety Button
1. Features of ScanPal EDA50 Enterprise Hybrid Device

Battery

EDA50 uses 3.8 v rechargeable lithium ion battery as its main power supply. The battery capacity is 15.2 watt/hour. Battery life is influenced by many factors, such as: screen brightness, the length of time the device waits before the screen automatically go to sleep, input configurations, extreme temperature and usage behaviors, etc.

Honeywell suggests you to keep the battery charged to avoid data loss. When replacing the battery, the terminal will be automatically turned off and then you need to cold start it.

If you need to buy a replacable battery, please contact regional resellers.

Warning: Improper use of the battery of this terminal can cause a fire or chemical burns. Please don’t disassemble the battery or heat it to 100 ° C (212 ° F) or more, or incinerate the battery. Make sure waste batteries are properly disposed. Keep out of reach of the children.

We recommend users to use Honeywell Li-ion battery pack. Damgaes caused by using non-Honeywell batteries will not be covered by Honeywell warranty.

Charging

Before using EDA50, you need to make sure the battery (model number BAT-EDA50) is fully charged. You can charge the battery before or after installing it to EDA50. It will take about 4 hours for the battery to be fully charged, regardless what kind of chargers are used:

Insert EDA50 with battery installed into the charger or cradle.
Replacing batteries

When the battery power is low, you can charge it together with the terminal, or replace it with a fully-charged battery.

1. Save all the files and close all running apps.
2. Long press the power key. Until the follow interface pop up:

![Image of power menu]

3. Tap **Turn off**.
4. EDA will ask whether to turn off, tap **Yes**.
1. Features of ScanPal EDA50 Enterprise Hybrid Device

   After it’s turned off, do as the following instructions manually:

   1. Press down the battery cover safety button to move the lock to the unlock position at right;

   2. Open the battery cover with the battery cover buckle handle;
1. Features of ScanPal EDA50 Enterprise Hybrid Device

3. Insert the battery (Insert the non-connector side first, then press the battery down to establish connection between the battery and the phone)

4. Press down the battery cover
1. Features of ScanPal EDA50 Enterprise Hybrid Device

5. Press down the battery cover safety button to move the battery cover safety lock to the lock position at left.

Battery icon

Battery icon on the status bar shows the power status of the battery. The following table only contains several of the icons. For detailed information about battery life and power remained, please go to Settings > Battery.

<table>
<thead>
<tr>
<th>Icon</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Battery icon" /></td>
<td>Battery power is 100% full</td>
</tr>
<tr>
<td><img src="image" alt="Battery icon" /></td>
<td>Battery power is 50% full</td>
</tr>
<tr>
<td><img src="image" alt="Battery icon" /></td>
<td>Battery power is too low. Replace the battery right now.</td>
</tr>
<tr>
<td><img src="image" alt="Battery icon" /></td>
<td>The terminal has been connected to external power supply for charging.</td>
</tr>
<tr>
<td><img src="image" alt="Battery icon" /></td>
<td>Battery failure occurs. Please replace the battery. If the failure still exists, please contact Honeywell technical support.</td>
</tr>
</tbody>
</table>
Power indicator on the upper left corner of the terminal shows the battery charging status. It can also be used as system message indicator. For detailed setting methods, please refer to http://developer.android.com/guide/topics/ui/notifiers/notifications.html.

**Default power indicator description**

<table>
<thead>
<tr>
<th>Connect to power supply</th>
<th>Indicator status</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>Flashing amber (Orange)</td>
<td>Battery power is less than 15% full</td>
</tr>
<tr>
<td>No</td>
<td>No light</td>
<td>Battery power is higher than 15% full</td>
</tr>
<tr>
<td>Yes</td>
<td>Stable amber (Orange)</td>
<td>Battery power is between 0% to 60% full</td>
</tr>
<tr>
<td>Yes</td>
<td>Flashing green</td>
<td>Battery power is between 60% to 80% full</td>
</tr>
<tr>
<td>Yes</td>
<td>Stable green</td>
<td>Battery power is higher than 80% full</td>
</tr>
<tr>
<td>Yes/no</td>
<td>Flashing red</td>
<td>Battery failure</td>
</tr>
</tbody>
</table>
Changing power indicators

If the default indicators for battery charging (flashing green) is inappropriate for your environment, you can change the indicator.

In addition to changing the default power indicator, you can also select:

- Default Battery LED
- No Battery LED

If you prefer the indicator to be solid amber and to change to solid green when in charging, you need to perform Default Battery LED settings. If you prefer the indicator as message notification (application or device management solution notification) indicator, you need to select No Battery LED settings.

Default power indicator meanings

<table>
<thead>
<tr>
<th>Connect to power supply</th>
<th>Indicator status</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>Flashing red</td>
<td>Battery power is less than 15% full</td>
</tr>
<tr>
<td>No</td>
<td>No light</td>
<td>Battery power is 15% or more</td>
</tr>
<tr>
<td>Yes</td>
<td>Stable red</td>
<td>Battery power is less than 15% full</td>
</tr>
<tr>
<td>Yes</td>
<td>Stable amber</td>
<td>Battery power is between 15% to 90% full</td>
</tr>
<tr>
<td>Yes</td>
<td>Stable green</td>
<td>Battery power is over 90% full</td>
</tr>
</tbody>
</table>

1. Tap **Applications > Settings > Battery LED**
2. Select from the following options:
   - Default Battery LED
   - HSM Battery LED (Factory settings)
   - No Battery LED
Checking the remaining battery capacity

Except for the battery icon and power indicator, you can also get the battery capacity information from Settings.

1. Tap **All Applications > Settings**
2. Tap **Battery**. The current percentage of remaining battery capacity and the remaining time will be displayed. The list will present the power consumed by each application and service. For detailed usage information, please tap the respective applications and services in the list.

Battery life and maintenance

Tips for battery maintenance

The expected life of the battery is approximately 500 cycles, or about two years, if care is taken in charging. Follow these guidelines to maximize life span.

<table>
<thead>
<tr>
<th>When this happens</th>
<th>Do this:</th>
</tr>
</thead>
<tbody>
<tr>
<td>The low power icon is displayed or the power indicator lights when the terminal is in use</td>
<td>Power off the terminal. Long press the power key and choose Turn Off.</td>
</tr>
<tr>
<td>The terminal is to be charged unused overnight or over a weekend</td>
<td>Power off the terminal to maximize battery cycle lifespan.</td>
</tr>
<tr>
<td>The terminal is to be charged while in use</td>
<td>Once it is close to a full charge, avoid continuously charging the terminal while operating to maximize lifespan. Remove the terminal from the charging source during operation. See the chapter on “Charging While in Use” for more information.</td>
</tr>
<tr>
<td>The terminal will be unused for more than a few minutes</td>
<td>Make sure the low power icon and power indicators are not on. Switch to sleep mode by pressing the Power key.</td>
</tr>
<tr>
<td>The terminal will be stored for more than one day</td>
<td>The battery will discharge slowly if it is removed from the terminal.</td>
</tr>
<tr>
<td></td>
<td>To store the terminal for several days (such as a weekend), install a fully charged battery or connect the terminal to the power supply and turn off the terminal.</td>
</tr>
</tbody>
</table>
1. Features of ScanPal EDA50 Enterprise Hybrid Device

<table>
<thead>
<tr>
<th>When this happens</th>
<th>Do this:</th>
</tr>
</thead>
<tbody>
<tr>
<td>If you need to store it for a longer time, remove the battery and charge it. Put the terminal and the battery in a cool place after the battery is fully charged.</td>
<td></td>
</tr>
<tr>
<td>If the battery is to be stored for several months, regular charging is recommended for optimal battery performance.</td>
<td></td>
</tr>
</tbody>
</table>
1. Features of ScanPal EDA50 Enterprise Hybrid Device

Battery maintenance recommendations and safety protection measures

- Fully charge the battery before use. The battery is only partly charged when initially shipped.
- Refer to the chapter "charging" to get the right process for battery charging. Using the battery for other devices may cause damages on the device or the battery.
- Avoid dropping the battery or the terminal. If you suspect that a battery or terminal fails, send it to Honeywell service center for verification.
- This battery should only be replaced by another Honeywell BAT-EDA50 battery. These batteries have been tested and meet the appropriate safety standards.
- Before recycling the battery, cover the contacts with insulation tape.
- Do not modify the battery or attempt to insert foreign objects into the battery.
- Do not solder directly to the battery poles.
- Do not short connect the battery and put the battery away from metal objects.
- Do not drop or mechanically shock or extrude the battery.
- Do not disassemble or open the battery. Do not crush, bend or deform the battery; Do not puncture, shred or burn the battery.
- Do not immerse the battery in water.
- Avoid extreme temperature conditions as found on the dash of a car in the sun or near a heat source such as a stove or open flame. After extreme low or high temperature exposure, allow the terminal and battery to come to room temperature before charging.

Charging While in Use

Avoid charging the terminal continuously while in use to maximize battery cycle life. Battery health is maximized when the terminal is turned off or in the Suspend state during charging.

Suspend (or "sleep") is an ultra-low-power state where the main processor and display are powered off to minimize power consumption. Under factory settings, the terminal automatically enters the Suspend state after a brief period of non-use. However, certain software applications or configuration settings can keep the terminal awake.

If the terminal does not Suspend within the expected time limit, do not leave the terminal in the charger. Check application settings. Update to the latest system software.
1. Features of ScanPal EDA50 Enterprise Hybrid Device

Software version 207.01.00.0016 and above includes a special feature designed to protect against battery damage due to continuous charging during use. This software optimizes charging behavior based on whether the terminal is in the Suspend state or not.

- **Charging while awake:** If the terminal is awake, that is, not off or in the suspend state, the charging system enters a special charging mode that adjusts voltage thresholds to avoid overcharging. In this mode, the battery charge is maintained between 80% and 90%. NOTE: This means that the battery will not be at 100% after a full night’s charge.

- **Charging while off or in Suspend:** In contrast, if the computer is off or in the Suspend state, the special charging mode is not invoked, and the battery level is maintained close to 100%.

This logic protects the battery from damage and maximizes battery cycle life.

**Enabling Airplane mode**

If you don’t need to connect to any wireless network, you can enable the airplane mode to turn off all wireless receivers to save power.

1. Tap **Settings**.
2. Tap **More** under **Wireless & Networks**.
3. Select **Airplane Mode** box to enable airplane mode.
1. Features of ScanPal EDA50 Enterprise Hybrid Device

Powering on

After the battery is fully charged and installed into ScanPal EDA50, turn on it for the first time:

Press down and then release the **power** key.

*Please note*: after complete the installation instructions, the welcome interface will not appear again. The interface appears as locked screen interface after each time you turn on the terminal.

Unlocking the screen

Every time you turn on the terminal, you need to unlock the screen.

- Slide the lock icon to any edge of the screen to unlock it.

  ![Unlocking the screen](image)

- After the EDA50 is deployed, we suggest you to set password to protect your terminal. Tap **All Applications > Settings > Security > Encryption**.
Scanning Indicator

The scanning indicator indicates the status of the scanner. For barcode scanning method, please refer to the chapter “Scanning barcodes”.

<table>
<thead>
<tr>
<th>Light of the indicator</th>
<th>Meanings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Green</td>
<td>Good read for the barcodes</td>
</tr>
<tr>
<td>Red</td>
<td>Barcodes reading failed</td>
</tr>
</tbody>
</table>
1. Features of ScanPal EDA50 Enterprise Hybrid Device

Setting screen backlight

The terminal's screen is equipped with background light sensor which can automatically adjust backlight intensity to save power and ensure the display readability. You may set the backlight intensity based on the environment.

1. Tap Settings.
2. Tap Display > Brightness
3. Tap Auto to automatically adjust the backlight intensity, or slide adjustment bar to set the backlight intensity.

Audio features

EDA50 is equipped with speaker, receiver and software utilities for volume setting.

Adjusting the ringtone volume for calls and messages

With the volume key on the side of the terminal, you can quickly adjust the ringtone volume.

Note: Volume key can only adjust ringtone volume for calls and messages. To adjust volumes of other sound, open Settings, and tap Sound > Volumes.
1. Features of ScanPal EDA50 Enterprise Hybrid Device

1. Press the key on the right side of the terminal (+ or -). Volume bar will show on the screen.

2. Adjust the volume by pressing volume key or slide volume bar.
Enabling vibration mode

In office environment, you can enable the vibration mode for the terminal and mute the speakers.

1. Long press the power key. Power options will be displayed on the screen:

2. Tap Enabling vibration mode.
Audio settings

This chapter will describe about audio and sound settings. To change audio setting, go to Settings and tap Sound.

Audio and sound settings

<table>
<thead>
<tr>
<th>Settings</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Volume</td>
<td>Use the volume adjustment bar to set the volume for:</td>
</tr>
<tr>
<td></td>
<td>Music, videos, games and other medias.</td>
</tr>
<tr>
<td></td>
<td>Ringtones for calls and message notifications. They can also be adjusted by the volume key on the side of the phone.</td>
</tr>
<tr>
<td></td>
<td>Alarm and alert tones</td>
</tr>
<tr>
<td>Ringtones (Model EDA50-111)</td>
<td>Select one of the ringtones</td>
</tr>
<tr>
<td>Vibrates when ringing (Model EDA50-111)</td>
<td>If checked, the terminal will vibrates when a call is in</td>
</tr>
<tr>
<td>Default notification tone</td>
<td>Select notifications tones</td>
</tr>
<tr>
<td>Dialpad touch tones (Model EDA50-111)</td>
<td>If checked, the dial tone will be enabled</td>
</tr>
<tr>
<td>Touch tones</td>
<td>If checked, touch tone will be enabled</td>
</tr>
<tr>
<td>Lock-screen tone</td>
<td>If checked, lock-screen tone will be enabled</td>
</tr>
<tr>
<td>Touch vibration</td>
<td>If checked, the terminal will vibrate when you touch Function key, Home key, Return key, All Application icon and lock or unlock screen</td>
</tr>
</tbody>
</table>
Inserting SD card

You can use a SD card to expand the memory or to install softwares. Honeywell recommend the using of Single Level Cell (SLC) graded SD memory card or SDHC memory card in order to achieve optimum performance and durability.

Note: format the memory card when you use it for the first time.

1. Turn off the terminal.
2. Press down the battery cover safety button to move the lock to the unlock position at right;
3. Open the battery cover with the battery cover buckle handle;
4. Pull out the battery (First open the battery connector side, then pull out the battery)
5. Insert the Micro SD card to SD card slot until it taps;
6. Insert the battery (Insert the non-connector side first, then press the battery down to establish connection between the battery and the phone)
7. Press down the battery cover (Insert the connector side first, then press the battery cover down);
8. Press down the battery cover safety button to move the battery cover safety lock to the lock position at left;
9. Press down the battery cover and slide the battery cover buckle handle to lock it.
1. Features of ScanPal EDA50 Enterprise Hybrid Device

**File transfer**

Files can be transferred between the terminal and a computer by using a USB adapter or standard USB cable. By connecting the terminal to a computer with a USB cable, you can view the files in the terminal, or transfer the files to the computer, or transfer files from the computer to the terminal. If you transfer files with a Mac computer, you need to use Android File Transfer app (it can be downloaded via www.android.com/filetransfer).

The terminal will use MTP (Media Transfer Protocol) connection as default. If you mainly transfer camera photos, you can use PTP (Picture Transfer Protocol) connection settings. If the computer with Windows system doesn't support MTP, you can use PTP transmission.

**Note:** EDA50 supports high-speed USB communication (USB2.0), with maximum data transfer rate at 480 Mbps.

1. Connect EDA50 to the computer.
2. Select Media device (MTP) or Camera (PTP) on the EDA50 screen. EDA50 will set your selection as default selection.
3. View the files stored in EDA50. You can copy, delete or transfer the files between EDA50 and the computer.

**How to view files on EDA50**

Users can view the files in EDA50 and its memory card through File Explorer.

**Note:** Due to system permission issues, some files cannot be opened. Based on your needs, you can select respective apps to open the file.

1. Tab Applications> File Explorer.
2. Tab the folder name or file name to open the file.
EDA50's accessories

EDA50 is shipped with original battery. All other accessories require separate order and shipment. If necessary, please contact your local sales representatives.

**EDA50's accessories and descriptions**

<table>
<thead>
<tr>
<th>Accessories</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDA50 battery (BAT-EDA50)</td>
<td>This battery can last several hours to power EDA50. Spare battery packs can be ordered to extend the service time.</td>
</tr>
<tr>
<td>Wall charger</td>
<td>Used for charge EDA50.</td>
</tr>
<tr>
<td>Single Cradle (Single Charging cradle)</td>
<td>Single Cradle can be used to place EDA50 with battery in to charge the main battery pack while provide power for the terminal.</td>
</tr>
</tbody>
</table>
2. User interface and applications

2  User interface and applications

This chapter introduces the Android system user interface, and how to interact with the screen. Users can also learn about a variety of Honeywell applications on the terminal through this chapter.
User interface

Android 4.4 operating system user interface provides users with a perfect touch and easy navigation experience.

The main interface

After turning on the terminal and setting up your preferred language, the main interface will be displayed on the screen first.

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Status bar</td>
<td>The left side of the status bar displays system messages sent by the application, such as information notifications. The right of the status bar displays the current wireless and network connection status and remaining battery power.</td>
</tr>
<tr>
<td>Common applications</td>
<td>The applications on this bar will be displayed on the main interface. <strong>All Applications</strong> option is in the middle of the common application bar.</td>
</tr>
<tr>
<td>Search bar</td>
<td>Use Google Search to search on the web or the terminal.</td>
</tr>
</tbody>
</table>
2. User interface and applications

**Navigation and function keys**

There are navigation and function keys below the common applications in the main interface of EDA50; other function keys are on the two sides of the terminal.

### Navigation and function keys

<table>
<thead>
<tr>
<th>Keys</th>
<th>Description</th>
<th>Functions</th>
</tr>
</thead>
<tbody>
<tr>
<td>▲</td>
<td>Return</td>
<td>Return to the previous screen</td>
</tr>
<tr>
<td></td>
<td>Function Key</td>
<td>Wallpaper; Manage apps; System settings</td>
</tr>
<tr>
<td></td>
<td>Home Key</td>
<td>Return to the main interface</td>
</tr>
<tr>
<td></td>
<td>Volume</td>
<td>Increase or decrease the speaker volume</td>
</tr>
<tr>
<td></td>
<td>Scan Button</td>
<td>Press and hold to scan graphics</td>
</tr>
<tr>
<td></td>
<td>Power key</td>
<td>Turn on, turn off, lock the screen</td>
</tr>
<tr>
<td></td>
<td>Reset Button</td>
<td>Reset the system</td>
</tr>
</tbody>
</table>

### Status bar icons

Status and notification icons display the current network connections, power, notifications and sound settings. Please refer the following table for detailed status bar icons:

#### Status and notification icons:

<table>
<thead>
<tr>
<th>Icons</th>
<th>Description</th>
<th>Icons</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>📅</td>
<td>Incomplete calendar events</td>
<td>🎧</td>
<td>Sound is disabled</td>
</tr>
<tr>
<td>⏰</td>
<td>Not ringing alarm clock; alarm clock set</td>
<td>📖</td>
<td>Vibration mode has been enabled</td>
</tr>
</tbody>
</table>
2. User interface and applications

<table>
<thead>
<tr>
<th>Icon</th>
<th>Message</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>🎉</td>
<td>New text messages or multimedia information</td>
<td>Battery power is 100% full</td>
</tr>
<tr>
<td>📦</td>
<td>Text messages or multimedia information transmission failed</td>
<td>Being in charge with external power supply</td>
</tr>
<tr>
<td>💌</td>
<td>New mails</td>
<td>Airplane mode is enabled</td>
</tr>
<tr>
<td>🌐</td>
<td>The terminal is connected to the computer via USB cable</td>
<td>EDA50 is syncing with a Bluetooth-enabled device</td>
</tr>
<tr>
<td>🌐</td>
<td>ABD has been enabled (USB troubleshooting has been enabled)</td>
<td>Bluetooth has been enabled</td>
</tr>
<tr>
<td>🔁</td>
<td>Data Sync</td>
<td>Wi-Fi signal is adequate</td>
</tr>
<tr>
<td>🔁</td>
<td>Sync or account logon failed</td>
<td>Wi-Fi is connected, but with no signal</td>
</tr>
<tr>
<td>🎞️</td>
<td>Memory card is full</td>
<td>Network connected</td>
</tr>
</tbody>
</table>

Key mapping

Users can change the default functions of the left and right scan keys.

1. Tap **All Applications > Settings > Key Remap**.
2. Touch the keys you want to redefine.
3. Tap **KEYS** or **APPS** to view options.
4. Select the required functions for the key. The new functions selected will be displayed under the name of the key.
2. User interface and applications

**Viewing system messages**

Users can view EDA50's system messages in the notification page.

- Open the notification page: swipe down from the top of the screen.
- Close the notification page: swipe up from the bottom of the screen or tap **Return key** or **Home** key.

**Managing system messages**

When the applications send system messages to EDA50, users can manage them quickly.

1. When the system message icon appears, swipe down the screen.
2. To manage the system message, touch it. The respective application will be opened for users to manage it.
   - Swipe the system message to the side to clear it.
   - Tap the icon on the top right of the screen to clear all system messages.
Personalizing the main interface

You can add application icons to either one of the main interface to open these applications more quickly.

1. Tap 📱. To display all applications.
2. To move the application icon to the main interface: long press the icons to be added to the main interface, then slide your finger to place it on either one of the main interface.
   To move the widget icon to the main interface: touch the widget on the top of the screen, long press the widget icon, then slide your finger to place the control icon on either one of the main interface.
3. To remove the applications or widgets from the main interface: long press the icons and slide to X Delete on the top of the interface.

Customizing common applications

Users can add applications to the common application bar to open these applications more quickly.

1. Tap 📱. To display all applications.
2. Long press the icons in the common application bar and slide it to the X Delete on the top of the interface.
3. To add application icon to the common application bar: long press the application to be added, and slide your finger to place the icon on the common application bar.
   To add the widget to the common application bar: touch the widget on the top of All Application Interface, long press the widget icon to be added, then slide your finger to place the icon on the common application bar.

Searching with Google™

Using Google search engine on the top of the main interface can help users to search any information on the terminal or the Internet.

1. Tap the Google search field on either one of the main interface and enter the search term. Search results from the terminal (like applications and contacts) will also appear below the search results from Internet.
2. Tap a search item to immediately start the search, or touch only its arrow to enter it in the search box without immediate search.
2. User interface and applications

**Touch screen gestures**

Use your finger can operate applications, menus, on-screen keyboard and other functions on the interface.

- Tap a function or application to select or start it.
- To enter a name or password, touch the place to enter and on-screen keyboard will appear for input.

Other touch screen gestures include:

- Long press: press an icon and hold until the system reacts.
- Drag: Press an icon, and then move your finger across the screen to the destination. For example: With dragging method, you can rearrange some shortcuts on the main interface.
- Swipe or slide: Quickly move your finger on the screen and keep your finger touching on the screen. For example, users can swipe the home screen to the left or right to view other home screens.
- Double-click: tap twice rapidly in a row on the map or other interface to enlarge it. Double-click again to return to the original size.
- Kneading: In some applications, subjects can be zoomed out by kneading two fingers on the screen, or zoom in by expanding two fingers.

**Setting timezones**

EDA50 can automatically sync the time and date according to the network. Users can also set timezones for their regions manually.

1. Open **Settings**.
2. Tap **Date & Time**.
3. Uncheck **timezone automation**.
4. Tap **Selecting Timezones** and tap the timezone for your region.
2. User interface and applications

Honeywell applications

Honeywell helps users troubleshoot and connect the terminals to other devices and networks. Tap 🤖 All Applications to show the applications below. For more details, please visit: www.honeywellaidc.com.

Honeywell software applications available on EDA50

<table>
<thead>
<tr>
<th>Icons</th>
<th>Applications</th>
<th>Descriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>![Demo icon]</td>
<td>Demo</td>
<td>Scan Demo, NFC Demo and more included, allows testing and using functions like scanning.</td>
</tr>
<tr>
<td>![Auto Install Settings icon]</td>
<td>Auto Install Settings</td>
<td>This application can automatically identify and install installation packages and APK files.</td>
</tr>
</tbody>
</table>

Unlocking developer options

If you are a developer for EDA50, you can easily unlock developer options. Developer options can help you test and troubleshoot during the process of developing EDA50. After Developer options is unlocked, the system menu will present developer option connections.

1. Tap Settings.
2. Tap About the phone.
3. Click the Build number 7 times and notification as "You are now in developer mode" will appear.
3. Scan Function

3 Scan Function

This chapter describes how to scan barcodes and set scan functions.
Scan Function

Integrated scanner enables reading for 1D and 2D barcode, composite code and postcode. It supports comprehensive, highly flexible scanning in real applications. Imaging Engine can capture black and white images, such as signatures and damaged inventory lists.

How to transfer data via Android keyboard input

Scan wedge feature enables transferring scanned barcode data to active applications via Android keyboard input. Scan wedge function is enabled by default on EDA50. Users can use applications that can accept scan wedge function through scanners or applications. If an application obtains scan function through Barcode Reader API, the scan wedge function will be temporarily disabled.

Users can build customized applications in Software Development Kit (SDK) for ScanPal EDA50. Please download SDK at: www.honeywellaidc.com.

Processing and settings for scanned data

<table>
<thead>
<tr>
<th>Processing steps</th>
<th>Respective scan settings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decode barcodes</td>
<td>Symbology settings</td>
</tr>
<tr>
<td>Parsing the barcodes as ISO8859-1</td>
<td>Symbology settings</td>
</tr>
<tr>
<td>Special barcodes detected activate special actions, rather than performing the normal operations.</td>
<td>Data processing settings</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Converted to the selected character set</td>
<td>Data processing settings</td>
</tr>
</tbody>
</table>
3. Scan Function

Add a prefix and suffix to make the data string in the following order:

- Prefix
- Sign prefix
- Barcode data
- Suffix

Parsing the replacement for prefix and suffix string

<table>
<thead>
<tr>
<th>Activate Total Freedom plug-in</th>
<th>Data processing settings</th>
<th>Data editing plugin</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input the final data as Android Key Events</td>
<td>Data processing settings</td>
<td>wedge</td>
</tr>
</tbody>
</table>

Prefix and suffix will be replaced within the string value.

**Prefix and suffix parsing**

<table>
<thead>
<tr>
<th>Substring</th>
<th>Replacement character code</th>
<th>Wedge in form of KeyEvent</th>
</tr>
</thead>
<tbody>
<tr>
<td>\r</td>
<td>13</td>
<td>No</td>
</tr>
<tr>
<td>\n</td>
<td>10</td>
<td>Yes</td>
</tr>
<tr>
<td>\t</td>
<td>9</td>
<td>Yes</td>
</tr>
<tr>
<td>\ &quot;</td>
<td>&quot;</td>
<td>No</td>
</tr>
</tbody>
</table>

**Changing scan settings**

Changes made to the default file apply for all non-document applications.

1. Tap **Settings**.
2. Tap **Scanning**.
3. Tap **Default**.
5. Modify the setting to meet application needs.
3. Scan Function

Restoring default scan settings

Users can easily cancel all the changes made to default folder and restore the factory defaults.

Note: Restore factory defaults for a certain setting, all the settings under this folder will be restored to factory defaults.

1. Tap the icon on the upright of any Scan Settings interface.
2. Tap Restore all defaults.

Scanner default settings

Study the following table to learn about Data Processing Settings, Symbology Settings, Decode Settings, Imager Settings, and Trigger Settings and Notification Settings.

Data processing settings

Use data processing settings to set the barcode data processing patterns for EDA50.

### Data processing settings

<table>
<thead>
<tr>
<th>Settings</th>
<th>Description</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wedge</td>
<td>Enable or disable the transferring of barcode data as Android Events when sending data to the application.</td>
<td>Enabled</td>
</tr>
<tr>
<td>Character set</td>
<td>Explain the selected character set when the barcode is a character, options including:</td>
<td>ISO-8859-1</td>
</tr>
<tr>
<td></td>
<td>• ISO-8859-1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• US-ASCII</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• UTF-16</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• UTF-16BE</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• UTF-16LE</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• UTF-8</td>
<td></td>
</tr>
<tr>
<td></td>
<td>The related BarCodeReader attributes:</td>
<td>ISO-8859-1</td>
</tr>
<tr>
<td></td>
<td>PROPERTY_DATA_PROCESSOR_CHARSET</td>
<td></td>
</tr>
</tbody>
</table>
### 3. Scan Function

<table>
<thead>
<tr>
<th><strong>Prefix</strong></th>
<th>Define the character to be added in front of the decoding barcodes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Suffix</strong></td>
<td>Define the character to be added at the end of the decoding barcodes</td>
<td>No</td>
</tr>
<tr>
<td><strong>Data editing plugin</strong></td>
<td>Specify a free plug-in for data editing</td>
<td>No</td>
</tr>
<tr>
<td><strong>Character prefix</strong></td>
<td>Specify a character prefix to decode the barcode data</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>• None</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Honeywell</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• AIM</td>
<td></td>
</tr>
<tr>
<td><strong>Start your browser</strong></td>
<td>To open or close URL barcode, if the barcode start with http:// or https://, the browser will open the respective URL</td>
<td>Enabled</td>
</tr>
<tr>
<td></td>
<td>The related BarCodeReader attributes: PROPERTY_DATA_PROCESSOR_LAUNCH- BROWSER</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Enable or disable scan processing for specified targets. Apply the barcode as the following format</td>
<td></td>
</tr>
<tr>
<td></td>
<td>‘//’ ACTION</td>
<td></td>
</tr>
<tr>
<td></td>
<td>‘//’ intent-suffix ‘$’ extra-data</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Where:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Additional operations and data include the following characters, to enable Intent or respective applications</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Intent action:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>“com.honeywell.scantointent.intent.action.”+ ACTION</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Intent extra</td>
<td></td>
</tr>
<tr>
<td></td>
<td>“com.honeywell.scantointent.intent.extra.DATA” contains the remainder of the barcode data after the first ‘$’ character.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>The related BarCodeReader attributes:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PROPERTY_DATA_PROCESSOR_SCAN_TO_INTENT</td>
<td></td>
</tr>
<tr>
<td>Start EZ Config</td>
<td>Enable or disable specifying EZ Config operations to barcode. Adopt Aztec code and include specified header data.</td>
<td></td>
</tr>
<tr>
<td>---------------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td></td>
<td>The related BarCodeReader attributes: Property_DATA_PROCESSOR_LAUNCH_EZ.CONFIG</td>
<td>Enabled</td>
</tr>
</tbody>
</table>

**PROPERTY_DATA_PROCESSOR_LAUNCH_EZ_CONFIG**
3. Scan Function

**Symbology settings**

Enable or disable a barcode symbology with Symbology Settings. Tap on a symbol to view and modify the configuration parameters of the symbol.

<table>
<thead>
<tr>
<th>Settings</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>Code 128</td>
<td>Enabled</td>
</tr>
<tr>
<td>GS1-128</td>
<td>Enabled</td>
</tr>
<tr>
<td>Code 39</td>
<td>Enabled</td>
</tr>
<tr>
<td>Datamatrix</td>
<td>Enabled</td>
</tr>
<tr>
<td>UPC-A</td>
<td>Enabled</td>
</tr>
<tr>
<td>UPC-E</td>
<td>Disabled</td>
</tr>
<tr>
<td>EAN-8</td>
<td>Disabled</td>
</tr>
<tr>
<td>EAN-13</td>
<td>Enabled</td>
</tr>
<tr>
<td>Aztec</td>
<td>Enabled</td>
</tr>
<tr>
<td>China Post</td>
<td>Disabled</td>
</tr>
<tr>
<td>Codabar</td>
<td>Enabled</td>
</tr>
<tr>
<td>Codablock A</td>
<td>Disabled</td>
</tr>
<tr>
<td>Codablock F</td>
<td>Disabled</td>
</tr>
<tr>
<td>Code 11</td>
<td>Disabled</td>
</tr>
<tr>
<td>Code 93</td>
<td>Disabled</td>
</tr>
</tbody>
</table>
### 3. Scan Function

<table>
<thead>
<tr>
<th>Code</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Composite</td>
<td>Disabled</td>
</tr>
<tr>
<td>Han Xin</td>
<td>Disabled</td>
</tr>
<tr>
<td>IATA 2 of 5</td>
<td>Disabled</td>
</tr>
<tr>
<td>Interleaved 2 of 5</td>
<td>Enabled</td>
</tr>
<tr>
<td>Korean Post</td>
<td>Disabled</td>
</tr>
<tr>
<td>Matrix 2 of 5</td>
<td>Disabled</td>
</tr>
<tr>
<td>Maxicode</td>
<td>Disabled</td>
</tr>
<tr>
<td>Micro PDF 417</td>
<td>Disabled</td>
</tr>
<tr>
<td>MSI</td>
<td>Disabled</td>
</tr>
<tr>
<td>PDF 417</td>
<td>Disabled</td>
</tr>
<tr>
<td>QR Code</td>
<td>Disabled</td>
</tr>
<tr>
<td>RSS (GS1)</td>
<td>Disabled</td>
</tr>
<tr>
<td>Standard 2 of 5</td>
<td>Disabled</td>
</tr>
<tr>
<td>Telepen</td>
<td>Disabled</td>
</tr>
<tr>
<td>TLC 39</td>
<td>Disabled</td>
</tr>
<tr>
<td>Trioptic</td>
<td>Disabled</td>
</tr>
<tr>
<td>2D Postal Settings</td>
<td>Disabled</td>
</tr>
<tr>
<td>OCR</td>
<td>Disabled</td>
</tr>
</tbody>
</table>
3. Scan Function

**Image settings**

There should be no need for users to change image color rendering. Covering the recommended value is disabled by default. Recommended image settings can be applied in many environments; only the users who have more in-depth understanding on the image can change the settings.

**Trigger settings**

Trigger settings can set up the using patterns for scan key.

**Trigger settings**

<table>
<thead>
<tr>
<th>Settings</th>
<th>Description</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decoding timeout</td>
<td>If the scan trigger is held down but decoding is not successfully performed, Scanning will automatically shut down after 20 seconds</td>
<td>20</td>
</tr>
</tbody>
</table>
Notification settings

You can set up the responses during scanning process for EDA50 in the notification settings.

### Notification settings

<table>
<thead>
<tr>
<th>Settings</th>
<th>Description</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good Read Notification</td>
<td>Enable or disable Good Read Notification. Notification includes green indicator, short beep and optional short vibration</td>
<td>Enabled</td>
</tr>
<tr>
<td>Bad Read Notification</td>
<td>Enable or disable Fail to Read notification. Notification includes red indicator, failure beep and optional short vibration</td>
<td>Disabled</td>
</tr>
<tr>
<td>Vibrate Enabled</td>
<td>Regardless of succeeding or failing to read, turn on or off the phone vibrations</td>
<td>Disabled</td>
</tr>
</tbody>
</table>
Scanning barcodes

Scan engine will emit scanning beams for accurate barcode aiming. It will also support a full range of 360° scanning, which will make barcode scanning more convenient.

**Note:** Before scanning a barcode, you only need to enable the desired barcode symbology in the settings.

1. Tap **Applications > Demos > ScanDemo**.
2. Align the scanning window with the barcode and stably place the terminal a few inches away from the barcode.
3. Press one of the scan keys or tap **Scan** on the interface. Make sure the entire barcode is within the scanning beam range.

When the scanning is successfully completed, you will hear a "beep" sound, and the Good Read LED will open immediately.
4 Using Telecommunication Function

You can use the phone function of the terminal (Only for EDA50-111) to make and receive calls, and to transmit data via wireless network as well.
4. Using Telecommunication Function

Telecommunication Function

The phone function of the terminal is realized with a speaker and a microphone. The phone function also supports a Bluetooth headset or hands-free device. The phone function is enabled by default.

This terminal supports the following network types:

- **GSM&EDGE**: Band3/Band8/
- **WCDMA**: Band1/Band8

For local network carriers, please contact Honeywell technical support.

When users enable the phone function and activate the service through wireless carriers, they can customize the phone features and network settings in the Mobile Network interface in Settings.

**Note**: WWAN version supports automatic system time setting with network messages and timezone messages (NITZ).

Activating UMTS calls

UMTS calls can be activated by inserting Micro SIM card in the terminal. Micro SIM card can be purchased from the network service provider.

1. Turn off the terminal.
2. Press down the battery cover safety button to move the lock to the unlock position at right;
3. Open the battery cover with the battery cover buckle handle;
4. Pull out the battery (First open the battery connector side, then pull out the battery)
4. Using Telecommunication Function

5. Insert SIM card to SIM card slot until it clicks;

6. Insert the battery (Insert the non-connector side first, then press the battery down to establish connection between the battery and the phone)

7. Press down the battery cover (Insert the connector side first, then press the battery cover down);

8. Press down the battery cover safety button to move the battery cover safety lock to the lock position at left;

9. Turn on the terminal.

![SIM Card]

Making a call

After the phone is successfully activated, you can make calls.

1. Tap ☎️ in the main interface or application interface.

   If the screen shows the list of numbers instead of a dial keypad, tap 📜 to get back to the dial keypad.

2. Tap the keys to enter the numbers, and then tap the below the keys ☏️ to make the call after all numbers have been entered.

3. To end the call, tap ☎️.
4. Using Telecommunication Function

Answering a call

When a user receives an incoming call, the screen will be illuminated with the caller's number displayed. All calls are recorded in the call log. If you have missed calls, you will receive reminding notifications.

When there is an incoming call, tap the white phone icon and slide to any one of the following icons:

- Answer the call:
- Hang up:
- Send a message from the default list:

Switching applications during a call

Users can switch applications during a call. For example, users can use the Contacts application to find contact information during a call.

**Note:** If the user only has WWAN connection, the applications requiring data connection may not be able to obtain network data during the call. Due to restrictions from network carriers, you cannot receive multiple simultaneous calls and connections and voice calls will get priority. For more information, please contact your network carrier.

During the call, tap the icon of other applications on the main interface or application interface to run the application, while the green call icon shows in the status bar.

Making an emergency call

Users can still make emergency calls even if the user's SIM card for his UMTS phone is lost or he has no effective CDMA accounts. In both cases, the phone will show that you are out of service, however, if you dial an emergency phone number (such as: 112, 911, 000, 08, 118, 119 or 999), you will get connected.

Configuring call settings

Users can customize phone settings, including ringtones, voice mailing options, key tone, intercom settings and other options.

1. Tap.
2. Tap Settings to show Call Settings menu.
3. Change the settings based on your needs.
5 Using Camera

This chapter describes how to use a color camera to take photos and videos.
Color camera

EDA50 is equipped with 5 megapixels color camera which can be used to take photos and videos. The camera and flash light are located on the back of the terminal. Tap Photo Gallery app to view all the photos and videos stored on the terminal.

Adjusting camera and video settings

Adjust the camera and video settings in the Camera apps.

Zooming

Focus adjustment is realized by zooming actions of the fingers on the screen. Place two fingers on the screen at the same time, then:

• Separate the two fingers in opposite directions to zoom in the images (enlarge objects).
• Fold the two fingers in opposite directions to zoom out the images.

Changing camera settings

In order to obtain the best results when taking photos, users can change the camera settings beforehand.

1. Tap All Applications and then tap Camera.
2. Tap the Flash Light icon on the bottom right to view Camera Options.
3. Tap HDR or any icons to change the basic settings of the camera.
   • When HDR is enabled, the terminal will automatically capture multiple photos and composite them into one to achieve the best possible image quality.
   • Enable or disable various options, like viewfinder mode, storage location and image size.

Taking photos

1. Tap All Applications and then tap Camera.
2. Take the screen as a viewfinder and move the terminal until you get the images you want to capture.
3. Tap the screen to focus. By default, the camera automatically senses the ambient light, and the flashlight will be opened if necessary.
4. Press the camera key 📸 to take photos
   - To view photographs, slide the screen to the left.
   - To return to the camera application, slide the screen to the right.

### Shooting videos

This section describes how to use the camera function to shoot videos.

1. Tap All Applications and then tap 📸.
2. Tap Camera Shooting Options on the bottom left 🎥.
3. Tap 🎯 to choose videos
4. Tap 🎥 to start video shooting. To adjust the focus, you can knead two fingers on the screen; to capture images, you can tap on the screen for instant capturing during video shooting process.
5. To stop video shooting, tap 🎥.

### Changing video settings

In order to obtain the best results when shooting videos, users can change the camera settings beforehand.

1. Tap All Applications and then tap 📸.
2. Tap 📸.
3. Tap 🎯 to view Video Options.
4. Tap any other positions of the screen to enable or disable Camera Options.
6 Terminal configurations

This chapter describes how to configure EDA50. Users can also learn about how to configure network communications and wireless security.
Terminal configurations

Users can configure many parameters for the terminal, such as barcode symbologies to be decoded or network settings. These parameters set by the user decide how the terminal works.

Users can configure the terminal in Application Settings.

Start Application Settings

Application Settings is in Applications Menu.

Tap Applications > Settings.

Structure of the Application Settings

The section describes the structure of Application Settings to make it easier for users to quickly locate respective specifications.
6. Terminal configurations

## Wireless & networks

<table>
<thead>
<tr>
<th>Settings</th>
<th>Introductions</th>
</tr>
</thead>
<tbody>
<tr>
<td>WLAN</td>
<td>To enable or disable Wi-Fi radios. When Wi-Fi is enabled, available Wi-Fi networks can be viewed by tapping this bar.</td>
</tr>
<tr>
<td>Mobile Data</td>
<td>To enable or disable Mobile Data. When Mobile Data is enabled, available Mobile Data networks can be viewed by tapping this bar.</td>
</tr>
<tr>
<td>Bluetooth</td>
<td>To enable or disable Bluetooth radios. When Bluetooth connection is enabled, Bluetooth-enabled devices within the range can be viewed by tapping this bar.</td>
</tr>
<tr>
<td>Data traffic usage</td>
<td>Displays the current call data usage during the cycle. Tap Data usage cycle to select another date range.</td>
</tr>
</tbody>
</table>

### More...

- Airplane mode: to enable or disable Airplane mode.
- Mobile network: including mobile network settings, such as to enable data transceiver and roaming, select the transceiver point and carriers, or choose only to enable 2G mode (to extend battery life).
- Default SMS application: SMS application is enabled by default.
- NFC: enabling NFC allows NFC tag information to be read when the terminal touches NFC tag.
- Android Beam: when NFC is enabled, this function allows users to send the application contents from the terminal directly to another NFC-supported device when the two get closer.
- Network sharing and hot spots: a handheld device can be used as a wireless router to radiate the wireless network, and then other WLAN-enabled device can receive it.
- VPN: Set a password for accessing the virtual private network.
- Mobile phone usage plan: plans provided by network carriers.
- Cell Broadcast: Set desired emergency information and ways to receive it.
### Device

<table>
<thead>
<tr>
<th>Settings</th>
<th>Introductions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sound</strong></td>
<td>Set sound for calls and notifications, including the tone and volume.</td>
</tr>
<tr>
<td><strong>Display</strong></td>
<td>Set screen brightness, wallpaper, screen timeout, font size and screen rotation.</td>
</tr>
<tr>
<td><strong>Memory</strong></td>
<td>Shows the remaining memory space.</td>
</tr>
<tr>
<td><strong>Battery</strong></td>
<td>Shows battery usage data and the current battery status.</td>
</tr>
<tr>
<td><strong>Applications</strong></td>
<td>Shows applications downloaded and on the run.</td>
</tr>
</tbody>
</table>

### Personalization

<table>
<thead>
<tr>
<th>Settings</th>
<th>Introductions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Location information</strong></td>
<td>To enable or disable location information (Google and GPS satellite data).</td>
</tr>
<tr>
<td><strong>Security</strong></td>
<td>Set screen lock and administrator privileges, including application installation and data storage security.</td>
</tr>
<tr>
<td><strong>Language &amp; input</strong></td>
<td>Select the current language and the default keyboard. Set automatic input function, such as: capitalization and punctuation. Set the cursor speed for external mouse or touch screen.</td>
</tr>
<tr>
<td><strong>Backup &amp; reset</strong></td>
<td>Factory Data Reset.</td>
</tr>
</tbody>
</table>
### 6. Terminal configurations

#### Honeywell Settings

<table>
<thead>
<tr>
<th>Settings</th>
<th>Introductions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Key Remap</td>
<td>Redefine the left scan key and the right scan key. For more help, please refer to <em>Key Mapping</em>.</td>
</tr>
<tr>
<td>Battery LED</td>
<td>Configuring battery LED lighting modes.</td>
</tr>
<tr>
<td>Scanning</td>
<td>Configure ScanPal EDA50 imager. For more help, please refer to <em>changing scan settings</em>.</td>
</tr>
</tbody>
</table>

#### Adding accounts

<table>
<thead>
<tr>
<th>Settings</th>
<th>Introductions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adding account</td>
<td>Set up an e-mail account.</td>
</tr>
</tbody>
</table>

#### System

<table>
<thead>
<tr>
<th>Settings</th>
<th>Introductions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data &amp; Time</td>
<td>Configure all time and date settings.</td>
</tr>
<tr>
<td>Auxiliary functions</td>
<td>Set auxiliary function level, for example: large font and text-to-speech output.</td>
</tr>
<tr>
<td>Printing</td>
<td>Configure printing options.</td>
</tr>
<tr>
<td>About the phone</td>
<td>Shows information about the terminal system.</td>
</tr>
</tbody>
</table>
Network communication

Users can connect the terminal to wireless and wired networks. Users can get the terminal connected via the following ways:

- 802.11 radios
- Bluetooth
- USB

Connecting to Wi-Fi networks

When communicating through wireless networks, ScanPal EDA50 transfer data through 802.11 radios. Before connecting to a Wi-Fi network, users need to know the Security Protocol of the network and the certificates it required. Usually, 802.11 radio is disabled by default.

1. Enter **Settings**, slide the WLAN switch to enable it.
2. When the WLAN switch turns blue, tapping the WLAN bar will display the detected network list.
6. Terminal configurations

3. To quickly connect to a network via WLAN Protected Access (WPS), tap 📲. To search the network outside of the list, tap ± and enter the network name.

4. Tap on a network name to view its details.

If the network is secure, a form will pop up asking you to fill in the necessary information (for example: certificate name, password or other credentials). To connect to a secure network, enter the required information, and then tap Connect.

- To leave the network that has been connected, tap Forget. For example, users can choose to forget a network that they won't use again.
- To close the network information screen, tap Cancel.

**Configuring Wi-Fi network proxy servers**

If users need to connect to network resources through a proxy server, they need to configure a proxy server for each Wi-Fi network added. By default, none of the Wi-Fi networks added by users has done proxy server settings.
6. Terminal configurations

Note: Proxy server settings only apply to the Wi-Fi networks that users modified. Users have to set proxy servers for each network that requires the using of proxy server.

1. Enter Application Settings screen, tap Wi-Fi to show available Wi-Fi networks.
2. Long press the network name, then tap **Modify the Network**, then a network setting list will pop up.
3. Choose Show Advanced Options at the bottom of the network setting list.
4. If the network does not have proxy server settings, tap **None** on the proxy server setting list, and then tap **Manual Settings**.
5. Enter the network proxy server settings.
6. Tap **Save**.

**Disable Wi-Fi notifications**

Wi-Fi is enabled by default. Users will receive notifications in the Status Bar when the terminal finds wireless networks. Users can disable these notifications.

1. Enter Application Settings screen.
2. Tap WLAN bar.
3. Tap the Settings icon on the bottom right.
4. Tap **Advanced** to display Wi-Fi Advanced Menu.
5. Uncheck the network notification to disable Wi-Fi Notifications.
6. Terminal configurations

Connecting to a virtual private network

The terminal supports connection to virtual private networks (VPNs). This section describes how to add and connect to VPNs. To configure a VPN, users must consult your network administrator. Users can view and change VPN settings in the Application Settings.

Note: Before accessing VPNs, users need to set a lock screen password.

Add VPNs

Before connecting to a VPN, users must first add the relevant information of the VPN.

1. Enter Application Settings screen.
2. Tap More under Wireless and Networks.
3. Tap VPN.
4. Tap Adding +.
5. Input the VPN information.
6. Tap Save, and VPN name will be displayed in the list.

Connect to VPN

1. Enter Application Settings screen.
2. Tap More under Wireless and Network.
3. Tap VPN.
4. Tap the VPN name in the list, and enter the certificate information based on the tips.
5. Tap Connect. The terminal gets connected to the VPN, and the status icons and notification will be displayed. To disconnect from the VPN, tap the notification.

Edit VPN information

1. Enter Application Settings screen.
2. Tap More under Wireless and Network.
3. Tap VPN.
4. Long press the name of the VPN to be edited and select Editing Networks from the list.
5. Edit VPN information based on your needs.
6. Tap **Save** after editing.

## Wireless Security

The terminal provides the following security solutions for users' wireless network:

- WPA2™
- WPA
- 802.1x
- LEAP
- WEP

Before setting up security program, you must first enable the radio and set the date and SSID on the terminal. To use 802.1x program, users must download a root certificate to the terminal. To use Transport Layer Security protocol (TLS) together with 802.1x, users also need to download a user certificate first.

View and configure all of the wireless security settings in the Application Settings screen.

### Certificates

Users can use digital certificates to identify the terminal's network access or server validation. To identify the device with certificates, users must first install the device to the trusted certification store on the terminal.

Android supports DER encoded X.509 certificate stored in the documents with .crt or .cer extension. Install a valid DER-format certificate. Android also supports X.509 certificate stored in PKCS #12 key store file with p12 or .pfx extension. To install a valid key storage file with other extensions at the end, users must change the extension to .p12 or .pfx first. If users installed a certificate from the PKCS #12 key store file, Android will also install the private key certificate or a certificate authority that came with it.

### Download certificates

To use the certificate, users must first install the certificate to the trusted certification store on the terminal.

**Note:** Some applications that support certificates, such as email and browsers, allow users to install the certificate directly from the application. For more information, please refer to the Help Documentation in the application.

1. Copy the certificate or key storage from computer to the SD card.
2. Install the SD card in the terminal and turn on the terminal.
3. Enter Application Settings, tap **Safety > Install From SD Card.**
6. Terminal configurations

4. Tap the name of the certificate or key storage to install. Following the tips to enter the password of the key storage, then tap OK.

5. Enter the certificate name and tap OK.

**Disable or delete certificates**

If the certificate is a stolen one or the organization selected by the user does not trust the certificate, the user can disable or delete the certificate.

1. Enter Application Settings, tap **Safety > Trusted Credentials**. There are two tabs in the Trusted Certificate screen:
   - System tab displays CA certificates installed in ROM.
   - User tab displays CA certificates installed by users.

2. Tap the certificate name to disable or delete it, and the certificate details screen will pop up.

3. Slide the screen down to the bottom, tap **Disabled** (system certificates) or **delete** (user certificates).

   If necessary, users can enable the disabled system certificate here. For deleted user certificates, users must reinstall it to enable it again.

4. Tap OK.
Bluetooth communication

EDA50 supports Bluetooth communication, allowing users to get connected with other Bluetooth-enabled devices.

Before searching for and connecting to other Bluetooth-enabled devices, users must enable the Bluetooth radio. By default, Bluetooth radio is disabled.

Bluetooth radio can be restored to its current state by system resetting. If users have reset the system data, they must re-establish the paired devices. Bluetooth status is displayed on the System Icon bar.

Pairing with a Bluetooth-enabled device

To connect to a Bluetooth-enabled device, users should enable Bluetooth radio first and then choose the device from the detected device list.

1. Enter Application Settings screen.
2. If Bluetooth switch is off, slide it on.
3. Tap **Bluetooth** to display available Bluetooth-enabled device list.
6. Terminal configurations

4. (Optional) If the desired device is not listed, please check if the Bluetooth of that device has been enabled and is detectable, and then tap **Scan Device**.

5. Select the device to pair with. After Pairing Dialog Box is displayed, enter the device PIN code, and tap **OK**. When the device and the terminals have been successfully paired, the device name will appear in the list of paired devices at the top.

6. To disconnect with the paired device, tap the Quick Setting icon beside the device name, and then tap Cancel Pairing.
Configuring Bluetooth settings

Users can configure for Bluetooth in Application Settings.

1. Enter Application Settings screen, and tap Bluetooth.

2. Tap Menu icon to select one for setting:
   - Tap Rename phone to change the name of the terminal. Enter a new name and then tap Rename.
   - Tap Visibility timeout to set the timeout duration for the terminal to be detectable, which is 2mins by default. Users can set it up as 5mins, 1hour or Never timeout. The shorter of the duration, the more power it could save.
   - Tap Show received files to view data in the received files.

Searching for EDA50

By default, EDA50 is not detectable by other devices, which means it’s not visible for other Bluetooth-enabled devices.

1. Tap All Applications > Settings.
2. Make sure Bluetooth radio has already been enabled.
3. Tap Bluetooth.
4. Tap ScanPal EDA50 (the default terminal name) at the top of the screen to change it to be detectable. Then the terminal begins 2mins countdown, during which period other devices can detect EDA50 through Bluetooth technology.

Renaming or disconnecting a paired device

Users can rename or disconnect a paired Bluetooth-enabled device in the Application Settings.

1. Enter Application Settings screen, and tap Bluetooth.

2. Tap Settings icon in the Paired List.

3. To rename the device, tap Rename, enter a new name and click OK.
   To disconnect with this device, tap Cancel Pairing.
6. Terminal configurations

Communication via serial port and USB

By communication via serial port and USB, users can transfer data to other devices or receive data from other devices with the following accessories.

- USB cable
- RS-232 cable

For more information about accessories, please contact local resellers.

Near Field Communication

NFC technology provides short-range wireless data transmission between ScanPal EDA50 with NFC tags or other NFC-enabled devices near its back.

NFC-enabled ScanPal EDA50 models support the following operations:

NFC tag read / write mode: The terminal reads digital information from the NFC tag or writes information into NFC tag.

Note: When in sleep mode (Suspend mode) and lock-screen state, NFC radio will be temporarily disabled.
7 Management and maintenance

This chapter will describes how to upgrade softwares, reset terminals and maintain EDA50.
Upgrading system software

The other system softwares of EDA50 can be upgraded by downloading ".zip" files from the Technical Support Website. Website: www.hsmcontactsupport.com or www.honeywellaidc.com.

Upgrading AutoInstall application

1. Copy the upgrade file "eda50-ota-xxx.zip" to the following EDA50’s system folder:
   File Explorer\External Memory Card\Honeywell\Autoinstall
2. Tap All Applications > AutoInstall Settings.
3. Choose Packages update, and ScanPal EDA50 will restart and install the upgrade file.

Upgrading composite key

1. Copy the file "eda50-ota-xxx.zip" to the root directory of the T card.
2. Restart the terminal, when the green light of the device turns on, press and hold the "(left) Scan key" + "Volume-" key at the same time. When the green light turns off, the terminal will automatically select the zip package and install it.
3. After the installation is complete, the terminal will restart automatically.

Manually upgrading Recovery Menu

1. Copy the file "eda50-ota-xxx.zip" to the root directory of the T card.
2. Turn off the terminal, press and hold the "Power Key" + "Volume-" key for about 15s, then the phone will enter Recovery Menu.
3. Press "Volume-", and select "Apply update from SD card". Press "Power Key", select the zip file just copied, then press and hold the "Power Key".
4. After the upgrading is completed, it will automatically move to Reboot System Now Menu. Please press the "Power Key" to restart the terminal.
Restarting the terminal

If the terminal or an application is locked or doesn't respond when pressing the power key, you need to restart the terminal.

When restarting, the terminal will use the current configuration saved in the flash memory. Try the following ways to restart the terminal:

- **Reset**: Restart the terminal and initialize it
- **Restore to factory settings**: Clear all data in the terminal, including all applications and data files, but excluding built-in files or data stored in a removable storage device.

Terminal resetting

When an application is not responding, you may need to restart the terminal to resolve the issue.

1. Save the file and close open applications.
2. Press and hold "Power Key" until the following interface displayed:

3. Tap **Power off**.
4. Tap **OK** when message as "Your phone will shut down" pops up.
5. Press down "Power Key" to restart EDA50.
7. Management and maintenance

**Restore factory settings**

If the terminal appears to be locked, try a cold boot. If resetting is invalid, try to restore factory settings, restart the terminal to make it work again and do troubleshooting later.

**Warning:** This action will clear all data in the terminal, including all applications and data, but excluding data stored in flash memory or external storage device.

1. Tap **All Applications > Settings**.
2. Tap **Backup & Reset**.
3. Tap **Restore Factory Settings**.
4. Tap **Reset the Phone**.
5. EDA50 will restart and automatically clear user data.

**Cleaning the terminal**

In order to ensure the terminal in good working condition, you need to clean the scan window, camera and touch screen. Based on the environmental conditions where the terminal is being used, clean these parts at regular intervals. Use a clean, soft cloth dampened with the following solvents for the cleaning, and quickly wipe it with another piece of clean, soft cloth.

- Acetic acid (10% soluble in water)
- Ethanol (10% soluble in water)
- Neutral soap solution

**Warnings:** this product includes non user-serviceable parts inside. Disassembling the product may prevent warranty and cause internal damages to the product.

**Note:** We advise you not to open the battery cover or remove the battery, so as to avoid the liquid flowing into the internal part of the terminal from the SIM card and SD card interface.

1. Press the **power** key to enter standby mode.
2. Dip a clean cloth in detergent, then wrung out excessive water.
3. Wipe the scanning window, camera and flash area, avoiding touching these areas with hard objects or abrasive materials.
4. Dry the cleaned area.
5. Make sure the terminal is fully dry before using it again.
Terminal disinfection

The medical version of the terminal supports wiping with chemical disinfectants. Chemical disinfectants supported including:

- Medical alcohol (75% concentration)
- Hydrogen peroxide (3% concentration)
- Isopropyl alcohol (70% concentration)
- Sodium hypochlorite solution (500PPM concentration)
- Peracetic acid (0.02% concentration)

**Warnings:** this product includes non user-serviceable parts inside. Disassembling the product may prevent warranty and cause internal damages to the product.

**Note:** We advise you not to open the battery cover or remove the battery, so as to avoid the liquid flowing into the internal part of the terminal from the SIM card and SD card interface.

1. Press the power key to enter standby mode.
2. Dip a clean cloth in disinfectants.
3. Wipe the scanning window, camera and flash area, avoiding touching these areas with hard objects or abrasive materials.
4. Make sure the terminal is fully dry before using it again.
8. Specifications

Mechanical and environmental specifications

This section describes the mechanical and environmental specifications of EDA50.

**Product dimensions**

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length</td>
<td>153.5 mm</td>
</tr>
<tr>
<td>Width</td>
<td>78.9 mm</td>
</tr>
<tr>
<td>Thickness</td>
<td>18 mm</td>
</tr>
<tr>
<td>Weight (with battery)</td>
<td>270 g (with battery)</td>
</tr>
</tbody>
</table>

**Tumble and drop standards**

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tumble</td>
<td>200 tumbles within 0.5m</td>
</tr>
<tr>
<td>Drop</td>
<td>Multiple 1.2m drops to concrete at room temperature</td>
</tr>
</tbody>
</table>

**Power and electrical specifications**

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Battery</td>
<td>Rechargeable Li-ion battery, 3.8v, 4000mAh</td>
</tr>
<tr>
<td>Charging power</td>
<td>5 V, 2 A</td>
</tr>
</tbody>
</table>

**Temperature and humidity specifications**

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating temperature</td>
<td>-10 °C to 50 °C (14 °F to 122 °F)</td>
</tr>
<tr>
<td>Storage temperature</td>
<td>-20 °C to 60 °C (-4 °F to 140 °F)</td>
</tr>
</tbody>
</table>
8. Specifications

<table>
<thead>
<tr>
<th>Relative humidity (during operation)</th>
<th>10% to 90%, non condensing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enviromental sealing</td>
<td>IP54</td>
</tr>
</tbody>
</table>

**Display specifications**

5.0" backlit color LCD display / 720 pixel HD / wide viewing angle / touch screen.

**Language Support**

Language Support and not limited to WW English, French, German, Italian, Spanish, Simplified Chinese, Traditional Chinese.

**Symbolgies support**

The following symbologies are supported:

**1D codes:**

- Codabar
- Code 3 of 9
- Code 11
- Code 32
- Code 93
- Code 128
- EAN-8
- EAN-13
- GS1-128
- Korea Post
- IATA 2 of 5
- Industrial 2 of 5
- Interleaved 2 of 5
- ISBN
- ISBT 128
- Matrix 2 of 5
- MSI Plessey
- EAN.RCC (RSS-14)
- RSS Limited
8. Specifications

- RSS Expanded
- Telepen
- Trioptic Code
- UPC-A
- UPC-E

**2D codes:**
- Aztec Code
- Codablock A
- Codablock F
- DataMatrix
- HanXin
- Maxicode
- Micro PDF 417
- MicroQr
- PDF 417
- QR Code
- TLC39
- OCR-A
- OCR-B

**Postal codes:**
- Australian Postcode
- Canadian Postcode
- KIX (Dutch) Postcode
- Japanese Postcode
- UK Postcode
- Planet Code
- Postnet
- USIntelligent
- Info mail
- UPU(ID-tag)
Scan Depth of Field (DOF)

DOF performance of the product was measured under the following conditions:

- DOF is the distance from the top of scan engine to the barcode
- 23 °C (73 °F), 0 ~ 10K lux
- Clear, high quality barcodes

Note: If the barcode is not aligned well with the scan engine, reading time and depth of field (DOF) will be affected and the device performance will be decreased.

<table>
<thead>
<tr>
<th>Barcode Type</th>
<th>Short range (in/cm)</th>
<th>Long range (in/cm)</th>
<th>Increments (in / cm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>5mil code39/128</td>
<td>2.5 (6.3)</td>
<td>4.3 (10.9)</td>
<td>1.8 (4.6)</td>
</tr>
<tr>
<td>13mil UPC-A</td>
<td>2.2 (5.5)</td>
<td>10.5 (27.8)</td>
<td>8.3 (22.3)</td>
</tr>
<tr>
<td>6.7mil PDF417</td>
<td>2.2 (5.5)</td>
<td>4.6 (11.7)</td>
<td>2.4 (6.2)</td>
</tr>
<tr>
<td>20mil QR</td>
<td>1.5 (4.0)</td>
<td>8.7 (22.0)</td>
<td>7.2 (18.0)</td>
</tr>
</tbody>
</table>
8. Specifications