

Hiking Band: User Manual

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1 Introduction

The purpose of this document is to provide Hiking Band users the required information to successfully launch, configure and utilize the core functionalities of the Hiking Band system. The system consists of two applications: the Raspberry Pi Web Application and LilyGO T-watch smartwatch hiking application. This document contains a section for each application and a section for communication between applications.

A test plan has been included for both applications for the purpose of detailing to QA specialists how it can be verified that the application works as intended. Additional information for testing can be found from the SRS documentation. It is important to highlight, however, that the SRS may contain optional features that have not been implemented in the proof-of-concept version. All non-optional features listed in SRS SHOULD be available and optional features MAY be available.

2 LilyGO T-Watch Hiking application

The LilyGO T-Watch Hiking application is a proof-of-concept (later in this section PoC) smart-watch application for tracking hiking trips. The application uses LilyGO T-Watches BMA423 accelerometer to track step count and LilyGO T-Watches M8/M6 GPS Module to track the travelled distance. Average speed is computed by recording the start time of the hike and calculating average speed from tracked distance and hike duration. Users can also view information from past hikes and configure Bluetooth synchronization from the settings menu.

2.1 Requirements

Before getting started, make sure that you have the following hardware components:

- LilyGO T-Watch V2
- A Raspberry Pi 3B+ with a Linux-based OS
- A USB-A to micro-USB cable

Tip

While the LilyGO hiking application officially supports V2 of the LilyGO T-Watch smart-watch, the application MAY also work on V3 with configuration changes. The configuration changes are detailed in the design report. Note that V3 is not officially supported.