图纸区：

前言

欢迎您阅读《微型手持站快速入门手册》,本手册主要对手持站的产品参数、产品功能、设备安装、注意事项和常见故障解决办法进行阐述。

技术支持

用户购买本产品之日起，将享受丰疆智能科技有限公司提供的长期技术服务和升级政策。
深圳总部
地址:深圳市南山区科技南一路28号达实大厦21楼
邮编:518063
电话:400-777-6160(CN);1833-330-6660(美);496-931-090-130(欧)。
官网:https://www.fjdynamics.cn,用户可以在网站内了解到丰疆智能所有导航产品的最新动态、下载相关产品的最新版本APP和相关技术资料。

用户反馈

关于本手册和本产品的不足之处及其他技术支持需求，请您发送邮件至service@fjdynamics.com，我们将为您竭诚服务。

用户需知

1.使用本产品之前请仔细阅读随机提供的用户使用手册，了解产品的使用方法和注意事项。
2.微型手持站在室外使用和安装的过程中，本设备具有IP67的防护等级。但是随着时间的推移，设备可能存在老化的可能，导致防护失效，所以请注意防水处理，同时在使用微型手持站获取定位数据时，请保持设备置于室外且空旷的环境。
3.应避免本设备摔落在地面或者其他物体的剧烈碰撞冲击。
4.在雨天室外架设本设备时，用户要注意采取适当的防雷措施，避免雷击。
5.遵严格按照产品参数要求，给设备提供正确的电源，避免设备损坏。
6.设备随机标配的线束或充电线口发生损坏，请立即停止使用，购买新的线束或联系我们进行售后处理。
7.设备因不可抗力因素，包括但不限于（雷击、跌落、冲击、高压、短路、烧损）导致设备损坏，不属于本公司免费保修政策。
8.请不要自行拆卸设备，否则您将失去丰疆智能提供的长期有限保修。

功能参数:

类别	规格参数	
GNSS 配置	BDS	B1I、B2I、B3I、B1C、B2a、B2b*
	GPS	L1C/A、L2P、L5
	GLONASS	G1、G2
	Galileo	E1、E5b、E5a、E6*
	QZSS	L1、L2、L5
	SBAS	L1C/A
通道数	并行通道	1408 个
精度和可靠性	信号重获	≤ 1s
	首次定位时间	冷启动≤ 30s
		热启动≤ 5s
	RTK 初始化时间	< 5 s
	初始化数据可靠率	> 99.9%
	数据更新率	测量 & 定位：1Hz、2Hz、5Hz、10Hz、15Hz、20Hz
	单点精度 (RMS)	H ≤ 1.5 m、V ≤ 2.5 m
	DGPS(RMS)	H ≤ 0.4 m、V ≤ 0.8 m
	RTK(RMS)	H ≤ 0.8 cm+1 ppm、V ≤ 1.5 cm+1 ppm
	时间精度（RMS）	20 ns
	速度精度 (RMS)	0.03 m/s
	激光倾斜测量	3m 测距，激光倾斜测量三维误差≤ 6cm(倾斜角度≤ 30°)（V4E PRO）
数据类型	差分数据	RTCM2.3, RTCM 3.x, CMR
	数据格式	NMEA-0183
电气和接口参数	供电电压	5V/2A
	功耗	≤ 1.5W
	电气接口	USB 2.0 Type-C 接口
	续航时间	≤ 3H
	工作时间	≥ 12H
通讯方式	蓝牙 4.0	双模蓝牙
		工作距离：5m
	WIFI（基站模式）	2.4G
		工作距离：300m(基站协议)
物理特性	外壳材质	PC+ABS
	尺寸	182mm*53mm*53mm
	重量	320g
	安装接口	1/4 螺纹内接口
	按键	开关键
	指示灯	固定解指示灯、充电指示灯
	工作温度	-20℃-60℃
	防水防尘	IP67

设备连接

1.手机扫描下方二维码下载最新版本APP。

Android　　IOS

2.按照下图所示长按开关按键3s打开或关闭设备,打开设备后卫星指示灯蓝灯闪烁,表示设备未连接APP,打开APP连接设备,设备连接上APP后,卫星指示灯灯闪烁代表设备处于非固定解状态,用户登录NTRIP账号或者连接基站获得固定解后,卫星指示灯常亮绿灯,设备充电中充电指示灯显示红色,充满电后指示灯显示蓝色。

3. 测量功能,请如下图所示进入APP,连接设备使用。

常见故障解决方法

故障现象	解决方法
设备正常开机，10s 后自动关机	设备电量过低，自动保护，请连接充电器充电
设备正常开机，10min 后自动关机	设备未连接设备，自动省电功能，开机连接蓝牙或基站可正常运行。
设备关机放置一段时间后，设备电量正常但显设备不能定位	长时间放置导致热启动电源电量过低定位异常，请保持设备开机状态并连接手机 APP，结热启动电源充电到工作电压后，设备定位恢复正常，时间约 1 小时。
APP 反复提报“差分数据断开”，“差分数据已连接”	请检查手机信号强度，如果信号很弱，请更换手机或其他运营商 SIM 卡。
其他异常情况无法确定原因	可按照“技术支持”章节内容联系我们，或者在 APP “个人中心”填写“意见反馈”

温馨提示

请使用配套的充电线和规定参数的充电器,使用未经厂商认证或非配套的线束和充电器可能引发火灾、爆炸或其他危险。

长期不使用设备时，请充入50%-80%的电量,按照参数要求存放在干燥阴凉的环境中,并每隔2个月充一次电,避免长时间存储导致设备过度放电损坏电池。

免责申明

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本说明书可能会因产品升级或其他原因而更新,丰疆智能保留修改本说明书的权利,恕不另行通知。

本说明书仅作为使用指导,丰疆智能已尽一切努力保证本说明书中的信息的准确性和可靠性。

Preface

Welcome to read the " Mini RTK Receiver Quick Start Manual". This manual mainly explains the product specifications, features, device installation, precautions and solutions to common troubleshooting of the receiving station.

Technical Support

From the date of purchasing this product, users will enjoy the long-term technical services and upgrade policies provided by FJDynamics Co., Ltd.
Shenzhen Headquarters
Address: Floor 21, Das Tower,No. 28, 1st South Keji Road,Nanshan District, Shenzhen
Zip code: 518063
Telephone: 400-777-6160(CN);1833-330-6660(USA);496-931-090-130(EU).
Official website: https://www.fjdynamics.cn, you can visit the website to learn about all FJD navigation products, download the latest version of the mobile APP, and access technical documentation.

User Feedback

If you have any feedback about this manual or need further technical support, please contact us at service@fjdynamics.com. We are committed to providing you with excellent service.

User Notice

1. Please read the user manual carefully before operating the device to understand its usage and safety precautions.
2. The device is rated IP67 for outdoor use. However, as time goes by, aging and wear may compromise its protective performance. Please always ensure proper waterproofing and place the device in open, outdoor environments for optimal positioning.
3. Avoid dropping or subjecting the device to strong impacts.
4. Please use lightning protection measures when setting up the device outdoors during rain to prevent damage from lightning strikes.
5. Please strictly follow the product parameter requirements and provide the correct power supply to the device to avoid device damage.
6. If the default power cable or charging interface is damaged, please stop using it immediately, replace it with a new cable or contact us for after-sales service.
7. Damage caused by force majeure (including but not limited to lightning, drops, impacts, high voltage, short circuits, or burning) is not covered by the warranty.
8. Do not disassemble the device. Unauthorized disassembly voids the limited warranty provided by FJDynamics.

Specification Parameters

Sort	Specification Parameters	
Galaxy system	BDS	B1I, B2I, B3I, B1C, B2a, B2b*
	GPS	L1C/A, L2P, L5
	GLONASS	G1, G2
	Galileo	E1, E5b, E5a, E6*
	QZSS	L1, L2, L5
	SBAS	L1C/A
Channel	Parallel Channels	1408
Precision and Reliability	Signal reacquisition	≤1s
	Time to First Fix	Cold Start<30s
		Hot Start<5s
	RTK initialization time	< 5 s
	Initialization data reliability	> 99.9%
	Data update rate	Measurement & Positioning: 1Hz、2Hz、5Hz、10Hz、15Hz、20Hz
	Single point solution accuracy(RMS)	H≤1.5 m、V≤2.5 m
	DGPS(RMS)	H≤0.4 m、V≤0.8 m
	RTK(RMS)	H≤0.8 cm+1 ppm、V≤1.5 cm+1 ppm
	Time accuracy（RMS）	20 ns
	Speed accuracy（RMS）	0.03 m/s
	Laser Tilt Measurement	3m distance measurement, laser tilt measurement three-dimensional error ≤6cm (tilt angle ≤30°) （V4E PRO）
Data Types	Differential Data	RTCM2.3, RTCM 3.x, CMR
	Data Format	NMEA-0183
Electrical and Interface parameters	Charging Parameters	5V/2A
	Power Consumption	≤1.5W
	Electrical Interface	USB 2.0 Type-C
	Charging Time	≤3H
	Battery Life	≥12H
Communication	Bluetooth 4.0	Dual-mode Bluetooth
		Working distance: 5m
	Wifi (base station mode)	2.4G
		Working distance: 300m (base station protocol)
Physical Properties	Shell material	PC+ABS
	Size	182mm*53mm*53mm
	Weight	320g
	Mounting Interface	1/4 thread internal interface
	Button	On/Off key

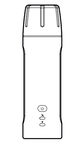
Sort	Specification Parameters	
Physical Properties	Indicator Lights	Fixed disassembly indicator light, charging indicator light
	Operating temperature	-20℃-60℃
	Protection	IP67

Device Connection

1. Scan the QR code below to download the latest version of the APP.

Android　　IOS

2. As shown in the figure below, Long press the power button to turn on or off the device. The satellite indicator flashes blue during operation, indicating that the device is not connected to the APP. After launching the app and connecting the device, a flashing red satellite indicator means the device has not yet achieved a fixed solution. Once you log into an NTRIP account or connects to a base station and obtains a fixed solution, the satellite indicator will turn solid green. The power indicator shows red while charging, when fully charged, the indicator turns blue.



3. For the measurement function, please enter the APP as shown below and connect the device for use.

Common troubleshooting solutions

Fault Symptom	Solution
Device turns on normally but automatically shuts down after 10s	The device battery is too low. Automatic protection is activated. Please connect the charger to charge.
Device turns on normally but automatically shuts down after 10min	The device is not connected to the APP, the automatic power saving function is enabled, and it can operate normally when it is turned on and connected to Bluetooth or a base station.
After the device is powered off and left alone for a period, the battery level is normal but the device cannot position	Long-term storage may cause the hot start power supply to be too low and the positioning to be abnormal. Please keep the device turned on and connected to the mobile APP to charge the hot start power supply to normal working voltage. Positioning will return to normal after approximately 1 hour .
The APP repeatedly broadcasts "Differential data disconnected" and "Differential data connected"	Please check the mobile phone signal strength. If the signal is weak, please change the mobile phone or other operator SIM card.
Other abnormalities for which the cause cannot be determined	You can contact us according to the content of the "Technical Support" section, or fill in the "Feedback" in the "Personal Center" of the APP

Kind Tips

Please use the matching charging cable and charger with specified parameters. Using uncertified accessories may lead to fire, explosion, or other hazards.

If the device is not in use for an extended period, please charge it to 50%-80%, store it in a dry, cool environment, according to the parameter requirements. Recharge every two months to prevent deep discharge and battery damage caused by long-term storage.

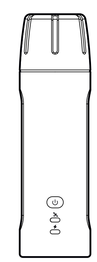
Disclaimer

The products, services, or features you have purchased are governed by the applicable commercial contracts and terms. Certain products, services, or functionalities referenced in this manual may not fall within the scope of your purchase or entitlement. Unless otherwise stipulated in the contract, FJDynamics makes no express or implied warranties or representations regarding the contents of this manual.

This manual may be updated due to product upgrades or other reasons. FJDynamics reserves the right to modify it without prior notice.

This document is for guidance only. While FJDynamics has made every effort to ensure its accuracy and reliability, we do not guarantee the content is free from error.

FJDTrion



Mini RTK Receiver

FJDynamics

尺　寸:140*210mm

材　质:120g道林纸

颜　色:CMYK

工　艺:风琴折

技术要求:
1、开制刀模,模切公差±0.5mm;印刷内容以印刷稿为准,套印公差±0.5mm;
2、成品无破损、脏污,切口需平整;版面不允许明显凸起、偏移、重影、残缺、错版等不良;图案文字清晰、整洁,无脏污;
3、同一批次成品颜色无差异,不同批次无明显差异;

裁切线:

压痕线:

齿刀线:

刷胶区:

比　例:　1:1

版　本	A	更改内容	首版	日期	2025.5.27	修订人	Cassie .He
料　号	PSM-SM-003177	名称	V4微型手持站说明书(中&英)	来源	外购	设计师	Cassie.He

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.

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.
Caution: Any changes or modifications to this device not explicitly approved by manufacturer could void your authority to operate this equipment.

Specific Absorption Rate (SAR) information:
This device meets the government's requirements for exposure to radio waves. 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 or health. FCC RF Exposure Information and Statement the SAR limit of USA (FCC) is 1.6 W/kg averaged over one gram of tissue. Device types: Smart phone (FCC ID: 2BOPT-V4E) has also been tested against this SAR limit. This device was tested for typical body-worn operations with the back of the device kept 0mm from the body. To maintain compliance with FCC RF exposure requirements, use accessories that maintain a 0mm separation distance between the user's body and the back of the device. The use of belt clips, holsters and similar accessories should not contain metallic components in its assembly. The use of accessories that do not satisfy these requirements may not comply with FCC RF exposure requirements, and should be avoided.