Rapidise Delivered Success Stories in Security & Surveillance

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Multi-Tenant Cloud Video Management Portal

Rapidise has a developed Multi-Tenant Custom Cloud Video Management Software to replace the existing third-party Portal. The portal is a comprehensive video streaming platform that enables users to manage and distribute video content seamlessly. It provides a user-friendly interface for uploading, organizing, and sharing videos securely. The portal offers robust features for video playback, customization, and analytics, making it an ideal solution for businesses and individuals in various industries.

Our Role:

- PRD Creation
- System Architecture
- UI Design
- Frontend Development
- Backend Development
- Admin/Partner/Customer Portal
- Database
- DevOps Activity
- Testing and Deployment

Technologies:

- Frontend: ReactJS
- Backend: NodeJS
- Web Server: Nginx
- Database: PostgreSQL and MongoDB
- Cloud Infrastructure: Amazon Web Services (AWS)
- Video Encoding: FFmpeg

Multi-Tenant Access Control System

Rapidise engaged in designing and developing a state-of-the-art access control system tailored for discerning multi-family property owners who want a perfect balance of contemporary design and high-tech functionality. It boasts the largest color touchscreen available in both cellular and ethernet models, along with external camera integration that offers multiple photo views of visitors and live streaming video at the gate.

Our Role:

- PRD Creation
- System Architecture
- Hardware Development
- Firmware Development
- Mechanical ID Design
- EVT Prototype and Testing
- Testing and Deployment
- Certifications – FCC, PTCRB, UL, AT&T, Verizon, IP65, IK10
- Mass Production

Technologies:

- iMX 8M Plus
- LoRaWan Gateway
- STM 32 MCU
- Wiegand Interface
- Cellular & Ethernet
- 11” display
- 3MP Camera
- 3 Axis IMU Sensor
- Microphone & Speaker
- IP65 - outdoor rated

Smart Gateway For Access Controller

The Smart Controller provides complete access control intelligence in one compact device, making it easier than ever to manage building security without the need for traditional, bulky access hardware. By leveraging existing electrified door systems the smart lock integrates seamlessly into any environment while providing users with enhanced functionality, remote control, and a streamlined experience. The device connects seamlessly to cloud-based platform, providing businesses with full control over their access systems with minimal setup.

Our Role:

- PRD & System Architecture
- Embedded Hardware Development
- Embedded firmware Development
- EVT Prototype and Testing
- Mass Production
- Functional Testing

Technologies:

- Authentication IC - SE050E2HQ1/Z01Z3Z
- IoT Module - WT02C40C
- WiFi-6 and BLE-5.4

Gateway Operated Access Control System

The Project was developed to open and close the gate through LoRaWAN, BLE and HID reader cards. To achieve this, we built the hardware which can connect with LoRaWAN gateway as a Node, BLE peripheral which can connect with Mobile phone and HID wiegand interface to read the HID card data. The HID card data and other access code information can be stored in SD card. USB has been given to send debug messages on PC. Accelerometer is used to detect tampering event by detecting shake movement.

Our Role:

- PRD Creation
- System Architecture
- Hardware Development
- Firmware Development
- PCB Fabrication, Component Procurement and PCB Assembly
- Board Bring Up
- Testing and Deployment

Technologies:

- LoRaWAN Node
- BLE
- USB
- Wiegand Interface

SmarTouch – Premium Smart Switch

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Smart Touch, being a premium smart switch with Touch LCD, has a sleek shiny crystal look that adds a touch of distinction to your home, office, or enclosed space. It has a 10.1" crystal clear display providing sharp backgrounds and interactive touch controls. Our Google Home supported smart device takes it up a notch by allowing you to control your smart home devices with your voice. Simply ask Google Home to turn off the lights, adjust the temperature, or start your coffee maker. With Smart Touch with LCD, you can create a smart home that is truly customized to your needs and preferences.

Our Offerings

- System Architecture
- Embedded Hardware Development
- Embedded Firmware Development
- Cloud Architecture
- Mobile App(Android and iOS)
- Mechanical Enclosure
- Custom Web dashboards (Member, Admin, Users)

Software Technologies

- iOS - Swift
- Android - Kotlin
- Backend - NodeJS
- Frontend - ReactJS
- Database - MongoDB
- Cloud - AWS
- Communication Protocol - MQTT, Wi-Fi
- Voice Assistant - Alexa, Google Home, Siri

Simple Access Control Device

Rapidise engaged in this project for Redesigning the existing device with new updated features with reduction of size, the device is used in power stations where main control unit is connected with this device for controlling the Lights, Gates and power connections. The device is simply used as relay controller and feedback system for the main controlling and processing unit.

Our Role:

- PRD Creation
- System Architecture
- Hardware Development
- Firmware Development
- PCB Fabrication, Component Procurement and PCB Assembly
- Board Bring Up
- Testing and Deployment
- EMI/EMC Testing
- Reliability Testing
- CE, FCC Certification

Technologies:

- Microchip Micro Controller
- BareMetal Firmware
- Ethernet Programming
- Relays
- UART Programming

Access Control with Presence Detections

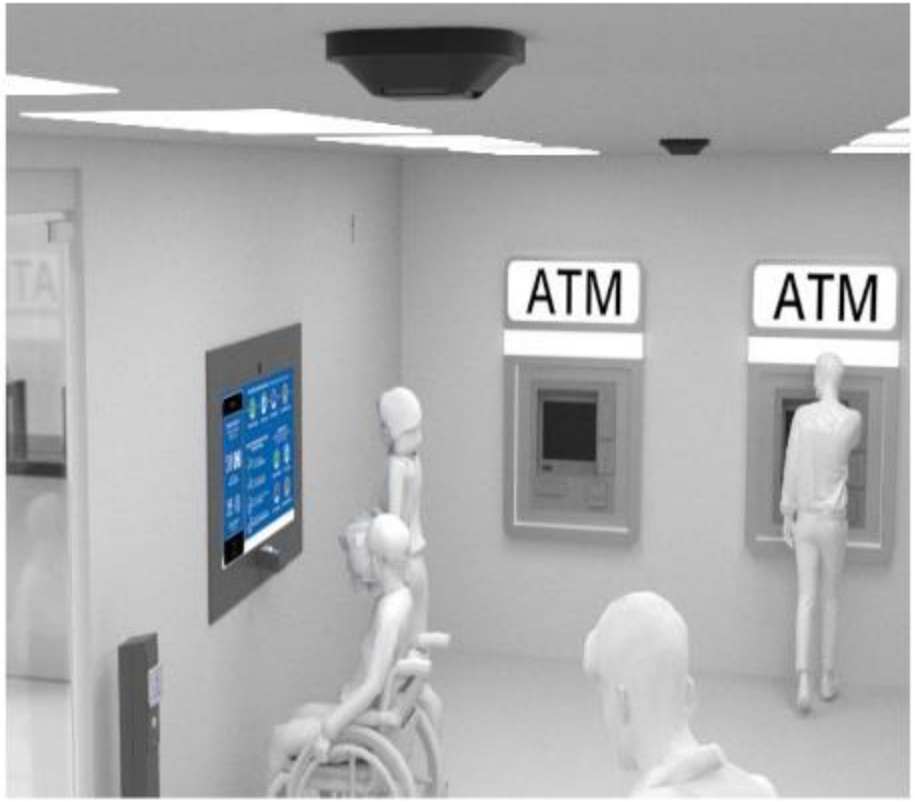
Rapidise engaged in developing a software for a RADAR-based Human Presence Detection (HPD) device for active monitoring of public spaces, ensuring social distancing and detecting loitering. The HPD is a high sensitive ceiling-mounted device used for monitoring activity in secure areas, such as ATM lobbies. The software detect and notify loiterers in ATM/tellerless branches, initiate loitering detection, and facilitate social distancing by limiting access to single individuals or small groups. Additionally, the HPD inhibits door access after entry to maintain single customer presence and alert to potentially dangerous situations on the client's property.

Our Role:

- Desktop Application Development
- UI Designing
- Application Rigorous Testing

Technologies:

- Frontend: ReactJS
- Backend: NodeJS
- .Net
- C#
- html/CSS



Smart MailBox

Rapidise has developed a Mailbox Receiver to receive a package from a courier drone (could be UPS, Amazon, a 3rd party drone courier delivering hot Chinese food or chilled prescription medication), and take it inside the ''Lockbox' housed within which keeps the package warm or cold based upon the contents.

Our Role:

- Embedded Hardware Development
- Embedded Firmware Development
- Mechanical Development
- UI Design
- iOS Mobile App Development
- Web Interface Development
- Cloud Development
- REST APIs Development
- Managed Services
- Platform Version Upgrade
- Performance Optimization

Technologies:

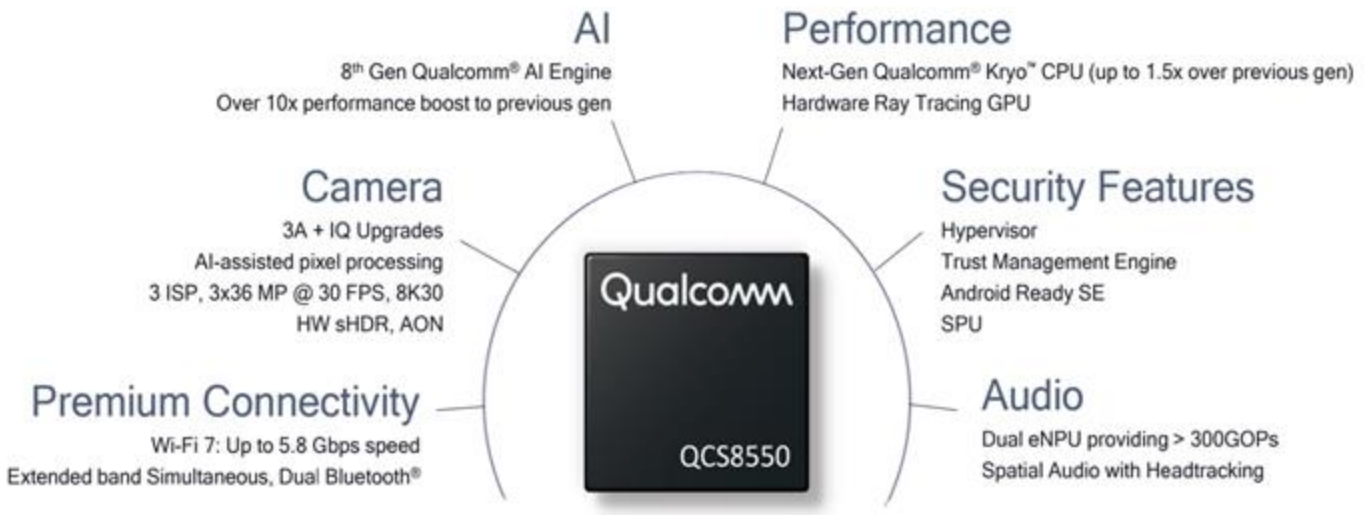
- Microprocessor
- GSM Implementation
- GPS Implementation
- Camera Integration
- Temperature sensor
- TOF Implementation
- Web Interface
- iOS - Swift
- Database - Hybrid (Mongo & MySQL)
- Cloud - AWS
- Cloud - Oracle
- Communication Protocol - MQTT

Low Light Camera based on QCS8550

Rapidise is developing a Low Light Camera with new age Image Sensor with better Performance then current industrial offerings. The Project is to make a Portable , Modular form factor that can help in making this Product scale across multiple industries such as Defense Vehicles, Drones, night Vision Scopes, Underwater Photography and other mission critical use case. The main Value addition is that we are working on this is to translate the existing optimized pipeline to the Qualcomm advanced Spectra 7 ISP.

Tech Specifications:

- Processor – **Qualcomm 8550 SOC**
- OS: Android 9.0
- System Components
  - LTE (4G) Communication
  - Wi-Fi 7
- QUAD Binning
- USB C display Port
- HDMI
- AI Algorithms
- 16 BIT 90 FPS



Next-generation premium SoC, delivering best-in-class system performance, exceptional intelligence, and premium imaging.