

Shimmer3

Wireless Sensor Platform



TECHNICAL SPECIFICATIONS

Microcontroller	TI MSP430
A/D Resolution	11 Channels of 12-bit A/D: 7 free for expansion
RAM	16KB
Flash	256KB
Frequency	24MHz
Wide Range Accel.	STMicro LSM303DLHC
Range	±2g, ±4g, ±8g, ±16g
Sensitivity	1000 LSB/g at +/-2g
Numeric Resolution	16-bit
Typical Operating Current	110 µA (Running Mag @ 7.5 Hz & Accel @ 50 Hz)
RMS Noise*	27.5 x 10 ⁻³ m/s ²
Low Noise Accel.	Kionix KXR85-2042
Range	±2g
Sensitivity	600 ±18 mV/g
Typical Operating Current	500 µA
RMS Noise*	5.09 x 10 ⁻³ m/s ²
Digital Mag	STMicro LSM303DLHC
Range	±1.3; ±1.9; ±2.5; ±4.0; ±4.7; ±5.6; ±8.1 Ga
Sensitivity	1100 LSB/Ga at ±1.3
Numeric Resolution	16-bit
RMS Noise*	0.0081 normalised local flux
Gyro	Invensense MPU9150
Range	±250; ±500; ±1000; ±2000 dps
Sensitivity	131 LSB/dps at ±250
Numeric Resolution	16-bit
Typical Operating Current	3.5 mA
RMS Noise*	0.0481 dps
Pressure Sensor	Bosch BMP180
Range	300 - 1100 hPa
Numeric Resolution	16-bit
Typical Operating Current	1 µA at 1 Hz
RMS Noise (Standard mode)	0.4 m (from Datasheet)

*@ 100Hz Bandwidth

CLASS LEADING WEARABLE WIRELESS SENSING

Dimensions: 51mm x 34mm x 14mm

Improved straps and quick snap clips provide full mobility, unrestricted movement and comfort for the wearer

Highly flexible and adaptable sensor platform can be applied to specific end user requirements

Highly accurate and scientifically reliable raw or calibrated data offers complete control over capture and interpretation of signals in real-time



SHIMMER3 ROADMAP

Shimmer3 Platform	Now Available
Biophysical	ECG, EMG, & GSR + Heart Rate: Now Available
Expansions	PROTO3 Mini Expansion board and PROTO3 Deluxe Expansion board: Now Available Strain Gauge Amplifier: Now Available
Weight	23.6 Grams

SUPPORTING SOFTWARE

Shimmer ConsensysPRO & ConsensysBASIC Software
 ShimmerCapture for Android
 Shimmer 9DoF Calibration for Android
 Shimmer LabVIEW Instrument Driver
 Shimmer MATLAB Instrument Driver
 Shimmer Java/Android API
 Shimmer C# API
 Multi Shimmer Sync for Android

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