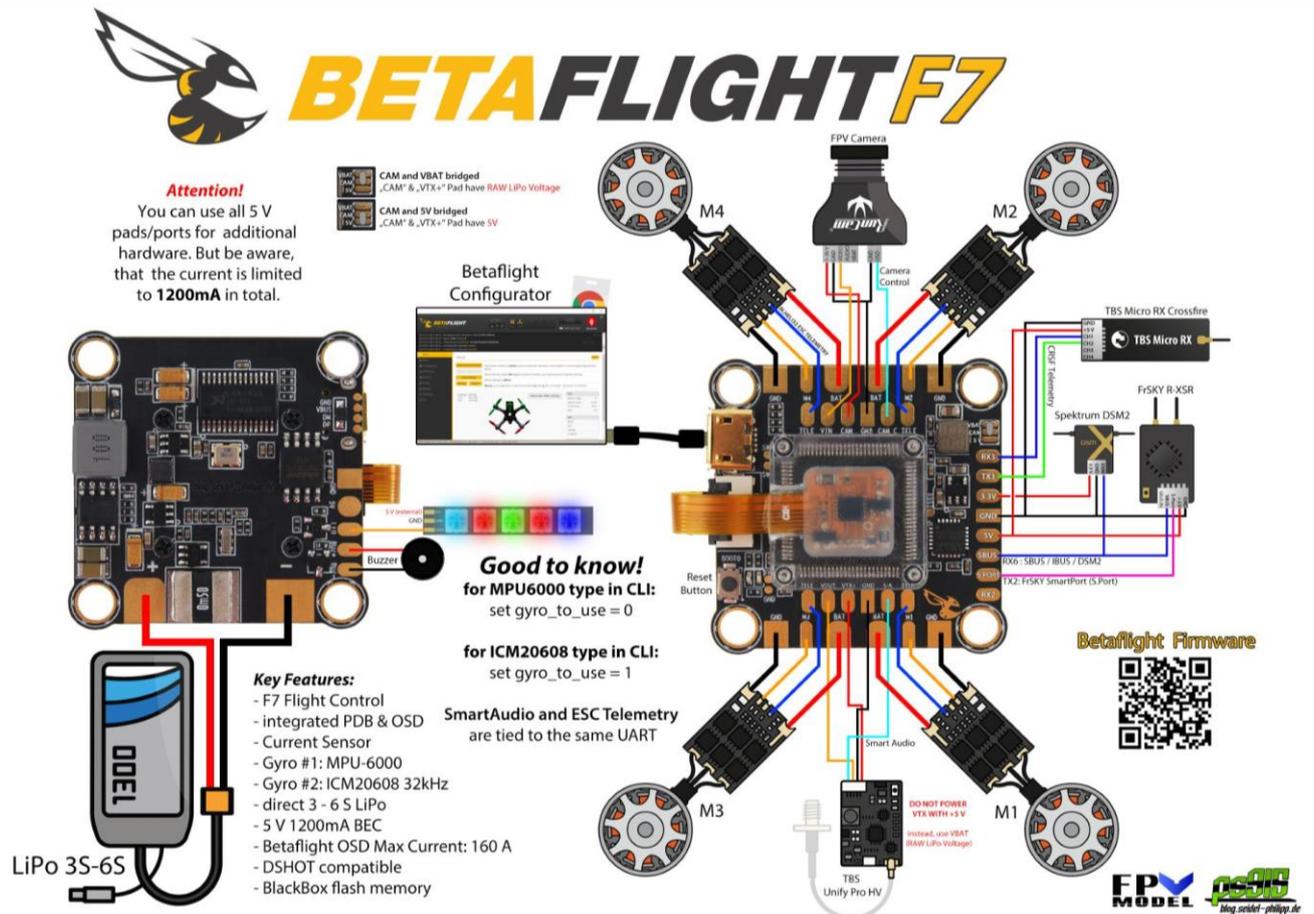


Betaflight F7 Quick Setup Guide

Welcome to your new Betaflight F7 flight controller. This guide is intended to give you the basic understanding of what your new flight controller can do, and more importantly, we're going to show you how to do it. Let's start out with a general overview of your new Betaflight F7 flight controller:



Specifications:

- ✓ 3s-6s battery input
- ✓ STM32F7 processor
- ✓ Built in Power Distribution Board
- ✓ Dual Gyro Support onboard mpu6000 and soft mounted ICM20608 (32k support with ICM20608)
- ✓ CLI for Gyro: set gyro_to_use = 0 (MPU6000), set gyro_to_use = 1 (ICM20608)
- ✓ 5v Regulator rating of 1.2 Amps
- ✓ Board size is 36x36mm with 30.5x30.5 OC mounting
- ✓ Current Sensor 145 Amps
- ✓ 16MB Flash Memory
- ✓ Betaflight Target, BetaflightF7
- ✓ 4 uarts, no inverter requirement.

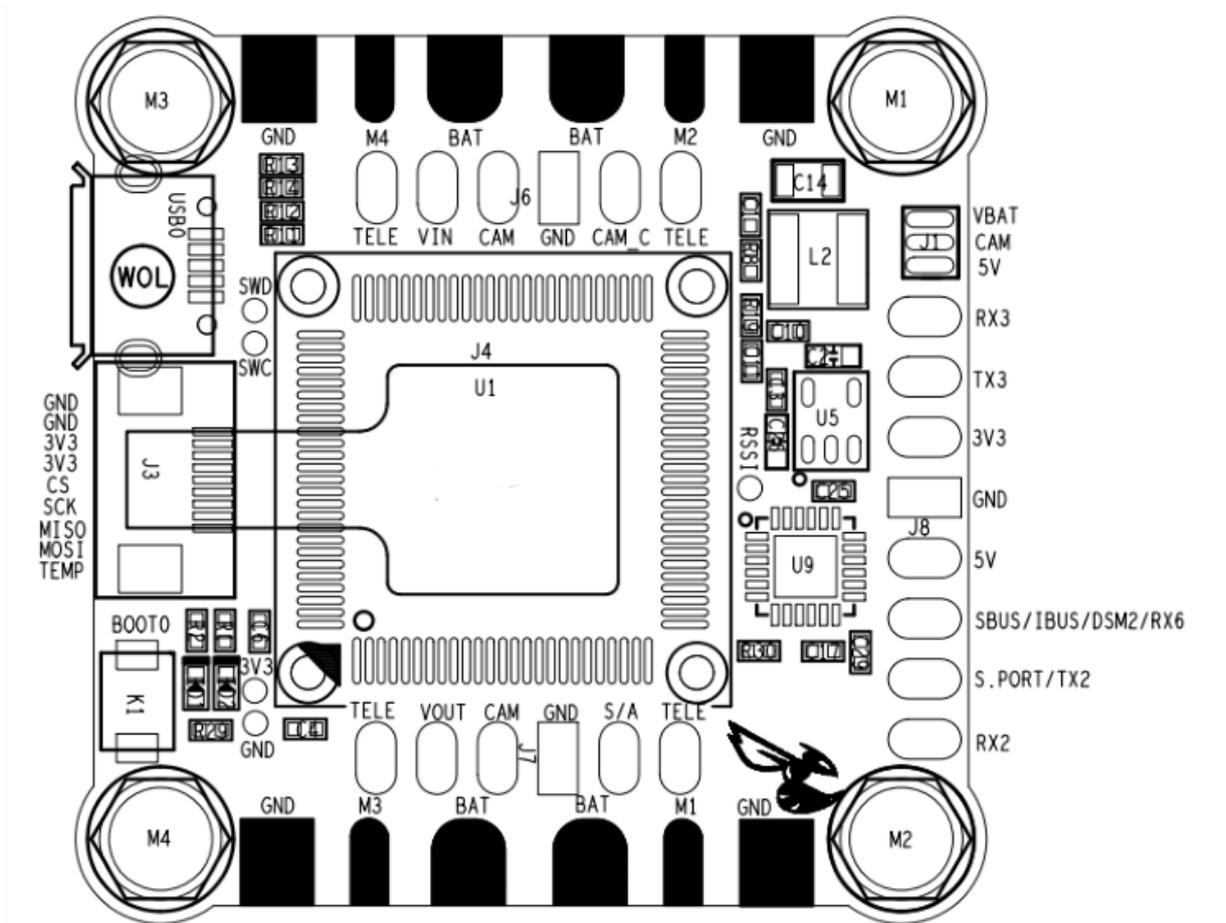
Features:

Programmable LEDs, Flash Memory, individual pad for camera control, labeled Smart Audio/Tramp TX1 next to VTx soldering pads. Labeled Smart Port TX2 pad next to Sbus/Ibus/DSM2 UART6 Tx, 5v and 3.3v pads (user selection based on type of receiver used), four pads for ESC telemetry connected to RX1. (Each pad placed near corners of the board)

Guide to Setup:

Your new Betaflight F7 flight controller comes with a wide array of connections and features that are user selectable and easily configurable via Betaflight Configurator. Here are some of the common features for this board. These features include but are not limited to: Smart Port Telemetry, Camera Control, Smart Audio/Tramp Telemetry, ESC Telemetry, and SBus/other receiver setup, programmable LED, and buzzer. In short, all of the features just mentioned can easily connect to your Betaflight F7 at the same time with a quick and clear understanding of the pad placement and wiring setup. Given your own ability and understanding of betaflight many more options are possible with this build.

TOP VIEW



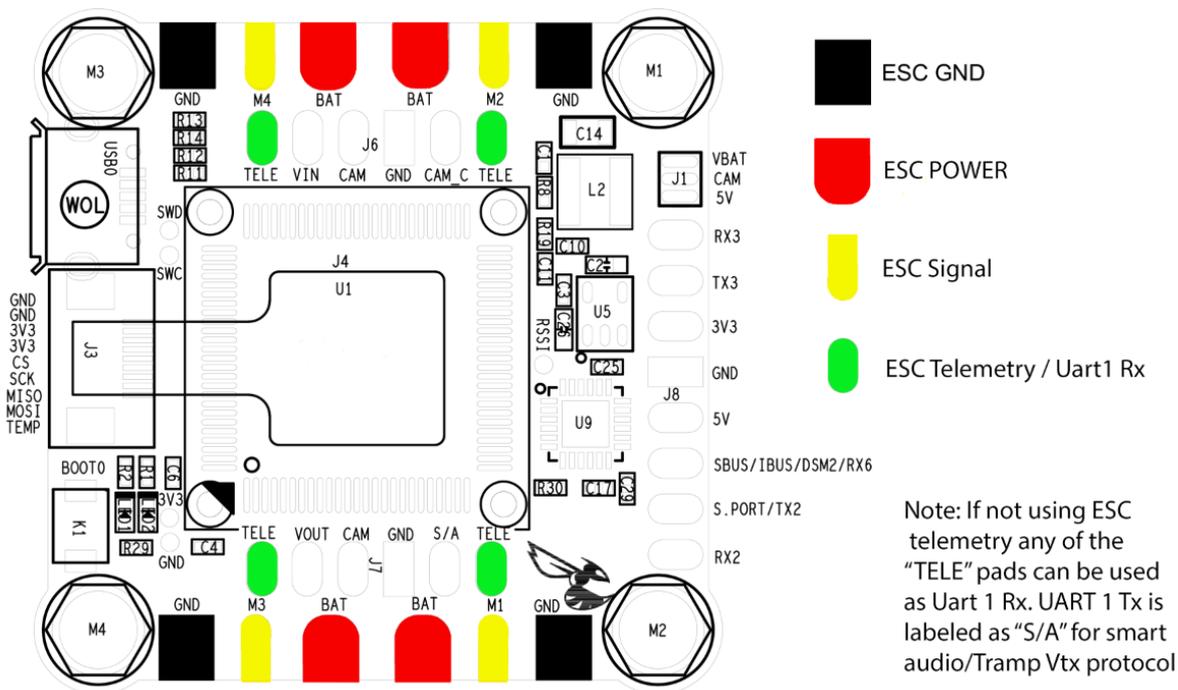
To get started on the build process with your new Betaflight F7 please take a moment to familiarize yourself with the wiring of the flight controller. Click on the picture above to direct yourself to an expandable view of the flight controller.

Your betaflyt F7 has many features built into the flight controller and some of them use uart connections in a different manner by separating and placing them in a better configuration to allow for easy connection of some of the most commonly used features that pilots want.

ESC CONNECTION

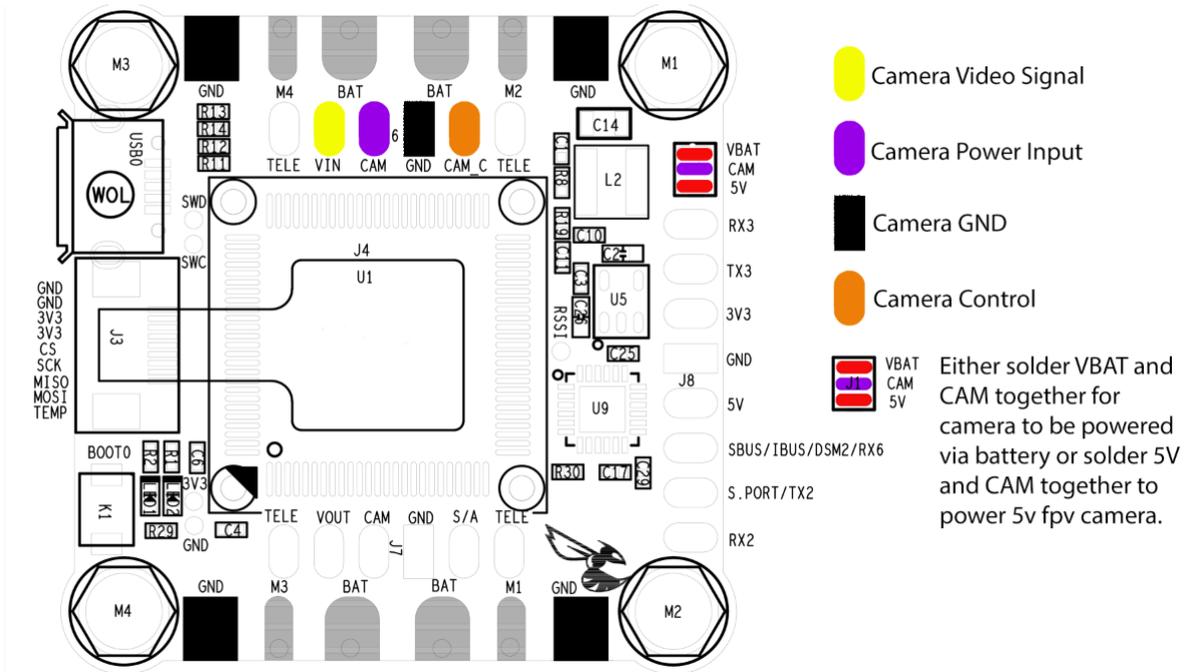
***If using ESC telemetry Smart Audio/Tramp Telemetry signal should be connected to UART 3 TX.**

Connecting ESCs to the Betaflight F7 is easier than before due to all top pad placement for ESC connection. GND, M1-4, and BAT votage connection are easily accessed from the top side of the FC along with Telemetry (TELE) pads for those that may be using BLHELI32 or other variants of ESCs with telemetry ability. Looking at the flight controller this color coded chart will give you an idea of proper ESC connection with no signal ground required.



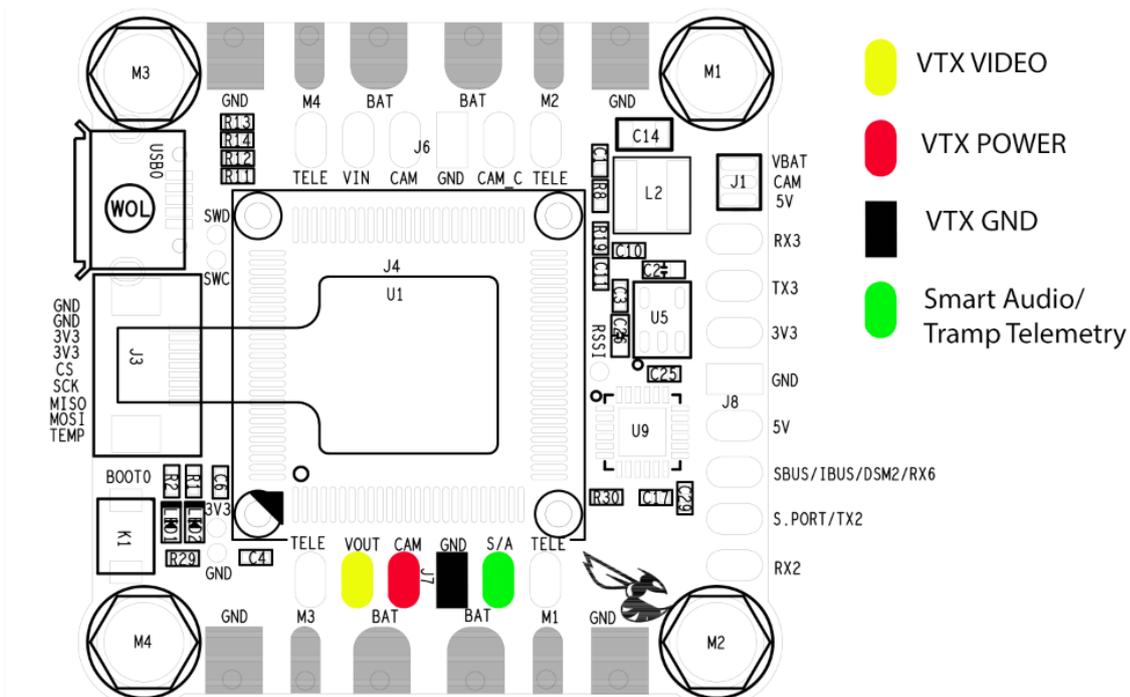
CAMERA CONNECTION

Your FPV camera connection can easily be connected following the color coded guide below. Two things the user will want to keep in mind. One your power supply for camera can either be 5v or battery voltage. The power choice is up to the user and will be completed by a small solder jumper at the edge to the FC as shown in the guide below. Two, your betaflyt F7 RV1 FC comes with a soldering pad for camera control. This gives the user the ability to control their compatible FPV camera menu settings via osd and transmitter sticks. This location is simply labeled CAM_C for Camera Control.



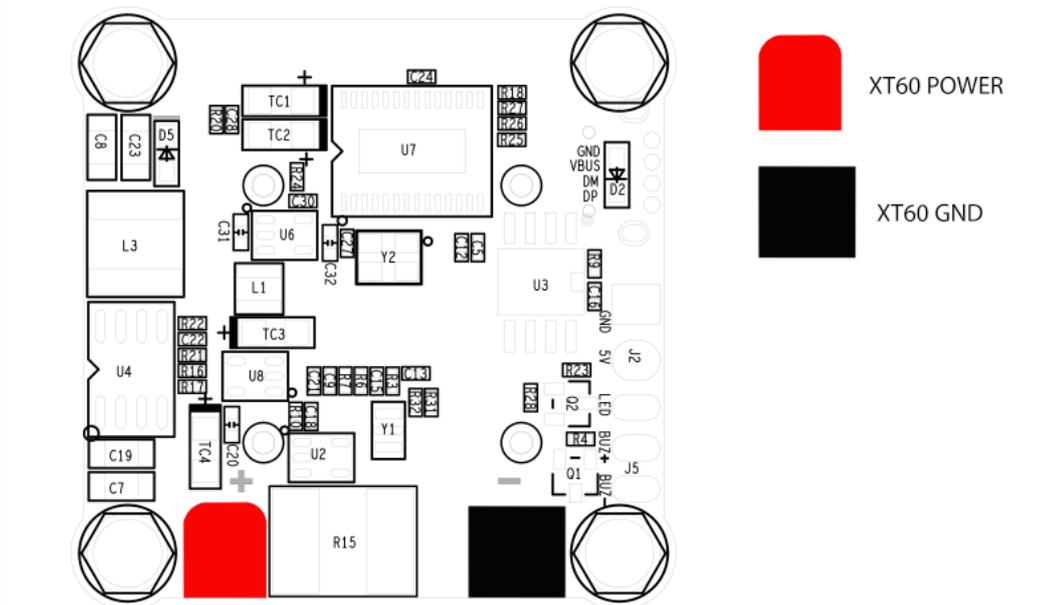
VTX CONNECTION

Your Betaflight F7 RV1 flight controller can be connected to a myriad models of video transmitters but some of the most commonly used vtx's are the TBS Unify, Matek, and Tramp video transmitters. The video transmitters allow for vtx protocols to be ran in conjunction with your flight controller and enable features such as mw selection and camera band and frequency selections. In an effort to make this FC user friendly some uarts have been labeled for most commonly used products. Your betaflight F7 has 4 uart connections. SMART AUDIO/TRAMP Telemetry (S/A location on the FC) and ESC Telemetry are are connected to the UART1. If using ESC telemetry, the Vtx Smart Audio/Tramp Telemetry wire should be connected to UART3 Tx.



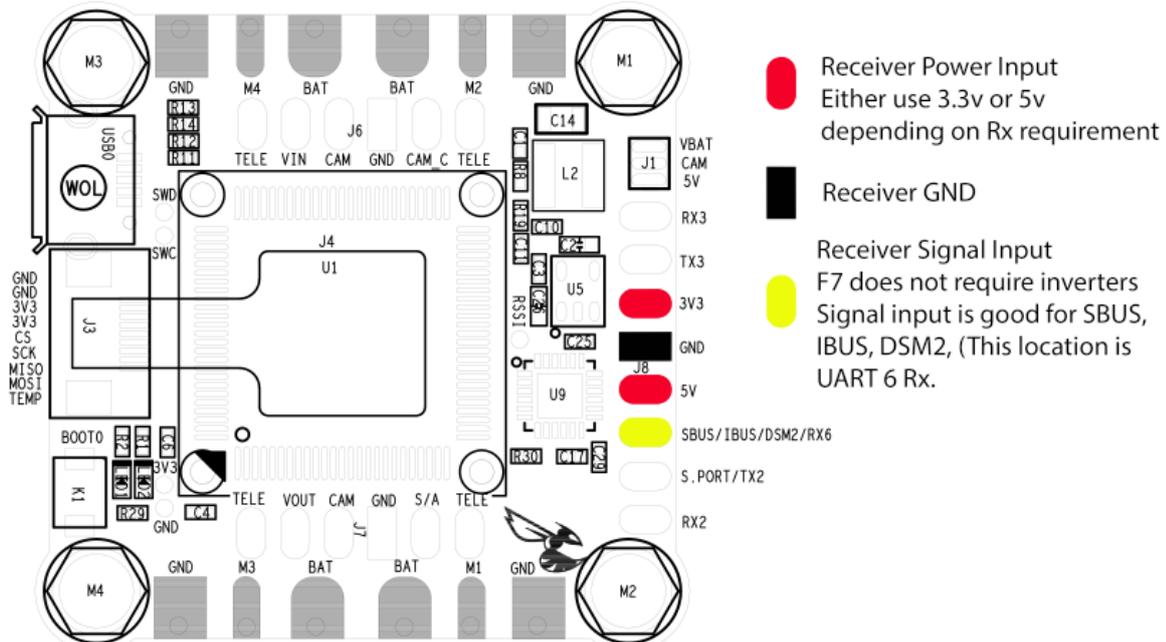
BATTERY CONNECTION

Battery connection is easy and straight forward. Ground goes to ground and positive goes to positive.



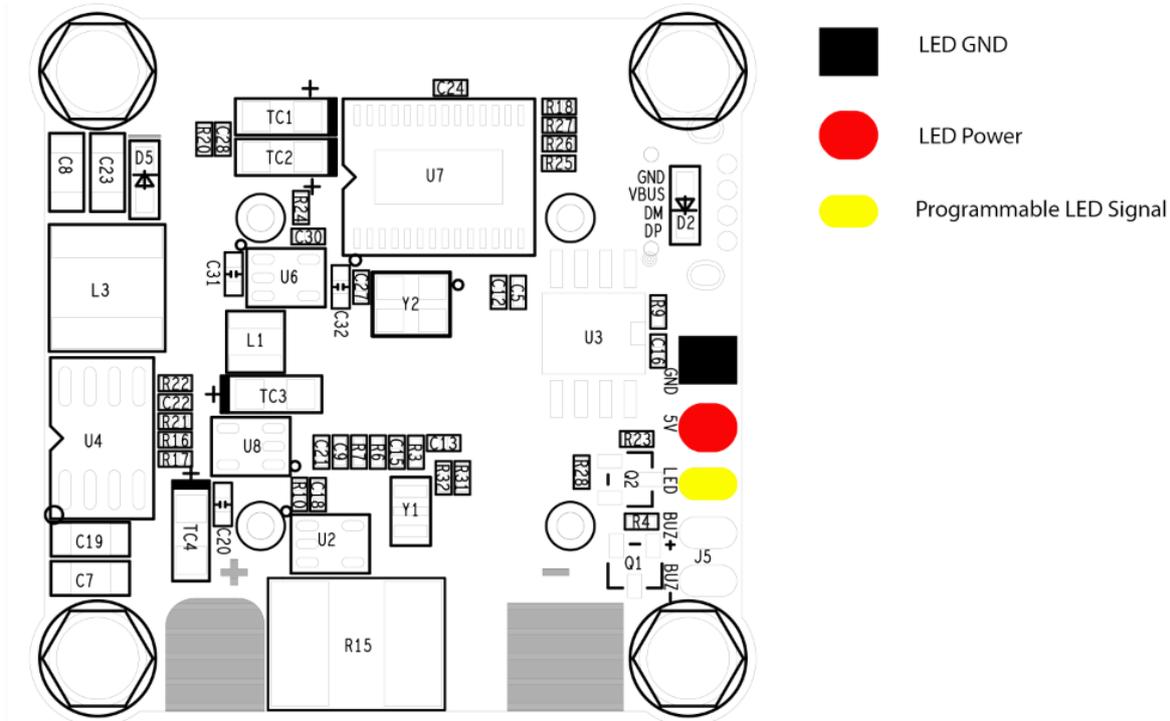
RECEIVER CONNECTION

Your Betaflight F7 can use a wide variety of receivers. Since this board is an F7 there is no need to use locations that have inverter or do not have inverter based on your receiver type, F7 can accept either inverted or non-inverted signals. Caution should be used, depending on receiver type, when it comes to voltage. If your receiver requires 3.3v power input use the pad labeled 3V3 if your receiver requires 5V use the pad that says 5V. Signal pad can accept SBUS, IBUS, DSM2. The signal pad is UART6 RX.



PROGRAMMABLE LED CONNECTION

Betaflight F7 has an available connection for RGB LEDs. Once connected these LEDs can be programmed to output a variety of colors. The connection guide below will show you where to connect the power, gnd, and signal wires if you choose to use this option.



BEEPER CONNECTION

Connecting a beeper to Betaflight F7 couldn't be easier. With very little effort you can help protect your quad by setting up a switch for those times when you may need a lost model alarm to help you find you quad.

