InvenSense

SHARKBAND 1.0

Turnkey Commercial-Grade Wearable Platform For Health and Fitness

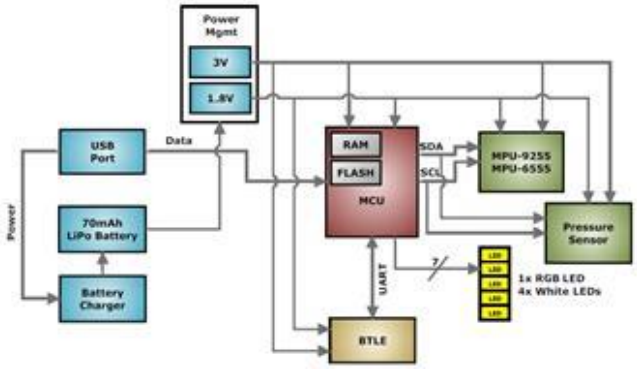
GENERAL DESCRIPTION

The InvenSense turnkey wearable platform solution is intended to substantially shorten the time to market for any OEM or ODM. It integrates all necessary functions of a health and fitness wearable device including motion sensors, pressure sensors, Microcontroller Unit (MCU), and BlueTooth Low Energy (BLE). This platform incorporates the InvenSense embedded Automatic Activity Recognition (AAR™) software library, which efficiently manages both the key software and hardware components, allowing for 'AlwaysOn' activity recognition.

The tightly wound embedded HW/SW software can deliver up to 5-6 days of battery life using a 70 mAHr battery by efficiently managing the gyro on time, the MCU sleep modes, the BLE radio transmission, and other system power components. The AAR library works in conjunction with the MPU-6555 and MPU-9255 inertial MEMS sensors, and allows detection of run, walk, bike, elliptical, stationary, and sleep on a wrist-worn wearable device. The AAR software library also provides accurate pedometer and elevation tracking.

To receive the Sharkband 1.0 HW solutions (Gerbers, Layout, Schematics, BOM, and XY Coordinates) as well the SW solutions (AAR library and Embedded system software in source code), an SLA stating the usage of INVN sensors must be signed beforehand.

FUNCTIONAL BLOCK DIAGRAM



APPLICATIONS

- Wearable Fitness Bands
- Wearable Smart Watches

FEATURES

- Supports MPU-9255 and MPU-6555
- 28 x 12 x 0.8mm PCB
- BLE Interface
- 5-6 Days Battery Life on 70mAHR Battery
- TAP Gesture
- LED Interface
- ARM M4 Core Architecture
- AAR™ Library
  - Optimized for Wrist-Worn Device
  - Activities Detected
    - Walking
    - Running
    - Stationary (Travelling in Car, Sitting, Standing)
    - Biking (Road, Cruiser, Mountain)
    - Elliptical Machine
    - Sleep Quality
  - Step Counting (Pedometer)
  - Relative Elevation Tracking

ORDERING INFORMATION

Please contact INVN Sales to inquire about the Sharkband SLA required to receive the HW and SW solutions for this wearable platform.

AAR LIBRARY

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