shimmer
DISCOVERY IN MOTION

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Shimmer Wireless Sensor Unit/Platform

Price: €199.00

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Description	**Images**	**Specifications**	**Similar Products**

Shimmer is a small sensor platform well suited for wearable applications.

Description

The unit host an integrated 3-axis accelerometer, large storage, and low-power standards based communication capabilities which enable emerging applications in motion capture, long-term data acquisition, and real-time monitoring. The latest revision of the Shimmer platform was launched in October 2009 and adds improvements based on years of field trials and deployments. The most dramatic change is a patent-pending direct-to-host data transfer path to hasten data offload, minimize user training, and provide fail-safe data access. Power control features have been added including soft-power switching and low-battery shutdown. Finally a passive vibration sensor was added— this sensor efficiently signals when the device is in use. Expansion modules currently include a gyro board, ECG, EMG, GSR, PIR and an Analogue Expansion board. The platform transmits the data either in real-time via Bluetooth or via 802.15.4 radios. The unit also has an SD card for local storage as appropriate. The device is open source and runs on TinyOS.

Key Features

Shimmer provides and extensible platform that allows you to overcome traditional hardware and software constraints through the following features:

  Very low power consumption
  Soft power switching
  Small form factor: 50mm x 25mm x 12.5mm
  Light weight: 15 grams
  Readily connects via Bluetooth or 802.15.4 radio
  Offline Data Capture – Micro SD Card Storage – 2 Gigabytes
  SD data bypass 8MHz MSP430 CPU (10Kbyte RAM, 48Kbyte Flash, 8 Channels of 12 bit A/D)
  Open Platform, driven by TinyOS
  Internal and external connectors for expansion
  Includes simple serial command interface for Bluetooth®
  Integrated TCP/IP stack for 802.15.4
  Integrated 3-axis MEMs accelerometer with selectable range
  Integrated tilt / vibration sensor
  Integrated Li-ion battery management

Applications

Shimmer is typically being used for proof of concept and rapid prototyping of both sensor boards and analytical algorithms. Shimmer was originally designed to further develop research in Telehealth, Disease Management, Assisted Living, and wearable health sensing. The Shimmer platform is now being used for projects in institutes in over 33 countries around the world. Current uses include gait analysis, motion sensing, mesh networking, sport technique analysis, and ambulatory cardio vascular monitoring to name but a few. Some of the typically areas of application are listed below

  Human Health Monitoring
  Activities of Daily Living
  Sports Science
  Structural Monitoring
  Intelligent Buildings
  Environmental and Habitat Monitoring

Download the Shimmer Wireless Sensor Platform Data Sheet.

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