Patient Monitoring Arm Band

THAUMATEC TECH GROUP

Patient Monitoring Arm Band, MDR Class IIa

The goal of this arm band is to enhance patient quality of life, reduce medical costs, support healthcare professionals in managing larger patient groups, and enable faster responses to medical concerns.

Analysis

24/7, continuous monitoring of heart rate, oxygen saturation level, temperature and activity

Connectivity

Medical-grade wearable device that communicates with the Cloud Portal

Features

Vital Parameters

Fall detection

User localization

Certificates and device classes

MDR Class IIa

IEC 62304

FDA

Contribution

Thaumatec was responsible for the full firmware development, including architecture design, technology selection, software implementation, testing, quality assurance, and CI/CD infrastructure setup. Additionally, our team contributed to biomedical algorithm research, cloud device protocol specifications, and integration activities.

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> Thaumatec was the only company that fulfilled the requirement of in-depth know-how of embedded software development and the proper QMS according to ISO13485 and IEC62304.
>
> *-Co-Founder SmartQare-*

Solution

The solution consists of a wearable device, an online platform, and a mobile app. The arm band features multiple sensors, including PPG, accelerometer, temperature, and pressure sensors, to measure vital biomedical parameters and generate alerts in emergency situations. Continuous cloud communication provides real-time feedback to users. The development process adhered to ISO 13485 certification standards.

 ISO 27001 LL-C (Certification)

 ISO 9001 LL-C (Certification)

 ISO 13485 LL-C (Certification)