

Quick Start Guide



Scan the QR code to access tutorials, technical support, and after-sales services.

◆ Specification overview

Product Name	CoreWing F405 WING V2
TOP Board	CoreWing F405 WING V2 TOP Board
FC Board	CoreWing F405 WING V2 FC Board
PDB Board	CoreWing WING PDB Board PLUS
USB extender	CoreWing Wireless USB Extender Board PRO
Wireless configuration	Supported
Battery level indicator	Supported
FC Firmware	iNav/ArduPilot
Power Input	3S-6S
Dimension	52(L) x 32(W) x 17(H) mm
Weight	40g (with Wireless USB Extender Pro)

Part 1-Overview

Assembly Instructions

The direction of the arrow is the aircraft head

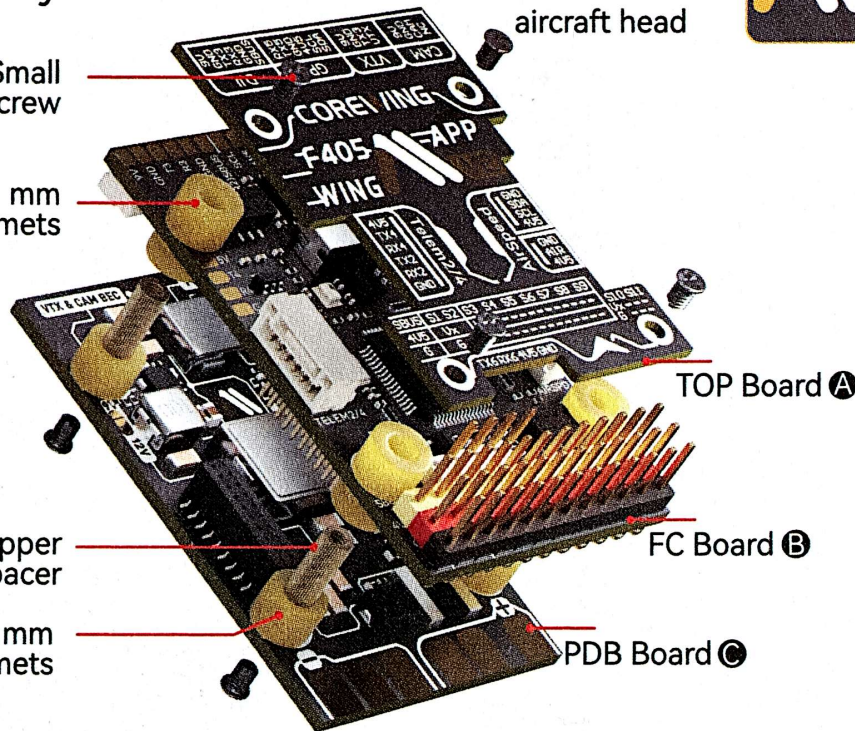


M2x4 Small Head Cross Screw

M3x8.1 mm Silicone Grommets

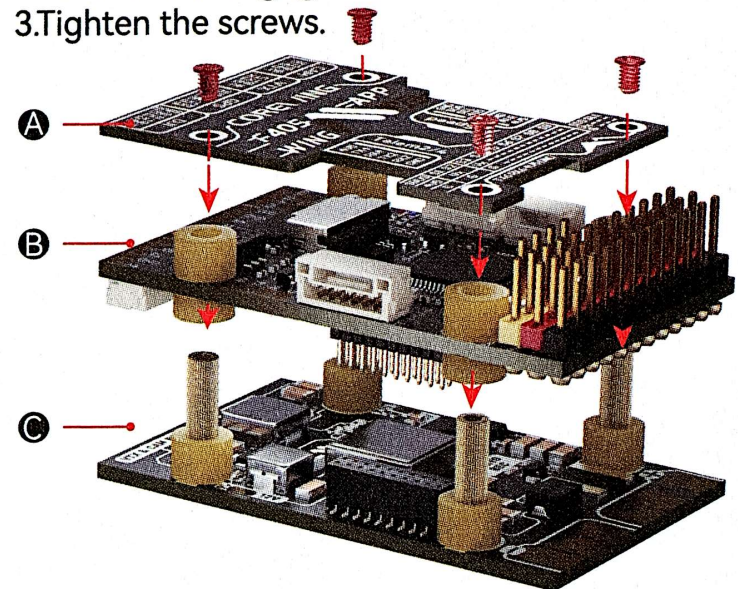
M2 x 12 Copper Standoff Spacer

M3x4 mm Silicone Grommets

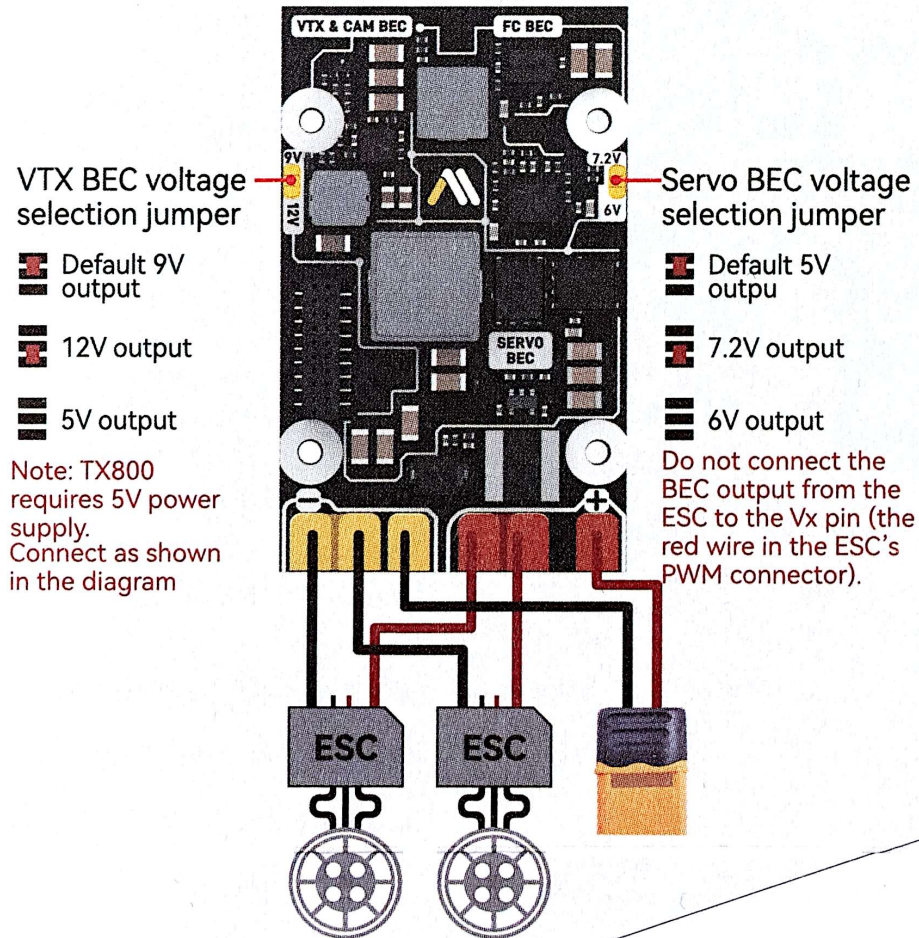


Assembly order

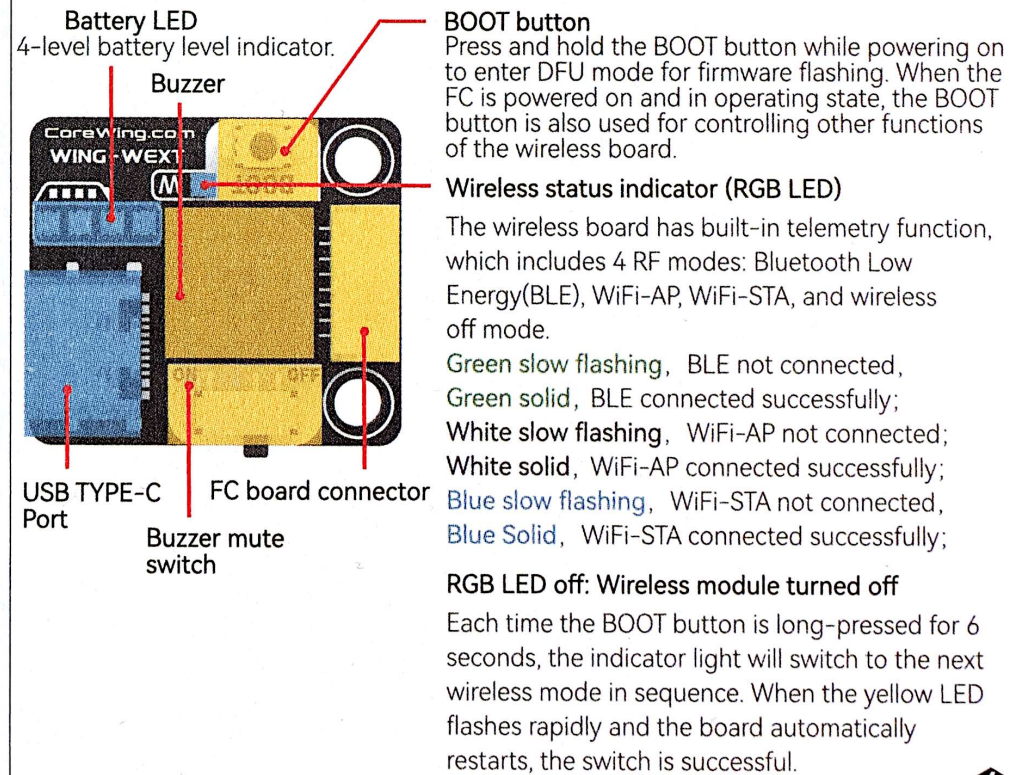
1. Assemble the (B)(C) board and firmly secure the two boards. Make sure the pin headers and sockets are properly aligned.
2. Assemble the (A)(B) board.
3. Tighten the screws.



PDB Board Front



Wireless USB Extender Board PRO Front



Wiring Diagram

Method 1:
Plug and play

Analog VTX

Please note that the TX800 is powered by 5V.

The GPS solder pad definition is different from the GPS interface definition.

GPS Module

Analog Cam

Airspeed Sensor

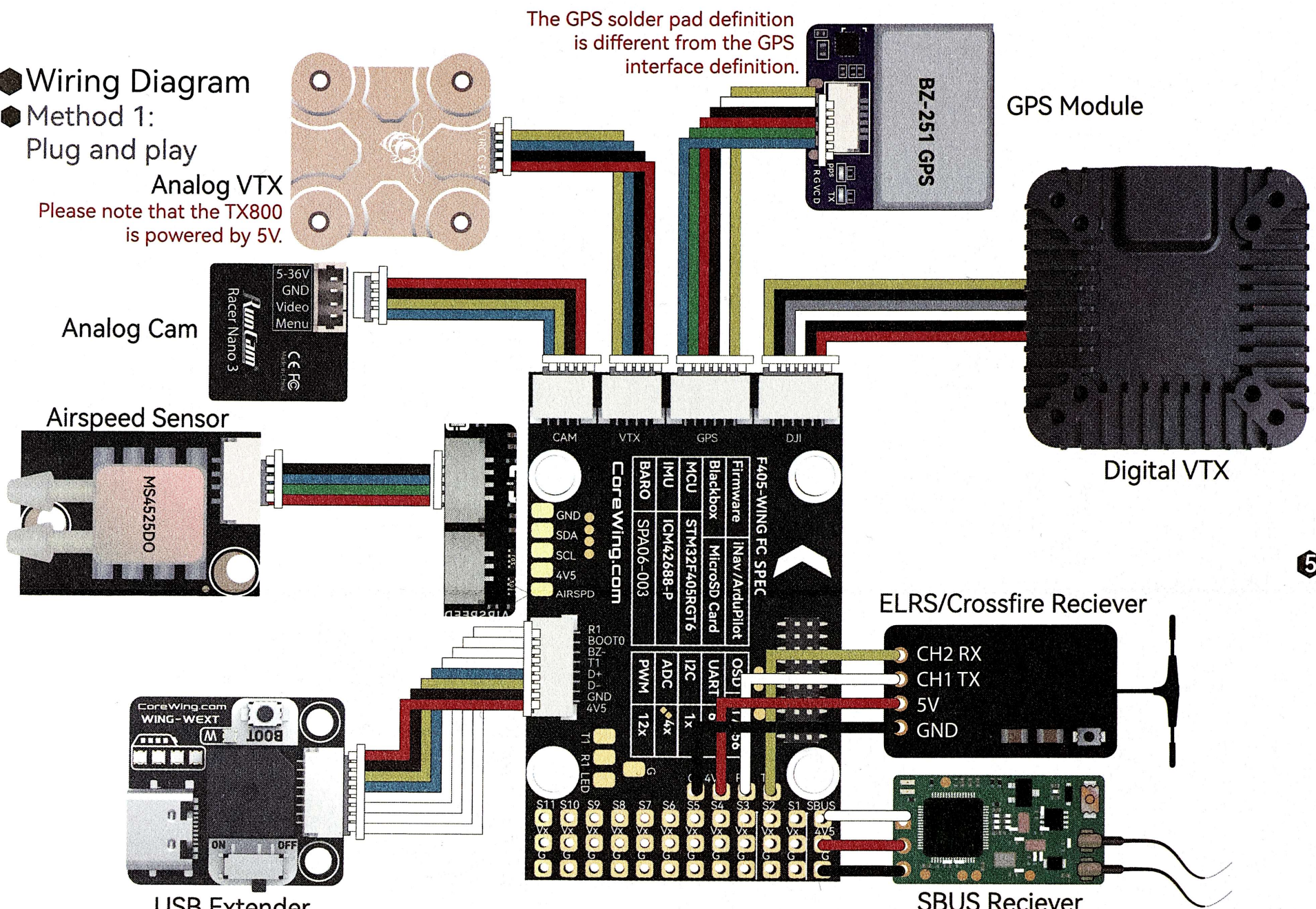
Digital VTX

ELRS/Crossfire Receiver

USB Extender

SBUS Receiver

DO NOT connect ESC BEC output to Vx pad (Red wire in middle of connector) .



Part 3-Firmware upgrade and APP connection

SpeedyBee APP Connection:

Supports iNav/ArduPilot firmware connection to the app:

Check the wireless status indicator light: if it flashes "BLE(Green slowly)", open the app and follow the steps to connect.

If the wireless status indicator light flashes "WiFi-AP(White slowly)", connect to "CoreWing WING-WIFI," open the app, and follow the steps to connect.

1 Click to Connect

2 Click FC Tuning

3 iNav Firmware

4 ArduPilot Firmware

SpeedyBee

My devices(0)

Found CoreWing WING-BLE

Identifiable devices

Connect

CoreWing WING...

CoreWing

FC Tuning

Supports Betaflight, iNav, and ArduPilot firmwares.

Flight status det...

Support ArduPilot flight status detection

Simple Tuning

Faster and more convenient.

Toolbox

Update BLE FW

Firmware Flasher

Fix Name and Pwd

Auto Close RF

SpeedyBee

8.88V (3S)

CPU load 7%

Free space 9.8

Gyro Accel Mag Baro GPS Sona Opflo Spee

COREWINGF405WINGV2 | iNAV 8.0.1

ControlProfile2 BatteryProfile2 MixerProfile1

Setup

Reset Z axis, offset:0 deg

iNav Firmware

ArduPilot Firmware

PreArmCheck

GPS, NoGPS

Labeling 0.0000000 0.0000000

3.38V Voltage

34.0A Current

0.00 Arms Active

0.09 Pitch(deg)

36.6 Arms (view(deg))

90% Voltage

Not Unlock

PreArmCheck

CoreWingF405WingV2 | ArduPlane V4.5.7 (6sdFoc12)

Status Manual

Reset Settings

Firmware Update

The SpeedyBee APP supports updating the flight controller firmware:

Go to the toolbox, select "Firmware Flasher," and follow the steps to update the firmware.

1 Click the "+" icon.

2 Click Connect

3 Click on "Firmware Flasher".

4 Select the firmware for upgrade.

SpeedyBee

My devices(0)

No devices have been added yet

Found CoreWing WING-BLE

CoreWing

FC Tuning

Supports Betaflight, INav, and ArduPilot firmware.

Flight status det...

Support ArduPilot flight status detection

Simple Tuning

Faster and more convenient.

Toolbox

Update BETAFLIGHT

Update INAV

Update ARDUPILOT

Auto Close RF

Close FC Firmware Flashing

Choose FC firmware type

BETAFLIGHT

INAV

ARDUPILOT

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◆ Steps for updating firmware on a computer:

- ① Press and hold the BOOT button on the flight controller, then connect the flight controller to the computer using a USB cable.
- ② Open the iNav configurator on the computer, go to the "Firmware Flasher" page, select the flight controller model as "CoreWingF405WINGV2," and then flash the firmware.
- ③ If flashing ArduPilot firmware, follow the same steps: select "Load Firmware[Local] ," then flash the firmware.