KDC80
Quick Guide

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KDC80
Quick Guide

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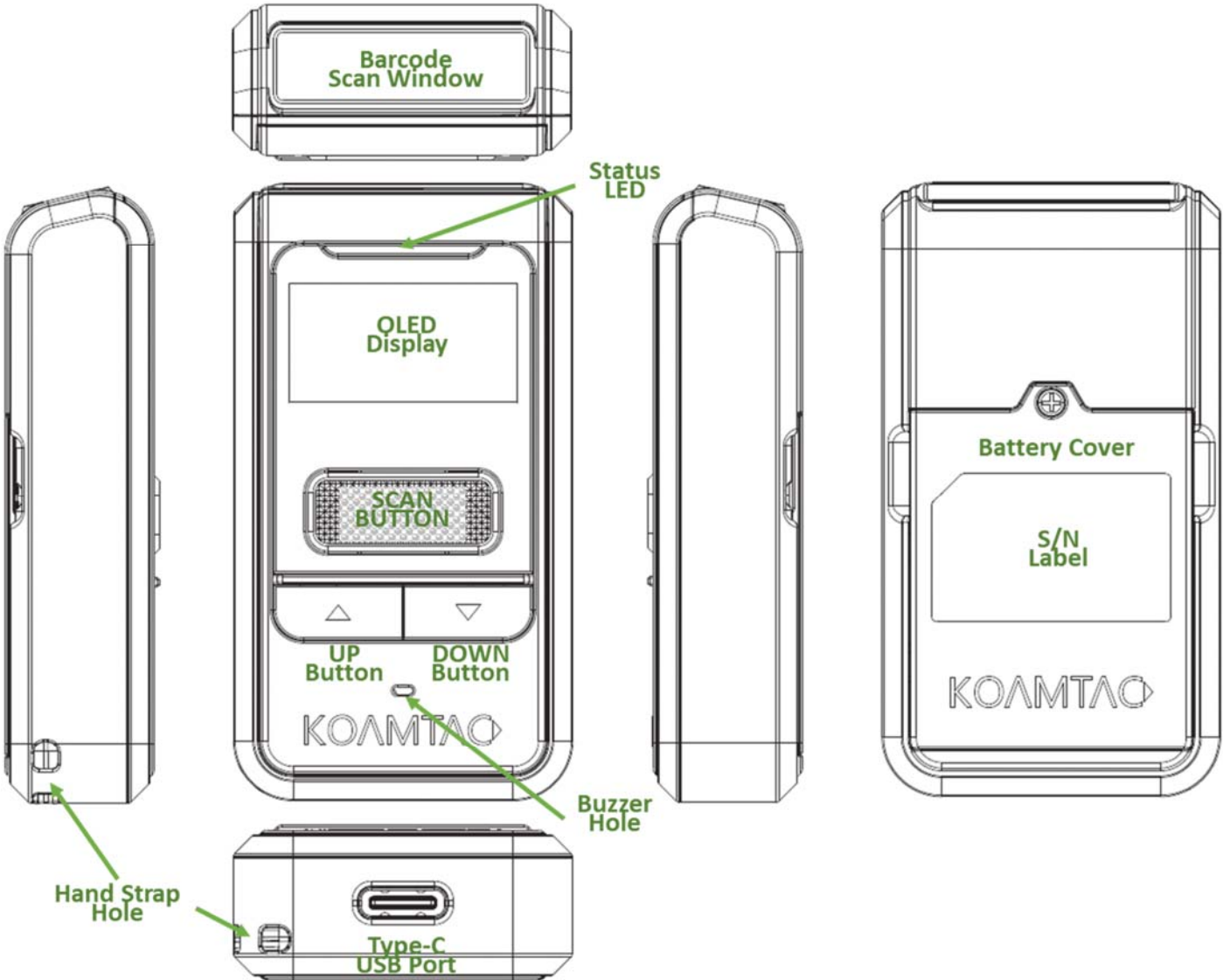
1. Product Introduction

The KDC80 Bluetooth barcode scanner is a 1D Laser Bluetooth Barcode Data Collector supporting Bluetooth Low Energy (BLE) v5.0.

1.1 KDC80 Diagram

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1.2 How to turn on and off

Refer to the figure in section 1.1 to locate the SCAN and DOWN buttons.

a) Press and hold the SCAN + DOWN buttons simultaneously for 3 seconds.
b) The KDC will beep when it is turned ON.
c) Press and hold the SCAN + DOWN buttons simultaneously for 3 seconds again to turn off the KDC.

2. Pairing (Bluetooth or NFC)

Connecting your KDC using Bluetooth is made easy with the below pairing barcodes.

If using an Android device, pairing via NFC is even easier: just approaching the KDC to the back of the host device's NFC area is enough for pairing. For more details, see section 2.3
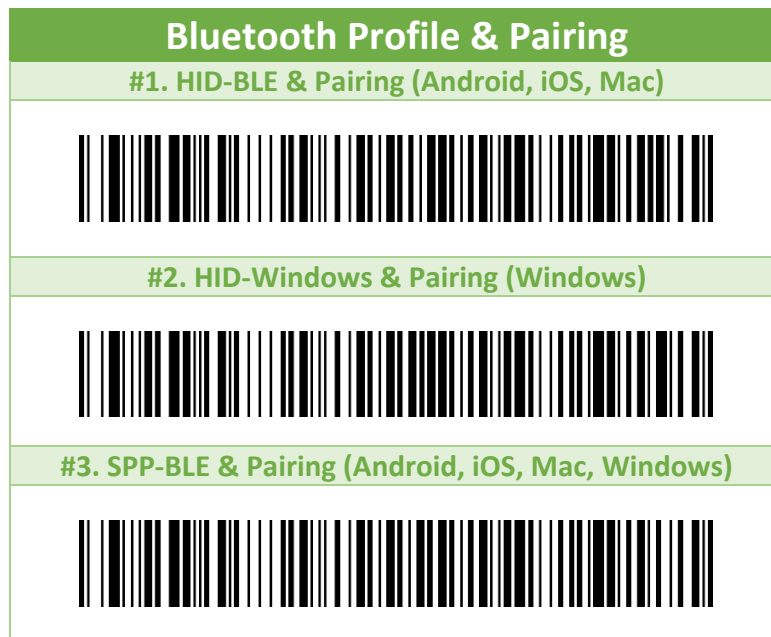
2.1 Bluetooth Profiles Explained

a. **HID Profile**: Allows one-way Bluetooth communication with an Android or iOS host device. The KDC only transmits data to the host device.
b. **SPP Profile**: Allows two-way Bluetooth communication. The KDC transmits data to the host device and the host device can transmit data back to the KDC.
c. **HID Windows Profile**: Allows one-way Bluetooth communication with a Windows PC. The KDC only transmits data to the Windows PC.

Note: HID inputs data directly into an application. SPP requires the KOAMTAC KTSync® app or integration of KOAMTAC SDK to input data into an application. To gain access to the SDK, please complete the form here: https://www.koamtac.com/sdk/

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2.2 Bluetooth Pairing a KDC80 to your smart device with special barcodes

Bluetooth Profile & Pairing

#1. HID-BLE & Pairing (Android, iOS, Mac)

#2. HID-Windows & Pairing (Windows)

#3. SPP-BLE & Pairing (Android, iOS, Mac, Windows)

a. Navigate to the Bluetooth setting on the host device and ensure that Bluetooth is both enabled and searching for devices.

b. Using the KDC, scan the pairing barcode above that corresponds to your desired Bluetooth profile. If you are unsure which Bluetooth profile is right for you, please refer to Chapter section 2.1.

- If you use an Android, iOS, or Mac device and desire an HID connection, then scan barcode #1 above.
- If you use a Windows device and desire an HID connection, then scan barcode #2 above.
- If you desire an SPP connection for any device, then scan barcode #3 above.

c. In HID or HID Windows Profile, check the list of available Bluetooth devices on your host device. From the list, select the KDC80 listed by serial number in brackets that matches the serial number found on the back side of the KDC80. KDC80 will beep upon connection and display "BLE HID Connected" on its screen. Now it is ready to use.

d. In SPP Profile for non-iOS, check the list of available Bluetooth devices on your host device. From the list, select the KDC80 listed by serial number in brackets that matches the serial number found on the back side of the KDC80. KDC80 will beep upon connection and display "BLE SPP Connected" on its screen, but you should launch KTSync or your application and select KDC80 within the application to complete the connection. Now it is ready to use.

e. In SPP Profile for iOS, the KDC is NOT listed on your host device, so you should launch KTSync or your application and select the KDC80 listed by serial number in brackets that matches the serial

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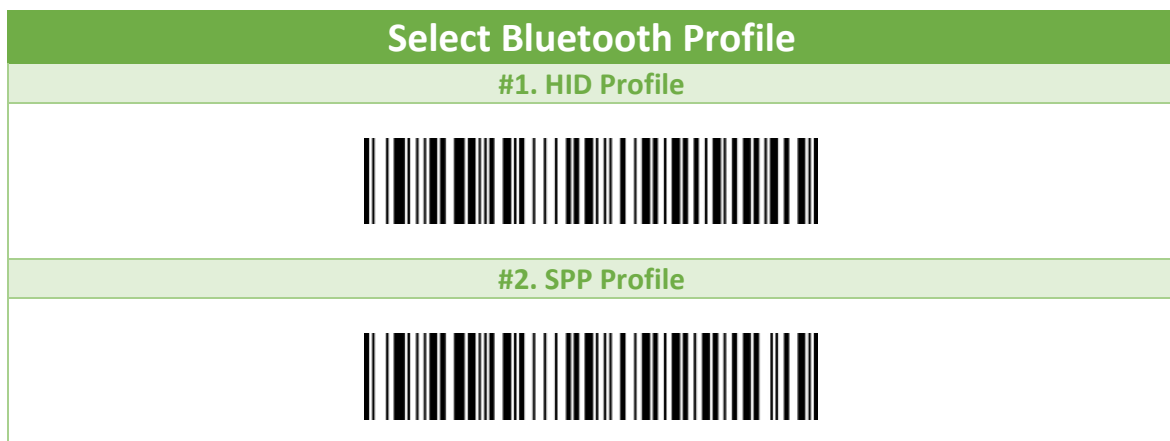
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number found on the back side of the KDC80. KDC80 will beep upon connection and display "BLE SPP Connected" on its screen. Now it is ready to use.

2.3 Bluetooth Pairing a KDC80 to your smart device with NFC (Android Only)

This feature applies only to Android. KDC may be paired in either HID or SPP only.

    a. Navigate to the NFC setting on the host device and ensure that NFC is enabled.

    b. On the KDC, make sure NFC pairing is enabled by navigating to KDC MENU → BLE Config → NFC Pairing → Enabled → Save & Exit.

    c. On the KDC, select the pairing profile by navigating to KDC MENU → BT Config → Connect Device → Select HID or SPP → Save & Exit.

Or, select the profile using the special barcodes below:

Select Bluetooth Profile
#1. HID Profile
#2. SPP Profile

    a. Approach the NFC area on the back of the host device with the KDC to complete pairing.

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3. Usage

### 3.1 Using Keyboard Wedge (HID Keyboard)

This option is only available using Bluetooth connection with HID profile.

Once the KDC is paired with the host, open any application with a text field and tap on the text field. Scan any barcode and it will populate in the text field.

3.2 Using KTSync – Android/iOS

You can use KTSync to utilize your KDC alone or with a native application. This is only available using a Bluetooth connection with SPP.

a) Download and install KTSync from the Google Play Store or the Apple App Store.
b) Open KTSync and tap on the "Connect" option on the bottom left to view a list of available devices. (Fig. 1)
c) In case of Android, the pairing should be established from Settings of the phone and in case of iOS, "START BLE SCANNING" menu should be run from "Connect" menu.
d) From the device list, select your KDC – ensuring that the serial number displayed in brackets matches the serial number on the back of your KDC. (Fig. 2)
e) Upon successful connection, KTSync will display "Connected" next to the name of your KDC at the top of the application. (Fig. 3)
f) To test your connection, scan any barcode. If the connection is successful, the barcode data will display on the screen. (Fig. 3)
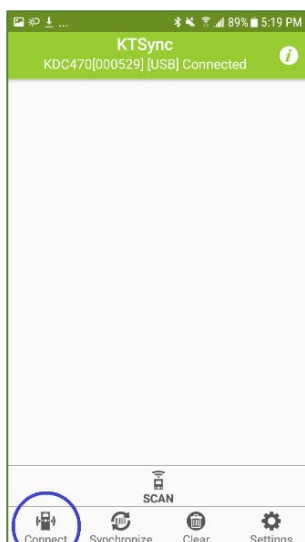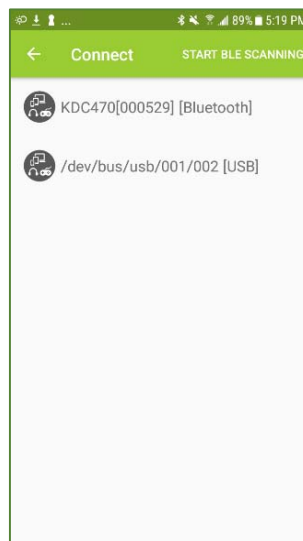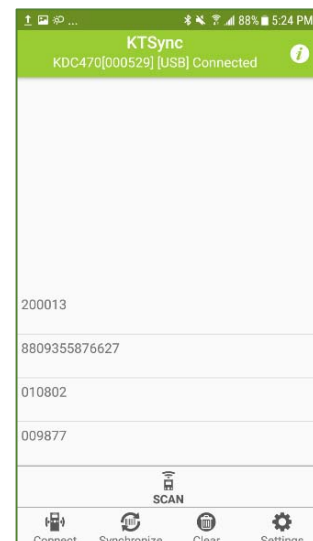
< Fig. 1 >	< Fig. 2 >	< Fig. 3 >

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In Always-pairing mode, an application can connect to a KDC without reading a pairing barcode, so the connection procedure is a little different.

a) In the KTSync app, tap the Connect icon at the bottom left of the app.
b) In KTSync, tap "START BLE SCANNING" in the top right.
c) In KTSync, check the list of found devices.
d) In KTSync, tap the KDC80 listed by serial number in brackets followed by [BLE] that matches the serial number found on the back side of the KDC80. The format will look like this, KDC80[xxxxxx] [BLE], where xxxxxx is the serial number.
e) The KDC80 will beep upon connection and display "BLE SPP Connected" on its screen. Now it is ready to use.
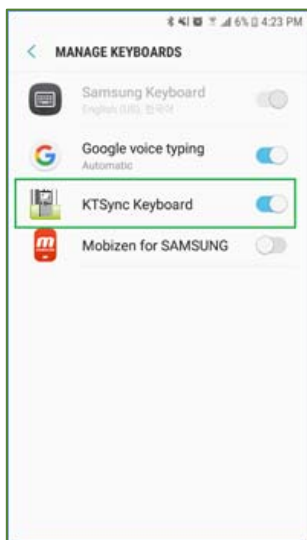

< Fig. 4>

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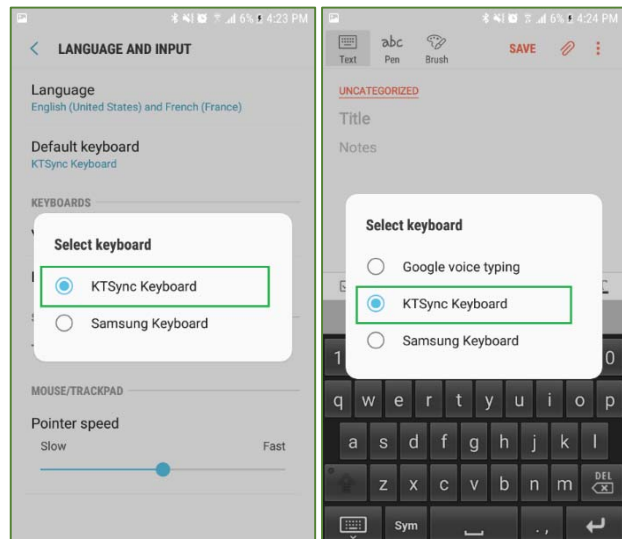
3.3   Using KTSync Keyboard – Android

Once your KDC is connected to KTSync, you can use your KDC as a keyboard.

a) While KTSync is running in the background, navigate to Settings > Language & Input > Virtual Keyboard > Manage keyboards
b) Tap on "KTSync Keyboard" to enable it.
c) Change "KTSync Keyboard" to the default keyboard. (Fig. 5)

To switch back to the previous keyboard, simply change the default keyboard again. Or, when a text field is selected swipe down from the top of the screen to bring up the notification panel. Select 'choose input method' and you can select the default keyboard from here. (Fig. 6)

< Fig. 5 >   < Fig. 6 >

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3.4   Using KTSync Keyboard – iOS

Once your KDC is connected to KTSync, you can use your KDC as a keyboard.

    a)   Navigate to the iPhone/iPad/iPod Settings > General > Keyboard > Keyboards > Add New Keyboard... > Select the KTSync keyboard to be added. (Fig. 7)

    b)   Select the KTSync Keyboard and toggle the switch to Allow Full Access. (Fig. 8)
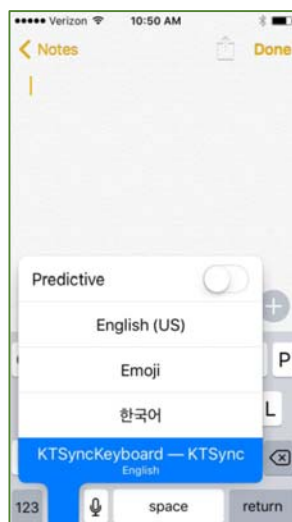
< Fig. 7 >   **< Fig. 8 >**
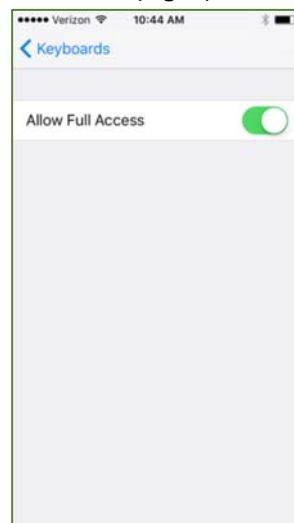
    c)   Open the application you want to scan into and tap on the screen, so the on-screen keyboard appears.

    d)   Press and hold the globe icon located to the left of the spacebar.

    e)   Select the KTSync Keyboard and begin scanning. (Fig. 9)

< Fig. 9 >

Note: The KDC must be connected to KTSync & the KTSync keyboard must be selected for this to work.

See Reference Manual for more detailed information
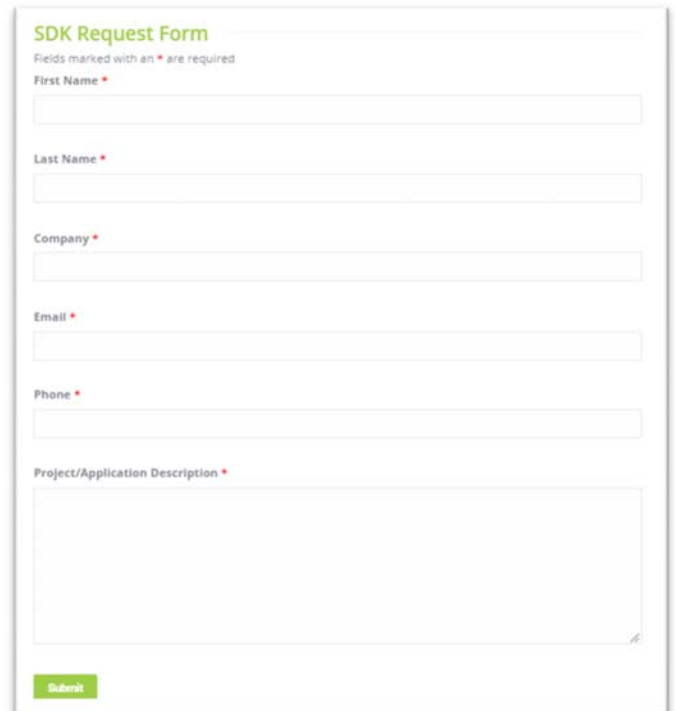Visit store.koamtac.com to purchase additional KDCs and accessories.

3.5   Using other Developed Applications with SDK – Android/iOS

A Software Development Kit (SDK) for Android and iOS is available to all AISolution customers to ensure smooth development of applications that work seamlessly with a KDC scanner. It's easy to request the SDK from the AISolution website:

a) On any web browser, open www.koamtac.com
b) Navigate to Support > Downloads > SDK
c) Complete the form and submit it.

After submission, a AISolution representative will reach out regarding next steps for completing the SDK Agreement.

The SDK package will have libraries, documents, a sample application and its source code.

SDK Request Form

Fields marked with an * are required

First Name *

Last Name *

Company *

Email *

Phone *

Project/Application Description *

Submit

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4. Product Specifications

Physical	Design	Companion Bluetooth Barcode Scanner
	Size	1.3 in x 2.4 in x 0.6 in / 34 mm x 62 mm x 15 mm
	Weight	1.2 oz / 35 g
Functionality	Supporting OS	Android / iOS / Windows / Mac OS X
	Keys	Scan Key, Up Key, Down Key
	Buzzer	Yes
	LED Indicator	1 Status LED (Red / Amber / Green)
	USB Port	1 Type-C USB Port
Memory	RAM	SDRAM 256KB
	ROM	Program Flash ROM 1MB User Data Flash ROM 5MB
	Barcode Storage	256,000 Barcodes (EAN-13)
Power	Battery (Standard)	200 mAh Lithium-Polymer
	Charging Solution	USB Connector
	Charging Time	2 Hours
Communication	Bluetooth	Bluetooth Low Energy V5.0, HID/SPP
	Type-C USB	USB Flash Memory (Windows) USB HID USB Serial (Android with OTG cable / Windows)
Barcode Reader	1D/2D Symbology	Only 1D
	# of scans per charge (1 sec interval)	> TBD
	# of scans per charge (10 sec interval)	> TBD
	Scan Range (20mil Code39)	1.97" to 18.11" (50 mm to 460 mm)
	Postal Codes / OCR Passport	No / No
Environment	Drop Spec	4 ft (1.2 m) 5 ft (1.5 m) with a protective boot
	Operating Temp.	14 ˚F to 122 ˚F (-10 ˚C to 50 ˚C)
	Storage Temp.	-4 ˚F to 140 ˚F (-20 ˚C to 60 ˚C)
	Humidity Spec	5% ~ 95% (non-condensing)
Regulatory Conformance	Laser Safety	IEC60825-1 (Class I)
	Regulatory	CE, FCC, KC, J-MIC, VCCI, SRRC, RoHS Compliant
Accessories	Charging Cradle	No
	Finger Trigger Glove / Ring	No
	Protective Boot	Yes

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5. Social Distancing Feature

The COVID-19 pandemic has added a new challenge to every workplace - warehouses, manufacturing lines, and even retail store floors - the need to maintain distance between people for their health and safety. Reopening your business is already an undertaking but ensuring social distance among your workers is made easy with the AISolution social distancing feature.

Whether you're a small or enterprise business, the AISolution social distancing feature works with the technology and systems you already have in place so you, and your workers, can have peace-of-mind as you adjust to the new normal.

- ➢ Supported on all Bluetooth Low Energy (BLE) 5.0 KDC devices.
- ➢ For more on the social distancing feature, please watch:
  https://youtu.be/m4Manx9vK68

There are three ways to enable and control the settings for the social distancing feature:
1. Enable via the KDC menu
2. Scan the special Social Distance barcodes that correspond with the settings you wish to enable
3. Enable via the KTSync application

KDC80 does not have a vibrate feature. So please ignore the vibrate for Social Distancing Feature.

5.1 Social Distancing Feature Parameters
The following parameters can be changed:

- ➢ **Distance**: Set the acceptable social distance range with values between 1 to 10 meters (Default: Disabled).
- ➢ **Host Alert**: This setting will forward distance alerts to the connected host device (Default: Disabled).
- ➢ **KDC Alert**: This setting allows the user to enable/disable an audible **beep** sound (Default: Enabled), **vibration** (Default: Disabled), and **data storage** (Default: Disabled) settings for distance violations on the KDC.
- ➢ **Security Key**: Choose keys between devices. Only KDC devices using the same key will be able to detect and report the distance between devices. If the security key is "Disabled", the KDC won't use any key. If "Fixed Key" is selected, the KDC will use a predefined key. If you prefer to set your own custom key by selecting "Custom Key", the custom key can only be set through KTSync (Default: Fixed Key).

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5.2   Enabling the Social Distancing Feature via the KDC Menu

If you prefer to enable the social distancing feature by navigating through the KDC menu, then follow the instructions below:

a)   From **KDC BLE Config** menu, select **Social Dist.** to configure
b)   Set the **Distance** from 1m to 10m
c)   Set the **Host Alert** to enable/disable
d)   Set the **KDC Alert**: Beep, Vibrator, and Data Store to desired settings
e)   Set the **Security Key**: Disabled, Fixed Key, or Custom Key

5.3   Enabling the Social Distancing Feature via Social Distance Barcodes

If you prefer to enable the social distancing feature via special barcodes, scan the special social distance barcodes that correspond with the settings you wish to enable:

Social Distance Range	
Disable ₜMKDC6z100.	1.0M ₜMKDC6z10A.
2.0M ₜMKDC6z114.	3.0M ₜMKDC6z11E.
4.0M ₜMKDC6z128.	5.0M ₜMKDC6z132.
7.0M ₜMKDC6z146.	10.0M ₜMKDC6z164.

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Host Alert	
Enable	Disable
╷MKDC6z201.	╷MKDC6z200.

KDC Alert	
Beep Enable	Beep Disable
╷MKDC6z301.	╷MKDC6z300.
Vibrate Enable	Vibrate Disable
╷MKDC6z401.	╷MKDC6z400.
Store Data Enable	Store Data Disable
╷MKDC6z501.	╷MKDC6z500.

Security Key	
Disabled	Fixed Key
╷MKDC6z600.	╷MKDC6z601.
Custom Key	
╷MKDC6z602.	

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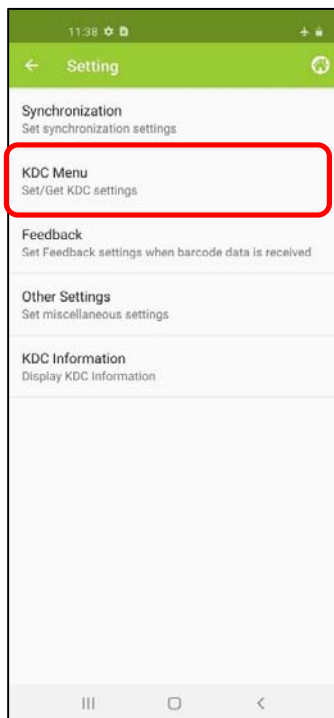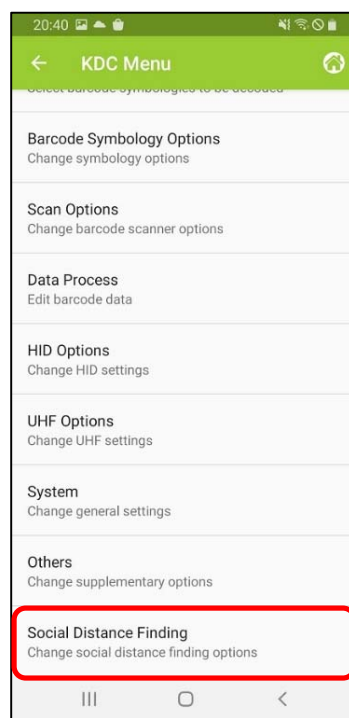Visit store.koamtac.com to purchase additional KDCs and accessories.

5.4 Enabling the Social Distancing Feature via the KTSync application

The social distancing feature can also be configured in the KTSync application.

a) Open KTSync and tap the **Setting** icon
b) Select **KDC Menu** (Fig. 10)
c) Select **Social Distance Finding** (Fig. 11)
d) Choose your Social Distance settings. Settings listed in the KDC Configuration section are the same settings available to you as if you were setting parameters on the KDC itself. These settings will be saved when you exit this screen. (Fig. 12)
e) Additional Application Configuration settings can be set on this screen as well. (Fig. 12)
   - *Enable Vibrator*: If enabled, the host device vibrates when receiving social distance alert data.
   - *Enable Email Sending*: If enabled, email application is launched instead of a social distance data pop up when receiving social distance alert data.
   - *Email Address:* Register and email address to send social alert events.
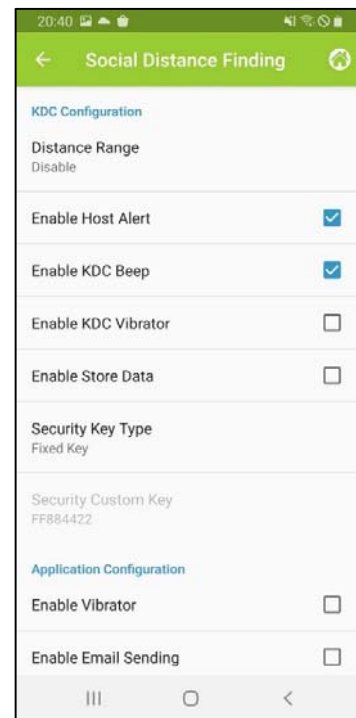
< Fig. 10 >   < Fig. 11 >   < Fig. 12 >

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5.5   Examples of Social Distance Alerts & Social Distance Alert Data

Whenever the KDC is connected, the KDC is sending social distance alert data to host device if **host alert** is enabled and another KDC is found within the selected **distance range**.

When a social distance violation occurs, you may receive these alerts, depending on settings:
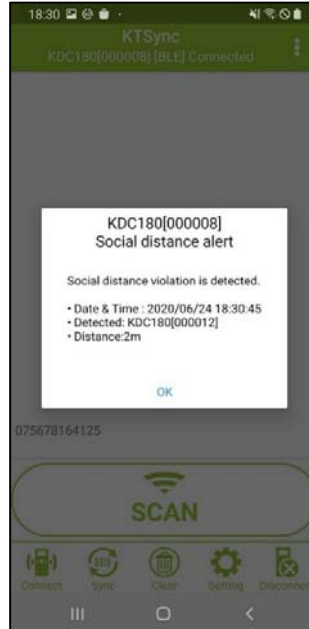
1. Social distance warning on KDC, showing your KDC serial number accompanied by **beep/vibrate** if selected. (Fig. 13)
2. Social distance pop-up in KTSync showing your KDC serial number, the date & time of the violation, the serial number of the other detected KDC, and the distance if using the **host alert** setting. (Fig. 14)
3. Social distance email showing your KDC serial number, the date & time of the violation, the serial number of the other detected KDC, and the distance if using the **enable email sending** setting. (Fig. 15)

*Note: When reconnected, the KDC will send social distance data to the host device even if the same KDC is found within distance.
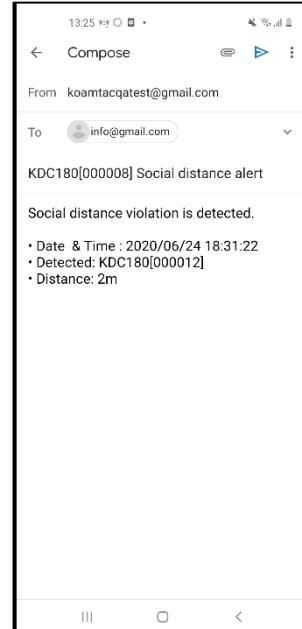
*Note: Only one social distance data alert is sent to the host device when multiple KDC devices are detected if social alert is already being displayed as a pop-up or email application is already launched.

< Fig. 13 >   < Fig. 14 >   < Fig. 15 >

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FCC Compliance Statement
This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

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

NOTE:
This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, If not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

RED Compliance Statement
This product is CE marked according to the provision of the RED (2014/53/EU).
Hereby AISolution Co., LTD. Declares that this product is in compliance with the essential requirements and other relevant provisions of Directive 2014/53/EU

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