

Medical & Life Sciences

Project
Management



Systems
Engineering



Electrical
Engineering



Software
Engineering



REAL-TIME CARDIAC ANALYSIS AND EXTENDED EXISTING WEARABLE ECG DATA RECORDER

APPROACH

- Applied analysis and testing to characterize device energy use and identify targets for energy optimization
- Optimized firmware implementation to reduce energy use while maintaining algorithm performance

RESULTS

- Finished system exceeded lifetime requirements and received FDA approval to go to market
- Low power, long-term electrocardiogram (ECG) recording and analysis tested against the ANSI/AAMI EC57 standard
- 510(k) cleared
- Battery life improved from 24 hours to seven days

KEY TECHNOLOGIES

- Real-time ECG waveform analysis to detect cardiac events
- Firmware optimization to extend battery life

