

Introduction to Hardware

Datasheet Exploration

Agenda

- Introduction
- Product Exploration
- Identifying the components
- Exploring Datasheets

Introduction

- Typical product components
 - Power supply
 - MCU
 - Sensors
 - Storage
 - Connectivity

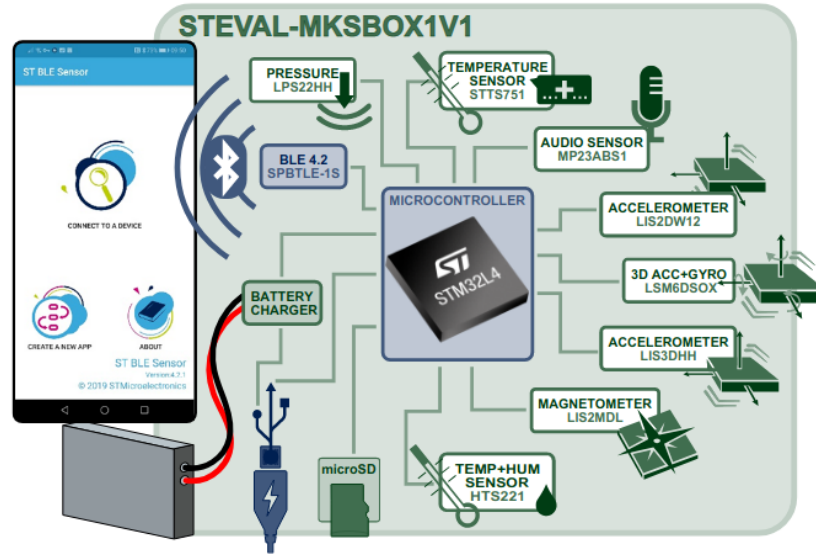
Product

ST Sensor Tile Box



Source : <https://www.st.com/en/evaluation-tools/steval-mksbox1v1.html>

High Level Product Architecture



Source : <https://www.st.com/en/evaluation-tools/steval-mksbox1v1.html>

Product Application

- Pedometer optimized for belt positioning
- Baby crying detection with Cloud AI learning
- Barometer / environmental monitoring
- Vehicle / goods tracking
- Vibration monitoring
- Compass and inclinometer
- Sensor data logger

Product Component

- Ultra-low-power ARM Cortex-M4 microcontroller with DSP and FPU (STM32L4R9)
- Digital temperature sensor (STTS751)
- 6-axis inertial measurement unit (LSM6DSOX)
- 3-axis accelerometers (LIS2DW12 and LIS3DHH)
- 3-axis magnetometer (LIS2MDL)
- Altimeter / pressure sensor (LPS22HH)
- Microphone / audio sensor (MP23ABS1)
- Humidity sensor (HTS221)
- Bluetooth application processor v5.2 (BlueNRG-M2) with Bluetooth Smart connectivity v4.2 module

The End