VANCH-VH

RFID Handheld Reader

Product Information Guide

➢ Shenzhen Vanch Intelligent Technology Co., Ltd has the right to do revisions for hardware, software and manual of product without statement. And this manual is subject to change without notice.

➢ Specifications and power of this product is subject to standard in original. please being sure that voltage is up to requirement, read and learn about safety precautions, especially in open-air installation of outdoor.

Content

1 Product Summarize

VANCH-VH is a cost-effective, rugged mobile inventory device independently developed, designed and produced by Shenzhen Vanch Intelligent Technology Co., Ltd. The VANCH-VH has high performance, high durability and high openness, which can meet the needs of use in harsh environments.

With the model VANCH-VH, we can customize mobile application solutions that meet the needs of different industries, such as warehouse management, transportation management, distribution management, store management, fixed asset management, production line data collection, material tracking, product quality tracking, equipment inspection, Field service, inspector, on-site law enforcement, field operations, etc.

1.1 Shape and Interface

The appearance of the VANCH-VH handheld is shown below. It is made of ABS housing and can be used indoors or outdoors in a well-ventilated environment with good dust and rain resistance.

VANCH-VH Keys introduction as below:

1、 Indicator light:

Working indicator (LED2): yellow, it will keep bright when power on, and
keep twinkling when scan.

Scan indicator (LED5): light green, it will keep twinkling when scan.

Bluetooth indicator (LED3): Blue. It will keep twinkling when power on,
this means the Bluetooth is standby status, it can be searched by other
Bluetooth device and connected. When the indicator keep bright, the
Bluetooth is being connected with other device.

USB indicator(LED1): Red, it will keep bright when connect USB.

Power charge indicator(LED4): yellow, it will keep bright when it's being
power charge. If it do not bright, it means the power charge finished.

If it will keep twinkling, it means the battery is not install correct or
broken.

2. USB port: it can used for power charge, firmware upgrade, data output and communication.

3. Scan button: it's use for start or stop scan process.

4. Built-in antenna: 2dbi

5. Anti-drop pad

6. Navigation button: it's use for menu switch

7. On/off button: It's used for the device on/off with long press. It can stop scanning every time, and it will be forced shutdown the device when long press than 5 seconds.

8. Lanyard hole.

1.2   Product Features

➢   Strong function with simple use

VANCH-VH meet the easily use based on Ergonomics. It can detect ISO18000-6C tag, Flash storage, Bluetooth communication etc. Function.

➢   Real-time data collection

VANCH-VH integrated with bluetooth communication module, user can do real-time data collection, and support real-time and offline data transmit.

➢   High reliability and durability

VANCH-VH is designed strong and sturdy to work under different harsh environment. The protection level is IP53, can bear 2 meters drop test.

Work temperature is -10℃~50 ℃.

➢ Open interface extension application

VANCH-VH is with good extension for projects, user could connect this device with different kind of external device by USB or Bluetooth. For example, it can connect with receipt of barcode printer to do real-time data transmit or printing.

➢ High storage capacity

VANCH-VH is built in 128M storage capacity, the data could be saved under out of power condition.

1.3   Package confirmation

Please check if the package is including components as below before using.

A. User manual CD

B. Hardware as below:

➢ Battery

➢ Power adapter and USB cable

➢ Device

1.4 Performance

（1） Read/write tag type: Comply with ISO18000-6C protocol

（2） RF ID Frequency: 902.5MHz ~ 927.5MHz

BLE Frequency: 2402MHz ~ 2480MHz

（3） Read range : >7m (tag performance independent)

（4） Support real-time and offline data transmit

（5） Flash storage capacity: 128MB

（6） Battery capacity: 3.6V 3100mAh re-chargeable lithium battery

（7） Dimension:270x125x30mm

2 User instructions

VANCH-VH button design completely follows the operating principle of the mobile phone keys, and the user can quickly get started with the device with a short time. Common operations are as follows:

Function	Operations
Power on/off	Long press" power" button with 2 seconds, it can power on/off the device, if long press with 5 seconds can Forced shutdown the device under unusual situation.
Menu switch	Click" UP""Down" could do the menu switch, long press them more than 1 second could menu switch quickly, click " OK" could enter/quit from the Sub-menu.
Select work module	Move to" menu switch", click" ok" to enter the sub-menu, you could select use" RFID module" or " barcode module" . " RFID module" use to rfid tag detect, "Barcode module" use to barcode scan(if the device is without barcode, then this function is not workable)
RFID power adjust	Move to" set RF power output" menu, click" ok" to enter the sub-menu, press" up" and "down" button to set the RF power output, then click" OK" to confirm.

Function	Operations
Volume adjust	Move to " volume adjust" menu, click" ok"enter to sub-menu, press" up" and" down" to set volume adjust, then press" OK" to confirm.
Read mode	Move to " Read mode" menu, click" ok" enter sub-menu, press" up" and" down" to set read mode, and click" OK" to click. "Single read tags", means keep press" scan" button to read, and without press, it will stop reading tags. "Continuous read tags", means press" scan" button to read, and press" scan" again to stop reading tags.
Inventory information	Move to" inventory record" menu, click" ok" enter sub-menu, press" up" and "down" to check the inventory records. Press"OK" to check tag details information, it will show the time of tag being read with year/month/date/time, location/total quantity, press"F1" to quit from the" inventory record" sub-menu.
Bluetooth information	Move to" Bluetooth information" menu, press" OK" to enter sub-menu to set the name of bluetooth, PIN code and rest of bluetooth etc. Operate.
Firmware information	Move to" firmware information" menu, press" OK" enter sub-menu, you could check the device model NO. Version No.

Function	Operations
	RFID reader module type, RFID reader module version.
Output type	Under detect type, move to" output type" menu, it's ok to select the data output type. "data transmit" type, it need send detected tag data to PC by USB cable. The output format please refer" VH-88 development manual" point 1.5. "Simulate keyboard" mode, it will treat the device as keyboard, to output the tag data to the PC cursor. Please refer" VANCH-VH simulate keyboard function" manual.
RFID read	Under RFID read mode, Set as" "Single read tags", means keep press" scan" button to read, and without press, it will stop reading tags. "Continuous read tags", means press" scan" button to read, and press" scan" again to stop reading tags.
Barcode scan	Under barcode scan mode: Press" Scan" to scan 1d/2d barcode, the barcode module will start work and keep 4 seconds. And long press" scan" it can keep scan barcodes.
Data storage	Long press" F1" could store the detected tags, the tags quantity show on the screen

Function	Operations
	of the device will clear after stored successfully, the time of storage is depend on the tag quantity. The data will be stored under" inventory" file of VANCH-VH, it's named as "year, month, date_number.bin".
USB flash mode	Connect VANCH-VH device with PC by USB cable, under the power off mode, first keep press" scan", second press" power on" , then will enter into the USB flash mode. The PC will spot the VANCH-VH as USB flash device, user could download the file from" inventory" of VANCH-VH.
DFU upgrade	This function used to upgrade the firmware of VANCH-VH, please refer the" VANCH-VH upgrade steps".
Others	If want to do secondary development of VANCH-VH, please refer" VANCH-VH development manual" document.

3 Common faults

3.1   Bluetooth fault

Fault	Solutions
Can not search out the Bluetooth	If the device power on, can not search it by other device, please power off then power on again, if it's still can not search out,

Fault	Solutions
	please return the device to manufacture for repairing, this case will not happen normally.
Connect the Bluetooth fail	When connect the Bluetooth with password, the default password is 0000.
Bluetooth signals not stable, Frequently dropped	When it dropped suddenly after connecting, please try to connect it near the Bluetooth adapter.

3.2   Other default

Fault	Solutions
Battery can not be charged	Exchange the battery to another normal workable device to check if it's the battery's problem or the power supply cable with adapter is fault.
Can not power on	First to check if the device is out of power or the device is with fault. If the battery is out of power, then please charge it firstly. If the problem of device, please contact the manufacture technical guys to find a suitable solution.
No sound	To check if the volume if it's correct

3.3   RFID Fault

Fault	Reasons may cause the fault	Solutions
Can not read tags	Out of the reader's	Move the rfid tag near

Fault	Reasons may cause the fault	Solutions
	reading range	the reader
	Antenna broken	Replace the reader antenna
	Parameter RF Power is too low	Set the RF power
	Tag broken	Replace other tags for testing
	Reader module broken	Contact technical guys
Read tags very short range	Parameter RF Power is too low	Restore factory parameters
	Tag's polarization is different from antenna	Rotate tag with 90°.
	Reader module broken	Contact technical guys
	Tag broken	Replace other tags for testing

4 AFTER SERVICE

4.1 *Support and service*

Website: Please visit http://www.vanch.net to get the product VANCH-VH specification, optional accessories and necessary information

Customer support: if you have questions about the specifications or the website information can't answer all your questions, you can contact with our service staff. If your equipment need to repair , please contact with us to get the service information ,delivery instructions and the cost for repair before deliver the equipment to us.

Service: please contact with our service staff if your equipment need diagnostic service or other services. Please do not deliver your equipment before contact with us. If your equipment meet the warranty conditions in the warranty，please show us the proof of purchase date.

Please do as follows before contacting with us:

A. Read the specification

B. Prepare the follow information of the product

  a) model

  b) Serial number

  c) the proof of purchase date

C. Prepare the equipment，the service staff may operating it .

D. Prepare the questions，detailed description can help the customer

service solve the problem quickly.

4.2 *Warranty*

Warranty information

This article is Warranty statement of hardware product, please read carefully.

One year limited hardware warranty

Shenzhen VANCH intelligent technology company provides the one year defect-free guarantee of the materials and manufacture which is according to the receipt date of the original purchaser

If Shenzhen VANCH intelligent technology company receives the defect notice of the above definition, we can decide to repair or replace the defective product which has been proven.

If Shenzhen VANCH intelligent technology company can not repair the product or replace it in reasonable time, the customer can choose a refund when returning the product.

Warranty range

As the describing of above warranty, it should not include the defects which caused by factors below: mistake use; unauthorized modification; open this hardware; operate and store this products in the excess environmental specifications; damage during transportation; improper maintenance; or cause to use the software, spare parts, media, accessories, consumables which is not supply by Shenzhen VANCH Intelligent Technology or use the item which is not design for this product.

There is only one warranty statement of Shenzhen VANCH Intelligent Technology Co., Ltd, and there is no other written or oral warranty statement.

The metaphor of sales of any goods or apply to special-purpose subject to this written warranty with one year period

Shenzhen VANCH Intelligent Technology Co., Ltd will not be responsible for direct, indirect, special, accidental, or ensuing damage (including profits loss) in any cases. Whether based on warranty statement, contract, negligence, or any other theoretical legal basis.

4.3 *Service Line*

Thank you for choosing our RFID products and, sincerely we will offer you technical supports about the integration application of these products. Any of your problems or doubts about our products' quality and application, is quite sure to get prompt attention and soon solutions. Our contact details as follows:

Company Name: Shenzhen VANCH Intelligent technology co., Ltd

Address: F4, Building B, Fuanna Industrial Park, Longhua District, Shenzhen, Guangdong Province, China

Postcode::518109

Tel: 0755-8242 6775

Fax:0755-8240 3457

Website: www.vanch.net

Email: sales@vanch.net

FCC 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.

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.a

•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.

The device has been evaluated to meet general RF exposure requirement. The device can be used in portable exposure condition without restriction.