

Eowave Sensor Datasheet: 2D GForce Accelerometers



FEATURES

High resolution
Dual-axis accelerometer
Low power <math><400 \mu\text{A}</math> (typ)
X-axis and Y-axis aligned to within 0.1°
High shock survival

APPLICATIONS

Tilt and motion sensing
Dance and live performance
Smart hand-held devices
Computer security
Input devices
Pedometers and activity monitors
Game controllers
Toys and entertainment products

Eowave 2D-GForce accelerometer

This Eowave 2D-GForce is a low power, complete dual-axis accelerometer with signal conditioned voltage outputs. It measures acceleration with a full-scale range of ± 2 g. It can measure both dynamic acceleration (e.g., vibration) and static acceleration (e.g., gravity). The outputs are analog voltages proportional to acceleration.

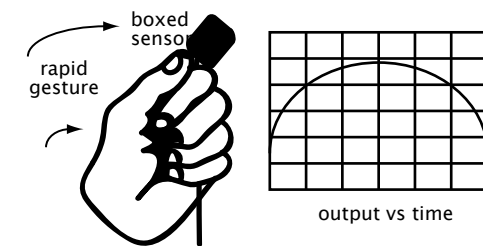
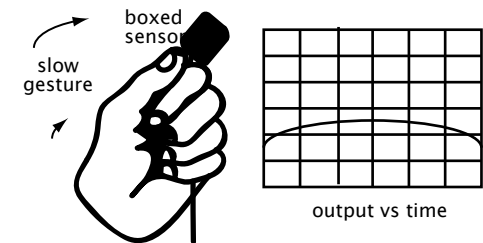
Technical specifications (TA = 25°C, VDD = 3 V, acceleration = 0 g.)

SENSOR INPUT (Each axis): Measurement Range: ± 2 g
Nonlinearity: 0.2 % of FS
Alignment Error: ± 1 Degrees
Alignment Error (X to Y): ± 0.1 Degrees
Cross-Axis Sensitivity: ± 2 %

SENSITIVITY (Each axis): Sensitivity at X, Y: VDD = 3 V 174 mV/g
Sensitivity Tolerance (part to part): ± 15 %
Sensitivity Change due to Temperature (Δ from 25°C): ± 0.02 %/°C
From 0° to 70°C

TEMPERATURE:
NOISE: Typical noise floor: 300 $\mu\text{g}/\sqrt{\text{Hz}}$, allowing signals below 2 mg (0.1° of inclination) to be resolved in tilt sensing applications using narrow bandwidths (10 Hz). Bandwidths of 1 Hz to 3 kHz can be selected to suit the application.

EOBODY COMPATIBILITY
Compatible Eobody1 & 2: Wiring: 2 x 6.35 mm TRS jack, 2 m-long cable
Compatible Eobody2 Wireless System : Wiring: 3 pins
Output format: Continuous 0 to 127 (7 bit), 4095 (12 bit)
Size: 22 mm ; Weight: 5 g
Power: Built-in phantom 5V DC



Basic Settings

step 1 Connecting a 2D GForce sensor to your Eobody2

Plug your sensor and Eobody2 USB8 SensorBox as shown in First Steps Tutorial T 0.1.

step 2 What do I need to remember about this sensor?

2D GForce need 2 inputs (1 per axis).

2D GForce sensors are very easy to configure as their range goes continuously from 0-127. It means that in most cases, using the Eobody2 internal process is not necessary. In the Editor routing window, you will be able to choose the destination (pitch bend or others).