Xtrinsic Sensors—Robust Reliable Performance

Freescale Freedom Development Platform for Xtrinsic Sensors

Features

- Cost effective (starting at $30.00)
- Small size (approximately 81 mm x 52 mm x 2 mm)
- Arduino™ footprint-compatible with support for sensor expansion boards
- Easy access to the MCU I/O pins

Software Enablement and Support

- Freescale Xtrinsic Sensor Fusion Toolbox for Android (free download)
- Magnetic calibration code
- 3-axis tilt
- 6-axis sensor (magnetometer and accelerometer) using Xtrinsic eCompass software
- 6-axis capability (accelerometer and gyroscope)
- 9-axis capability (accelerometer, gyroscope and magnetometer)
- Virtual gyroscope and offset compensated angular rates

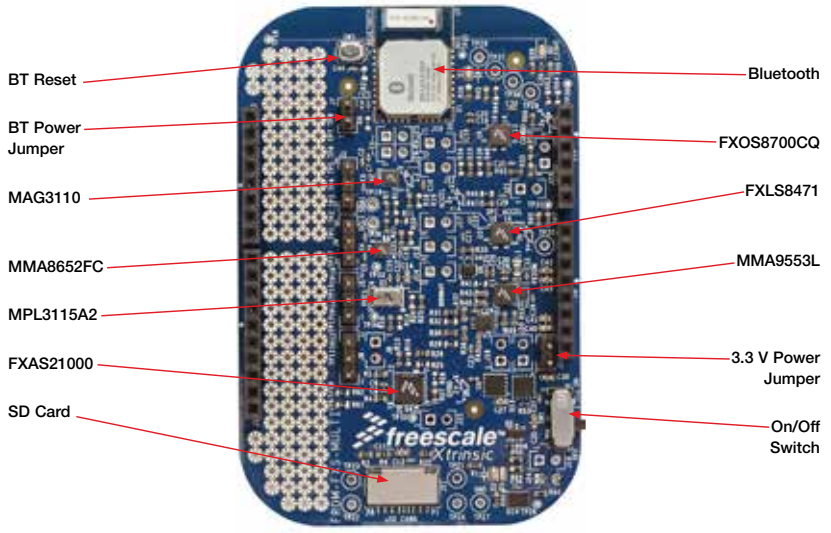
Overview

The Freescale Freedom development platform is a small, low-power, cost-effective evaluation and development system for quick application prototyping and demonstration of Xtrinsic Sensors with Kinetis MCUs.

Each platform is scalable leveraging various Xtrinsic sensors. As a next-generation tool set, there is variation of what can be demonstrated from basic discrete, raw data up through more complex contextual awareness. The FRDM-FXS family of boards are the first of its kind offering up to 12-axis sensing, wireless with Bluetooth® and the compatible Android™ app—the Xtrinsic Sensor Fusion Toolbox.

With ease of integration it is easy to get started. Simply choose your preferred Freescale Freedom development hardware with Xtrinsic sensors and select compatible drag-and-drop software installation for compiled binaries.

Freedom Development Platform for Xtrinsic Sensors FRDM-FXS-MULTI-B



freescale™
Xtrinsic

FRDM-FXS Family Features

- MPL3115A2 Absolute Xtrinsic Smart Pressure Sensor
- MMA8652FC ±2 g/±4 g/±8 g, Xtrinsic 3-Axis, 12-Bit Digital Accelerometer
- FXAS21000 Xtrinsic 3-Axis Digital Gyroscope
- FXOS8700CQ Xtrinsic 6-Axis Sensor with Integrated Linear Accelerometer and Magnetometer
- FXLS8471 SPI Accelerometer
- MMA9553L Xtrinsic Pedometer
- MAG3110 Xtrinsic High Accuracy, 3D Magnetometer
- Power supply option: 3.7 V 500 mAh li-Ion battery or power from the processor board
- Current measurement points for each individual sensor

Xtrinsic Sensor Design Resources, Software and Tools

freescale.com/FRDM-MULTI-B
freescale.com/FRDM-MULTI
freescale.com/FRDM-9AXIS

Get Started

Learn more at **freescale.com/freedom**

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Freedom Xtrinsic FRDM-FXS development hardware



	FRDM-FXS-MULTI-B	FRDM-FXS-MULTI	FRDM-FXS-9AXIS
Compatible Freedom Development Hardware	FRDM-KL25Z FRDM-K20D50M	FRDM-KL25Z FRDM-K20D50M	FRDM-KL25Z FRDM-K20D50M
Arduino R3-compatible board	√	√	√
FXAS21000 Gyroscope	√	√	√
FXOS8700CQ	√	√	√
MMA8652FC Accelerometer	√	√	
MPL3115A2 Altimeter/ Barometer Sensor	√	√	
FXLS8471 Accelerometer	√	√	
MMA9553L Pedometer	√	√	
MAG3110 Magnetometer	√	√	
Bluetooth Module and Battery	√		

Freescale: A Leader in Sensing Solutions

Expanding on more than 30 years of sensor innovation, Freescale Xtrinsic sensing solutions are designed with the right combination of high-performance sensing capability, processing capacity and customizable software to help deliver smart, differentiated sensing applications. With Xtrinsic sensing solutions, our vision is to offer a diverse and differentiated product portfolio to meet the expanding needs of the automotive, consumer and industrial segments. Xtrinsic solutions offer ideal blends of functionality and intelligence designed to help our customers differentiate and win in highly competitive markets

For a complete list of boards offered as part of the Freescale Freedom development platform, please visit freescale.com/Freedom

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