ESTUN
CODROID

Estun Codroid

Palletizing Workstation

User Manual



9ǎúʣy′ / 2Ř№2ʌŘ t ⊦ffŜűʌÎʌy∃ ² 2№ʔǎú⊦ű⁄2y′



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Version	Release date	Description



Warnings



Warnings



Warnings



Warnings



Be careful

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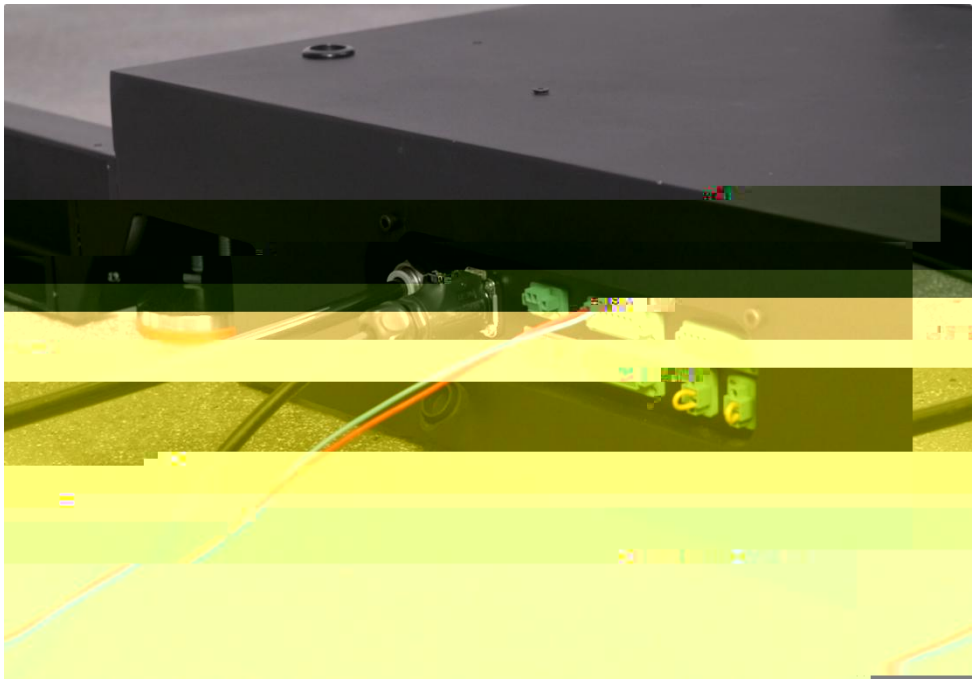
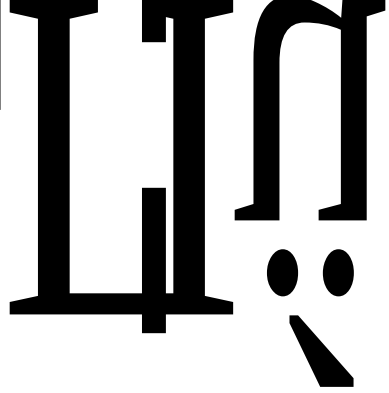
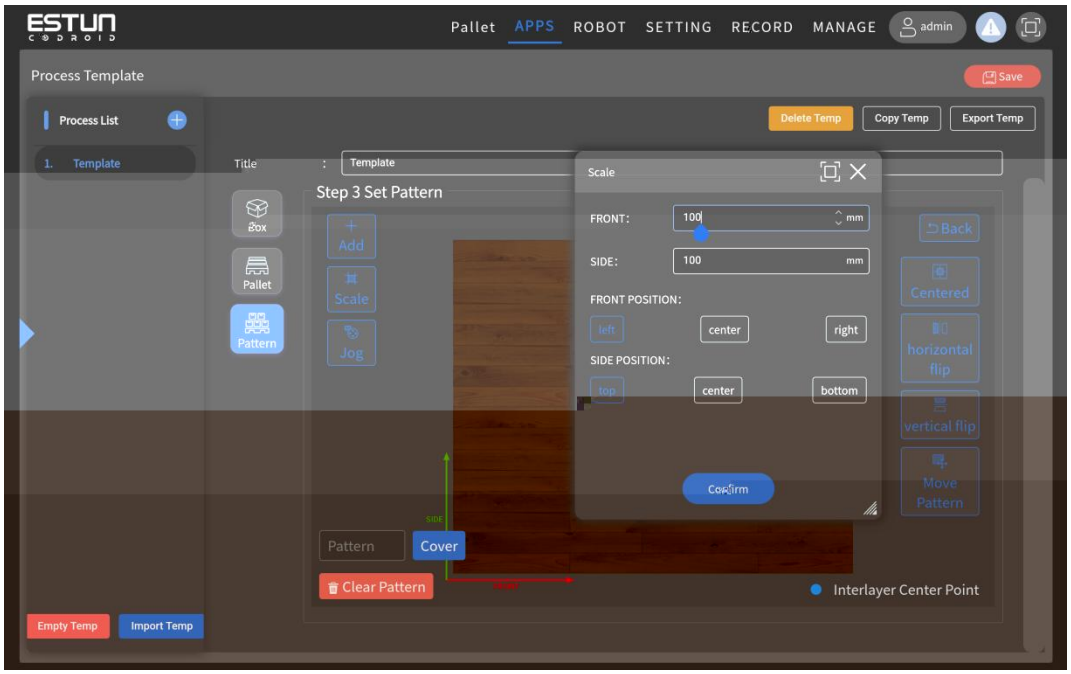
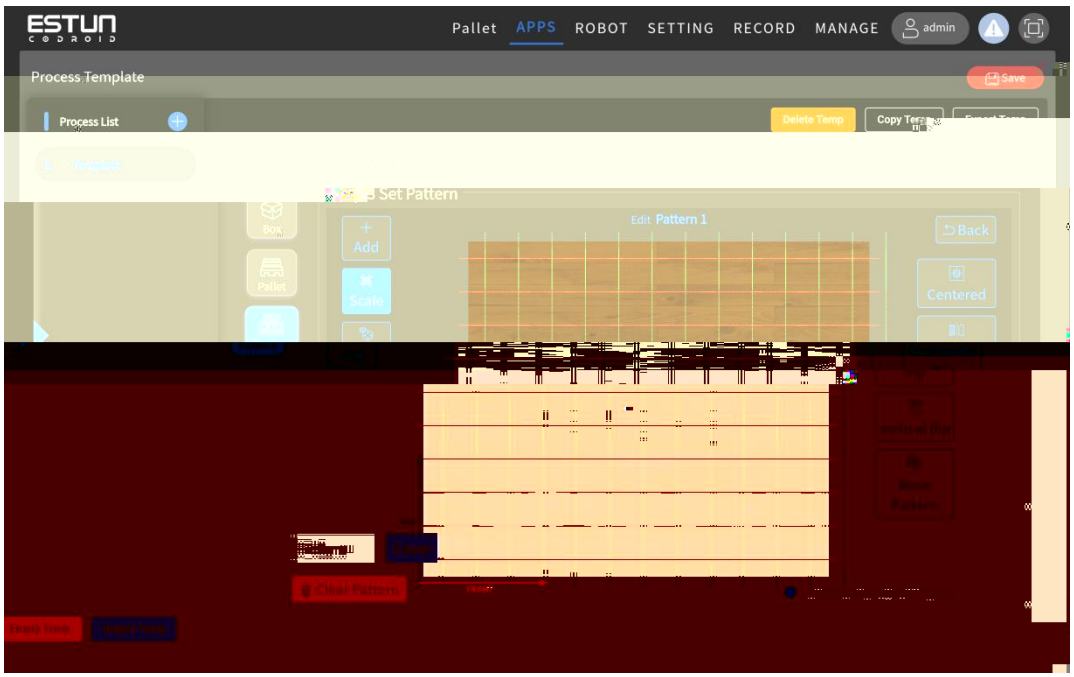


Figure 3-3 Minimalist wiring



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ESTUN
CODROID
Pallet
APPS
ROBOT
SETTING
RECORD
MANAGE
admin
Process Template
Save
Process List
Delete Temp
Copy Temp
Export Temp
1. Template
Title
Template
Step 3 Set Pattern
Box
Pallet
Pattern
Add
Scale
Jog
Scale
FRONT:
100
mm
SIDE:
100
mm
FRONT POSITION:
left
center
right
SIDE POSITION:
top
center
bottom
Confirm
Back
Centered
horizontal flip
vertical flip
Move Pattern
Pattern
Cover
Clear Pattern
Interlayer Center Point
Empty Temp
Import Temp


ESTUN
CODROID
Pallet
APPS
ROBOT
SETTING
RECORD
MANAGE
admin
Process Template
Save
Process List
Delete Temp
Edit Pattern 1
Back
Centered
Add
Scale




ESTUN
Pallet
APPS
ROBOT
SETTING
RECORD
MANAGE
admin
Progress
BY CODROID V1.6.6.48T(PL)

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Warning



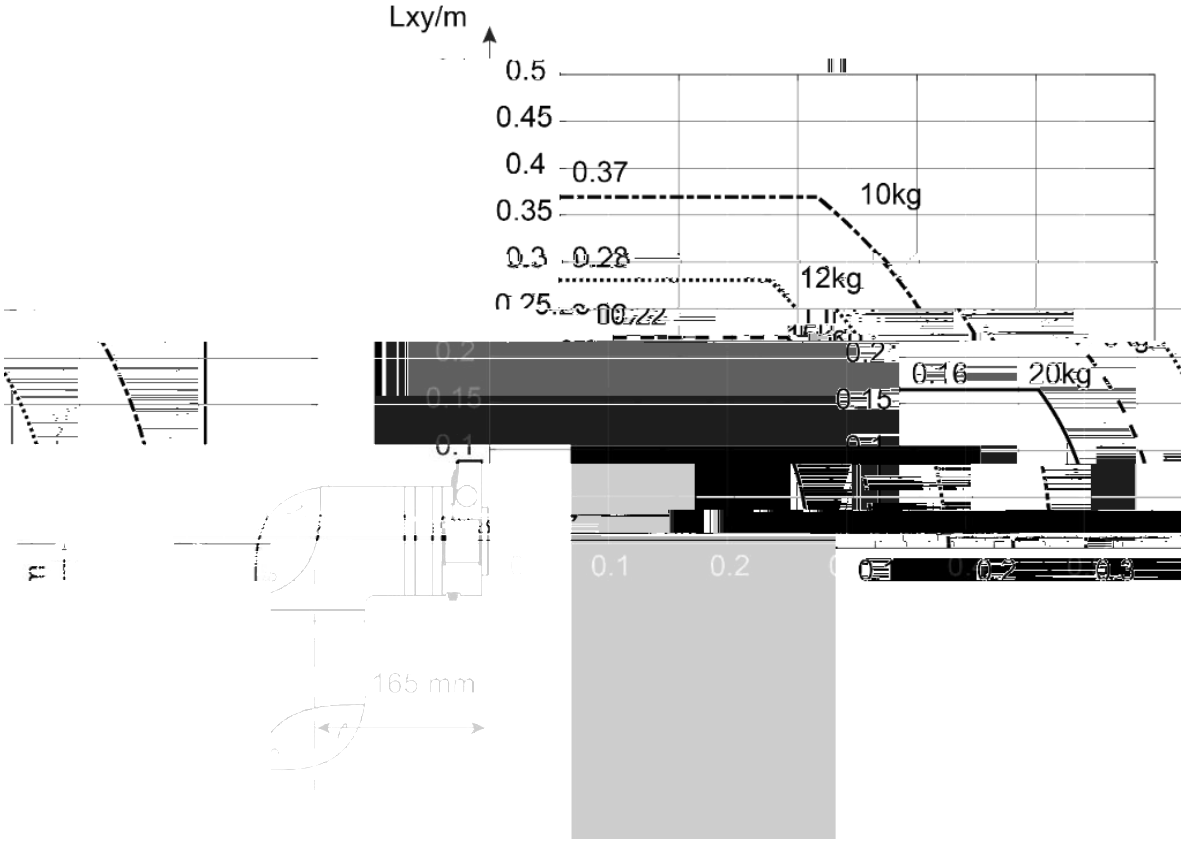


Figure 4-3 S20-180 load curve-

Parameters	Data

Robot model	S20-180
Degrees of Freedom	6 + Lifting column
Maximum load (kg)	20
Floor area	1530 * 1480
Arm span (mm)	1777
Maximum stacking height (mm)	2400
Repeatability accuracy (mm)	+ / - 0.1
Whole machine weight (kg)	300
Certification	EN ISO 13849-1 PLd Cat.3 & EN ISO 10218-1
Axis operating range	Axis 1/2/4/5/6: ±360° Axis 3: ±160°
Maximum speed of the axis	Axis 1/2:110 °/s Axis 3:150 °/s Axis 4/5/6:180 °/s
Tool end maximum speed (m/s)	3.2
Working voltage (V)	220
Maximum power consumption (W)	3000
Palletizing speed	8-12 per minute
Working pressure (Mpa)	> 0.6Mpa (6bar)
Operating temperature (° C)	0-50
Working humidity (%RH)	70% RH
Working noise (dB)	≤65dB

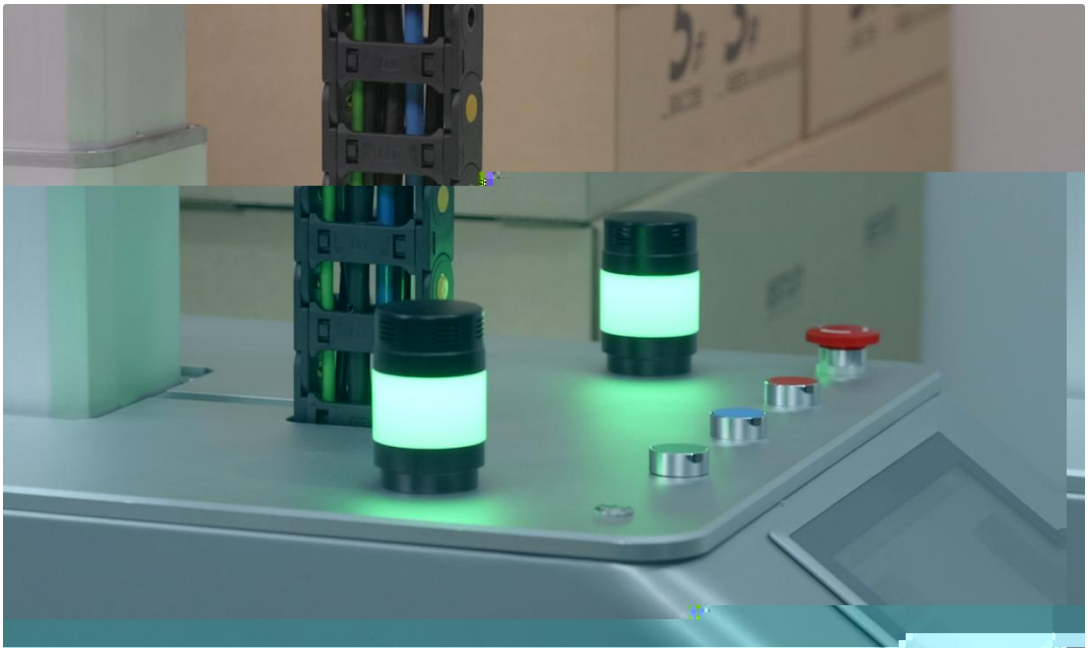


Figure 4-4 Tricolor light-

Status	Meaning

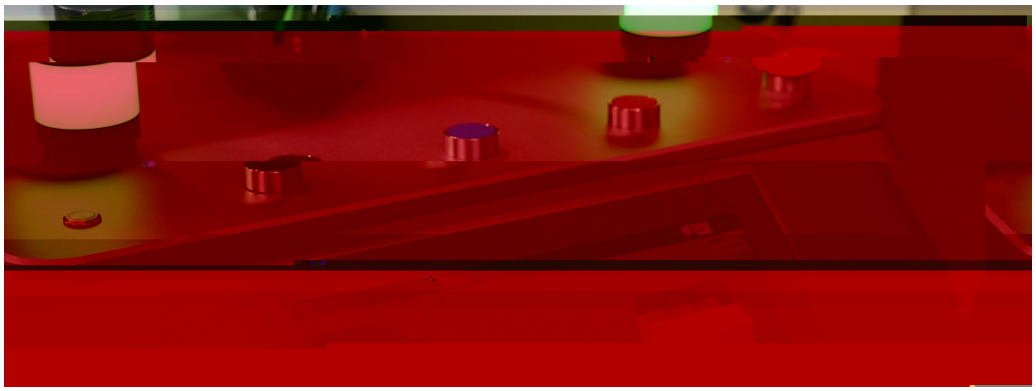


Figure 4-5 Button-

Warnings





Figure 4-6 Operation panel-

The the external interface overview - in Figure 5-1.

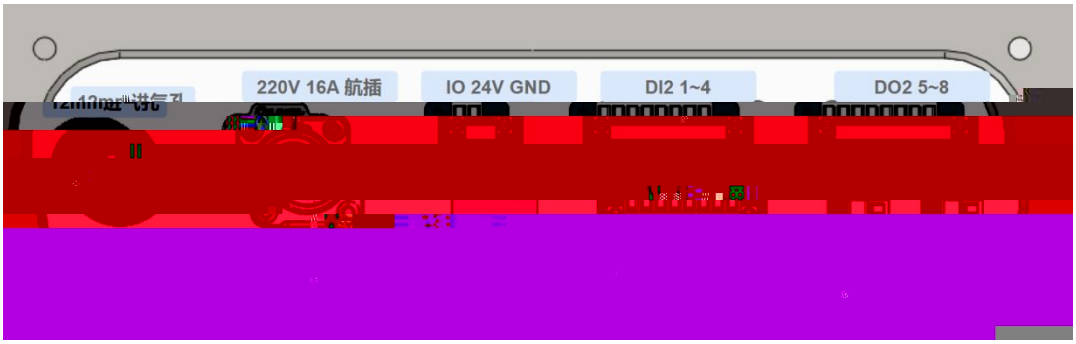


Figure 5-1 Overview of the external interface

Interfaces	Instructions	Uses

Ports	Uses	Port	Uses

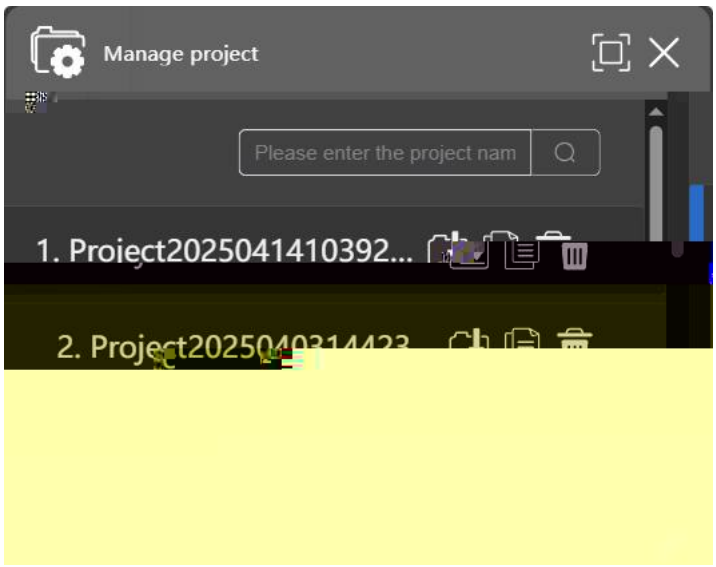
Port	Uses	Port	Uses

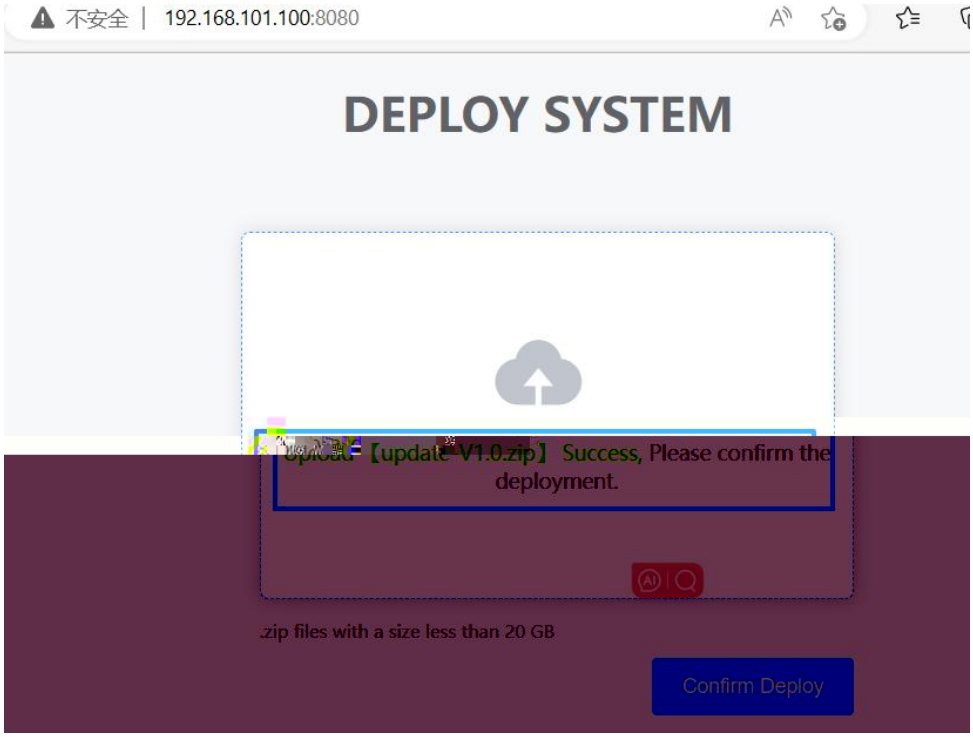


Figure 5-2 Overview of the internal electrical wiring diagram of the palletizing workstation

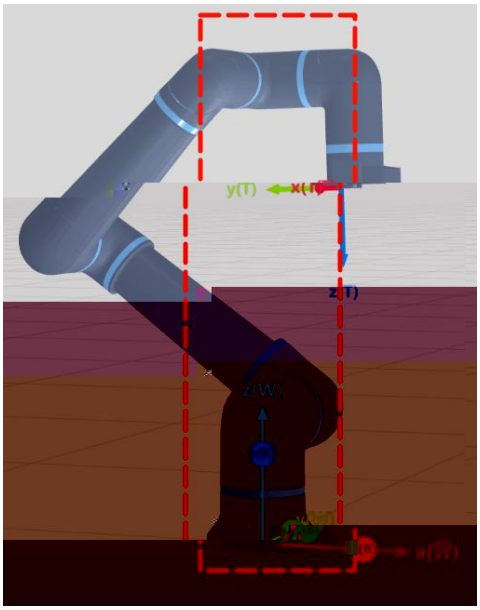
[illegible]

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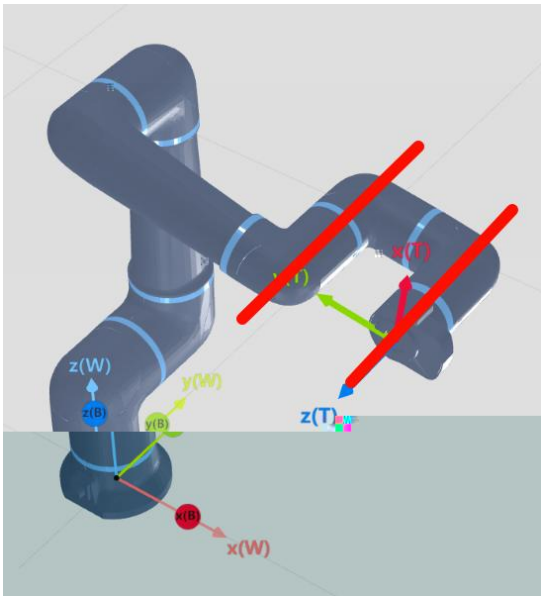

Manage project
Please enter the project nam
1. Project2025041410392...
2. Project20250403144423


不安全 | 192.168.101.100:8080
DEPLOY SYSTEM
【update_V1.0.zip】 Success, Please confirm the deployment.
.zip files with a size less than 20 GB
Confirm Deploy

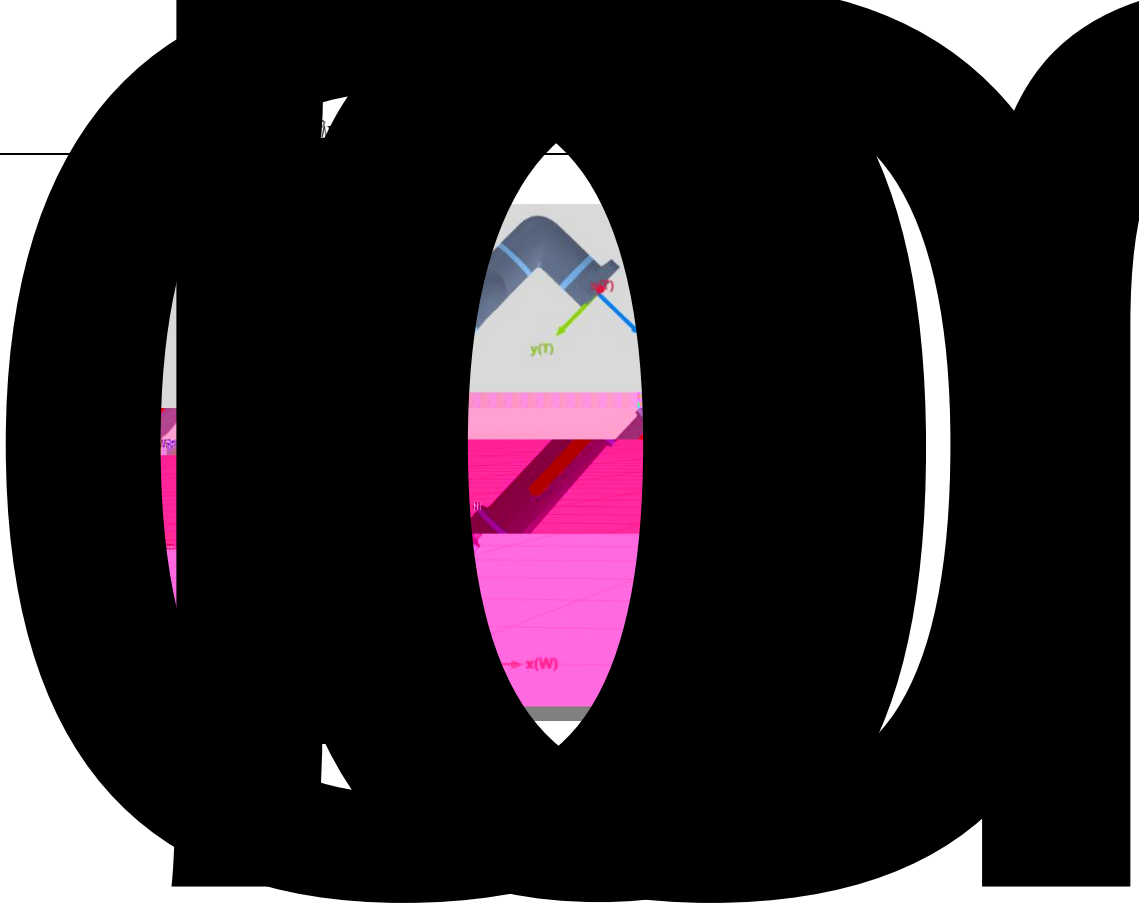
-


y(T)
z(T)
z(W)

-


x(T)
z(W)
y(W)
z(B)
y(B)
z(T)
x(B)
x(W)

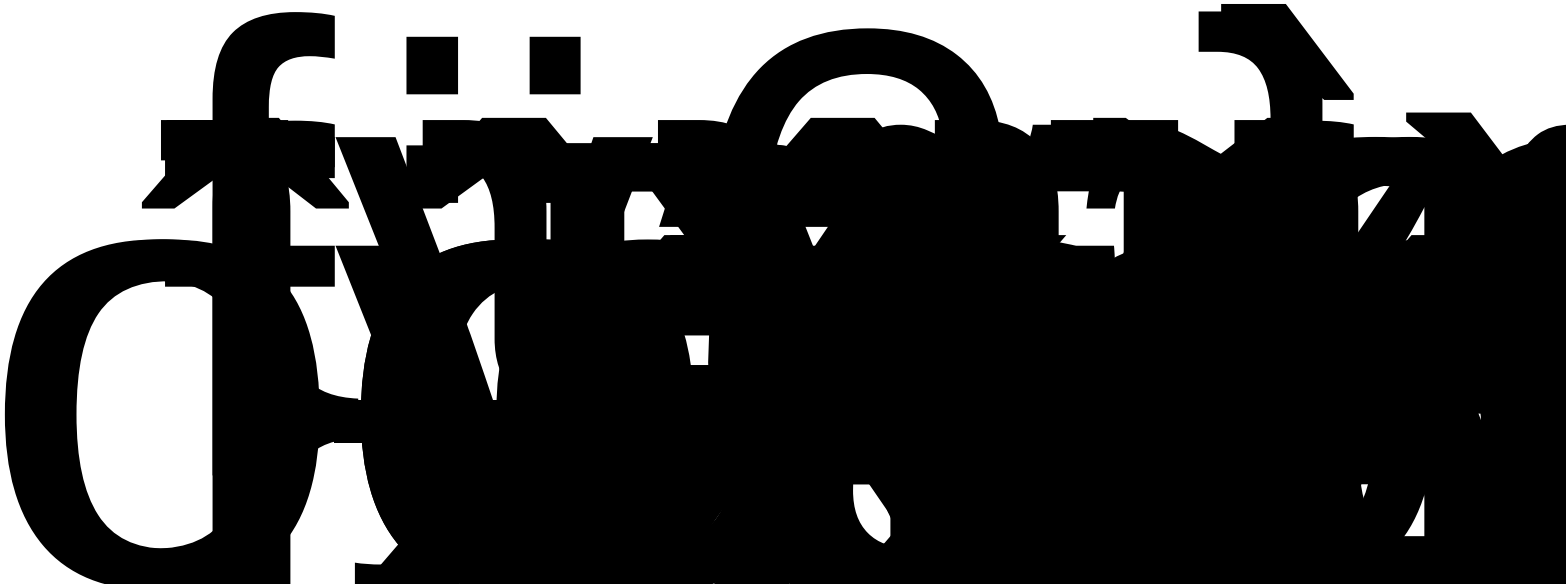
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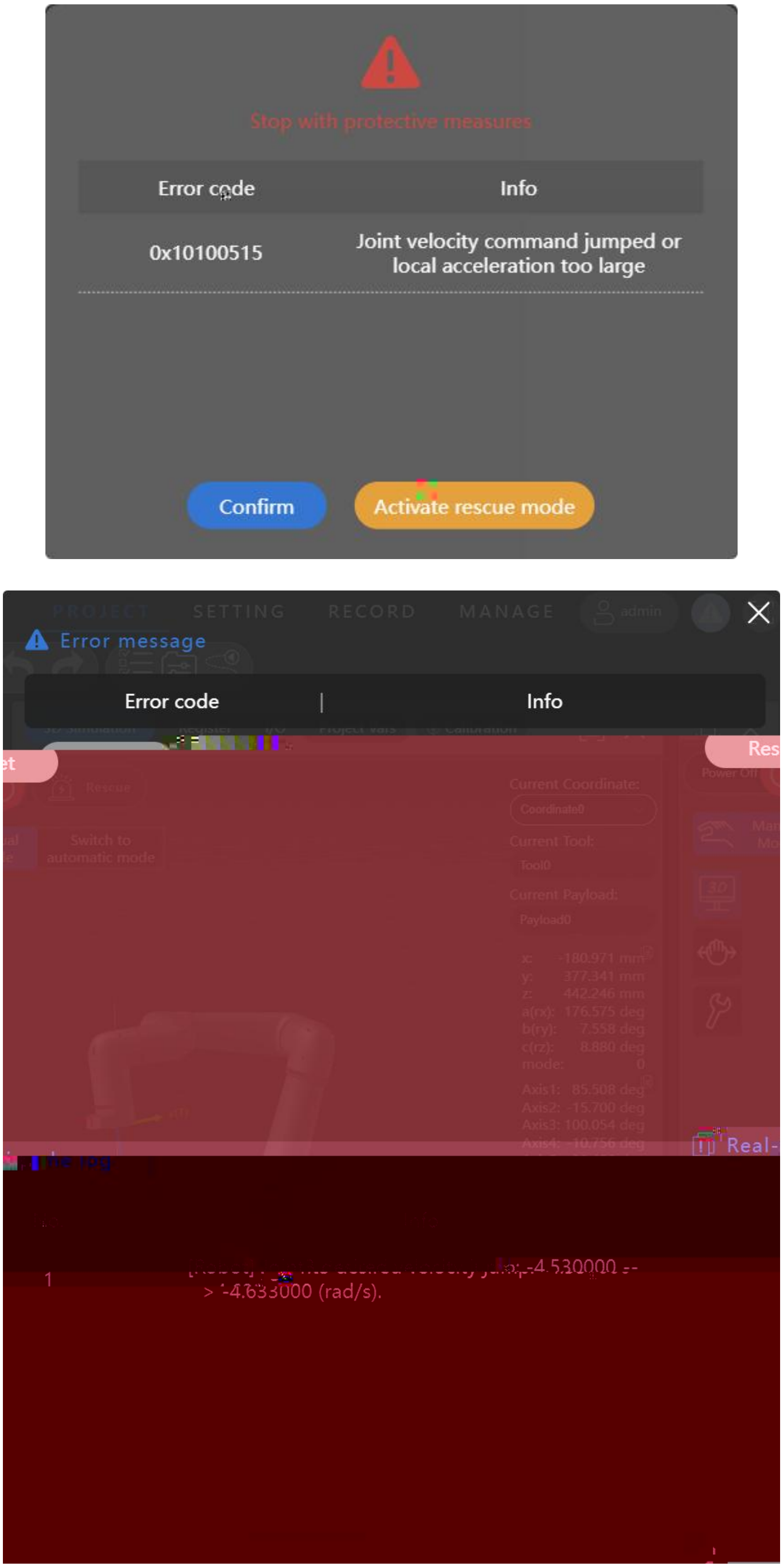


Figure 7-3 Error messages and real-time logs

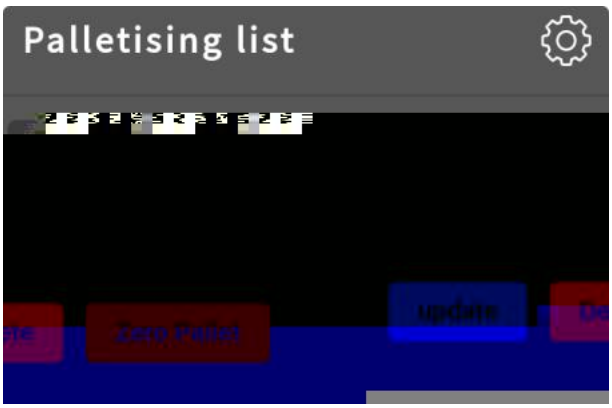
[illegible]

N2ō2ű Ǒŀyˇōŝ LJ2ǿŜNŜŘ dzLJ ŀƎŀʎyˇŀŦűŜN úĸŜ ŜNN2N ăúŀúdză ʎă ǑfŜŀNŜŘɸ





Figure 7-4 Layout of palletizing tabs



Add pallets

update

Delete

Zero Pallet

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Update pose



Copy pose



Remove pose

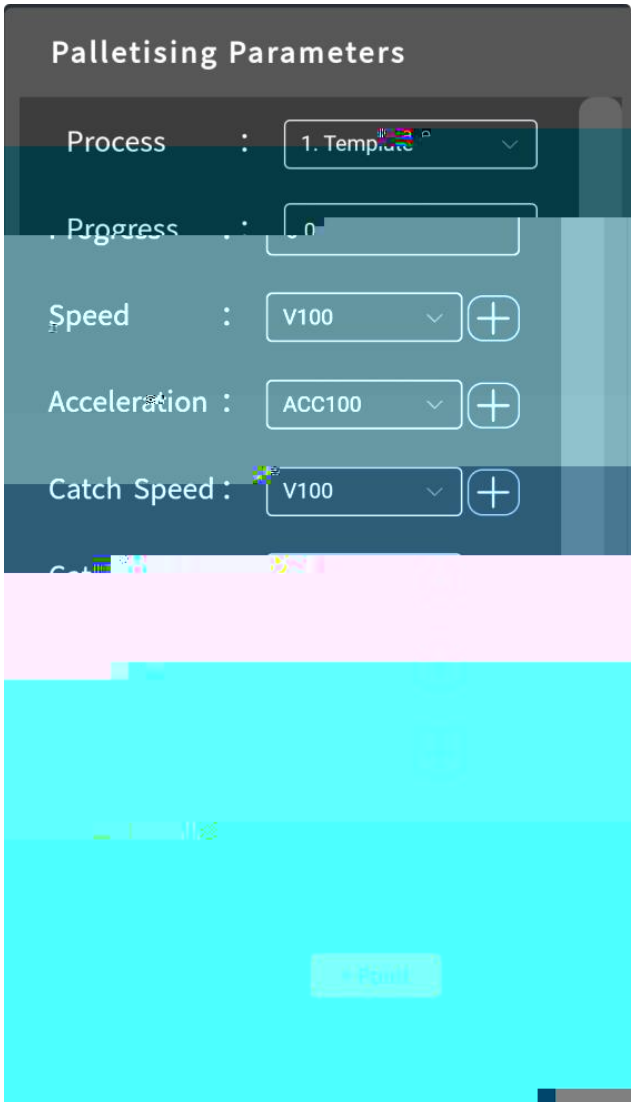


Edit pose names

Edit pose values

POSCG configuration

Mode	/ ŜyűŜN 2ŕ úĸŜ ǿN¤ăú ʎy'NŜſŀúʎ2y'ú2 úĸŜ ŀÈ›ă 2ŕ 2yŜ ŀÈ›ă лŸ ŀĸŜŀŘŕ мŸ ōŜĸ›yŘ	Axis3(flag3) $(\theta_3 + 90 - arc\tan(S/L3))$ 0: [0,180] 1:(-180,0)	Axis5(flag5) (θ_5) 0: [0,180] 1:(-180,0)
0	0	0	0
1	0	0	1
2	0	1	0
3	0	1	1



Process

Progress

Speed

Acceleration

Catch Speed

Catch Acc

Put Speed

Put Acc

positioning points

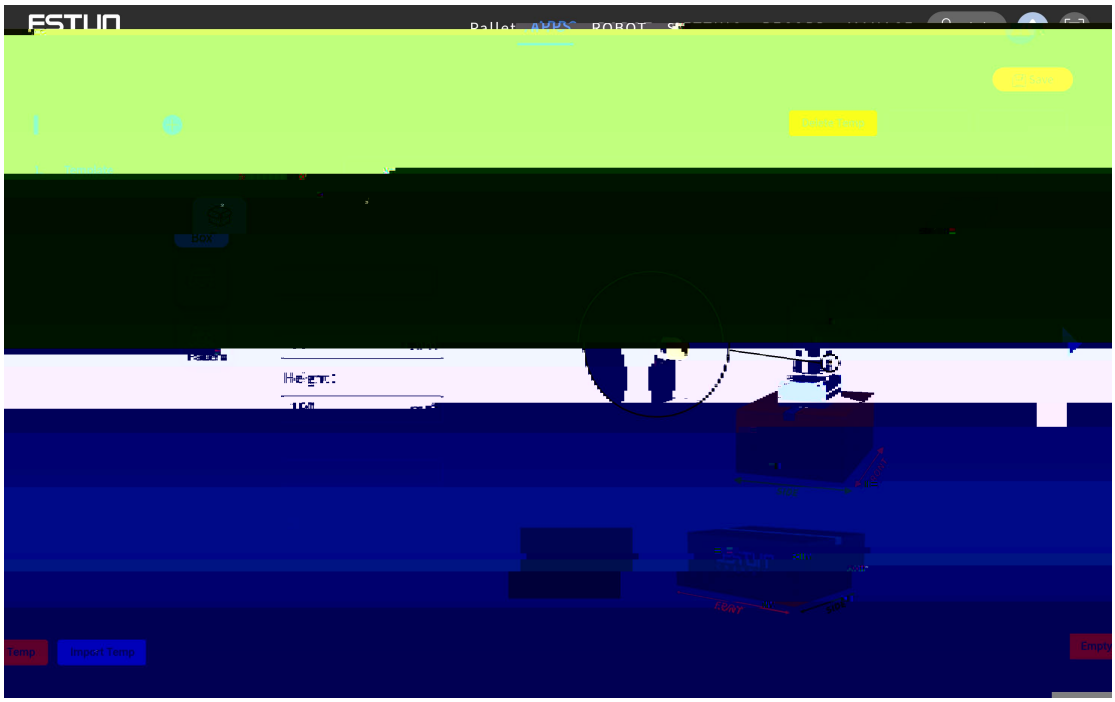
Box point




1. Project20250414103926...
2. Project20250403144239...


72%
1
100

p



Front

Side

Height

Weight

Setting label direction



Front

Side

Height

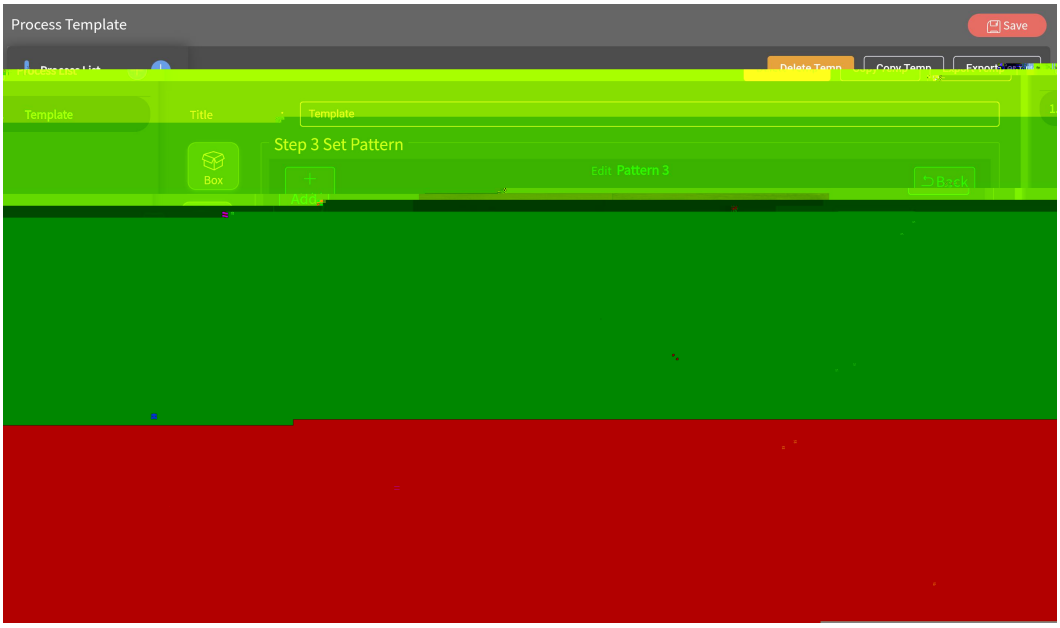
Compress Ratio



Set

p i ’0ƨ, Ь • b

2ƴмл / 2L Ƙ 9ăúd ŘЍ2Řнлнрсм



Add

Delete

Rotate

op̃

Sacle

pɒû

Jog

Cover

ppôö

Vertical flip

Move Pattern



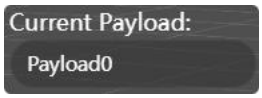

Suction


Release


Reset

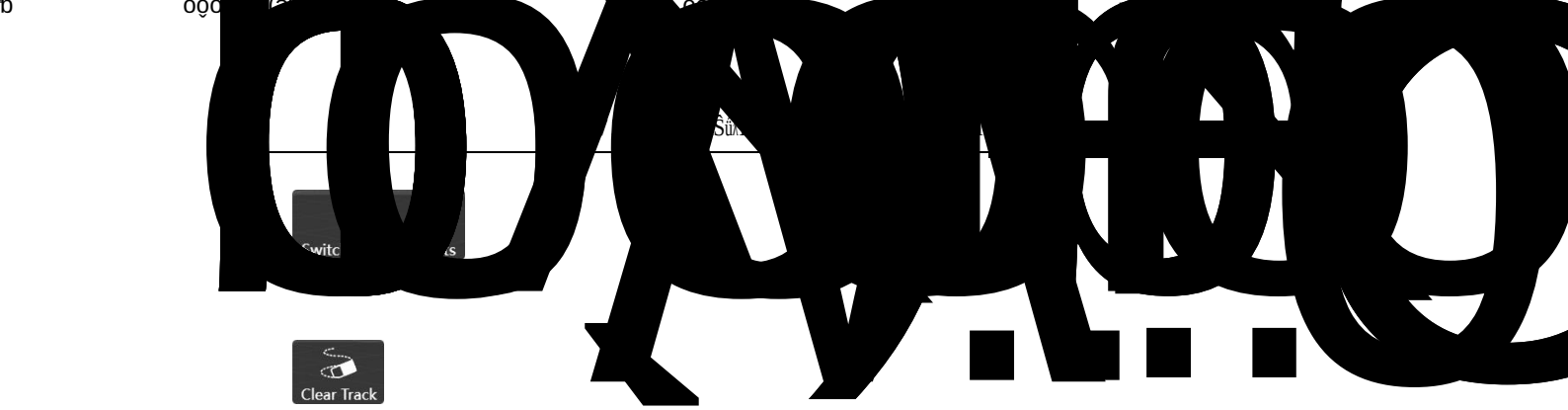

Current Coordinate:
Coordinate0


Current Too..
Tool0

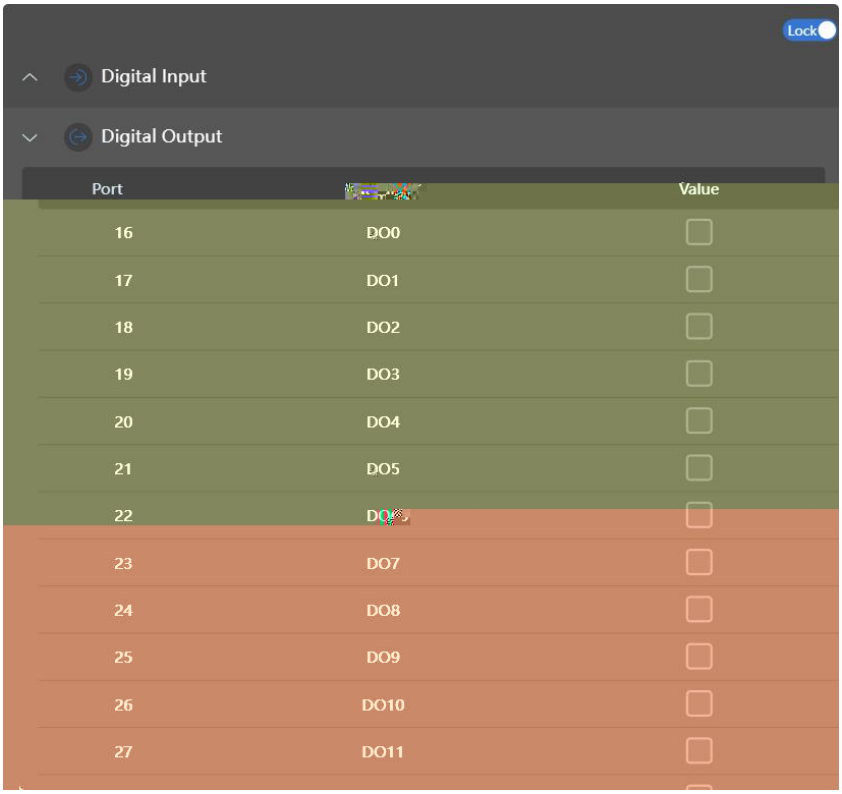

Current Payload:
Payload0


Manual Mode
Switch to automatic mode


3D


Clear Track
Return to home
Back to Safe Location
Move to Candle Position
Back to Packing Position




Lock
Digital Input
Digital Output
Port
Value
16 DO0
17 DO1
18 DO2
19 DO3
20 DO4
21 DO5
22 DO6
23 DO7
24 DO8
25 DO9
26 DO10
27 DO11

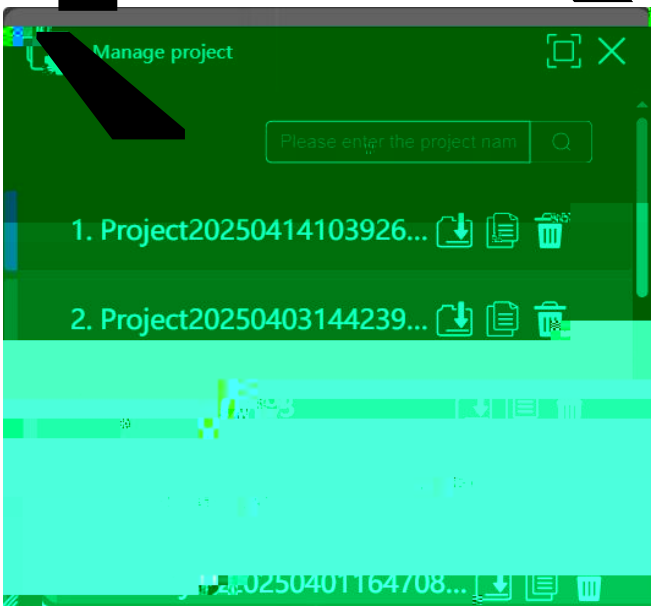

Unlock


Lock


Force






Manage project
Please enter the project nam
1. Project20250414103926...
2. Project20250403144239...






Manual Mode Speed Multiplier
72%
1
100

poô

[illegible]

oe̗p ’– Q˜Öÿ€

p [illegible] 7o÷

p oø p

o[illegible]@ P AY)"Vüp[illegible]× ` p

Parameters	Data type	Parameter meaning

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Joint plus acceleration

Protocol version





Add devices

Remove Device

Device Name

IP address

Port

Reconnection count



Connection status

Add signal

Remove the signal

Type

Address

Response time [ms]

Timeout

Request failed

Actual frequency

Save

Stack



Left anchor point t

Right anchor point

Remove the left stack grab offset

Remove the right stack grab offset

f

Grab signal

Enable reverse blowing

Backblow signal

Back-blowing intervals

Backblow time

Enable grab detection

Enable box (Palletizing arrival/depalletizing available) inspection

Left box signal

Right box signal

Enable partition detection

Partition in place check

Partition grabs signal

Enable pallet inspection

Detect left pallets arriving at DI port

Detect the arrival of the right pallet at the DI port

Trigger method

Loop mode

Number of loops

Detect DI port

Trigger mode


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admin

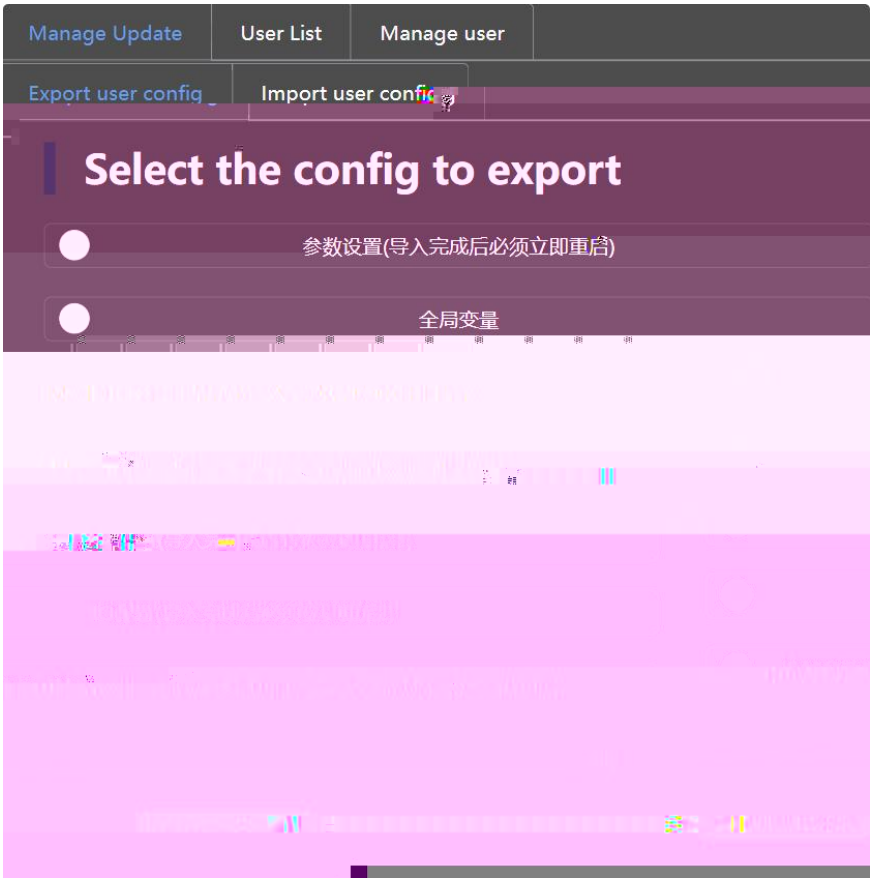

下载日志


PROJECT
SETTING
MANAGE

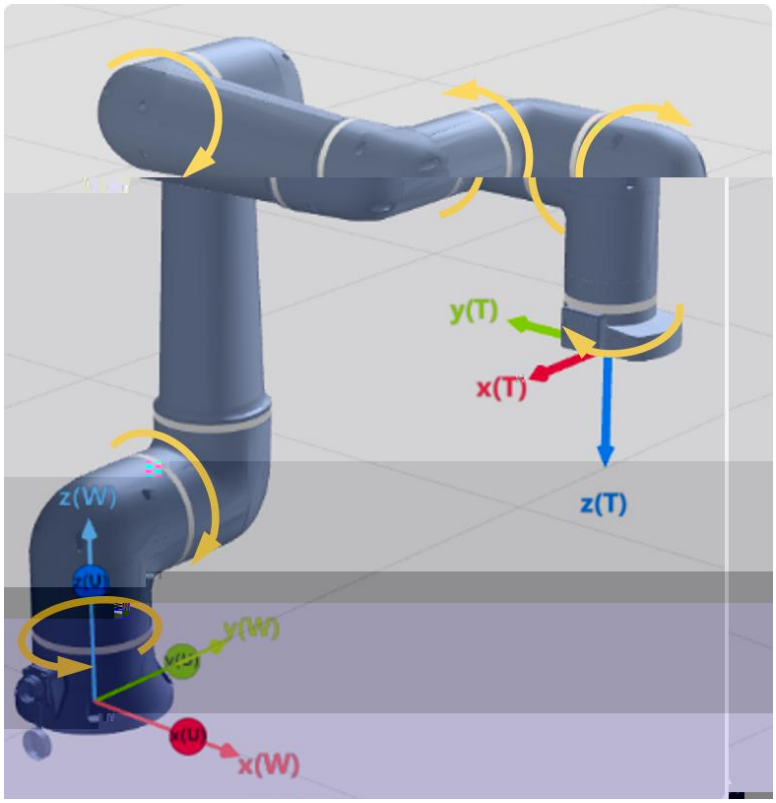
Parameter Settings (Reboot takes effect)

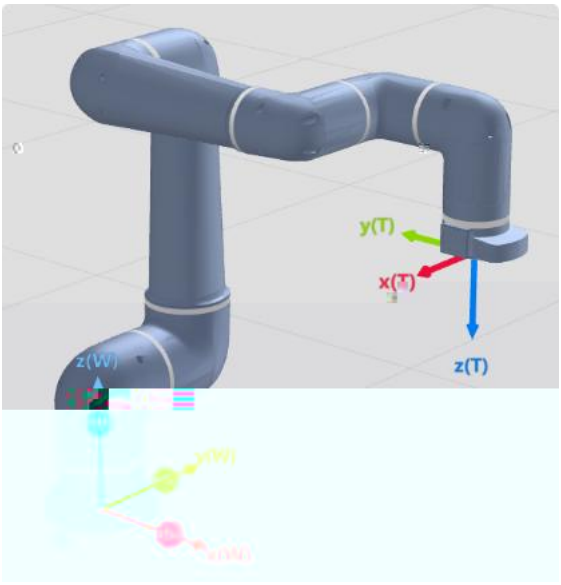
Global variables

ModbusTCP master station configuration (reboot takes effect)

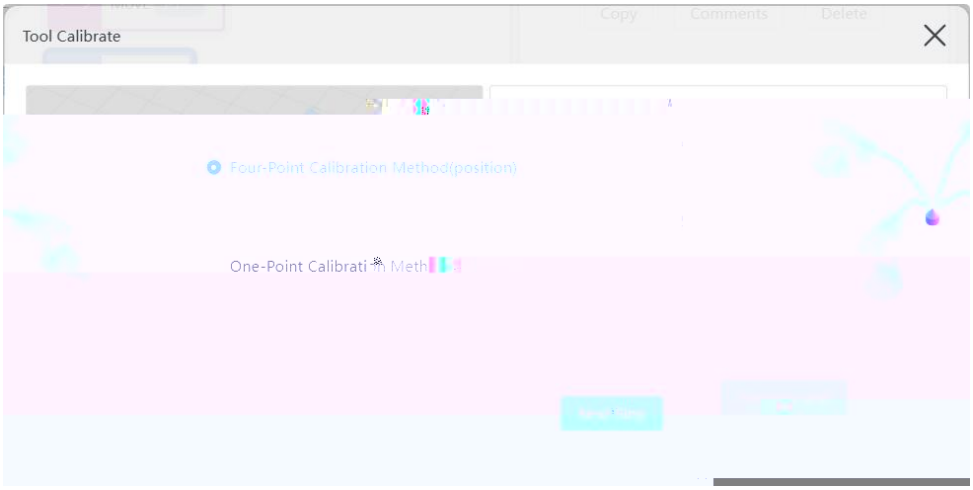


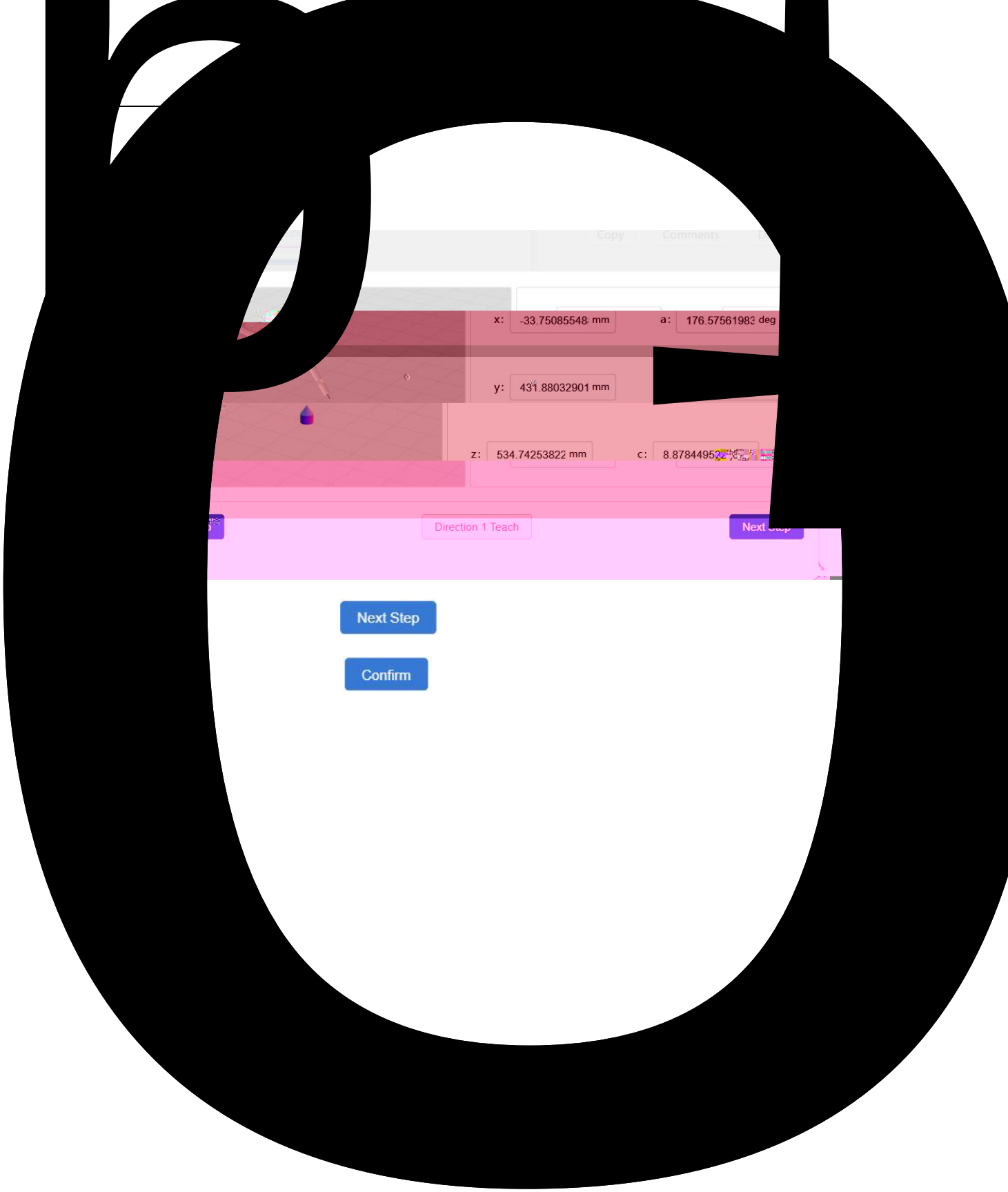

ower Off
Rescue
Mode
automatic mode
Current Coordinate:
Coordinate0
Current Tool:
Tool0
Current Payload:
Payload0
y: 377.341
z: 534.753
a(rx): 176.575
b(ry): 7.558
c(rz): 8.880
mode: 0
Axis1: 85.508
Axis2: -12.798
Axis4: -26.373 deg
Axis5: 83.458 deg
Axis6: -13.891 deg
Follow coord
y
z
a
b
c
x

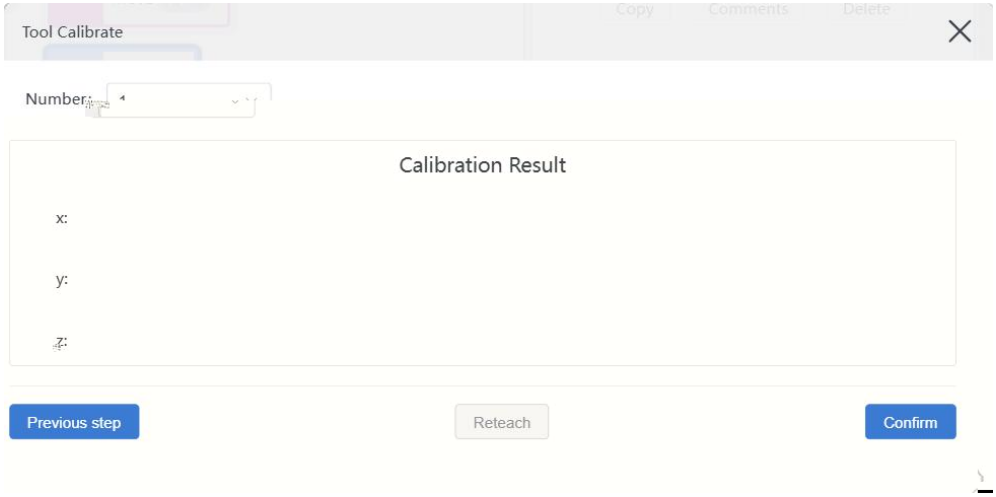

y(T)
x(T)
z(T)
z(W)
z(U)
y(W)
x(U)
x(W)

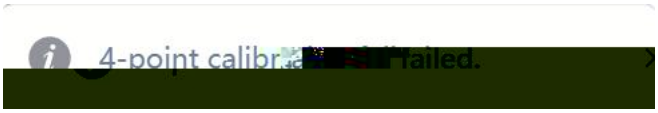

y(T)
x(T)
z(T)
z(W)

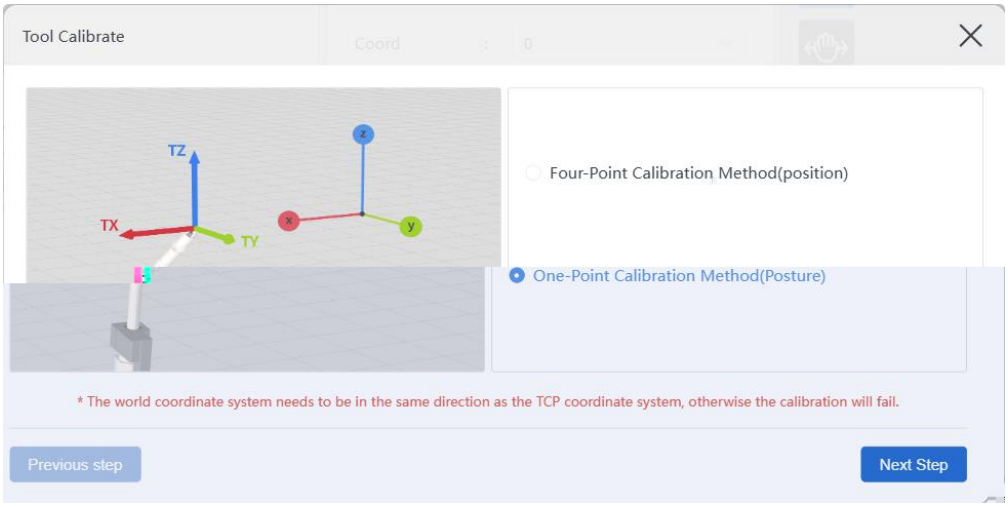

POINTS
ATTR
APOS
CPOS
DAPOS
DCPOS
P2
3D Simulation
Register
I/O
Project Vars
Calibration
Power Off
Rescue
Manual Mode
Switch to automatic mode
Zero Calibration
Tool Calibrate
Coord Calibrate

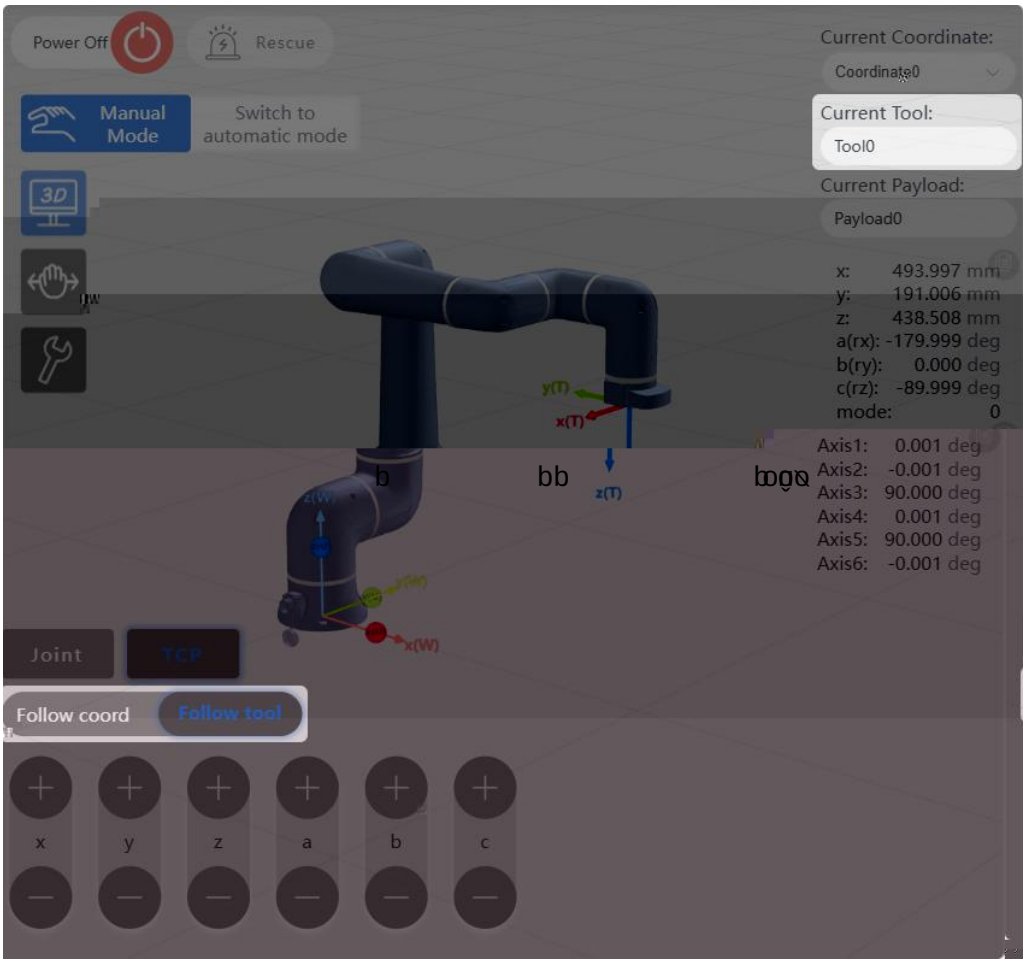

Tool Calibrate
Four-Point Calibration Method(position)


Copy
Comments
x: -33.75085548 mm
a: 176.57561983 deg
y: 431.88032901 mm
z: 534.74253822 mm
c:
Direction 1 Teach
Next Step
Next Step
Confirm


Tool Calibrate
Number:
Calibration Result
x:
y:
z:
Previous step
Reteach
Confirm


4-point calibra
failed.

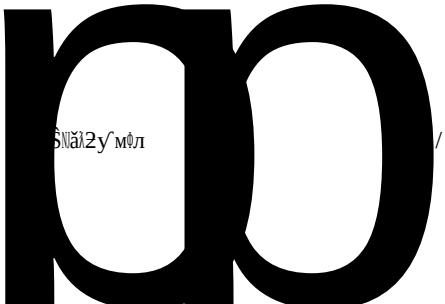

Tool Calibrate
TZ
TX
TY
z
x
y
Four-Point Calibration Method(position)
One-Point Calibration Method(Posture)
* The world coordinate system needs to be in the same direction as the TCP coordinate system, otherwise the calibration will fail.
Previous step
Next Step


Power Off
Rescue
Current Coordinate:
Coordinate0
Manual Mode
Switch to automatic mode
Current Tool:
Tool0
Current Payload:
Payload0
3D
x: 493.997 mm
y: 191.006 mm
z: 438.508 mm
a(rx): -179.999 deg
b(ry): 0.000 deg
c(rz): -89.999 deg
mode: 0
Axis1: 0.001 deg
Axis2: -0.001 deg
Axis3: 90.000 deg
Axis4: 0.001 deg
Axis5: 90.000 deg
Axis6: -0.001 deg
Joint
TCP
Follow coord
Follow tool
x
y
z
a
b
c

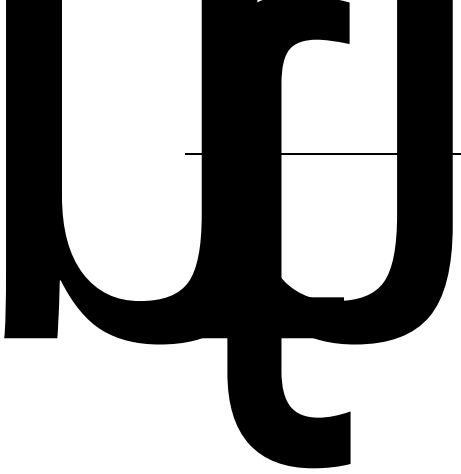
Serial number	Error Level

-
-
-
-

Error code Error description



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Company Address:

Tel: [redacted]400-025-3336

European agency address: