

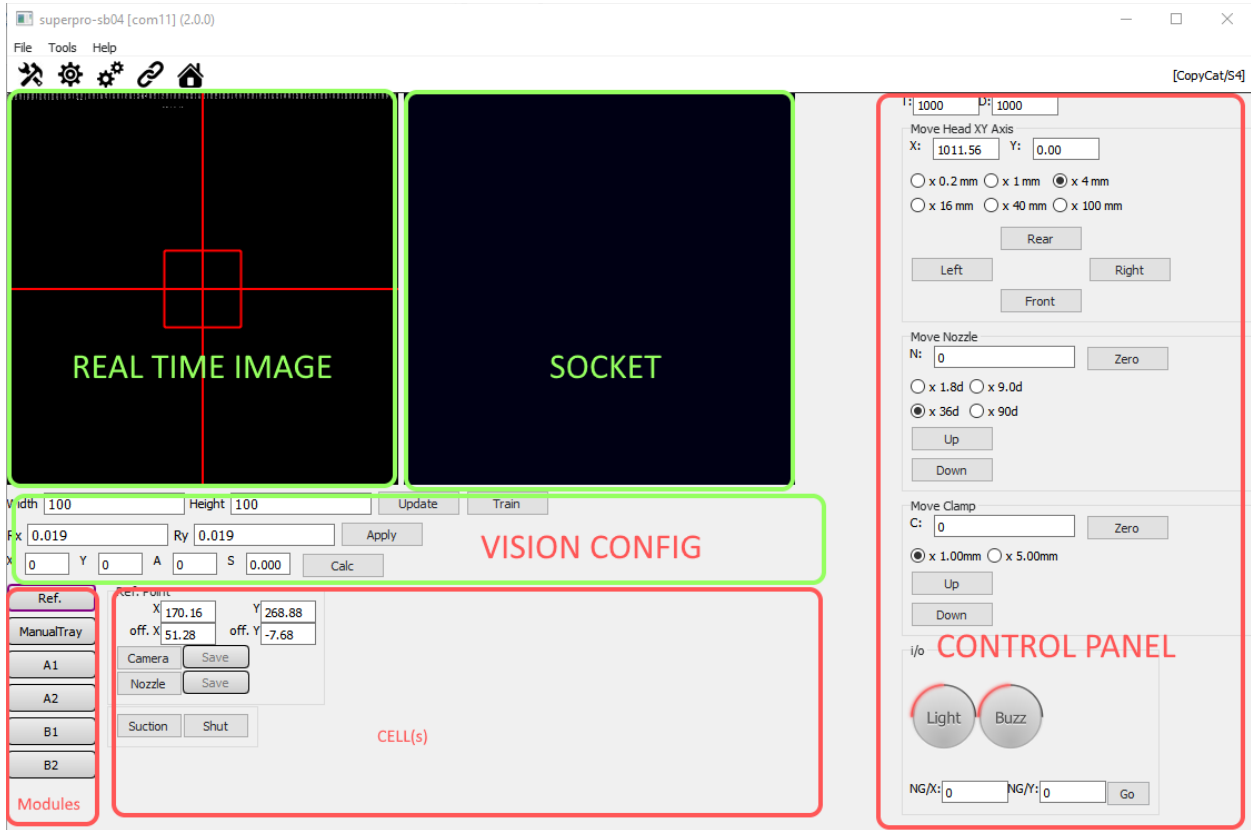
Get started

1. Power on the superpro-sb04 machine
2. Turn on the controlling computer
3. Run XELTEK Superpro-spng7k
4. Load project using spng7k
5. Turn on the programmer power
6. Turn on the system power
7. Run XELTEK Superpor-sb04
8. Probe home
9. Connect
10. Position [Ref. Point]
11. Position Tray Cells
12. Position Device Sockets (A1, A2, B1, B2)
13. Switch to automatic view
14. Set Tray row and column
15. Set Job quantity
16. Start

Application overview

Positioning View

Superpro-sb04 uses camera to help positioning.



Automatic view

superpro-sb04 [com11] (2.0.0) [fake2/S4]

File Tools Help

CONTROL BUTTON(S)

Start Stop Cleanup Reset

row #: 10 col. #: 10 Apply

0	1	2	3	4	5	6	7	8	9
10	11	12	13	14	15	16	17	18	19
20	21	22	23	24	25	26	27	28	29
30	31	32	33	34	35	36	37	38	39
40	41	42	43	44	45	46	47	48	49
50	51	52	53	54	55	56	57	58	59
60	61	62	63	64	65	66	67	68	69
70	71	72	73	74	75	76	77	78	79
80	81	82	83	84	85	86	87	88	89
90	91	92	93	94	95	96	97	98	99

TRAY INFO

PROGRAMMER INFO.

Configuration

Name	Value
checksum	fake_checksum
device	fake_device
mode	S4
name	fake2
sid	fake_sid

PROJECT INFO.

Counter

Job/Qty 0 Update

Realtime

Pass	0
Fail	0
Ratio	0.00%

Job

Target	0
Now	0

COUNTER(S)

Get Started

Power on the superpro-sb04 machine

Use the switch at the back panel, turn it the ON position.

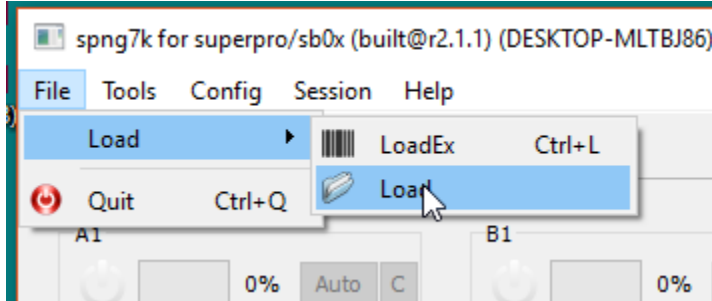
Turn on the controlling computer

Switch on the computer and login.

Run XELTEK Superpro-spng7k



Load project using spng7k



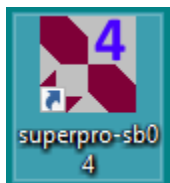
Turn on the programmer power

Use the button [PROGRAMMER] at the front panel.

Turn on the system power

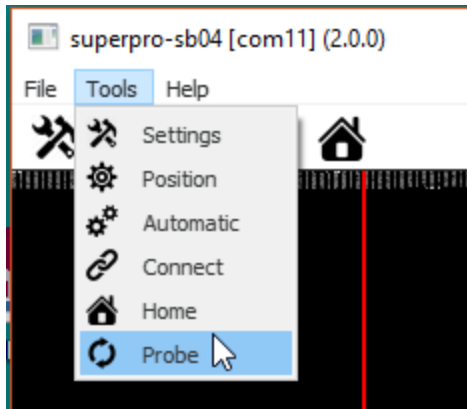
Use the button [SYSTEM] at the front panel.

Run XELTEK Superpor-sb04

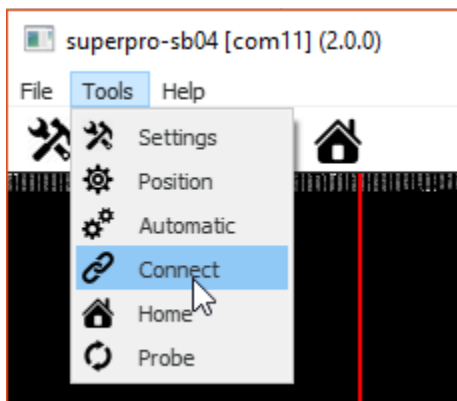


Probe home

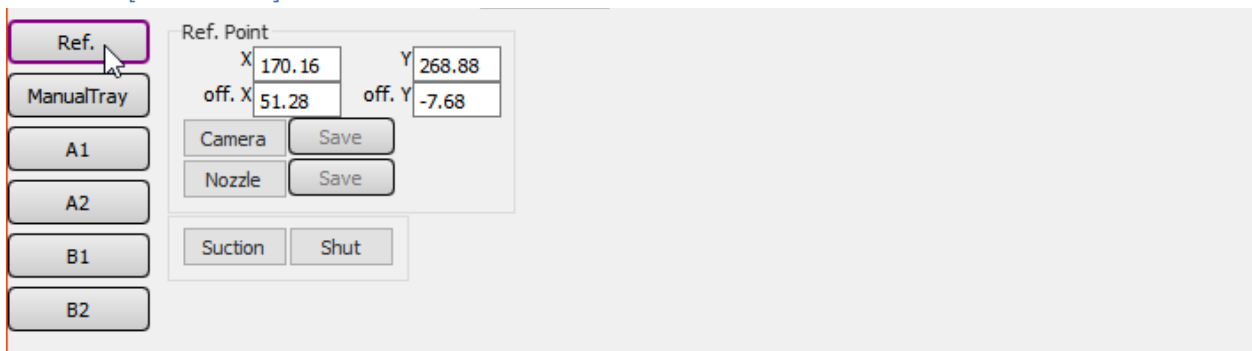
Use [Tools] -> [Probe], to probe home position.



Connect



Position [Ref. Point]



Click [Ref.] to activate [Ref. Point] page.

Click [Camera] to activate corresponding [Save] button, which will save current position as REF. POINT position.

Click [Nozzle] to activate corresponding [Save] button, which will calculate the offset and save it as NOZZLE OFFSET.

Position Tray Cells

Cell	X	Y	Z	Buttons
U/L	354.48	11.04	1000	Camera, Save, Auto. Heigh, Pick, Place
U/R	235.68	11.44	1000	Camera, Save, Auto. Heigh, Pick, Place
L/R	235.84	306.72	1000	Camera, Save, Auto. Heigh, Pick, Place

Click [ManualTray] to activate [ManualTray] page.

Click [Camera] to activate corresponding [Save] button, which will save current position as CURRENT CELL'S POSITION.

Click [Auto. Height] to probe Tray Cell Height. You can use any one of the three cells, and you only need to do it once. All cells on the tray share same height.

Caution: [Auto. Height] uses nozzle air pressure sensor to probe the actual height.

Click [Pick] to pick the IC from current cell.

Click [Place] to place the IC to current cell.

There are three cells, Upper Left, Upper Right, and Lower Right.

Position Device Sockets (A1, A2, B1, B2)

Socket	X	Y	Z	Buttons
S1	80	80	1000	Camera, Save, Auto Pos., Auto. Heigh, Pick, Place
S2	80	80	1000	Camera, Save, Auto Pos., Auto. Heigh, Pick, Place
S3	80	80	1000	Camera, Save, Auto Pos., Auto. Heigh, Pick, Place
S4	80	80	1000	Camera, Save, Auto Pos., Auto. Heigh, Pick, Place

There are four modules built in superpro-sb04; They are labelled with A1, A2, B1, B2.

We need to position all sockets on all these modules.

We use Module [A1] as an example.

Click [A1] to activate [A1] page.

Click [Camera] to activate corresponding [Save] button, which will save current position as CURRENT CELL'S POSITION.

Click [Auto. Height] to probe Tray Cell Height. You can use any one of the sockets, and you only need to do it once. All sockets on all modules share same height.

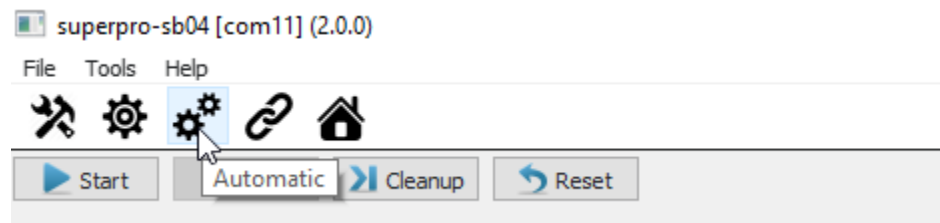
Caution: [Auto. Height] uses nozzle air pressure sensor to probe the actual height.

Click [Pick] to pick the IC from current cell.

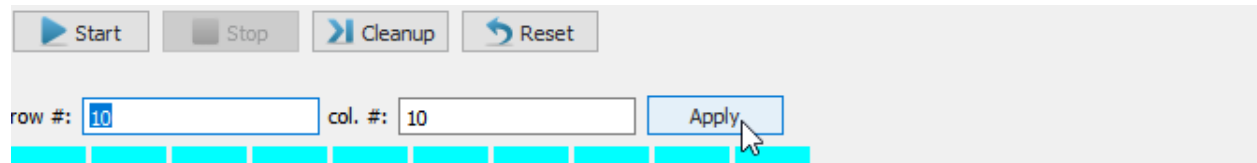
Click [Place] to place the IC to current cell.

Click [Auto. Pos.] to automatically position current socket use the trained image.

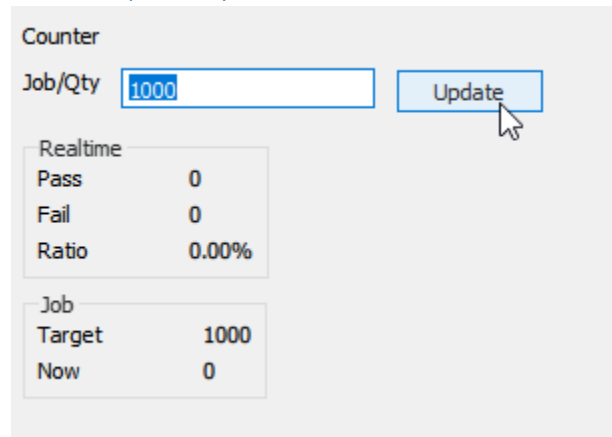
Switch to automatic view



Set Tray row and column



Set Job quantity



Start automatic batch programming



Functions, and components

Computer vision aids

Reference Point

Configuration

All superpro-sb04 related configuration files are stored in folder of %PROGRAMDATA%/superpro-sb04. There is a root configuration file settings.ini, which is for global, and/or default settings; And adapter specific configuration are stored in subfolder named after the Adapter ID.

This PC > Local Disk (C:) > ProgramData > superpro-sb04

Name	Date modified	Type	Size
CopyCat	6/11/2018 3:48 PM	File folder	
CopyCats	6/6/2018 1:25 PM	File folder	
fake2	6/13/2018 9:37 AM	File folder	
shrub	1/30/2018 1:52 PM	File folder	
xip	1/30/2018 1:54 PM	File folder	
settings.ini	6/13/2018 9:24 AM	Configuration sett...	3 KB

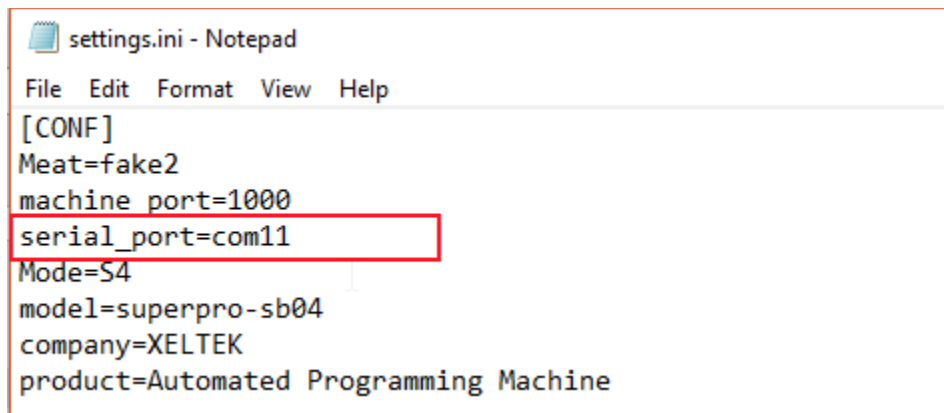
settings.ini - Notepad

File Edit Format View Help

```
[CONF]
Meat=fake2
machine_port=1000
serial_port=com11
Mode=S4
model=superpro-sb04
company=XELTEK
product=Automated Programming Machine

[PLC]
DD12000=1282
DD12001=-192
DD12002=8862
DD12003=276
DD12004=5892
DD12005=286
DD12006=5896
```

Setting up the FPOR PLC serial port.

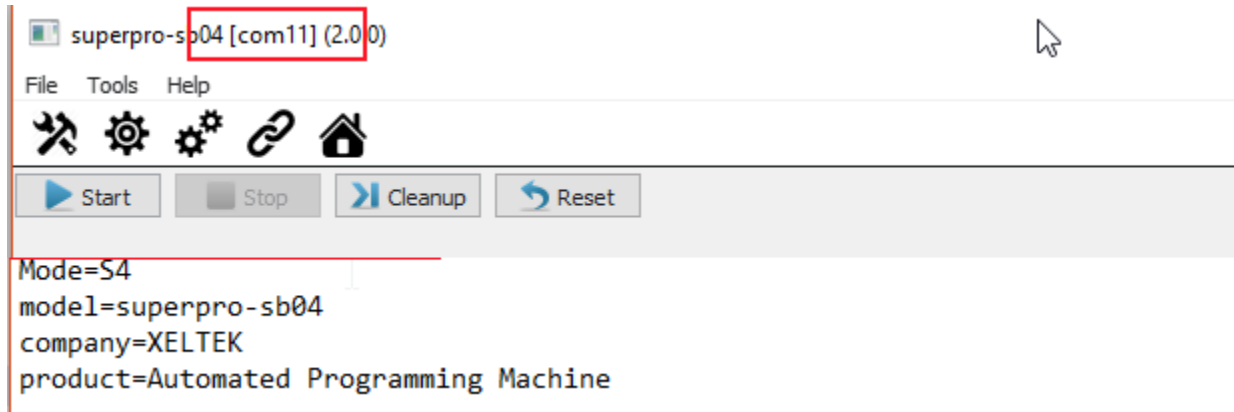


The image shows a Notepad window titled "settings.ini - Notepad". The menu bar includes "File", "Edit", "Format", "View", and "Help". The text content is as follows:

```
[CONF]
Meat=fake2
machine_port=1000
serial_port=com11
Mode=S4
model=superpro-sb04
company=XELTEK
product=Automated Programming Machine
```

The line "serial_port=com11" is highlighted with a red rectangular box.

Serial port id will show at the title bar.



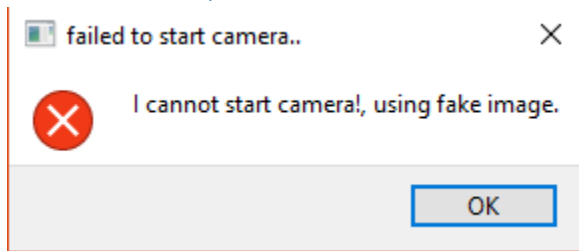
The image shows a software window titled "superpro-sb04 [com11] (2.0.0)". The title bar text is highlighted with a red rectangular box. The menu bar includes "File", "Tools", and "Help". Below the menu bar is a toolbar with icons for a wrench and screwdriver, a gear, a double gear, a link, and a house. Below the toolbar is a control bar with four buttons: "Start", "Stop", "Cleanup", and "Reset". The main content area displays the following text:

```
Mode=S4
model=superpro-sb04
company=XELTEK
product=Automated Programming Machine
```

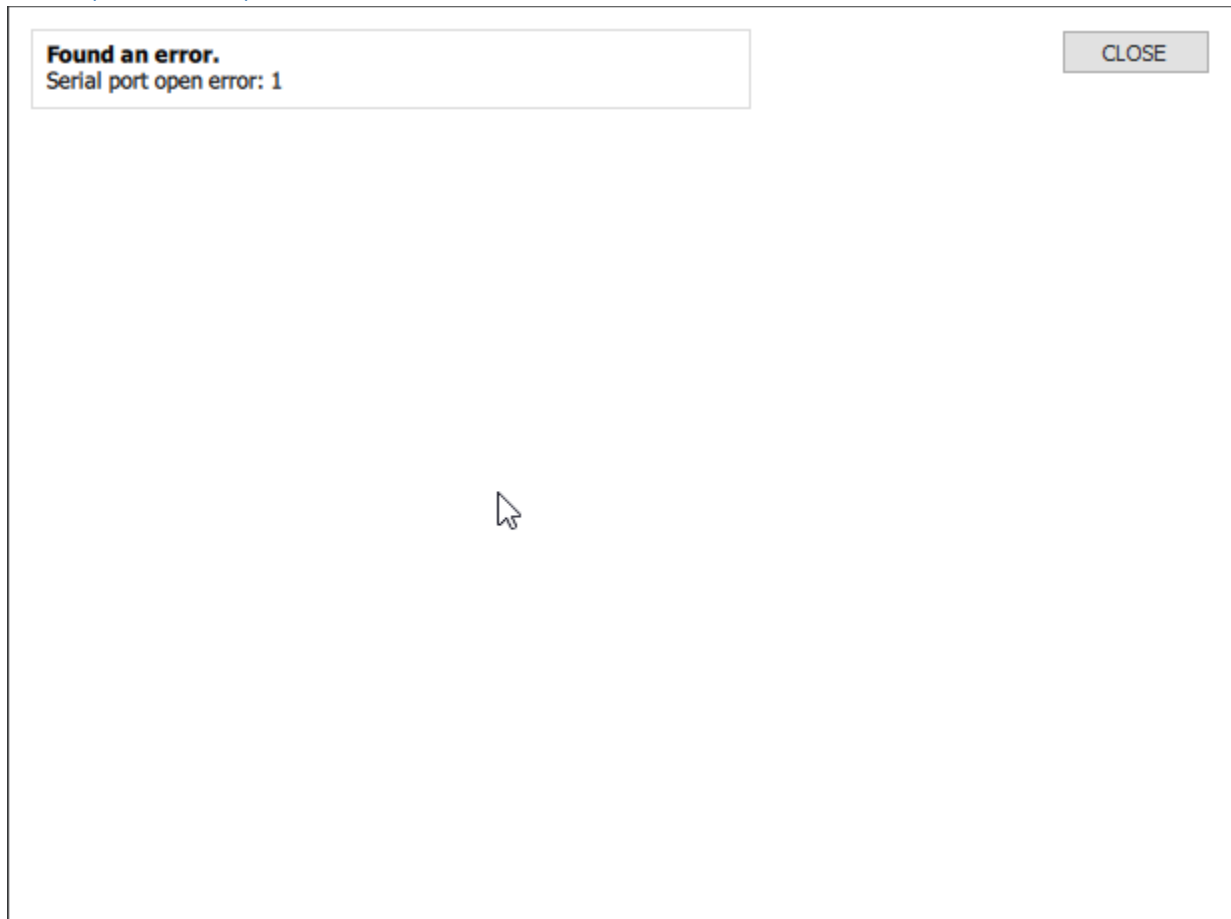
You need to restart the software to take effect.

Trouble shootings

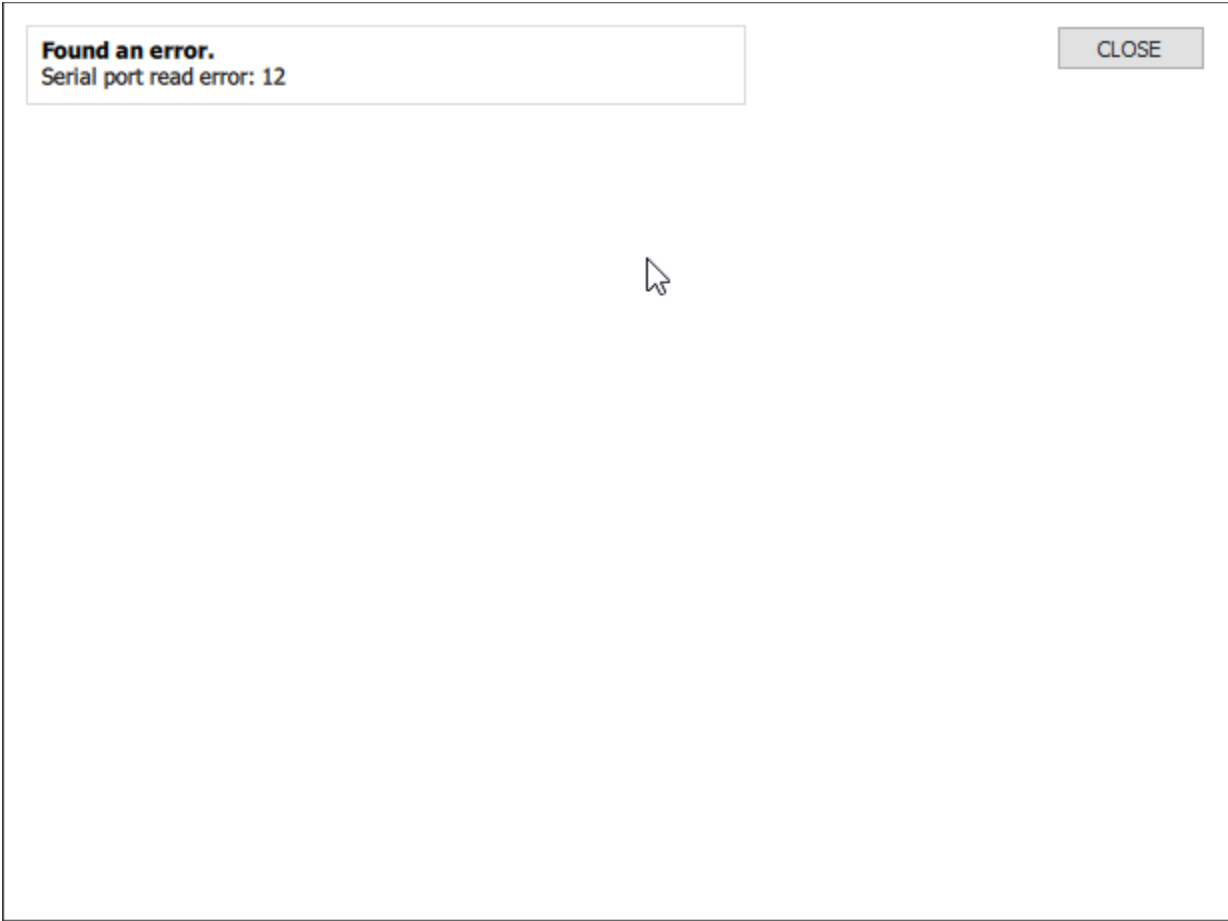
Camera is not present.



Serial port is not present.



Serial port is not responding.



PLC related errors

