

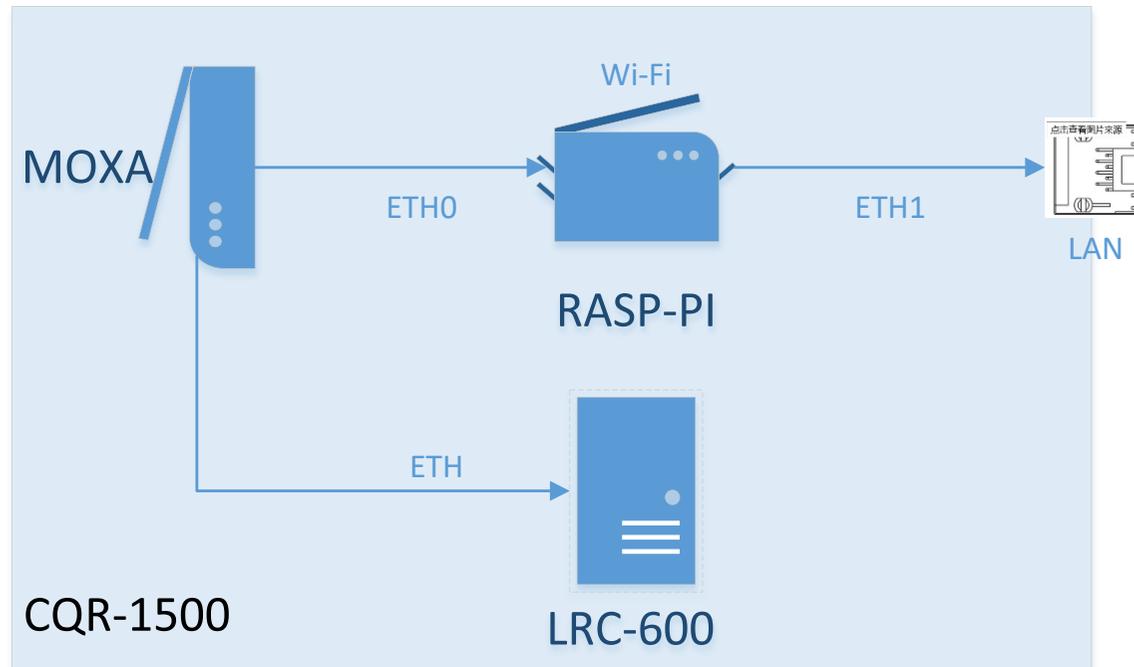
New Robot Configuration





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

● Network Topology



Local LAN	SSID	Laser_Cart		
	PW	okagy2015		
	IP	192.168.1.1		
CQR-1500	MOXA-1137C	WLAN	192.168.1.157	
			ID:admin	
			PW:moxa	
	RASP-PI	LAN	192.168.0.1	
			WLAN	192.168.1.57
			ETH0	192.168.0.3
	LRC-600	Remote server	ETH1	192.168.126.252
			ETH	192.168.0.2
			192.168.1.2/9007	
			192.168.1.251/51888	
			192.168.1.252/51888	
192.168.0.3/51888				
192.168.126.253/51888(wired)				

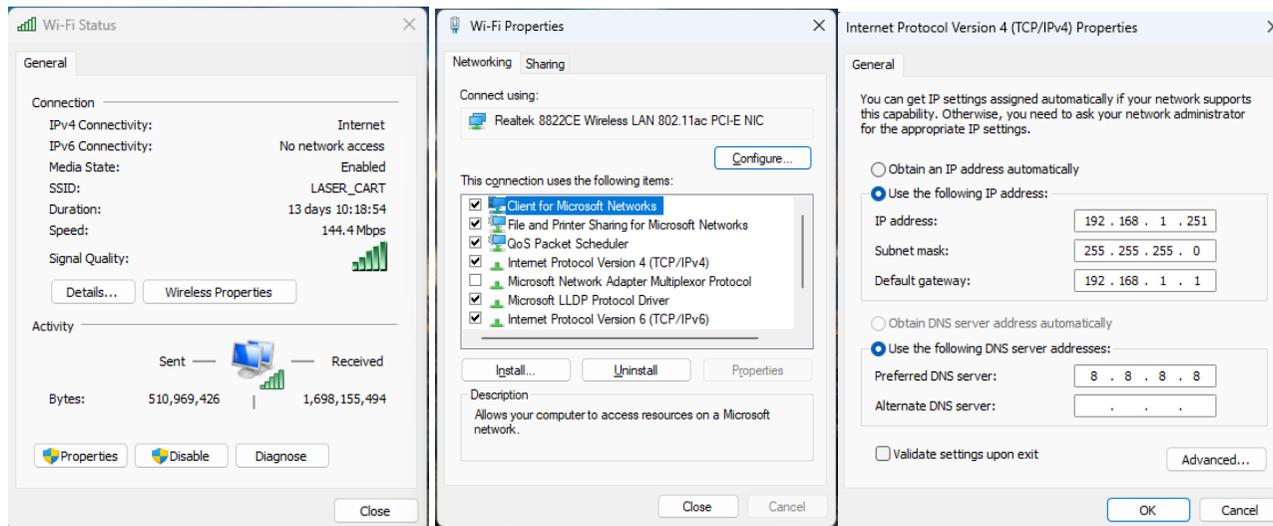
● Network settings on the computer (Already configured on the Y4B computer)

There are two network settings on the computer:

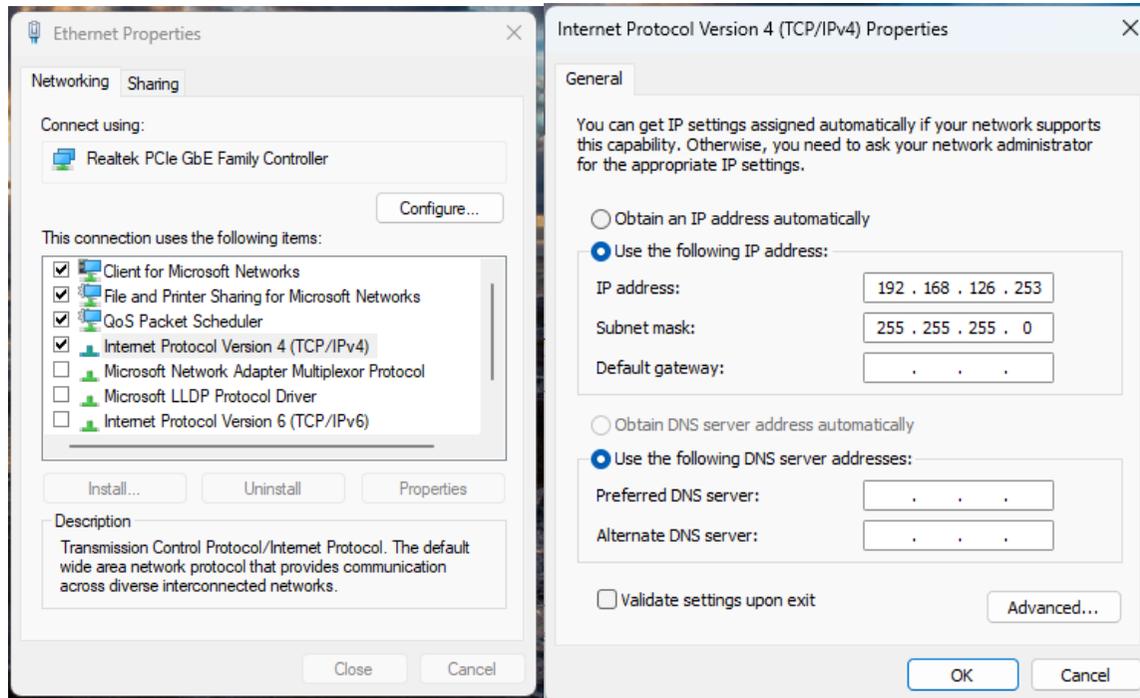
To get to the Internet Protocol Version 4 (TCP/IPv4) Properties, follow the steps below:

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

1. Wifi to Laser_Cart:
 - a. Static IP:



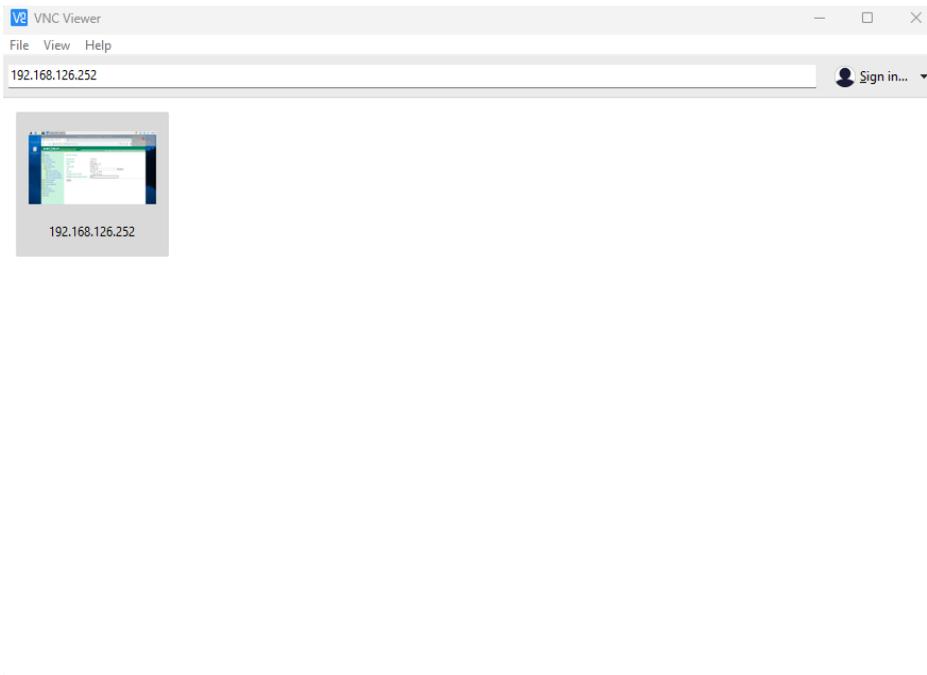
2. Ethernet Cable directly connected to the robot:
 - a. Static IP: 192.168.126.253



● Run VNC Viewer

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

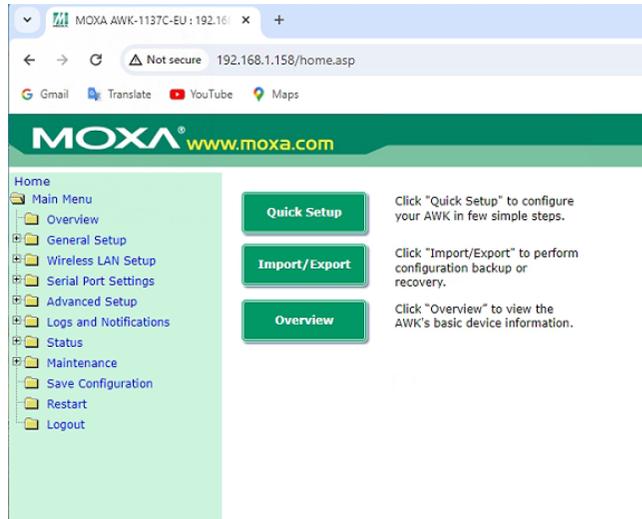
1. Connecting to the Raspberry Pi IP 192.168.126.252 with ID: liftians and password being the same as of MM. The 192.168.126.252 IP is the static IP within the Raspberry Pi environment



2. Inside the VNC Viewer, open the web browser to access 192.168.0.1 Moxa page to change the password and other network settings
3. Save and restart the Moxa program to make the changes effective. It will take about one minute to restart the Moxa router

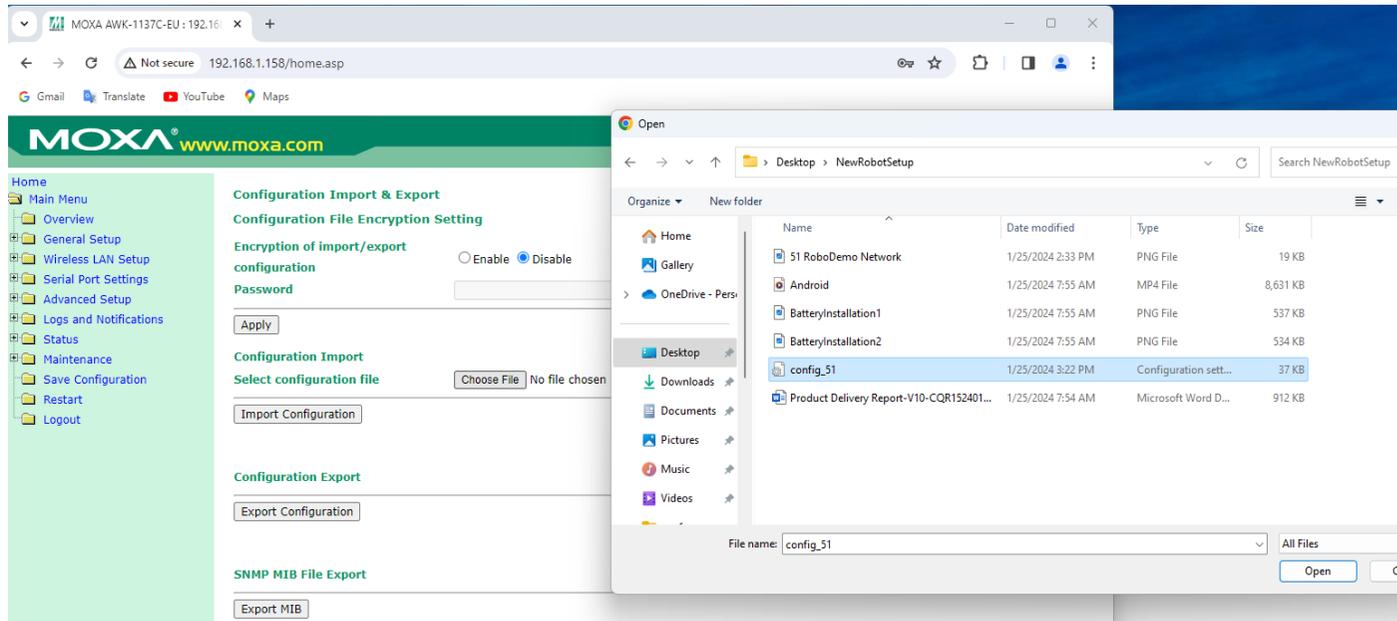
● Log in to Moxa page outside VNC Viewer

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



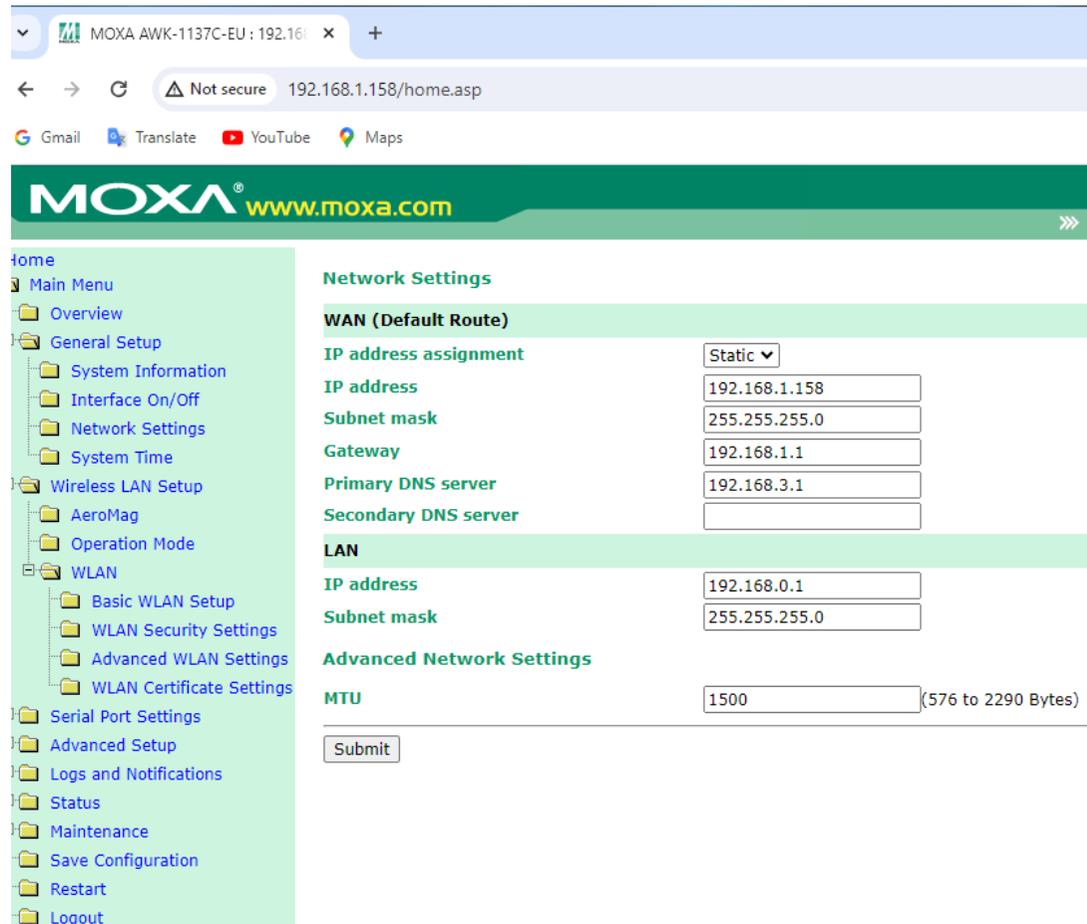
2. Import the network configuration file from bot 51.

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



3. Change the IP address to 192.168.1.1XX from 192.168.1.151

4. General Setup > Network Settings



The screenshot shows a web browser window displaying the MOXA network management interface. The browser's address bar shows the URL `192.168.1.158/home.asp`. The page features a green header with the MOXA logo and website URL. A left-hand navigation menu lists various system settings, with 'Network Settings' highlighted. The main content area is titled 'Network Settings' and is divided into three sections: 'WAN (Default Route)', 'LAN', and 'Advanced Network Settings'. Each section contains configuration fields for IP addresses, subnet masks, gateways, and DNS servers. A 'Submit' button is located at the bottom of the configuration area.

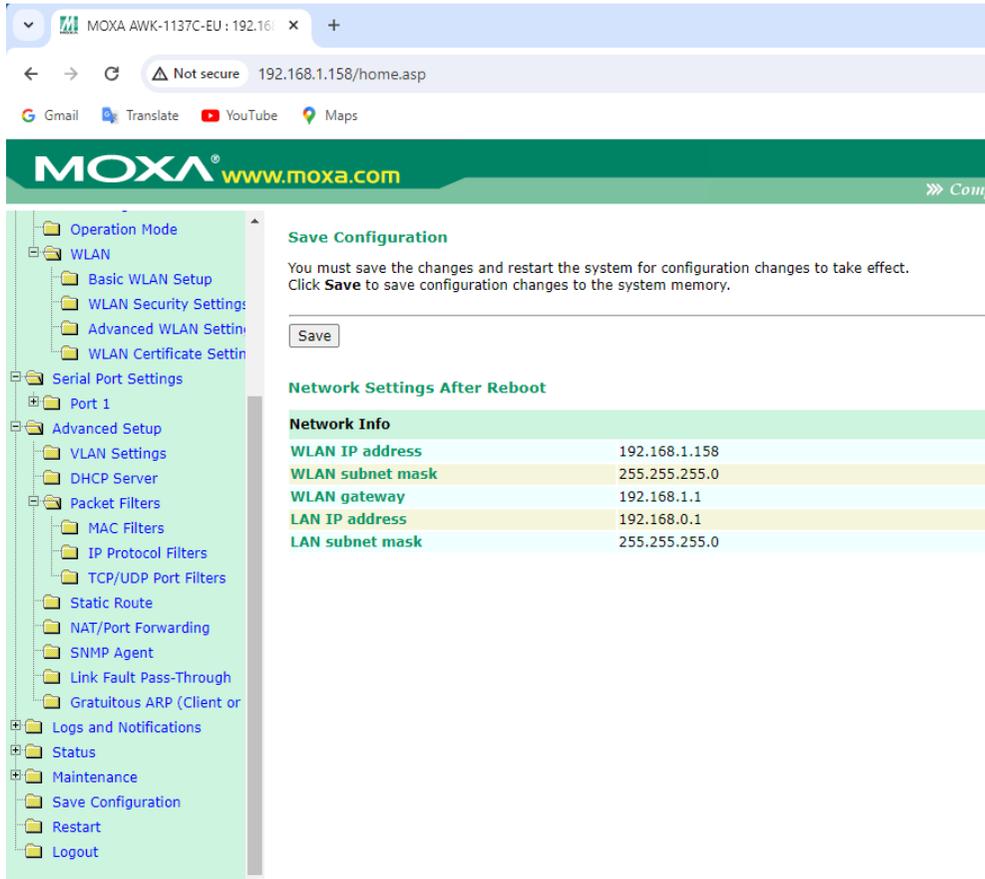
WAN (Default Route)	
IP address assignment	Static
IP address	192.168.1.158
Subnet mask	255.255.255.0
Gateway	192.168.1.1
Primary DNS server	192.168.3.1
Secondary DNS server	

LAN	
IP address	192.168.0.1
Subnet mask	255.255.255.0

Advanced Network Settings	
MTU	1500 (576 to 2290 Bytes)

Submit

5. Save Configuration and Restart



MOXA AWK-1137C-EU : 192.168.1.158

Not secure 192.168.1.158/home.asp

Gmail Translate YouTube Maps

MOXA www.moxa.com

- Operation Mode
 - WLAN
 - Basic WLAN Setup
 - WLAN Security Settings
 - Advanced WLAN Settings
 - WLAN Certificate Settings
 - Serial Port Settings
 - Port 1
 - Advanced Setup
 - VLAN Settings
 - DHCP Server
 - Packet Filters
 - MAC Filters
 - IP Protocol Filters
 - TCP/UDP Port Filters
 - Static Route
 - NAT/Port Forwarding
 - SNMP Agent
 - Link Fault Pass-Through
 - Gratuitous ARP (Client or Server)
 - Logs and Notifications
 - Status
 - Maintenance
 - Save Configuration
 - Restart
 - Logout

Save Configuration

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.

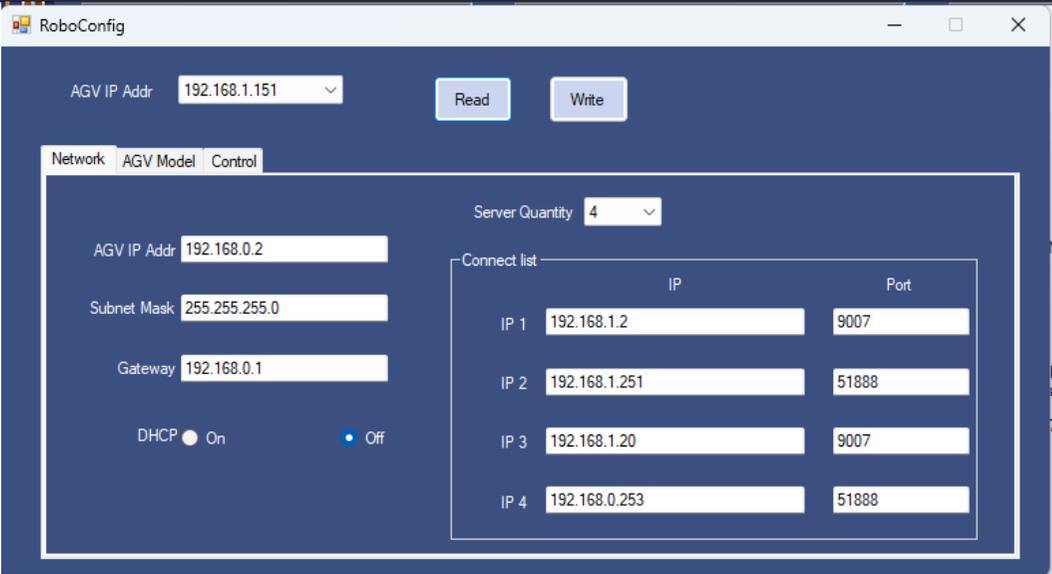
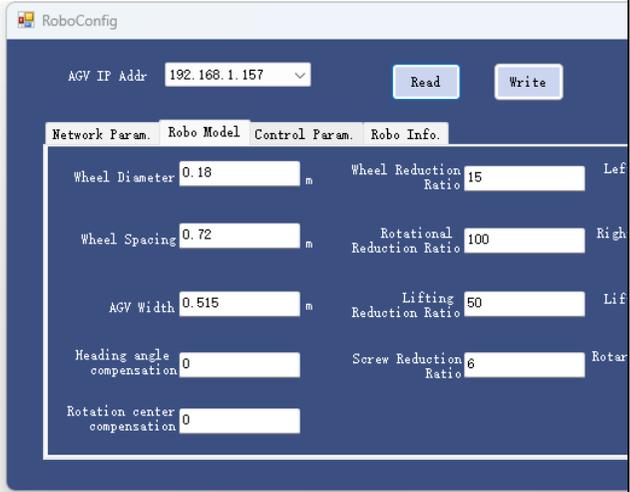
Network Settings After Reboot

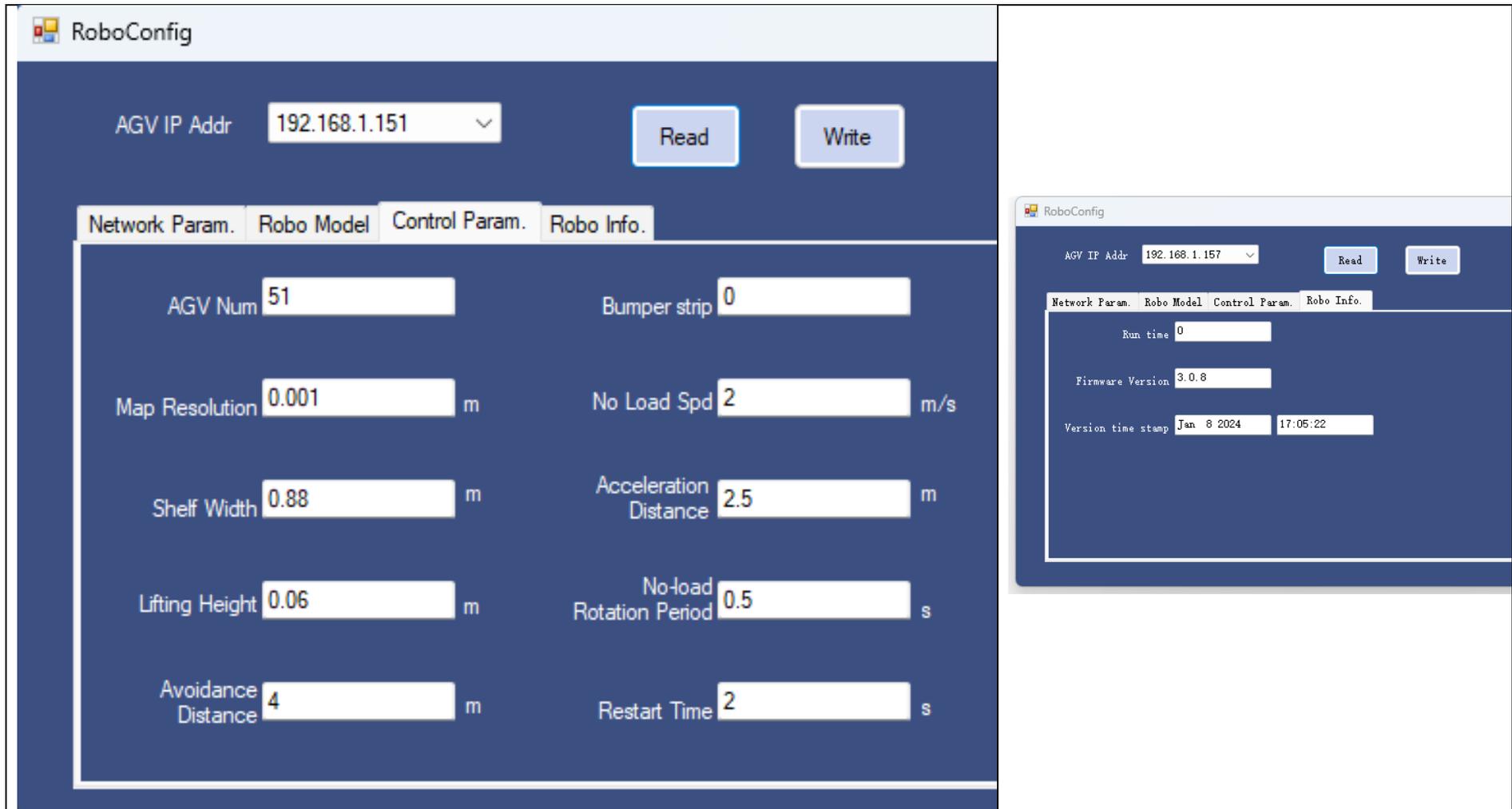
Network Info	
WLAN IP address	192.168.1.158
WLAN subnet mask	255.255.255.0
WLAN gateway	192.168.1.1
LAN IP address	192.168.0.1
LAN subnet mask	255.255.255.0

● 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)	Robo. Model Config.															
 <table border="1" data-bbox="719 895 1245 1158"> <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>192.168.0.253</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	192.168.0.253	51888	
	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	192.168.0.253	51888														
Robo. Control Config.	Robo. Info.															



The image displays the RoboConfig software interface. The main window is titled "RoboConfig" and features a dark blue background with white text and input fields. At the top, there is a section for "AGV IP Addr" with a dropdown menu showing "192.168.1.151" and two buttons labeled "Read" and "Write". Below this, there are four tabs: "Network Param.", "Robo Model", "Control Param.", and "Robo Info.". The "Control Param." tab is currently selected, showing a grid of parameters with their values and units. A smaller inset window, also titled "RoboConfig", is shown in the bottom right corner, displaying the "Robo Info." tab with fields for "Run time", "Firmware Version", and "Version time stamp".

Parameter	Value	Unit
AGV Num	51	
Bumper strip	0	
Map Resolution	0.001	m
No Load Spd	2	m/s
Shelf Width	0.88	m
Acceleration Distance	2.5	m
Lifting Height	0.06	m
No-load Rotation Period	0.5	s
Avoidance Distance	4	m
Restart Time	2	s

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

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

RoboConfig

AGV IP Addr

Network Param. | Robo Model | Control Param. | Robo Info.

Server Quantity

AGV IP Addr

Subnet Mask

Gateway

DHCP On Off

Connect list

	IP	Port
IP 1	<input type="text" value="192.168.1.2"/>	<input type="text" value="9007"/>
IP 2	<input type="text" value="192.168.1.251"/>	<input type="text" value="51888"/>
IP 3	<input type="text" value="192.168.1.20"/>	<input type="text" value="9007"/>
IP 4	<input type="text" value="192.168.0.253"/>	<input type="text" value="51888"/>

RoboConfig

AGV IP Addr: 192.168.1.151

Network Param. | Robo Model | Control Param. | Robo Info.

Wheel Diameter	<input type="text" value="0.18"/> m	Wheel Reduction Ratio	<input type="text" value="15"/>	Left Motor Encoder Lines	<input type="text" value="10000"/>
Wheel Spacing	<input type="text" value="0.726"/> m	Rotational Reduction Ratio	<input type="text" value="100"/>	Right Motor Encoder Lines	<input type="text" value="10000"/>
AGV Width	<input type="text" value="0.515"/> m	Lifting Reduction Ratio	<input type="text" value="50"/>	Lift Motor Encoder Lines	<input type="text" value="10000"/>
Heading angle compensation	<input type="text" value="-0.2"/>	Screw Reduction Ratio	<input type="text" value="6"/>	Rotary Motor Encoder Lines	<input type="text" value="10000"/>
Rotation center compensation	<input type="text" value="0"/>				

