

# VDB1506 规格书

# VDB1506 Datasheet

## 文档信息/Document Information

|                     |                               |            |
|---------------------|-------------------------------|------------|
| 标题/Title            | VDB1506 规格书 VDB1506 Datasheet |            |
| 文档类型/Document Type  | 规格书/Datasheet                 |            |
| 文档编号/Document No.   | WN-21040050                   |            |
| 版本日期/Version & Date | V1.03                         | 7-Apr-2021 |
| 秘密等级/Classification | 公开/Open                       |            |

## 历史版本/Reversion History

| 版本号/Version | 更新内容/Remark                               | 制作人/Maker | 日期       |
|-------------|---|-----------|----------|
| V1.01       | 起始版本/The initial version                  | Rowen     | 20210407 |
| V1.02       | 更新防护级别/<br>update the level of protection | Wendy     | 20210609 |
| V1.03       | 更正型号、网址/<br>update the model and Website  | Wendy     | 20210715 |

## 设备清单/Product List

| 名称/Item                          | 型号/Model Number | 数量/Number | 备注/Remark |
|----------------------------------|-----------------|-----------|-----------|
| 蓝牙标签<br>Bluetooth Beacon         | VDB1506         | 1pcs      |           |
| 吸合式充电线<br>Pick-up charging cable |                 | 1pcs      |           |

95Power 保留本文档及本文档所包含的信息的所有权利。95Power 拥有本文档所述的产品、名称、标识和设计的全部知识产权。严禁没有征得 95Power 的许可的情况下复制、使用、修改或向第三方披露本文档的全部或部分内容。

95Power 对本文档所包含的信息的使用不承担任何责任。没有明示或暗示的保证，包括但不限于关于信息的准确性、正确性、可靠性和适用性。95PowerB 可以随时修订这个文档。可以访问 [www.95power.com.cn](http://www.95power.com.cn) 获得最新的文件。

Copyright © 2021, 深圳市微能信息科技有限公司。

95Power® 是深圳市微能信息科技有限公司在中国的注册商标。

95Power reserves all rights to this document and the information contained herein. Products, names, logos and designs described herein may in whole or in part be subject to intellectual property rights. Reproduction, use, modification or disclosure to third parties of this document or any part thereof without the express permission of 95Power is strictly prohibited.

The information contained herein is provided “as is” and 95Power assumes no liability for the use of the information. No warranty, either express or implied, is given, including but not limited, with respect to the accuracy, correctness, reliability and fitness for a particular purpose of the information. This document may be revised by 95Power at any time. For most recent documents, visit [www.95power.com.cn](http://www.95power.com.cn).

Copyright © 2021, 95Power95Power Information Technology Co., Ltd.

95Power® is a registered trademark of 95Power Information Technology Co., Ltd. in China

## 目录/Contents

|   |    |
|---|----|
| 1. 产品介绍/Product Induction.....              | 4  |
| 2. 工作参数/Working Parameter.....              | 5  |
| 3. 产品使用 User Manual.....                    | 6  |
| 3.1 开机 Power On.....                        | 6  |
| 3.2 SOS.....                                | 6  |
| 3.3 关机 Power Off.....                       | 6  |
| 3.4 充电 Charging.....                        | 7  |
| 4. 产品安装 Product Setup.....                  | 7  |
| 4.1 使用钻孔安装 Installation By Drilling.....    | 7  |
| 4.1.1 钻孔 Drill Hole.....                    | 7  |
| 4.1.2 固定卡扣 Fixed Card Buckle.....           | 8  |
| 4.1.3 固定标签 Fix The Tag.....                 | 8  |
| 4.2 使用 3M 胶安装 Install With 3M Adhesive..... | 9  |
| 4.2.1 使用 3M 胶布 Use 3M Tape.....             | 9  |
| 4.2.2 固定卡扣 Fixed Card Buckle.....           | 9  |
| 4.2.3 固定标签 Fix The Tag.....                 | 10 |
| 5. 联系方式/Contact.....                        | 10 |

## 1. 产品介绍/Product Induction

VDB1506 安全帽标签，主控芯片采用 NRF52832 实现低功耗的待机及广播信息发送，定位方案可采用我司 VG05 信标扫描加转发标签广播信息及其 RSSI，然后用 VDB2601 网关配合收集标签信息并上报后台服务器解析 RSSI 实现定位。可以实现 3~5m 精度的室内定位或存在性检测，推荐用于工地、工厂、矿道等安全监护场合的人员定位。

VDB1506 is a safety helmet Tag, of which the main control chip uses NRF52832 to achieve low power consumption standby and broadcast information transmission. It can use our company's VG05 beacon for scanning and forwarding the tag broadcast information, including RSSI, to VDB2601 gateway to collect tag information and report to the background server to analyze RSSI to achieve positioning. It can reach 3~ 5meter accuracy in indoor positioning or existence detection. It is recommended for personnel positioning in construction sites, factories, mines and other safety monitoring occasions.

标签内置加速速度传感器，智能切换人员运动和静止时的定位频率，实现更低功耗的待机；带有 SOS 按键求救功能，可及时通知后台监护人员。工卡内置振动传感器，可在触发报警或下发消息时提醒佩戴者。标签可使用磁吸线充电，一端接到磁吸接口，另一端连接到普通 USB 电源上可正常充电。内置 1000mAh 大容量可充电锂电池，可实现 8 天以上的连续工作时长。

The tag has a built-in accelerometer, which can switch the positioning frequency intelligently between moving and stationary ,so as to achieve a lower power consumption. It has SOS button function, which can inform the backstage monitoring personnel in time; The built-in vibration sensor can alert the wearer when an alarm is triggered or a message is sent. The tag can be re-charged by connecting the USB magnetic cable to a USB power supply, and the other side connecting to magnetic charging interface. The Built-in 1000mAh large capacity rechargeable lithium battery, can achieve more than 8 days of continuous working time.

标签外壳采用超声压合技术，按键采用 3M 胶贴方式，实现 IP65 级别的防水设计。并且配备一个白色卡扣，方便人员佩戴。

The tag's shell uses ultrasonic pressing technology, and the button adopts 3M adhesive way, in order to achieve IP65 level waterproof design. And it is equipped with a white buckle, easy to wear.



Figure 1-1 VDB1506 TAG

## 2. 工作参数/Working Parameter

Table 2.1 产品参数 Product Parameter

| 工作参数<br>/Working Parameter                            | 描述/description  |
|---|---|
| 刷新频率/<br>Refreshing frequency when moving             | 0.5Hz   |
| 功耗/<br>Power consumption                              | 待机 50uA 定位发射 18mA@0dBm<br>Standby 50uA location launch 18mA@0dBm                        |
| 精度 Precision  | 3~5m  |
| 一次充电使用时间/<br>General using time when fully<br>charged | 8 days  |
| 充满电时间/<br>Full charge time                            | About 3.5 hours   |
| 定位距离/<br>Positioning distance                         | 20m   |
| 防护等级/level of protection                              | IP65  |
| 电池容量/Battery capacity                                 | 1000mAh   |
| 温度/<br>Temperature                                    | Operational: -20~80℃<br>Charging: 0~45℃<br>Storage: -20~40℃ (<3month in shut down mode) |
| 产品尺寸/Dimension  | 57.4mm*38.8mm*21mm(±0.5mm)  |
| 存储/RAM and ROM  | 512kB flash/64kB RAM  |
| 协议/Protocol   | Support BLE5.0 (No Long-range)  |
| 频率/Frequency  | 2400MHz---2483.5MHz   |
| 充电适配器参数/<br>Power adapter parameter                   |   |
| 输出/Output   | DC 5V /1A   |

### 3. 产品使用 User Manual



Figure 3-1 VDB1506 Top View and Upward View

#### 3.1 开机 Power On

长按标签按键，直到红色 LED 亮起和马达振动，松开按键，红灯会持续亮 3s 后熄灭，表示开机成功进入工作状态，之后红色 LED 开始闪烁（8S 一次）。

Long press the tag button, until the red LED lights up and the motor vibrates, release the button, the red LED will continue to be on for 3S and then off, Indicates successful startup and entry into working state, and then the red LED starts flashing (once per 8S).

#### 3.2 SOS

标签在工作状态时，长按按键 3s 以上就会触发一次紧急呼救，此时蓝色 LED 会短暂闪烁，代表 SOS 触发成功。

When the tag is in the working state, long press the button for at least 3s to trigger an emergency call. Meanwhile, the blue LED will flash briefly, representing the SOS is successfully triggered.

#### 3.3 关机 Power Off

在标签工作状态，连续按 4 下按键（短按 3 次长按 1 次，短按时间间隔 1S 之内，长按时间大于 3S），按键操作完，红色 LED 长亮 5S 后灭掉，表示关机成功。

When the tag is working, press the button 4 times continuously (short press 3 times and long press 1 time, short press time interval <1S, long press time >3S). After the button operation, the red LED will light up for 5S and turn off, indicating successful shutdown.

### 3.4 充电 Charging

将充电线的充电头通过磁力对准充电接口座吸住，标签进入充电状态，红色 LED 开始闪烁（1S 一次），充满时红色 LED 长亮。移除充电头后，红色 LED 熄灭，标签立刻进入关机状态。在进入充电状态时标签会重启并且处于开机状态。

The head of the charging line is aligned with the charging interface seat through magnetic force. Then, the tag enters the charging state, the red LED starts to blink (once per second), and the red LED will be always on when it is fully charged. After removing the charging head, the red LED goes off and the tag immediately enters the shutdown state. The tag will be restarted when it enters the charging state and then turned on.

## 4. 产品安装 Product Setup

### 4.1 使用钻孔安装 Installation By Drilling

#### 4.1.1 钻孔 Drill Hole

按照卡扣的孔间隔将安全帽打两个孔（M4<孔径<M10，推荐 M6；两孔中心 15MM±1MM）。

Drill two holes in the helmet according to the hole spacing of the buckle (M4 < Diameter < M10, M6 recommended; Center of two holes: 15MM±1MM).



Figure 4-1 打孔示意图 Diagram of Drilling



Figure 4-2 螺丝 screw

#### 4.1.2 固定卡扣 Fixed the Buckle

将标签的卡扣用螺丝固定在安全帽上。

Fix the buckle on the helmet with screws.



Figure 4-3 固定卡扣 Fixed the buckle

#### 4.1.3 固定标签 Fix The Tag

将标签的固定在卡扣上。

Fix the Tag on the buckle.



Figure 4-4 固定安全帽标签 Fix the tag



## 4.2 使用 3M 胶安装 Install With 3M Adhesive

### 4.2.1 使用 3M 胶布 Use 3M Tape

将 3M 胶布粘合到卡扣上，如下图：

Glue 3M tape to the buckle, as shown in the picture below:



Figure 4-5 固定 3M 胶布 Fixed 3M tape

### 4.2.2 固定卡扣 Fixed Card Buckle

将标签的卡扣用螺丝固定在安全帽上。

Fix the label buckle on the helmet with screws.



Figure 4-6 固定卡扣 Fixed card buckle

### 4.2.3 固定标签 Fix The Tag

将标签的固定在卡扣上。

Fix the Tag on the buckle.



Figure 4-7 固定标签 Fix The Tag

## 5. 联系方式/Contact

### 95Power Information Technology Co., Ltd

深圳市微能信息科技有限公司

地址: 中国广东省深圳市龙华区工业东路利金城工业园 9 号楼 6 层

**Address:** 6 Floor, No.9 Building, Lijincheng Scientific & Technical park, Gongye East Road, Longhua District, Shenzhen, Guangdong, China

电话/**Phone:** 86-755 8340 8210 (销售支持 Sales Support)

电话/**Phone:** 86-755 8340 8510 (技术支持 Technical Support)

传真/**Fax:** 86-755-8340 8560

邮箱/**E-mail:** sales@95power.com.cn

网站/**Website:** www.95power.com.cn