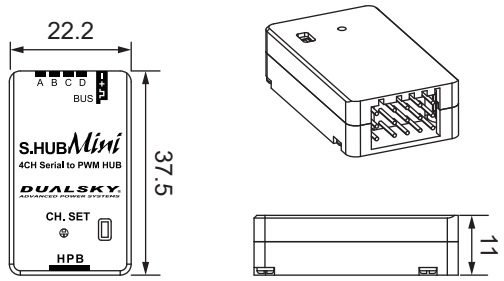
S.HUB Mini

— 四路通道扩展器 使用说明书 —

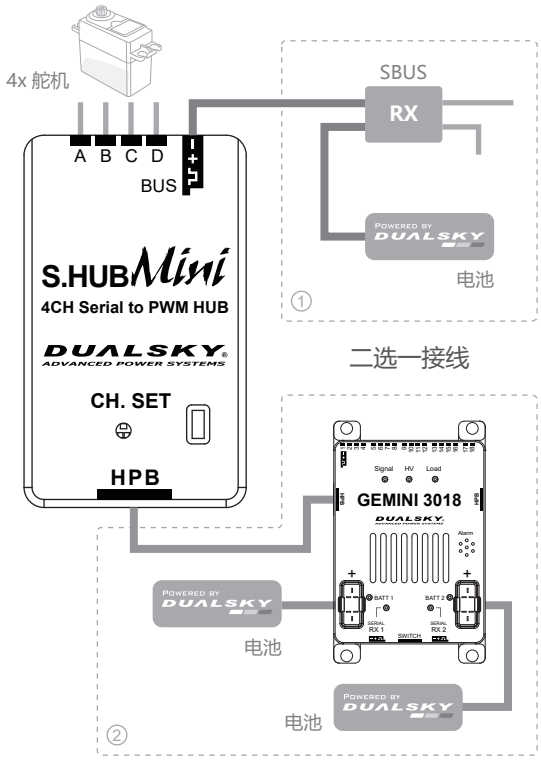
产品规格

- 尺寸 : L 37.5 x W 22.2 x H 11mm
- 重量 : 13.2g
- 工作电压 : 4.8V to 8.4V
- 工作电流 : 持续 10A , 峰值 15A
- 串行输入数量 : 单路
- 支持的协议 : Futaba S.Bus / S.Bus2
- PWM输出数量 : 4 of 16
- S.Bus中继输出 : 直接输出
- 稳压输出 : N/A
- 外壳材料 : 全铝外壳
- 应用场合 : 用于总线控制的模型，在总线的远端节点接驳PWM舵机

产品尺寸



连线示意图



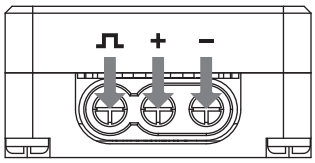
S.Bus 信号输入

S.HUB mini 提供两个总线输入口，支持 Futaba S.Bus & S.Bus2 协议。

① 标准 S.Bus 口，提供轻量化连接接收机的方法。

② HPB 口，通过 HPB 线，可以方便连接双子星 Gemini 3018。

通过 ① 端口输入 S.Bus 信号时，提供 MAX 5A 供电能力。通过 ② HPB 口输入时，供电能力更强（MAX 15A），设备压降更低，适合长距离和大电流应用场合。采用标准 S.Bus 口 ① 作为输入时，也可以利用 HPB 口 ② 供电，极性说明如下：



① ② 口是并联关系，当连接其中一个口做为信号输入时，另一个口可以作为中继输出。（推荐总线线路形成环路，以增加线路的冗余度）

输出通道设定

S.HUB mini 有四个 PWM 舵机插口，标识为 ABCD，极性方向同 BUS 口标定。通过 LED 灯的颜色，我们可以知道当前 ABCD 对应哪一组 (4 个连续通道为一组)，见下表：

LED 指示灯颜色	A	B	C	D
组1 (蓝色)	1	2	3	4
组2 (绿色)	5	6	7	8
组3 (黄色)	9	10	11	12
组4 (紫色)	13	14	15	16

长按设定按键，可以依次、循环改变 LED 的颜色，同时输出通道切换到对应组，并保存。

舵机输出端口

ABCD 舵机输出端口的频率与 SBUS 频率自动同步。当接收机工作在 S.Bus 16/18CH 模式时，输出端口频率为 15ms。当接收机工作在 S.Bus 12CH 高速模式时，输出端口频率同步提高到 6ms。注意：此模式下只能使用数字舵机；且通道分组只有 3 组，设定在第四组没有输出。单个舵机输出端口的最大连续电流为 2.5A，MAX 5A，过大的电流会损坏端口插针。

失控保护

S.HUB mini 的失控保护策列为“保持”(Hold)，舵机保持失控前最后的位置。基于此策略，不建议在 S.HUB mini 上连接油门通道。

免责声明

首先非常感谢您，使用本产品。请严格按照手册使用本产品。我们不承担使用本产品或非法改装、操作不当产生的任何责任，包括但不限于间接损失或连带责任，最高赔偿不高于产品本身价格。一旦使用即代表您同意本声明的条款。

保修条例

双天电子类产品自售出之日起提供 12 个月的保修服务。如果你想在保修期内索赔，请立即联系您的经销商。

模型店的收银台收据可证明货物是否在保修期内。请注意，任何情况下保修期都不会延长。在保修期内，任何功能缺陷、生产故障或材料缺陷都会免费提供保修服务。我们不会接受任何进一步索赔，如间接损害货物返回时需自行承担运费，我们将支付回程费用。运费未预付，我们将不会接受货物。我们不接受运输造成的损害，也不弥补运输损失。我们建议您投运输险，将你的设备发送到服务中心。

满足以下条件，我们才能处理您的索赔：

- 提供收银台收据
- 按照说明书正确地使用产品
- 使用推荐的电源和配件
- 不是因为进水，反极性，过载而造成的损害
- 请提供一个简洁、准确的故障描述，帮助我们解决问题

 21ZX20C1010

DUALSKY ADVANCED POWER SYSTEMS

S.HUB Mini

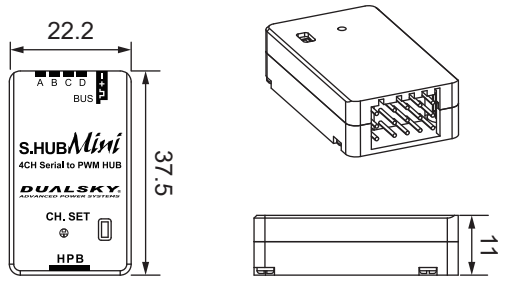
— 4CH Serial to PWM HUB —

Instruction Manual

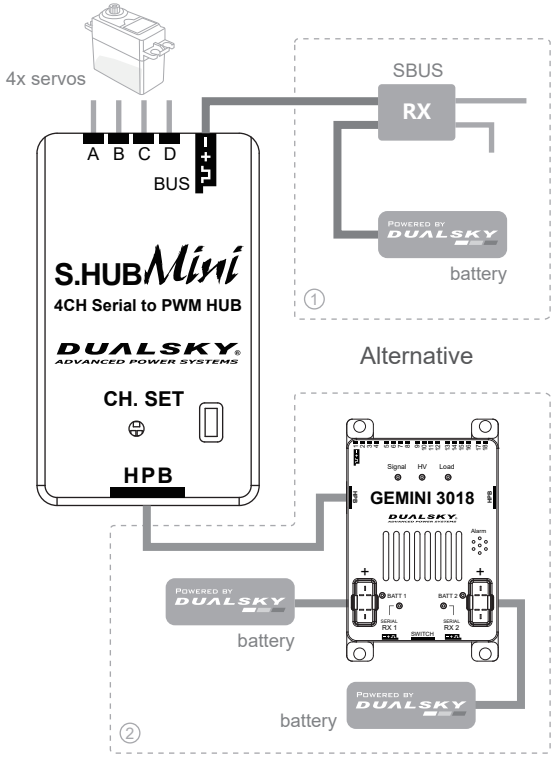
Specifications

- Dimension : L 37.5 x W 22.2 x H 11mm
- Weight : 13.2g
- Working Voltage : 4.8V to 8.4V
- Working Current : 10A constant, 15A peak
- Number of serial input : Single
- Protocol supported : Futaba S.Bus / S.Bus2
- Number of PWM output : 4 of 16
- S.Bus output relay : Yes, directly
- Voltage Regulator : N/A
- Casing material : Fully aluminium alloy
- Applications : For the model which controlled via bus.Connect the PWM servos at the distal node.

Dimensions



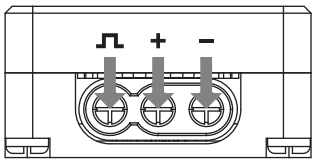
Wiring Diagram



S.Bus signal input

S.HUB mini provides two bus input ports and supports Futaba S.Bus & S.Bus2 protocol.
① The standard S.Bus port provides a lightweight method for connecting receivers.
② The HPB port can be conveniently connected to the Gemini 3018 via the HPB cable.

The input of the S.Bus signal through port ① has MAX 5A power supply capability. When inputting through HPB port ②, the power supply capacity is stronger (MAX 15A), and the device voltage drop is lower, which is suitable for long distance and high current applications. When using the standard S.Bus port ① as input, you can also use the HPB port ② to supply power. The polarity description is as follows:



The ports of ① and ② are connected in parallel. When one port is connected as a signal input, the other port can be used as a relay output. (It is recommended that the bus lines form a loop to increase the redundancy of the circuit)

Output channel setting

S.HUB mini has four PWM servo sockets, marked as ABCD, and the polarity is as same as the BUS port marked. By the color of the LED light, we can know which group the current ABCD corresponds to (a group of 4 consecutive channels). Please see the following table:

LED indicator	A	B	C	D
Group 1 (Blue)	1	2	3	4
Group 2 (Green)	5	6	7	8
Group 3 (Yellow)	9	10	11	12
Group 4 (Purple)	13	14	15	16

Press and hold the setting button, you can change the color of the LED sequentially and cyclically, to change the output channels to the corresponding group and save automatically.

Servo output port

The frequency of the ABCD servo output port is automatically synchronized with the input SBUS' s frequency. When the receiver works in S.Bus 16CH / 18CH mode, the output port frequency is 15ms. When the receiver works in S.Bus 12CH high-speed mode, the output port frequency synchronization is increased to 6ms.
Note: Only digital servos can be used in HS mode; There are only 3 groups of channel, and there is no output if select the fourth group.
The maximum continuous current of a single servo output port is 2.5A, MAX 5A. Excessive current will damage the pins.

Signal fail-safe protection

S.HUB mini's fail safe strategy is "Hold", and the servo maintains the last position before the signal loss. Based on this strategy, it is not recommended to connect the throttle channel on the S.HUB mini.

Disclaimer

Thank you very much for using this product. Please use this product strictly in accordance with the manual. We do not assume any liability arising out of the use of this product or illegal modification or improper operation, including but not limited to indirect damage or joint liability, the maximum compensation is not higher than the price of the product itself. By using this product, you agree to the terms of this statement.

Warranty

Dualsky electronic products warranty is for 12 months from the date of sale. If you want to claim during the warranty period, please contact your dealer immediately.
The cashier receipt at the model store can prove whether the goods are under warranty. Please note that the warranty period will not be extended under any circumstances. Warranty service is provided free of charge for any functional defects, production failures or material defects during the warranty period. We will not accept any further claims, such as the user is responsible to pay the return shipping cost of the indirect damaged goods, we will pay for the return shipping cost to the user. If the shipping costs are not prepaid, we will not accept the goods. We do not accept the damage caused by transportation and do not make up for the loss of transportation. We recommend you to buy transportation insurance and send your equipment to the service center.
We can process your claim if the following conditions are met:

- Provide cashier receipts
- Operate the equipment correctly according to the instructions
- Use recommended power supplies and accessories
- The damage is not caused by water, reverse polarity, or over load.
- Please provide a concise and accurate description of the fault to help us solve the problem

 21ZX20C1010

DUALSKY®
ADVANCED POWER SYSTEMS