

VitalJacket® SDK



VitalJacket Certificates

CE marking

On October 2009, VitalJacket was certified according to the European Directive 93/42/EEC, proving to be in conformity with all the provisions of this directive therefore bearing the CE mark enabling the product to move freely within the Community and to be put into service in accordance with its intended purpose. CE 1011, CE 0560, ISO 9001 and ISO 13485

Brasil Certification

On October 2010, VitalJacket finished its certification in Brasil according to ANATEL and ANVISA regulations.

The VitalJacket® is a wearable system with real time ECG acquisition that can be transmitted on-line or stored for posterior analyses. The ECG signal is send in real time to a online module using Bluetooth (wireless) or stored in a memory card for later analyses through a powerful software.

VitalJacket SDK

Offer new VitalJacket integration possibilities into R&D projects, new prototypes and products.

Provide developers a Software Development Kit (SDK) and API for different programming environments with drivers and sample code.

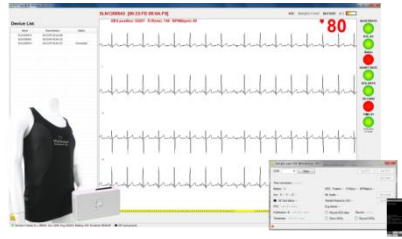
Allow VitalJacket configuration through a simple messaging protocol/Mode switching to enhance its adaptability.

What is VitalJacket SDK?

A tool to provide all stream control parameters (Sampling Frequency, Gain, etc.), Mode Switching (Configuration/ Recording); RTC settings; Pushbutton event (on Bluetooth stream and SD Card):

- App Windows for test and data acquisition;
- App Android;
- Tools for data export: full ECG wave (1-5 leads), beat-by-beat R-R (ms), QRS position (sample offset), Triaxial accelerometer (X,Y,Z; +/-4g);
- Windows DLL for QRS detect (Pam & Tompkins, MIT-BIH database validated);
- Library for Linux and Raspberry

Hardware Technical Data



Technical Specification

| | |
|------------------|--|
| Current | 40 mA/h |
| Gain | 500 |
| Max Signal Range | 3.3 mV |
| Power | 132 mW/h |
| Leads | Full ECG data output at 500Hz, Version 1L: Lead I Version 5L: Lead I, Lead II, Lead V1 – V3, Lead V4 – V6 Lead III can be computed after sampling |
| Temperature | -20°C to +45°C |
| Dimensions | 66 x 38 x 16 mm |
| Weight | 50g |
| Battery Autonomy | 72hours |

Logger Unit Specification

| | |
|---------------|--|
| Communication | Bluetooth 2.0, Class 2, 2.4GHz |
| Storage | 1GB SD Card |
| Battery | 1200mAh rechargeable Li-ion |
| Accelerometer | Tri-axial accelerometer output at 10Hz, ±4g |
| RTC | Integrated in device |
| Pushbutton | To register events (in Bluetooth stream and SD Card) |

Support applications

- A Windows Ecg tool software has been made available
- Windows DLLs for data processing and QRS detect [1, 2]
- Sample code for easy integration
- Library Android for data processing
- Library Linux for data processing and QRS detect [1, 2]
- Library for Raspberry Pi for data processing and QRS detect [1, 2]
- Sample code in Android
- Tools for export data to Matlab

[1] Pan J and Tompkins WJ. A Real-Time QRS Detection Algorithm. IEEE Transactions on Biomedical Engineering 32(3):230-236, 1985

[2] MIT-BIH Arrhythmia Database:

<http://www.physionet.org/physiobank/database/mitdb/>

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