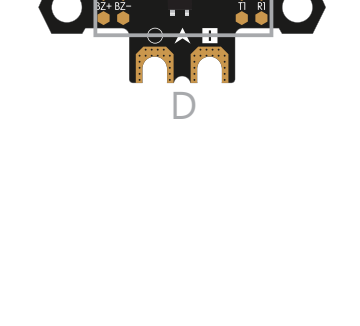


SPEEDY BEE FLIGHT CONTROLLER SETTING THE PARAMETERS VIA APP

Speedy Bee F7 AIO Manual

TOP



Features-A

- ◇ S2: ESC Signal
- ◇ R5: ESC Telemetry
- ◇ T2/R2: UART2
- ◇ SDA/SCL: I2C used for external Compass module
- ◇ G: Ground
- ◇ 5V (Max. 2.5A): 5V output for other devices
- ◇ R5: ESC Telemetry
- ◇ S1: ESC Singal

Features-B

- ◇ Vt: Video input
- ◇ 5V (Max. 2.5A): 5V output for other devices
- ◇ G: Ground
- ◇ G: Ground
- ◇ 5V(Max. 2.5A): 5V output for other devices
- ◇ 9V(Max. 2.5A): 9V output for other devices
- ◇ VO: Video output
- ◇ CC: BetaFlight Camera Control
- ◇ VBAT: Battery voltage filtered
- ◇ R5/T5: UART5
- ◇ S5: ESC Singal
- ◇ R4/T4: UART4

Features-C

- ◇ S4: ESC Signal
- ◇ R5: ESC Telemetry
- ◇ USB
- ◇ R5: ESC Telemetry
- ◇ S3: ESC Signal

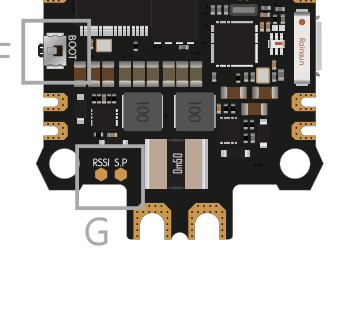
Features-D

- ◇ LED: Used for WS2812 LED
- ◇ G: Ground
- ◇ BZ+ & BZ-: 5V Buzzer
- ◇ 5V(Max. 2.5A): 5V output for other devices
- ◇ G: Ground
- ◇ T1/R1: UART1

LED Indicators

- ◇ LED1--Red: Power Indicator
- ◇ LED2--Blue: Flight controller Indicator
- ◇ LED3--Green: Bluetooth Indicator
- Constantly on: Bluetooth connected/Off: Not connected

BACK



Features-E (4 in 1 ESC)

- ◇ S1: ESC Singal
- ◇ S2: ESC Singal
- ◇ BAT: Battery
- ◇ G: Ground
- ◇ JST 8PIN: G/BAT/S1/S2/S3/S4/CURR/TEL
- ◇ S3: ESC Singal
- ◇ S4: ESC Singal
- ◇ CURR: Current sensor signal IN or OUT
- ◇ TEL: ESC Telemetry

Features-F

- ◇ Boot: Boot(DFU)mode button

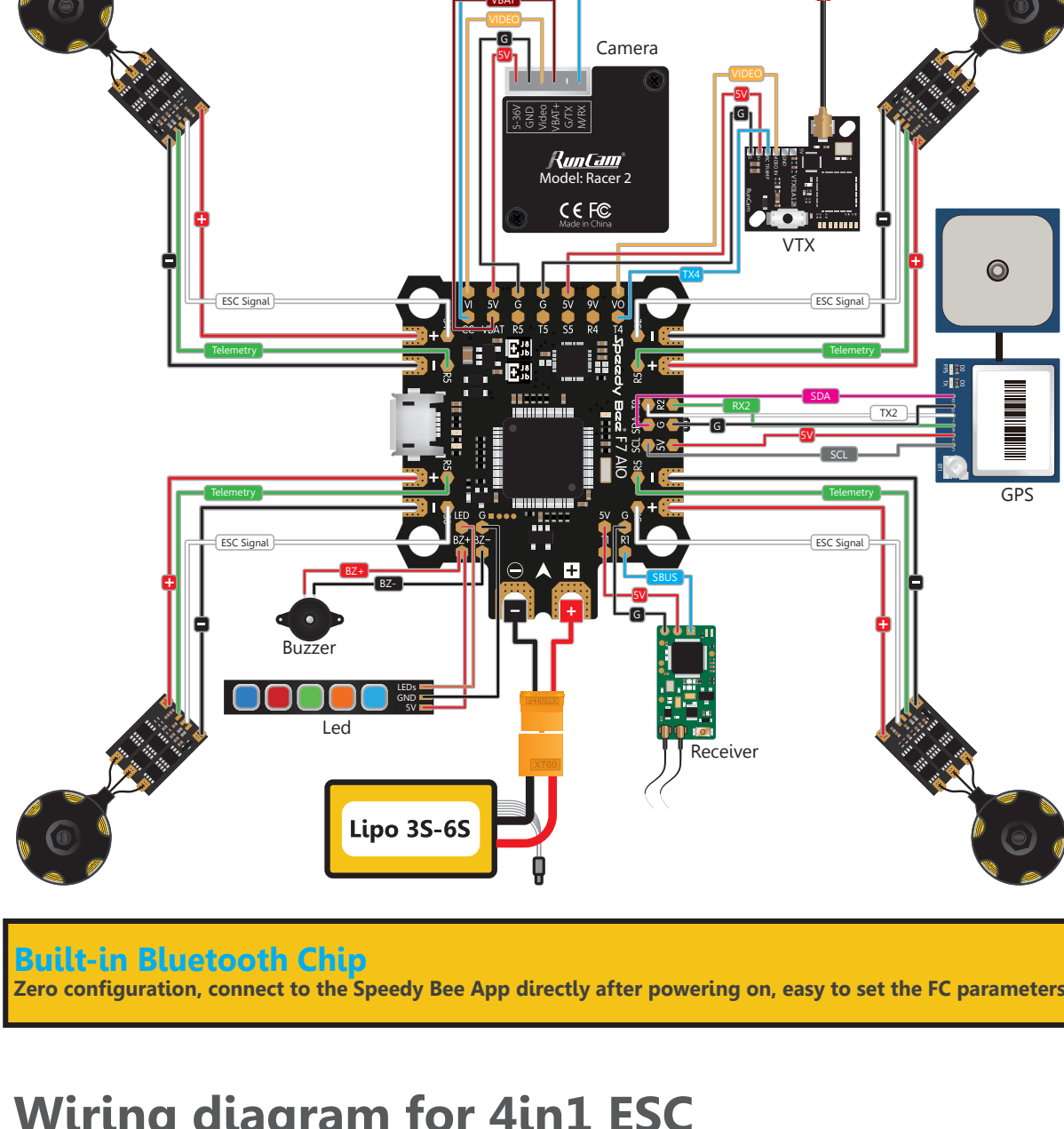
Features-G

- ◇ RSSI: Receiver RSSI IN
- ◇ S.P: SmartPort

Main features

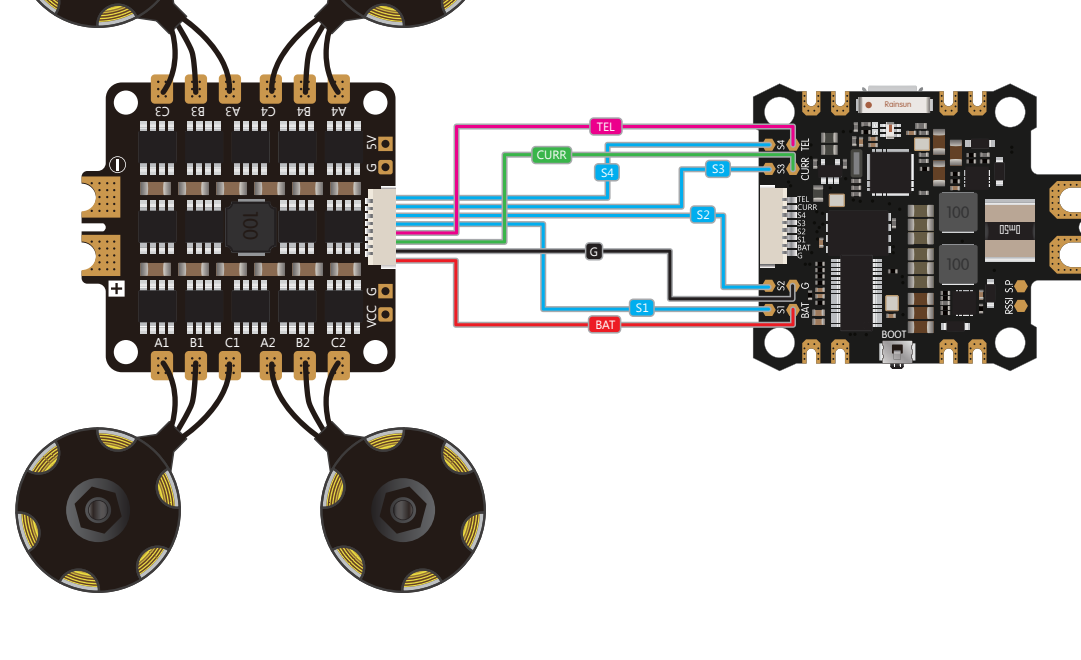
- STM32F722
- ICM20689
- Integrated barometer
- Support 4in1 ESC
- 32mb flash
- BetaFlight OSD
- RSSI input solder pad
- Smartport solder pad
- BetaFlight Camera Control Pad
- BLE Module: inner connect to UART3 for remote setting with Speedy Bee
- App or other similar apps

Wiring Guide

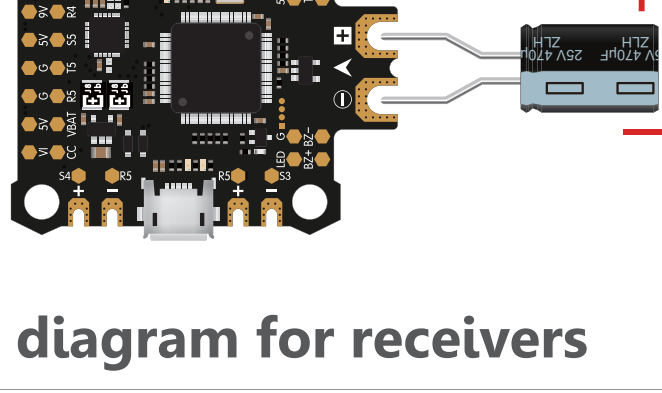


Built-in Bluetooth Chip
Zero configuration, connect to the Speedy Bee App directly after powering on, easy to set the FC parameters.

Wiring diagram for 4in1 ESC



Wiring diagram for capacitor



Wiring diagram for receivers

	<table border="1"> <thead> <tr> <th>Ports</th> <th>Configuration/PS</th> <th>Serial Rx</th> </tr> </thead> <tbody> <tr> <td>UART0</td> <td>115200 1</td> <td></td> </tr> <tr> <td>UART1</td> <td>115200 1</td> <td></td> </tr> <tr> <td>UART2</td> <td>115200 1</td> <td></td> </tr> <tr> <td>UART3</td> <td>115200 1</td> <td></td> </tr> <tr> <td>UART4</td> <td>115200 1</td> <td></td> </tr> <tr> <td>UART5</td> <td>115200 1</td> <td></td> </tr> </tbody> </table>	Ports	Configuration/PS	Serial Rx	UART0	115200 1		UART1	115200 1		UART2	115200 1		UART3	115200 1		UART4	115200 1		UART5	115200 1		<table border="1"> <thead> <tr> <th>Receiver</th> </tr> </thead> <tbody> <tr> <td>Serial-based receiver (SPEKSAT:...) Receiver Mode</td> </tr> <tr> <td>Note: Remember to configure a Serial Port (via ports tab) and choose a Serial Receiver Provider when using RX_SERIAL feature.</td> </tr> <tr> <td>SBUS</td> </tr> </tbody> </table>	Receiver	Serial-based receiver (SPEKSAT:...) Receiver Mode	Note: Remember to configure a Serial Port (via ports tab) and choose a Serial Receiver Provider when using RX_SERIAL feature.	SBUS
Ports	Configuration/PS	Serial Rx																									
UART0	115200 1																										
UART1	115200 1																										
UART2	115200 1																										
UART3	115200 1																										
UART4	115200 1																										
UART5	115200 1																										
Receiver																											
Serial-based receiver (SPEKSAT:...) Receiver Mode																											
Note: Remember to configure a Serial Port (via ports tab) and choose a Serial Receiver Provider when using RX_SERIAL feature.																											
SBUS																											
	<table border="1"> <thead> <tr> <th>Ports</th> <th>Configuration/PS</th> <th>Serial Rx</th> </tr> </thead> <tbody> <tr> <td>UART0</td> <td>115200 1</td> <td></td> </tr> <tr> <td>UART1</td> <td>115200 1</td> <td></td> </tr> <tr> <td>UART2</td> <td>115200 1</td> <td></td> </tr> <tr> <td>UART3</td> <td>115200 1</td> <td></td> </tr> <tr> <td>UART4</td> <td>115200 1</td> <td></td> </tr> <tr> <td>UART5</td> <td>115200 1</td> <td></td> </tr> </tbody> </table>	Ports	Configuration/PS	Serial Rx	UART0	115200 1		UART1	115200 1		UART2	115200 1		UART3	115200 1		UART4	115200 1		UART5	115200 1		<table border="1"> <thead> <tr> <th>Receiver</th> </tr> </thead> <tbody> <tr> <td>PPM RX Input</td> </tr> <tr> <td>Receiver Mode</td> </tr> </tbody> </table>	Receiver	PPM RX Input	Receiver Mode	
Ports	Configuration/PS	Serial Rx																									
UART0	115200 1																										
UART1	115200 1																										
UART2	115200 1																										
UART3	115200 1																										
UART4	115200 1																										
UART5	115200 1																										
Receiver																											
PPM RX Input																											
Receiver Mode																											
<h4>Crossfire Nano RX Wiring Diagram</h4>	<table border="1"> <thead> <tr> <th>Ports</th> <th>Configuration/PS</th> <th>Serial Rx</th> </tr> </thead> <tbody> <tr> <td>UART0</td> <td>115200 1</td> <td></td> </tr> <tr> <td>UART1</td> <td>115200 1</td> <td></td> </tr> <tr> <td>UART2</td> <td>115200 1</td> <td></td> </tr> <tr> <td>UART3</td> <td>115200 1</td> <td></td> </tr> <tr> <td>UART4</td> <td>115200 1</td> <td></td> </tr> <tr> <td>UART5</td> <td>115200 1</td> <td></td> </tr> </tbody> </table>	Ports	Configuration/PS	Serial Rx	UART0	115200 1		UART1	115200 1		UART2	115200 1		UART3	115200 1		UART4	115200 1		UART5	115200 1		<table border="1"> <thead> <tr> <th>Receiver</th> </tr> </thead> <tbody> <tr> <td>Serial-based receiver (SPEKSAT:...) Receiver Mode</td> </tr> <tr> <td>Note: Remember to configure a Serial Port (via ports tab) and choose a Serial Receiver Provider when using RX_SERIAL feature.</td> </tr> <tr> <td>CRSF</td> </tr> </tbody> </table>	Receiver	Serial-based receiver (SPEKSAT:...) Receiver Mode	Note: Remember to configure a Serial Port (via ports tab) and choose a Serial Receiver Provider when using RX_SERIAL feature.	CRSF
Ports	Configuration/PS	Serial Rx																									
UART0	115200 1																										
UART1	115200 1																										
UART2	115200 1																										
UART3	115200 1																										
UART4	115200 1																										
UART5	115200 1																										
Receiver																											
Serial-based receiver (SPEKSAT:...) Receiver Mode																											
Note: Remember to configure a Serial Port (via ports tab) and choose a Serial Receiver Provider when using RX_SERIAL feature.																											
CRSF																											
<h4>Crossfire Micro RX Wiring diagram</h4>	<table border="1"> <thead> <tr> <th>Ports</th> <th>Configuration/PS</th> <th>Serial Rx</th> </tr> </thead> <tbody> <tr> <td>UART0</td> <td>115200 1</td> <td></td> </tr> <tr> <td>UART1</td> <td>115200 1</td> <td></td> </tr> <tr> <td>UART2</td> <td>115200 1</td> <td></td> </tr> <tr> <td>UART3</td> <td>115200 1</td> <td></td> </tr> <tr> <td>UART4</td> <td>115200 1</td> <td></td> </tr> <tr> <td>UART5</td> <td>115200 1</td> <td></td> </tr> </tbody> </table>	Ports	Configuration/PS	Serial Rx	UART0	115200 1		UART1	115200 1		UART2	115200 1		UART3	115200 1		UART4	115200 1		UART5	115200 1		<table border="1"> <thead> <tr> <th>Receiver</th> </tr> </thead> <tbody> <tr> <td>Serial-based receiver (SPEKSAT:...) Receiver Mode</td> </tr> <tr> <td>Note: Remember to configure a Serial Port (via ports tab) and choose a Serial Receiver Provider when using RX_SERIAL feature.</td> </tr> <tr> <td>CRSF</td> </tr> </tbody> </table>	Receiver	Serial-based receiver (SPEKSAT:...) Receiver Mode	Note: Remember to configure a Serial Port (via ports tab) and choose a Serial Receiver Provider when using RX_SERIAL feature.	CRSF
Ports	Configuration/PS	Serial Rx																									
UART0	115200 1																										
UART1	115200 1																										
UART2	115200 1																										
UART3	115200 1																										
UART4	115200 1																										
UART5	115200 1																										
Receiver																											
Serial-based receiver (SPEKSAT:...) Receiver Mode																											
Note: Remember to configure a Serial Port (via ports tab) and choose a Serial Receiver Provider when using RX_SERIAL feature.																											
CRSF																											
	<table border="1"> <thead> <tr> <th>Ports</th> <th>Configuration/PS</th> <th>Serial Rx</th> </tr> </thead> <tbody> <tr> <td>UART0</td> <td>115200 1</td> <td></td> </tr> <tr> <td>UART1</td> <td>115200 1</td> <td></td> </tr> <tr> <td>UART2</td> <td>115200 1</td> <td></td> </tr> <tr> <td>UART3</td> <td>115200 1</td> <td></td> </tr> <tr> <td>UART4</td> <td>115200 1</td> <td></td> </tr> <tr> <td>UART5</td> <td>115200 1</td> <td></td> </tr> </tbody> </table>	Ports	Configuration/PS	Serial Rx	UART0	115200 1		UART1	115200 1		UART2	115200 1		UART3	115200 1		UART4	115200 1		UART5	115200 1		<table border="1"> <thead> <tr> <th>Receiver</th> </tr> </thead> <tbody> <tr> <td>Serial-based receiver (SPEKSAT:...) Receiver Mode</td> </tr> <tr> <td>Note: Remember to configure a Serial Port (via ports tab) and choose a Serial Receiver Provider when using RX_SERIAL feature.</td> </tr> <tr> <td>IBUS</td> </tr> </tbody> </table>	Receiver	Serial-based receiver (SPEKSAT:...) Receiver Mode	Note: Remember to configure a Serial Port (via ports tab) and choose a Serial Receiver Provider when using RX_SERIAL feature.	IBUS
Ports	Configuration/PS	Serial Rx																									
UART0	115200 1																										
UART1	115200 1																										
UART2	115200 1																										
UART3	115200 1																										
UART4	115200 1																										
UART5	115200 1																										
Receiver																											
Serial-based receiver (SPEKSAT:...) Receiver Mode																											
Note: Remember to configure a Serial Port (via ports tab) and choose a Serial Receiver Provider when using RX_SERIAL feature.																											
IBUS																											
	<table border="1"> <thead> <tr> <th>Ports</th> <th>Configuration/PS</th> <th>Serial Rx</th> </tr> </thead> <tbody> <tr> <td>UART0</td> <td>115200 1</td> <td></td> </tr> <tr> <td>UART1</td> <td>115200 1</td> <td></td> </tr> <tr> <td>UART2</td> <td>115200 1</td> <td></td> </tr> <tr> <td>UART3</td> <td>115200 1</td> <td></td> </tr> <tr> <td>UART4</td> <td>115200 1</td> <td></td> </tr> <tr> <td>UART5</td> <td>115200 1</td> <td></td> </tr> </tbody> </table>	Ports	Configuration/PS	Serial Rx	UART0	115200 1		UART1	115200 1		UART2	115200 1		UART3	115200 1		UART4	115200 1		UART5	115200 1		<table border="1"> <thead> <tr> <th>Receiver</th> </tr> </thead> <tbody> <tr> <td>Serial-based receiver (SPEKSAT:...) Receiver Mode</td> </tr> <tr> <td>Note: Remember to configure a Serial Port (via ports tab) and choose a Serial Receiver Provider when using RX_SERIAL feature.</td> </tr> <tr> <td>SUMD</td> </tr> </tbody> </table>	Receiver	Serial-based receiver (SPEKSAT:...) Receiver Mode	Note: Remember to configure a Serial Port (via ports tab) and choose a Serial Receiver Provider when using RX_SERIAL feature.	SUMD
Ports	Configuration/PS	Serial Rx																									
UART0	115200 1																										
UART1	115200 1																										
UART2	115200 1																										
UART3	115200 1																										
UART4	115200 1																										
UART5	115200 1																										
Receiver																											
Serial-based receiver (SPEKSAT:...) Receiver Mode																											
Note: Remember to configure a Serial Port (via ports tab) and choose a Serial Receiver Provider when using RX_SERIAL feature.																											
SUMD																											