FLY SKY

FS-iBG01

产品说明书

产品介绍

- FS-iBG01 支持 GPS、北斗等多个卫星系统，具有高灵敏性，采集时间短，抗干扰能力强及使系统保持低功耗等特点。

产品概览

[1] i-BUS2 输出接口
[2] LED 指示灯
[3] 安装方向指示
[4] 支架
注：支架为选配件。
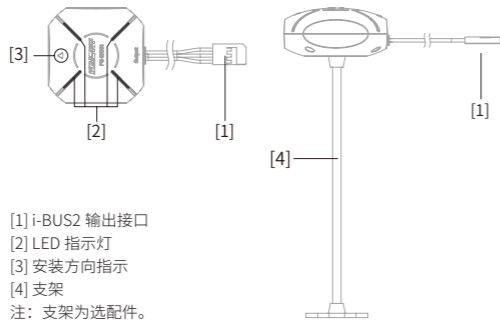
兼容性

- FS-iBG01 适配 PL18 发射机等和增强版接收机（如 FTr8B）。
注：PL18 发射机固件版本需 1.0.65 及以上版本。

基本参数

- 产品名称：FS-iBG01
- 支持卫星系统：GPS ｜ 北斗
- 适配模型：船、飞机、机器人等
- 跟踪：-167dBm

- 捕获：-160dBm
- 冷启动：-148dBm
- 热启动：-157dBm
- 冷启动时间：平均 26s
- 热启动时间：平均 1s
- 定位精度：0.3 degrees
- 测速精度：0.05 m/s
- 时间精度：RMS 99% 30ns
- 最大高度：50，000m
- 加速度：≤ 4g
- LED 显示：有
- 更新频率：10Hz
- 数据格式：i-BUS2
- 输入电源：3.5~9V/DC
- 温度范围：-10℃～ +60℃
- 湿度范围：20% ～ 95%
- 外形尺寸：40.2*40.2*18.5mm
- 机身重量：24.1g
- 外观颜色：黑色
- 认证：CE, FCC

注意事项

- 使用前必须确保本产品与模型安装正确，否则可能导致模型发生严重损坏；
- 保持 FS-iBG01 水平安装，尽量高于机身安装，远离大电流强磁物体；
- 请不要暴力损坏物品；
- 如不安装支架使用，请将 FS-iBG01 固定到模型机架上；

- 如需安装支架使用，请将 FS-iBG01 固定在支架上并保持如下安装状态。

安装方向指示（朝向模型前进方向）

支架

i-BUS2 输出接口
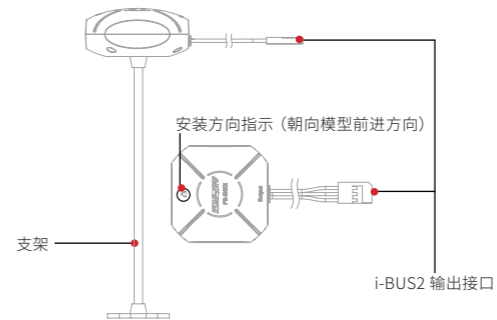
功能说明

注：FS-iBG01 相关功能实现均需要借助发射机与接收机，以下功能介绍以 FS-iBG01 与 PL18 发射机和 FTr8B 接收机连接为例说明。

连接 FS-iBG01

将 FS-iBG01 与发射机和接收机连接。

1. 将 FS-iBG01 正确安装到模型上，并确保水平放置；
2. 将发射机与接收机完成对码。在发射机端，通过"主页 1> 基本功能 > 接收机设置 > 自定义接口协议"进入接口输出信号类型设置界面，如要连接 NPA，点选 [NPA] 后，点击 [i-BUS2]；
3. 将 FS-iBG01 连接至接收机的 NPA 接口，FS-iBG01 即与发射机和接收机建立连接。

注：NPA 接口为增强版接收机的 Newport 接口，通常增强版的接收机有 1~4 个 Newport 接口，将任一 Newport 接口输出信号类型设置为 i-BUS2 后就可以与 FS-iBG01 连接使用。

LED 介绍

- 当 FS-iBG01 接通电源，但未定位时，LED 灯状态为红色常亮；
- 当 FS-iBG01 陀螺仪校准时，LED 灯状态为绿色常亮；
- 当 FS-iBG01 搜星定位成功且正常工作时，LED 灯状态为蓝色慢闪。

注：当 FS-iBG01 接通电源系统进入自检状态时，LED 灯状态为白色常亮，通常自检过程在三秒内完成，若 LED 灯持续白色状态，则通信故障。

时区选择

用户可根据实际位置选择合适的时区。

1. 在发射机端，通过"主页 1> 基本功能 > 接收机设置 > i-BUS2 GPS 传感器设置 > 时区选择"，进入时区设置界面；
2. 选择合适的时区。

陀螺仪校准

FS-iBG01 内置陀螺仪。可在发射机端查看模型姿态，当 FS-iBG01 安装位置不在水平面时，通过此功能校准 FS-iBG01 当前所在平面为水平面。

1. 在发射机端，通过"主页 1> 基本功能 > 接收机设置 > i-BUS2 GPS 传感器设置 >陀螺仪校准"，进入陀螺仪校准界面，点击 [开始校准]；
2. 校准成功后弹出确认菜单，点击 [确定] 即完成校准。
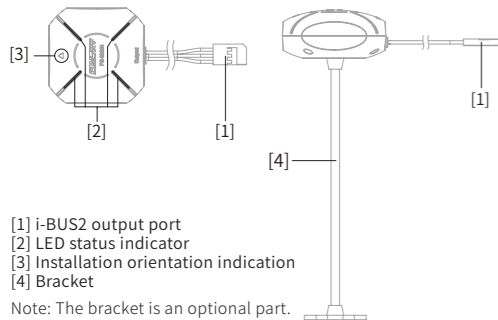
GPS 显示

可以显示模型当前方位，模型移动方向，模型姿态等信息。

在发射机端，通过"主页 1> 基本功能 > 接收机设置 > i-BUS2 GPS 传感器设置 >GPS 显示"，进入显示界面，查看相关信息。

Introduction

- The FS-iBG01 supports GPS, Beidou and other satellite systems, and features high sensitivity, short acquisition time, strong anti-interference ability and low power consumption.

Product Overview

[1] i-BUS2 output port
[2] LED status indicator
[3] Installation orientation indication
[4] Bracket

Note: The bracket is an optional part.

Compatibility

- FS-iBG01 is compatible with PL18 transmitter et cetera and the AFHDS3 enhanced receivers, such as FTr8B receiver.

Note: The firmware version of PL18 transmitter needs to be 1.0.65 or above.

Product Specifications

- Product Name: FS-iBG01
- Satellite Systems Supported: GPS ｜ Beidou
- Model Type: Boats, air-crafts, robots, etc.

- Tracking: -167dBm
- Capture: -160dBm
- Cold Start: -148dBm
- Hot Start: -157dBm
- Cold Start Time: Average 26s
- Hot Start Time: Average 1s
- Positioning Accuracy: 0.3 degrees
- Accuracy of Speed Measurement: 0.05 m/s
- Time Accuracy: RMS 99% 30ns
- Maximum Height: 50，000m
- Acceleration: ≤ 4g
- LED: Yes
- Update Frequency: 10Hz
- Data Format: i-BUS2
- Input Power: 4.0 ～ 8.4V
- Temperature Range: -10℃～ +60℃
- Humidity Range：20% ～ 95%
- Dimensions: 52.4*50*18.5mm
- Weight: 30g
- Colour: Black
- Certification: CE, FCC

Attentions

- Ensure that the product and model are installed correctly before use, otherwise the model may be seriously damaged.
- Keep the FS-iBG01 installed horizontally, install it higher than the machine body as far as possible, and keep it away from high current and strong magnetic objects;
- Avoid overexertion to damage any objects;
- If the bracket is not installed, please fix the FS-iBG01 to the model frame.
- If you need to install the bracket, please fix the FS-iBG01 on the bracket and keep the following installation status.

Installation orientation indication (Towards the forward direction of the model)

Bracket

i-BUS2 output port

Functions

Note: The FS-iBG01 needs to be connected with the PL18 transmitter and FTr8B receiver to implement its functions, the detail is as follows:
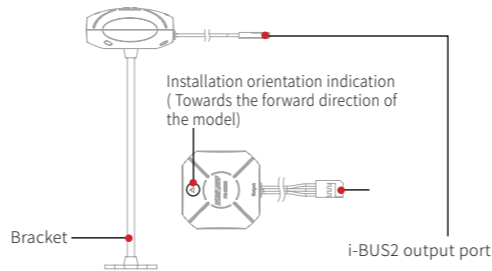
Connect the FS-iBG01

To connect the FS-iBG01 with the PL18 transmitter and FTr8B receiver.

1. Install the FS-iBG01 onto the model correctly and horizontally.
2. Complete the bind between the transmitter and the receiver. At the transmitter side, enter the output signal type setting interface via "Home 1 > Basic > RX Setting > Custom port protocol". To connect to the NPA, click [NPA] and then [i-BUS2].
3. Connect the FS-iBG01 to the NPA interface of the receiver to establish its connection with the transmitter and receiver.

Note: NPA interface is a Newport interface for enhanced receivers. Usually, an enhanced receiver has 1~4 Newport interfaces, any one of them, whose output signal type is set as i-BUS2, can be connected to the FS-iBG01.

Introduction to LEDs

- When the FS-iBG01 is powered on without positioning, the LED status is solid red.
- When the FS-iBG01 gyroscope is calibrated, the LED status is solid green.
- When the FS-iBG01 star search and positioning is successful and it functions normally, the LED light status is blue under slow flashing.

Note: When the FS-iBG01 is powered on and the system enters a self-test state, the LED is solid white. Usually, the self-test process is completed within three seconds. If the LED remains white continuously, it indicates that the connection is faulty.

Time zone selection

You can select an appropriate time zone according to the actual location.

1. At the transmitter side, enter the time zone setting interface via "Home 1 > Basic > RX Setting > i-BUS2 GPS sensor setup > UTC select".
2. Select the right time zone.

Gyroscope calibration

The FS-iBG01 has a built-in gyroscope. You can check the model attitude at the transmitter side. When the FS-iBG01 is not installed on the horizontal plane, calibrate the current plane of FS-iBG01 to be horizontal through this function.

1. At the transmitter side, enter the gyroscope calibration interface via "Home 1 > Basic>RX Setting > i-BUS2 GPS sensor setup > Gyro calibration". Click Calibration.
2. After successful calibration, the confirmation menu will pop up. Click OK to finish the calibration.

GPS display

It can display the current orientation, moving direction and attitude of the model.

At the transmitter side, enter the display interface via "Home 1 > Basic > RX Setting > i-BUS2 GPS sensor setup > GPS display", and look over the relevant information.

Certifications

FCC Compliance 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.

Warning: changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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.

EU DoC Declaration

Hereby, [Flysky Technology co., ltd] declares that the Radio Equipment [FS-iBG01] is in compliance with RED 2014/53/EU.
The full text of the EU DoC is available at the following internet address: www.flysky-cn.com.

RF Exposure Compliance

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator and your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Environmentally friendly disposal

Old electrical appliances must not be disposed of together with the residual waste, but have to be disposed of separately. The disposal at the communal collecting point via private persons is for free. The owner of old appliances is responsible to bring the appliances to these collecting points or to similar collection points. With this little personal effort, you contribute to recycle valuable raw materials and the treatment of toxic substances.