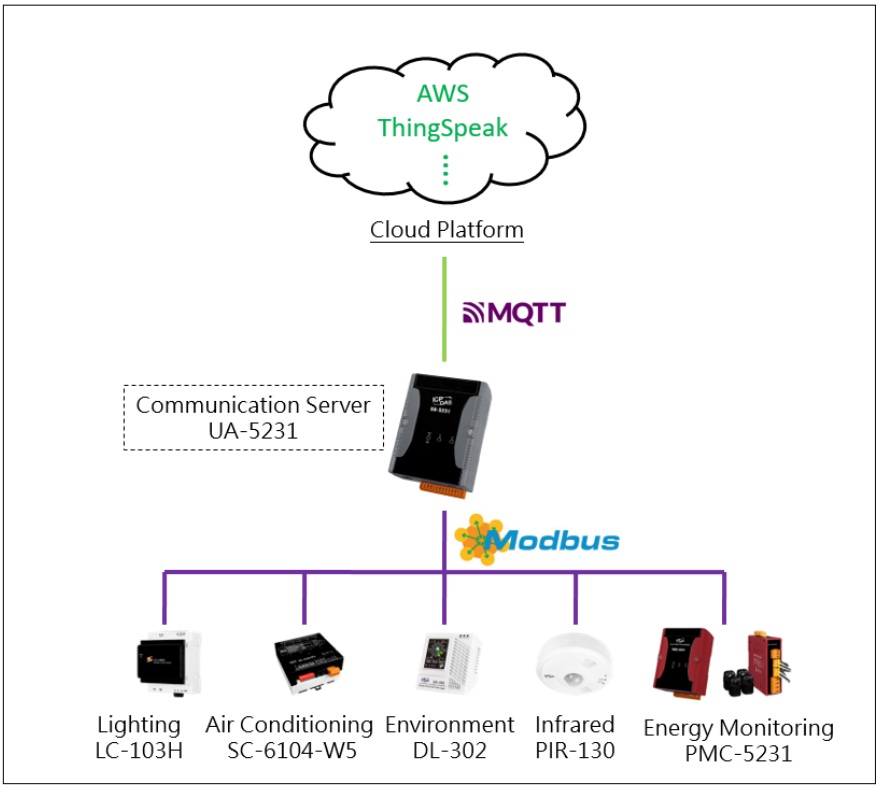
FAQ-MQC-01: UA Web UI Function Wizard-MQTT Customized

- **How to upload the data collected from UA Series to ThingSpeak's MQTT server?**
  (Example: UA-5231 transfers DL-302 data from Modbus TCP to ThingSpeak's MQTT server.)

ICP DAS's UA Series provides the ability to upload the Modbus RTU / Modbus TCP communication data to the IoT cloud platform. (Support for ThingSpeak / AWS / Bluemix and other Cloud Platforms). See the following diagram for how to use it.



The article will explain:

1. **How to set up a ThingSpeak environment?**

2. **Setting up the UA Series to upload data to ThingSpeak IoT Cloud Platform by [MQTT IoT Cloud] function of [MQTT Customized]**

3. **View the ThingSpeak data**

(Please follow the official website This example is for reference only.)

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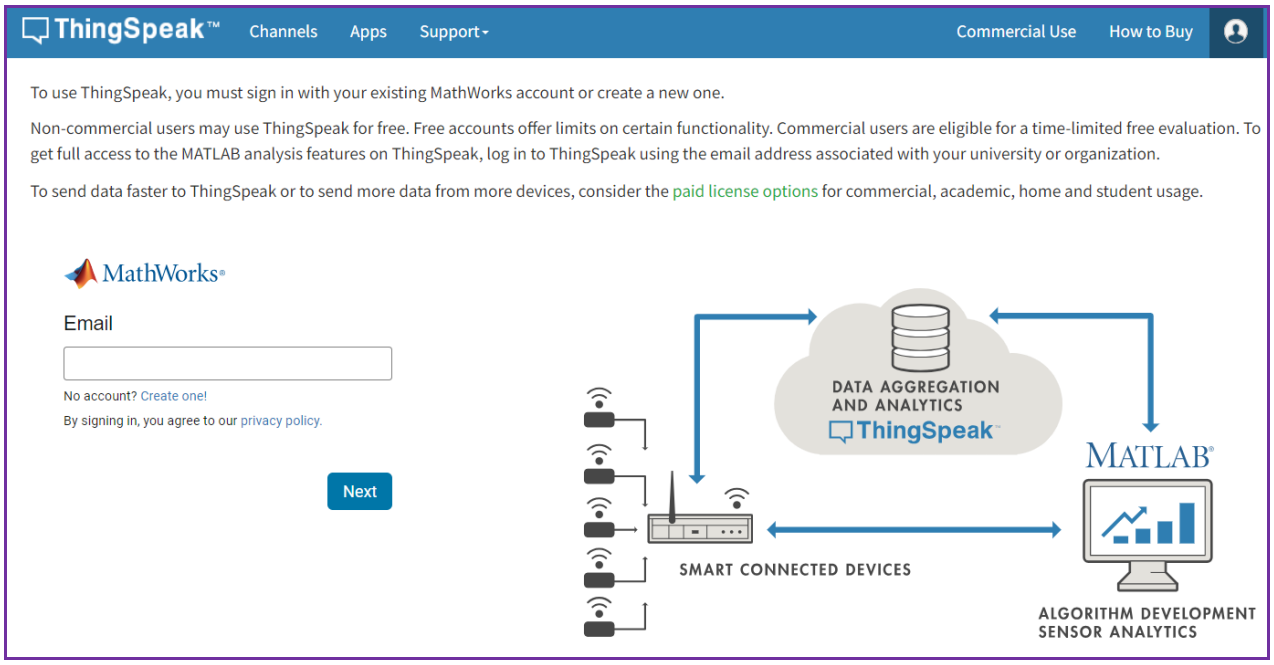
1. How to set up a ThingSpeak environment?

Go to the ThingSpeak website:

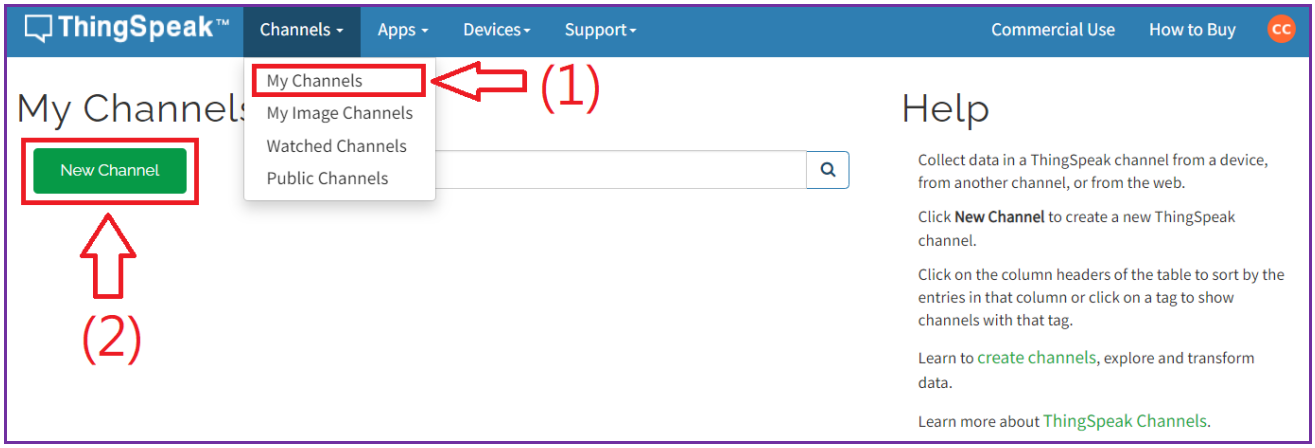
https://thingspeak.com/login?skipSSOCheck=true

Login

diagrams



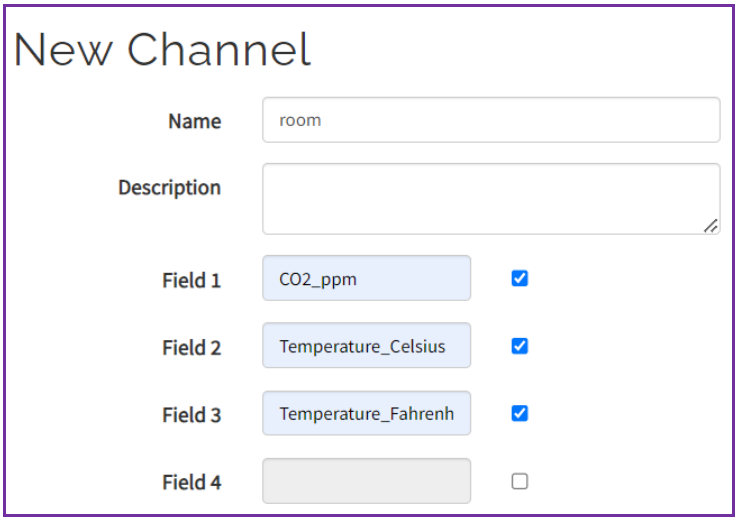
Create Channels

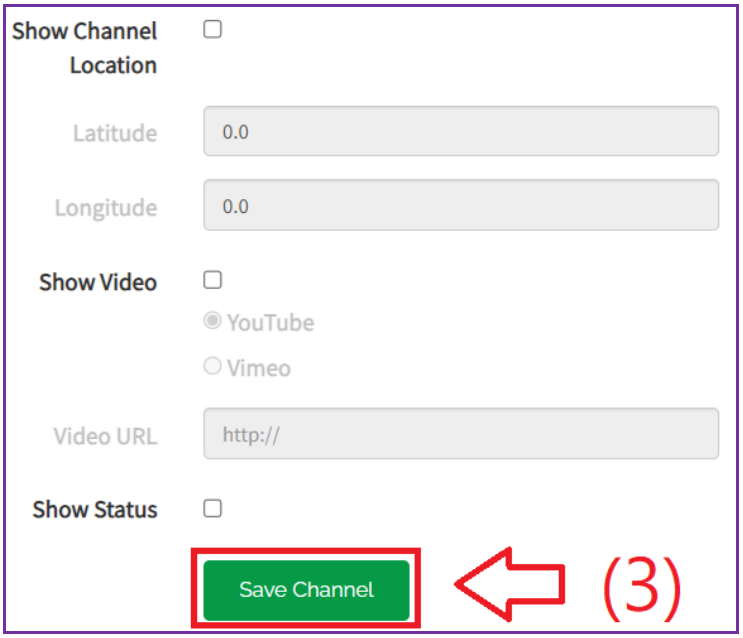


(1) Click [My Channels]

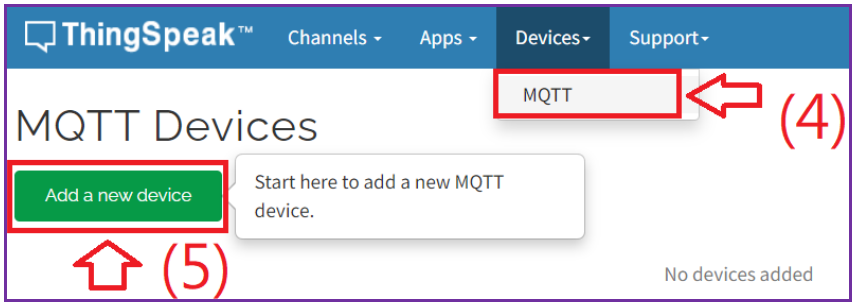
(2) Click [New Channel]

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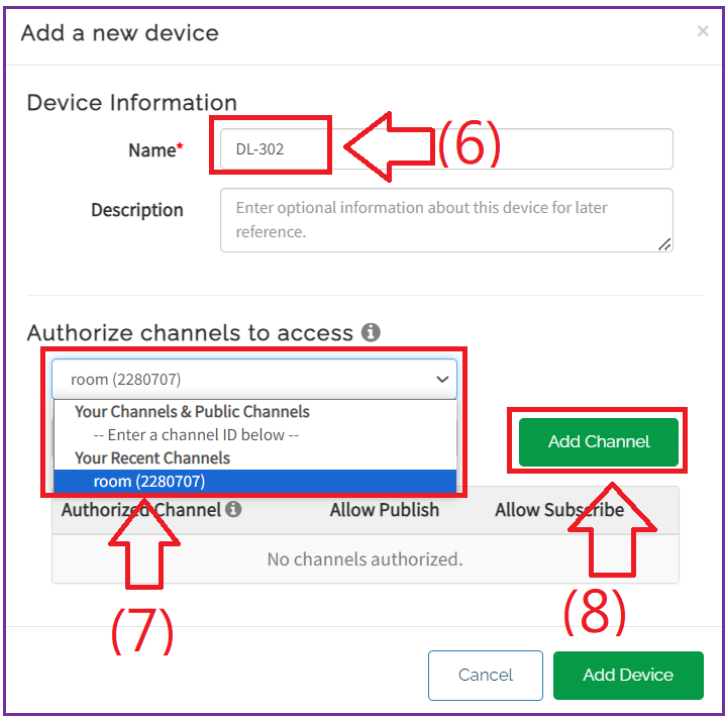
(3) Fill in [Field] and click [Save Channel]



(4) Under [Devices], click [MQTT]

(5) Click [Add a new device]

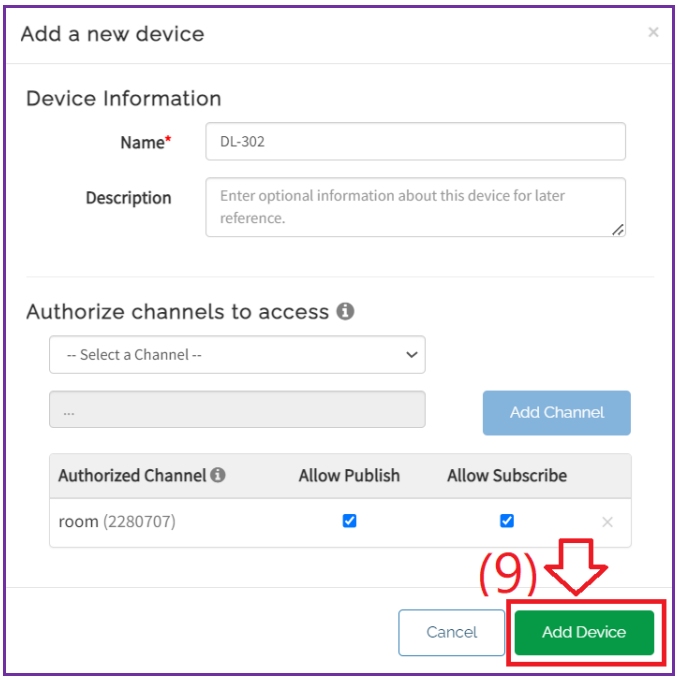
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(6) Enter [Name]

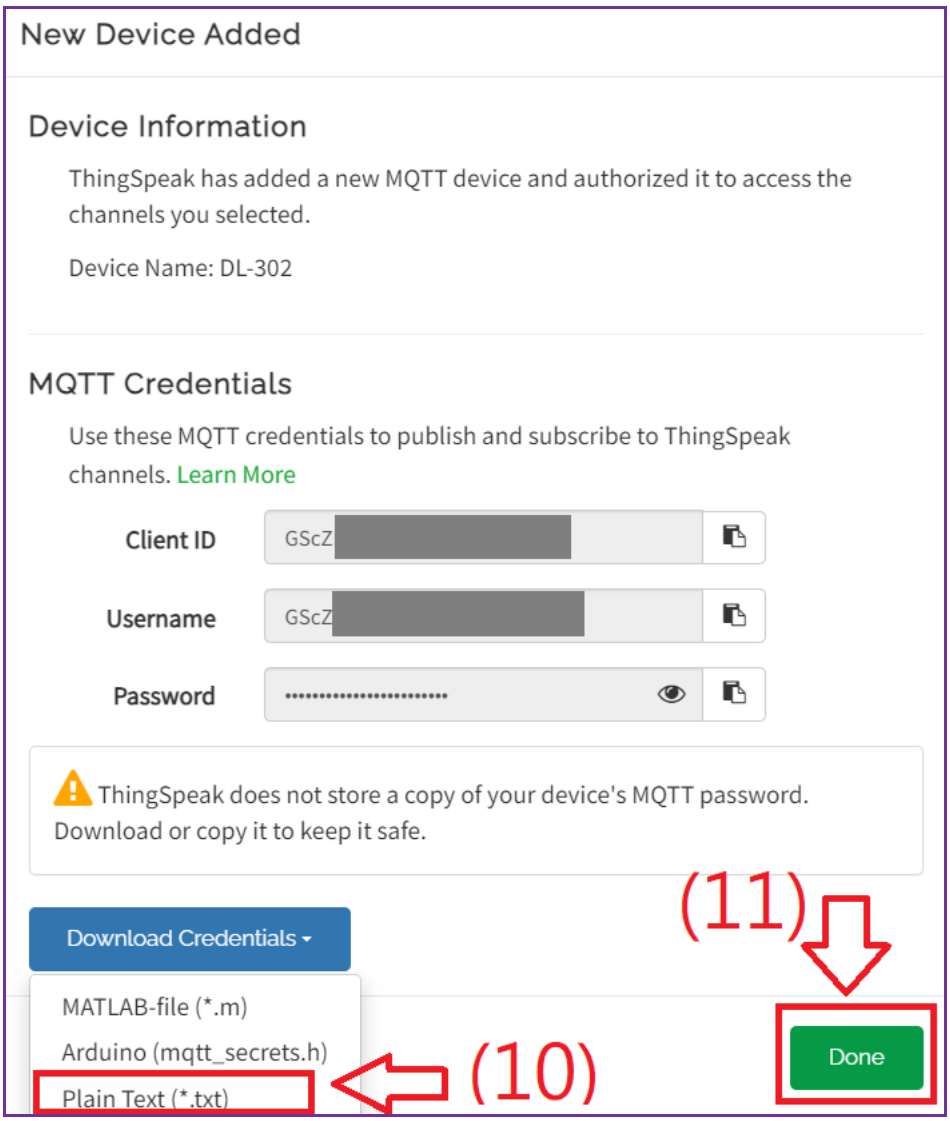
(7) Setting Authorize channels to MQTT device

(8) Click [Add Channel]



(9) Click [Add Device]

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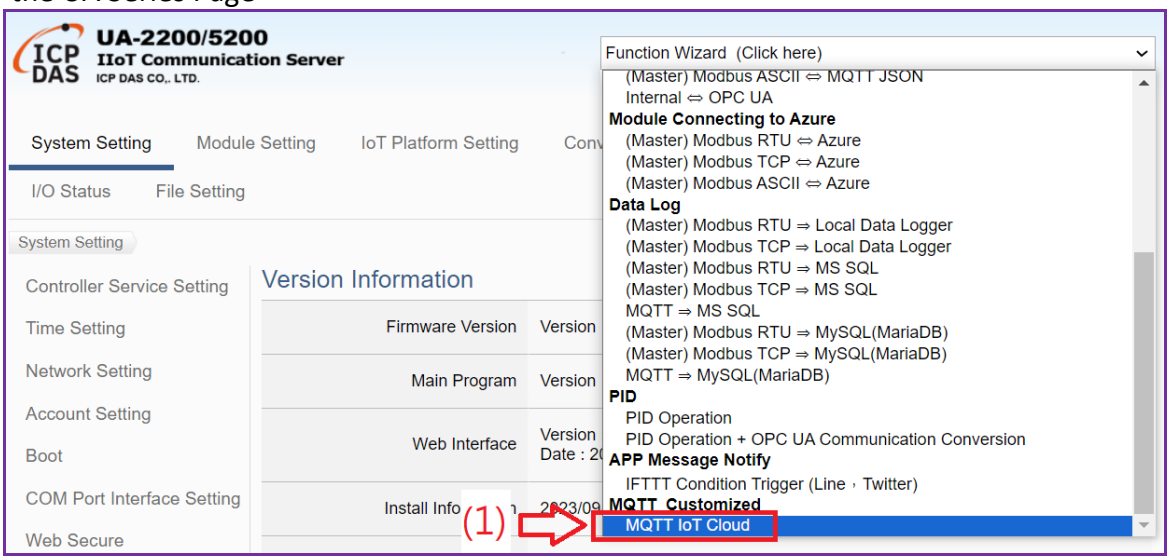
(10) Download txt files

(11) Click [Done]

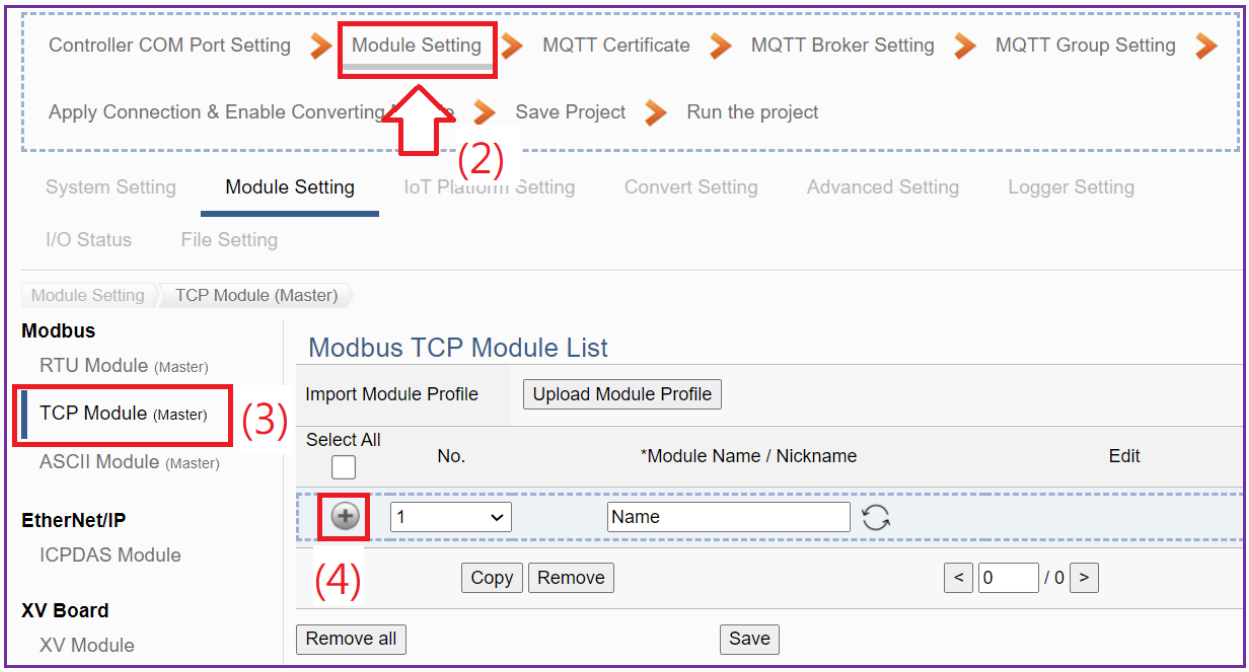
2. Setting up the UA Series to upload data to ThingSpeak IoT Cloud Platform by [MQTT IoT Cloud] function of [MQTT Customized]

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Login to the UA Series Page



(1) Select [MQTT IoT Clould] in the [Function Wizard]



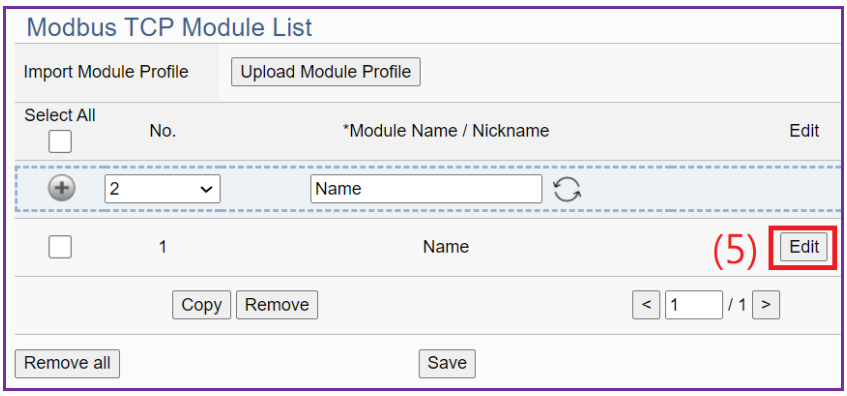
(2) Click [Module Setting]

(3) Click [TCP Module]

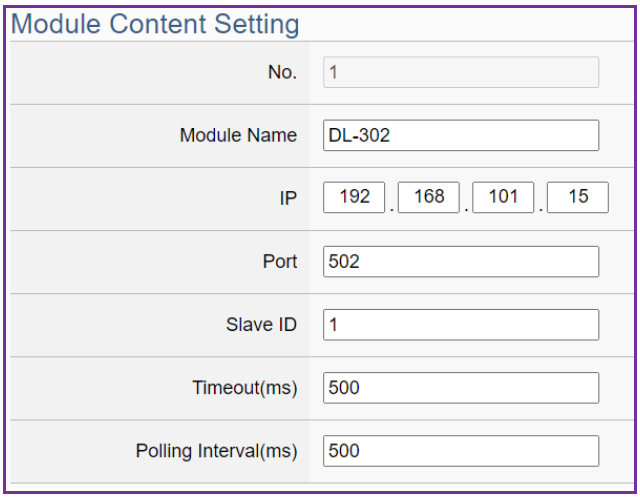
<u>Please select according to the communication protocol of your device, if it is not TCP Module, please set Controller COM Port Setting.</u>

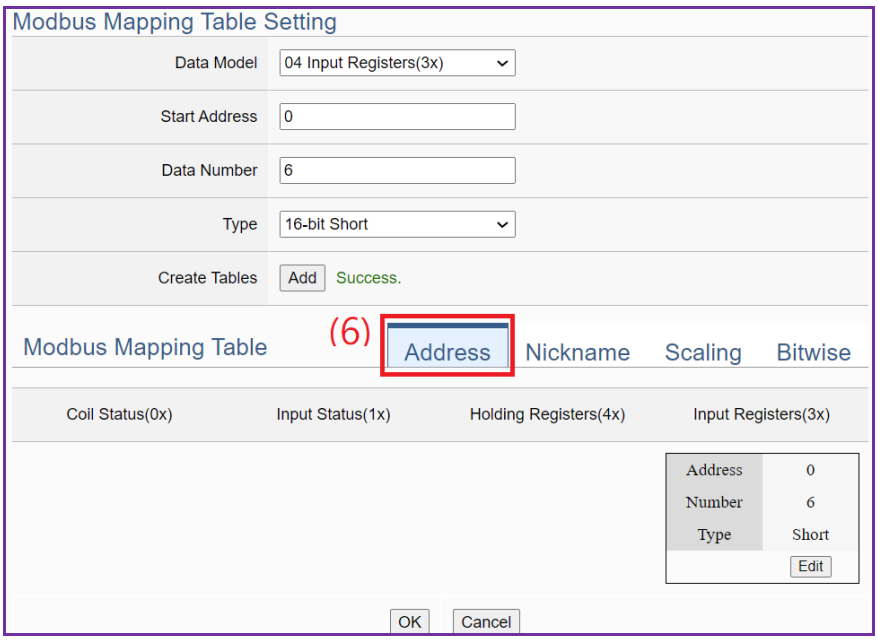
(4) Click the plus sign

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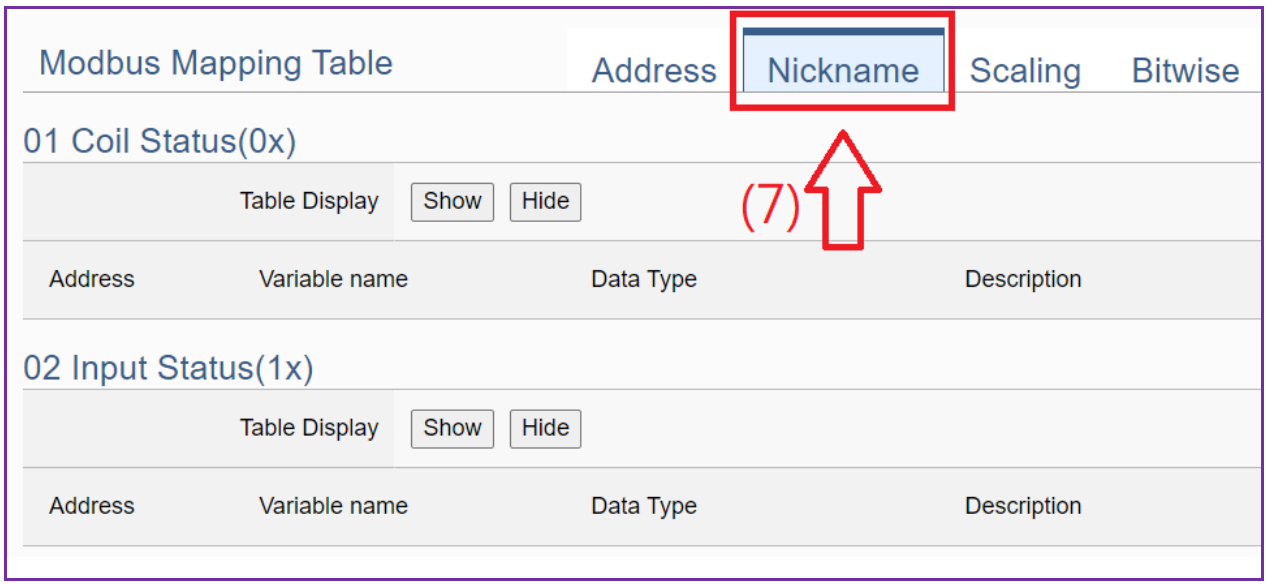
(5) Click [Edit]



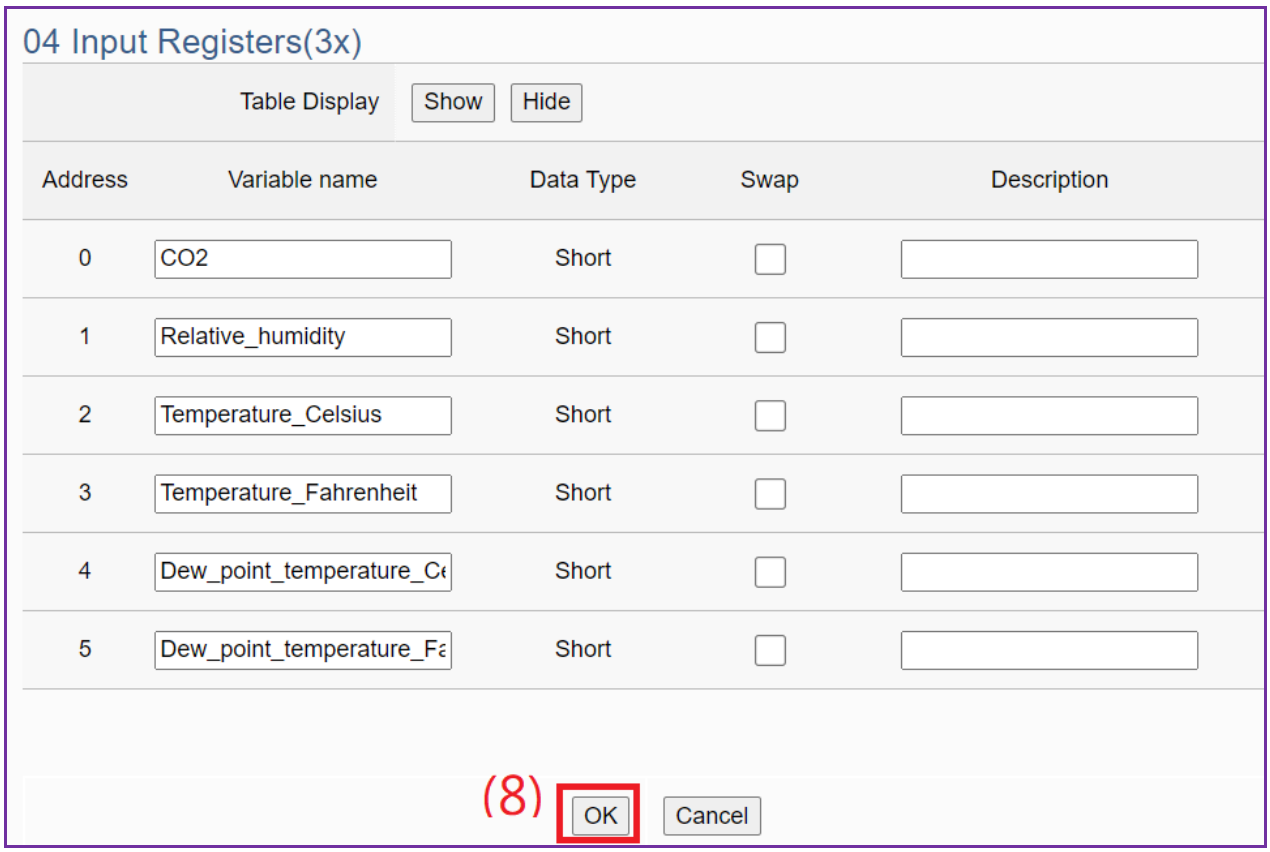


(6) Setting up Modbus

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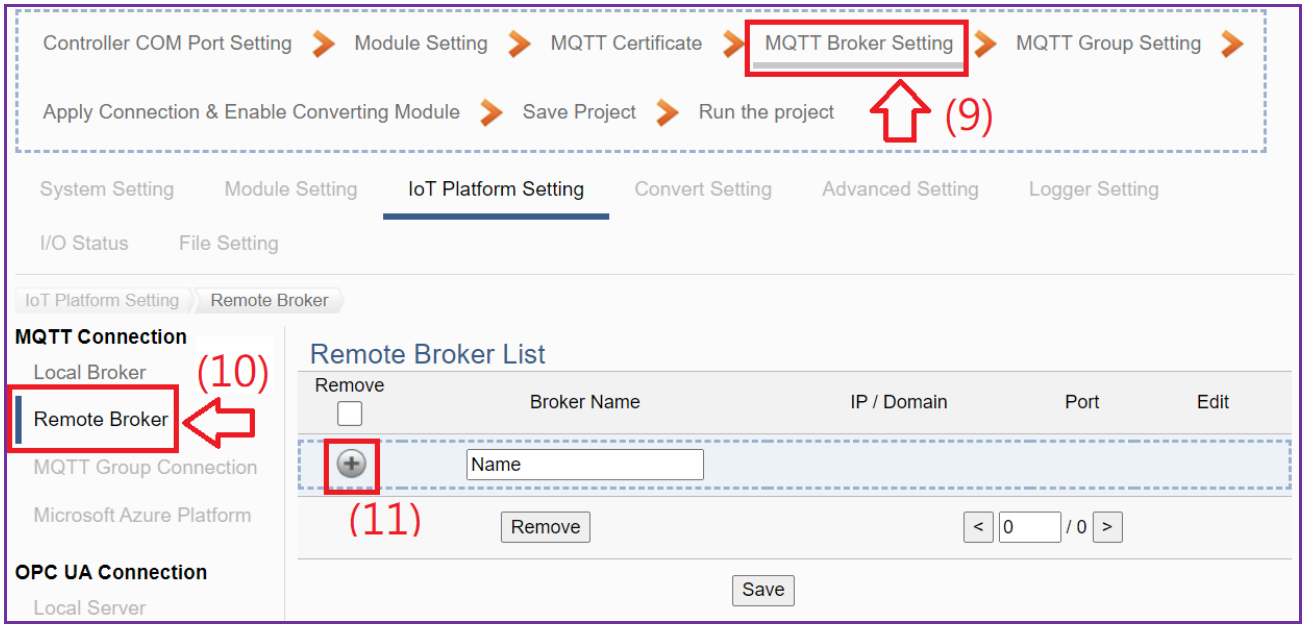


(7) Click [Nickname]



(8) After setting [Nickname], click [OK]

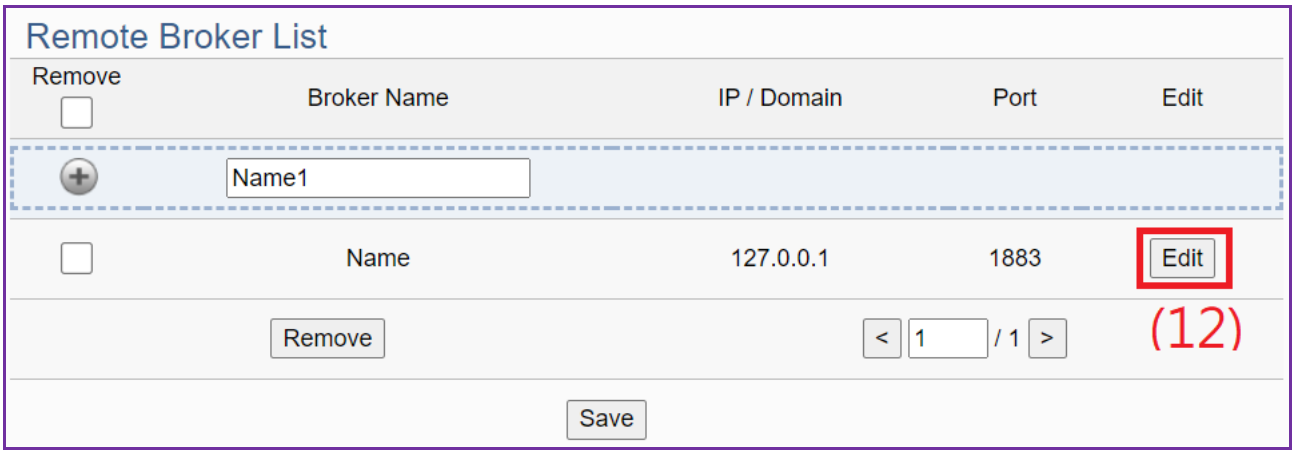
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(9) Click [MQTT Broker Setting]

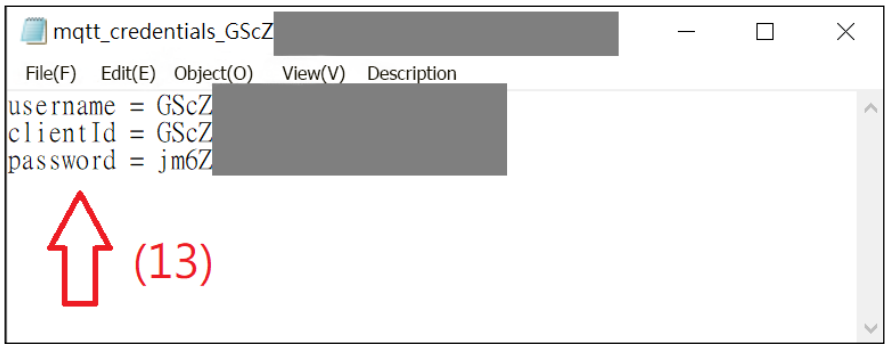
(10) Click [Remote Broker]

(11) Click the plus sign

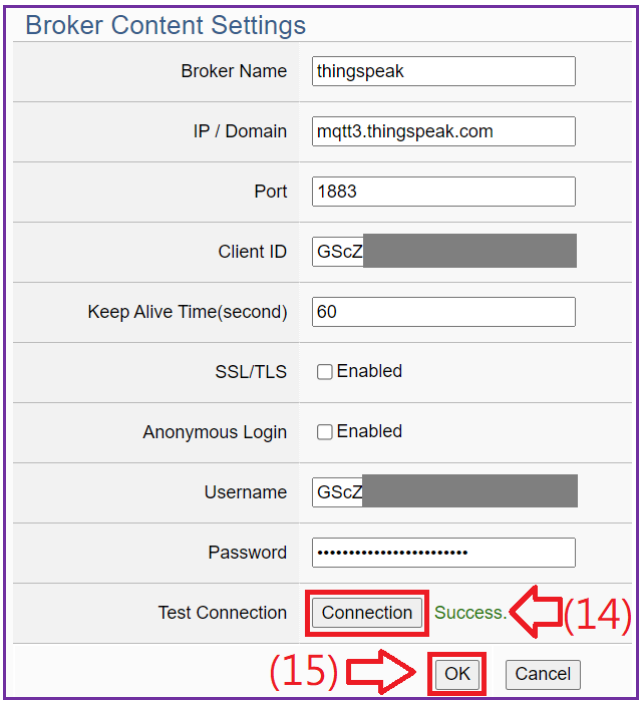


(12) Click [Edit]

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(13) Open the txt file you just downloaded

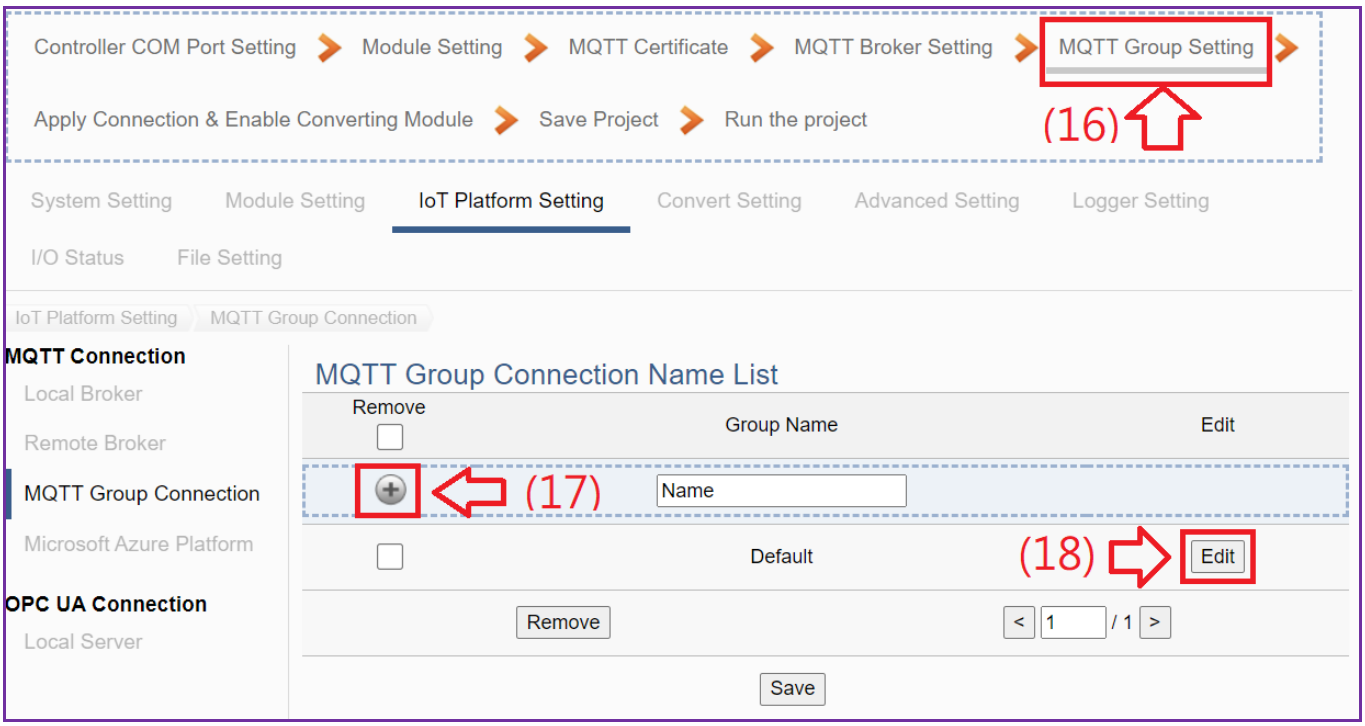


(14) Fill in the connection information and click [Connection] to test the connection

IP / Domain: mqtt3.thingspeak.com
Port: 1883
Client ID: Following the information in the txt file
Keep Alive Time(second): 60
SSL/TLS: Uncheck Enabled
Anonymous Login: Uncheck Enabled
Username: Following the information in the txt file
Password: Following the information in the txt file

(15) Click [OK]

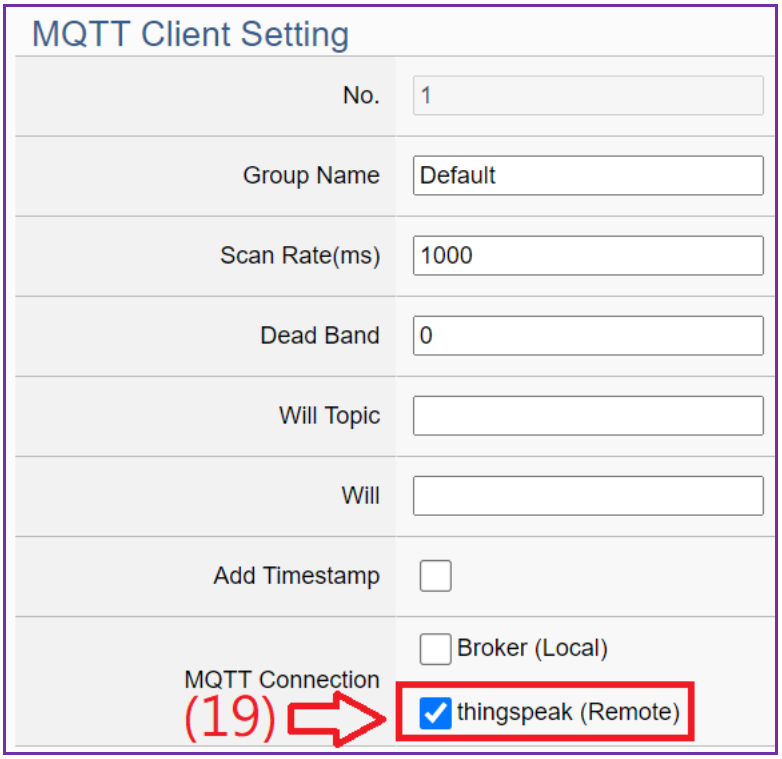
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(16) Click [MQTT Group Setting]

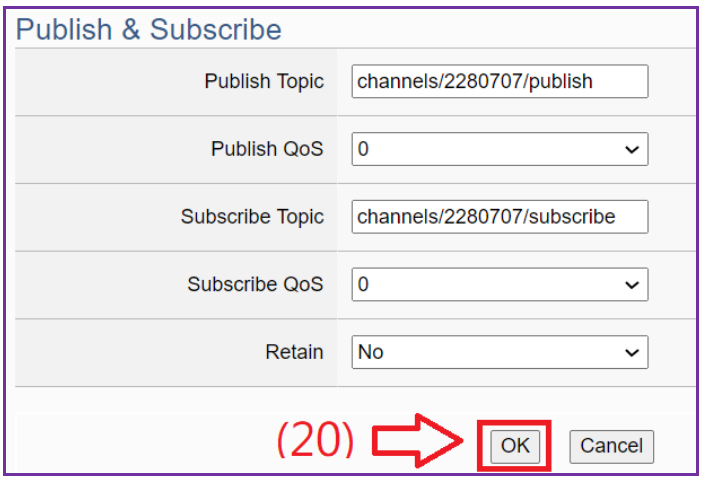
(17) Click the plus sign

(18) Click [Edit]



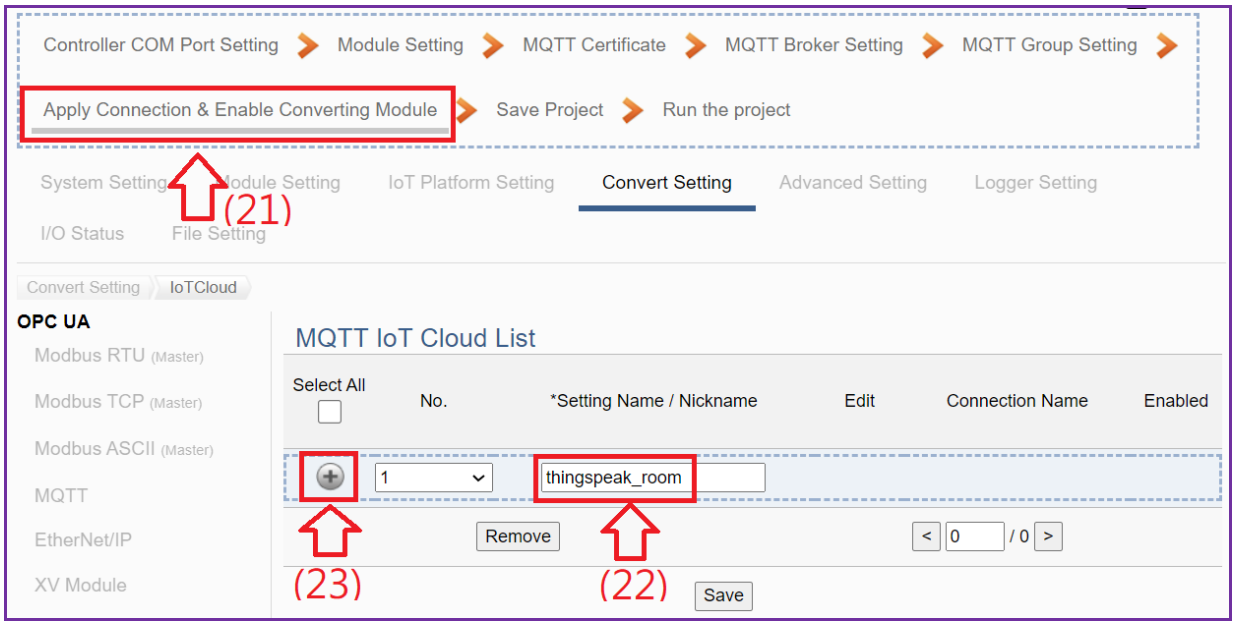
(19) Check the MQTT remote connection

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(20) After setting the parameters, click [OK]

Parameters Setting:
Publish Topic: channels/[Channel ID]/publish (Example: channels/2280707/publish)
Publish QoS: 0
Publish Topic: channels/[Channel ID]/ subscribe (Example: channels/2280707/ subscribe)
Subscribe QoS: 0
Retain: No

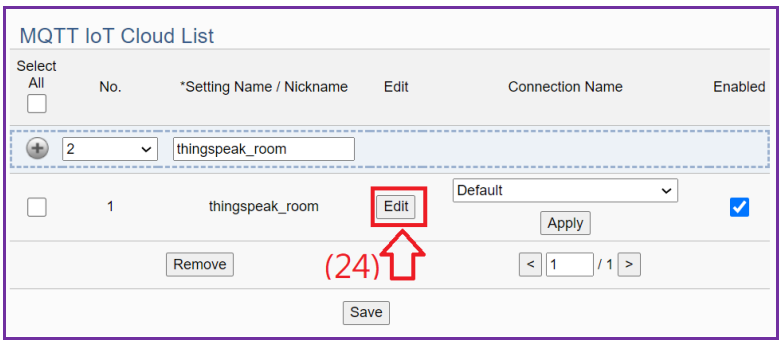


(21) Click [Apply Connection & Enable Converting Module]

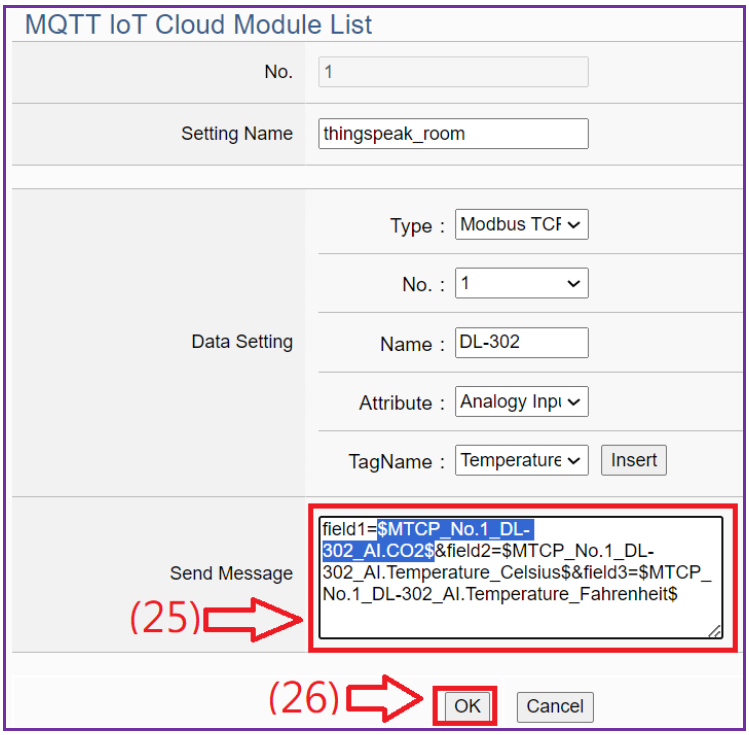
(22) Enter Setting Name

(23) Click the plus sign

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(24) Click [Edit]



(25) Fill in the MQTT IoT Cloud Module List

Three variables are used in this example: MTCP_No.1_DL-302_AI.CO2 and MTCP_No.1_DL-302_AI.Temperature_Celsius and MTCP_No.1_DL-302_AI.Temperature_Fahrenheit

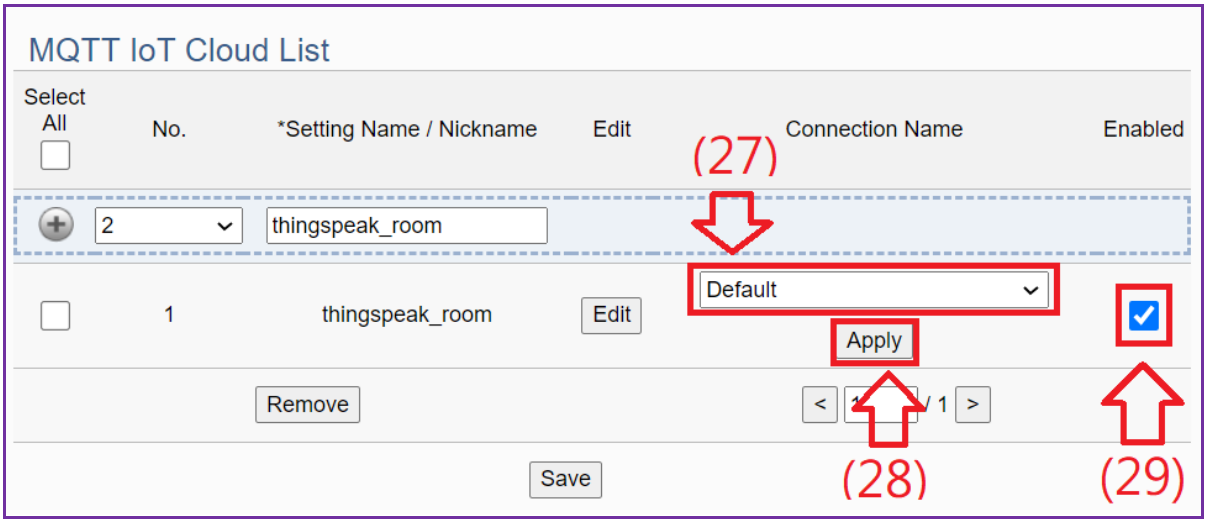
<u>To publish 3 fields at the same time in ThingSpeak as an example:</u>

field1=$MTCP_No.1_DL-302_AI.CO2$&field2=$MTCP_No.1_DL-302_AI.Temperature_Celsius$&field3=$MTCP_No.1_DL-302_AI.Temperature_Fahrenheit$

(After selecting the variable and clicking [Insert], the variable name will be added to the [Send Message] field)

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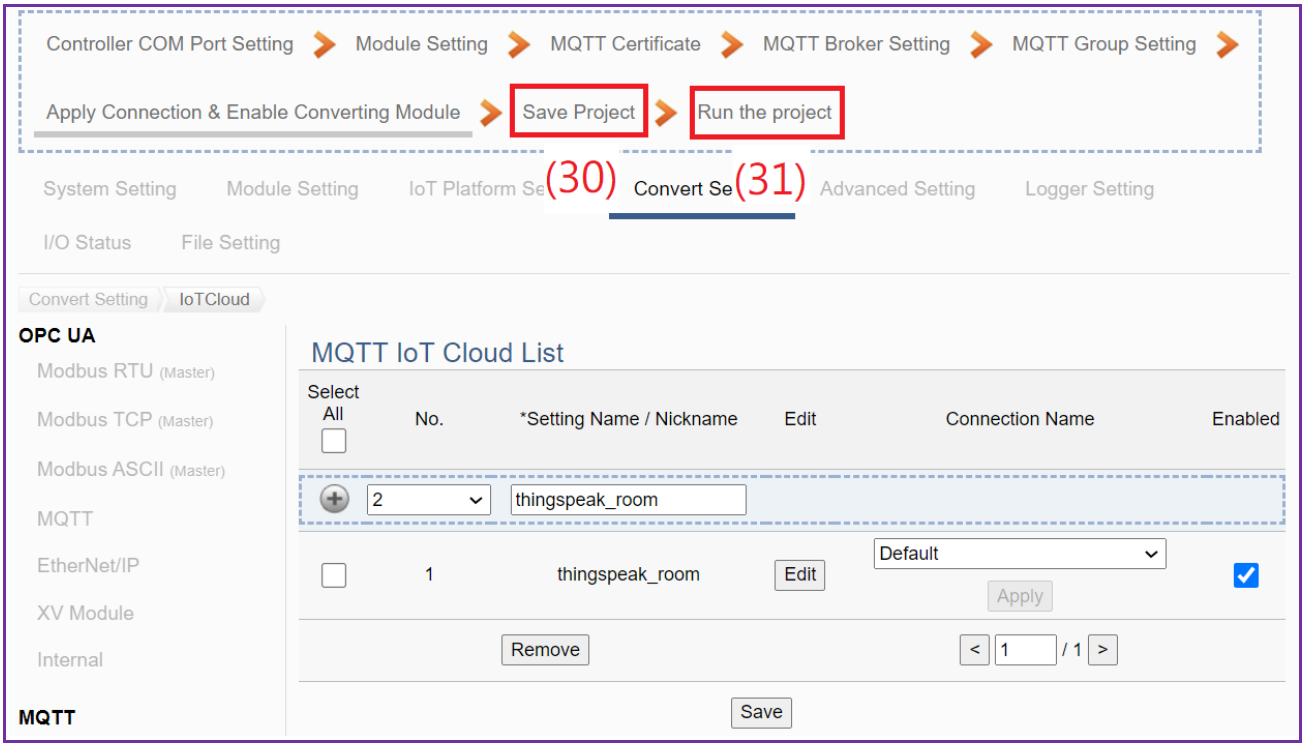
(26) Click [OK]



(27) Select the Connection Name

(28) Click [Apply]

(29) Check [Enabled]



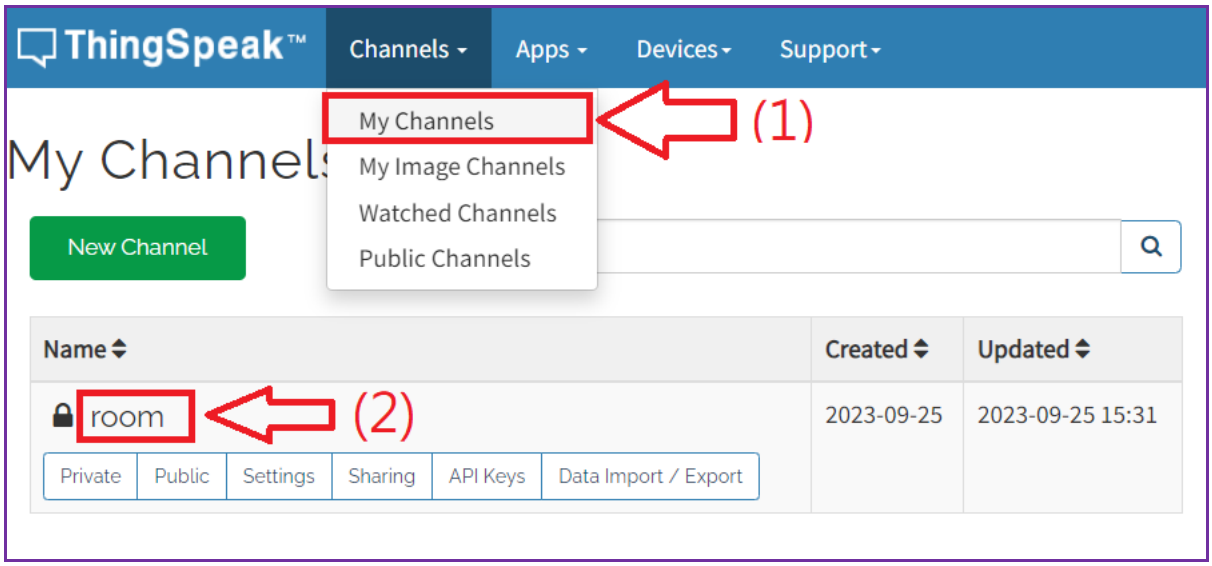
(30) Click [Save Project]

(31) Click [Run the project]

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3. View the ThingSpeak data

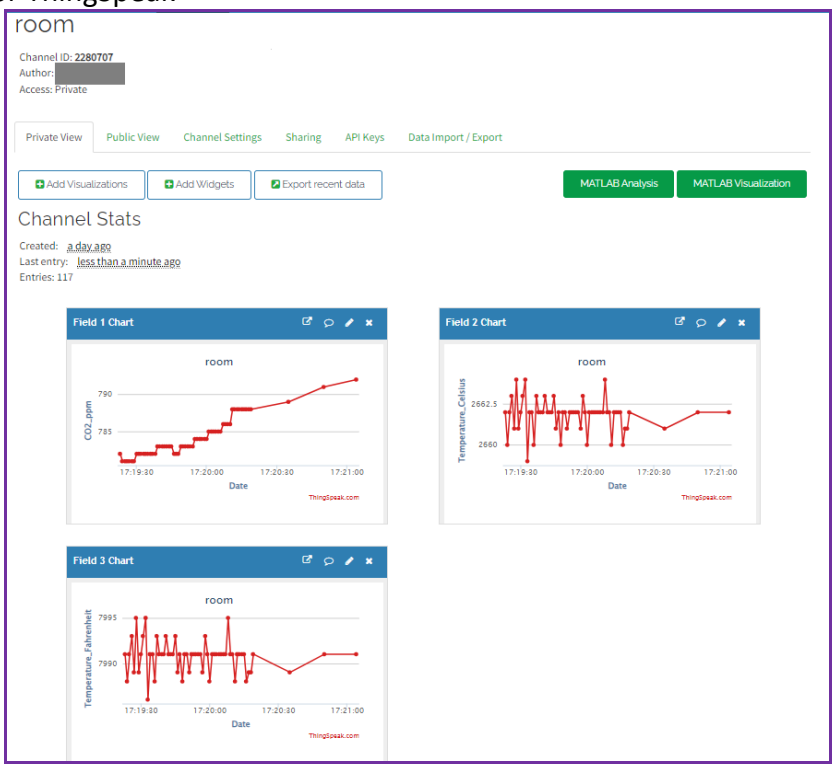
Go to the ThingSpeak page to login



(1) Click [My Channels]

(2) Go to the Channel you want to see

View the diagrams for ThingSpeak



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