Introduction

The RB-25/RB-25S builds on the success of the previous trusted Redundancy Bus Series by adding new advanced features combined with a compact new design which meets the needs of users who want a flight-safe system built in a smaller size unit.

Triple Receiver Redundancy & Dual Power Input

RB-25/RB-25S has been designed to offer both dual-power and triple-receiver redundancy. This provides the user triple receiver signal and telemetry redundancy by adding multiplex ports (RX1-3 IN / S.Port). Dual-power provides a safe and efficient way to power the system with your power sources connected via a pair of standard XT30 connections. The dual-power consumption system is designed to operate in balance mode, where it consumes the power line from either power sources depending on which has the higher voltage.

Advanced Stabilizer (RB-25S)

The RB-25S offers an ADV Stabilizer function which is an upgrade over the original classical gyroscope stabilization modes. The ADV Stabilizer offers an advanced mode that provides more programmable stabilized channels and flexibility.

The classical stabilization mode has been enhanced with 5 additional stabilization channels, providing pin mapping to each channel in the multiple flight modes like Stabilization, Auto-Level, Hover, and Knife-Edge with an airplane model.

In the advanced stabilization mode, all the RB25S output pins are configurable for stabilization and additional advanced features such as File Sharing, Programmable Parameters, and Developer Access, etc.

Diversified Sensor Telemetry

The RB-25/RB-25S also works as an extensive sensor module with various built-in sensors including diversified telemetry. The RB-25S also includes the high-precision telemetry sensor for monitoring altitude, vertical speed, etc. can be also used as an alternative to using a GR or S series receiver.

Power Switch Function

The built-in power switch function draws the support of using multiple types of external switches (e.g. NFC switch, Pin Plug, etc.) that enables flexible options on how the power can be switched on/off without the need to plug/unplug the battery connections.

Overview
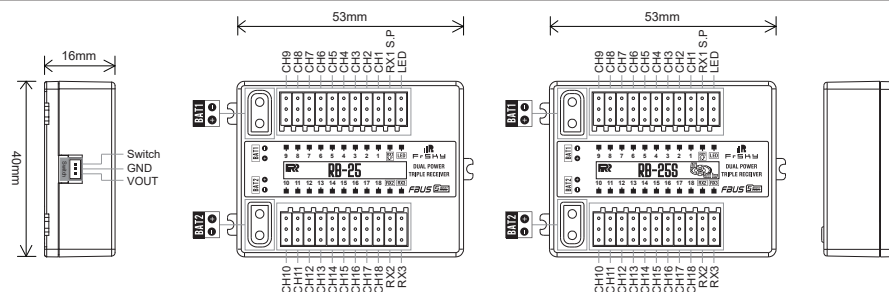
Specifications

- Dimension: 53*40*16mm (L*W*H)
- Weight: 25.6g (RB-25) / 26.7g (RB-25S)
- Number of Channel Ports: 18 (PWM/FBUS/S.Port/SBUS Out)
- 3 RX Input Ports & 1 LED Indicator Port
- Operating Voltage: 4-10V (Recommend 2S Li batteries)
- Operating Current: ≤185mA@5V / Continuous Current: ≤30A
- Operating Temperature: -20°C~75°C
- Power Input Connector: XT30

Features

- Dual Power Balancing Consumption
- Triple Receiver Redundant Guarantee
- RX In | FBUS/SBUS/S.Port Auto Recognization
  (Note: Only the S.Port on the RX1 channel port can be used to upgrade firmware.)
- Built-in Advanced Stabilization Functions (RB-25S)
- Built-in High-Precision Telemetry Sensor (Altitude, Vertical Speed, etc.) (RB-25S)
- Built-in Power Switch Function | Match with Different External Switches (Optional)
- Supports External LED Indication
- Compatible with FBUS/S.Port Products

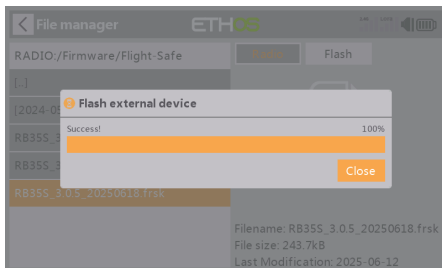## How to Update the Firmware for RB25/RB25S
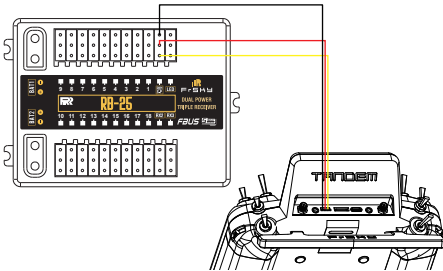
1. Connect the firmware update cable to the RX S.P port on the RB25(S) and the S.Port on the ETHOS radio.
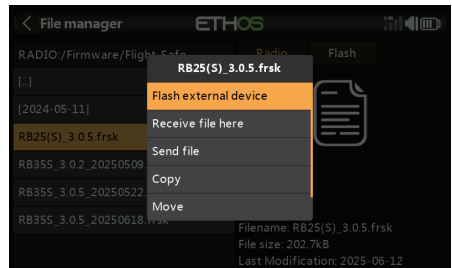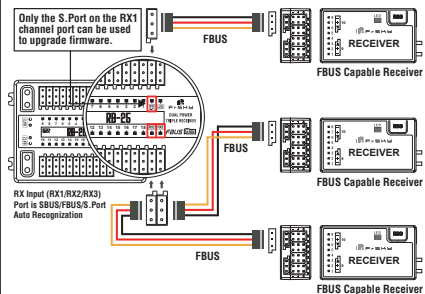

2. Copy the firmware file to your radio. Use the File Manager tool to locate it, then select the file and choose "Flash external device."
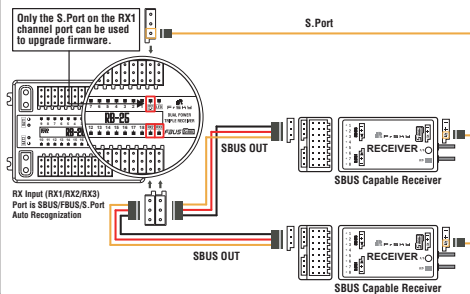

3. When the message changes to "Flashing," simply wait until the process completes.

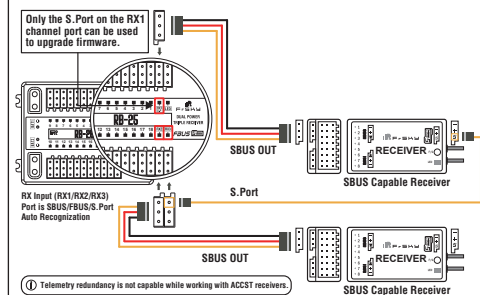## Setup Guide - Redundant Signal Control with Telemetry

FBUS Capable Receiver Connections

Only the S.Port on the RX1 channel port can be used to upgrade firmware.

FBUS

RECEIVER

FBUS Capable Receiver

RB-25

FBUS

RECEIVER

FBUS Capable Receiver

RX Input (RX1/RX2/RX3) Port is SBUS/FBUS/S.Port Auto Recognization

FBUS

RECEIVER

FBUS Capable Receiver

ACCESS Receiver Connections vis SBUS

Only the S.Port on the RX1 channel port can be used to upgrade firmware.

S.Port

RB-25

SBUS OUT

RECEIVER

SBUS Capable Receiver

RX Input (RX1/RX2/RX3) Port is SBUS/FBUS/S.Port Auto Recognization

SBUS OUT

RECEIVER

SBUS Capable Receiver

ACCST Receiver Connections vis SBUS

Only the S.Port on the RX1 channel port can be used to upgrade firmware.

RB-25

SBUS OUT

RECEIVER

SBUS Capable Receiver

RX Input (RX1/RX2/RX3) Port is SBUS/FBUS/S.Port Auto Recognization

S.Port

SBUS OUT

RECEIVER

SBUS Capable Receiver

ⓘ Telemetry redundancy is not capable while working with ACCST receivers.

How to set the RB25/RB25S functions.

Scan it

or *Click me*

Setup Guide Suitable for

Firmware	v3.0.5 or later
Lua	v2.1.5 or later
ETHOS	v1.6.0 or later
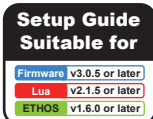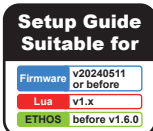
New ▸ Version Notes

1. Added Heading Hold mode. (RB25S)
2. Added support for configuring up to 15 banks of Gyro parameter memories. (RB25S)
3. Introduced Gyro parameter Copy & Preset features. (RB25S)
4. Enhanced flexibility in Flight Mode settings (Enabling user-assignment of control channel and switch). (RB25S)
5. Enabled user-assignment ability of Gain Adjustment channel. (RB25S)
6. Added low-voltage read/write protection: To ensure the device operates properly, the device must be powered by BAT1 and/or BAT2, with at least one maintaining a voltage above 6.0V. Otherwise, any modifications made by LUA scripts will NOT be saved to storage. (RB25/RB25S)
7. Fixed known issues (including FBUS functionality, etc.) (RB25/RB25S)

Scan it

or *Click me*

Setup Guide Suitable for

Firmware	v20240511 or before
Lua	v1.x
ETHOS	before v1.6.0

History Version Notes

1. It is recommended to update to the latest version (FW, Lua & ETHOS) for a more user-friendly configuration experience and access to new features (Heading Hold mode, Gyro Memory, etc.).

FrSky is continuously adding features and improvements to our products. To get the most from your product, please check the download section of the FrSky website www.frsky-rc.com for the latest update firmware and manuals