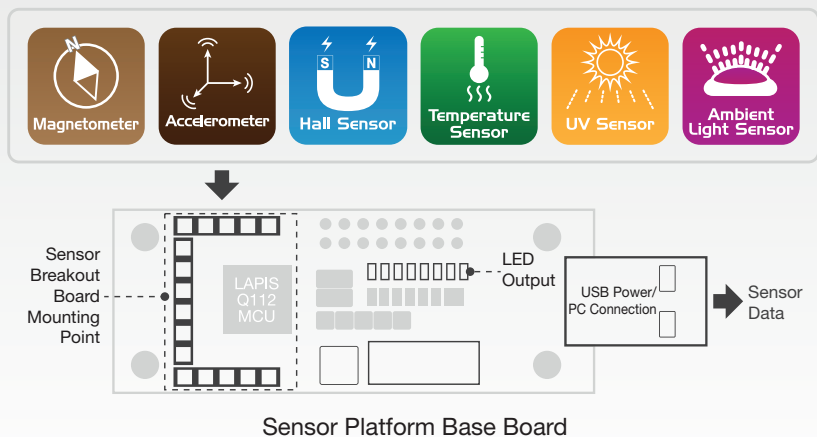# ROHM Semiconductor's Sensor Platform Kit

Enables quick testing and evaluation of ROHM sensors

ROHM's Sensor Platform Kit (ROHM-SENSEKIT1-EVK-101) is a low-cost way to quickly evaluate and test sensor products provided by ROHM. The kit consists of three main elements: a Sensor Platform Base Board, 6 Sensor Breakout Boards (Analog and Digital Ambient Light Sensors (ALS), Accelerometer + Magnetometer Combo Sensor, along with Hall, Temp, and UV Sensors) and a USB Battery (used for standalone mode). Using these in combination allows for quick testing in the field or in the lab. In standalone mode, LEDs are used to visualize sensor output . And for detailed testing, the kit outputs precise readings from the sensor over the USB port for display and use on a PC.

Sensor Platform Base Board

Specifications & Features

- The kit is powered over USB either from a PC or the supplied 5V USB Battery

- Two Operating Modes:
    1. Standalone Mode (no PC required)
        - "Range" based outputs (UV, Light, Temp) shown using LED output in binary format (0 ~ 255)
        - For any "non-ranged" outputs (Accel, Hall), different LED output schemes are used to show functionality
    2. Precision Output Mode (PC required)
        - Connects to a PC using a USB port as a simple COM port for displaying and analyzing raw and scaled data

- Hot Pluggable Design: Allows sensor boards to be hot swapped onto the Sensor Platform Base Board

- Open Source Hardware and Firmware: Simplifies integration into custom designs

Applications

- TVs
- Notebook PCs
- Smartphones and Smart Watches
- Wearable Health/Fitness Devices
- IOT/E
- Portable Electronics and Handsets
- Gaming
- Weather Stations
- Navigation Devices
- Digital Cameras
- Contactless Switches
- Thermal Protection/Fan Control
- Vehicle Stability

Included Sensors

Digital Ambient Light Sensor (BH1721FVC) ROHM
- 1 ~ 65528 Lx range (16bit ADC)

Analog Ambient Light Sensor (BH1620FVC) ROHM
- Different gain modes allow for 0 ~ 100000Lx range

Omnipolar Hall Sensor (BU52011HFV) ROHM
- ±3.0mT switch operation point
- Dual output for N and S polarity
- Other PNs in lineup have different mT operation points

Temperature Sensor (BDE0600G) ROHM
- ±3.5C output accuracy
- Other PNs in lineup have different thermostat trigger operating points from 55˚C ~ 115˚C in 5˚C steps

Analog UV Sensor (ML8511) LAPIS
- Sensitive to UV-A and UV-B
- Can be used to approximate UV index
- Outputs in mW/cm^2
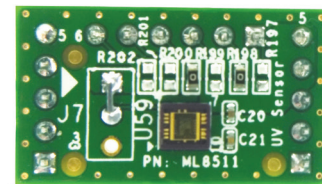
Accelerometer + Magnetometer Combo Sensor (KMX61) KIONIX
- Accel: ±2g, ±4g, ±8g
- Mag: ±1200µT

UV Sensor Breakout Board

ROHM Group Companies