

New Robot Configuration



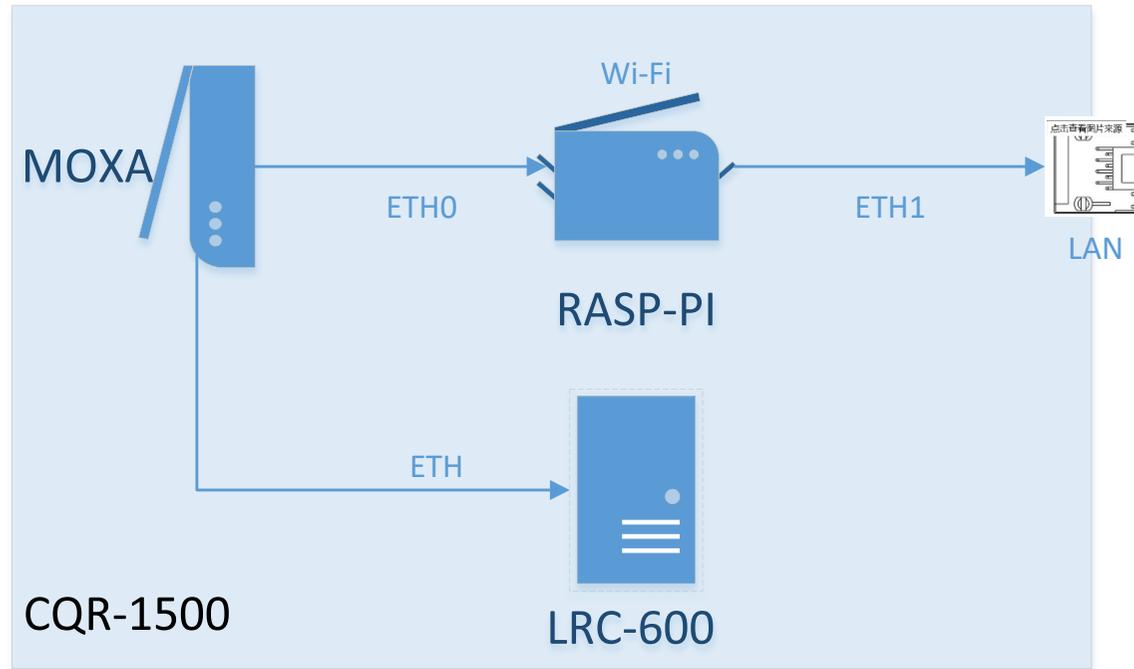


Model	CQR-1500	SN	CQR152401080057
Engineer	Allen Cheung	Date	Jan 8 2024

Network Topology



Local LAN





Local LAN	SSID	LASER_CART	
	PW	okagv2015	
	IP	192.168.1.1	
CQR-1500	MOXA-1137C	WLAN	192.168.1.157
			ID:admin
			PW:moxa
		LAN	192.168.0.1
	RASP-PI	WLAN	192.168.1.57
		ETH0	192.168.0.3
		ETH1	192.168.126.252
	LRC-600	ETH	192.168.0.2
		Remote server	192.168.1.2/9007
			192.168.1.251/51888
			192.168.1.20/9007
			192.168.0.3/51888
192.168.126.253/51888(wired)			

Network settings on the computer (Already configured on the Y4B computer)

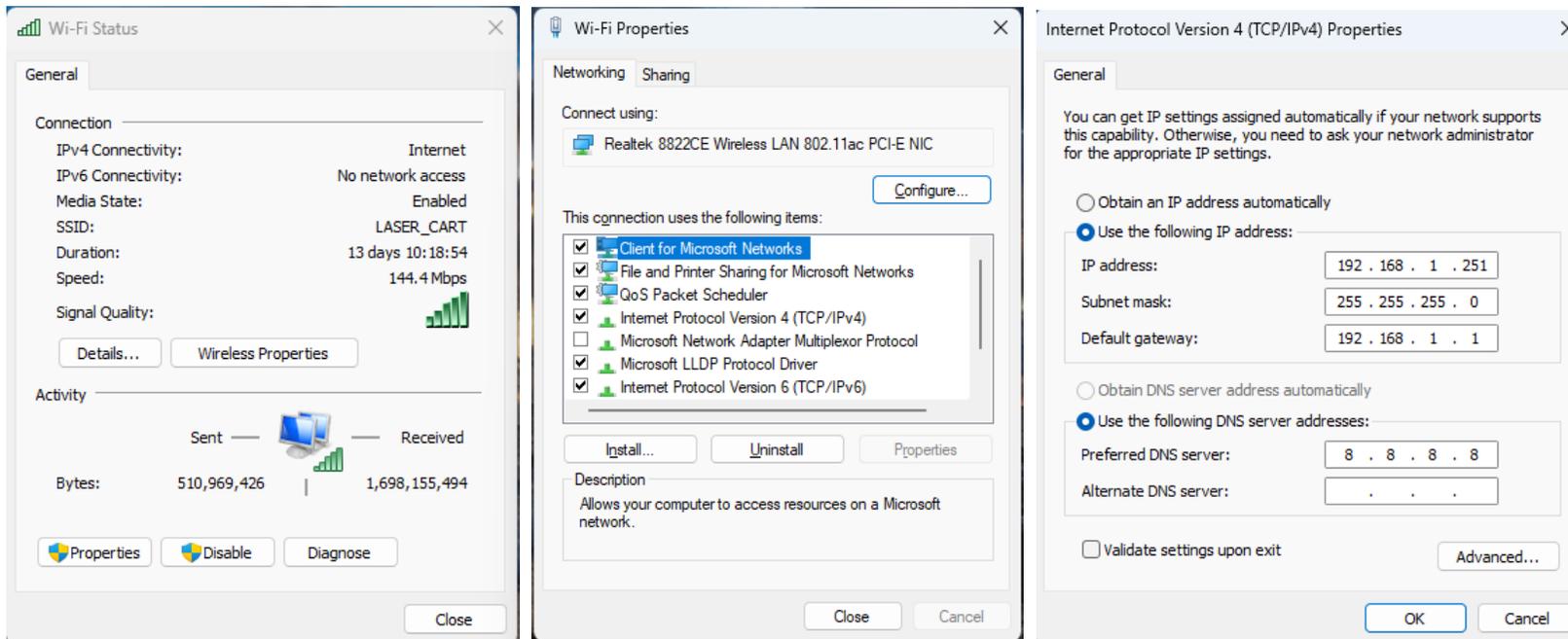
There are two network settings on the computer:

To get to the Internet Protocol Version 4 (TCP/IPv4) Properties, follow the steps below:

Control Panel > Network and Internet > Network and Sharing Center > Connections > Properties > Internet Protocol Version 4 (TCP/IPv4) > Properties

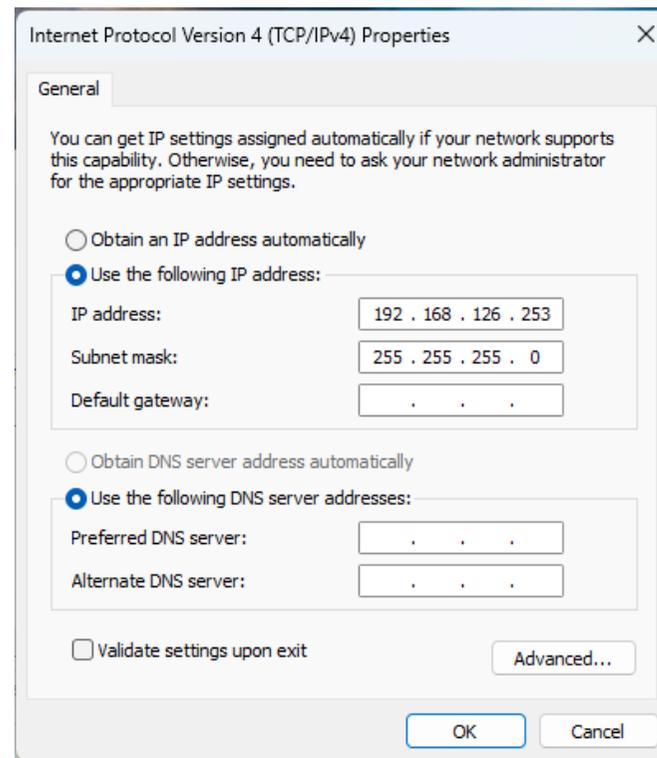
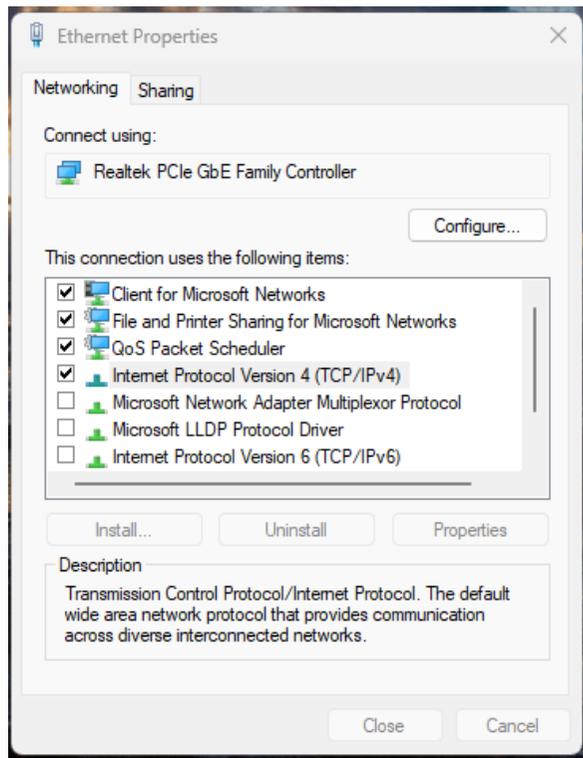
Wifi to LASER_CART:

Static IP:



Ethernet Cable directly connected to the robot:

Set the Computer Static IP: 192.168.126.253

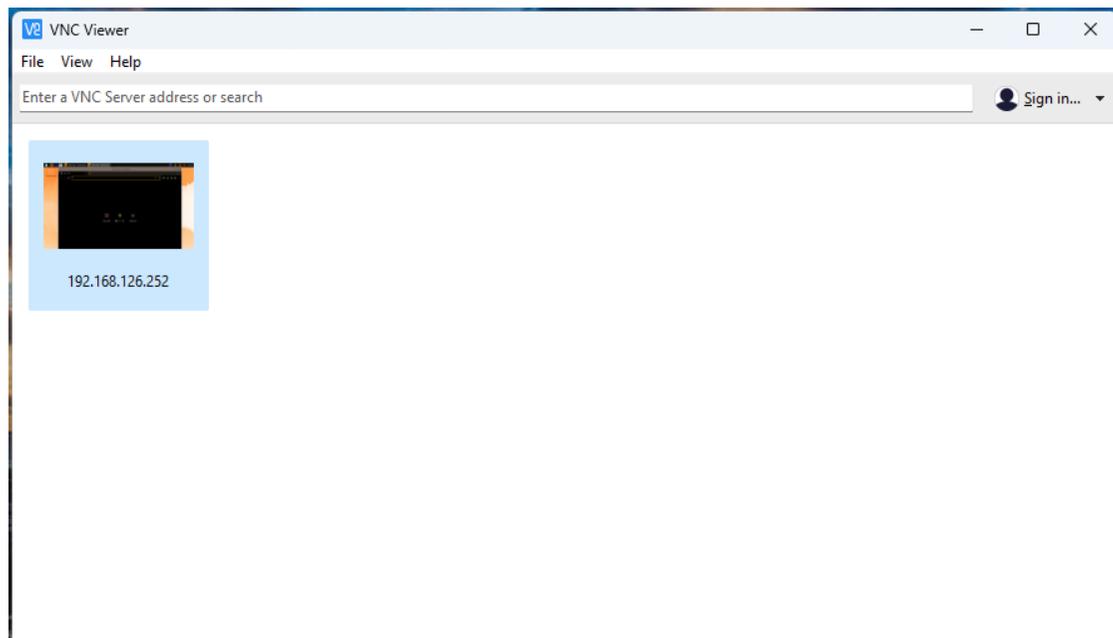


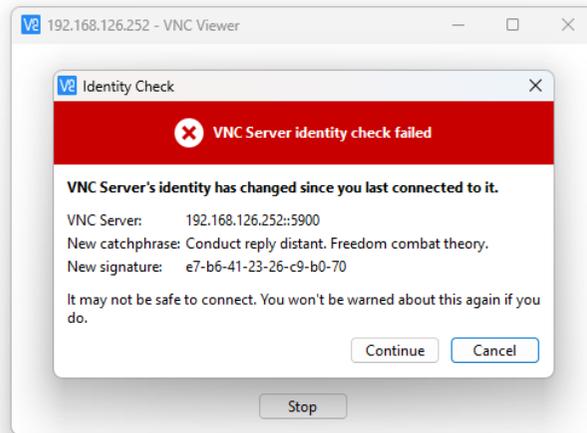
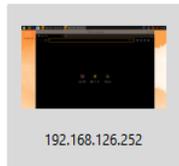
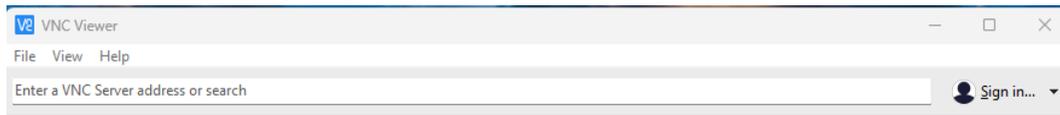


Run VNC Viewer

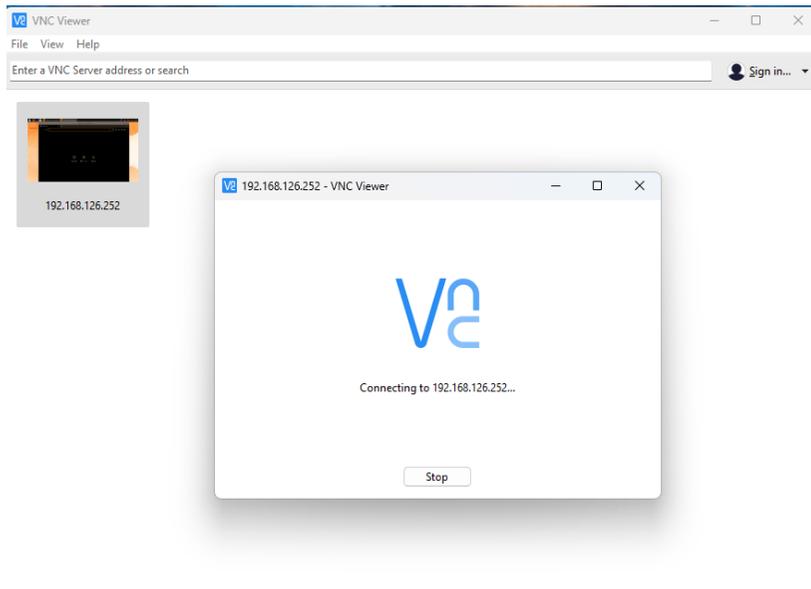
While the ethernet cable is being connected, run the VNC Viewer program.

Connecting to the Raspberry Pi IP 192.168.126.252 with ID: liftians and password being the same as of MM. The 192.168.126.252 IP is the static IP within the Raspberry Pie environment.

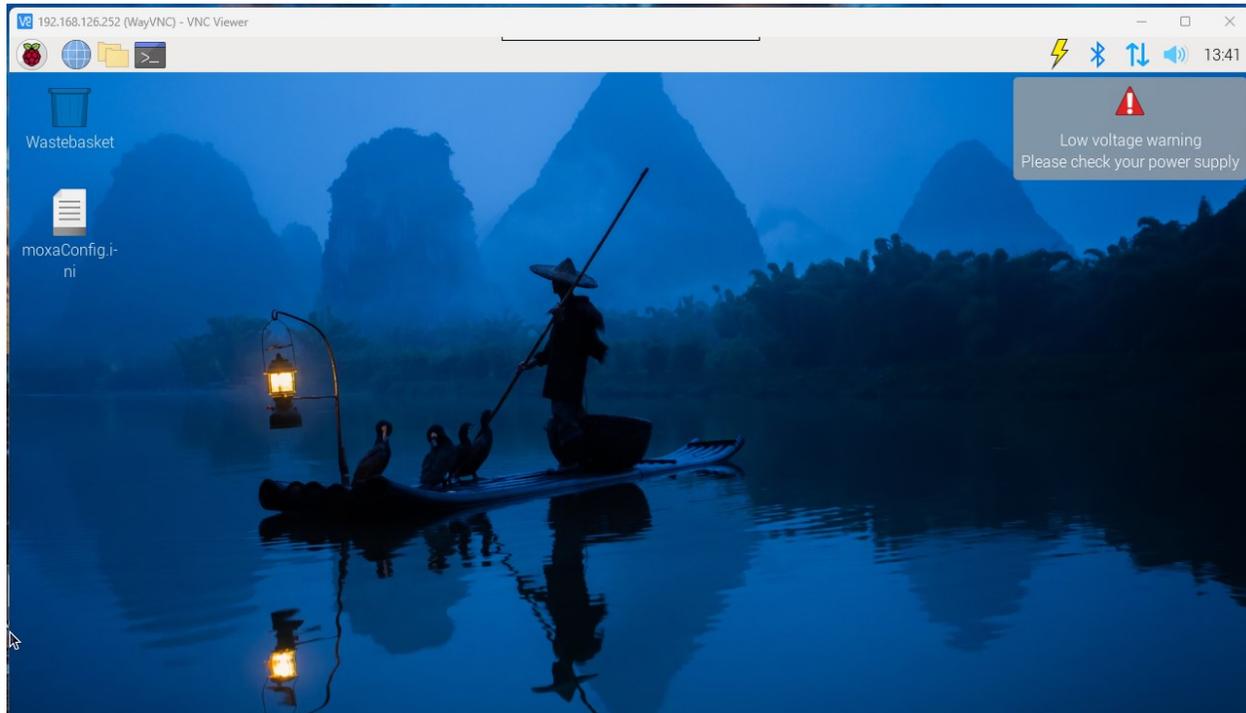


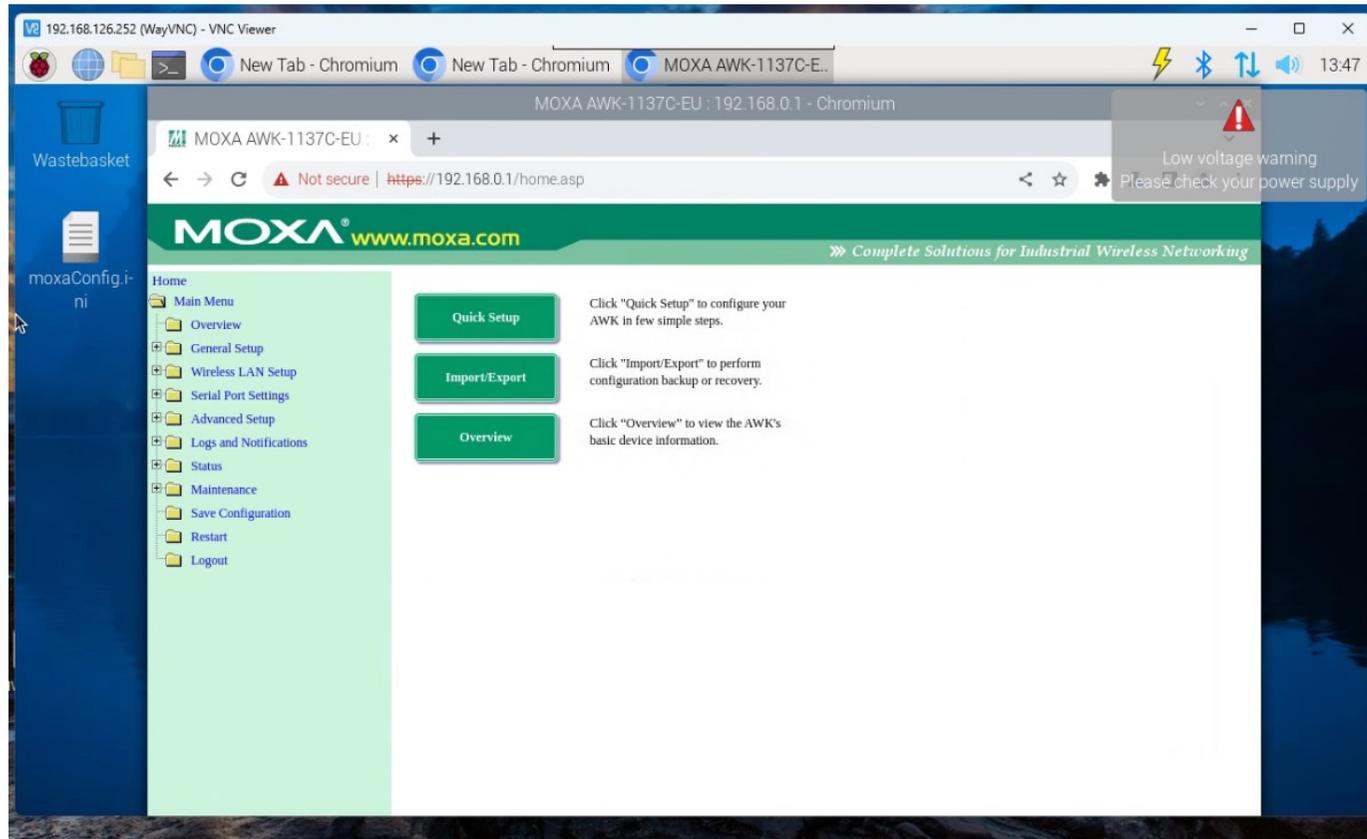


Click on Continue

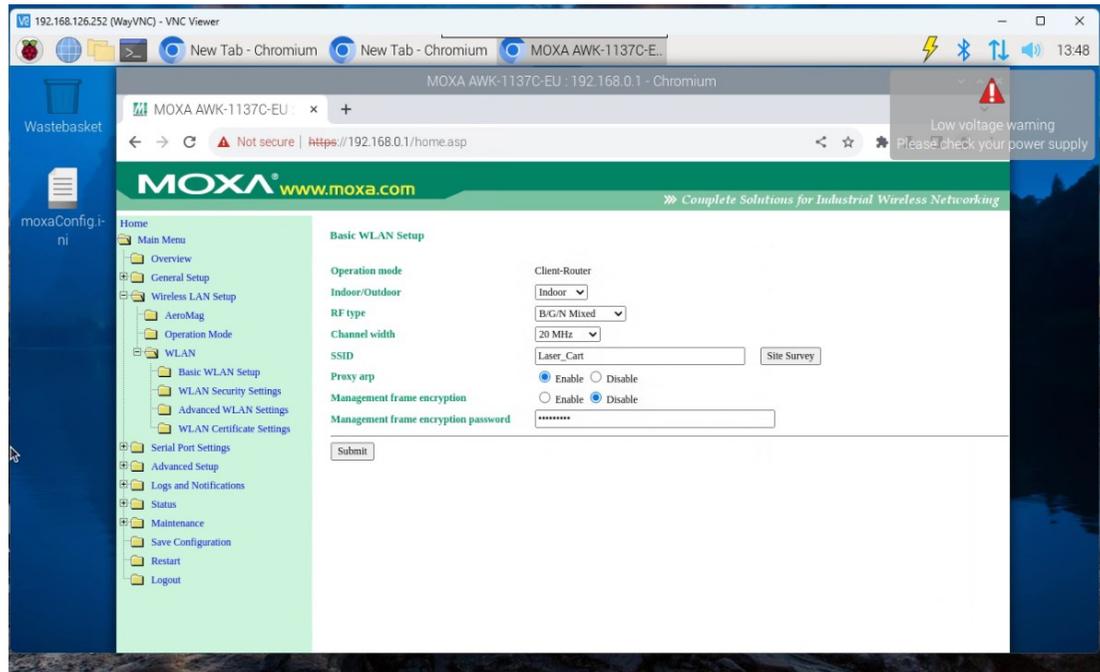


Inside the VNC Viewer, open the web browser to access 192.168.0.1 Moxa page to change the password and other network settings





Browse Main Menu > Wireless LAN Setup > WLAN > Basic WLAN Setup



Click on the SiteSurvey button and select any LASER_CART access points



192.168.126.252 (WayVNC) - VNC Viewer

MOXA AWK-1137C-EU : 192.168.0.1 - Chromium

Site Survey - Chromium

Not secure | https://192.168.0.1/site_survey.asp?index=1

No.	SSID	MAC Address	Channel	Mode	Signal/Noise Floor
1	HWFEED2	E4:55:AB:0A:26:FC	1	BSS/WPA2/PSK	(-61dBm/-93dBm)
2	LASER_CART	EA:55:AB:0A:26:FC	1	BSS/WPA2/PSK	(-61dBm/-93dBm)
3		DA:55:AB:0A:26:FC	1	BSS/WPA2/PSK	(-60dBm/-93dBm)
4	HWFCorp	E2:55:AB:0A:27:1D	1	BSS/WPA2/PSK	(-75dBm/-93dBm)
5	HWFGUEST	EE:55:AB:0A:27:1D	1	BSS/WPA2/PSK	(-74dBm/-93dBm)
6	LASER_CART	EA:55:AB:0A:27:1D	1	BSS/WPA2/PSK	(-75dBm/-93dBm)
7		DA:55:AB:0A:27:1D	1	BSS/WPA2/PSK	(-73dBm/-93dBm)
8	HWFEED2	E4:55:AB:0A:26:F8	1	BSS/WPA2/PSK	(-73dBm/-93dBm)
9	HWFCorp	E2:55:AB:0A:26:F8	1	BSS/WPA2/PSK	(-72dBm/-93dBm)
10	HWFGUEST	EE:55:AB:0A:26:F8	1	BSS/WPA2/PSK	(-72dBm/-93dBm)
11	LASER_CART	EA:55:AB:0A:26:F8	1	BSS/WPA2/PSK	(-72dBm/-93dBm)
12	HWFGUEST	EE:55:AB:0A:27:21	1	BSS/WPA2/PSK	(-83dBm/-93dBm)
13		DA:55:AB:0A:27:21	1	BSS/WPA2/PSK	(-84dBm/-93dBm)
14	DIRECT-64-XXX-AL-C855 (911EFS)	9E:93:4E:86:8B:73	1	BSS/WPA2/PSK	(-68dBm/-93dBm)
15	TP-LINK_73692	F8:DE:27:73:68:92	6	BSS/WPA2/PSK	(-61dBm/-91dBm)

Low voltage warning
Please check your power supply

Wireless Networking

MOXA AWK-1137C-EU : 192.168.0.1 - Chromium

Site Survey - Chromium

Not secure | https://192.168.0.1/site_survey.asp?index=1

192.168.0.1 says
Are you sure to change the SSID to "LASER_CART" ?

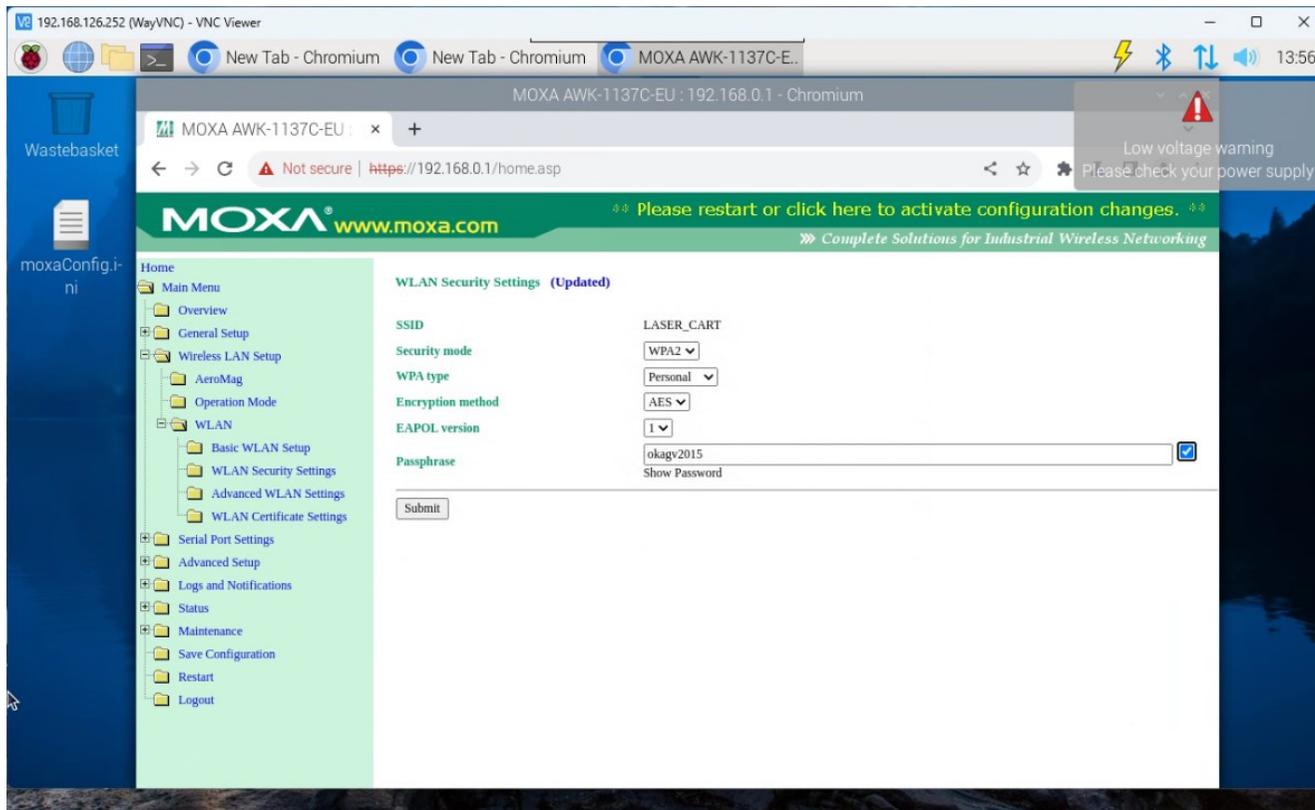
Cancel OK

No.	SSID	MAC Address	Channel	Mode	Signal/Noise Floor
1	HWFEED2	E4:55:AB:0A:26:FC	1	BSS/WPA2/PSK	(-61dBm/-93dBm)
2	LASER_CART	EA:55:AB:0A:26:FC	1	BSS/WPA2/PSK	(-61dBm/-93dBm)
3		DA:55:AB:0A:26:FC	1	BSS/WPA2/PSK	(-60dBm/-93dBm)
4	HWFCorp	E2:55:AB:0A:27:1D	1	BSS/WPA2/PSK	(-75dBm/-93dBm)
5	HWFGUEST	EE:55:AB:0A:27:1D	1	BSS/WPA2/PSK	(-74dBm/-93dBm)
6	LASER_CART	EA:55:AB:0A:27:1D	1	BSS/WPA2/PSK	(-75dBm/-93dBm)
7		DA:55:AB:0A:27:1D	1	BSS/WPA2/PSK	(-73dBm/-93dBm)

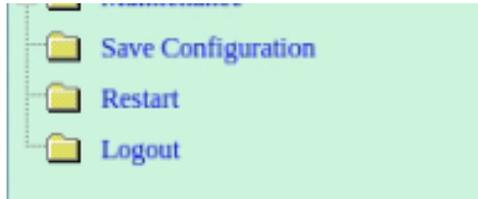


Set password to okagv2015 and click Submit

Click on WLAN Security Settings and check Show Password box to type in the correct password again.



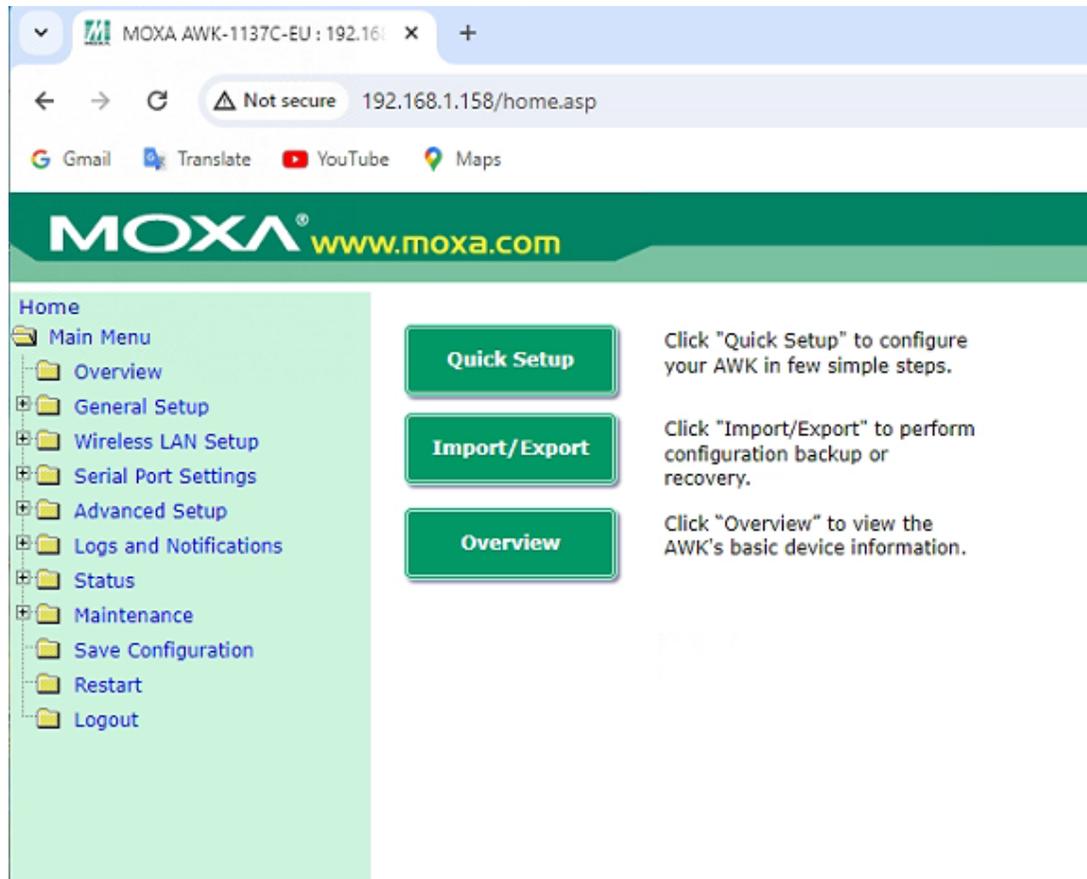
Save Configuration and Restart the Moxa router



Save and restart the Moxa program to make the changes effective. It will take about one minute to restart the Moxa router

Log in to Moxa page outside VNC Viewer – DISCONNECTING THE ETHERNET CABLE

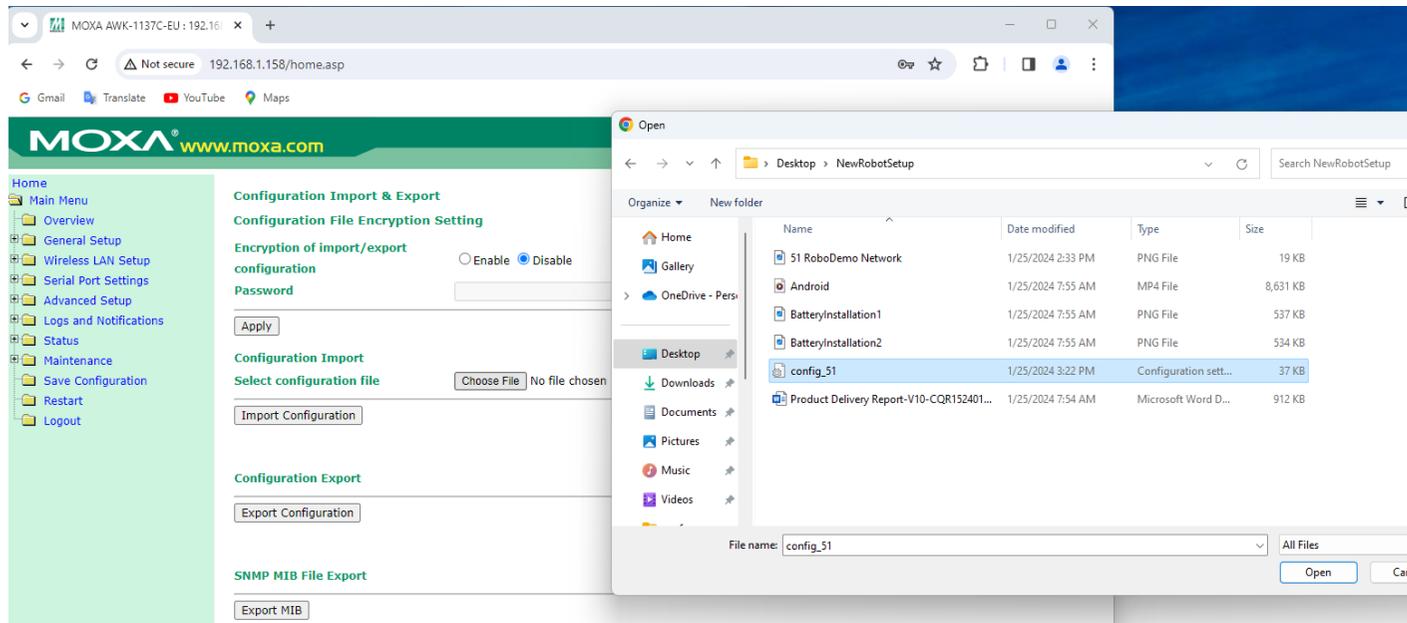
Open the web browser with IP: 192.168.1.1XX, XX is the robot number. Click on Import/Export on the home page.





Import the network configuration file from bot 51.

Choose File (Desktop > NewRobotSetup > Config_51) > Open > Import Configuration



Change the IP address to 192.168.1.1XX from 192.168.1.151



General Setup > Network Settings

MOXA AWK-1137C-EU : 192.168.1.158

Not secure 192.168.1.158/home.asp

Gmail Translate YouTube Maps

MOXA www.moxa.com

- Home
- Main Menu
 - Overview
 - General Setup
 - System Information
 - Interface On/Off
 - Network Settings**
 - System Time
 - Wireless LAN Setup
 - AeroMag
 - Operation Mode
 - WLAN
 - Basic WLAN Setup
 - WLAN Security Settings
 - Advanced WLAN Settings
 - WLAN Certificate Settings
 - Serial Port Settings
 - Advanced Setup
 - Logs and Notifications
 - Status
 - Maintenance
 - Save Configuration
 - Restart
 - Logout

Network Settings

WAN (Default Route)

IP address assignment	Static
IP address	192.168.1.158
Subnet mask	255.255.255.0
Gateway	192.168.1.1
Primary DNS server	192.168.3.1
Secondary DNS server	

LAN

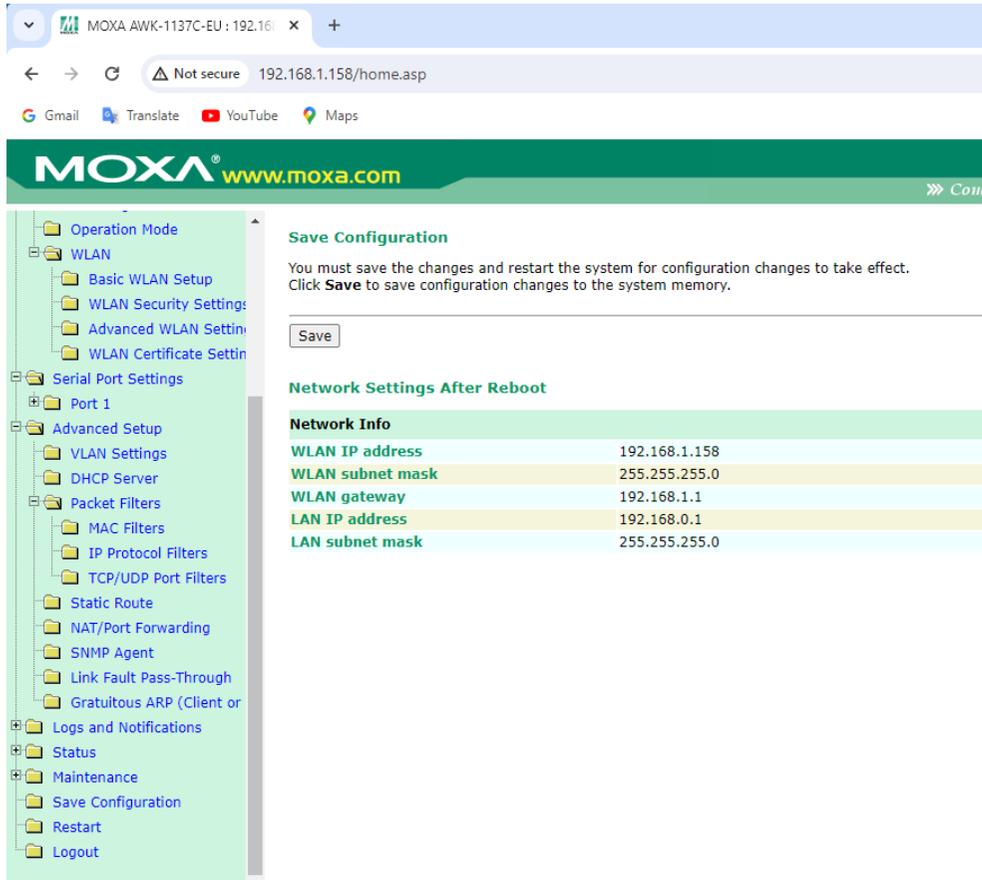
IP address	192.168.0.1
Subnet mask	255.255.255.0

Advanced Network Settings

MTU	1500 (576 to 2290 Bytes)
-----	--------------------------

Submit

Save Configuration and Restart



The screenshot shows a web browser window with the address bar displaying "192.168.1.158/home.asp". The page header features the MOXA logo and the website URL "www.moxa.com". On the left, a navigation tree lists various configuration categories, including "WLAN", "Serial Port Settings", "Advanced Setup", "Logs and Notifications", "Status", "Maintenance", and "Logout". The main content area is titled "Save Configuration" and contains a warning message: "You must save the changes and restart the system for configuration changes to take effect. Click **Save** to save configuration changes to the system memory." Below this message is a "Save" button. Further down, a section titled "Network Settings After Reboot" displays a table of network parameters.

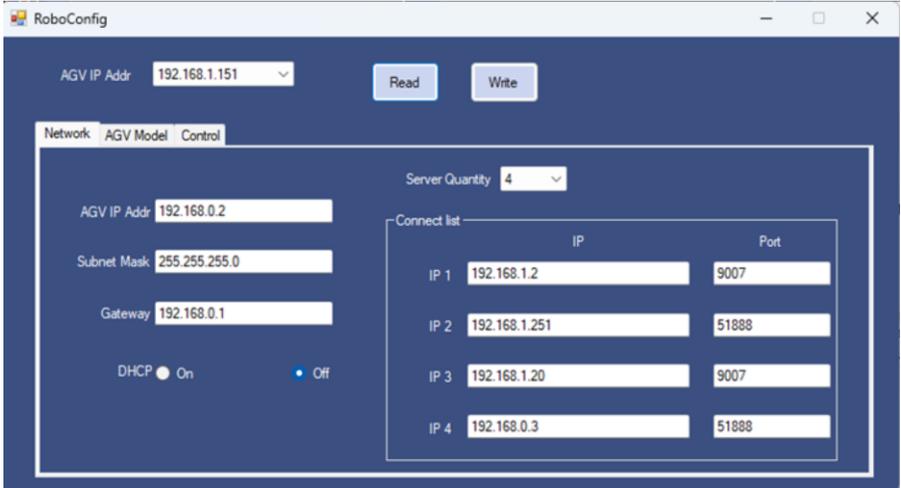
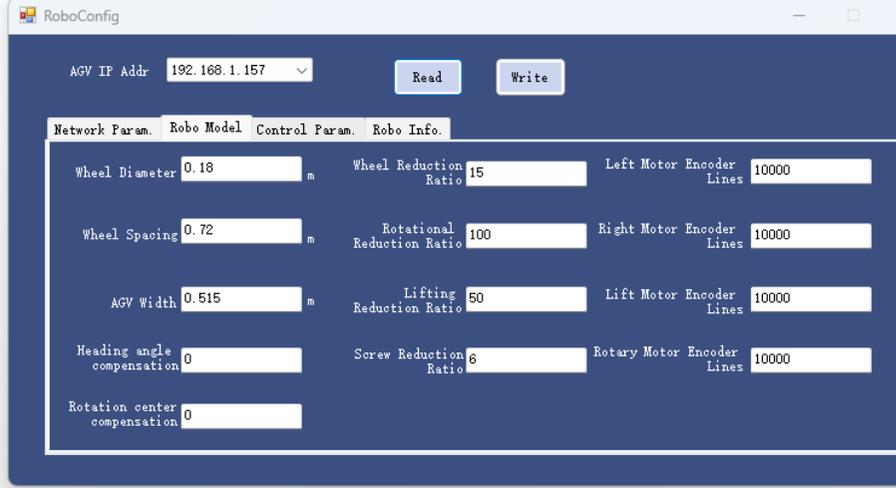
Network Info	
WLAN IP address	192.168.1.158
WLAN subnet mask	255.255.255.0
WLAN gateway	192.168.1.1
LAN IP address	192.168.0.1
LAN subnet mask	255.255.255.0



Configuration

Use the network configuration for Bot 51 as HWF network connections (Primary and Secondary Servers)

RoboDemo connection > RoboCheck > Protocol Switch to LiftiansTest > RoboConfig to select an IP > **Read** from Network Param> Modify Network parameters and **Write**

Network Config (HWF, NEED CHANGES IP3 and IP 4)	Robo. Model Config.																																													
 <p>The screenshot shows the 'Network' tab in RoboConfig. The 'AGV IP Addr' is set to 192.168.1.151. Below, there are fields for 'AGV IP Addr' (192.168.0.2), 'Subnet Mask' (255.255.255.0), and 'Gateway' (192.168.0.1). A 'DHCP' section has 'On' selected. A 'Server Quantity' dropdown is set to 4. A 'Connect list' table is shown below:</p> <table border="1"><thead><tr><th></th><th>IP</th><th>Port</th></tr></thead><tbody><tr><td>IP 1</td><td>192.168.1.2</td><td>9007</td></tr><tr><td>IP 2</td><td>192.168.1.251</td><td>51888</td></tr><tr><td>IP 3</td><td>192.168.1.20</td><td>9007</td></tr><tr><td>IP 4</td><td>192.168.0.3</td><td>51888</td></tr></tbody></table>		IP	Port	IP 1	192.168.1.2	9007	IP 2	192.168.1.251	51888	IP 3	192.168.1.20	9007	IP 4	192.168.0.3	51888	 <p>The screenshot shows the 'Robo Model' tab in RoboConfig. The 'AGV IP Addr' is set to 192.168.1.157. The 'Network Param.' tab is selected, showing various parameters:</p> <table border="1"><tbody><tr><td>Wheel Diameter</td><td>0.18 m</td><td>Wheel Reduction Ratio</td><td>15</td><td>Left Motor Encoder Lines</td><td>10000</td></tr><tr><td>Wheel Spacing</td><td>0.72 m</td><td>Rotational Reduction Ratio</td><td>100</td><td>Right Motor Encoder Lines</td><td>10000</td></tr><tr><td>AGV Width</td><td>0.515 m</td><td>Lifting Reduction Ratio</td><td>50</td><td>Lift Motor Encoder Lines</td><td>10000</td></tr><tr><td>Heading angle compensation</td><td>0</td><td>Screw Reduction Ratio</td><td>6</td><td>Rotary Motor Encoder Lines</td><td>10000</td></tr><tr><td>Rotation center compensation</td><td>0</td><td></td><td></td><td></td><td></td></tr></tbody></table>	Wheel Diameter	0.18 m	Wheel Reduction Ratio	15	Left Motor Encoder Lines	10000	Wheel Spacing	0.72 m	Rotational Reduction Ratio	100	Right Motor Encoder Lines	10000	AGV Width	0.515 m	Lifting Reduction Ratio	50	Lift Motor Encoder Lines	10000	Heading angle compensation	0	Screw Reduction Ratio	6	Rotary Motor Encoder Lines	10000	Rotation center compensation	0				
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Heading angle compensation	0	Screw Reduction Ratio	6	Rotary Motor Encoder Lines	10000																																									
Rotation center compensation	0																																													
<p>IP 1: 192.168.1.2:9007 is assigned for BOTSERVICE on the Primary server</p> <p>IP 2: 192.168.1.251:51888 is where RoboDemo is connected, or Android device where Liftians RoboRemote App is installed</p> <p>IP 3: 192.168.1.20:9007 is assigned for BOTSERVICE on the Secondary server</p> <p>IP 3: 192.168.0.3:51888 is reserved for Raspberry Pi ETH0</p>	<p>Preconfigured, no need to change</p>																																													



Robo. Control Parameters (NEED CHANGES)

RoboConfig

AGV IP Addr: 192.168.1.157

Network Param. Robo Model Control Param. Robo Info.

AGV Num: 56	Bumper strip: 0	Low Power Interval: 300
Map Resolution: 0.001 m	No Load Spd: 1.5 m/s	Load Spd: 1 m/s
Shelf Width: 0.88 m	Acceleration Distance: 1.2 m	Deceleration Distance: 1.2 m
Lifting Height: 0.06 m	No-load Rotation Period: 1.5 s	Load Rotation Period: 2 s
Avoidance Distance: 4 m	Restart Time: 2 s	Avoidance Sensitivity: 3000

Robo. Info.

RoboConfig

AGV IP Addr: 192.168.1.157

Network Param. Robo Model Control Param. Robo Info.

Run time: 0
Firmware Version: 3.0.8
Version time stamp: Jan 8 2024 17:05:22