

VDU1501 规格书

VDU1501 Datasheet

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1. 产品介绍/ Product description

VDU1501 是一款基于 UWB（超宽带）技术的定位工卡，主控芯片采用 NRF52832 实现 UWB 信号的收发控制，定位芯片采用 DW1000，可以通过烧录不同的固件并配合不同的 UWB 定位基站实现基于 UWB TDOA（到达时间差）的高精度定位。工卡内置加速度传感器，智能切换人员运动和静止时的定位频率，以达到优化功耗的目的，工卡带有 SOS 按键求救功能，可以实现敬老院等安全监护场合的人员定位。

VDU1501 is a positioning card based on UWB (ultra wide band) technology. The main control chip uses NRF52832 to control the receiving and transmission of UWB signals. DW1000 positioning chip can realize high precision positioning based on UWB TDOA (arrival time difference) by burning different firmware and cooperating with different UWB positioning base stations. The built-in acceleration sensor can intelligently switch the positioning frequency of moving and stationary personnel to optimize the power consumption. The card has the SOS button for help function, which can realize the positioning of personnel in nursing homes and other security monitoring occasions.



图 1-1 VDU1501 产品图片/Figure 1-1 VDU1501 product picture

2. 基本参数/Parameters

表 2-1 产品参数/ Table 2-1 Product specifications

基本工作参数/Working Parameter	
运动刷新频率/Refresh frequency of moving	10Hz(默认, 可更改/Default, changeable)
静止刷新频率/Refresh frequency of static	1Hz (默认, 可更改/Default, changeable)
功耗/Power consumption	待机 50uA 定位发射 150mA/ Standby 50uA positioning and launch 150mA
精度/Precision	精度达 10cm/Precision up to 10 cm
一次充电使用时间/ General using time when fully charged	2 个月左右 (1Hz 定位) / About 2 months (positioning at 1Hz)
定位距离/Positioning distance	25~50M
电池容量/Battery capacity	550mAh
工作温度/ operating temperature	-20~60°C
产品尺寸/Dimension	长/Long 85mmX 宽/Wide 54mmX 厚/High 7.5mm(±1mm)
UWB 参数/UWB Parameter	
频率范围/Frequency	默认/default 3774~4243.2MHz
支持信道/Channel	ch1-5 (可修改/ changeable)
协议标准/Protocol	IEEE 802.15.4-2011 UWB
BLE 参数/BLE Parameter	(默认关闭, 客户可以选择打开 BLE 功能) / (Off by default, customers can choose to enable BLE function)
存储/RAM and ROM	512kB flash/ 64kB RAM
协议/Protocol	Support BLE4.2
频率/Frequency	2400MHz-2483.5MHz
充电适配器匹配参数/Power adapter parameter	
充电电压/ Charging voltage	DC5V /1A
工作温度/ operating temperature	-20°C-60°C

3 产品使用/User manual



图 3-1 VDU1501 正面/Figure 3-1 Front view of the VDU1501



图 3-2 VDU1501 反面/Figure 3-2 VDU1501 reverse side

3.1 开机/ Power on

长按按键，直到蓝色灯亮起，松开按键，蓝色灯会持续亮 3s 后熄灭，表示开机成功。充电时候工卡会处于开机状态。

Long press the button until the blue light comes on. Then release the button, and the blue light will continue on for 3s and then go off, indicating that the machine is successfully started. The card will be on when charging.

3.2 SOS 求救/ SOS

工卡开机成功后，长按 3s 按键就表示一次紧急呼救。

After the card is turned on successfully, pressing the button for 3 seconds will trigger an emergency call for help.

3.3 关机/ Power off

开机后，连续短按 3 下按键，每次间隔在 1s 左右，最后一下长按，红灯亮起后灭掉表示关机成功。

After power on, press the button three times continuously, with an interval of less than 1s, and long press at the last time. Then the red light will be on for a while and go out, it means that the power off is successful.

3.4 充电/ Charging

将配套的充电线一端接入 5V 直流电源适配器，另外一端接入磁力充电接口座。红灯开始以 1s 的频率闪烁，表示正在充电，当蓝灯亮起时，表示已充满电量。移除充电器后，蓝灯熄灭。

Connect one end of the supporting charging line to the 5V DC power adapter and the other end to the magnetic charging interface seat. The red light starts flashing at a frequency of 1s, indicating that the battery is being charged, and when the blue light comes on, indicating that the battery is fully charged.

After the charger is removed, the blue light is off.

4. 联系方式/Contact information

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