

Shimmer ECGmd



INTRODUCTION

The Shimmer ECGmd is the newest addition to the Shimmer product family. ECGmd has a small form factor, features a 5 wire 4 lead Holter monitor electrocardiograph solution with built in defibrillation protection. ECGmd is designed for medical professionals, researchers or system integrators to develop a full electrocardiograph for medical applications.

The ECGmd Unit is powered by a rechargeable battery, giving up to 10 hours of use between charges. Data is passed via a Bluetooth link to the host storage and display device.

PRODUCT OVERVIEW

While addressing the challenges of mobility, the ECGmd unit can record the pathway of electrical impulses through the heart muscle, and can be recorded on subjects with signals collected from the skin via conventional disposable electrodes.

Shimmer ECGmd hardware and firmware is intended to be used as an ECG recorder that ultimately can be incorporated into a full Electrocardiograph solution.

KEY FEATURES

- Re-usable, 5 wire, 4 channel Holter monitor electrocardiograph (ECG)
- Class IIa Medical Device EUR and ROW. (Low Voltage Directive, LVD to USA and Canada)
- MDD 93/42/EEC approval
- FCC and CE approved
- Onboard defibrillator protection
- 9 & 18 inch DIN colored snap leads (Red, black, yellow, green, white) for ease of use with ECGmd only
- Standard Bluetooth communications, no data storage
- Rechargeable lithium battery 450mAh,
- Integration guide provided for system integrators
- ECG display example software included, (Test only)

APPLICATIONS

The ECGmd can be applied to a variety of applications such as:

- Atrial fibrillation
- Premature ventricular contraction
- Heart function monitoring
- Abnormal rhythm detection and alert
- Fatigue analysis



Shimmer ECGmd Unit with electrode leads

Shimmer ECGmd



TECHNICAL SPECIFICATIONS	
Gain:	Software configurable (1, 2, 3, 4, 6, 8, 12)
Data Rate:	Software configurable (125, 250, 500, 1000, 2000, 4000, 8000 SPS)
Input Differential	Approx 800 mV (for gain = 6)
Dynamic Range:	
Bandwidth:	8.4 kHz
Ground:	Wilson Type Driven Ground
Input Protection:	ESD and RF/EMI filtering; Current limiting; inputs include defibrillation protection (survive only, not repeat)
Connections:	Input Ch1N, Input Ch1P, Input Ch2N, Input Ch2P, Reference (Ref) All Hospital-Grade 1mm Touchproof IEC/EN 60601-1 DIN42-802 jacks
Weight:	34 grams
Dimensions:	100 x 30 x 10 mm



IMPORTANT INFORMATION
ECGMD IS REUSABLE
ECGMD IS NOT STERILE
SUITABLE FOR USE IN A MEDICAL ENVIRONMENT
NOT INTENDED FOR USE AS AN UNATTENDED CRITICAL MONITOR
NOT TO BE USED IN A NON-CONTROLLED MEDICAL ENVIRONMENT
DESIGNED FOR SYSTEM INTEGRATORS OR MEDICAL RESEARCHERS TO INCORPORATE INTO A SYSTEM THAT CREATES A FULL ELECTROCARDIOGRAPH
DIGITAL INTERFACE INCLUDES TEST ONLY SOFTWARE FOR VALIDATION PURPOSES

ECGMD MODULE SPECIFICATIONS
Processing: MSP 430 microcontroller
Communication: Bluetooth – RN42, 802.15.4 radio – TI CC2420
Battery: 450mAh rechargeable lithium battery