Rapidise illustrates its success in IP-based surveillance and multi-tenant access control through several detailed product delivery case studies, demonstrating expertise in integrating cutting-edge hardware, specialized AI, and cloud-based management systems.

Here are the key real-world deployments documented in the sources:

# 1. Multi-Tenant Access Control Systems (Multi-Family Property Access Control)

Rapidise has successfully designed and developed systems tailored specifically for sophisticated access management needs, particularly in multi-family environments.

### Multi-Tenant Access Control System

This project involved designing and developing a state-of-the-art access control system intended for **discerning multi-family property owners**.

- **Design and Interface:** The device features a **perfect balance of contemporary design and high-tech functionality**. It boasts the **largest color touchscreen available** in models supporting both cellular and Ethernet connectivity.
- **Video Integration:** The system integrates an external camera, providing **multiple photo views of visitors** and enabling **live streaming video at the gate**. The hardware uses an **NXP iMX 8M Plus Processor** and a **3MP Camera**.
- **Connectivity and Protocols:** The system supports **LoRaWan Gateway Connectivity** and utilizes the **Wiegand Interface**.
- **Robustness and Certifications:** The device is rated **IP65 for outdoor use**. Rapidise was responsible for development, testing, and securing numerous certifications, including **FCC, PTCRB, UL, AT&T, Verizon, IP65, and IK10**.

# 2. IP-Based Surveillance and Video Management

Rapidise's success in IP-based surveillance is demonstrated through its development of advanced camera hardware and comprehensive cloud VMS solutions.

### Surveillance AI Camera Based on QCS 6490

This product is a dedicated, remote-connected **video sensing/surveillance product** utilizing state-of-the-art functionality.

- **Camera Design:** The camera supports a **3-camera design** for capturing different angles and wide-angle viewing.
- **Edge Processing:** It is powered by the **Qualcomm QCS 6490 SOC** and runs on **Android 9.0**.
- **Connectivity:** It includes full wireless connectivity (**Wi-Fi, Cellular, and BLE**) for streaming camera data wirelessly to users' mobile devices. The product also supports wired connections, including multiple **USB 3.0 and USB 2.0 Ports** for future camera expansion.

### Multi-Tenant Cloud Video Management Portal

Rapidise developed a **Multi-Tenant Custom Cloud Video Management Software** specifically to replace an existing third-party portal.

- **Functionality:** This portal serves as a comprehensive video streaming platform enabling users to **manage and distribute video content seamlessly**. It provides features for video playback, customization, and analytics.
- **Architecture:** The solution uses **Amazon Web Services (AWS)** for cloud infrastructure, **ReactJS** for the frontend, **NodeJS** for the backend, and **FFmpeg** for video encoding.

### Smart City Surveillance Applications

While a dedicated "Smart City Surveillance" case study title is not provided, the core AI modules and product capabilities explicitly target smart city needs:

- **RISE Series Roadmap:** The RISE series modules, integral to Rapidise's platform, list surveillance applications like **Signal-Light Violation Alerts, Light Traffic Analytics, and ANPR (Automatic Number Plate Recognition)**, indicating product development focus in this area.
- **Telep AI Library:** The Telep AI Model Library includes algorithms essential for municipal or smart city traffic management, such as **License Plate Recognition, Congestion Detection, Overspeed Detection, Red Light Violation Detection**, and **Pothole Detection**.

## 3. LoRaWAN and Smart Gateway Deployments

Rapidise demonstrates expertise in building compact, connected devices that leverage LoRaWAN for efficient communication in security and access applications.

## Gateway Operated Access Control System

This project focused on leveraging LoRaWAN for remote access control.

- **Connectivity Focus (LoRaWAN Gateway):** The solution was developed to **open and close the gate through LoRaWAN, BLE, and HID reader cards**. The hardware was configured to connect with a **LoRaWAN gateway as a Node**.
- **Interface:** It utilizes the **Wiegand interface** to read HID card data.
- **Security Feature:** An accelerometer was incorporated to detect **tampering events** by monitoring shake movement.

## Smart Gateway For Access Controller

This delivered product offers an alternative, compact approach to access control.

- **Functionality:** This device provides **complete access control intelligence in one compact device**. It integrates seamlessly into existing electrified door systems, supporting enhanced functionality and remote control.
- **Connectivity:** The smart controller connects seamlessly to a cloud-based platform and features **WiFi-6 and BLE-5.4** connectivity.