



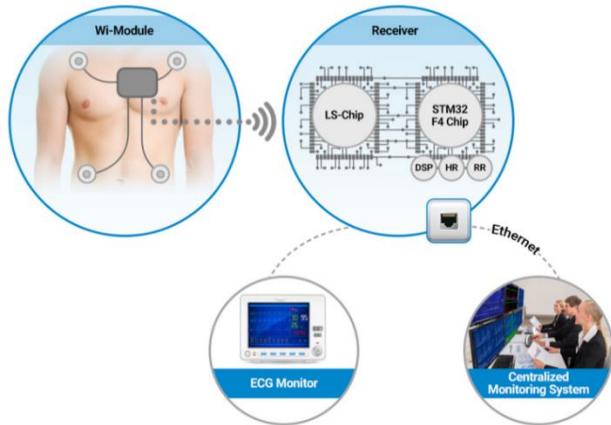
GadgEon

Engineering Smartness

HEALTH MONITORING SOLUTION



Health Monitoring Solution



Medical solution for real time monitoring – Respiration , ECG and Pulse Oximetry

Results / Outcomes

- Designed test automation framework for end to end use case validation integrated with standard CI/CD framework
- Designed custom solutions for automating test cases spanning different interfaces and hardware
- Automated test scripts for data verification



System Description

Challenges

- Implement CI/CD Framework for improving the development process
- System validation for a medical solution having Multiple Interfaces and hardware devices
- Real time data validation and monitoring

Technology used :

- Python, Robot framework, Bamboo, AWS, WiFi

Continuous Integration and Deployment

- Atlassian Bamboo
- Shell Script
- Git

Test Automation

- Python , Robot Framework, WiFi
- Image Processing – Tenser Flow
- Real time LCD Touch Simulation – Robotic Arm
- Mode Changes simulation for the hardware – 8 Port USB relay

Test Management and Reports

- TestRail
- Robot Framework



System Description

Feasibility Study and Documentation

- Requirements Gathering & Analysis
- Defined functional test cases
- Use case based on end to end test scenarios

Implemented CI /CD Framework

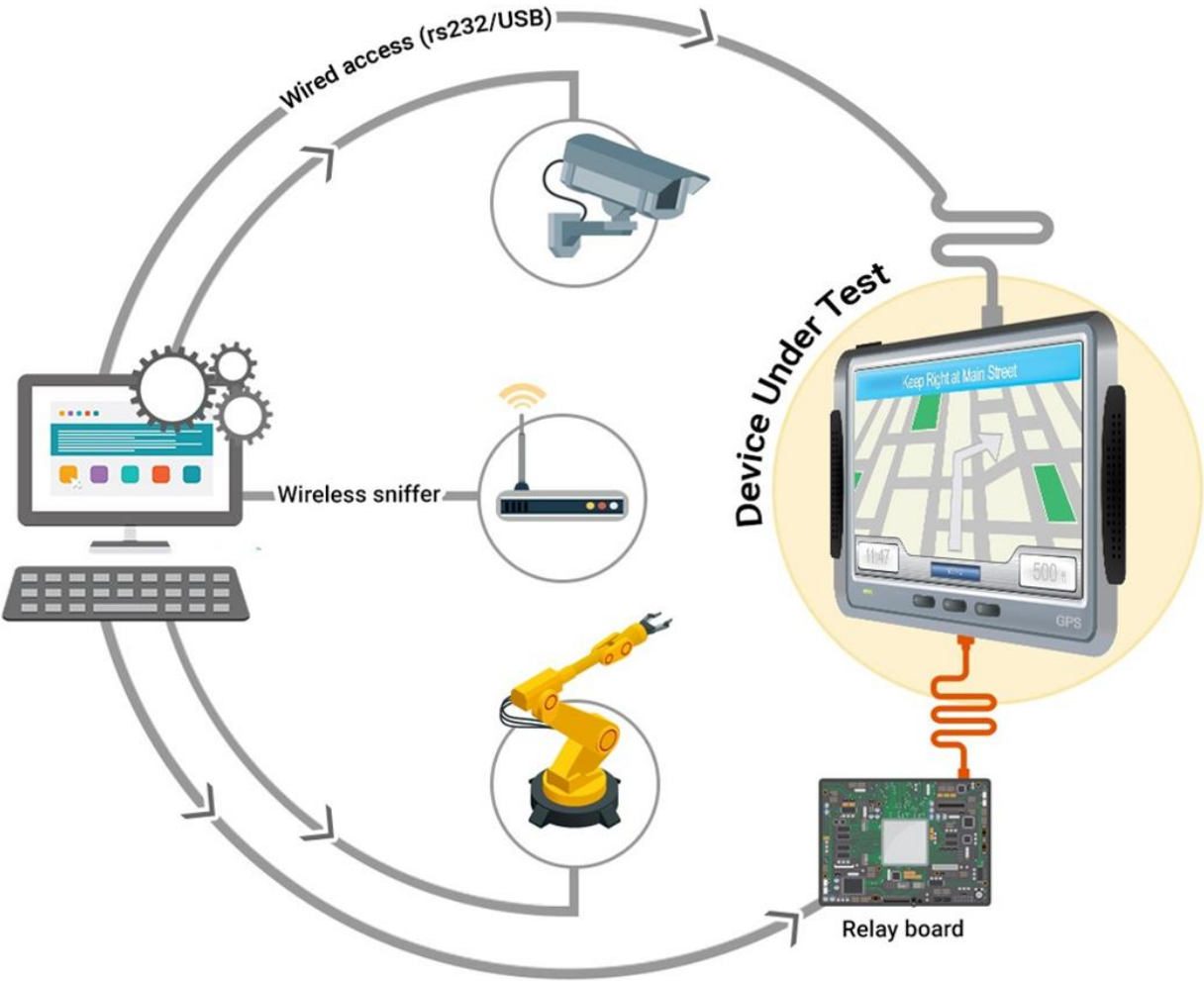
- Bamboo with Master slave configuration running in Cloud AWS EC2 Instance and in a local network servers.
- GCC in AWS EC2
- Amazon S3 Bucket for Image Storage
- Git

Automation framework

- Designed Automation framework which can validate multiple interfaces on different hardware
- USB Output validated using Custom Hardware consist of USB Mux and Relays.
- LCD Output validation using Image processing tools - TensorFlow, OpenCV
- Real-time KEY PAD Controls /Hardware Mode changes using Robotic Arm / USB Relay controls .
- Test scripts using python and shell scripts
- Data verification using ethereal



Test System Diagram



THANK YOU



For More Details, Let's Connect



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