Topic: How to connect DOP-300 to DIACloud via wired Ethernet and Wi-Fi Dongle

Applicable model	DOP-300S
Keyword	DX-MWB-01N Wi-Fi dongle

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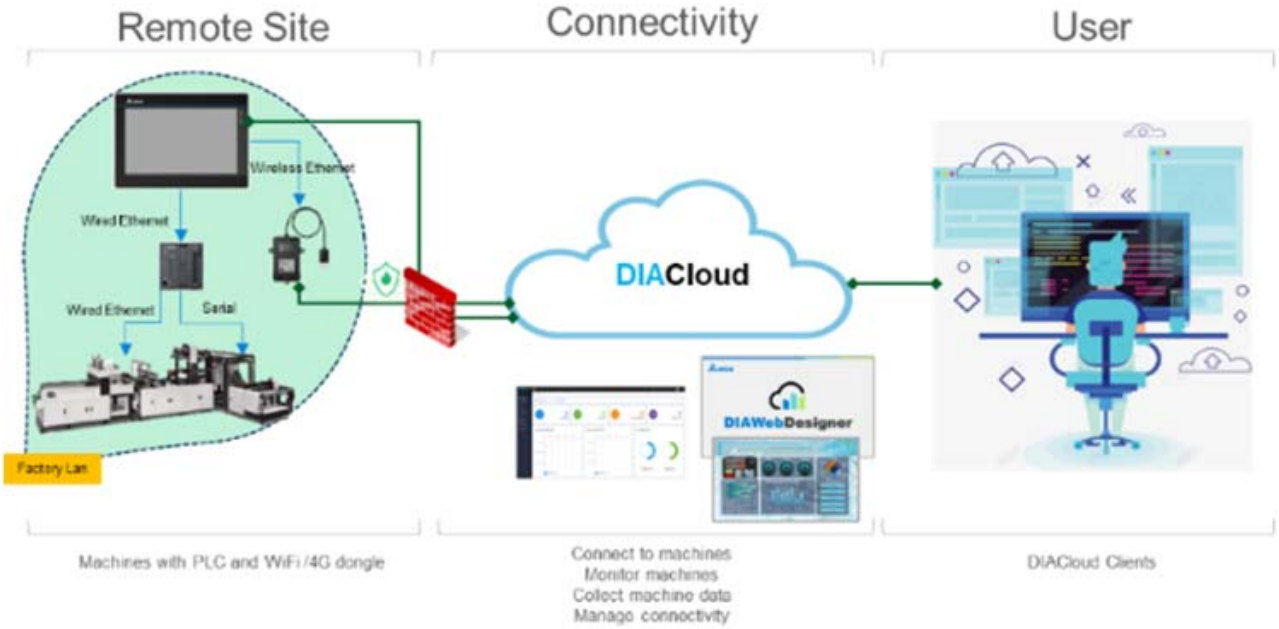
1. Introduction

DIACloud is an IoT cloud platform specially designed for machine manufacturers and end customers. DIACloud allows you to easily create customized dashboards and use them to collect, analyse and utilize data to improve efficiency, help administrators obtain machine status, and monitor device status from anywhere in the world through a web browser on a PC. The HMI has a variety of communication protocols, integrates the lower PLC information and uploads the data to DIACloud for situation room analysis.

2. Scenario

Wi-Fi Dongle and DOP-300S products support remote connection to machines or devices. With these products, machine manufacturers and users can troubleshoot machines, correct PLC errors and operate HMI remotely without traveling.

These products establish secure VLN (Virtual Local Network) connections between users and machines anytime, anywhere. The connection is established through DIACloud, a highly secure industrial cloud platform. The dongle allows connection via 4G or Wi-Fi for easy remote operation in any situation.



3. Hardware / Software Configuration

Software version: DIAScreen1.4.3.45

Firmware version: Ver-1.0132.6.1

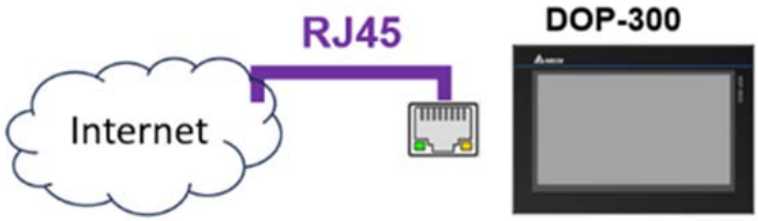
Omron editing software: Sysmac Studio Ver 1.4.0.0.64008

Network Configurator: Version 3.69a

- **Plan 1: DOP-300 + Ethernet**

No.	Device	Type	Quantity
1	HMI	DOP-3S07S3E2	1
2	Cable	RJ45	1

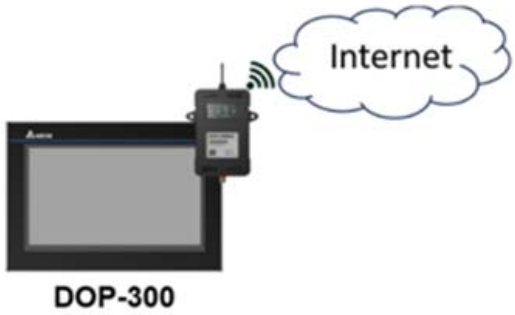
Architecture:



- **Plan 2: DOP-300 + Wi-Fi Dongle**

No.	Device	Type	Quantity
1	HMI	DOP-3S07S3E2	1
2	Dongle	DX-MWB-01N	1

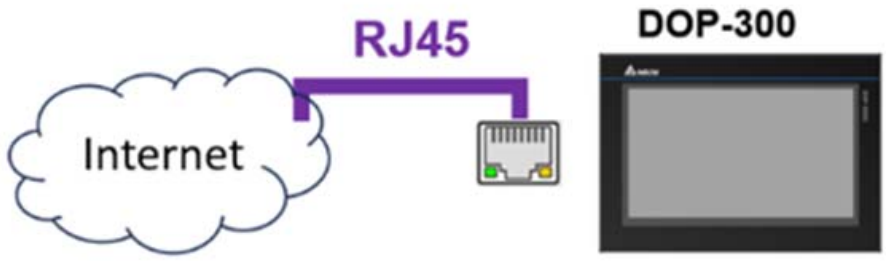
Architecture:



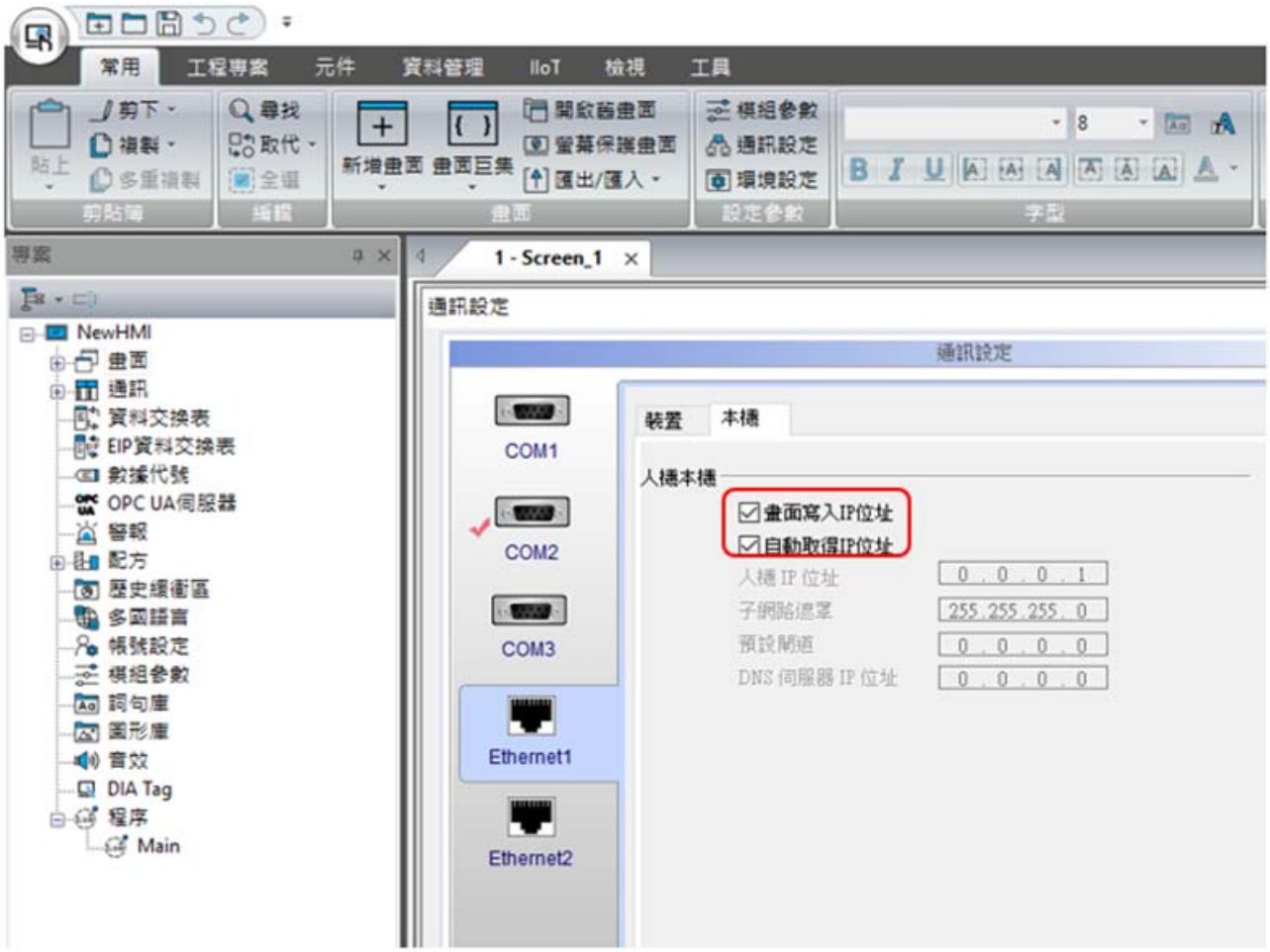
4. Operational Steps

This chapter demonstrates how the HMI connects to DIACloud through wired Ethernet and wireless Ethernet Wi-Fi Dongle respectively:

- **Plan 1: DOP-300 with wired Ethernet**

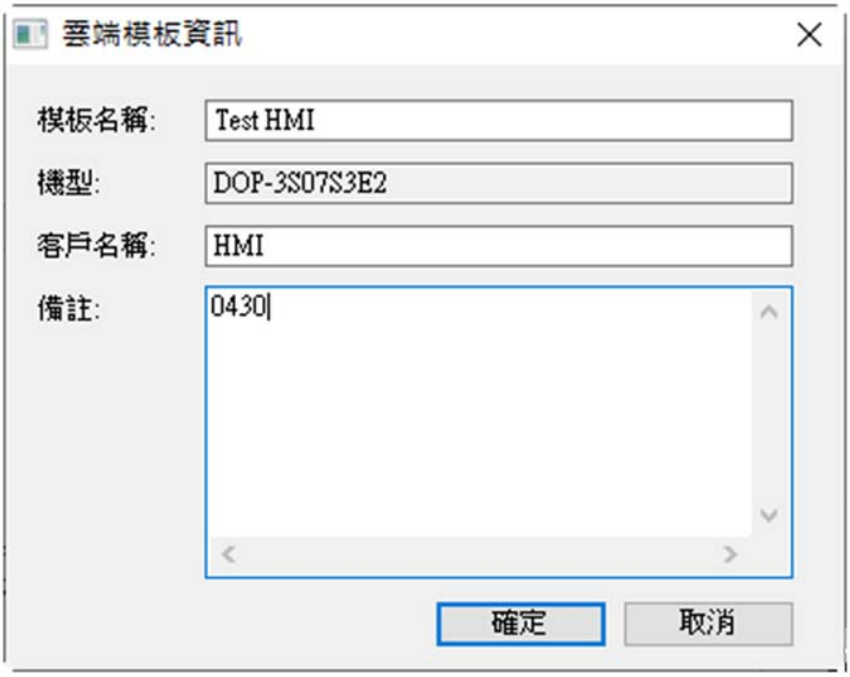


1. Set up DOP-3S07S3E: Click **DIAScreen** > Common > Communication Settings > Ethernet 1 > Local > Enter the IP address on the screen and obtain the IP address automatically.



2. Check **Enable cloud template**: Click **DIAScreen** > IIoT > DIACloud > Cloud Template.

Create a new template > Enter relevant information > Click **OK**.



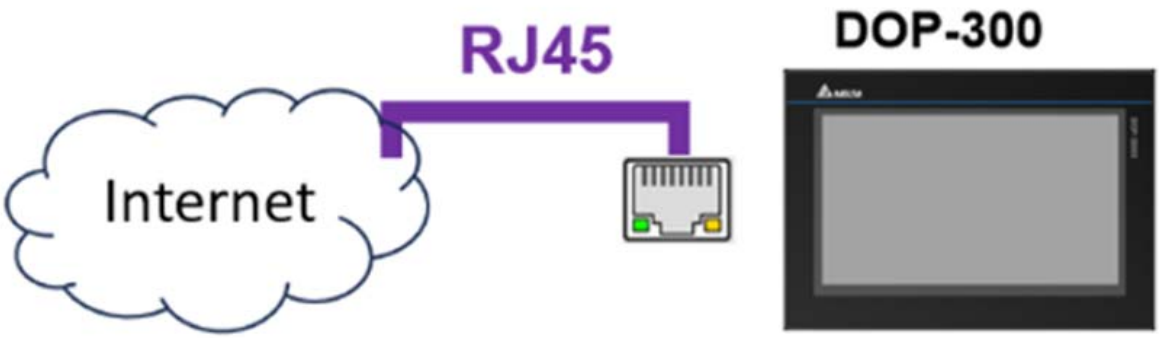
3. Click **Start Transfer** to upload the project and tags to the cloud.

4. Enter your account and password and click **Login** > The template is uploaded successfully.

Note: Please go to https://hms.diacloudsolutions.com/ to register.

5. Click **Project** > Download All > Download the project to HMI.

6. After completing the above steps, please connect the HMI and the network through the RJ45 network cable



7. Next, please use barcode or Bluetooth to bind the HMI to DIACloud.

■ Bind HMI to DIACloud through barcode

a. Press and hold a blank area on the HMI screen for three seconds, and the system directory will appear.

b. System menu > Click **System Settings** > Click **DIACloud** > Select **Bind HMI page** > Select **Bind HMI to DIACloud**.

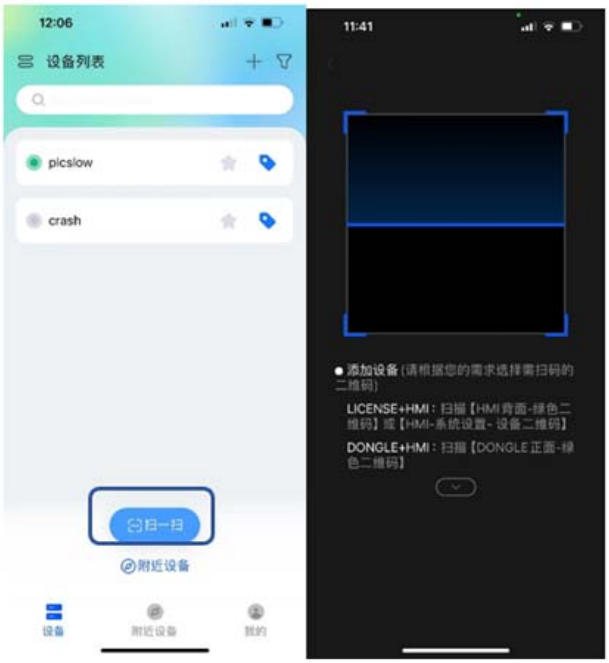
c. Install eDIACloud App on iPhone/ Android phone.

IOS Download link: https://testflight.apple.com/join/2pkeme9g

d. Open eDIAcloud and log in.

If you have not registered an account yet, please click **Register Now** to register.

e. Click **+** > Scan > Scan the QRCode on the HMI.



f. Enter the following relevant information and click **OK**.

■ Bind HMI to DIACloud via Bluetooth

a. Open eDIACloud and log in

If you have not registered an account yet, please click **Register Now** to register.

IOS Download link: https://testflight.apple.com/join/2pkeme9g

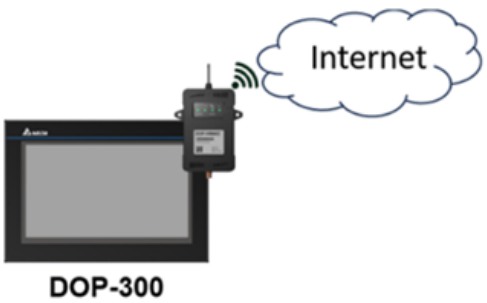
b. Click **Nearby** to search for nearby Bluetooth devices, and the scanning results will be displayed on the interface.

c. Click the device and enter the HMI PIN code.

d. Click **Yes** to bind HMI to DIACloud.

So far, all settings have been completed.

- **Plan 2: DOP-300 with wireless Ethernet (Wi-Fi Dongle)**



1. Insert DX-MWB-01N into the DOP-300S.
2. Open the eDIACloud App to scan the QRCode on the Wi-Fi Dongle

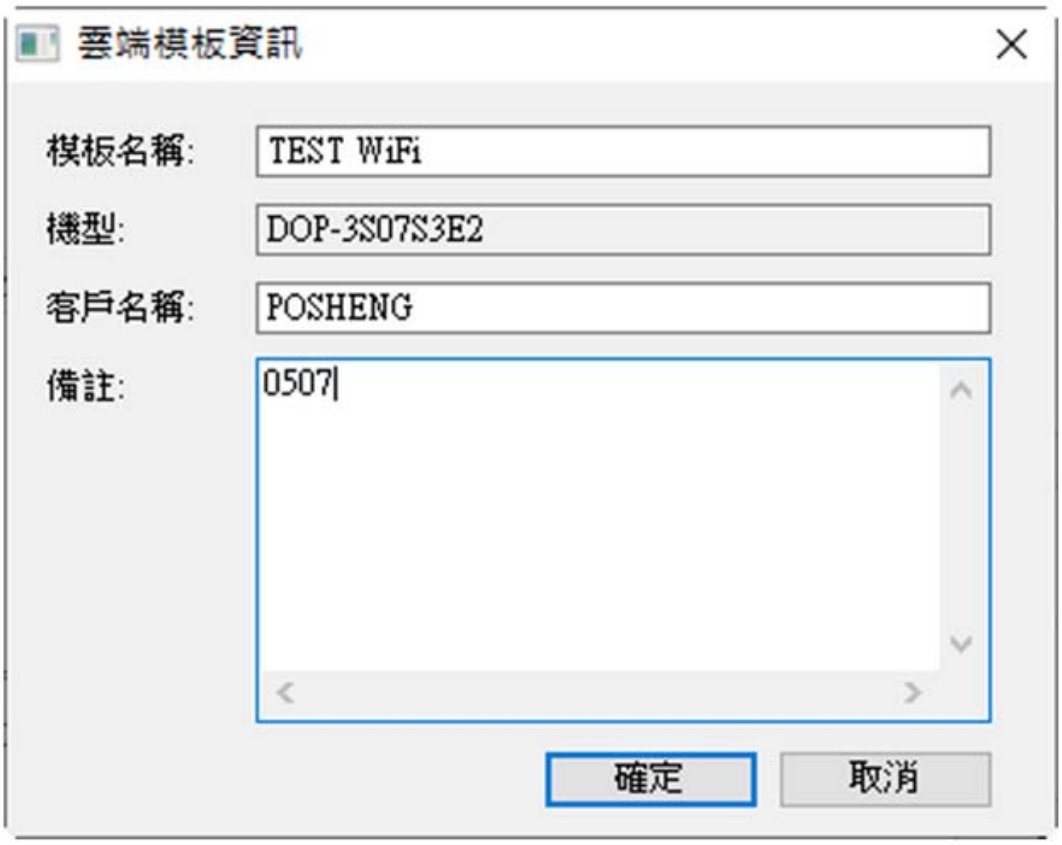
3. After scanning, the following screen will appear. Please enter the PIN code (please refer to the blue box in the picture above) and click **Next**.

4. Follow the instructions to scan the HMI serial number.

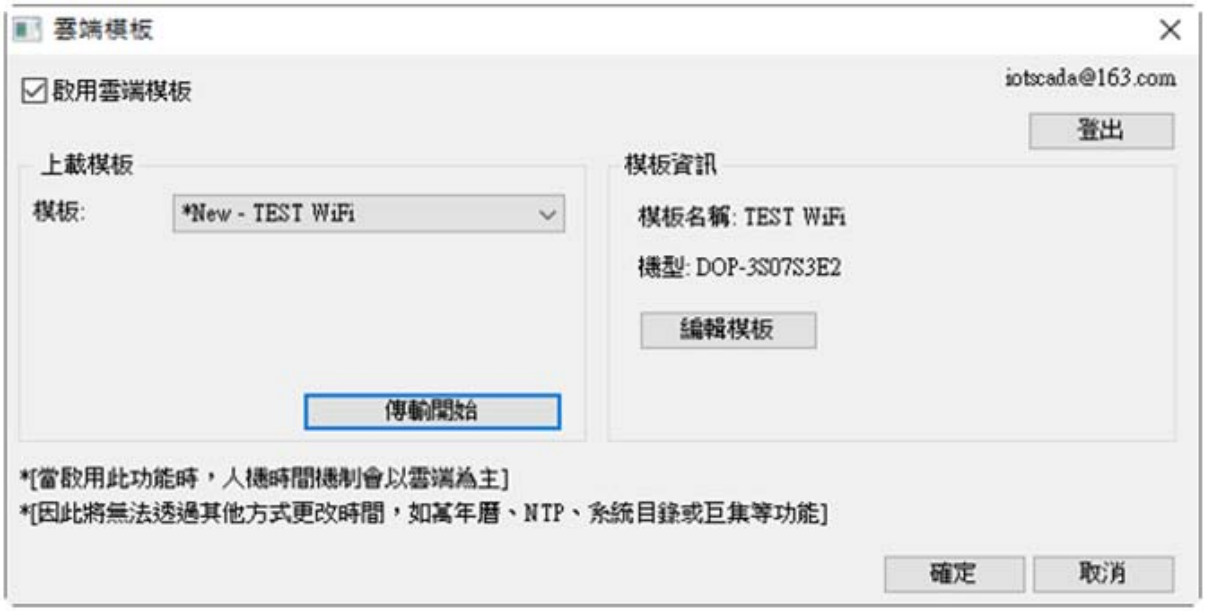
5. After filling in the information, click **OK**. Completing this step means that the HMI binding process has been completed.

6. Download the HMI project: DIAScreen > IIoT page > Cloud template > Check **Enable cloud template**.

7. Click **New Template** and fill in the relevant information and click **OK**.



8. Click **Start Transfer** to upload the project and label settings to the cloud.

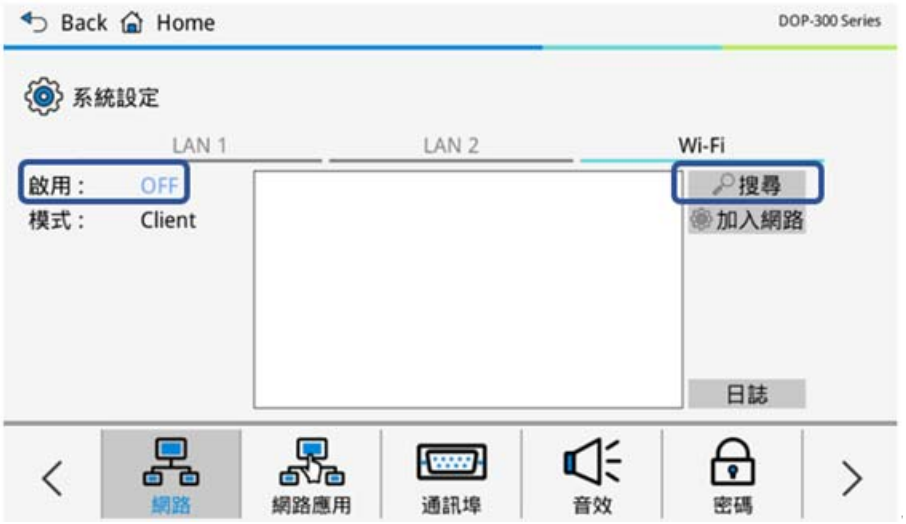


9. Enter your account number and password and click **Log In**.

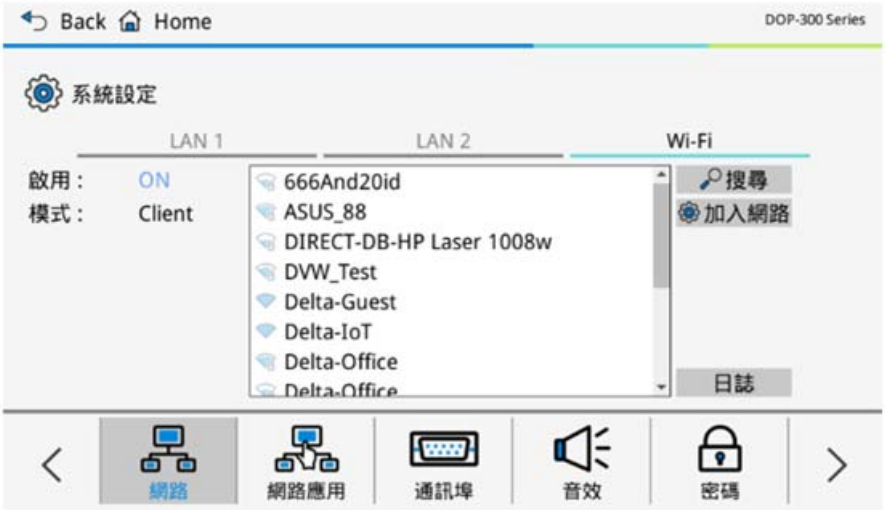
10. Click **Project** > click **Download All to HMI**.

11. Press and hold on a blank area of the HMI screen for three seconds. The system toolbar on the left will appear and click .

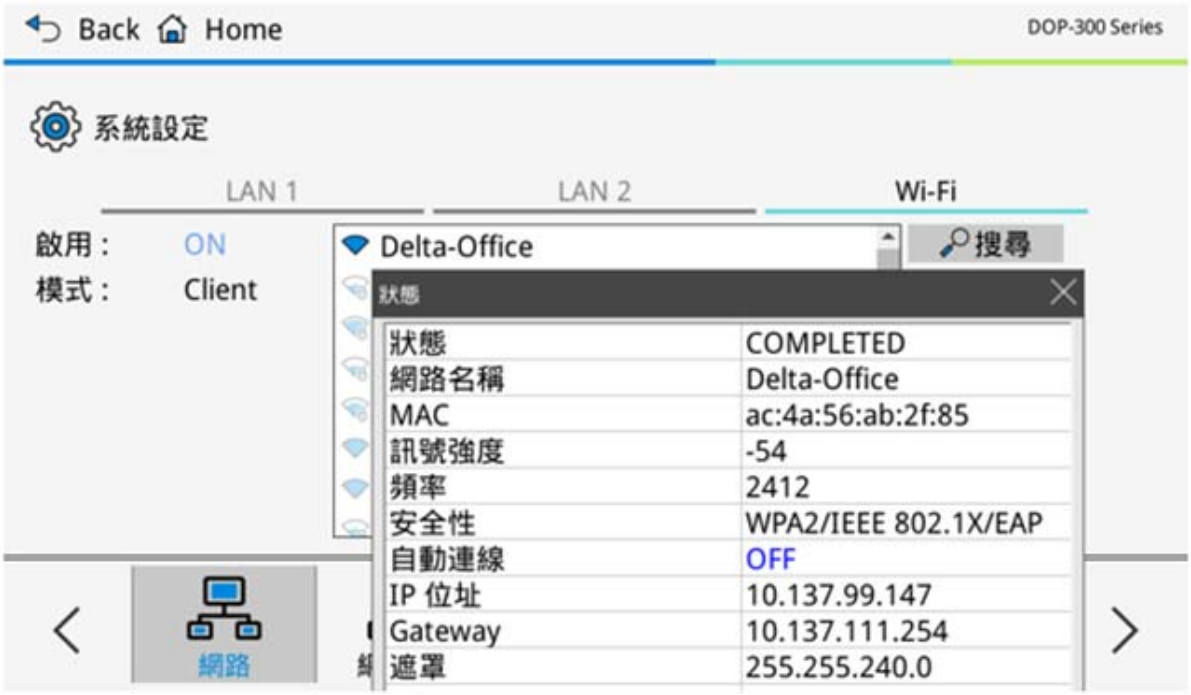
12. Click **System Settings** > Network > Wi-Fi > Click the enabled default value from OFF to ON > Click **Search**.



13. After searching, select the network name that can be connected and enter the account number and password to connect.



After clicking on the network name, you can view the network name related content and connection status.



5. Function Testing

After completing the steps above, you can see the device status through the following three paths.

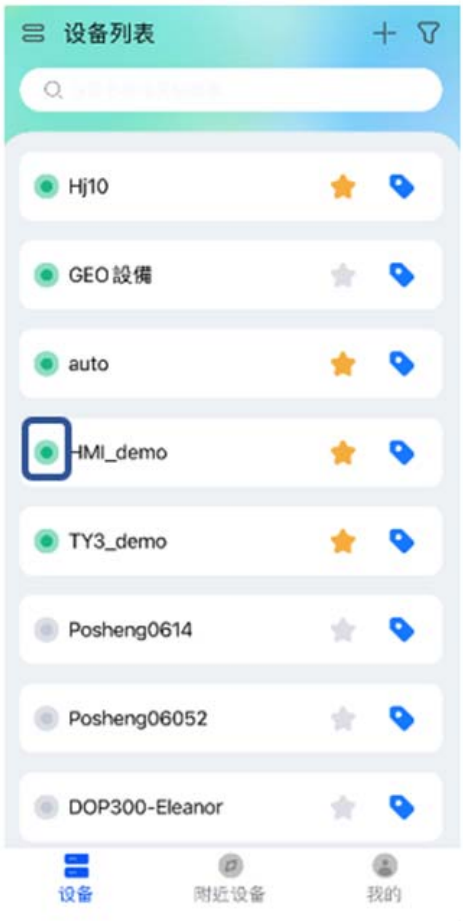
- **From the website**

1. Log in to https://hms.diacloudsolutions.com/

2. Click **Device Management** > Device List to check the device connection status.

- **From the mobile phone**

1. Click  icon to log in and click device.



Note: Green light means successful connection, gray light means offline.

- **From the system**

1. Press and hold on the blank area of the HMI screen for three seconds. The toolbar on the left will appear. Please click  .

2. Click **System Settings** > click **DIACloud** > click **Device Information** > click **Device Status**.

Status:

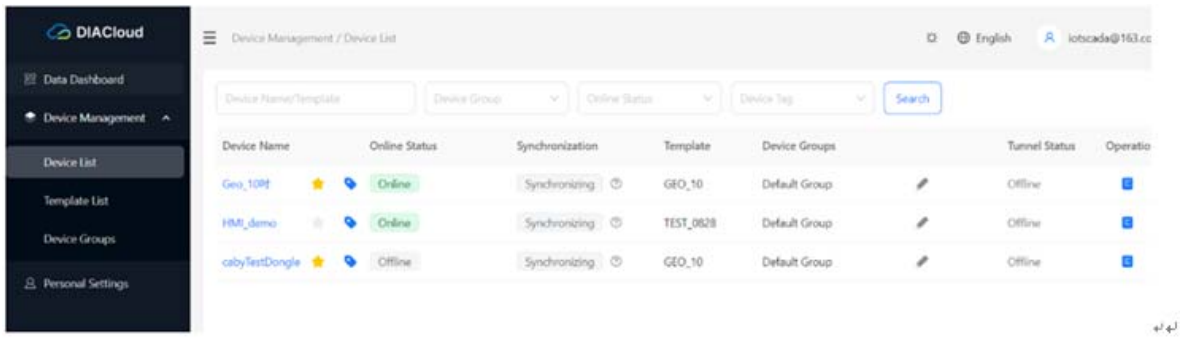
	Name	Description
1	Account unbound	The HMI has not yet bound an account, but can access the external network.
2	Offline	The HMI has not yet bound an account and cannot access the external network.
3	Online	The HMI has been bound to an account and can access the external network.

6. Function Description

When DOP-300 is successfully connected to DIACloud, it can perform VNC and Dashboard Screen functions on the HMI.

VNC: Remotely monitor HMI screen (Note: The HMI VNC Server needs to be enabled).

Dashboard Screen: Use DIAWebDesigner to create a customized situation room panel.



7. Conclusion

This chapter demonstrates how the HMI connects to DIACloud via wired Ethernet and wireless Ethernet (Wi-Fi Dongle).