

User Manual of Hobbywing DataLink

Dear customers, thank you for purchasing this product! Please read the following statement carefully before use and, once used, it is considered to be an acceptance of all the contents. Please strictly observe and adhere to the manual installation with this product. Unauthorized modification may result in personal injury and product damage. We reserve the rights to update the design and performance of the product without notice.

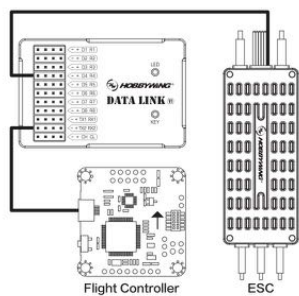
Introduction:

Data Link-V2 is a communication device that integrates data acquisition, data storage and data transmission, and coordinates with aircraft control equipment to monitor the operation of the power system and records the flight status in real time.

Size:

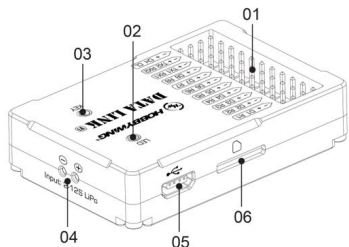
- 1 Exterior 57\*40\*13mm
- 2 Power supply 2-14S LIPO

Installation



The output wire of the ESC is connected to the DATA LINK"- D (1-8)" port for serial data input flight control linked to the TX1 RX2/TX2 RX2 port. It is connected to the output data from the DATA LINK total integrated serial port to the flight control.

Component descriptions



1.1 Serial port connection

1.1.1 The serial port cable can be connected to the DATA LINK"- D (1-8)" port for data entry and data storage in the DATA LINK memory card.

1.1.2 TX1 RX1 is a 115200 BPS serial data output port that outputs all of the slow serial total set data. TX2 RX2 is a 1M BPS serial data output port, that outputs all serial of the set data to connect to flight control and other equipment.

1.2 CAN connect

CAN ESC data link - The CH1 CL 1 plus port enters and stores the data in the DATA LINK memory card

In the data box - CH1 CL1 plus port can accept the transfer of CAN data, using parallel port access to the data box and accept 8 data inputs at the same time.

Note: When connecting to the ESC, please let the data box (DATA LINK) ground together with the ESC, the number of CAN connections can be 1-8, the serial connection is 1-8.

2 KEY button

Install the driver after connecting to the computer.

3 LED light

Indicates the role of the instructions and feedbacks the operating condition information

4 The power input

Power supply input, support for 2-14S LIPO.

5 USB Type-C port

Connect your PC for software upgrades or data transfer. The dataLINK has an internal memory card capacity of 128M.

LED Status indicator

DATALINK Mode	The status of the box	LED light indication
Data acquisition	The SD card is abnormal when DATALINK starts	The blue light flashes slowly
	The SD card is OK when DATALINK starts	The green light flashes slowly
	DATALINK is running with an unusual SD card	The red light flashed slowly
Upgrade features	DATALINK device firmware upgrade	Purple lights flash
	Serial port firmware upgrade	Green lights flash
	CAN ESC firmware upgrade	Yellow lights flash
USB drive function	Connect the computer to USB drive mode	Green lights flash

Description of the function

Databox (DATA LINK V2) has data storage (stored in memory card 128M), data forwarding, upgrade power, upgrade DATALINK and other functions.

1 Data forwarding and data storage capabilities

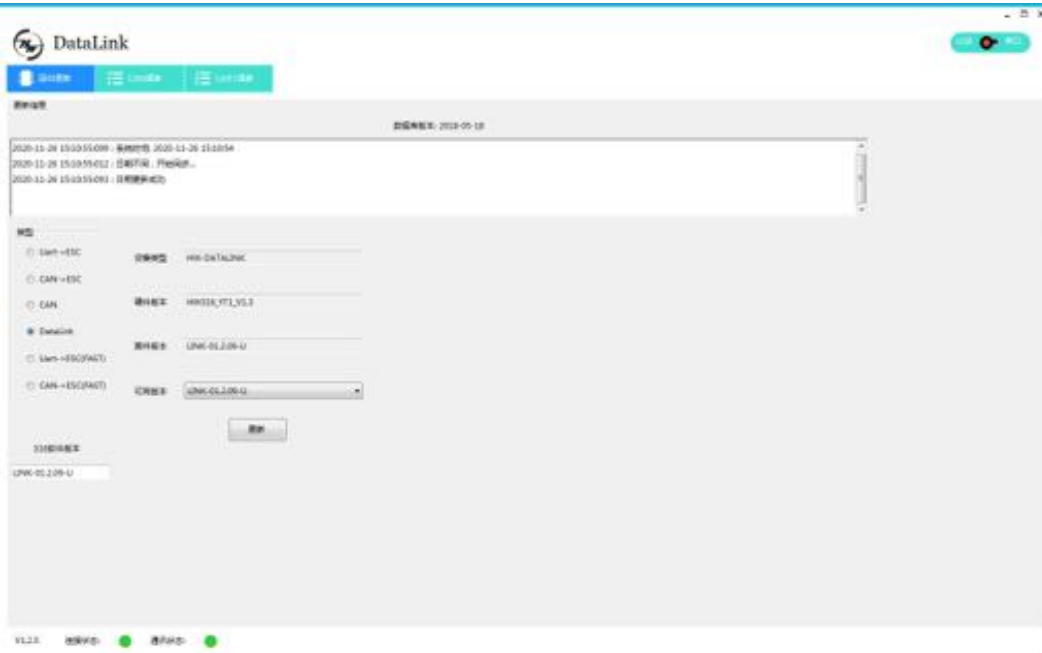
The data box (DATA LINK) is connected to the ESC after the power start (USB cable is not connected state), into the normal data acquisition and forwarding mode to store the data in real-time. The current time is displayed in the newly created folder within the SD card, while the data box sends the total integrated serial data to the receiving module equipment such as flight control via TX RX disconnect.

SD card data storage methods are as follows: Each time the data box opens, the SD card will create a new folder to store the data. Power-off and it will be restarted automatically. Create a new folder to store data, folder naming rules for UART - year - day - minutes and seconds, such as UART-201120-17404; File naming rules UART - Year Day - First Minutes - End Minutes and Seconds (CAN Data Rules 1h, in CAN.cdat format). When the memory card is full, the record file for the previous date is automatically deleted.

If the DATA LINK software on the PC side does not open, connect the PC directly using a USB cable to open the DATA LINK data box. The data box then enters into the USB drive mode where you can view the files and copies inside the SD card.

2 Databox (DATA LINK) upgrades itself

Firstly, turn on the DATA LINK software to select the default USB link mode (upper right corner) and switch to the DataLink option within the firmware upgrade. Next, connect the data box to a computer. Successful link status will be green. Lastly, select the required firmware and click upgrade.



Note: Press the KEY button on the data box if the computer does not recognize the data box (DATALINK). The red, green and blue LED will flash alternately. In this state, the USB HID driver can be installed in the computer device manager data box (DATALINK) as "USB input device driver" and operate after installation is finished.

### CAN ESC Upgrade

Connect the data box to the computer and open the DATA LINK software. Select the Datalink option inside the firmware update option to view the firmware version and upgrade it.

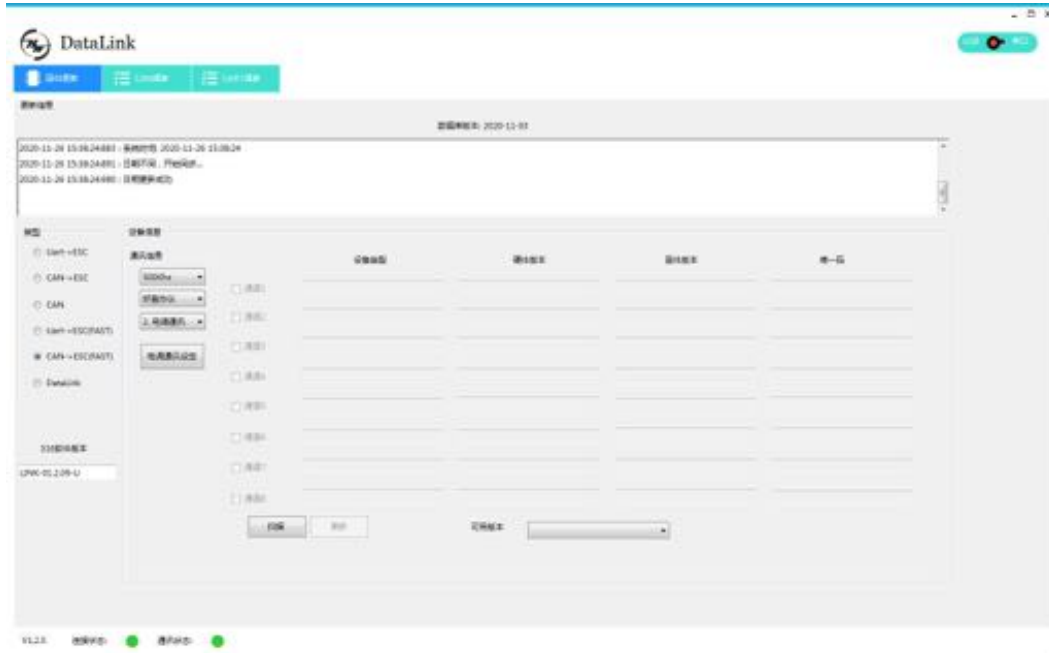
For \*\*\*\*\*C such as LINK-01.2.09-C

Set the CAN ESC ID number and the throttle channel. Next, set the ID number and throttle channel of different ESC in the CAN adjustment entry, such as 1.2.3... 8 and so on, The ESC factory default ID is 125.

Normal upgrade: Select the CAN-ESC feature, and click Scan to power up the ESC that needs to be upgraded (all the power transfers that need to be upgraded are advanced). Connect to the -CH CL plus port) and select " stop " after three seconds. After which, you can select the firmware version that needs to be upgraded. Next, select the CAN function, click on " scan " followed by " stop " after three seconds. Select the ESC that was just upgraded for the CAN communication firmware upgrade.

High-speed upgrade method: choose CAN-ESC (FAST for High-speed upgrade, latest ESC firmware is needed to support) function. Firstly, click on the "ESC communication" option and select the communication information bar inside the "ESC drive" option. Next, click on " scan" , and three seconds later, the selectable channel will be displayed. Click to stop, and select to upgrade the ESC.

On the same page, click on the "ESC Communication" option in the communication information bar and upgrade it

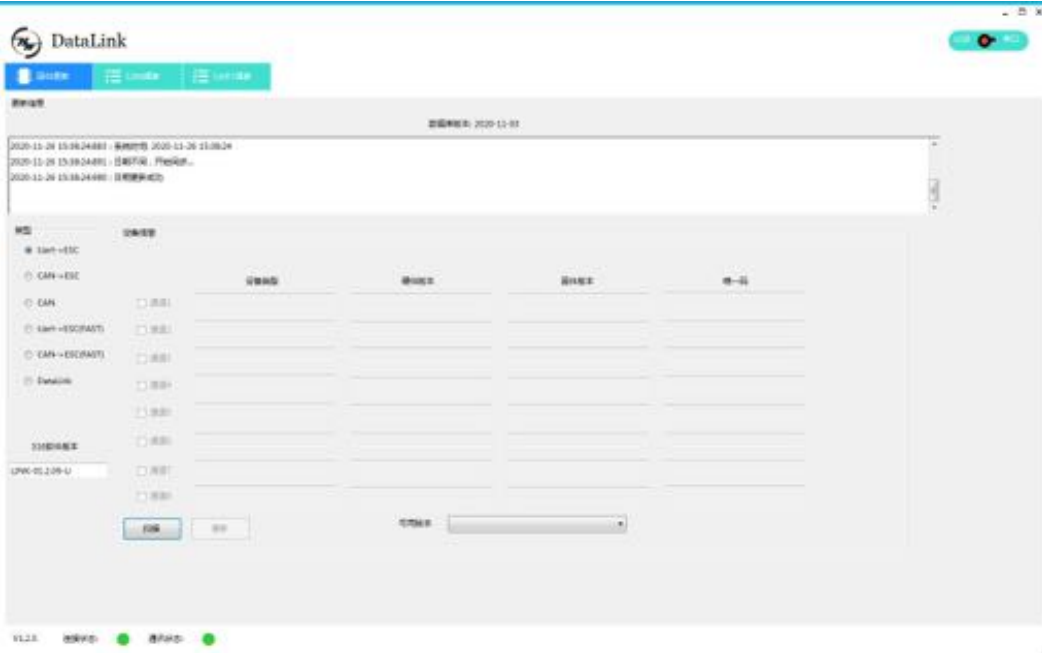


Note: The ID number of the CAN ESC that is synchronously upgraded must be of a different number at this stage. Normal upgrades will not work if the IDs are the same. It needs to be set in the second parameter function to upgrade together.

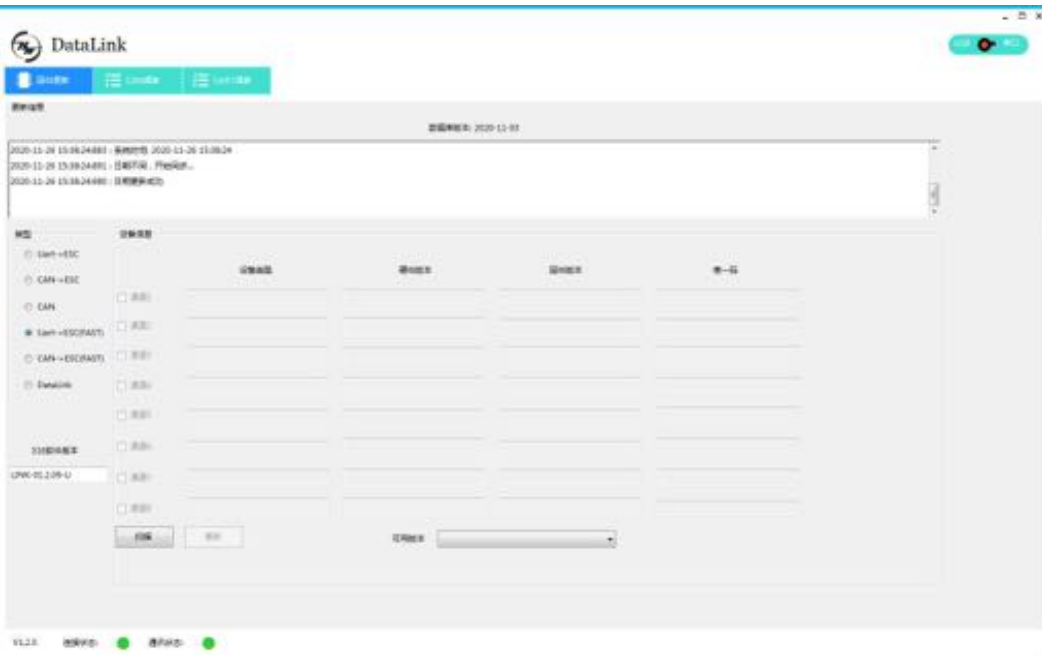
### ESC upgrade

1. Connect the data box to the computer and open the DATA LINK software. Select the Datalink option inside the firmware update option to view the firmware version and upgrade it (such as LINK-01.2.09-C)

2. Normal upgrade: Select the UART-ESC feature, and click Scan to power up the ESC that needs to be upgraded (all the power transfers that need to be upgraded are advanced). Connect to the -CH CL plus port) and select " stop " after three seconds. After which, you can select the firmware version that needs to be upgraded. Next, select the CAN function, click on " scan " followed by " stop " after three seconds. Select the ESC that was just upgraded for the CAN communication firmware upgrade.

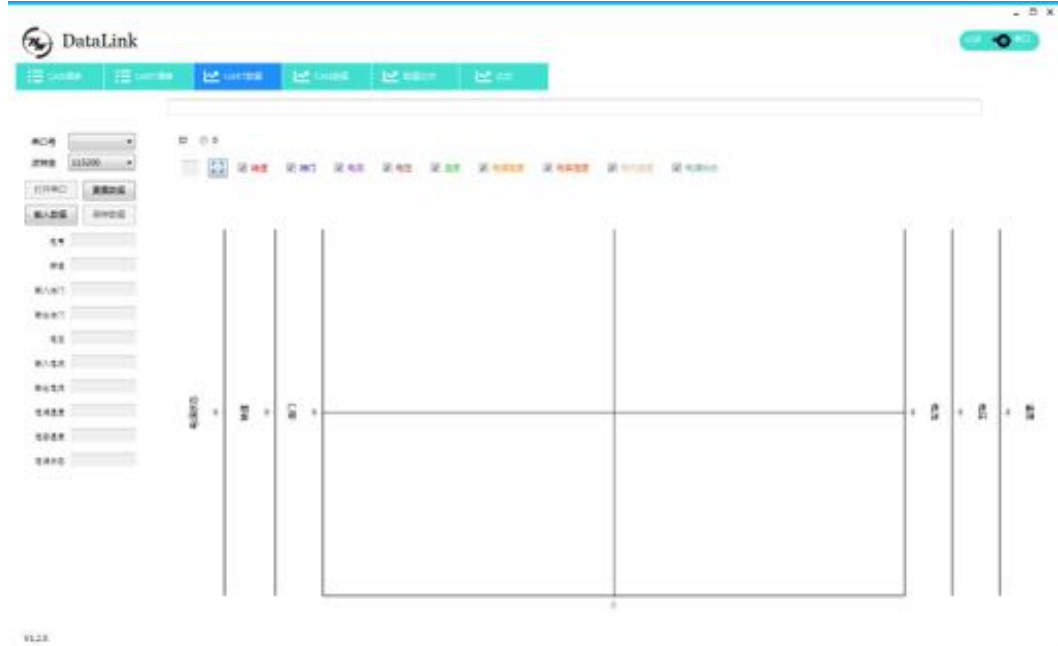


2, High-speed upgrade method: select UART-ESC (FAST for rapid upgrade, latest E-FG firmware is needed to support) function, and click on“ scan” to upgrade (all the need to upgrade the ESC in parallel in advance to (-D) port). After three seconds, click to stop, and select upgrade the firmware version to upgrade.



ESC Data viewing comparison

1, Connect the DATA LINK data box to the computer. Open DATA LINK software and select the serial port option in the upper right corner. View the serial data and select UART data options. Next, load data and view CAN data. Input motor pole, tooth ratio of 1 (no changes needed), data generally contains; speed, input throttle, output throttle, voltage, input current, output current, MOS pipe temperature and capacitor temperature and other data. If the data has been copied from the DATALINK data box, you do not need to connect to the DATALINK data box, open the software directly to load and view the data.



1, Select data comparison function of the DATALINK software. Directly compare the speed of each channel, voltage current and other comparative data. If the data has been copied out without connecting to the DATALINK data box, you can identify by loading the comparison.