

Powering On/Off

Power On

Press and hold the SCAN and DOWN buttons for 3 seconds.

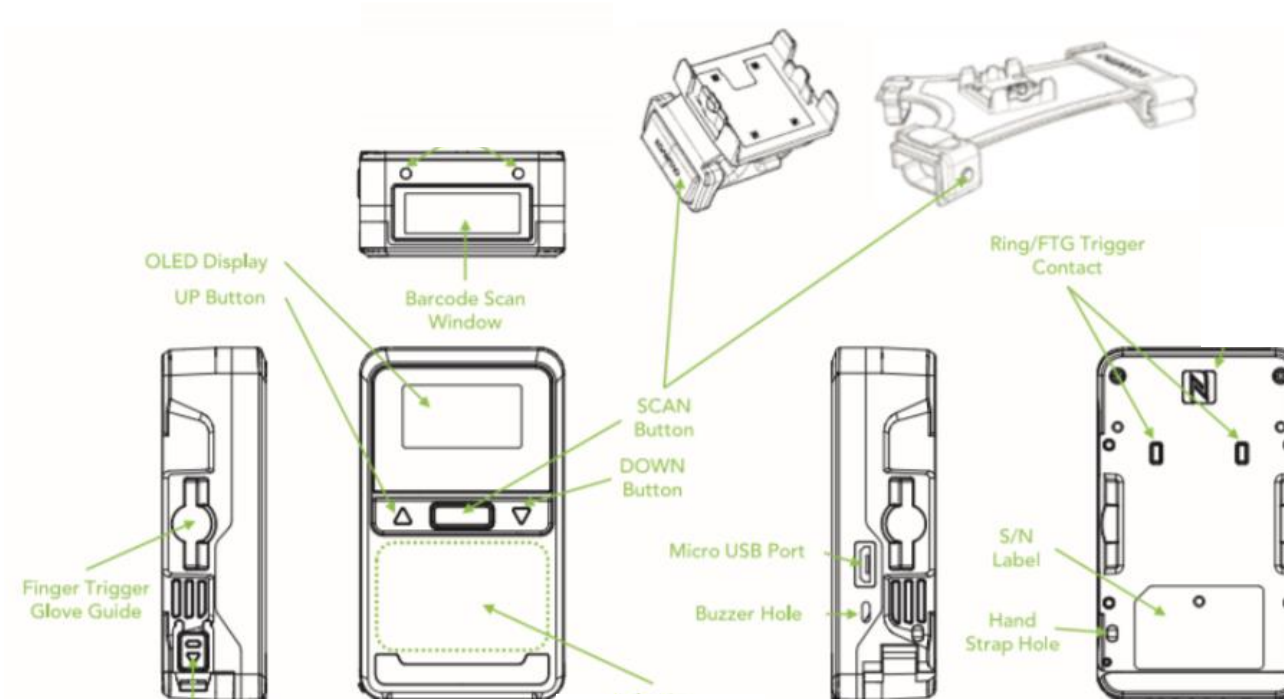


Power Off

Press and hold the SCAN and DOWN buttons for 3 seconds again.

* The SCAN buttons on the KDC180 or Ring Trigger may be used for powering on/off.

KDC180 Diagram



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KOAMTAC

KDC180U
User Manual



Bluetooth Profiles Explained

HID

Allows one-way Bluetooth communication with an Android or iOS host device. The KDC only transmits data to the host device.

SPP

Allows two-way Bluetooth communication. The KDC transmits data to host device and the host can transmit data back to the KDC.

HID Windows

Allows one-way Bluetooth communication with Windows host device. The KDC only transmits data to the host device.

OPEN

A Bluetooth Low Energy standard mode called "guest mode" which does not need to be paired. It supports bi-directional communication.

HID inputs data directly into an application. SPP requires KOAMTAC KTSync® app or integration of KOAMTAC SDK to input data into an application.

Pairing & Connecting

1. Navigate to the Bluetooth setting on the host PC, Mac, Smartphone, or Tablet.
2. Ensure that Bluetooth is enabled on the host device and searching for devices.
3. Using the KDC, scan the pairing barcode that corresponds to your desired Bluetooth profile. If you are unsure which Bluetooth profile is right for you, please refer to previous panel.
4. Check the list of available Bluetooth devices on your host device. In iOS, the application will need to search devices.
5. From the list, select the KDC180 listed by serial number in brackets that matches the serial number found on the back side of the KDC180.
6. In HID Mode, KDC180 is ready to use.
7. To complete connection in SPP Mode, launch KTSync or your application and select KDC180 to connect.

Pairing Barcodes



HID



HID Windows



SPP

If you desire to connect via Bluetooth Low Energy (BLE) OPEN profile, please refer to the instructions in the next section.

Connecting via BLE OPEN Profile


An application can connect to KDC180 without pairing in OPEN profile. The connection procedure below utilizes the KOAMTAC KTSync Application.

1. Ensure that the KDC is powered on.
2. Ensure that Bluetooth is enabled on your smartphone or tablet. Although the KDC180 may appear as an available Bluetooth device on your smartphone or tablet, **do not** select the KDC180 in this menu.
3. Using the KDC, scan the OPEN mode barcode below:



OPEN

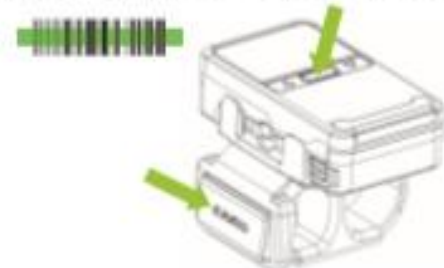
Connecting via BLE OPEN Profile

4. Open KTSync on your smartphone or tablet.
5. In the KTSync app, tap the Connect () icon at the bottom left of the app.
6. In KTSync, tap "Start BLE Scanning" in the top right.
7. In KTSync, check the list of found devices.
8. In KTSync, tap the KDC180 listed by serial number in brackets followed by [BLE] that matches the serial number found on the back side of the KDC180. The format will look like this, KDC180[xxxxxx] [BLE], where xxxxxx is the serial number.
9. The KDC180 will beep upon connection and display "Bluetooth Connected" on its screen.



How to Read Barcodes

1. Aim the KDC directly at the barcode and press the SCAN button on the KDC or on the Ring Trigger, ensuring the beam covers the barcode horizontally.



2. A successful scan (A) will sound 1 beep, show 5 green LEDs, and display the scanned info on the screen. An unsuccessful scan (B) will sound 2 beeps, show 5 red LEDs, and display "Read Failed" on the screen.



UHF Single Read Mode

Only one tag is read every time the scan button is pressed.

* 1 short beep sounds when changing mode with DOWN key.

Single Read Mode



UHF Multiple Read Mode

When the SCAN button is pressed, multiple tags are read simultaneously for the set time (default 10 seconds).

* Time setting can be changed in Settings ->Reading Timeout.

* 2 short beeps sound when changing mode with DOWN key.

Multiple Read Mode



How to Read UHF Tags

Use KDC180 UHF facing forward as shown as below. (C)



* Only applicable to KDC180 models with UHF Reader.

LED Indicator Status

The KDC180 is equipped with a set of LED indicators that provide operational feedback & can be programmed via SDK.



* Lights 1 through 5 illuminate based on battery level.



* Lights 1 through 5 illuminate based on battery level.

Using Keyboard Wedge

Keyboard wedge allows you to use your KDC as a keyboard. The HID profile works as keyboard wedge by default. When using SPP or MFi, KTSync provides a keyboard wedge function when KTSync keyboard is enabled. Please refer to the KDC Reference Manual for detailed instructions to enable KTSync keyboard.

1. Ensure that the KDC is connected to the host using the HID profile or the KDC is connected via KTSync keyboard using SPP/MFi profiles.
2. Open any application on the host device that contains a text field you want to populate.
3. Tap the text field in the application.
4. Scan any barcode with the KDC.
5. The barcode data will then populate in the text field.

Toggling Read Modes*

There are two read modes in which the SCAN button works: Barcode Mode and UHF mode. They are toggled by pressing the UP button for 3 seconds.



When entered into this mode, 1 long and 1 short beep will be heard. Barcodes can be read with the SCAN button.



When entered into this mode, 1 long and 2 short beeps will be heard. UHF tags can be read with the SCAN button.



* Only applicable to KDC180 models with UHF Reader.

Changing UHF Tag Read Mode*

The tag read mode is changed by scanning one of the following barcodes or by pressing the DOWN key on the KDC180 for 3 seconds in RFID mode.

The tag read mode is changed in the following order: Active (default) read -> Single read -> Multiple read

UHF Active Read Mode

Basic operation status. Simultaneous reading of multiple tags while pressing the scan button (max. 10 minutes).

* 3 short beeps sound when changing mode with DOWN key.

Active Read Mode



* Only applicable to KDC180 models with UHF Reader.

KTSync & SDK

KTSync® is a program which communicates with KOAMTAC's KDC via Bluetooth. It enables users to read and store data. KTSync is compatible with iOS, Android, Windows, and Mac. It also supports wedging and downloading data from the KDC.

For more information about KTSync, please visit: www.koamtac.com/support/downloads/applications

The Software Development Kit (SDK) is the perfect solution for creating a custom application to collect data utilizing your KDC. KOAMTAC's SDK covers all major development platforms: Android, iOS, Mac OS X, Tizen, Windows, Xamarin, and Cordova. Developers may take advantage of the complimentary SDK and enjoy the full benefits of the KOAMTAC Developer Program.

For more information regarding the KOAMTAC Developer Program or to request the latest SDKs, visit: www.koamtac.com/support/downloads/sdk or e-mail sdk@koamtac.com.

Specs

Functionality

Memory Flash ROM: 256KB
Program, 256KB User Data
Memory RAM: 64KB
Can store up to 13,000 barcodes (EAN-13)

Wedging & Synchronization

Store to file or transfer to app
Keyboard wedge function
Add-on prefixes and suffixes
Barcode option selection

Scan Range (20mil Code39)

KDC180H: 1.73" to 31.5"
(44 mm to 800 mm)

Supported RFID Standards (UHF Companion)

EPC Class1 Gen2, EPC Gen2 V2

Nominal Read Range (UHF)

1.5'+ (0.5m+)

Interfaces

Bluetooth Low Energy,
HID/SPP/Open
USB to Serial (Micro USB port)

User Environment

IP Rating: IP65
Drop Spec: 6' (1.8 m)
Operating: -4°F to 122°F
(-20°C to 50°C)
Storage: -4°F to 140°F
(-20°C to 60°C)
Humidity: 5% to 95%
(non-condensing)

Supporting OS

Android, iOS, Mac OS X,
Tizen, Windows, Xamarin,
Cordova

FCC Statement

1. 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.

(2) This device must accept any interference received, including interference that may cause undesired operation.

2. 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.

SAR Information Statement

Your wireless phone is a radio transmitter and receiver. It is designed and manufactured not to exceed the emission limits for exposure to radiofrequency (RF) energy set by the Federal Communications Commission of the U.S. Government. These limits are part of comprehensive guidelines and establish permitted levels of RF energy for the general population. The guidelines are based on standards that were developed by independent scientific organizations through periodic and thorough evaluation of scientific studies. The standards include a substantial safety margin designed to assure the safety of all persons, regardless of age and health. The exposure standard for wireless mobile phones employs a unit of measurement known as the Specific Absorption Rate, or SAR. The SAR limit set by the FCC is 1.6 W/kg. * Tests for SAR are conducted with the phone transmitting at its highest certified power level in all tested frequency bands. Although the SAR is determined at the highest certified power level, the actual SAR level of the phone while operating can be well below the maximum value. This is because the phone is designed to operate at multiple power levels so as to use only the power required to reach the network. In general, the closer you are to a wireless base station antenna, the lower the power output. Before a phone model is available for sale to the public, it must be tested and certified to the FCC that it does not exceed the limit established by the government adopted requirement for safe exposure. The tests are performed in positions and locations (e.g., at the ear and worn on the body) as required by the FCC for each model. The highest SAR value for this model phone when tested for use on the body, as described in this user guide, is **0.592W/Kg**(Body-worn measurements differ among phone models, depending upon available accessories and FCC requirements). While there may be differences between the SAR levels of various phones and at various positions, they all meet the government requirement for safe exposure. The FCC has granted an Equipment Authorization for this model phone with all reported SAR levels evaluated as in compliance with the FCC RFexposure guidelines. SAR information on this model phone is on file with the FCC and can be found under the Display Grant section of <http://www.fcc.gov/oet/fccid> after searching on

FCC ID: **VH9KDC180U** Additional information on Specific Absorption Rates (SAR) can be found on the Cellular Telecommunications Industry Association (CTIA) web-site at <http://www.wow-com.com>. * In the United States and Canada, the SAR limit for mobile phones used by the public is 1.6 watts/kg (W/kg) averaged over one gram of tissue. The standard incorporates a substantial margin of safety to give additional protection for the public and to account for any variations in measurements.

Body-worn Operation

This device was tested for typical body-worn operations. To comply with RF exposure requirements, a minimum separation distance of **0mm** must be maintained between the user's body and the handset, including the antenna. Third-party belt-clips, holsters, and similar accessories used by this device should not contain any metallic components. Body-worn accessories that do not meet these requirements may not comply with RF exposure requirements and should be avoided. Use only the supplied or an approved antenna.