

Optical cardiac monitoring

Medical-grade detection and classification of cardiac arrhythmias



Reliably assess heart condition – anywhere, anytime!



CSEM's optical cardiac monitoring software modules use photoplethysmography (PPG) signals of 30 seconds to detect and classify arrhythmias. Monitoring of heart condition becomes possible anytime and anywhere when wearable devices such as bracelets are used to generate PPG signals. This enables the detection of cardiac arrhythmias that would otherwise remain undetected, and thus facilitates the timely initiation of therapy to prevent medical complications such as strokes and heart failure. CSEM's optical cardiac monitoring software modules are clinically validated, compliant with ISO 13485/IEC 62304 and compatible with ECG signals.

Being committed to enhancing and improving optical cardiac monitoring, CSEM is currently conducting a clinical study, involving more than 500 patients in two leading Swiss university hospitals.

Sensing form factors compliant with CSEM's optical cardiac monitoring

- Transmissive PPG signals, e.g., from a SpO2 sensor
- Reflective PPG signals, e.g., from a SpO2 sensor, a PPG sensor in a wristwatch or bracelet, a smartphone camera/LED module
- Classic ECG signals

In partnership with



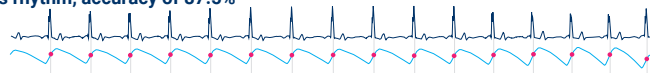
FIRSTBEAT

ActiGraph.

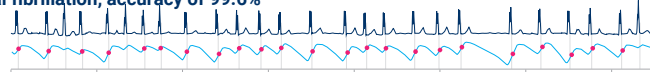


Centre hospitalier universitaire vaudois

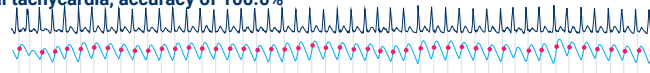
Sinus rhythm, accuracy of 87.5%



Atrial fibrillation, accuracy of 99.6%



Atrial tachycardia, accuracy of 100.0%



AV reentrant tachycardia, accuracy of 96.4%



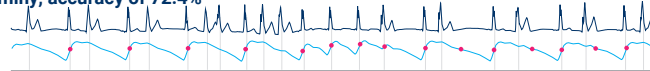
AV block, accuracy of 93.1%



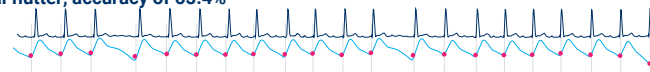
Ventricular tachycardia, accuracy of 80.2%



Bigeminy, accuracy of 72.4%



Atrial flutter, accuracy of 65.4%



— ECG — PPG — Heart beat

Contact us now

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