



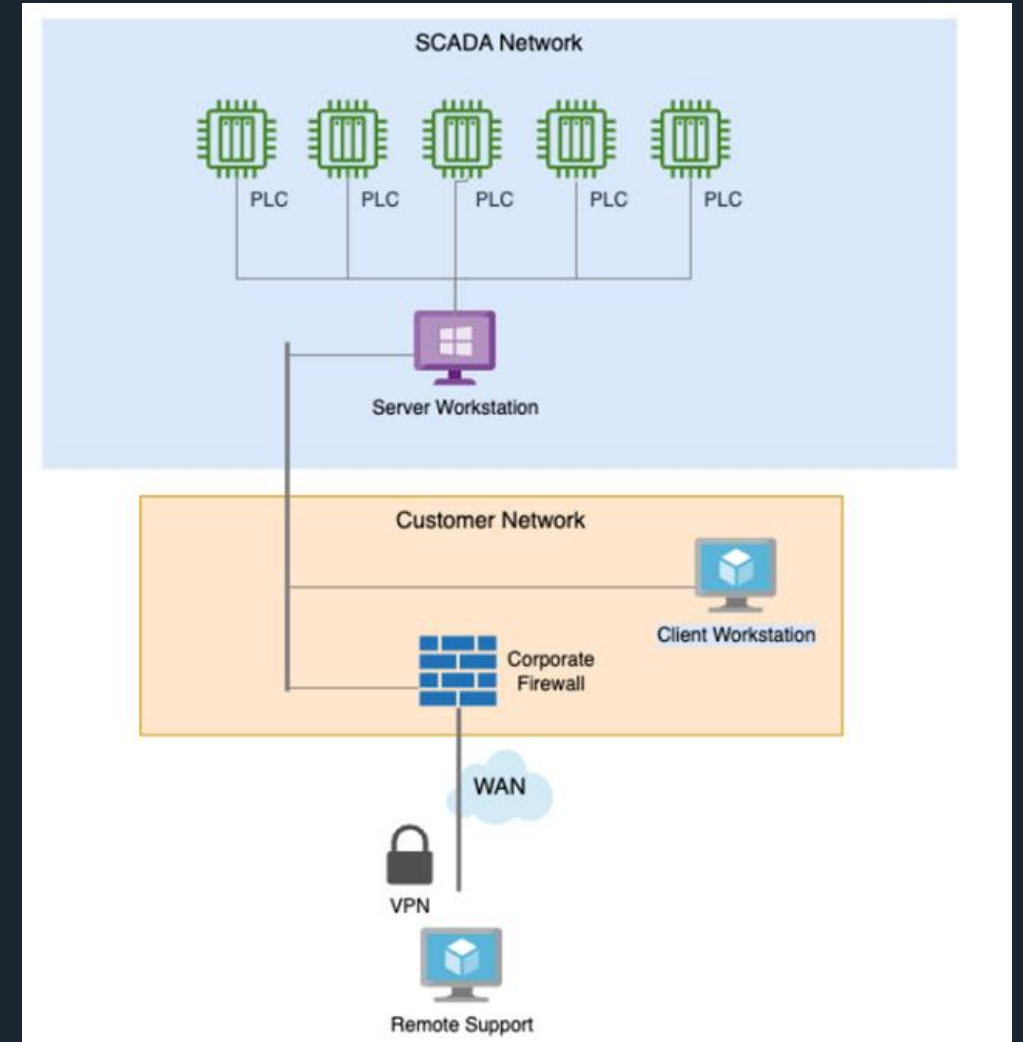
Introduction

Automation-  
Boards SRL

A Showcase of Our Work

# Industrial Automation - SCADA

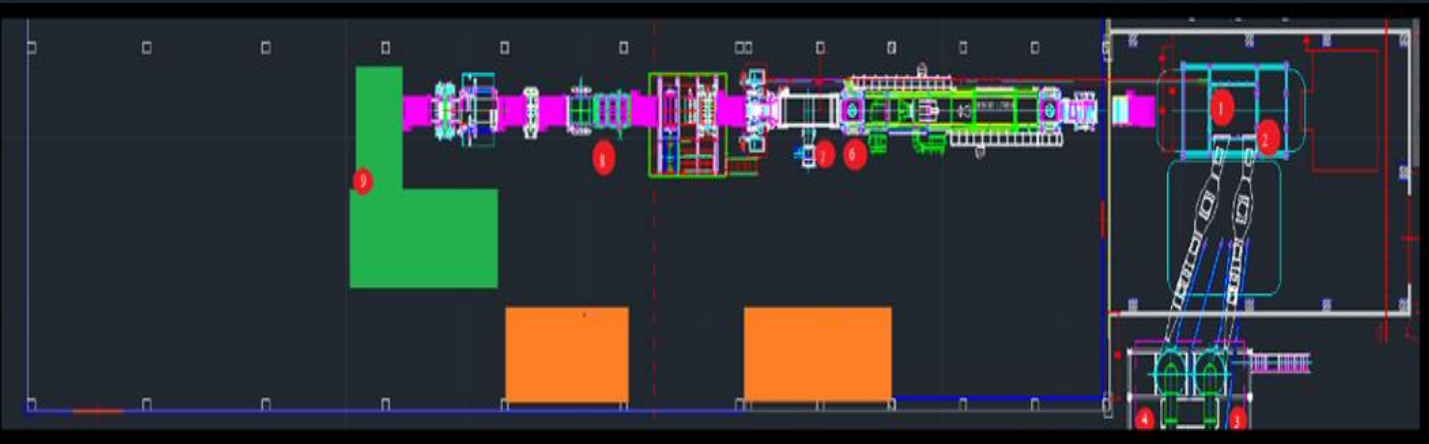
- Title: **Revolutionizing Control: SCADA System Implementation**
- Description: In this groundbreaking project, we successfully implemented a SCADA (Supervisory Control and Data Acquisition) system to empower seamless external control of plant Programmable Logic Controllers (PLCs). This innovative solution marks a significant leap forward in enhancing operational efficiency and control capabilities.
- Technology: SCADA



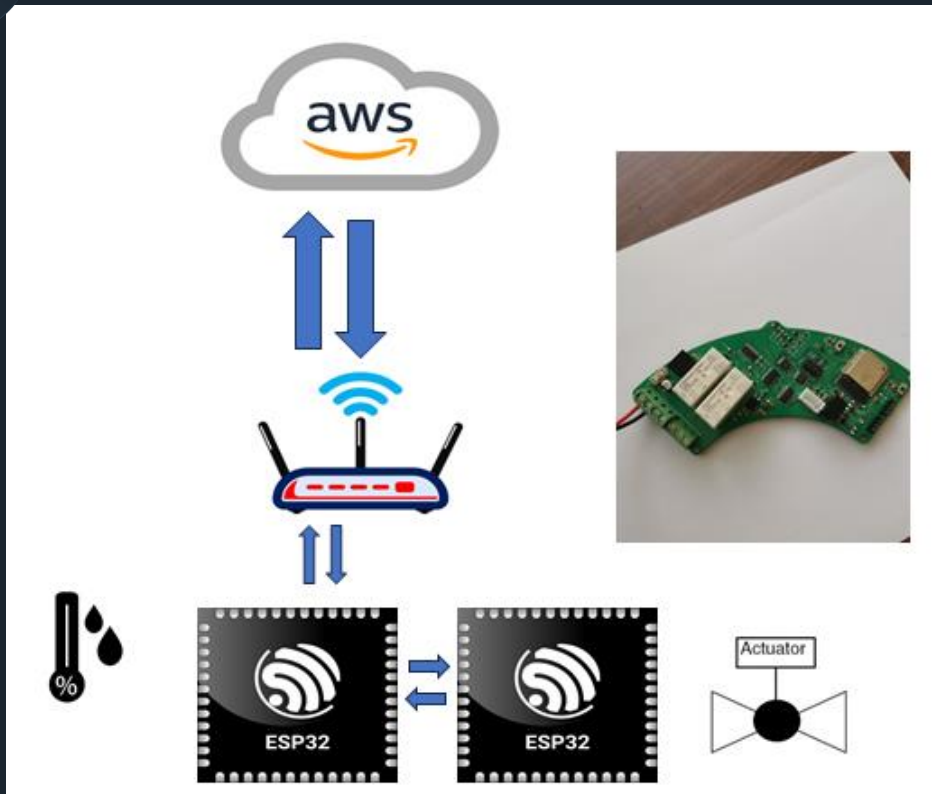
# Industrial Automation Glass Wool Production Plant



- Title: **Innovative Glass Wool Production Plant**
- Description: In this landmark project, our team took charge of the complete electrical design encompassing both medium and low voltage systems, as well as electronic components and PLC programming for a cutting-edge glass wool production line.
- Technology: PLC S7 TiaPortal



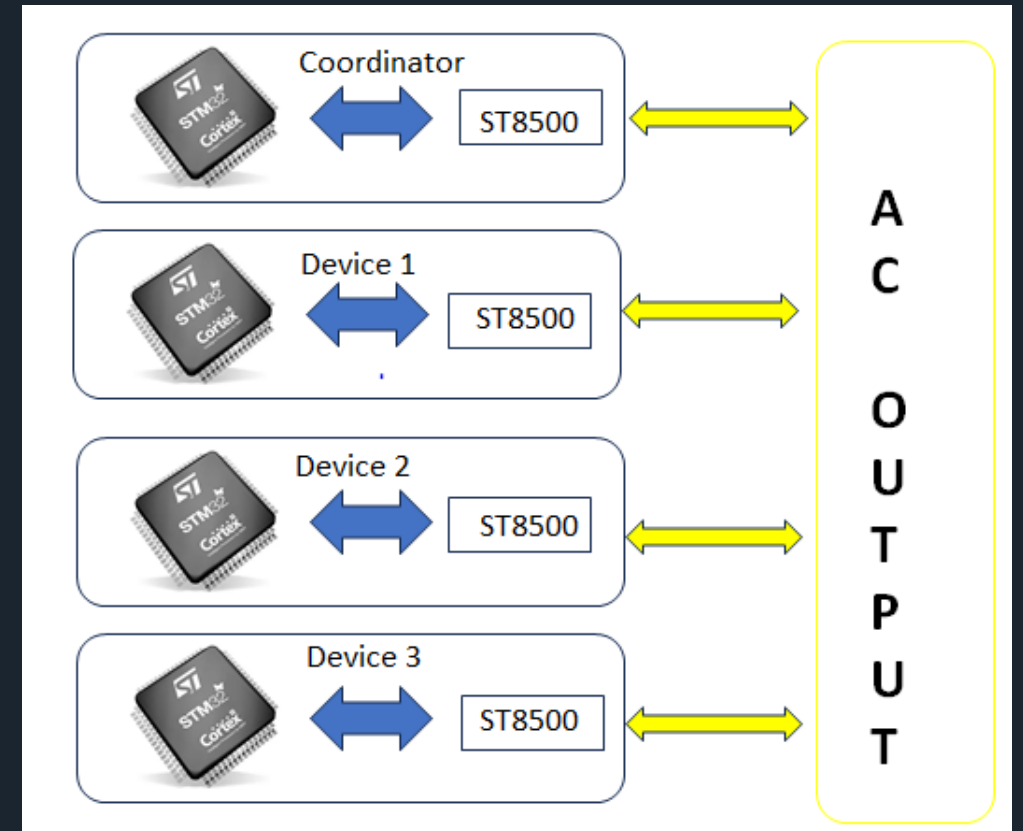
# Firmware Solutions (Example 1)



- Title: **Revolutionizing Air Quality Management: IoT Smart Environment Analyzer**
- Description: Embark on a journey of environmental intelligence with our IoT Smart Environment Analyzer project. ESP32#1 takes care of monitoring air quality through a network of sensors measuring temperature, humidity, CO2 and more. This data is seamlessly transmitted to Amazon Web Services (AWS), where a sophisticated algorithm analyzes and makes informed decisions. These decisions are then relayed back to ESP32#1, which in turn directs commands to ESP32#2. The purpose of ESP32#2 is to skillfully control actuators, ensuring the proactive purification of the environmental air.
- Platform: ESP32  
Technology: Amazon AWS, WIFI, TCP/IP, MQTT

# Firmware Solutions (Example 2)

- Title: **Next-Gen Connectivity: IoT Power Line Communication**
- Description: Dive into the future of connectivity with our IoT Power Line Communication project. Witness the creation of a network of boards, meticulously orchestrated by an STM32 microcontroller. These boards engage in seamless communication through Power Line Communication, utilizing data exchange across live and neutral cables. The technology is designed with a coordinator, serving as the NET owner, and devices boasting unique addresses seamlessly connected within the same network (NET).
- Platform: STM32, ST8500  
Technology: PLC, UDP, TCP/IP



# Firmware Solutions (Example 3)

- Title: **Precision Winding with BOBINATRICE: STM32-based Control System**
- Description: Experience precision in every winding with our BOBINATRICE project. We strategically selected an STM32-based board to interface with an aging machine dedicated to crafting the windings of electric motors. The STM32's mission was twofold: to accurately count the number of spires and orchestrate outputs, creating programmable groups of spires through an intuitive display. The total count of groups and spires was seamlessly configured via an LCD display, breathing new life into the control system.
- Platform: STM32  
Technology: Redesigning of an old control board





# Firmware Solutions (Example 4)

- Title: **Smart Vending Machine: STM32-based Control System**
- Description: Embark on a journey of intelligent vending with us! We carefully selected an STM32-based board to seamlessly control a vending machine. The STM32 interfaces with a coin changer, efficiently acquiring money from users. Not just limited to handling currency, the STM32 also empowers operators to set prices for each item. With precision, it drives motors to deliver the chosen product to the user, redefining the vending experience.
- Platform: STM32  
Technology: Executive Protocol

# Firmware Solutions (Example 5)



**Title: Automated Precision Bagging: Calce Raffinata Project**



**Platform: STM32**

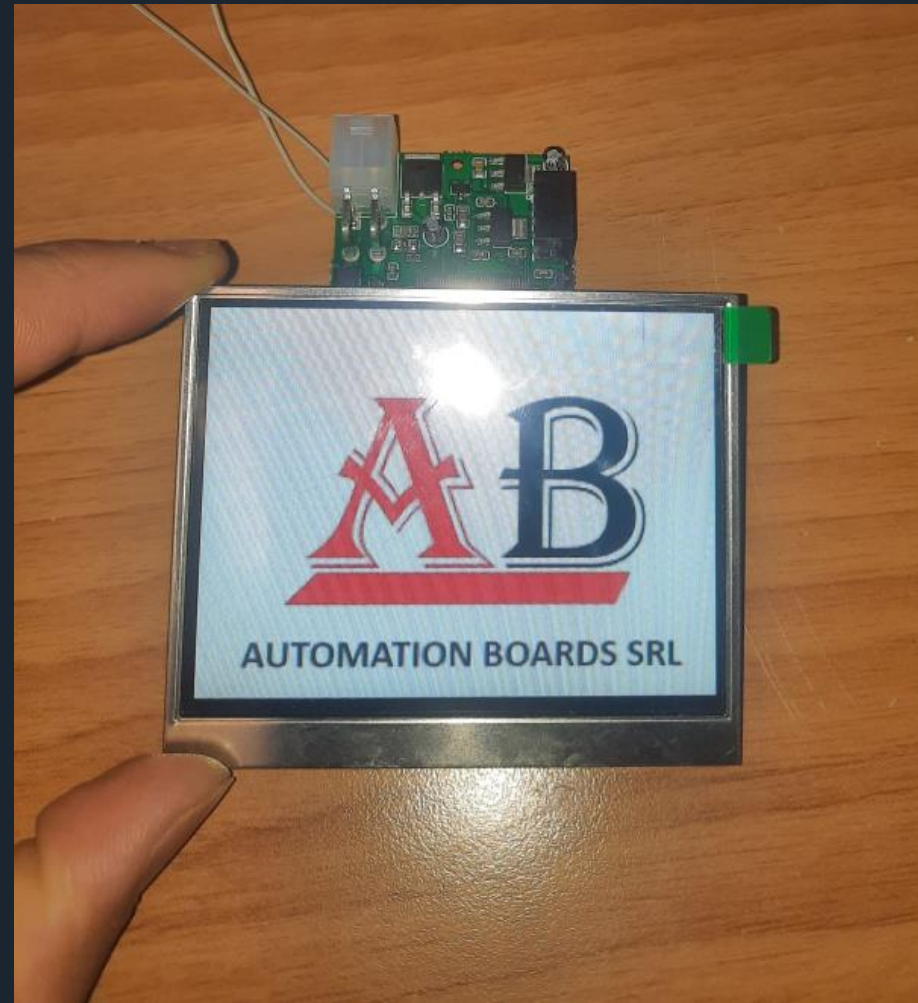


**Description:** Witness the epitome of precision in bagging with our Calce Raffinata project. Our choice of an STM32-based board orchestrates the seamless control of an automatic bagging machine. The STM32 interfaces harmoniously with an array of sensors and actuators, meticulously ensuring the creation of precisely filled 25kg bags of building lime. This project stands as a testament to the intersection of innovation and efficiency in automated bagging solutions.

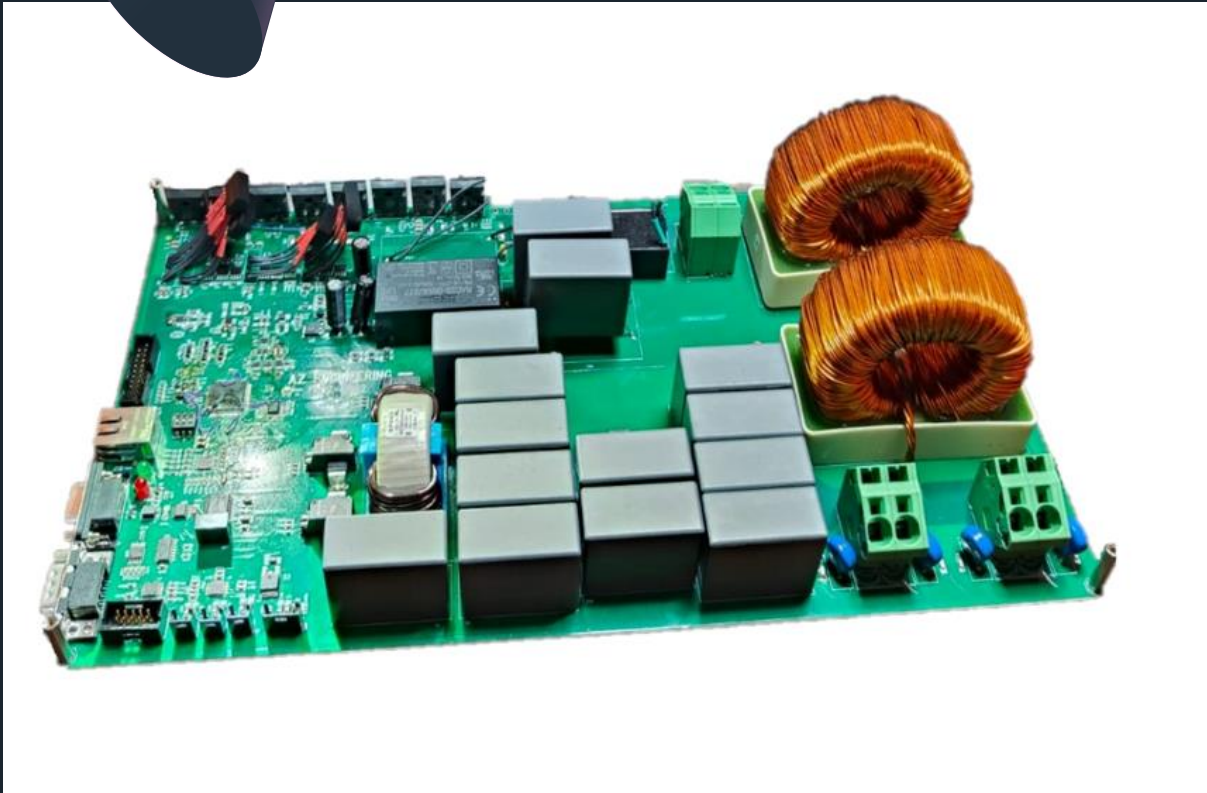


# Firmware Solutions(Example 6)

- Title: **Vivid Visuals: TFT RGB Display in Automotive Innovation**
- Description: Immerse yourself in automotive innovation with our TFT RGB Display project. A meticulously chosen STM32-based board takes center stage, orchestrating the control of a vibrant RGB(565) display. The display seamlessly receives data from the CAN-BUS network, bringing forth a visually immersive experience. The integration of LTDC (LCD TFT Display Controller) and CAN technologies ensures not just colorful visuals but also real-time data synchronization, making this project a symbol of cutting-edge technology in automotive displays.
- Platform: STM32  
Technology: LTDC, CAN



# Firmware Solutions (Example 7)



- Title: **Advanced Power Converter with Integrated Protections**
- Description: Experience the pinnacle of power conversion technology with our project dedicated to the creation of an advanced Power Converter with built-in protections. Leveraging the capabilities of an STM32-based platform, this innovation incorporates a suite of protective measures. The seamless integration of UART, CAN (Controller Area Network), and ADC (Analog-to-Digital Converter) [driven by a precise timer] technologies ensures not only efficient power conversion but also real-time monitoring and safeguards. Step into the future of power electronics with our meticulously engineered solution.
- Platform: STM32  
Technology: UART, CAN, ADC

# App Solutions (Example 1)

Title: Elevating E-Mobility: E-Bike Connectivity App

Description: Embark on a journey of modern e-mobility with our E-Bike Connectivity App project. We've crafted a seamless Android/iOS-compatible application that interfaces flawlessly with an E-bike using the Bluetooth Low Energy (BLE) protocol. This intuitive application not only connects users with their E-bikes but also acquires crucial engineering data, logging it effortlessly in a CSV file. Elevate your E-biking experience with the perfect synergy of technology and convenience.

Platform: Smartphone

Technology: Flutter, BLE



# App Solutions (Example 2)

Title: **Seamless E-Scooter Connectivity: Mobile App Integration**

Description: Step into the future of e-mobility with our E-Scooter Connectivity project. We've developed a user-friendly Android/iOS-compatible application that seamlessly interfaces with an E-scooter through the Bluetooth Low Energy (BLE) protocol. This innovative app not only enhances user control but also provides a dynamic and interactive experience, ensuring a smooth and connected ride.

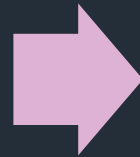
Platform: Smartphone

Technology: Flutter, BLE



# App Solutions (Example 3)

Title: **Connected Commute:  
E-Scooter Mobile App  
Integration**



Description: Experience the future of e-mobility with our E-Scooter Connectivity project. Our Android/iOS-compatible application seamlessly interfaces with an E-scooter using the Bluetooth Low Energy (BLE) protocol. This user-friendly app not only enhances control over the e-scooter but also ensures a dynamic and interactive riding experience. Elevate your commute with the perfect fusion of technology and convenience.



Platform: Smartphone  
Technology: Flutter, BLE



# App Solutions (Example 4)

- Title: **Gate Control at Your Fingertips: Remote Access Application**
- Description: Step into the future of gate control with our Remote Gate Control project. Our Android/iOS-compatible application, crafted using Flutter technology, seamlessly connects with a gate through the internet. With this intuitive app, users can effortlessly operate the gate, whether manually or in automatic mode, and check the gate's status in case of any failures. Elevate your security and convenience by bringing gate control directly to your smartphone.
- Platform: Smartphone  
Technology: Flutter, MQTT

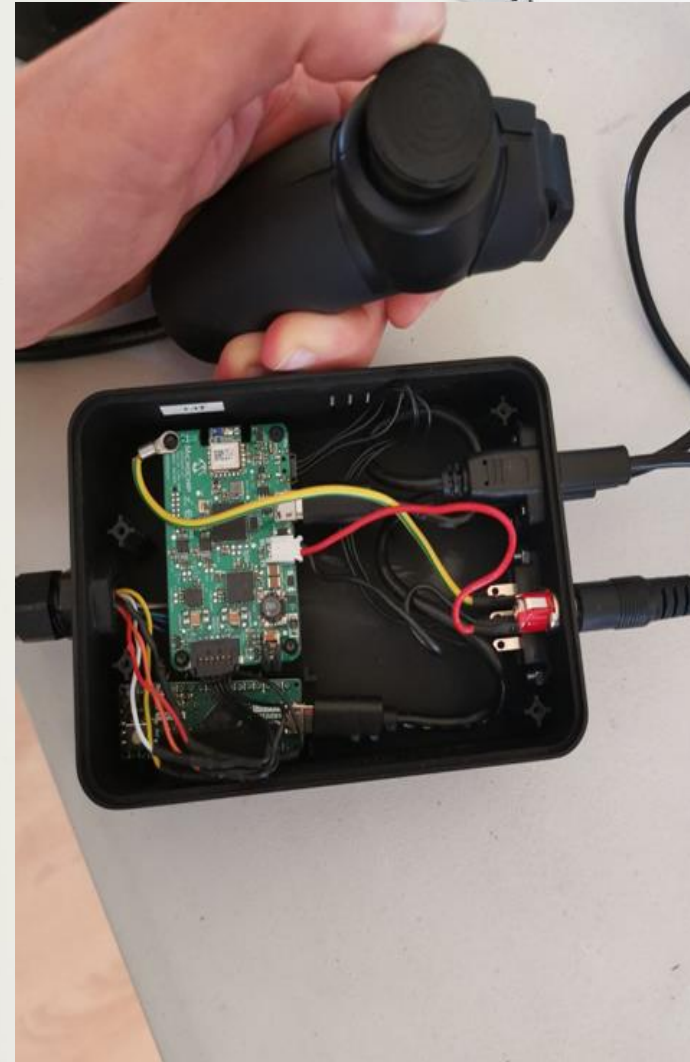
# Desktop Solutions (Example 1)



- Title: **Immersive Flight Simulation Control Center**
- Description: Embark on a journey of virtual aviation with our Flight Simulator project. We've meticulously crafted a Graphical User Interface (GUI) that serves as the control and monitoring hub for a state-of-the-art flight room simulator. This Windows Desktop application seamlessly interacts with a Programmable Logic Controller (PLC) via an Ethernet cable, ensuring real-time acquisition of all pertinent information. Experience the next level of flight simulation control and monitoring through the perfect blend of C# and OPC/UA technologies.
- Platform: Windows Desktop  
Technology: C#, OPC/UA

# Desktop Solutions (Example 2)

- Title: **Sensory Synthesis: Tactile Feedback Unity Game**
- Description: Immerse yourself in a unique sensory experience with our Tactile Sensory Feedback project. We've created a groundbreaking Unity Game that transforms sound stimuli into tactile sensations. Users can customize their experience by choosing sound stimuli in .wav format. These tactile sensations are then transmitted to the user through a joystick, creating a multisensory fusion of sound and touch. Elevate your gaming experience to a new dimension with this innovative Windows Desktop application.
- Platform: Windows Desktop  
Technology: Unity





# Contact Information

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Thank You!

