

# GNSS ZED-F9T Timing Breakout

GPS-18774

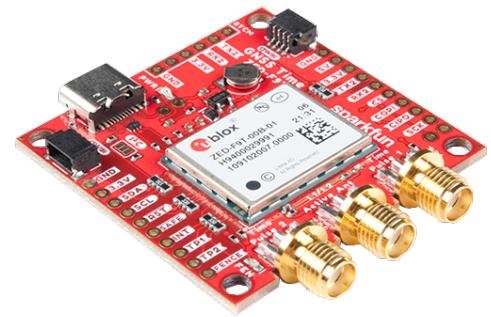
## Product Overview

09/15/2022

For the most up-to-date information, visit [www.mouser.com](http://www.mouser.com) or the supplier's website.

## Description

SparkFun GNSS ZED-F9T Timing Breakout (GPS-18774) is a Qwiic-low power compatible geospatial board based on the u-blox ZED-F9T GNSS (Global Navigation Satellite System) Module. The multi-band ZED-F9T Module exhibits 5ns (1-sigma) timing accuracy with concurrent GNSS receivers that can receive and track multiple GNSS systems. The ZED-F9T features GPS, Galileo, GLONASS, and BeiDou systems, and multi-band RF front-end architecture can receive all four GNSS signal types concurrently.

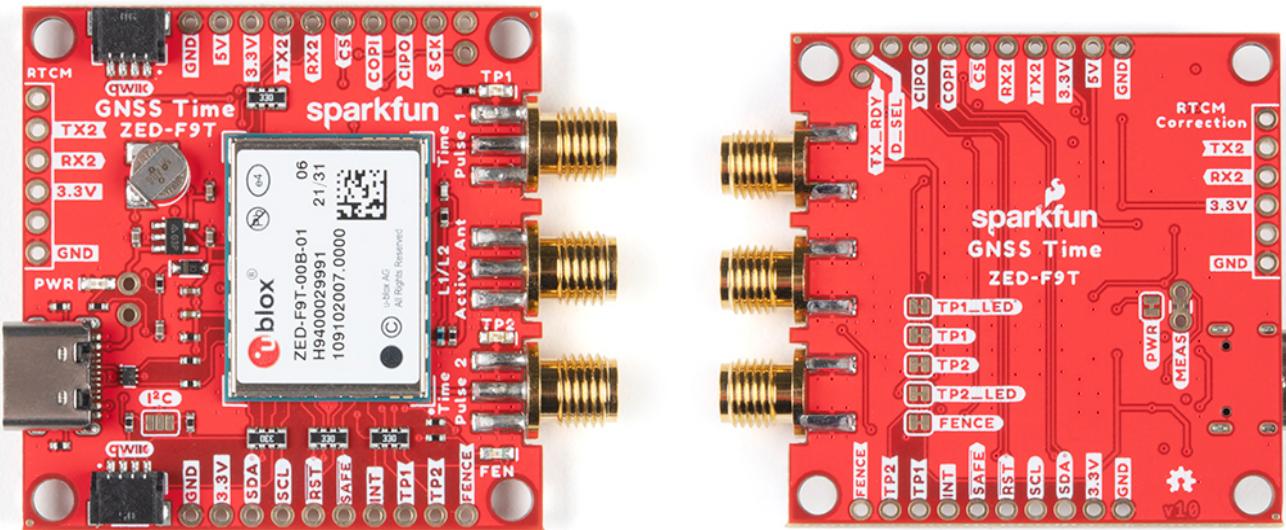


The SparkFun GNSS ZED-F9T Timing Breakout consists of a USB Type-C™ connector for primary power and communication and two Qwiic connectors for communicating over I<sup>2</sup>C using the SparkFun Qwiic system. Three SMA connectors are provided for the antenna and timing pulse signals. The Breakout Board also includes headers allowing direct interaction with most of the ZED-F9T Module pinouts. An onboard rechargeable backup battery provides power to the Real-Time Clock (RTC) on the ZED-F9T and helps in reducing the time-to-first fix from a cold start (~24s) to a hot start (~2s).

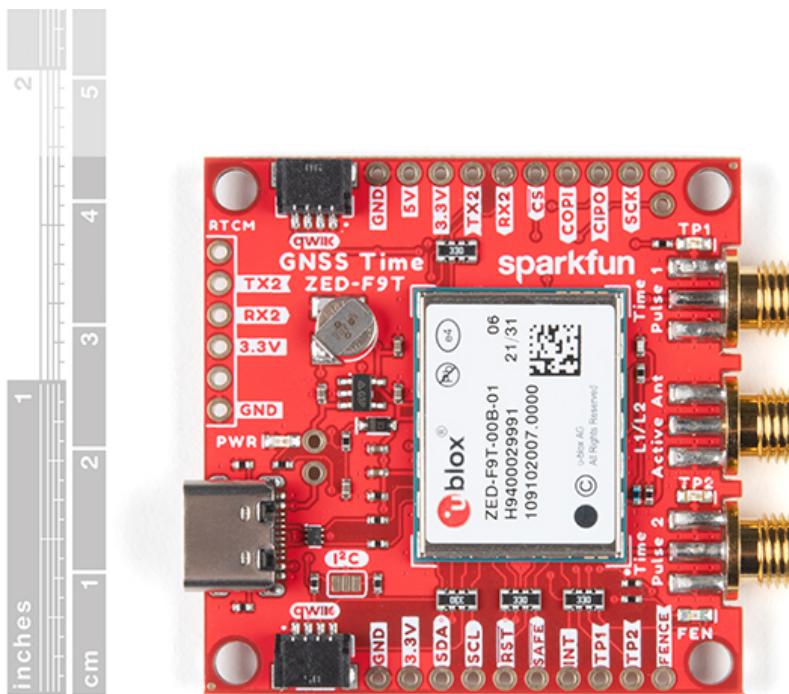
## Features

- ZED-F9T GNSS Module
- Concurrent reception of GPS, GLONASS, Galileo, and BeiDou constellations
- Receives L1/L2/E5b bands
- Voltage: 5V or 3.3V (all logic is 3.3V)
- Current: 68mA to 130mA depending on operating conditions and constellations
- Time pulse signal accuracy
- 5ns absolute timing mode
- 2.5ns differential timing mode (with correction data)
- Fix acquisition: ~24s (Cold) / 2s (Hot)
- 0.25Hz to 25MHz time pulse signal frequency
- ±4ns time pulse signal jitter
- 2.0m horizontal position accuracy
- Maximum altitude: 80km (49.7 miles)
- Max velocity: 500m.s (118mph)
- I<sup>2</sup>C address: 0x42
- 2x Qwiic Connectors
- Compact 1.7" x 1.7" PCB

## Board Overview

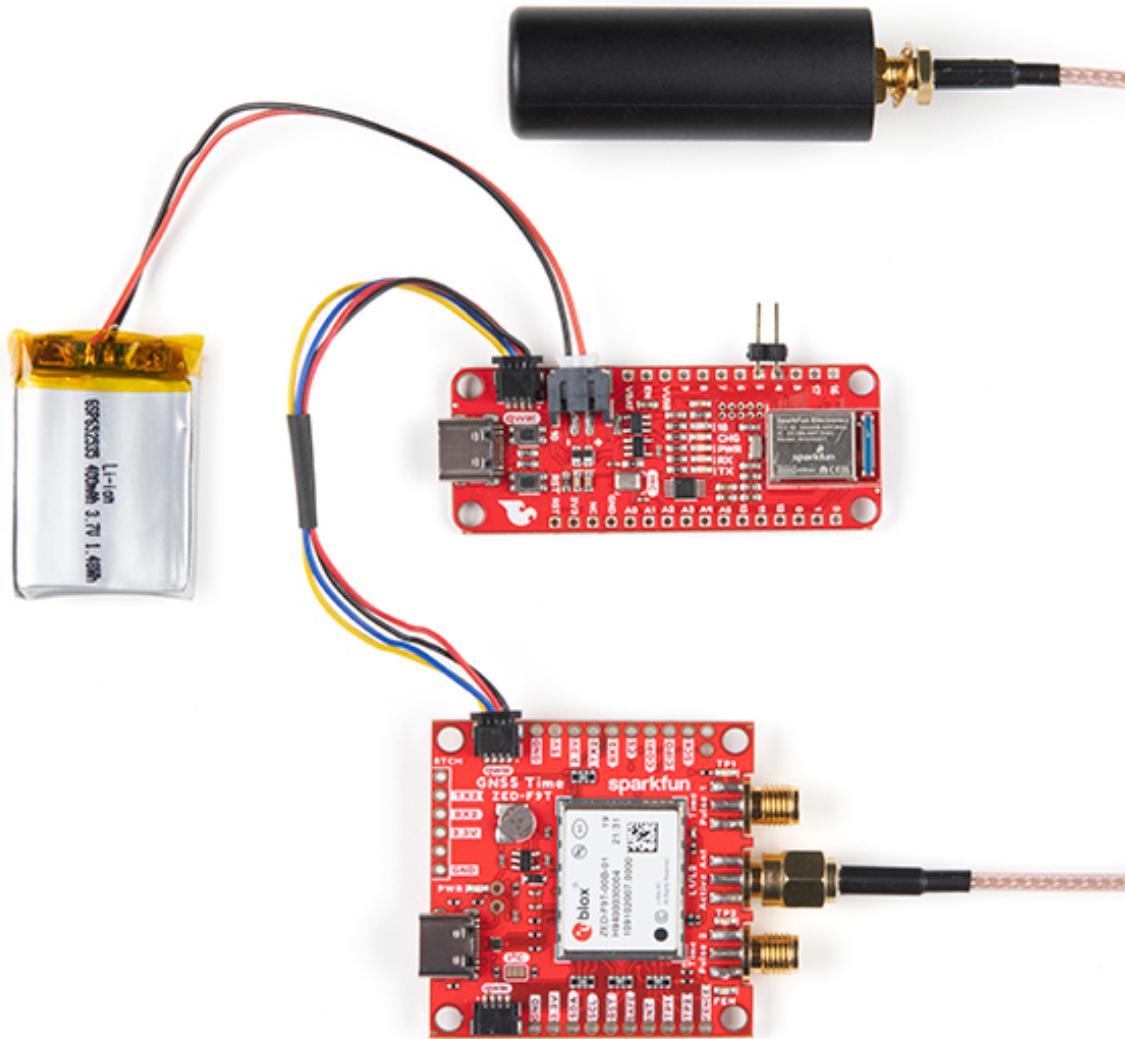


## Board Dimensions



*The information contained in this document should be used as a guideline only.*

## Board Connections



## Additional Resources

- [Schematic](#)
- [Board Dimensions](#)

## Mouser Part Number

[View Part](#)

To learn more, visit <https://www.mouser.com/new/sparkfun/sparkfun-gnss-zedf9t-breakout/>