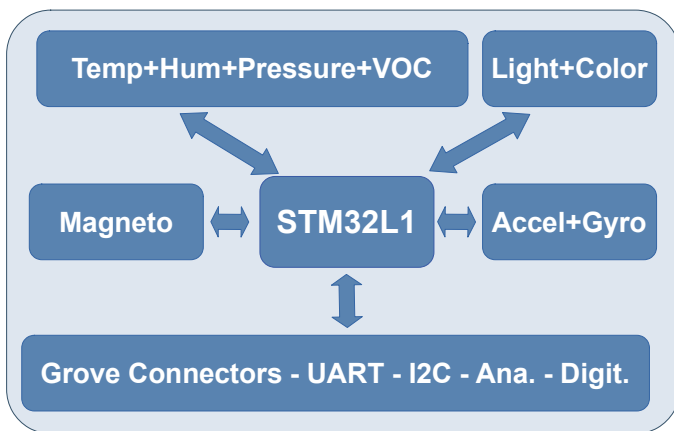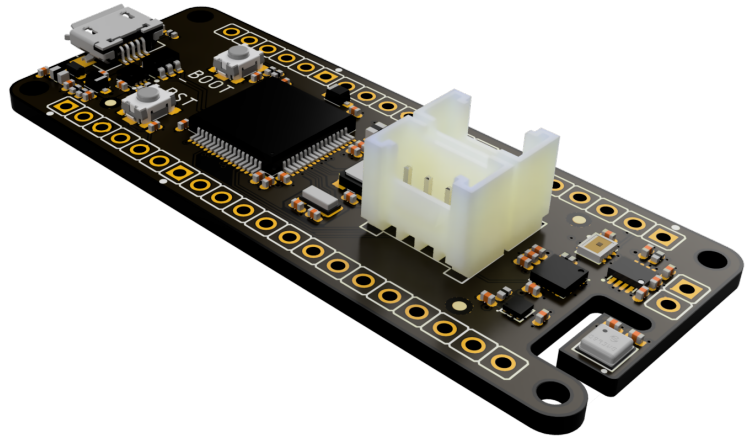# Bosch SmartSensors – Multi Sensor Board

## GENERAL DESCRIPTION

The **Bosch SmartSensors** Arduino MKR format board features a powerful Cortex M3 processor and a rich assortment of sensors from Bosch Sensortech.

The board is compatible with Arduino IDE thanks to the STM32duino project or can be programmed with STM32CubeIDE and tools to unleash the full power of the MCU.



```
Temp+Hum+Pressure+VOC        Light+Color

Magneto  ⇄  STM32L1  ⇄  Accel+Gyro

Grove Connectors - UART - I2C - Ana. - Digit.
```

### Target Applications:

➢ 24/7 always-on sensor processing at ultra-low power consumption.

➢ IoT Battery powered devices

➢ Environmental Monitoring

➢ Smart metering, Industrial monitoring and control, Home energy management systems, Smart parking,

➢ Smart Building, Building Information Management Systems

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## FEATURES

The **Bosch SmartSensors** board features a complete assortment of sensors for multiple uses.

6 Grove connectors allow full sensor/actuator expandibility.

### Hardware Features

MCU Core:

- ARM® Cortex®-M3 CPU at 32 MHz
- 512 kBytes Flash
- 80 kBytes RAM
- 16 kBytes EEPROM with ECC
- -40 to 85°C operating temp. (125 °C available)
- Voltage range 1.65 V to 3.6 V
- Low power modes down to 0.29 µA
- 12 bit ADC up to 1 MSPS

NFC:

- ST25DV64K
  - 8192 bytes user memory
  - I²C interface

Sensors:
- BHI160B          IMU (accel + gyro)
- BMM150          magnetometer
- BME688          temp press hum VOC AI
- TCS34725FN    Light/Color

Grove Connectors:
- UART
- I2C
- Analog In
- Digital I/O

| Order Code | Description |
|---|---|
| BLK-HVN-xxxxx | Havana – Multi Sensor Board |