STREF-MKI128V6
Smart MEMS Multi-sensor module

Simplify your creativity with our smart multi-sensor module for flexible prototyping

The STREF-MKI128V6 MEMS sensor module, thanks to its enhanced embedded sensor topology, helps save time and effort when developing smart, creative prototypes for a wide range of applications.
This compact board integrates the iNEMO inertial module (LSM6DSM) with 3D accelerometer and 3D gyroscope particularly suitable for smartphones with OIS/EIS and AR/VR systems, a magnetometer (LIS2MDL), a dust-resistant full-mold absolute pressor sensor (LPS22HB), and a relative humidity and temperature sensor (HTS221).

KEY FEATURES

Motion MEMS sensors:

- 3D accelerometer sensor with selectable ±2/±4/±8/±16 full-scale acceleration range
- 3D gyroscope sensor with selectable ±125/±245/±500/±1000/±2000 dps full-scale angular rate range in a 14-pin LGA package (2.5 x 3 x 0.83 mm)
- 3D magnetometer with selectable ±4/±8/±12/±16 gauss full-scale magnetic field range in a 12-pin
- LGA package (2 x 2 x 0.7 mm)

Environmental sensors:

- High accuracy pressure sensor
  - Piezo-resistive pressure sensor
- 260 to 1260 mbar absolute pressure range
- Low power consumption
- Humidity and temperature sensor
  - 0 to 100% RH range
  - -40 to 120 °C temp. range
  - 16-bit ADC measurements

TARGETED APPLICATIONS

- ablets and mobile phones with OIS/EIS and AR/VR systems
- Gaming and virtual reality input devices
- Wellness and wearable devices
- Drones and robotics
- IoT devices including industrial and factory automation systems

The STREF-MKI128V6 MEMS sensor module integrates a set of complementary motion and environmental sensors. It is a robust and easy-to-assemble building block for quick system prototyping and development.

The sensor module and its companion software brings a convenient and unique sensor subsystem solution for developing complete platforms addressing smartphone and tablet applications, gaming, augmented reality, indoor navigation and localization-based services.

It is the perfect companion sensor module for intrinsic development platforms offering both software and hardware development tools to enable a fast evaluation and seamless product development.

EMBEDDED SENSORS

- **LSM6DSM** (3D accelerometer with 3D gyroscope)
- **LIS2MDL** (3D magnetometer)
- **LPS22HB** (pressure sensor)
- **HTS221** (humidity and temperature sensor)

3D Accel. + 3D Gyro
LSM6DSM

Pressure
LPS22HB

3D Magnetometer
LIS2MDL

Humidity
HTS221