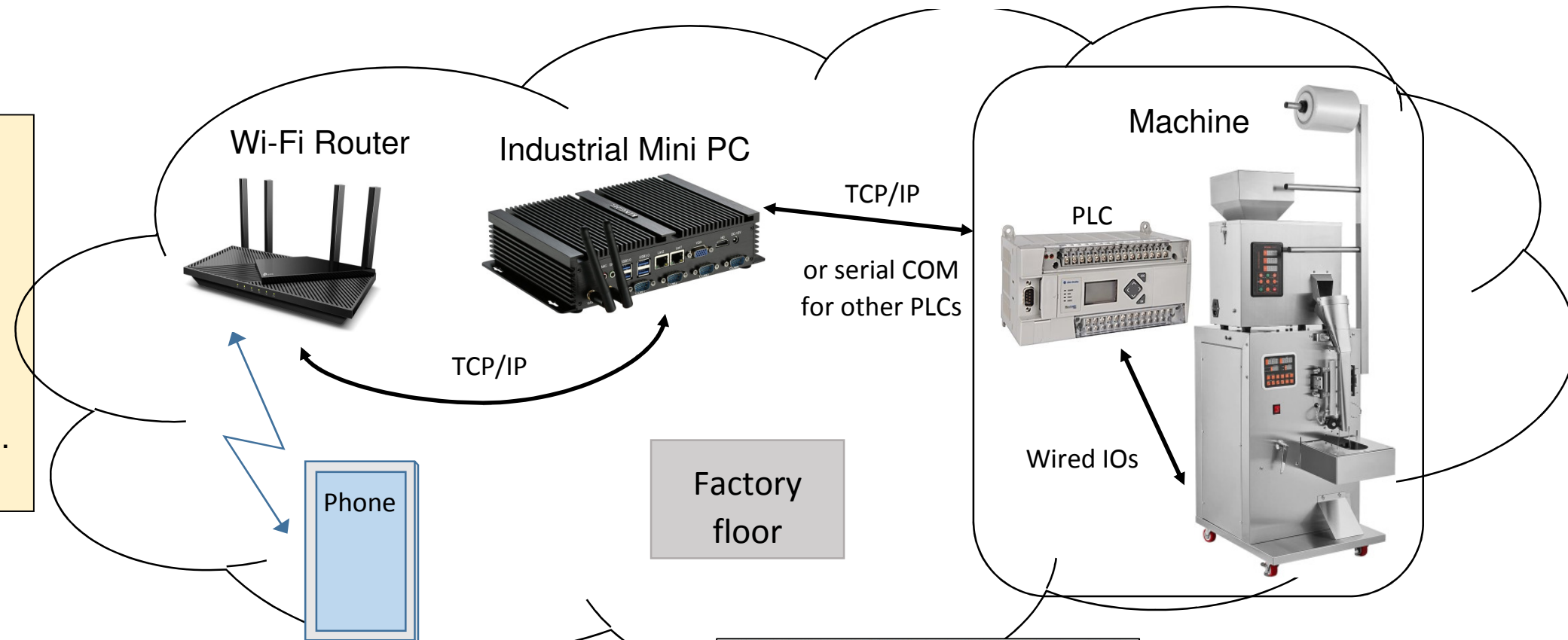## Remote monitoring and control for industrial machines controlled with PLCs

Mini PC software

1 **Windows** 11 Pro.

2 **Communication** with the PLC – FeABPLC, FeMODBUS, and/or other software.

3 **SCADA** for database read/write – FeSCADA.

4 **WAMP** (Windows OS, Apache web server, MySQL database, and PHP language support).

Wi-Fi Router

Industrial Mini PC

Machine

TCP/IP

PLC

or serial COM
for other PLCs

TCP/IP

Phone

Factory
floor

Wired IOs

How is it working?

1 The communication software is set up to read (write) from (to) the PLC the tags that are of interest for monitoring (control).

2 The SCADA software is writing (reading) tags to (from) the MySQL database – every **5 seconds**.

3 When accessed, the WAMP web server is displaying a login page. A **user name** and a **password** are required.

4 After login the user can have access to 3 web pages:

- **Status** (tags that are read only – monitoring);
- **Settings** (tags that can be written – control);
- **Alarms** (shows the actual or history alarms).

(The web pages are updating automatically every **5 seconds**.)

Enter Login Details

Username user2

Password ••••••••

Login

Welcome **John Doe**, You have successfully logged in!... Click to Logout.

Your Name Here

Application Example

FeSCADA

Remote Monitoring and Control

The "Guest" users will have access only to "Status" and "Alarms" data.

Machine 1

Machine 2

Contact: Silviu FRANDOS
e-mail: sfrandos@gmail.com
phone: 714-616-4460

Welcome **John Doe**, You have successfully logged in!... Click to Logout.

Your Name Here

Application Example

Machine 2

Remote PLC control

Description of the machine...
Main functions and parameters...

Status   Settings   Alarms

Project price: $5000
Includes:

- Mini PC with all the software.
- 8 work hours to setup the system.

Remote monitoring and control for industrial machines controlled with PLCs

Machine 2
STATUS

Select Tag Type

Both

Last updated: 2025-02-19 19:05:15

TagName - digital	Value
Remote_Enabled	1
Door1	1
Door2	1
Door3	1
VFD1_Alarm	0
VFD2_Alarm	0
VFD3_Alarm	0
VFD1_Running	1
VFD2_Running	1
VFD3_Running	0
Air_Pressure	1
Oven1_PID_Status	0
Oven2_PID_Status	1
Oven3_PID_Status	1

TagName - analog	Value
Oven1_Temperature	91
Oven2_Temperature	75.199997
Oven3_Temperature	74.5
Oven1_PID_OUT	0
Oven2_PID_OUT	-100

Status   Settings   Alarms

Machine 2
SETTINGS

Select Tag Type

Both

TagName - digital	Value	Switch
Remote_Request	1	
VFD1_Start	0	
VFD2_Start	1	
VFD3_Start	0	
Oven1_PID_Start	0	
Oven2_PID_Start	1	
Oven3_PID_Start	1	
Send_Email	0	

TagName - analog	Value	New Value
Oven1_PID_SP	85.5	
Oven2_PID_SP	65	
Oven3_PID_SP	65	
fTag1	10.25	
fTag2	20	
fTag3	30	

Status   Settings   Alarms

Welcome **John Doe**, You have successfully logged in!... Click to Logout.

Your Name Here

Machine 2
ALARMS

Active and History

Active   Update

Limit history to: 50 records

No alarms

Status   Settings   Alarms

ALARMS

Active and History

Active   Update

Limit history to: 50 records

Records: 3

ID	State	Date	Time	Message
11	On	2025-02-19	19:08:12	PLC Alarms Present - check the HMI
10	On	2025-02-19	19:08:15	No Air Pressure
13	On	2025-02-19	19:08:16	Door2 is open – Close the door to run

Status   Settings   Alarms

Machine 2
ALARMS

Active and History

History   Update

Limit history to: 50 records

Records: 11

ID	State	Date	Time	Message
13	On	2025-02-19	19:08:16	Door2 is open – Close the door to run
10	On	2025-02-19	19:08:15	No Air Pressure
11	On	2025-02-19	19:08:12	PLC Alarms Present - check the HMI
5	Off	2025-02-19	16:56:02	Keep alive
5	On	2025-02-19	16:55:02	Keep alive
11	Off	2025-02-19	14:49:08	PLC Alarms Present - check the HMI
10	Off	2025-02-19	14:49:02	No Air Pressure
11	On	2025-02-19	14:48:54	PLC Alarms Present - check the HMI

Status   Settings   Alarms