

Case Study: HSYCO Iono Pi based servers streamline Access Control and Automation in BelVillage Aurora, Barcelona Hospitality Project

Introduction

HSYCO S.r.l., a leader in building automation and access control solutions, has implemented its innovative platform in several short-term rental apartment complexes. In collaboration with Bel Invest Group, a prominent real estate developer, HSYCO has delivered a cutting-edge system that enhances security, operational efficiency, and guest experience by integrating access control and building automation into a unified web-based solution.



Figure 1: BelVillage Aurora, Barcelona

Project Scope and Objectives

HSYCO's goal was to provide a centralized, scalable, and efficient system for managing access control and environmental automation across multiple apartment units. The key requirements included:

- **Seamless Access Control:** A secure and user-friendly system for managing apartment entry through keypad authentication and badge readers.
- **Integrated Building Automation:** Centralized control of temperature, fan speed, and lighting using Modbus-enabled actuators.
- **Remote Supervision:** A web-based interface allowing administrators to monitor and control all apartments from a single platform.

System Architecture

HSYCO's solution consists of:

1. **HSYCO PRO Server (On-Premise):** The central hub that manages communication and access control supervision of all apartments. In this specific deployment, the HSYCO PRO server is installed on-premise, ensuring complete

local control and reliability. However, HSYCO also offers solutions where the central server runs in the cloud, with local servers in each apartment handling in-unit functionalities.

2. **HSYCO IONO PI Units (On-Premise):** Each apartment is equipped with an HSYCO IONO PI device, responsible for controlling lighting and room temperature, managing door access, and integrating with Modbus-based automation. The IONO PI includes onboard relays to control door openings, as well as a series of digital and analog inputs to monitor the status of connected building systems.
3. **Wiegand Keypad and Badge Readers:** Installed at each apartment entrance, these readers allow secure tenant access via both PIN codes and RFID badges.
4. **Modbus Integration:** Temperature control and other automation functions are handled through USB-to-RS485 adapters, ensuring seamless communication with Modbus actuators.
5. **HSYCO graphical Web Interface:** An intuitive dashboard that provides administrators with real-time oversight of access control and building automation for all apartments. Each apartment also features a dedicated touchscreen interface for local control.

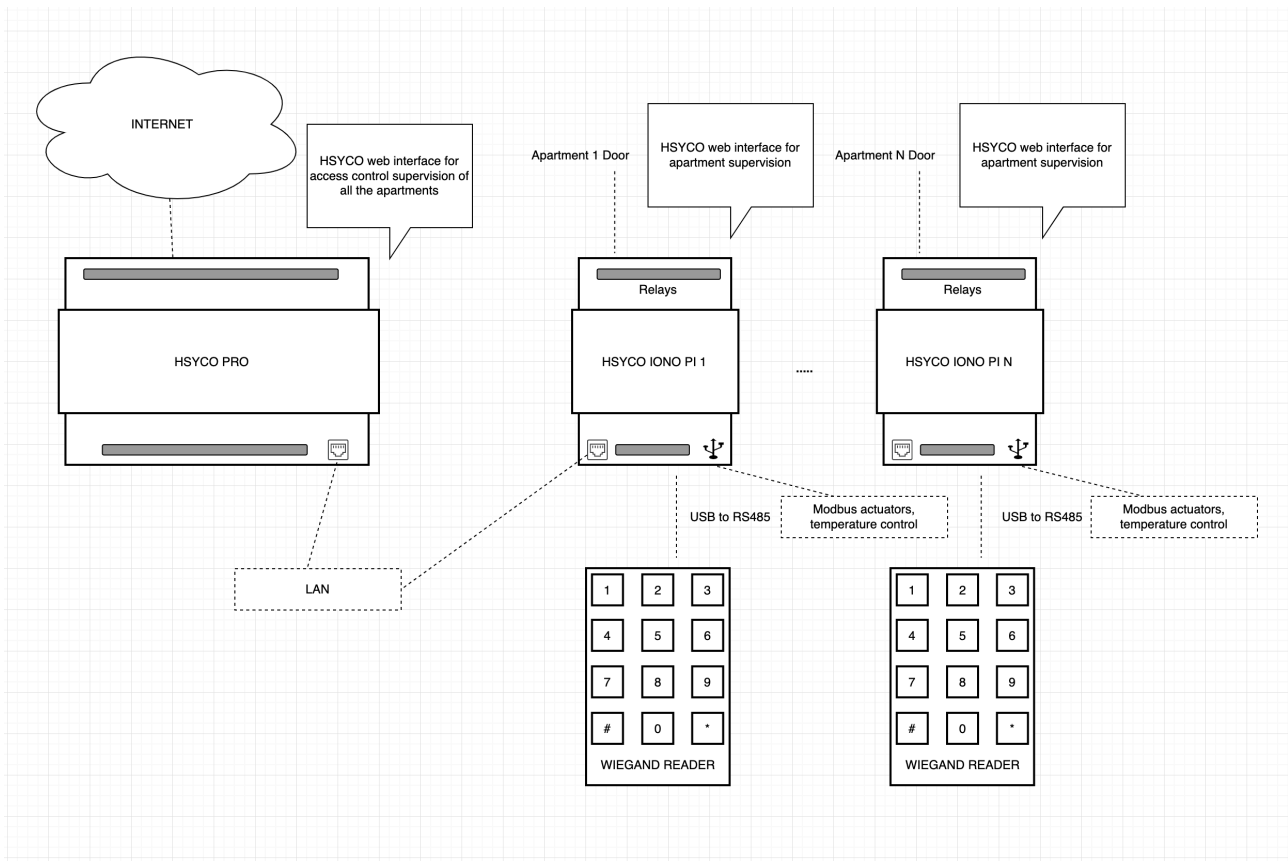


Figure 2: HSYCO's System Architecture

Case Study: BelVillage Aurora, Barcelona

Aurora is more than just an address; it's a gateway to a unique urban experience on Carrer Aurora, where historical charm meets contemporary living. Featuring 28 beautifully designed apartments, Aurora offers elegant interiors, high-quality furnishings, and the latest in technology. It's a perfect blend of comfort and urban energy, creating an unparalleled living experience.



Figure 3 & 4: An apartment in the building and HSYCO's Interface

Benefits and Results

The HSYCO implementation has delivered significant advantages:

- **Enhanced Security:** A robust access control system prevents unauthorized entry and ensures tenant safety.
- **Operational Efficiency:** Centralized monitoring reduces the need for on-site management, cutting operational costs.
- **Improved Guest Experience:** Automated lighting and climate control and seamless entry access enhance convenience for short-term renters.

- **Scalability:** The flexible architecture allows easy expansion to additional apartments or properties without major infrastructure changes.

Conclusion

HSYCO's expertise in building automation and access control has been key to modernizing short-term rental operations. Using its web-based solutions, HSYCO has delivered an advanced, scalable, and secure system that enhances security, efficiency, and guest satisfaction. The collaboration with Bel Invest Group highlights HSYCO's ability to provide tailored solutions for the hospitality industry.

About HSYCO

HSYCO is a versatile supervision platform that supports over 100 protocols and is continually evolving to integrate emerging technologies. It simplifies the creation of secure, scalable solutions for industrial and building automation. With a graphical interface, HSYCO streamlines control, enhances user experience, and minimizes operator training. Integration and interoperability optimize efficiency, reducing duplicative activities and costs in field systems. The platform ensures safety by combining functionalities and automating responses to alarms. HSYCO provides a secure umbrella for diverse systems, correcting unexpected behaviors and preventing unauthorized activities for enhanced security. Customizable and open for developers, HSYCO offers a powerful API based on Java and JavaScript languages. It caters to complex installations while remaining easy to maintain.

For more information, please visit our website: [HSYCO](#)

About BelVillage

BelVillage offers furnished apartments with co-living spaces in prime urban locations like Berlin and Barcelona, designed for globally mobile professionals seeking flexibility, comfort, and community. Each building combines architectural quality with smart-home technology, operational efficiency, and curated shared environments—delivering a scalable, tech-enabled housing model aligned with the future of urban living.

The BelVillage Aurora automation project was carried out by Smart Lab
www.smartlabsrl.com

For more information:

- [BelVillage Aurora](#)

Media Contact

Maria Chizzali, COO, HSYCO
Tel: +39 02 45077418
E-Mail: press@hsyco.com