

# IMU Sensors



Open-Source Modular  
Plug & play



Easy - intergration  
Bosch/TI Powered



SKU: SEN0252



## Gravity: BMX160+BMP388 10 DOF Sensor

BMX160+BMP388 Low-power consumption and high-precision 10-axis attitude sensor.

- Accelerometer:  $\pm 2g/\pm 4g/\pm 8g/\pm 16g$
- Gyroscope:  $\pm 125^\circ/s \sim 2000^\circ/s$
- Geomagnetism:  $\pm 1150\mu T$ (x,y-axis);  $\pm 2500\mu T$ (z-axis)
- Atmospheric pressure: 300-1250 hPa

SKU: SEN0253



## Gravity: BNO055+BMP280 10 DOF IMU AHRS

16-bit gyroscope, 14-bit accelerometer, geomagnetic sensor.

- Accelerometer:  $\pm 2g/\pm 4g/\pm 8g/\pm 16g$
- Gyroscope:  $\pm 125^\circ/s \sim 2000^\circ/s$
- Geomagnetism:  $\pm 1300\mu T$ (x,y-axis);  $\pm 2500\mu T$ (z-axis)
- Atmospheric pressure: 300~1100hPa

SKU: SEN0529/SEN0419



## BMM150 Triple Axis Magnetometer Sensor

Adopting the high-precision geomagnetic sensor BMM150 from Bosch.

- Magnetic force measurement range:  $\pm 1300\mu T$  (x, y axes)  $\pm 2047\mu T$  (z axis)
- Resolution: 0.3uT
- Accuracy: 30uT horizontal magnetic field component  $\pm 2.5^\circ$

SKU: SEN0619/SEN0622



## BMM350 Triple Axis Magnetometer Sensor

The Bosch BMM350 ultra-low power consumption high-precision geomagnetic sensor.

- Working current: 200uA
- Magnetic force measurement range:  $\pm 2000\mu T$
- Resolution: 0.1uT
- Accuracy: 30uT horizontal magnetic field component  $\pm 2.5^\circ$

SKU: SEN0412/SEN0408



## H3LIS200DL Triple Axis Accelerometer

Large-range accelerometers of  $\pm 100g$  and  $\pm 200g$  for high-speed impact detection.

- Optional range:  $\pm 100g/\pm 200g$

SKU: SEN0409/SEN0405



## LIS2DW12 Triple Axis Accelerometer

Built-in algorithms such as free fall detection, direction detection, single/double click detection, motion detection, motion wake-up, etc.

- Optional range:  $\pm 2g/\pm 4g/\pm 8g/\pm 16g$

SKU: SEN0411/SEN0407



## LIS331HH Triple Axis Accelerometer

Range  $\pm 6g/\pm 12g/\pm 24g$ , 16-bit data output accelerometer.

- Optional range:  $\pm 6g/\pm 12g/\pm 24g$

SKU: SEN0371



## BMP388 Digital Pressure Sensor

High-precision atmospheric pressure sensor based on Bosch Sensortec BMP388.

- Measurement range: 300 - 1250 hPa
- Relative accuracy:  $\pm 0.08$  hPa (equivalent  $\pm 0.66m$ )
- Absolute accuracy:  $\pm 0.5$  hPa

SKU: SEN0423



## BMP390L Digital Barometric Pressure Sensor

Atmospheric pressure sensor with an absolute accuracy of up to 50Pa based on Bosch BMP390L

- Pressure range: 300 - 1250 hPa
- Relative accuracy:  $\pm 0.03hPa$  (equivalent to 25cm)
- Absolute accuracy:  $\pm 0.50hPa$

SKU: SEN0373



## BMX160 9-axis Sensor

9-axis motion sensor based on Bosch BMX160, integrating accelerometer, gyroscope and geomagnetic sensor.

- Acceleration:  $\pm 2g/\pm 4g/\pm 8g/\pm 16g$
- Gyroscope:  $\pm 125^\circ/s \sim 2000^\circ/s$
- Geomagnetism:  $\pm 1150\mu T$  (x-, y-axis);  $\pm 2500\mu T$  (z-axis)

SKU: SEN0374



## BNO055 Intelligent 9-axis Sensor

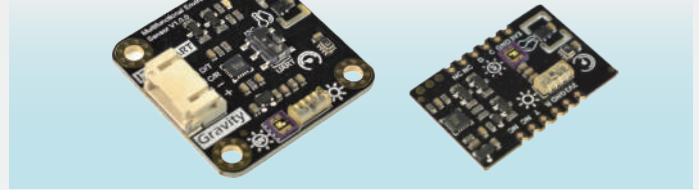
9-axis intelligent motion sensor based on Bosch BNO055 with integrated algorithms .

- Acceleration ranges  $\pm 2g/\pm 4g/\pm 8g/\pm 16g$
- Ranges switchable from  $\pm 125^\circ/s \sim 2000^\circ/s$
- Magnetic field range typical  $\pm 1300\mu T$ (x-,y-axis);  $\pm 2500\mu T$ (z-axis)

# Environmental Sensors



Quick Integration  
with Sensirion & Bosch chips



SKU: SEN0500/SEN0501



## 5 in 1 environmental sensor

Integrated 5 in 1 sensor of five environmental parameters including temperature and humidity sensor, atmospheric pressure sensor, light sensor and ultraviolet sensor.

SKU: SEN0375/SEN0248



## Fermion: BME680 Environmental Sensor

Quadruple-in-one MEMS environmental sensor (VOC, temperature, humidity, air pressure) based on Bosch BME680.

SKU: SEN0392/SEN0394



## SGP40 Air Quality Sensor

VOC air quality sensor without calibration based on the new generation SGP40 of Sensirion, Switzerland.

- Temperature range: -10°C to 50°C
- humidity range: 0%RH to 90%RH
- VOC index range: 0-500

SKU: SEN0332/SEN0334



## SHT31-F Temperature & Humidity Sensor

Based on Sensirion SHT31-F temperature and humidity sensor chip. The chip has IP67 dustproof performance.

- Temperature:  $\pm 0.2^{\circ}\text{C}$ , Humidity:  $\pm 2\%\text{RH}$

SKU: SEN0335



## Fermion: ENS160+BME280 Multi-function Environmental Module

Multi-parameter fused environmental sensor (temperature, humidity, air pressure, altitude, TVOC and eCO<sub>2</sub>) based on Bosch BME280 and ScioSense ENS160 chips.

SKU: SEN0330



## Fermion: SHT30 Temperature & Humidity Sensor

Based on Sensirion SHT30 temperature and humidity sensor chip.

- Temperature:  $\pm 0.2^{\circ}\text{C}$ , Humidity:  $\pm 2\%\text{RH}$

SKU: SEN0331



## Fermion: SHT31 Temperature & Humidity Sensor

Based on Sensirion SHT31 temperature and humidity sensor chip.

- Temperature:  $\pm 0.2^{\circ}\text{C}$ , Humidity:  $\pm 2\%\text{RH}$

SKU: SEN0333



## Fermion: SHT35 Digital Temperature & Humidity Sensor

Based on Sensirion SHT35 temperature and humidity sensor chip.

- Temperature:  $\pm 0.2^{\circ}\text{C}$ , Humidity:  $\pm 1.5\%\text{RH}$

SKU: SEN0414



## Fermion: SHTC3 Temperature & Humidity Sensor

Based on Sensirion SHTC3 temperature and humidity sensor chip

- Temperature:  $\pm 0.2^{\circ}\text{C}$ , Humidity:  $\pm 2\%\text{RH}$

SKU: SEN0428



## SHT40 Temperature & Humidity Sensor

Based on Sensirion SHT40 temperature and humidity sensor chip.

- Temperature:  $\pm 0.2^{\circ}\text{C}$ , Humidity:  $\pm 1.8\%\text{RH}$

