EZ-UAQ Utility

User Manual

V3.0.2, 2025/4

(For SW V3.0.10 Beta above)

ICP DAS CO., LTD.

Technical Editor: Howard Wu

Editor: Sandy Lin

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Document Version Modify List

Version	Description
3.0.2	Date:2025/03 1. Software Installation: Modify the Title Text 2. Advanced: ✧ Agreement Security: Changed to Protocol Security 3. Appendix: ✧ Modified the title of Appendix A and Appendix B ✧ Modified Appendix C (Certificate date input restrictions, maximum value changed to 2 years) ✧ Added Appendix D (Resolved UA, UA I/O, and BRK web connection security display issues)
3.0.1	Date:2025/02 1. Preparation Before Installation: Add an operational illustration 2. Advanced: ✧ Reduce CPU Usage: Change "Whether to clean the module's CPU usage" to "Release" 3. Upload: Update Modbus Configuration: Update Modbus to OPC UA and Modbus to MQTT template files (add UA-7231M) 4. Certificate: ✧ Update OPC UA Server/Client: Add 1 flowchart ✧ Update MQTT Broker/Client: Add 2 flowcharts 5. Warning Messages & Descriptions: Delete the message "[Unable to open SFTP port (please check SD card)]"
3.0.0	1. Advanced: ✧ Add Agreement Security ✧ Add Language Settings Reset 2. Upload: ✧ Update Modbus Configuration Function 3. Download: ✧ Change "Modbus and OPC UA Configuration" to "Modbus Configuration Function" 4. Add Certificate ✧ Query Validity Period ✧ Add CA ✧ Update HTTPS ✧ Update OPC UA Server / Client ✧ Update MQTT Broker / Client ✧ File Export ✧ Document Import

Version	Description
	5. Warning Messages: ✧ Update Warning Message Table ✧ Add "Unable to upload" and "Unable to download" messages 6. Appendix ✧ Update Appendix A (Factory Version) ✧ Remove Appendix (How to Add Other Languages) ✧ Update Appendix B (UA/UA I/O Series Setting EZ-UAQ Utility Password) ✧ Add Appendix C (Certificate Date Input Restrictions)
2.3.1	Date:2024/08 1. Basic Functions ✧ Search Module ✧ Export Search Information ✧ Import Search Information ✧ Product Webpage 2. Advanced Functions ✧ Module Detailed Information ✧ Reduce CPU Usage 3. Upload Functions ✧ Update Firmware ✧ Update Project 4. Download Functions ✧ Download Project ✧ Download Log ✧ Download Modbus and OPC UA Configuration 5. Display Area 6. Warning Messages 7. Appendices ✧ Appendix A (Factory Version) ✧ Appendix B (How to Add Other Languages) ✧ Appendix C (UA/UA I/O Series Setting EZ-UAQ Utility Password)

1. Introduction

This document is to explain how to use the EZ-UAQ Utility software developed by ICP DAS. This software is developed to work with the UA Communication Server, UA I/O, and BRK series products of ICP DAS.EZ-UAQ Utility. The software is installed on the computer (PC) and obtains UA Communication Server, UA I/O, and BRK product information (e.g. IP Address, MAC Address, firmware version...etc.) via Ethernet and displays the information on the screen to provide the field personnel with information about the product modules. Besides, information show on the screen can be exported as a Excel file, and the saved Excel file can be imported into the screen for viewing.

Furthermore, using EZ-UAQ Utility software can easily and fast update firmware or project and download project or LOG files of single (or multiple) devices in the field. EZ-UAQ Utility provide details of modules that allow IT/OT personnel to be able to realize module information thus to improve internet safety. (Supported firmware version, please refer to Appendix A.)

2. Preparation for installation

EZ-UAQ Utility software support following OS: Windows /10/11, 64/32 bit.

Before using the EZ-UAQ Utility software, please ensure that the UA, UA I/O, and BRK series are connected to both the power supply and network cable. The users can easily access the module information, upload/download files, and manage certificates through the software. (please refer to the user's manual of each series)

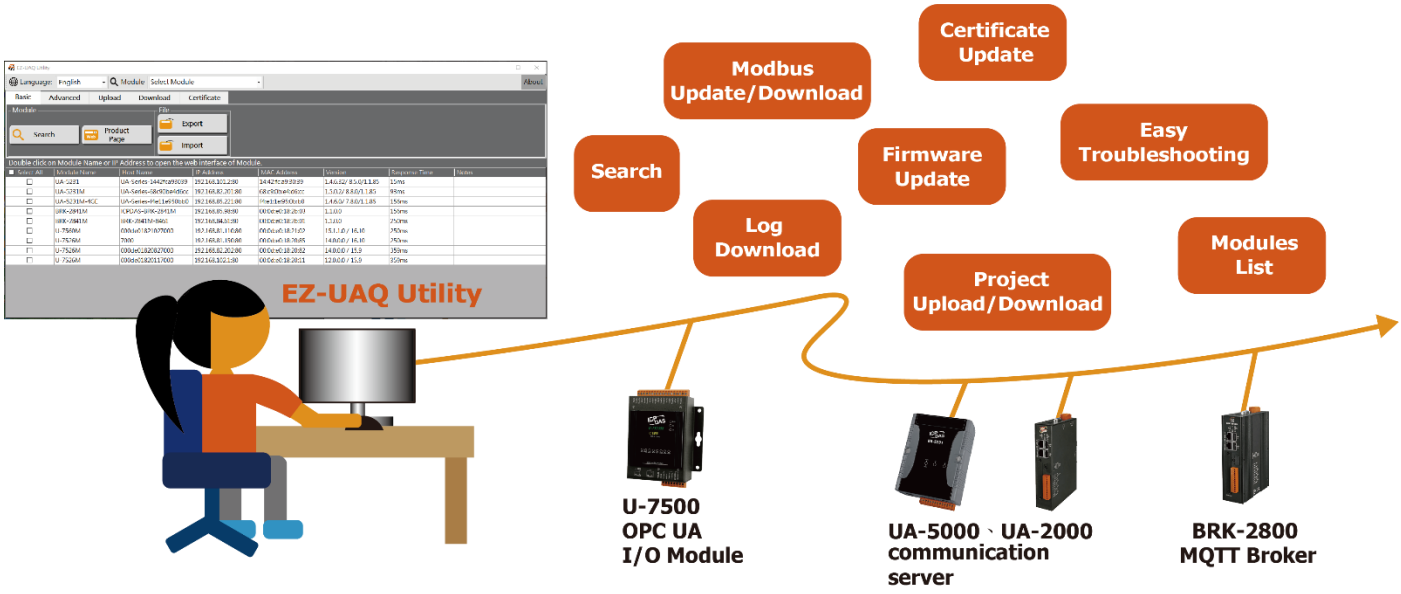


Figure 2-1 Illustration of Operation

Microsoft .NET Framework Version 4.7 is required for the EZ-UAQ Utility software to run. Please download and install Microsoft .NET Framework before installing the EZ-UAQ Utility. The download sites are as follows:

- Microsoft .Net Framework Version 4.7 Download website

  Download:

  https://dotnet.microsoft.com/en-us/download/dotnet-framework/net47

3. Software Installation

Please click to download EZ-UAQ Utility from following linkage:

https://www.icpdas.com/en/download/show.php?num=8560&nation=TW&kind1=&model=&kw=EZ-UAQ

Download and unzipped EZ-UAQ Utility version 3.0.10 then shows file as following capture.

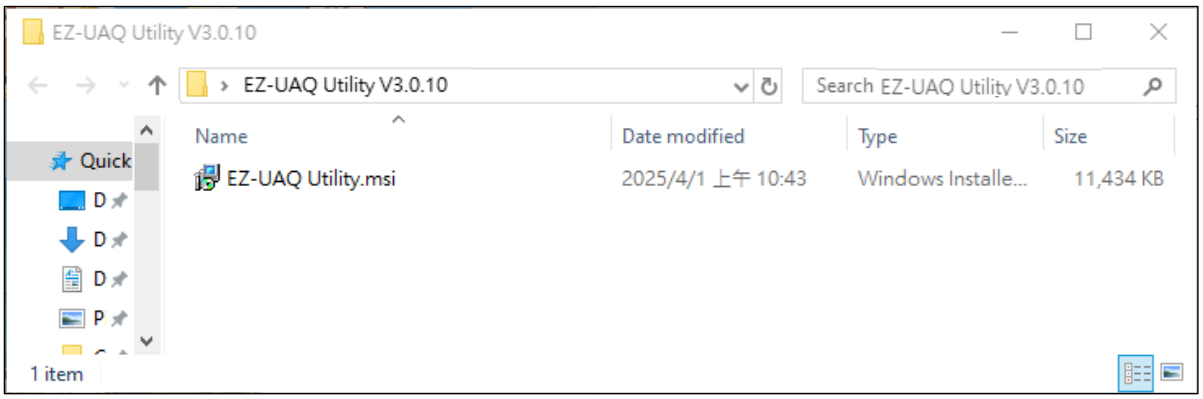


Figure 3-1 Unzipped file of EZ-UAQ Utility

And click on the installation file to start the installation. Click [Next].

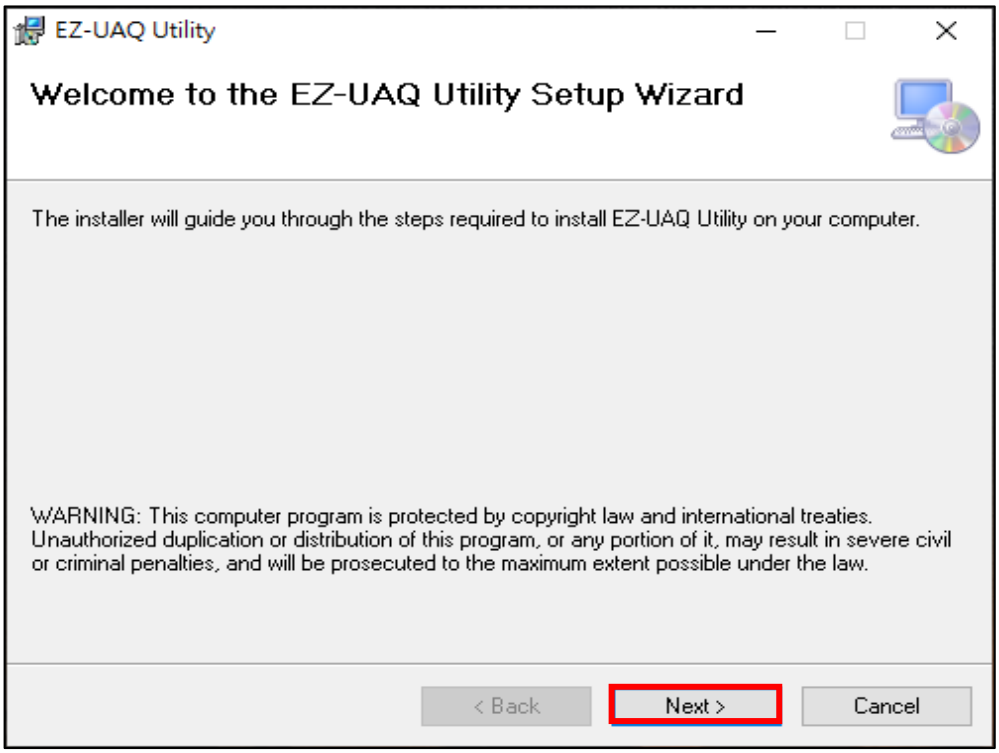


Figure 3-2 EZ-UAQ Utility Installation File Steps (1)

In the [Select Installation Folder] page, set the installation path and software user. Click [Next].

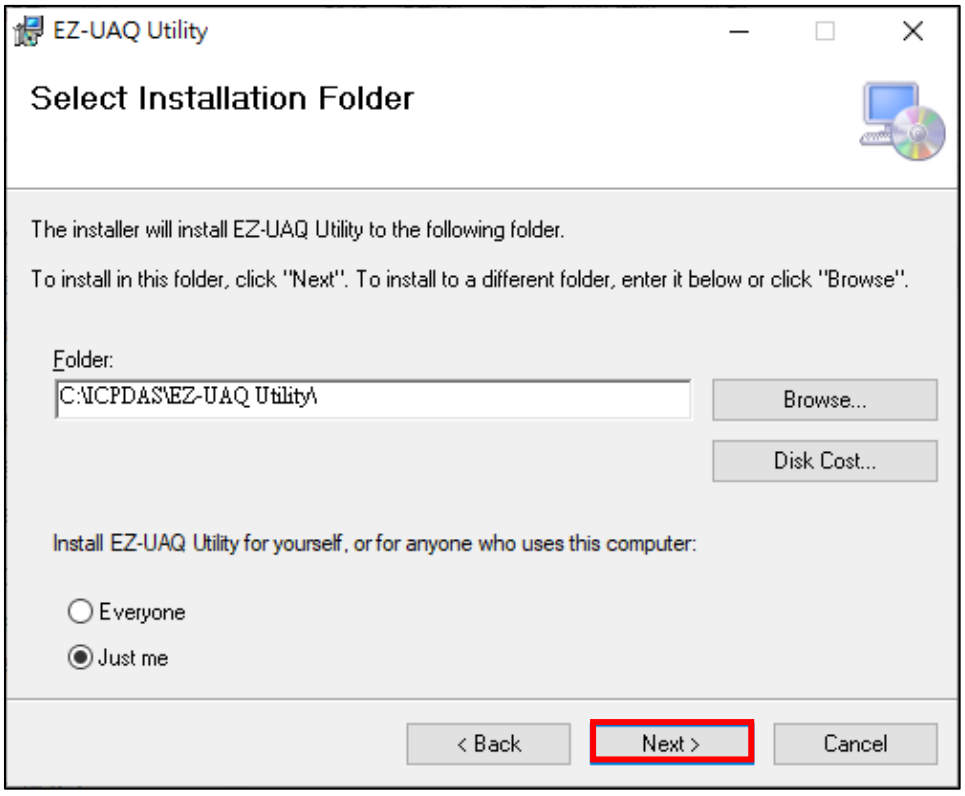


Figure 3-3 EZ-UAQ Utility Installation File Steps (2)

In the [Confirm Installation] page, make sure it is correct. Then click [Next].

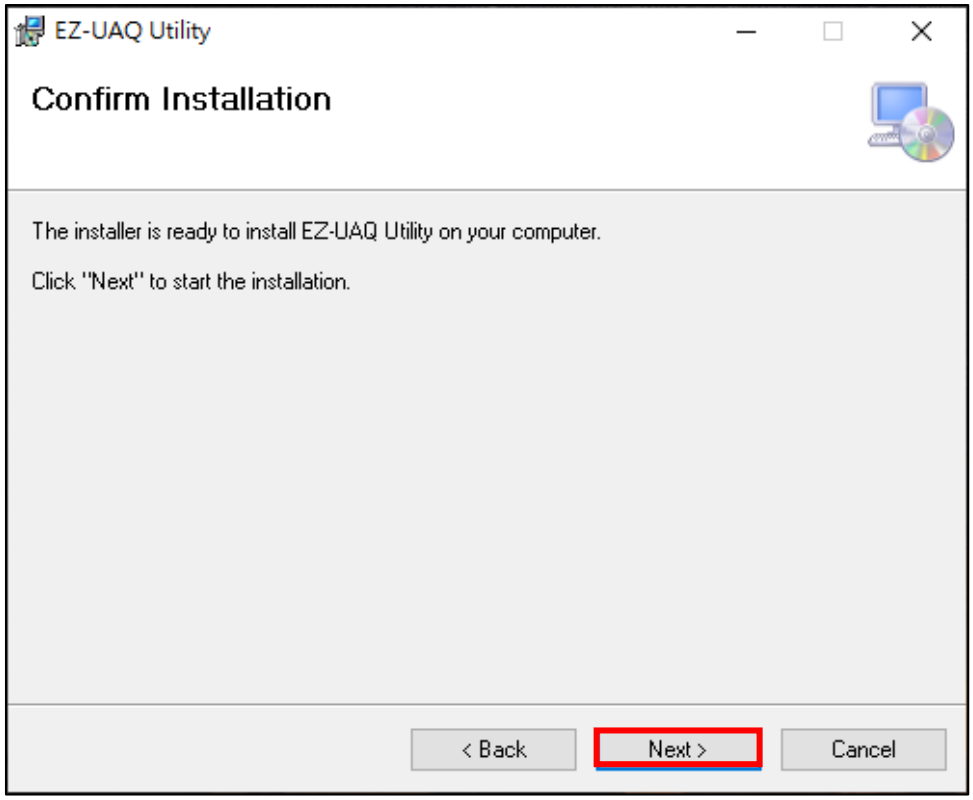


Figure 3-4 EZ-UAQ Utility Installation File Steps (3)

When the installation is finished, click [Close] to end the installation.

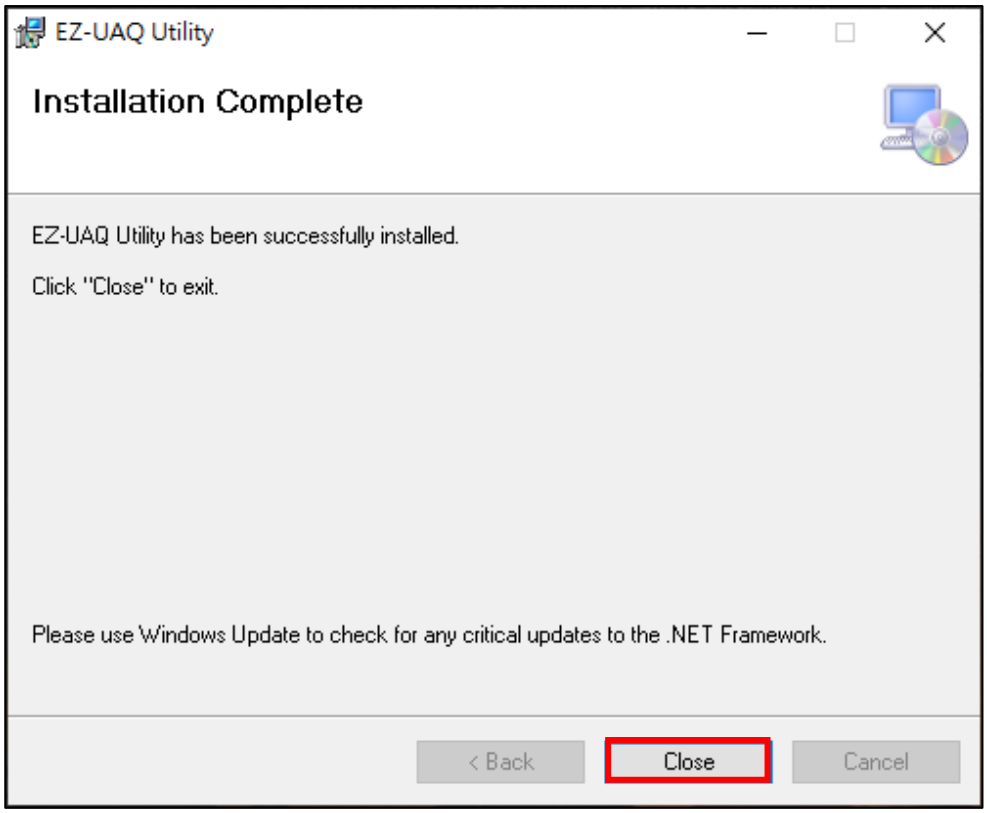


Figure 3-5 EZ-UAQ Utility Installation File Steps (4)

After installation, the EZ-UAQ Utility software shortcut will be created on the desktop.

Figure 3-6 EZ-UAQ Utility software shortcut

4. User Interface Introduction

The operation interface of EZ-UAQ Utility is introduced as follows:

Toolbar: Switching languages, Select module, About.

Functions: Five main functions of EZ-UAQ Utility

Basic/ Advanced Function: users can get basic and detailed information of modules.

Upload/ Download Function: to update firmware version or download details of single (or multiple) modules.

Certificate: Provides efficient and convenient certificate management functions for generating certificates and updating them to the modules.

Display Area: Display Area: to show operation information of modules. Support following functions:

- Display module information include: Module Name, Host name, IP Address, firmware version, Respond Time and Note.
- Click module column will link to the module information coordinately.
- Users can choose to hide columns while these columns are too much information (please refer to 5.3 Display Area).
- Click the "Copy" function to directly paste the Host Name, IP, and other information on the module to the third-party software.(please refer to 5.3 Display Area).

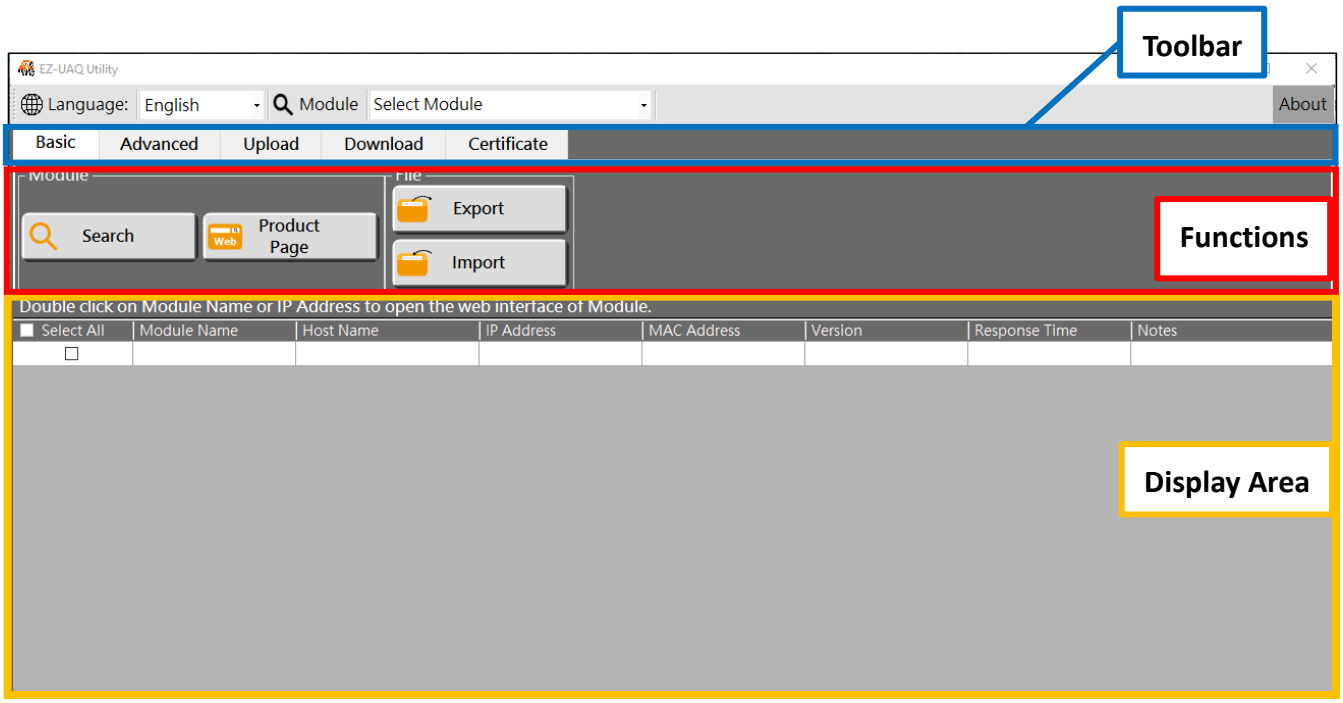


Figure 4-1 The operation interface of EZ-UAQ Utility

5. Interface Function Details

5.1 Toolbar

Figure 5-1 Toolbar

5.1.1 Language switching

To change the software language, please click the drop down list in the toolbar (as following capture) and select the suitable language. Languages currently are available in Traditional Chinese, Simplified Chinese, and English. (5.2.2 add other anguages)

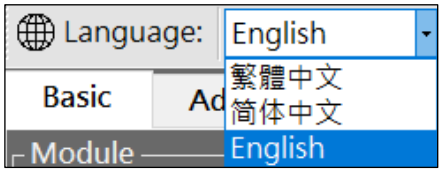


Figure 5-2 Select Language Page

5.1.2 Select Module

*** Note : This function requires the use of [Basic Function] →[Select Module](refer to 5.2.1)**

If you need to filter specific module, please click “search module”. Confirm that all modules are shown in the above column and click the drop down list of modules, select the module number, and the module will be in the Display Area. The following picture shows the selected U-7526M module.

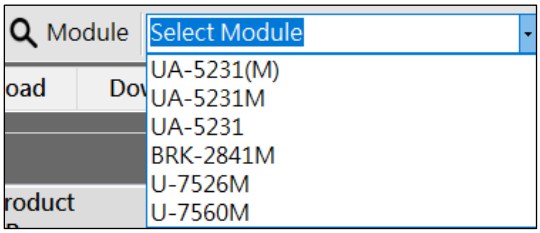


Figure 5-3 Select Module Page

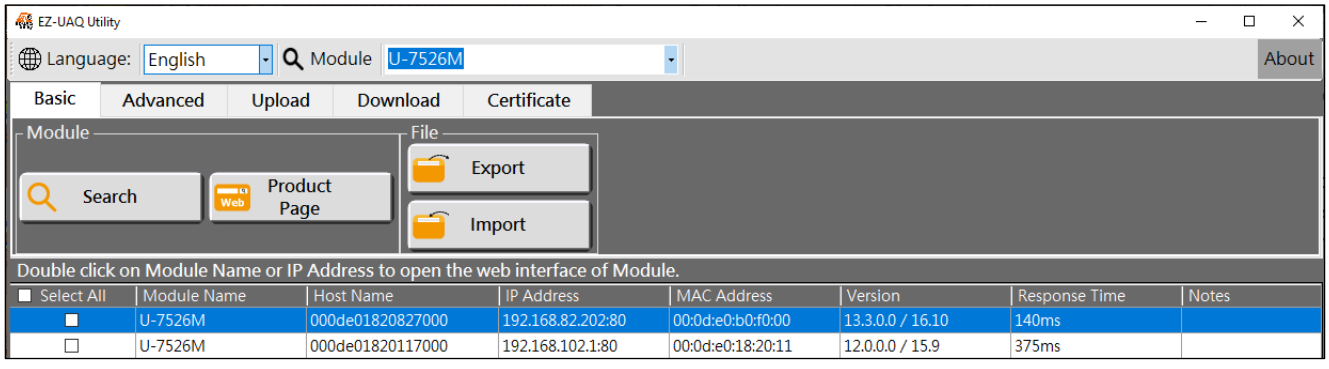


Figure 5-4 Filter Module Information Display Area

5.1.3 About

Clicking the **[About]** button on the toolbar will display the version information and update details of the EZ-UAQ Utility.

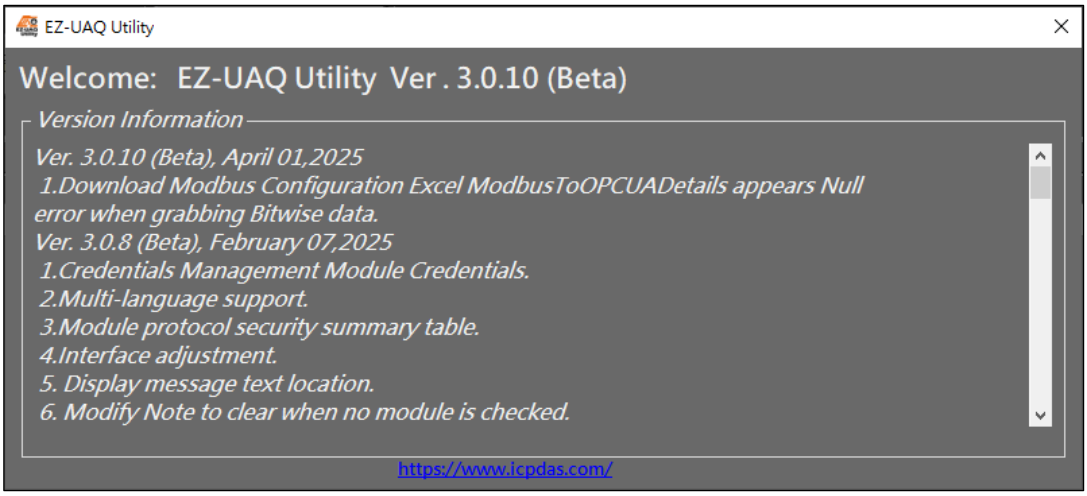


Figure 5-5 About page

5.2 Functions

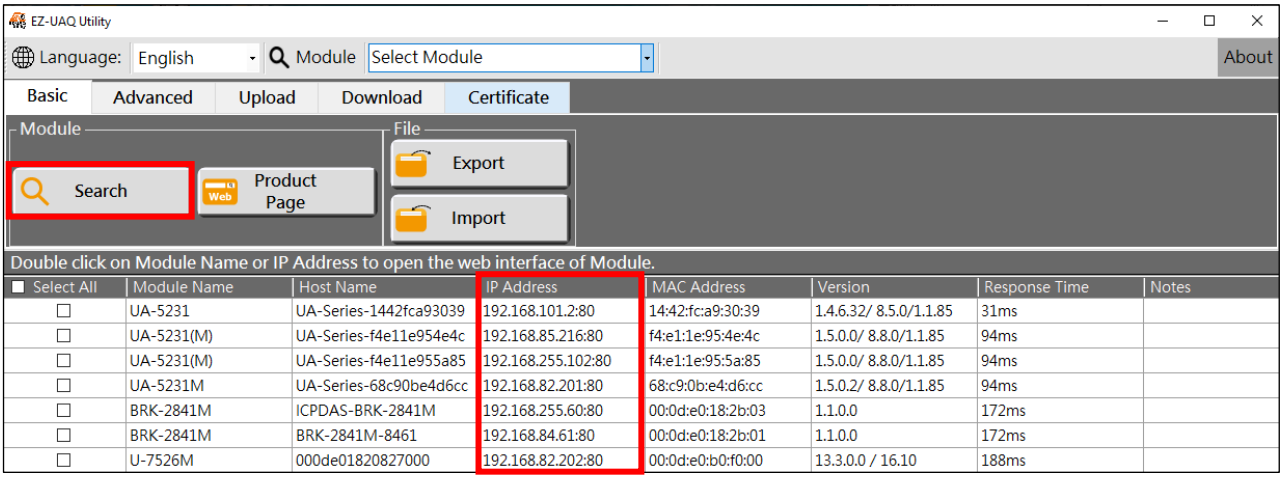
Figure 5-6 Functions

5.2.1 Basic

Figure 5-7 Basic Functions

➢ **Search Module**

Click the **[Search]** button to scan and display all UA, UA I/O, and BRK series modules with network segment IP settings in the display area.



Select All	Module Name	Host Name	IP Address	MAC Address	Version	Response Time	Notes
☐	UA-5231	UA-Series-1442fca93039	192.168.101.2:80	14:42:fc:a9:30:39	1.4.6.32/ 8.5.0/1.1.85	31ms	
☐	UA-5231(M)	UA-Series-f4e11e954e4c	192.168.85.216:80	f4:e1:1e:95:4e:4c	1.5.0.0/ 8.8.0/1.1.85	94ms	
☐	UA-5231(M)	UA-Series-f4e11e955a85	192.168.255.102:80	f4:e1:1e:95:5a:85	1.5.0.0/ 8.8.0/1.1.85	94ms	
☐	UA-5231M	UA-Series-68c90be4d6cc	192.168.82.201:80	68:c9:0b:e4:d6:cc	1.5.0.2/ 8.8.0/1.1.85	94ms	
☐	BRK-2841M	ICPDAS-BRK-2841M	192.168.255.60:80	00:0d:e0:18:2b:03	1.1.0.0	172ms	
☐	BRK-2841M	BRK-2841M-8461	192.168.84.61:80	00:0d:e0:18:2b:01	1.1.0.0	172ms	
☐	U-7526M	000de01820827000	192.168.82.202:80	00:0d:e0:b0:f0:00	13.3.0.0 / 16.10	188ms	

Figure 5-8 Search Module Information Display Area

***Note: If any of the following three situations occur, please modify the IP to avoid IP conflicts and module communication issues. If there is a problem with the MAC address, please contact technical support personnel.**

(1) When module IP Address conflict occurs, the column of [IP Address] will be in orange background and [notes] column shows in orange text.

Select All	Module Name	Host Name	IP Address	MAC Address	Version	Response Time	Notes
☐	UA-5231M	UA-Series-68c90...	192.168.82.201:80	68:c9:0b:e4:d6:cc	1.4.6.29/ 8.5....	0ms	IP Address Conflict
☐	UA-5231	UA-Series-1442fc...	192.168.101.2:80	14:42:fc:a9:30:39	1.4.6.32/ 8.5....	0ms	
☐	BRK-2841M	BRK-2841M-8461	192.168.84.61:80	00:0d:e0:18:2b:01	1.0.0.79	110ms	
☐	BRK-2841M	BRK-2841M-8460	192.168.84.60:80	00:0d:e0:18:2b:05	1.0.0.79	141ms	
☐	U-7526M	000de018201170...	192.168.102.1:80	00:0d:e0:18:20:11	12.0.0.0 / 15.9	156ms	
☐	U-7560M	000de018210270...	192.168.81.100:80	00:0d:e0:18:21:02	14.0.0.0 / 16....	250ms	
☐	U-7526M	000de018208270...	192.168.82.201:80	00:0d:e0:18:20:82	13.2.0.0 / 16....	938ms	IP Address Conflict

Figure 5-9 Display page in case of module IP conflict

(2) When module MAC Address conflict occurs, the column of [MAC Address] will be in red background and [notes] column shows in red text.

Select All	Module Name	Host Name	IP Address	MAC Address	Version	Response Time	Notes
☐	UA-5231M	UA-Series-68c90...	192.168.82.201:80	68:c9:0b:e4:d6:cc	1.4.6.29/ 8.5....	15ms	Mac Address Conflict
☐	UA-5231	UA-Series-1442fc...	192.168.101.2:80	14:42:fc:a9:30:39	1.4.6.32/ 8.5....	62ms	
☐	BRK-2841M	BRK-2841M-8461	192.168.84.61:80	00:0d:e0:18:2b:01	1.0.0.79	109ms	
☐	BRK-2841M	BRK-2841M-8460	192.168.84.60:80	00:0d:e0:18:2b:05	1.0.0.79	140ms	
☐	U-7526M	000de018201170...	192.168.102.1:80	00:0d:e0:18:20:11	12.0.0.0 / 15.9	156ms	
☐	U-7526M	000de018208270...	192.168.82.202:80	68:c9:0b:e4:d6:cc	13.2.0.0 / 16....	187ms	Mac Address Conflict
☐	U-7560M	000de018210270...	192.168.81.100:80	00:0d:e0:18:21:02	14.0.0.0 / 16....	250ms	

Figure 5-10 Display page in case of module MAC conflict

(3) When module IP address conflicts with MAC address, the module column will all display in red text.

Select All	Module Name	Host Name	IP Address	MAC Address	Version	Response Time	Notes
☐	UA-5231M	UA-Series-68c90...	192.168.82.201:80	68:c9:0b:e4:d6:cc	1.4.6.29/ 8.5....	15ms	IP Address And Mac Address Conflict
☐	UA-5231	UA-Series-1442fc...	192.168.101.2:80	14:42:fc:a9:30:39	1.4.6.32/ 8.5....	31ms	
☐	BRK-2841M	BRK-2841M-8461	192.168.84.61:80	00:0d:e0:18:2b:01	1.0.0.79	109ms	
☐	BRK-2841M	BRK-2841M-8460	192.168.84.60:80	00:0d:e0:18:2b:05	1.0.0.79	140ms	
☐	U-7526M	000de018208270...	192.168.82.201:80	68:c9:0b:e4:d6:cc	13.2.0.0 / 16....	156ms	IP Address And Mac Address Conflict
☐	U-7526M	000de018201170...	192.168.102.1:80	00:0d:e0:18:20:11	12.0.0.0 / 15.9	172ms	
☐	U-7560M	000de018210270...	192.168.81.100:80	00:0d:e0:18:21:02	14.0.0.0 / 16....	250ms	

Figure 5-11 Module IP address and MAC address conflict display page

➢ Product Page

When the module checkbox is not selected, clicking the **[Product Page]** button will simultaneously open the official websites for the UA, UA I/O, and BRK series, and display the corresponding pages based on the language setting.

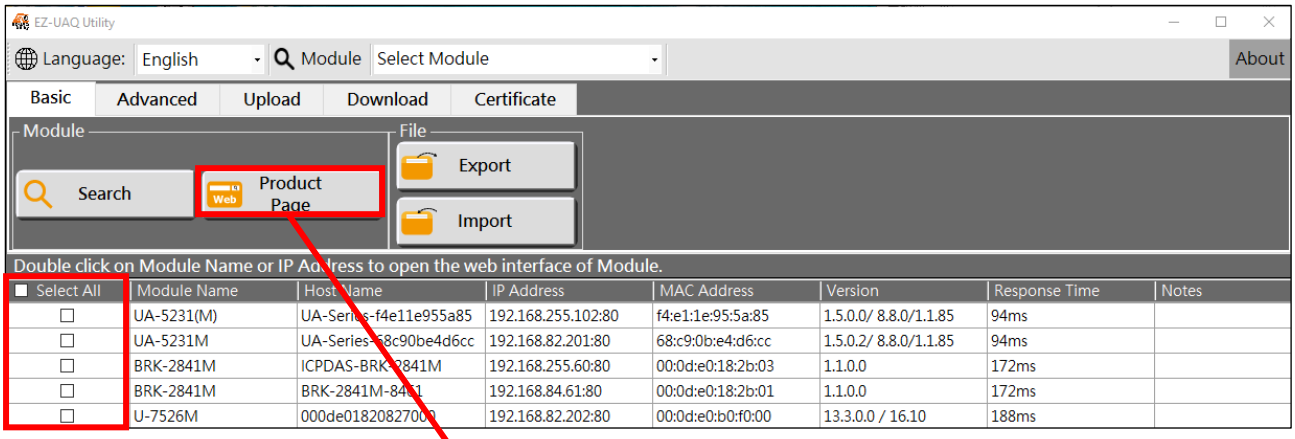
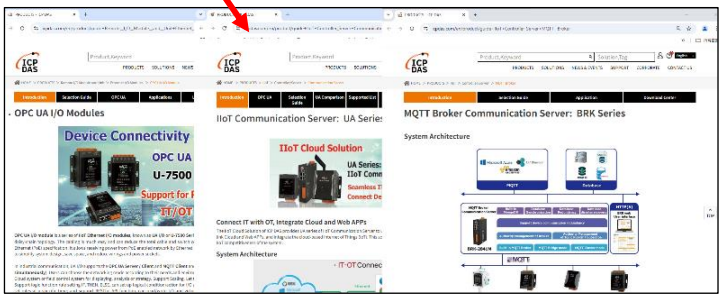


Figure 5-12 Product Web Page (Unchecked Module)



When the module checkbox is selected, clicking the **[Product Page]** button opens the selected module's product webpage based on the language setting. For UA modules, firmware below V1.4.2.0 opens the selection table directly.

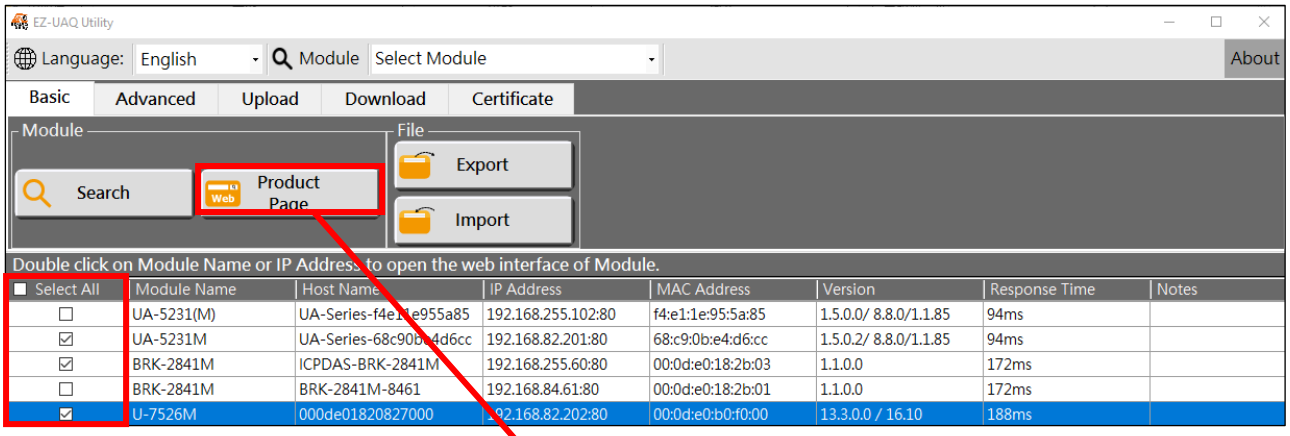
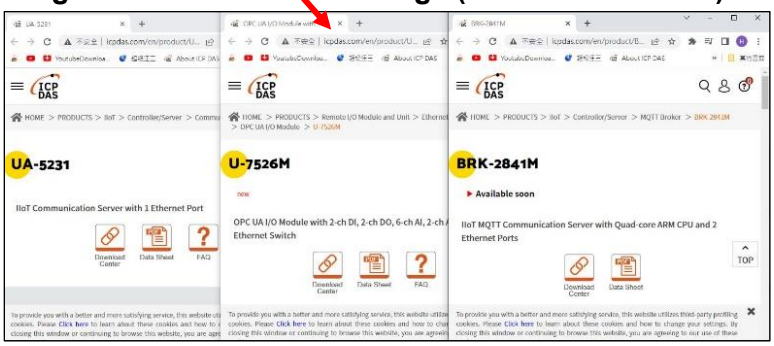
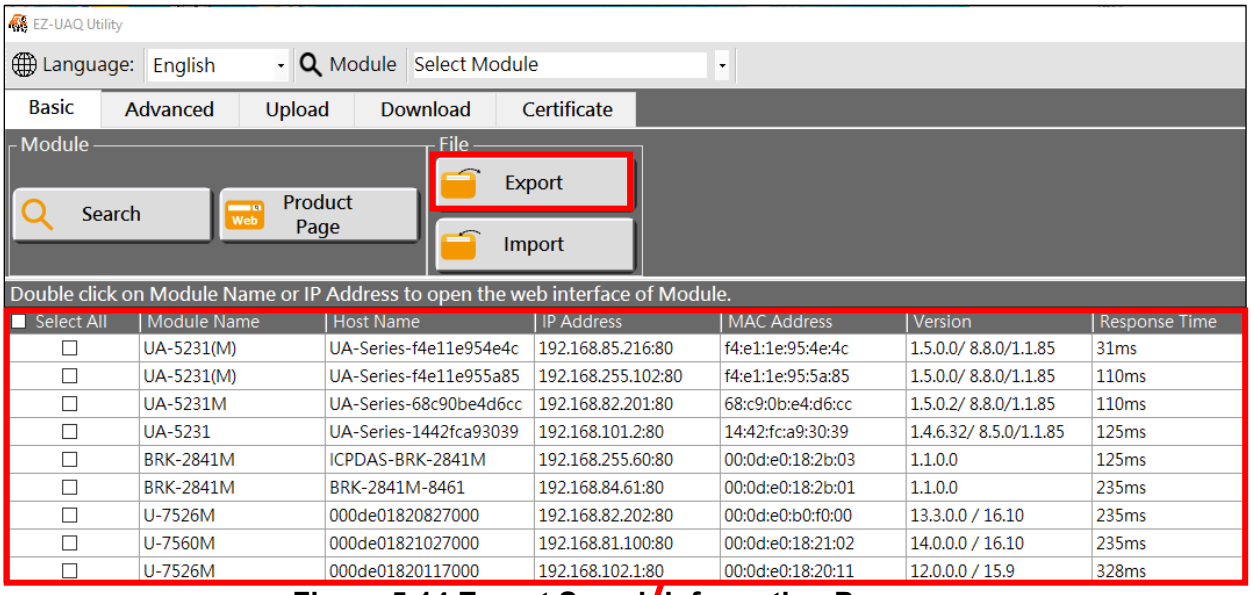


Figure 5-13 Product Web Page (Checked Modules)



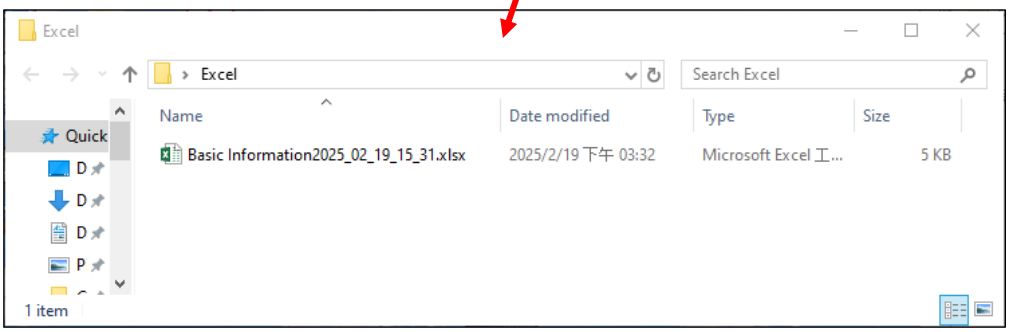
➢ Export Search Information

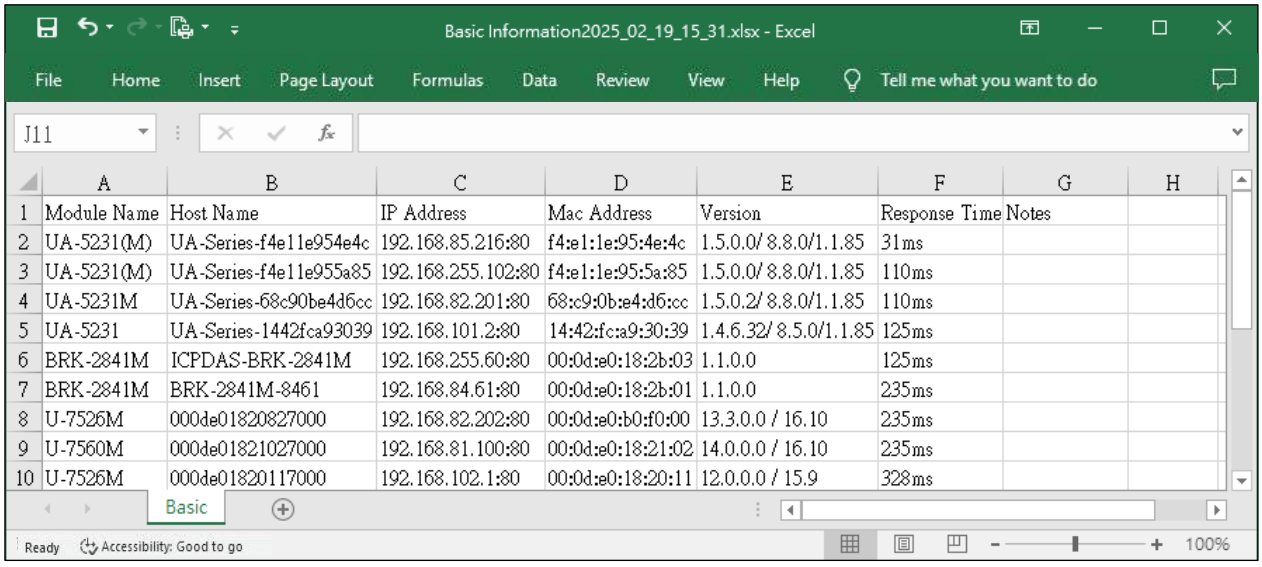
Click the [Export Search Information] button to export the displayed data as an Excel file. The exported file name will be used as the year, month, day, hour, and minute.



Select All	Module Name	Host Name	IP Address	MAC Address	Version	Response Time
☐	UA-5231(M)	UA-Series-f4e11e954e4c	192.168.85.216:80	f4:e1:1e:95:4e:4c	1.5.0.0/ 8.8.0/1.1.85	31ms
☐	UA-5231(M)	UA-Series-f4e11e955a85	192.168.255.102:80	f4:e1:1e:95:5a:85	1.5.0.0/ 8.8.0/1.1.85	110ms
☐	UA-5231M	UA-Series-68c90be4d6cc	192.168.82.201:80	68:c9:0b:e4:d6:cc	1.5.0.2/ 8.8.0/1.1.85	110ms
☐	UA-5231	UA-Series-1442fca93039	192.168.101.2:80	14:42:fc:a9:30:39	1.4.6.32/ 8.5.0/1.1.85	125ms
☐	BRK-2841M	ICPDAS-BRK-2841M	192.168.255.60:80	00:0d:e0:18:2b:03	1.1.0.0	125ms
☐	BRK-2841M	BRK-2841M-8461	192.168.84.61:80	00:0d:e0:18:2b:01	1.1.0.0	235ms
☐	U-7526M	000de01820827000	192.168.82.202:80	00:0d:e0:b0:f0:00	13.3.0.0 / 16.10	235ms
☐	U-7560M	000de01821027000	192.168.81.100:80	00:0d:e0:18:21:02	14.0.0.0 / 16.10	235ms
☐	U-7526M	000de01820117000	192.168.102.1:80	00:0d:e0:18:20:11	12.0.0.0 / 15.9	328ms

Figure 5-14 Export Search Information Page





	A	B	C	D	E	F	G	H
1	Module Name	Host Name	IP Address	Mac Address	Version	Response Time	Notes	
2	UA-5231(M)	UA-Series-f4e11e954e4c	192.168.85.216:80	f4:e1:1e:95:4e:4c	1.5.0.0/ 8.8.0/1.1.85	31ms		
3	UA-5231(M)	UA-Series-f4e11e955a85	192.168.255.102:80	f4:e1:1e:95:5a:85	1.5.0.0/ 8.8.0/1.1.85	110ms		
4	UA-5231M	UA-Series-68c90be4d6cc	192.168.82.201:80	68:c9:0b:e4:d6:cc	1.5.0.2/ 8.8.0/1.1.85	110ms		
5	UA-5231	UA-Series-1442fca93039	192.168.101.2:80	14:42:fc:a9:30:39	1.4.6.32/ 8.5.0/1.1.85	125ms		
6	BRK-2841M	ICPDAS-BRK-2841M	192.168.255.60:80	00:0d:e0:18:2b:03	1.1.0.0	125ms		
7	BRK-2841M	BRK-2841M-8461	192.168.84.61:80	00:0d:e0:18:2b:01	1.1.0.0	235ms		
8	U-7526M	000de01820827000	192.168.82.202:80	00:0d:e0:b0:f0:00	13.3.0.0 / 16.10	235ms		
9	U-7560M	000de01821027000	192.168.81.100:80	00:0d:e0:18:21:02	14.0.0.0 / 16.10	235ms		
10	U-7526M	000de01820117000	192.168.102.1:80	00:0d:e0:18:20:11	12.0.0.0 / 15.9	328ms		

Figure 5-15 Exported Search Information (xlsx File)

➢ **Import Search Information**

Click the "Import Search Information" button, then click on the data to compare (Excel files exported from previous or other computers). The system will automatically perform a comparison with the retrieved data so far.

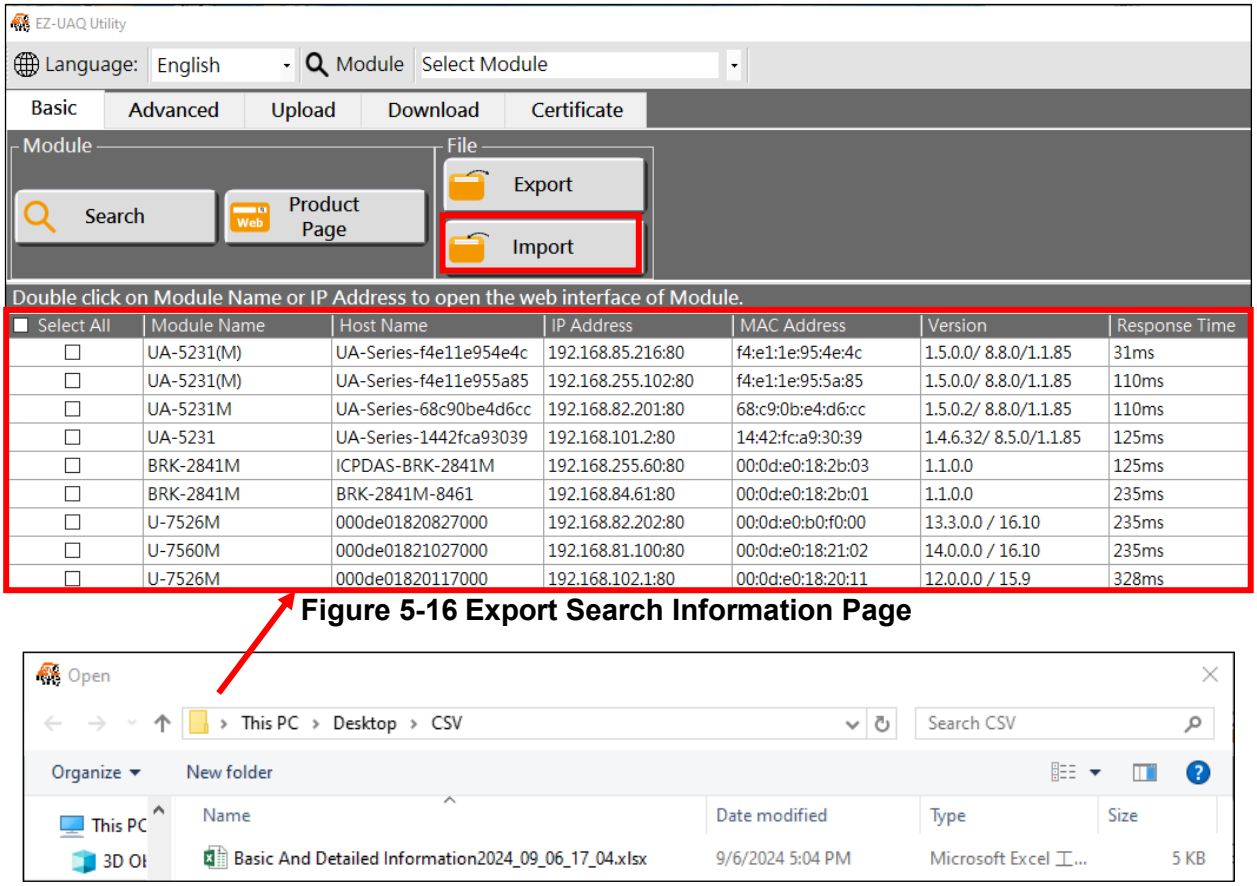


Figure 5-16 Export Search Information Page

After the above steps are completed, the Module Data Comparison window appears. In the figure below, "Search Module" shows the current data. Any added or missing module will be highlighted with a red line after comparison with previous data or data from other computers. The following image indicates that two modules have been added.

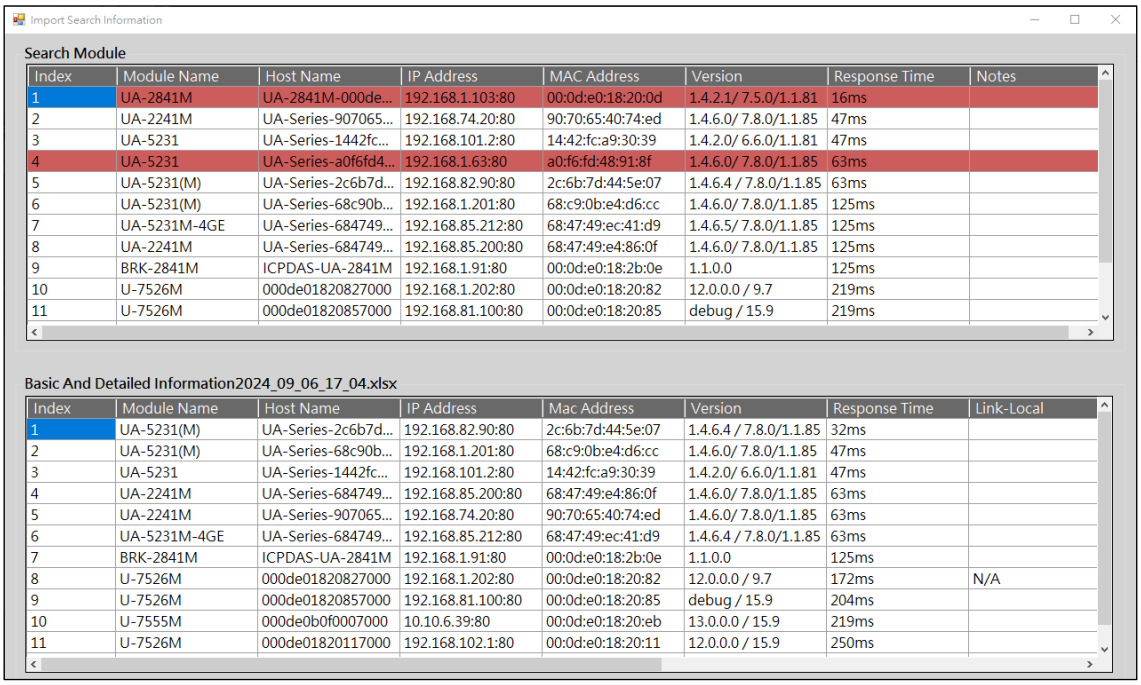


Figure 5-17 Module Data Comparison Window

5.2.2 Advanced

➢ **Search Timeout**

This parameter is used for users to set while in the complicated network environment and with lower network speed. Default setting is 800ms, maximum is 30000ms and minimum is 500ms. If the search quantity is always different in numbers, we'll suggest to set the Search Timeout for higher time range.

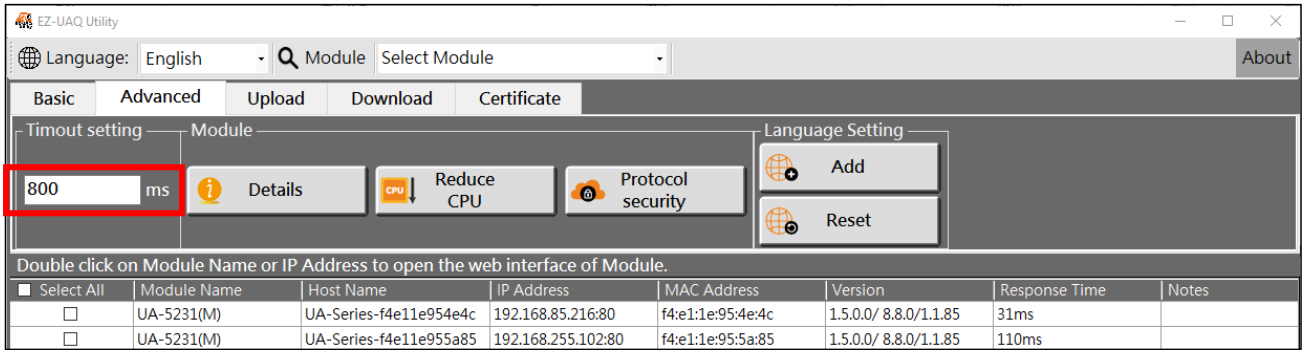


Figure 5-18 Search Timeout Settings Page

➢ **Module Details**

[Module Details]: Check the Module checkbox and click the [Module Details] button to view the details of the module.

Details shows the TCP/UDP Internet Protocols, the occupied procotols include HTTP, HTTPS, OPCUA, and etc of this module. Port number and detail information of these modules provide IT personnel a method to manage internet security in the field. On the other hand, for OT personnel can provide the information to IT while there is error connects between modules and SCADA.

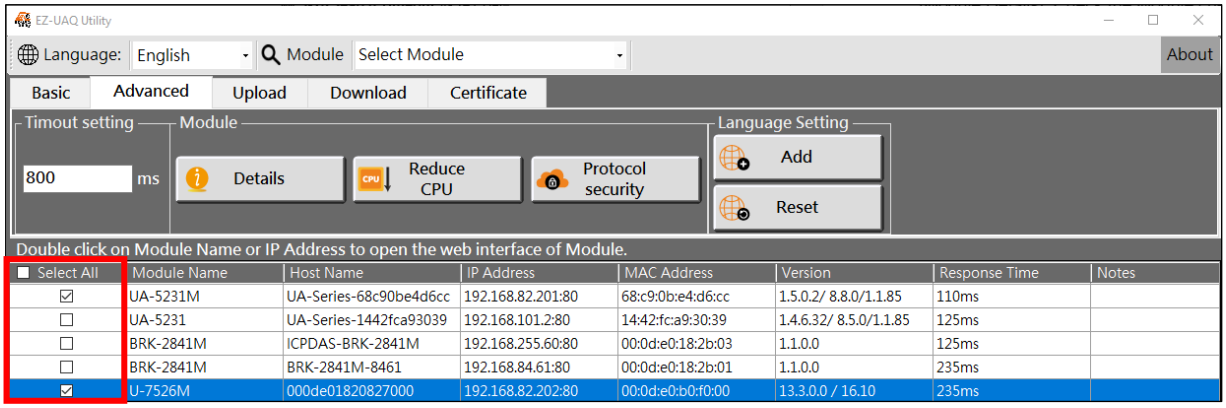


Figure 5-19 Module Details Page (1)

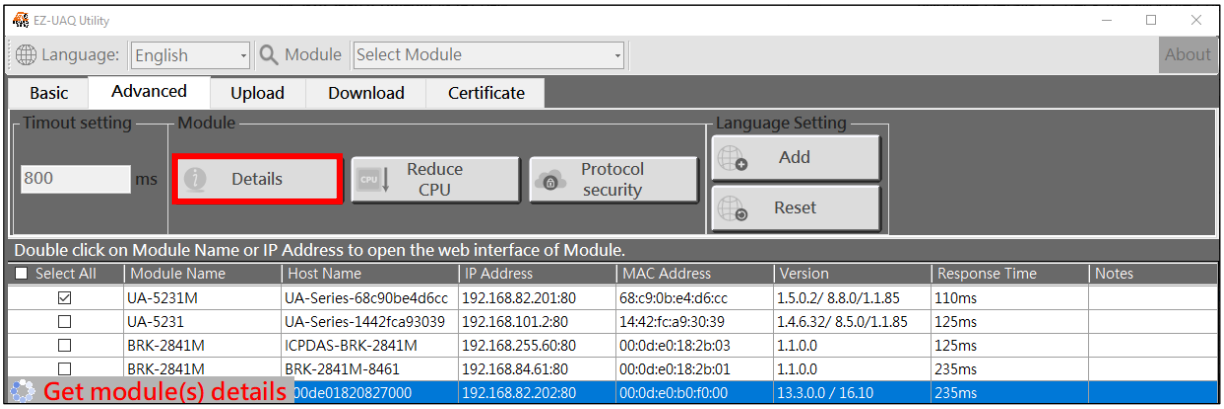


Figure 5-20 Module Details Page (2)

- ✧ IPv6: IP address, which is only available in the UA series.
- ✧ Alias: Field information for identifying module functions or areas to facilitate management. (Please go to the web interface first to set it up, and after complete the setting, it will be displayed in the module details.) Refer to the next page for instructions for Alias Configuration.

Click the "Export" button, and all the module details and basic information searched will be merged and converted into a Excel file for the users to save.

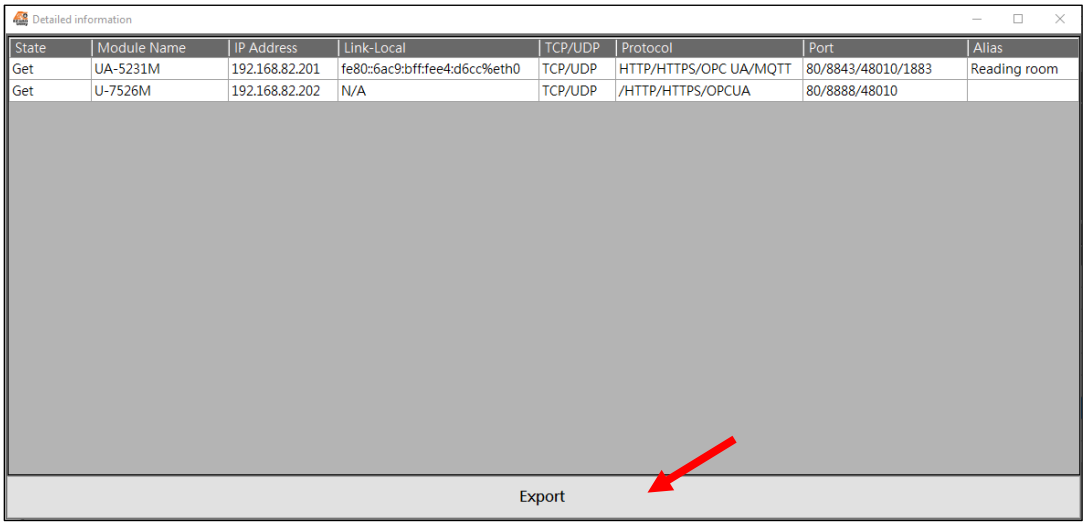


Figure 5-21 Module Details Page (3)

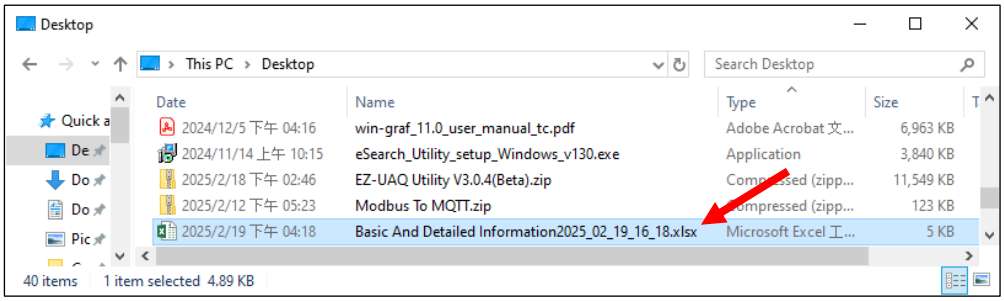


Figure 5-22 Exported module details (xlsx file name)

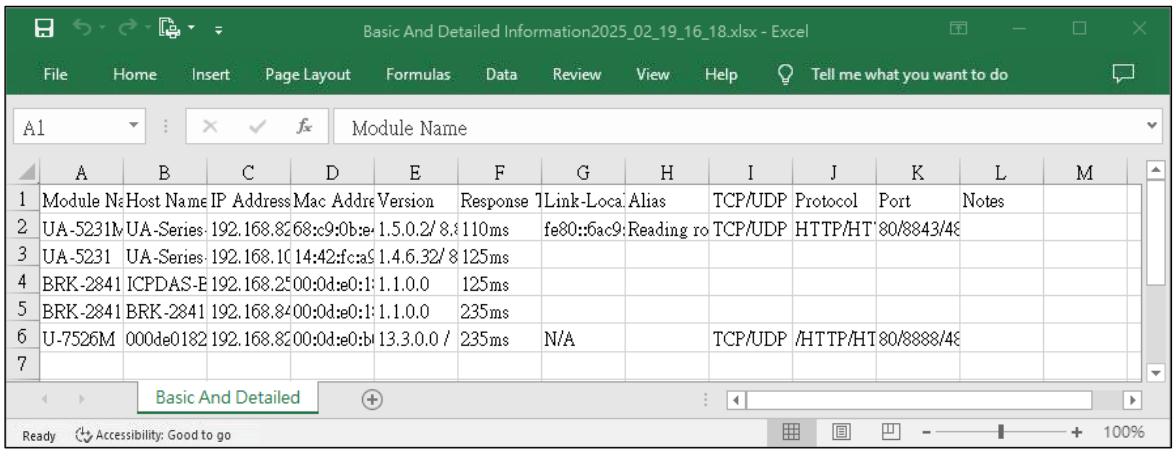


Figure 5-23 Exported module details (xlsx file)

➔ **Alias Configuration**:

UA Communication Server: Open the Web System Setting->EZ-UAQ Utility->Alias Settings>Save, then you can set an alias for the UA series.

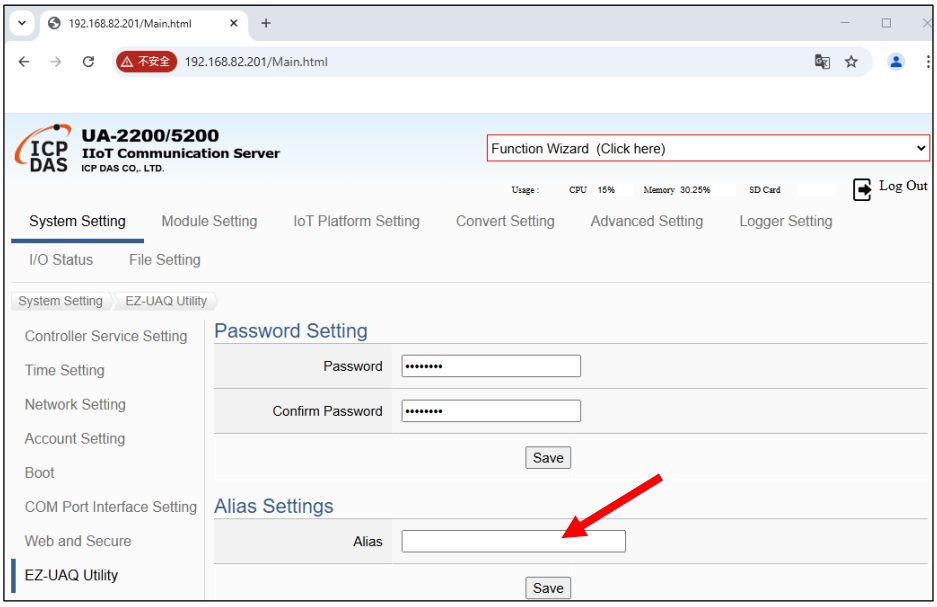


Figure 5-24 UA Communication Server: Alias Configuration (1)

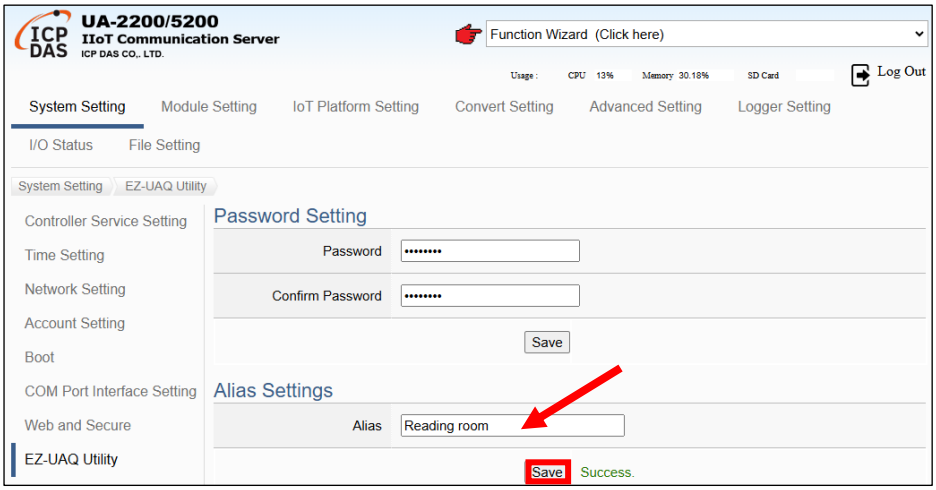


Figure 5-25 UA Communication Server: Alias Configuration (2)

UA I/O Module: Open the Web Advanced Settings->EZ-UAQ Utility->Nickname>Save, then you can set an alias for the UA I/O series.

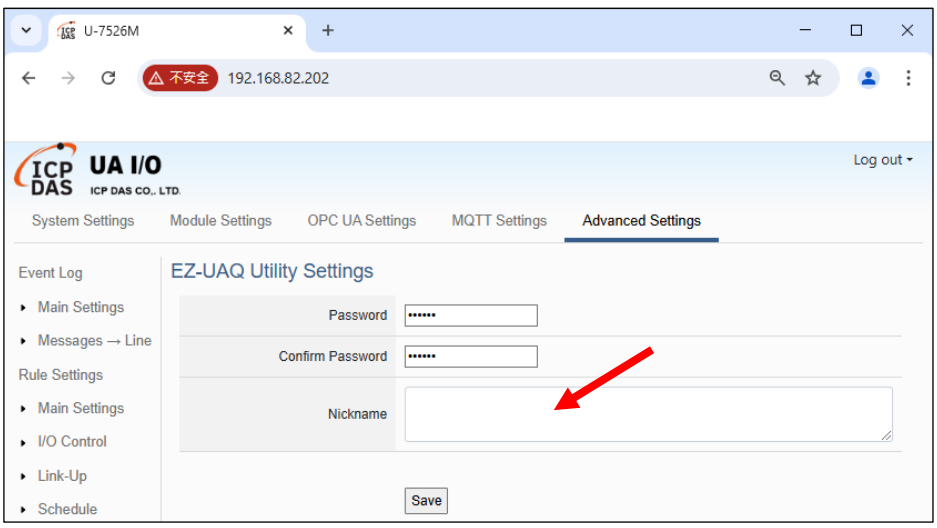


Figure 5-26 UA I/O Module: Alias Configuration (1)

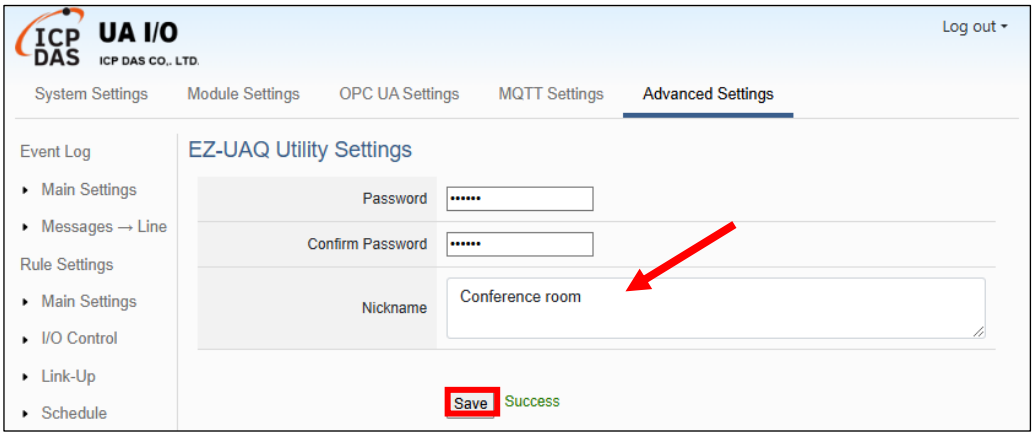


Figure 5-27 UA I/O Module: Alias Configuration (2)

BRK Communication Server : Open the Web System Setting > Utility>Alisa> Save, then you can set an alias for the BRK series.

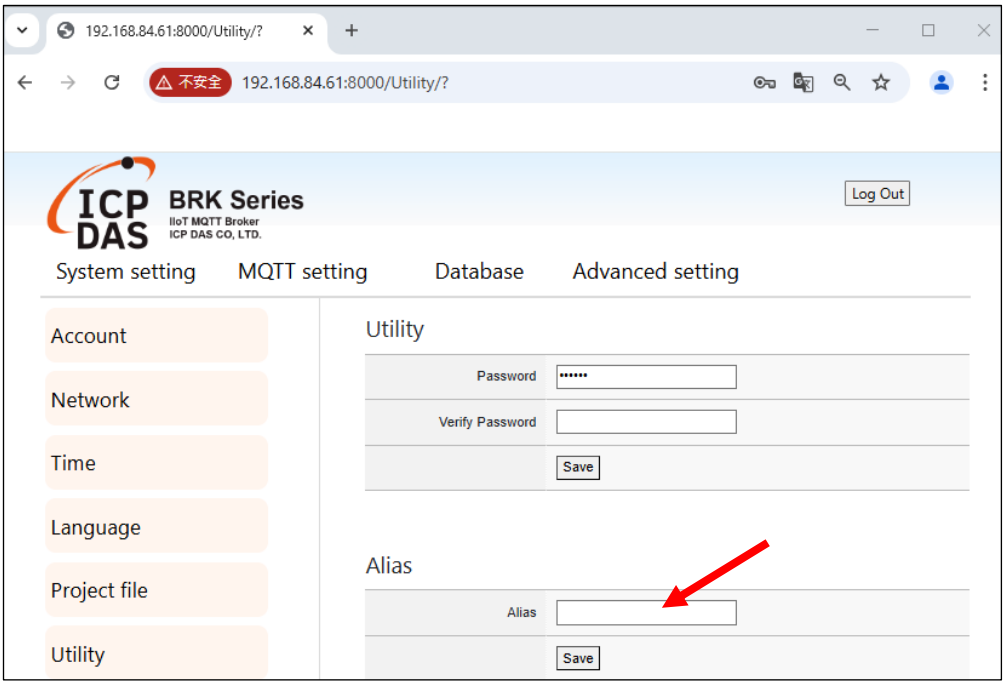


Figure 5-28 BRK Communication Server: Alias Configuration (1)

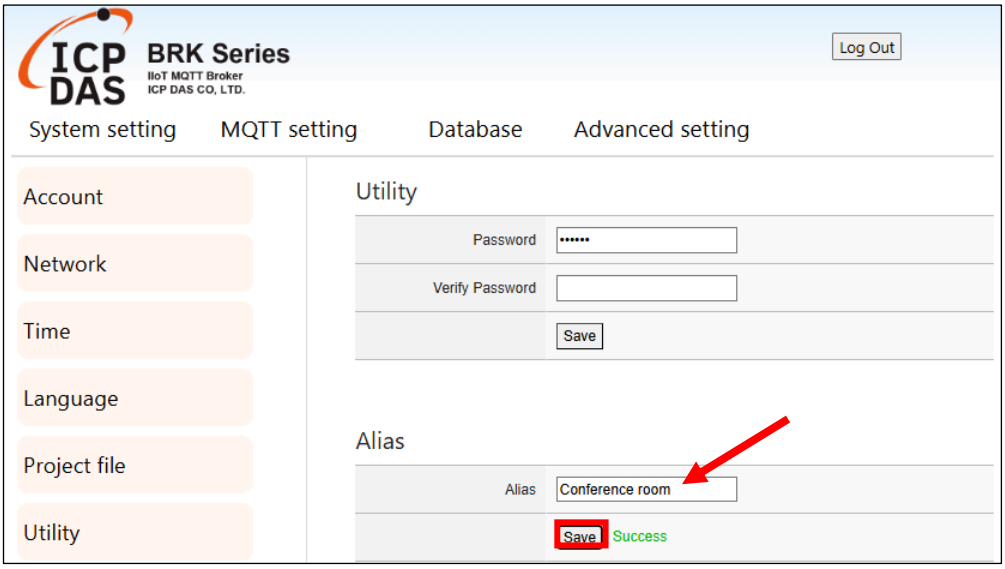


Figure 5-29 BRK Communication Server: Alias Configuration (2)

➢ **Reduce CPU**

*** Warnings: To increase the level of information security, activating this function needs to first set the password in the module. If users would not set the password, the activating will use the default password which will be in higher risk. We suggest to use same password for the same series of modules.**

[Reduce CPU]: While module CPU is in high usage, click the [Reduce CPU] button to pop-up a dialog box to make sure if user confirm to perform this action. To continue this action requires a user password. This function will turn off some function of the module, detail list please refer to following table:

Series Name	Turn-off Functions	Restore turn-off function
UA	(Run Project) MQTT Broker	There are instructions in the communication server manual for reactivating closed functions via the web page.
UA I/O	OPC UA Client IoTstar Setting Event log	Need to restart to restore

Table 5-1 Reduce CPU usage (Turn-off Functions and Restore turn-off function)

Step1: Please check the module first, and then click the [Reduce CPU] button. The window shown in Figure 5-31 will appear. Please click Yes.

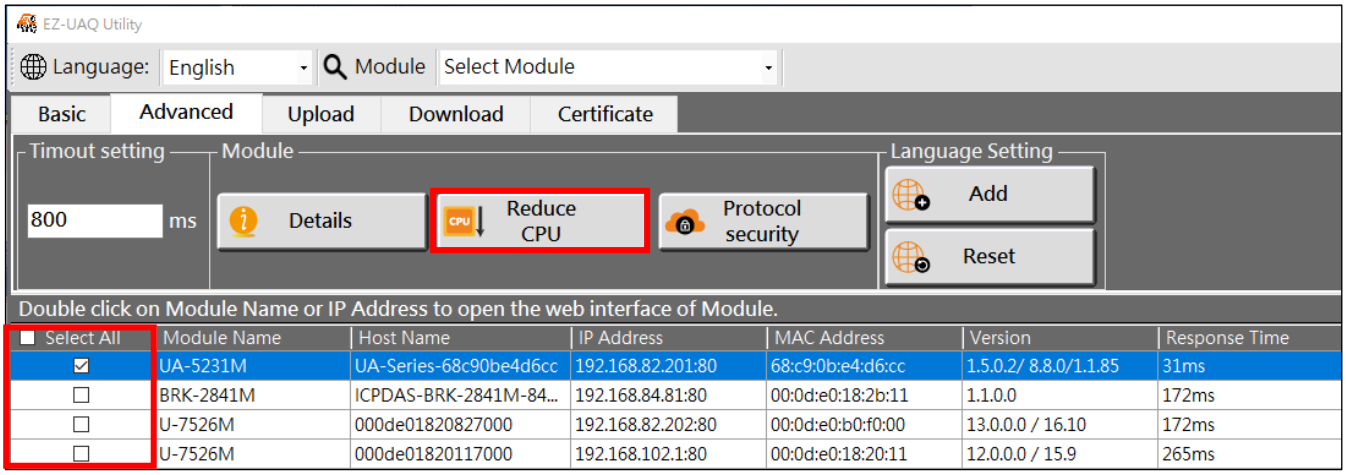


Figure 5-30 Reduce CPU usage (1)

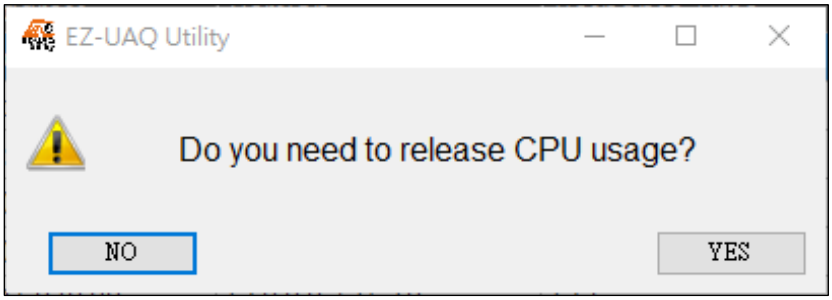


Figure 5-31 Reduce CPU usage (2)

About password settings, please refer to Appendix B: Password Settings which describes how to setup EZ-UAQ Utility password of modules.

If users make progress of “Reduce CPU Usage” without setting password, System will generate a default password for users to quickly finish the cleanups. We highly recommand users to change the password and as previously mentioned, we suggest to set the same password for the same series of products to quickly activate multiple modules at a time.

Step2: In the Password window, please enter the EZ-UAQ Utility password set in the module, and then click OK. The interface will display "**Reduce CPU** ", indicating that the operation has started.

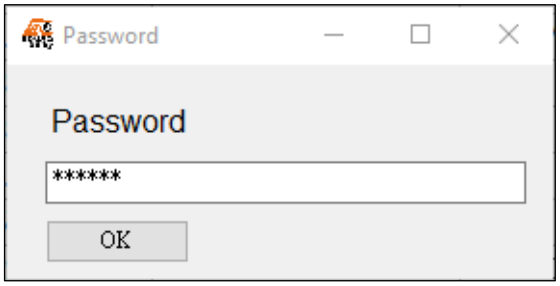


Figure 5-32 Reduce CPU usage (3)

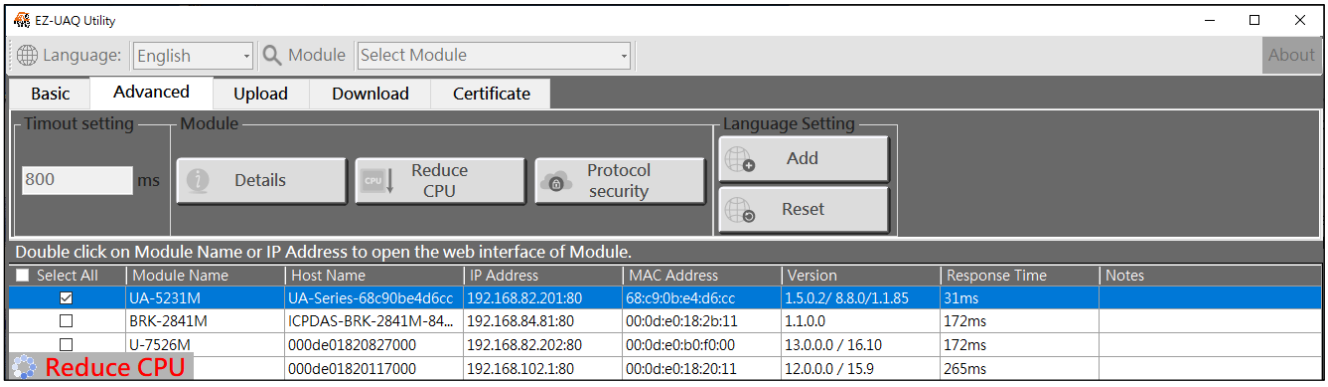


Figure 5-33 Reduce CPU usage (4)

Step3: When the CPU usage is successfully reduced, the words "CPU usage reduction success" will be displayed in the [Notes] of the selected module.

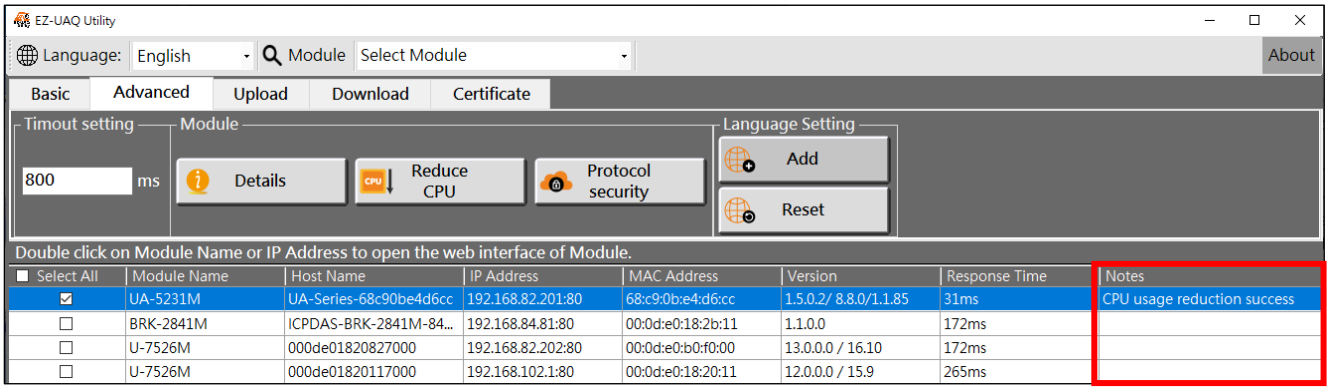


Figure 5-34 Reduce CPU usage (5)

The picture below shows the UA communication server web interface. After reducing the CPU usage, you can know which functions are turned off.

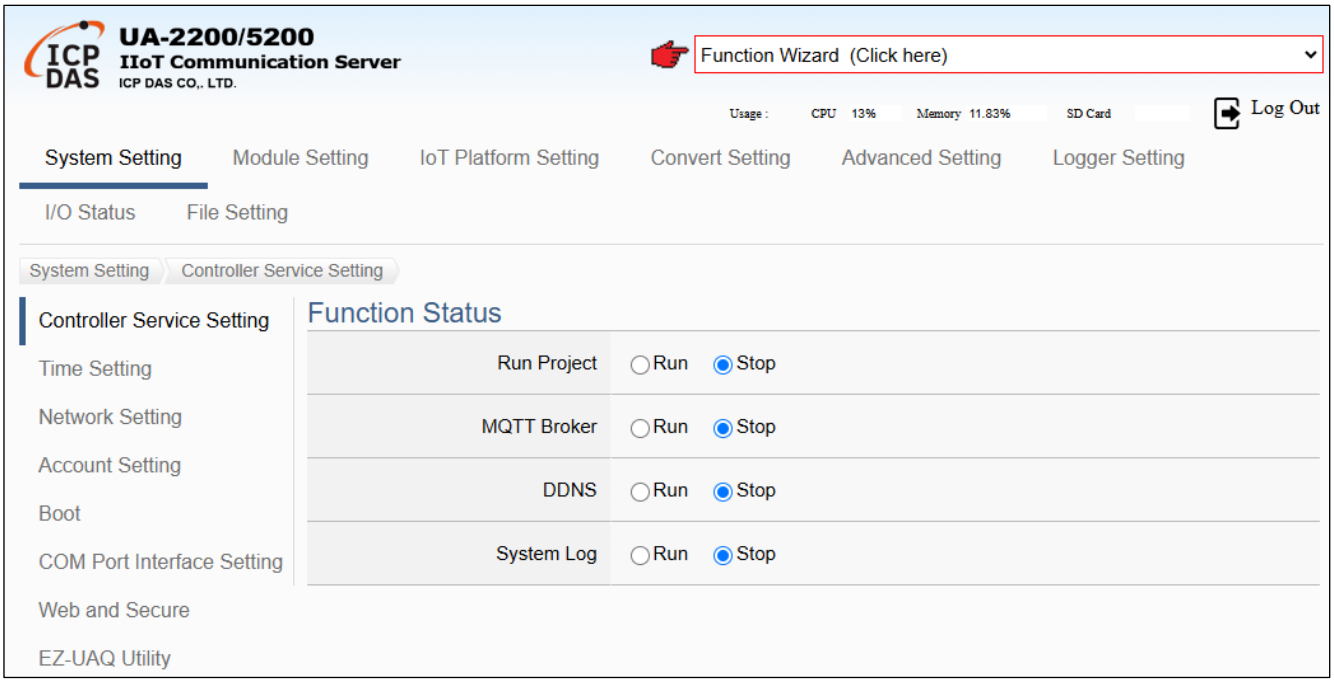


Figure 5-35 UA communication server web interface
(function that will be disabled when CPU utilization is reduced)

The picture below shows the UA I/O module web interface. After reducing the CPU usage, you can know which functions are turned off.

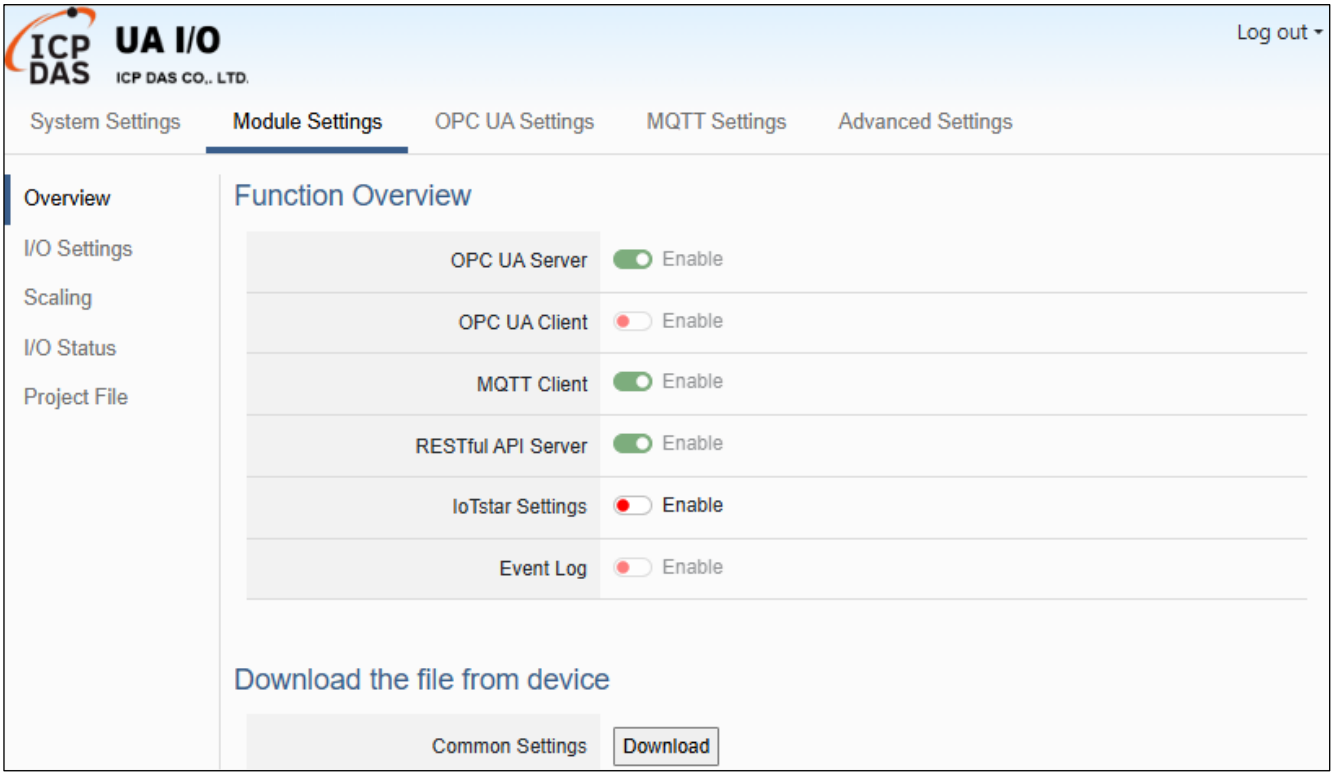


Figure 5-36 UA I/O communication server web interface
(function that will be disabled when CPU utilization is reduced)

➢ **Protocol Security**

[Protocol Security]: This function displays the security of module protocols, including HTTPS, OPC UA Server/Client, and MQTT Broker/Client. It indicates whether the protocol or protocol function is enabled to use the encrypted certificate feature. The icons below provide further explanation.

Icon	Description
	Feature not enabled
	Feature enabled but encryption and certificate functions are not used
	Feature enabled and encryption and certificate functions are used

Table 5-2 Module Protocol Security

Step 1: First, select the module, then click the **[Protocol Security]** button. A password window will appear. Enter the EZ-UAQ Utility password set in the module configuration, and click OK.

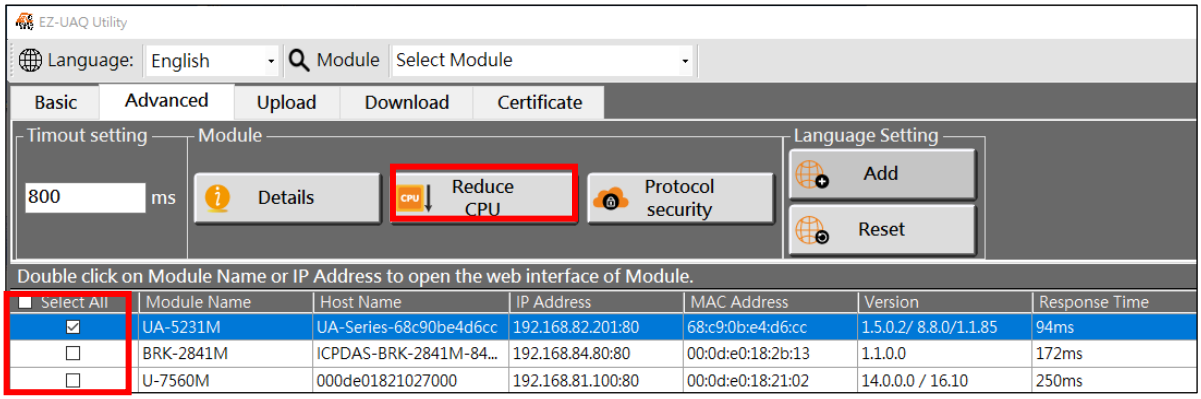


Figure 5-37 Protocol Security (1)

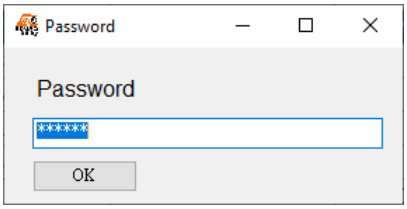


Figure 5-38 Protocol Security (2)

Step 2: The interface will then display "**Retrieving Module Protocol Security**," indicating that the process has started. Once completed, the results will be shown in the "Module Protocol Security" window.

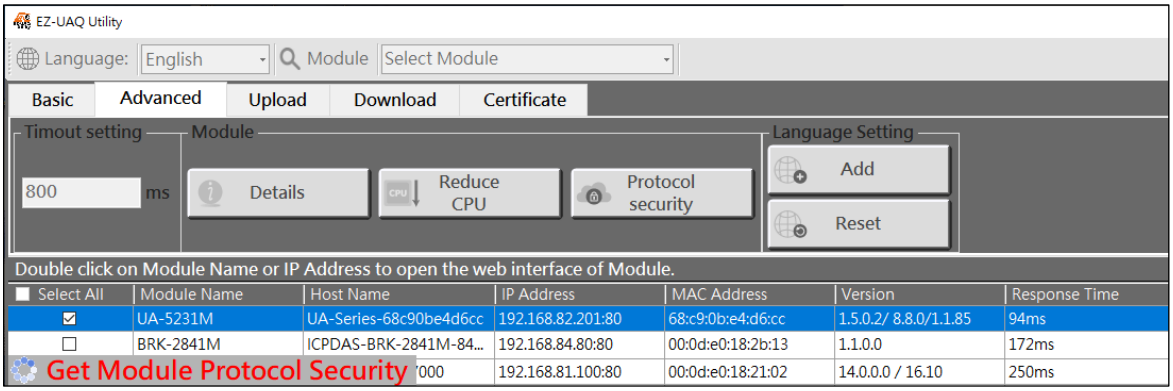


Figure 5-39 Protocol Security (3)

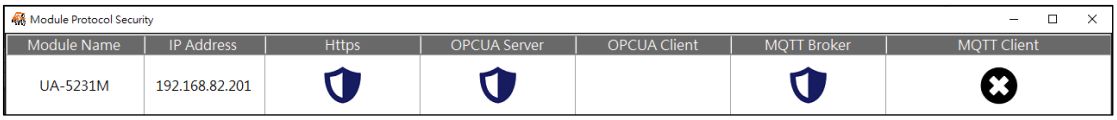


Figure 5-40 Protocol Security (4)

➢ **Language Setting**

[Add]: Using the "Add Language" feature, users can add languages to the EZ-UAQ Utility.

Step1: Click the **[Add]** button to open the ”Add Multiple Languages” window**.**

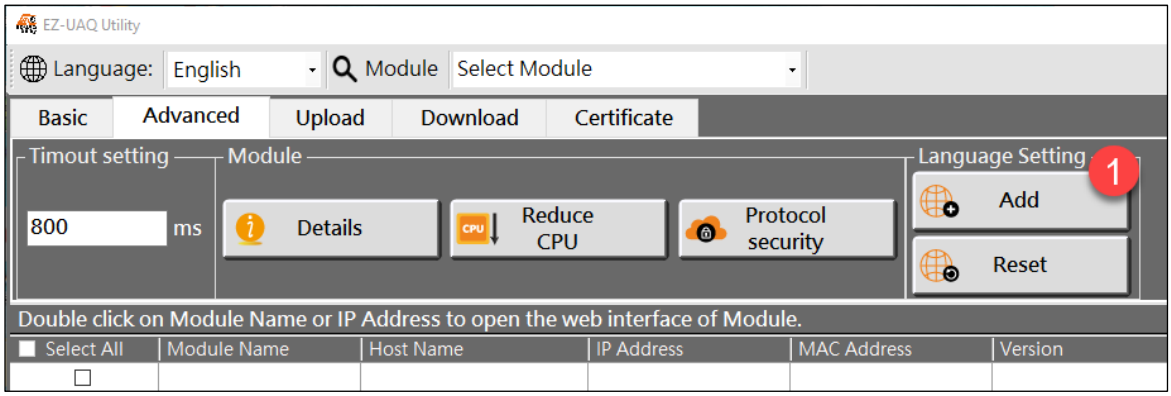


Figure 5-41 Language Settings - Add (1)

Step 2: First, enter the language you want to add in Add Language, then click [Copy English Word]. Use translation software to translate the English word into the language you want (e.g., Japanese) and copy it.

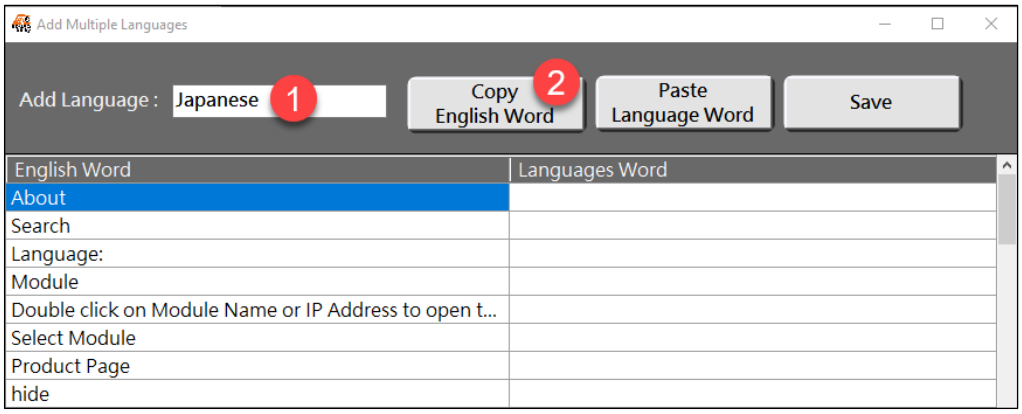


Figure 5-42 Language Settings – Add (2)

Step 3: Then click [Paste Language Word], and the Japanese text will be displayed in the table below Add Languages Word. Next, click[Save], and a window shown in Restart EZ-UAQ Utility message will appear; then click 'OK’.

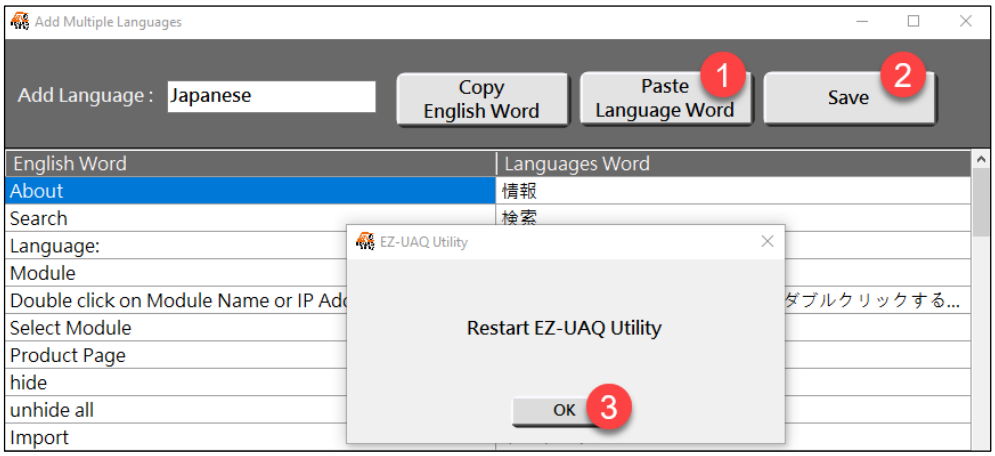


Figure 5-43 Language Settings - Add (3)

Step 4: Next, restart the software, and Japanese will appear in the language dropdown menu. Please select Japanese.

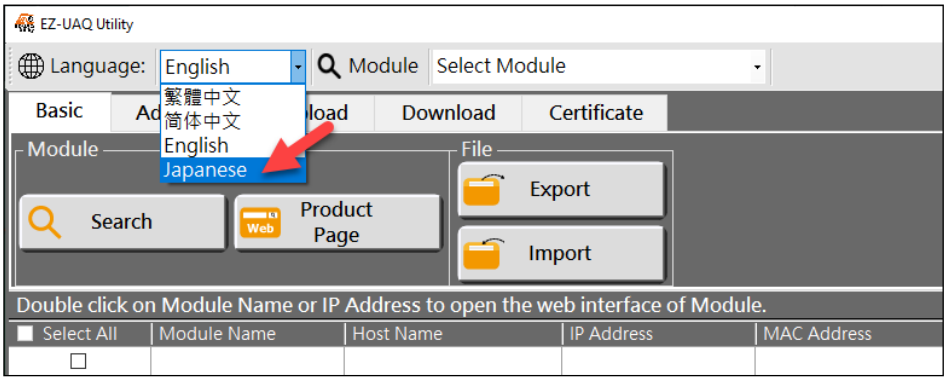


Figure 5-44 Language Settings - Add (4)

Step 5: The EZ-UAQ Utility software interface will automatically switch to Japanese.

Figure 5-45 Language Settings - Add (5)

[Reset]: If the newly added language is not functioning properly, users can reset the language settings to restore the factory default language file, using Japanese as an example.

***Note:** Using the **[Reset]** function will remove all custom languages.

Step 1: Click the **[Reset]** button to open the "**Reset Successful**" message window.

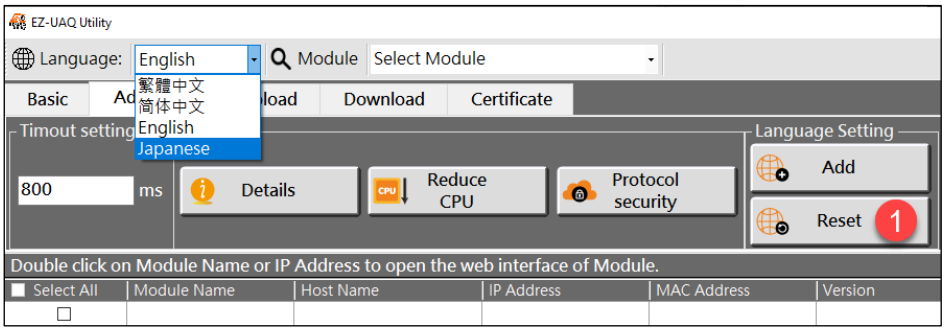


Figure 5-46 Language Settings – Reset (1)

Step 2: Then, click OK to restart the software and restore the language file to the factory default settings.

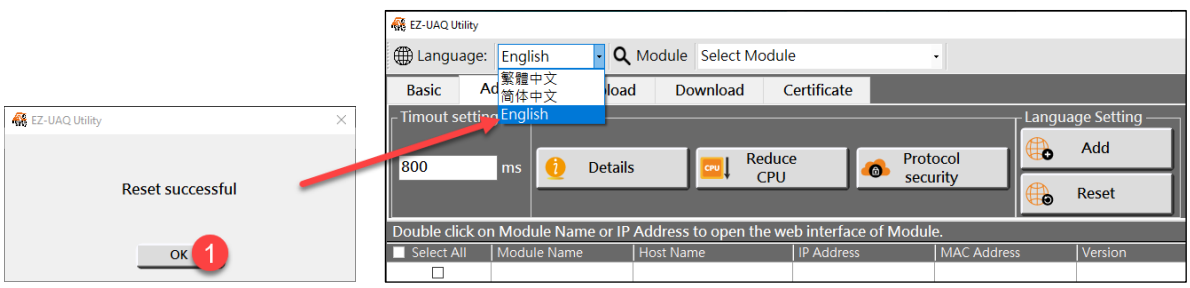


Figure 5-47 Language Settings – Reset (2)

5.2.3 Upload

*** Note: When using the Upload function, must be the same series if multiple modules are downloaded at the same time.**

*** Warnings: To enable this feature, you must first set a password in the module settings to enhance information security. If no settings are made, the default password will be used. However, using the default password carries certain risks.**

- **Update Firmware**

  Users can use the "Update Firmware" function to update the firmware of multiple UA Communication Server, UA I/O, and BRK modules in batches. The following operational interface shows the update process for a single U-7526M module:

Step1: Click  to select the firmware package you want to update.

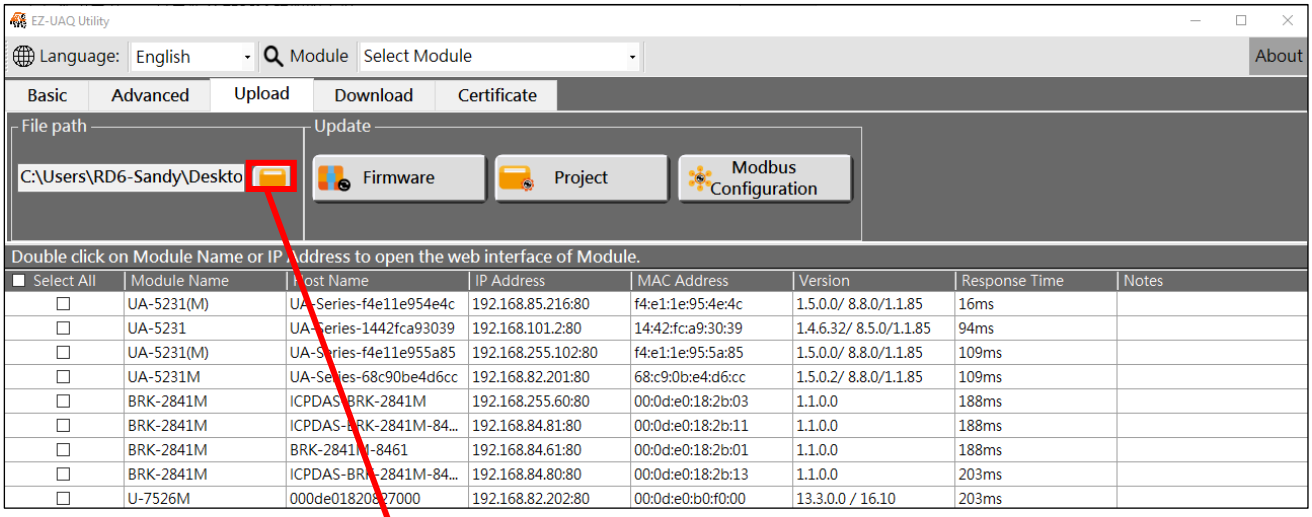
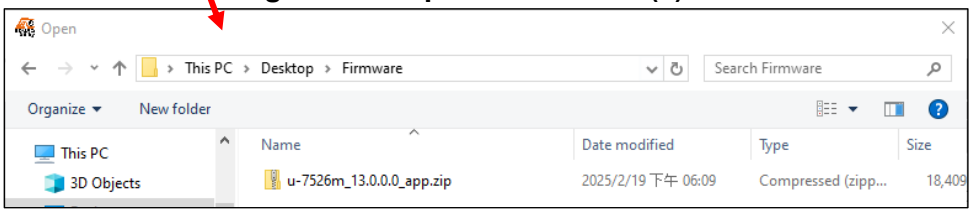


Figure 5-48 Update Firmware (1)



Step2: After selecting the file, check the module you want to update

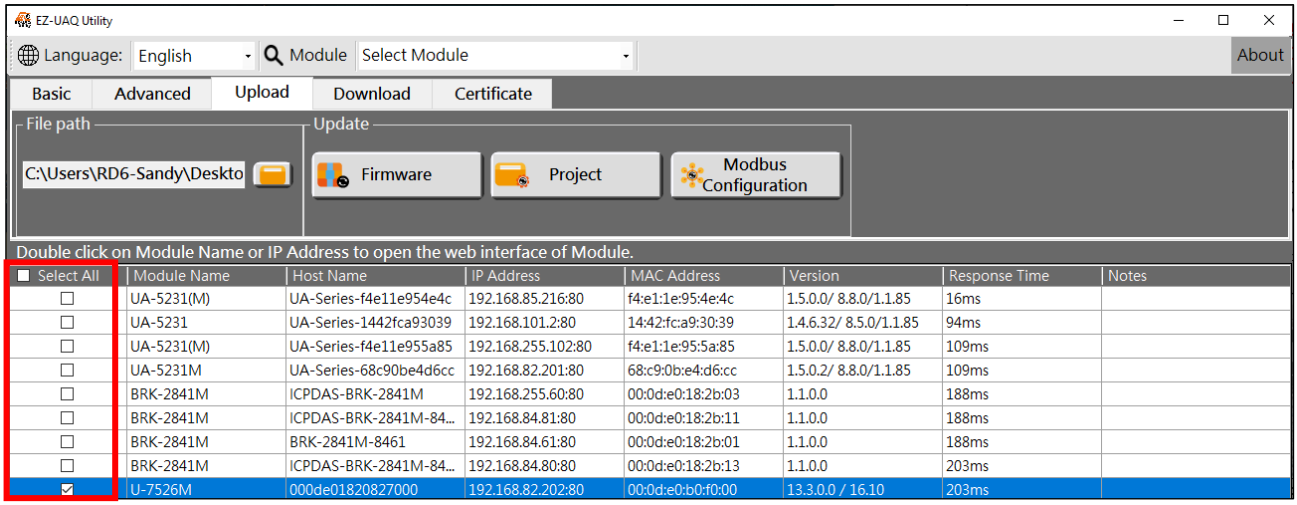


Figure 5-49 Update Firmware (2)

Step3: Click the [Update Firmware] button, and two prompt boxes will pop-up, as shown in Figure 5-51 and Figure 5-52 below to make sure it is not an operation error. After clicking YES, the Password window will pop up. Please enter the EZ-UAQ Utility password set in the module, and then click OK. The interface will display "**Updating the module(s) firmware, please wait**", indicating that the update operation has begun. For previously released UA I/O modules can be updated through the new EZ-UAQ Utility, The table below explains the operational differences across various firmware versions of UA I/O:

UA I/O firmware before V13.8	UA I/O firmware after V13.8 (inclusive)
Deleting the default password will activate the old firmware update method. After the module is updated, the new version of the module cannot be used, as shown in Figure 5-53.	A window will pop up for the user to enter the password set by the module, as shown in Figure 5-54.

Table 5-3 Operational Differences Across Various Firmware Versions of UA I/O

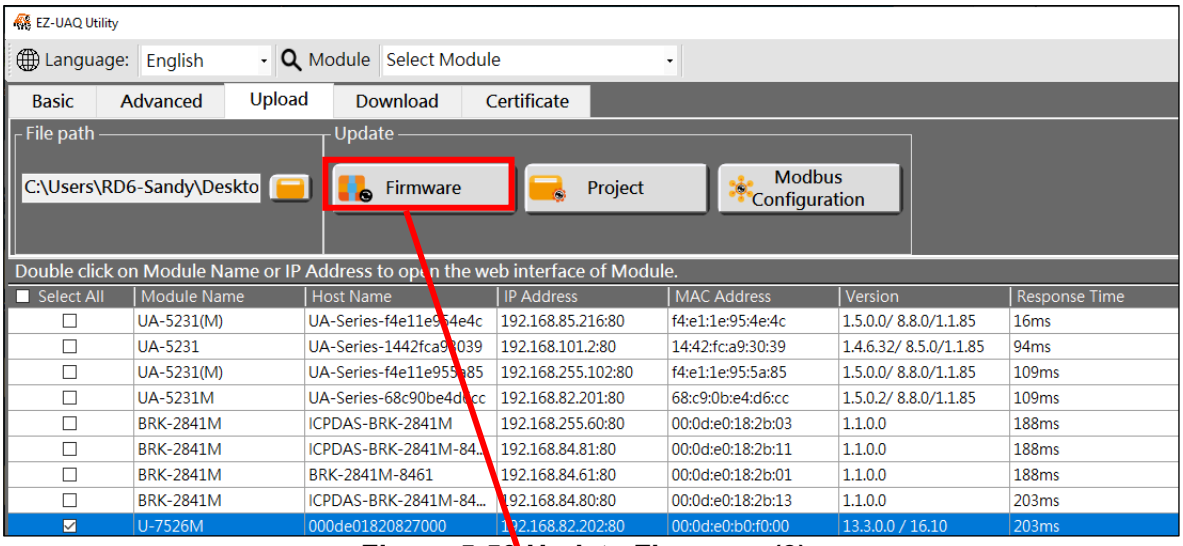


Figure 5-50 Update Firmware (3)

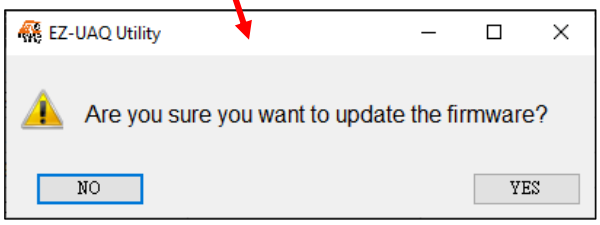


Figure 5-51 Update Firmware (4)

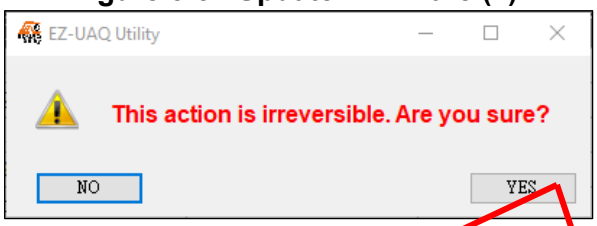


Figure 5-52 Update Firmware (5)

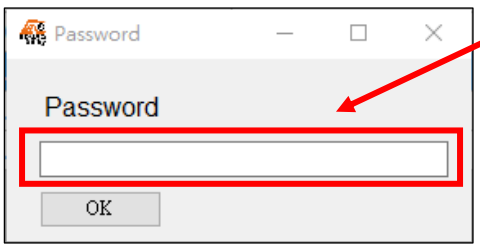


Figure 5-53 Update Firmware (6)

or

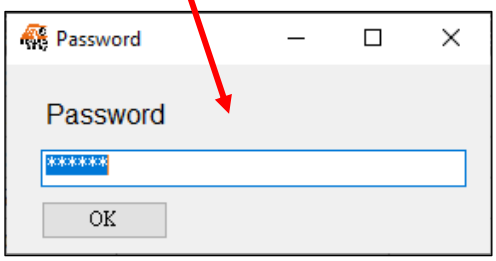


Figure 5-54 Update Firmware (7)

About password settings, please refer to Appendix B: Password Settings which describes how to setup EZ-UAQ Utility password of modules. If users make progress of “Update Firmware” without setting password, System will show a default password for users to quickly finish the updates. We highly recommand users to change the password and as previously mentioned, we suggest to set the same password for the same series of products to quickly activate multiple modules at a time.

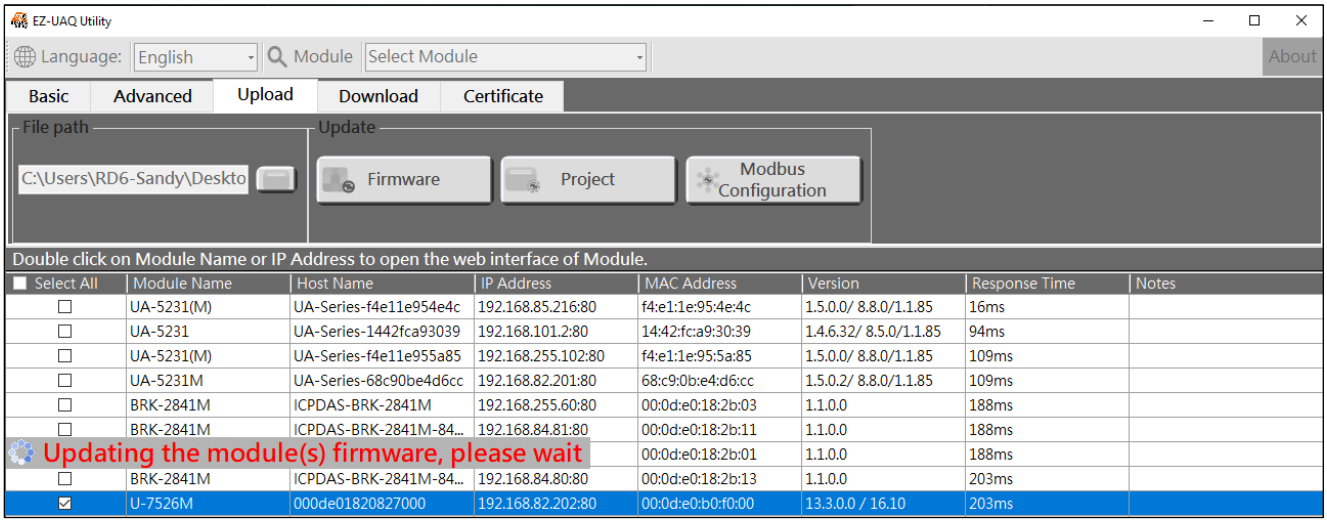


Figure 5-55 Update Firmware (8)

Step4: When the update is successful, the words "Update successful" will be displayed in the [Notes] of the selected module.

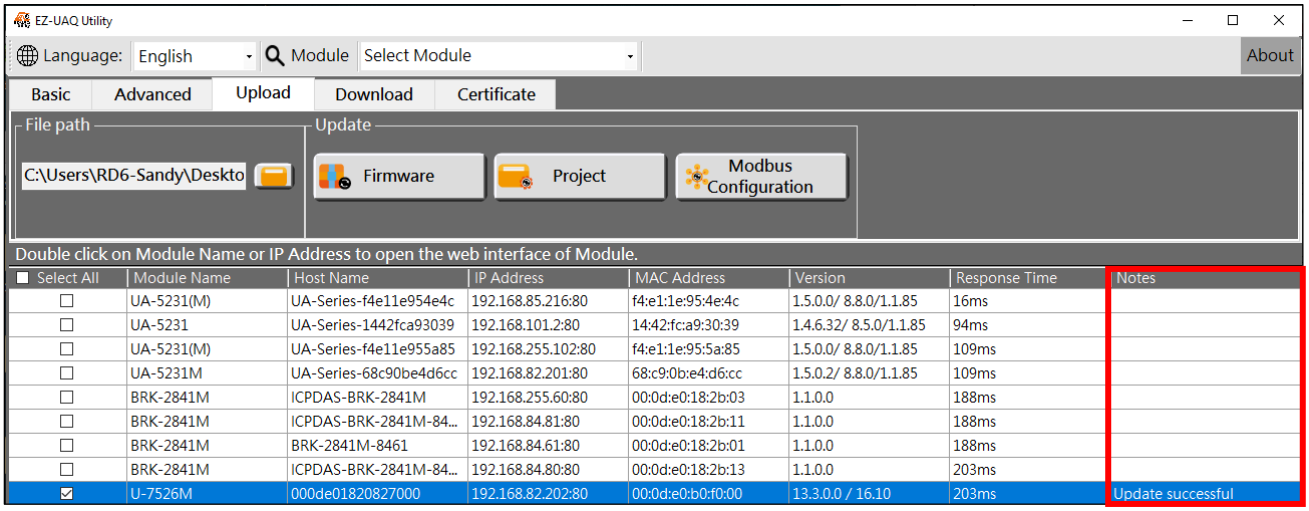


Figure 5-56 Update Firmware (9)

***Note: If a warning message box pops up or [Notes] displays a warning message (refer to 6. Warning message)**

➢ **Update Project**

Users can use the "Update Project" function to update the Project of multiple UA Communication Server, UA I/O, and BRK modules in batches. The following operation interface illustrates the update process for a single U-7526M module:

Step1: Click  to select the Project file you want to update.

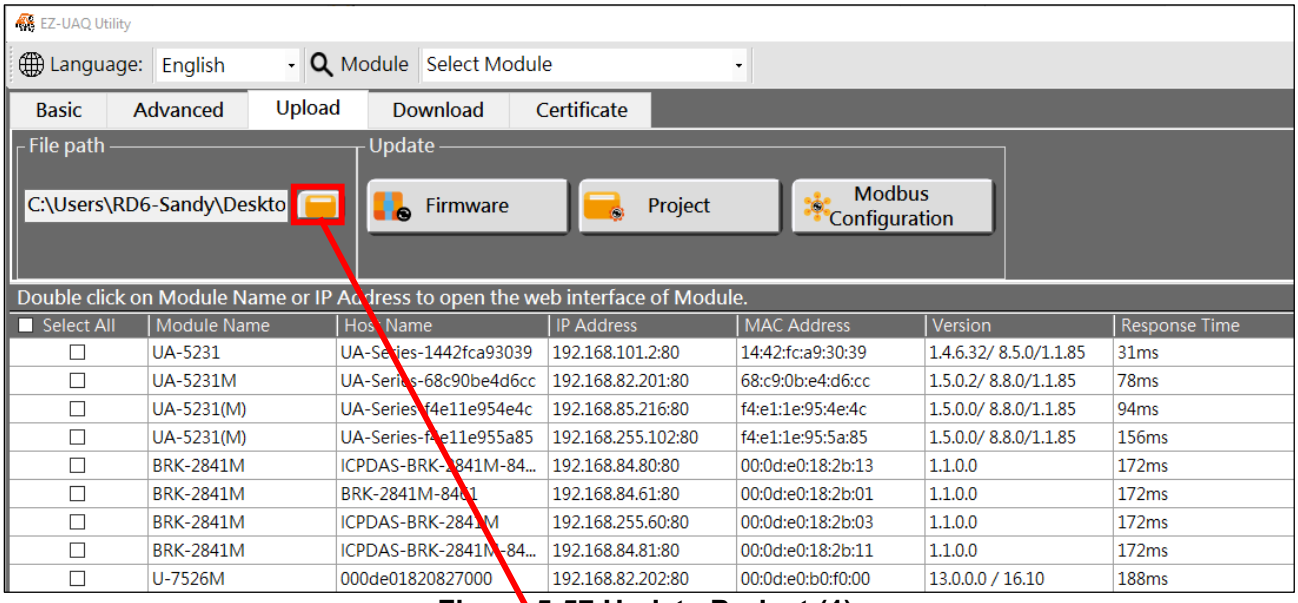
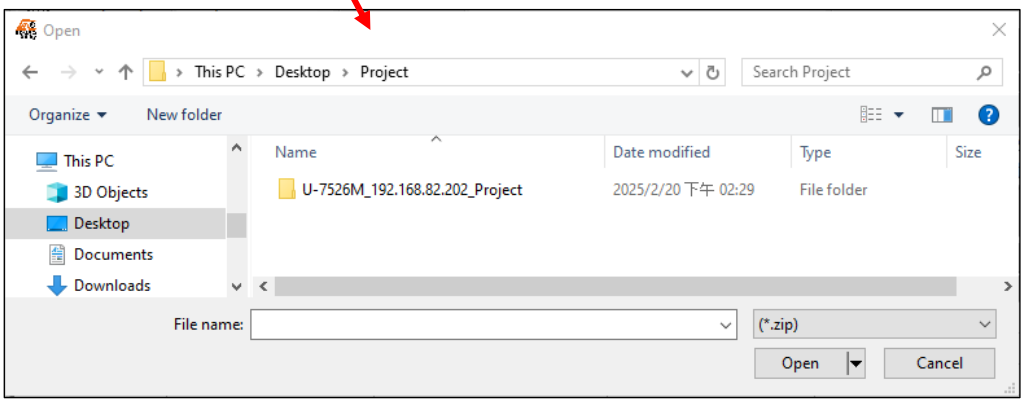


Figure 5-57 Update Project (1)



Step2: After selecting the file, check the module you want to update.

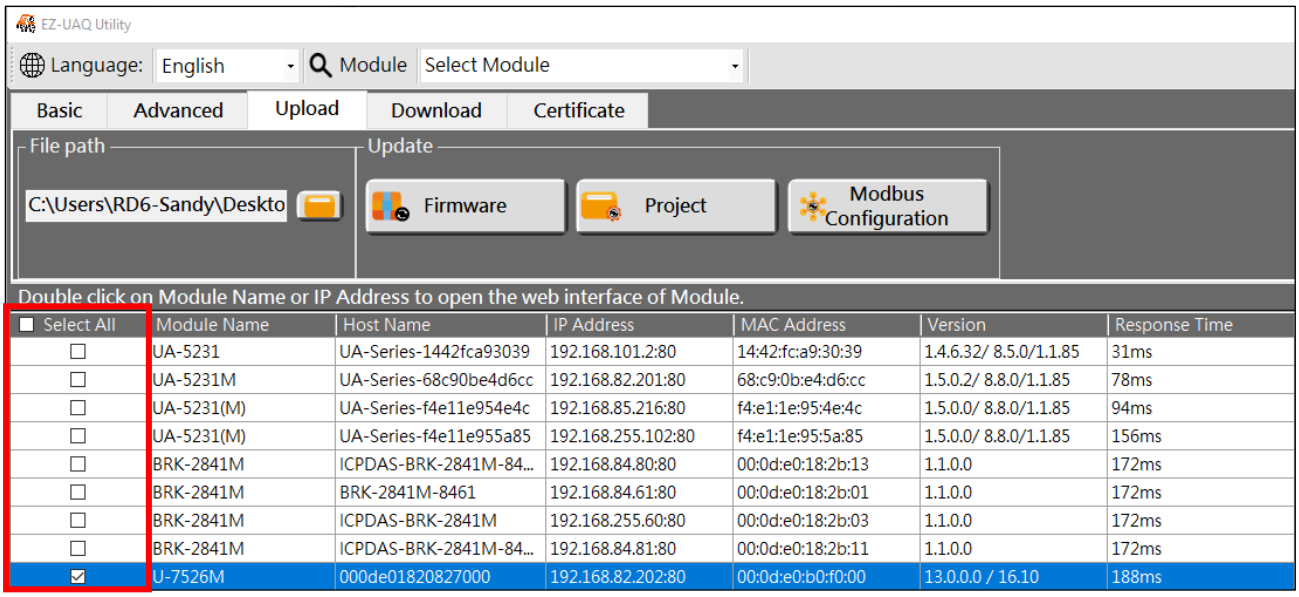


Figure 5-58 Update Project (2)

Step3: Click the [Project] button, two prompt boxes will pop up asking, as shown in Figure 5-60 and Figure 5-61 below. Make sure it is not an operation error, then click YES, the Password window will pop up, please enter the EZ-UAQ Utility set in the module Password, and then press OK, the interface will display "**Updating the module(s) project, please wait**", indicating that the update action has begun.

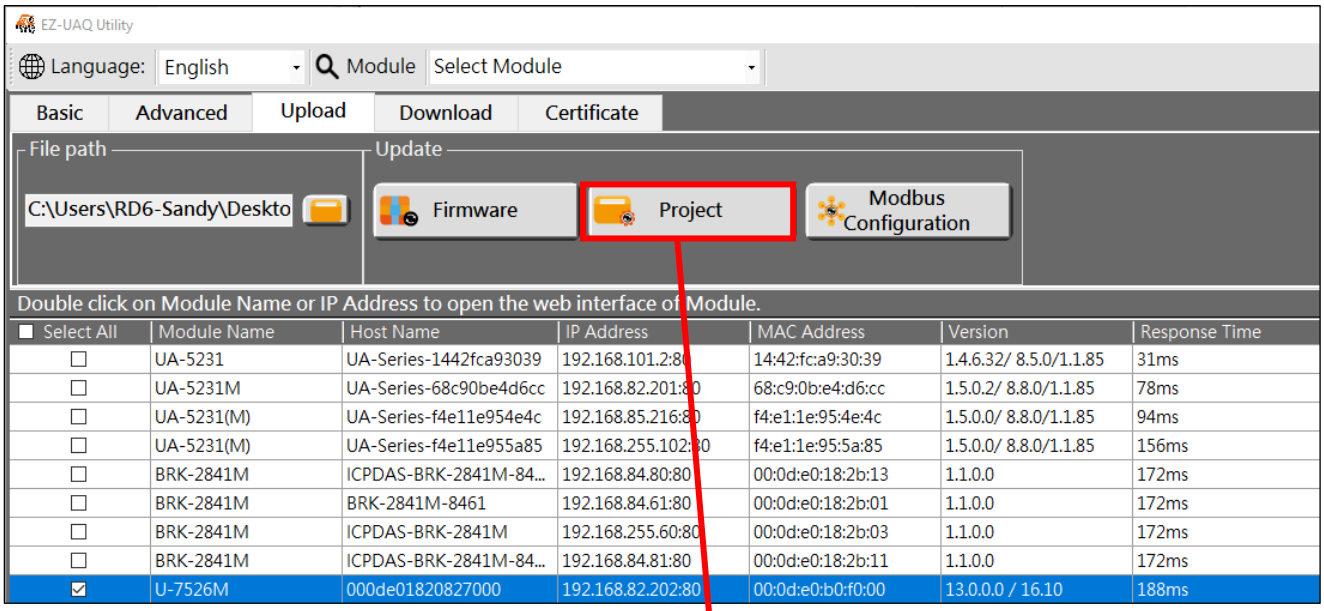


Figure 5-59 Update Project (3)

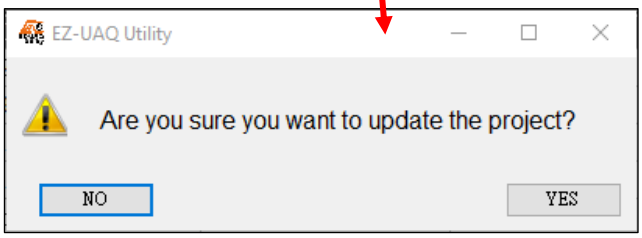


Figure 5-60 Update Project (4)

Figure 5-61 Update Project (5)

About password settings, please refer to Appendix_B: Password Settings which describes how to setup EZ-UAQ Utility password of modules.

If users make progress of “Update Project” without setting password, System will show a default password for users to quickly finish the updates. We highly recommand users to change the password and as previously mentioned, we suggest to set the same password for the same series of products to quickly activate multiple modules at a time.

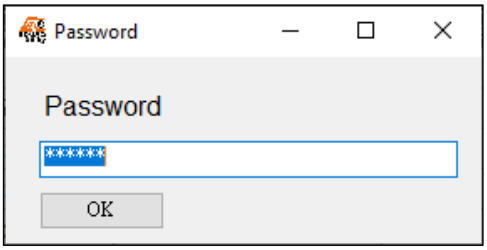


Figure 5-62 Update Project (6)

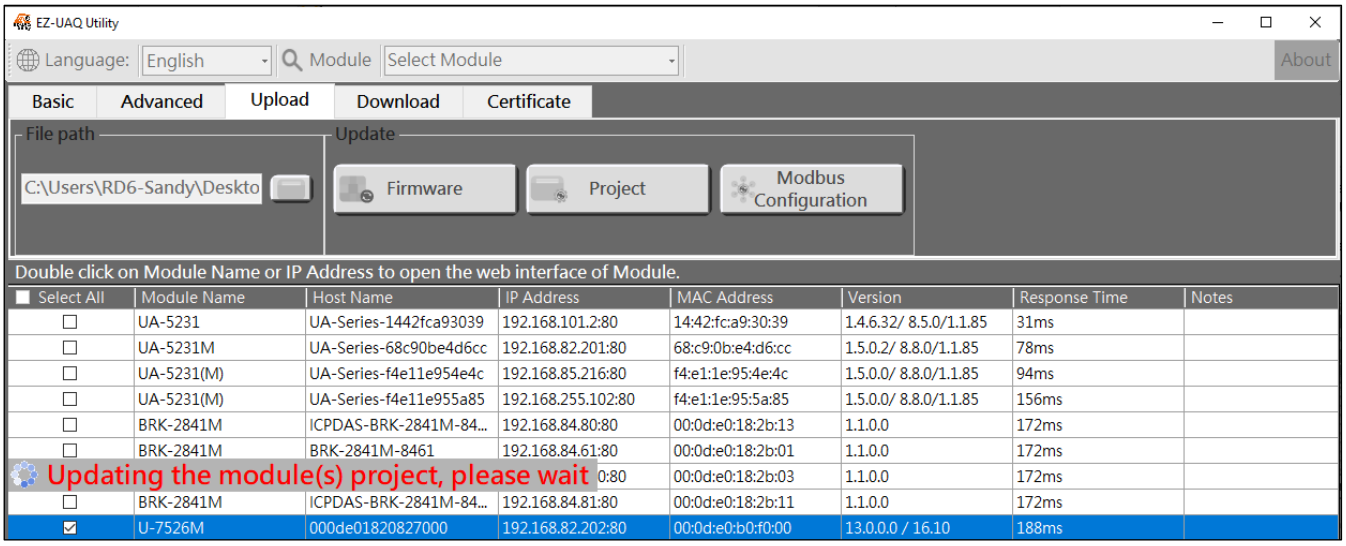


Figure 5-63 Update Project (7)

Step4: When the update is successful, the words "Update successful" will be displayed in the [Notes] of the selected module.

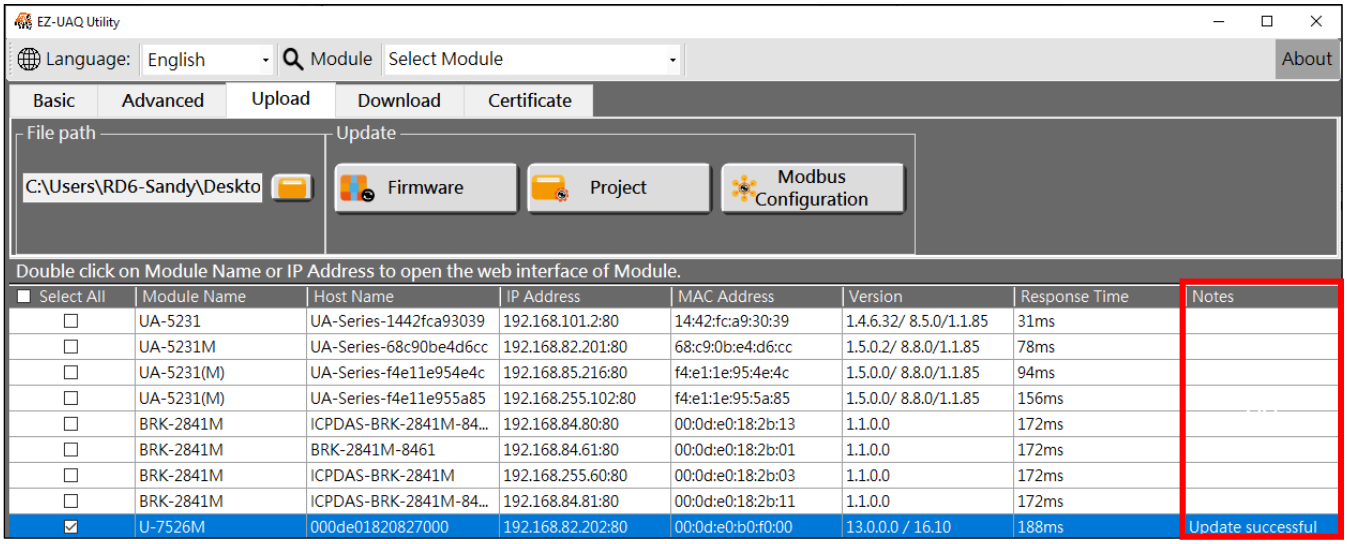


Figure 5-64 Update Project (8)

***Note: If a warning message box pops up or [Notes] displays a warning message (refer to 6. Warning message)**

➢ Update Modbus Configurations

***Note: This feature is only available for UA communication servers.**

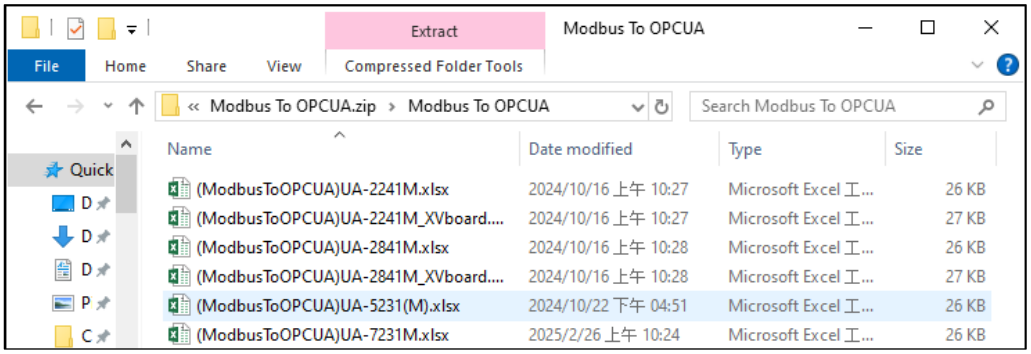
Using the **[Update Modbus Configuration]** feature, users can quickly create a large number of Modbus points and convert them to OPC UA or MQTT protocols. Modules with configured Modbus points can download the configuration using the [Download Modbus Configuration] option, edit it, and then upload it again. For newly purchased or unconfigured modules, users can download a template file from the EZ-UAQ Utility webpage for editing.

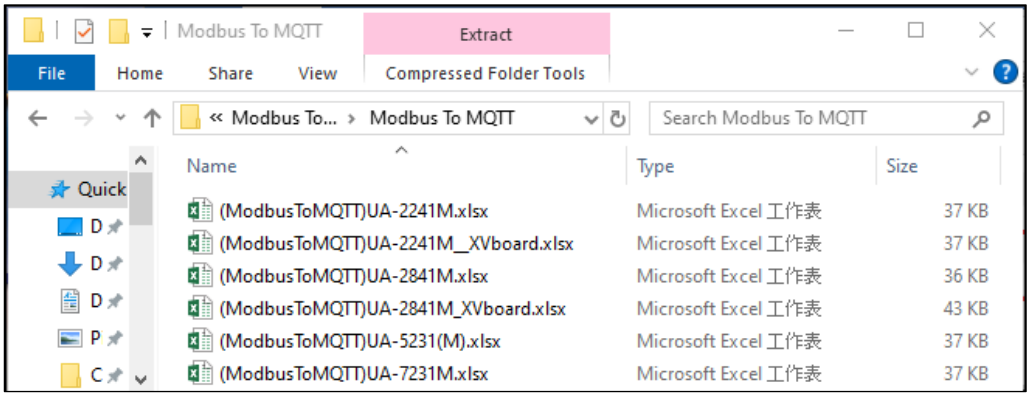
The template file link from the download center on the EZ-UAQ Utility webpage is as follows: https://www.icpdas.com/en/download/show.php?num=8560&nation=TW&kind1=&model=&kw=EZ-UAQ

EZ-UAQ Utility

FILE NAME	VERSION	FILE DATE	SIZE	NOTE	
---<< Software >>---					
EZ-UAQ Utility V3.0.10.zip	V3.0.10(Beta)	2025-04-01	10.7MB		
EZ-UAQ Utility V2.4.40.zip	V.2.4.40 (Beta)	2025-01-06	11.3 MB		
EZ-UAQ Utility V2.3.1.zip	V2.3.1	2023-09-13	2.23 MB		
---<< Template file>>---					
Modbus To OPCUA.zip		2025-03-06	104 KB		
Modbus To MQTT.zip		2025-03-06	148 KB		

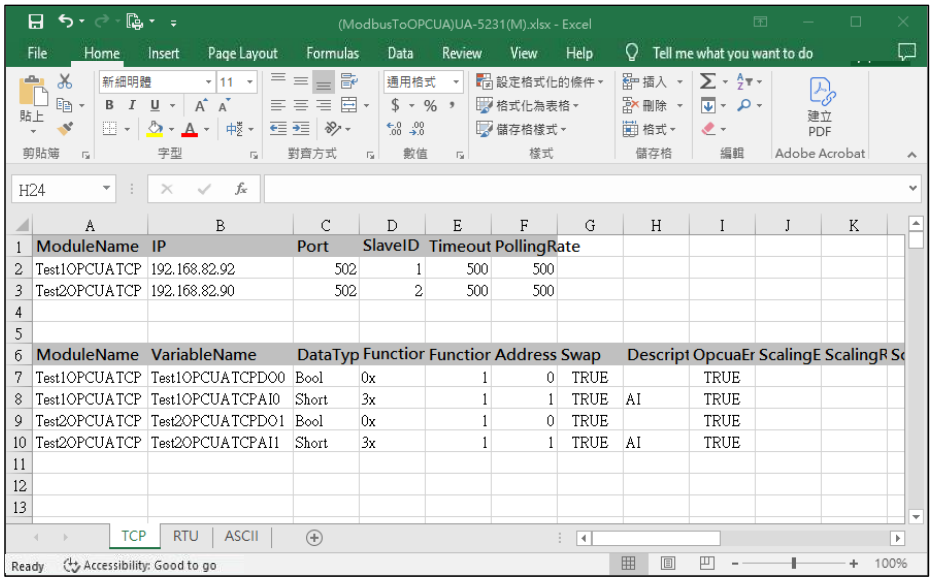
Download the file and extract it. Inside, you'll find the module's Excel template file. If the module uses an XVboard, make sure to use the _XVboard template file for editing. Below is an illustration of the Modbus To OPC UA and Modbus To MQTT template files.





Using "Modbus To OPC UA" as an example, set the communication mode to Modbus TCP. First, edit the template Excel file, and once completed, upload it to the module via the EZ-UAQ Utility.

❖ When Editing Excel content, Please use numbers and text, Do not using formulas, as they may display incorrectly or cause errors.



	A	B	C	D	E	F	G	H	I	J	K
1	ModuleName	IP	Port	SlaveID	Timeout	PollingRate					
2	Test1OPCUATCP	192.168.82.92	502	1	500	500					
3	Test2OPCUATCP	192.168.82.90	502	2	500	500					
4											
5											
6	ModuleName	VariableName	DataTyp	Functior	Functior	Address	Swap	Descript	OpcuaEr	ScalingE	ScalingR
7	Test1OPCUATCP	Test1OPCUATCPDO0	Bool	0x	1	0	TRUE		TRUE		
8	Test1OPCUATCP	Test1OPCUATCPAI0	Short	3x	1	1	TRUE	AI	TRUE		
9	Test2OPCUATCP	Test2OPCUATCPDO1	Bool	0x	1	0	TRUE		TRUE		
10	Test2OPCUATCP	Test2OPCUATCPAI1	Short	3x	1	1	TRUE	AI	TRUE		
11											
12											
13											

Step 1: Please click  to select the edited Excel file that needs to be updated. The image below shows the file extension for selecting the version package.

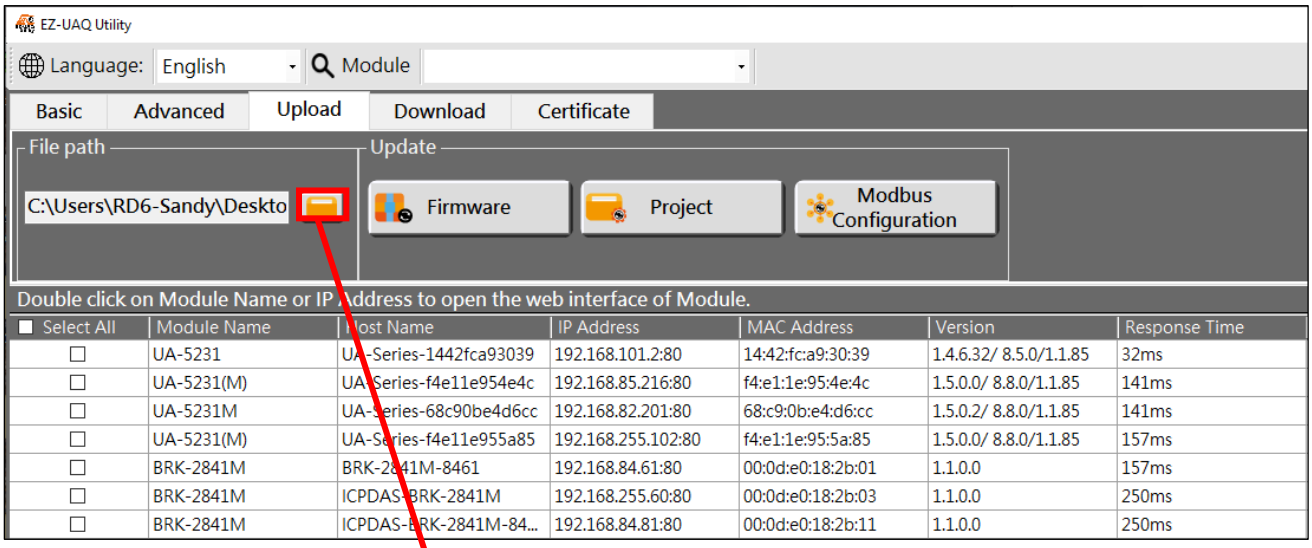
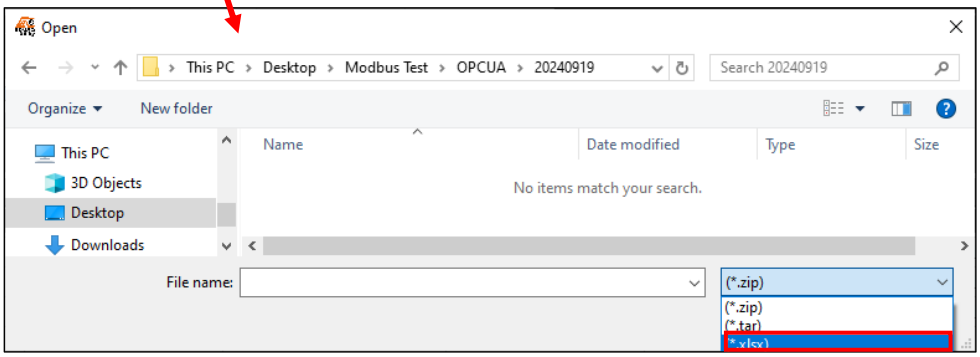
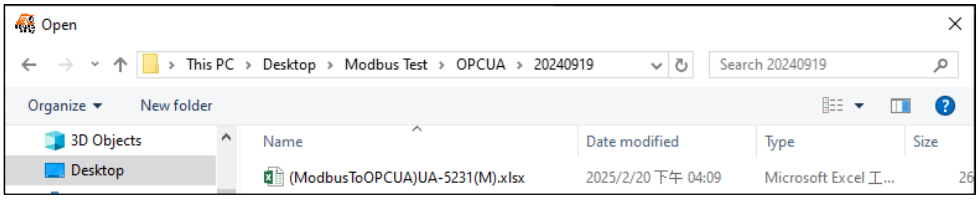


Figure 5-65 Update Modbus Configuration (1)





Step 2: After selecting the file, please check the modules that need to be updated.

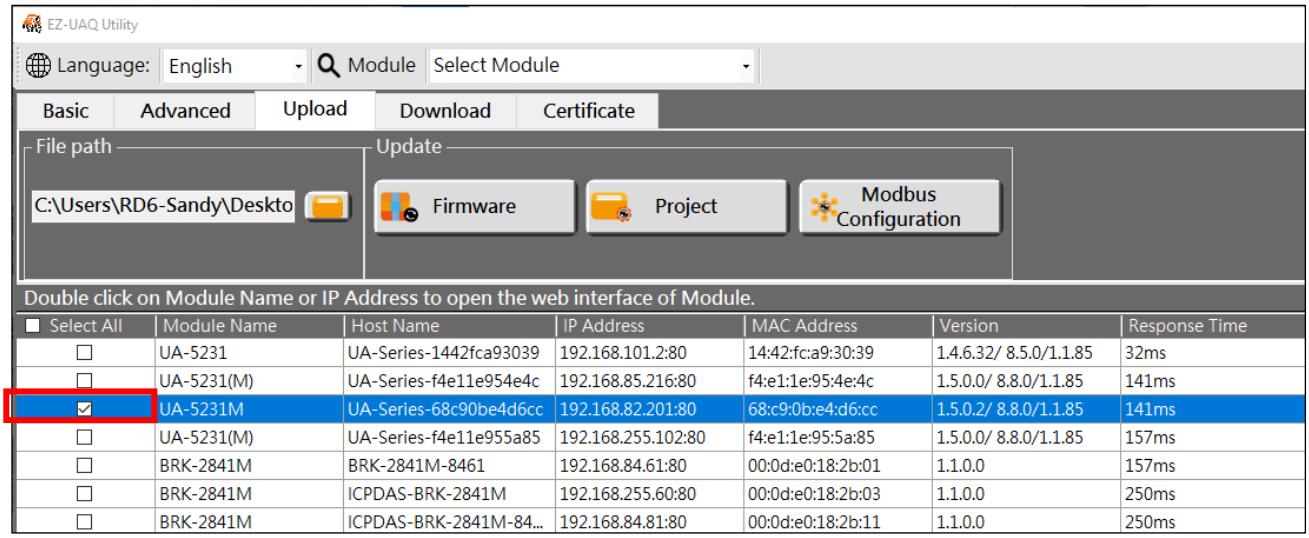


Figure 5-66 Update Modbus Configuration (2)

Step 3: Click the **[Modbus Configuration]** button, and two confirmation prompts will appear, as shown in Figures 5-68 and 5-69. This is to ensure no accidental operation. Then, click YES, and a password window will pop up. Enter the EZ-UAQ Utility password set in the module configuration and press OK. The interface will display "**Updating Modbus Configuration File, Please Wait,**" indicating that the update process has begun.

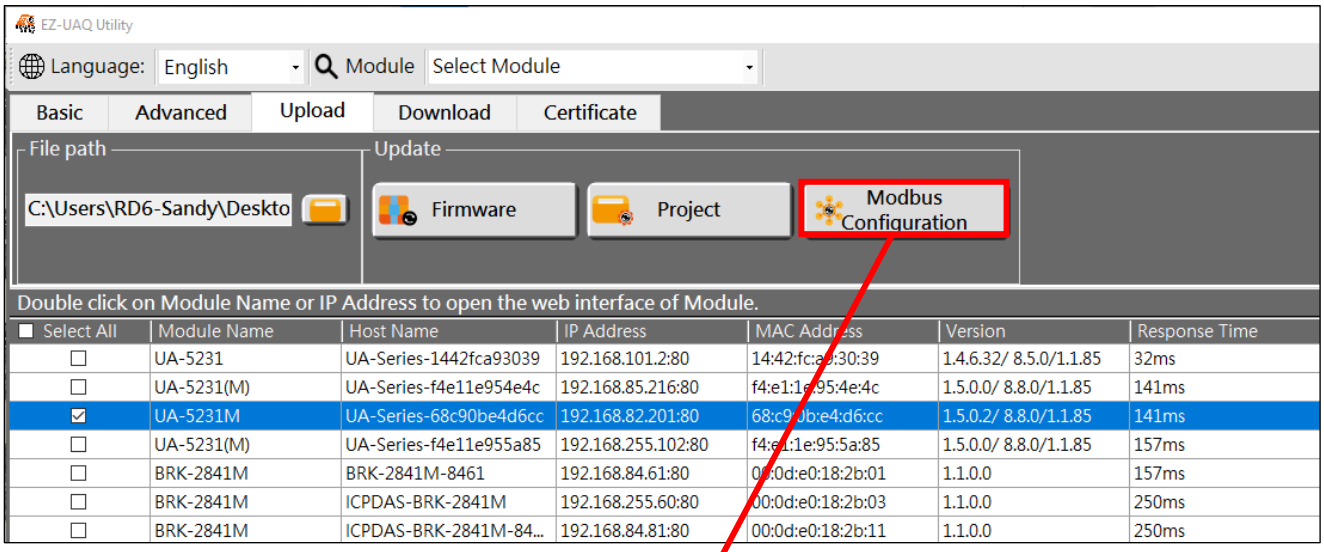


Figure 5-67 Update Modbus Configuration (3)

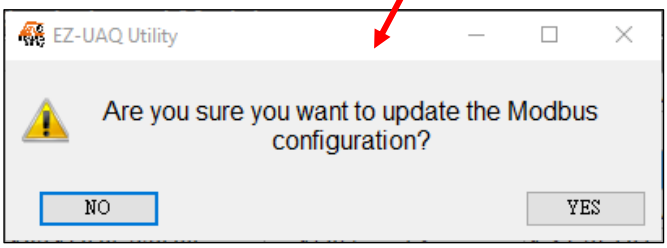


Figure 5-68 Update Modbus Configuration (4)

Figure 5-69 Update Modbus Configuration (5)

The Password can be referenced(Reference in Appendix B: Password Settings), which outlines how to set the EZ-UAQ Utility password for the module. If no password has been set, the default password will be displayed during the update process, allowing users to proceed quickly, as both the software and modules come with default passwords. However, it is highly recommended to change the default password to enhance security. For easier management, it is also advisable to use the same password for modules within the same series, enabling seamless multi-module operations.

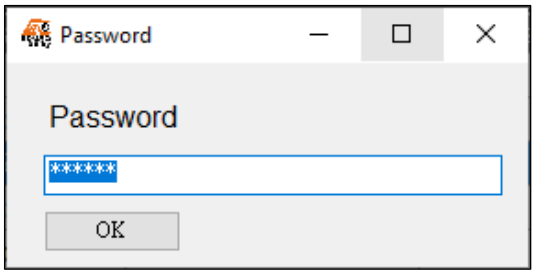


Figure 5-70 Update Modbus Configuration (6)

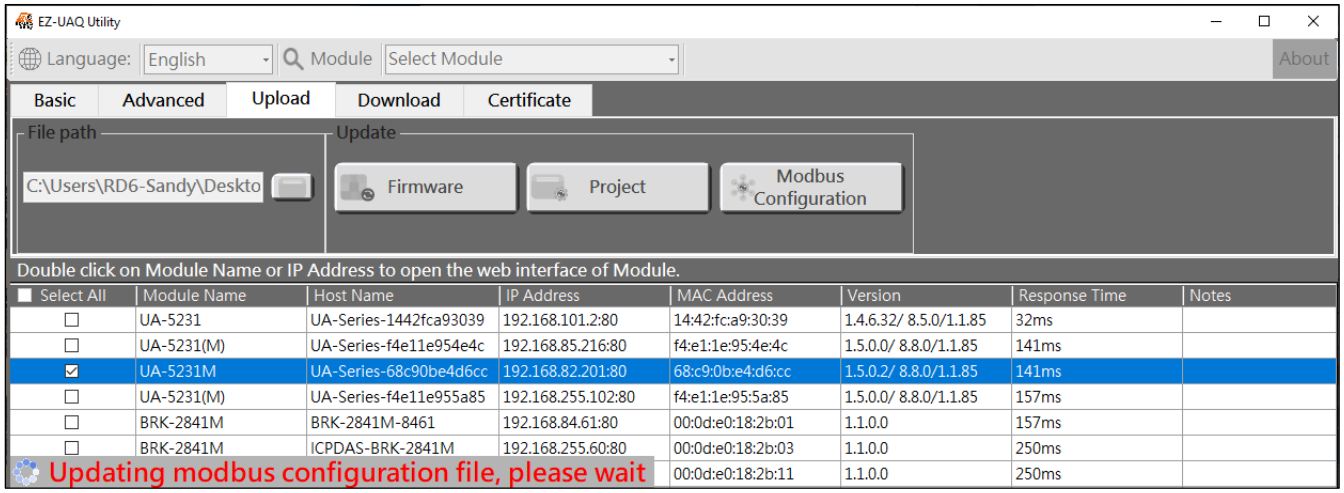


Figure 5-71 Update Modbus Configuration (7)

Step 4: When the update is successful, the selected module's [Notes] section will display the text "Update Successful."

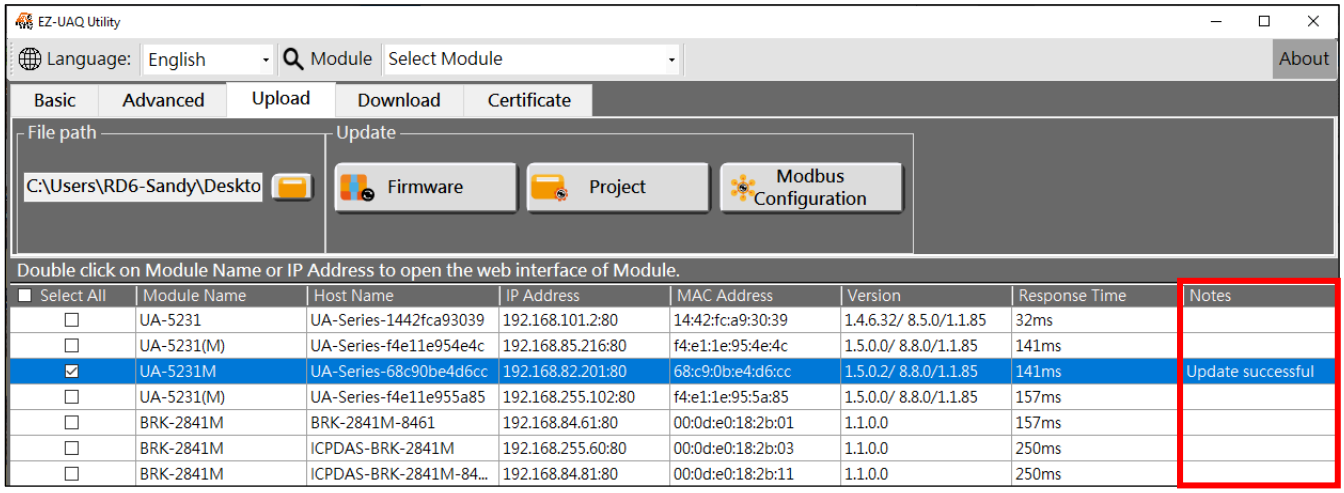


Figure 5-72 Update Modbus Configuration (8)

5.2.4 Download

*** Note: When using the Download function, must be the same series if multiple modules are downloaded at the same time.**

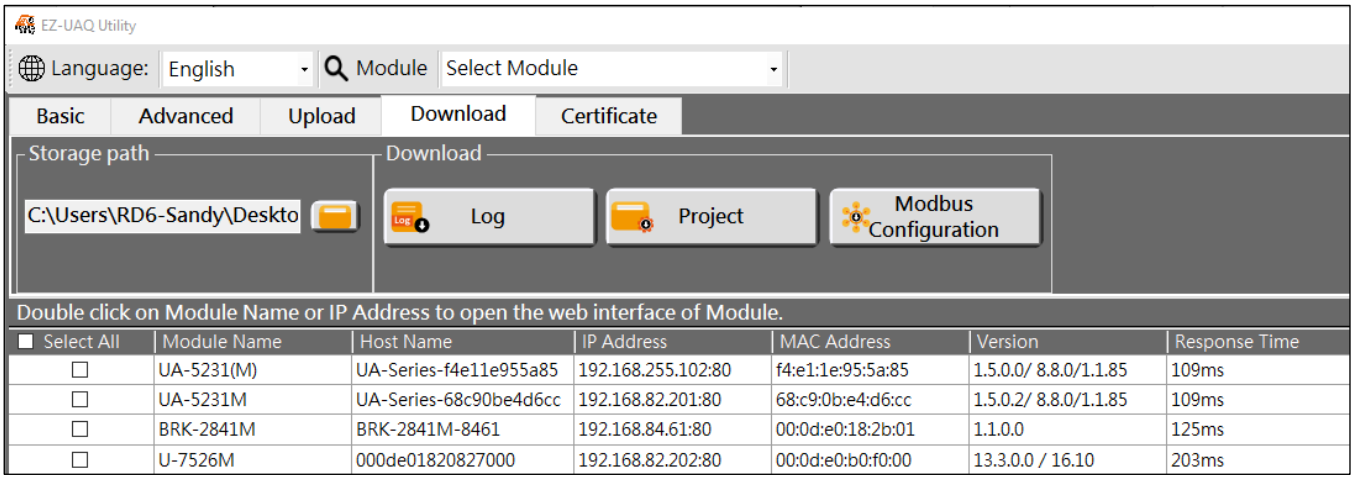


Figure 5-73 Download Function Page

If the storage folder is not selected, the downloaded file will be placed in the default location on the desktop when performing the download function.

- **Download Log**

  Users can use the "Download Log" function to Download the Log of multiple UA Communication Server, UA I/O, and BRK modules in batches. The following screen shows the process of Downloading a single U-7526M module:

Step1: Click  to select the Log file you want to download. The image below shows the file extension of the Project file.

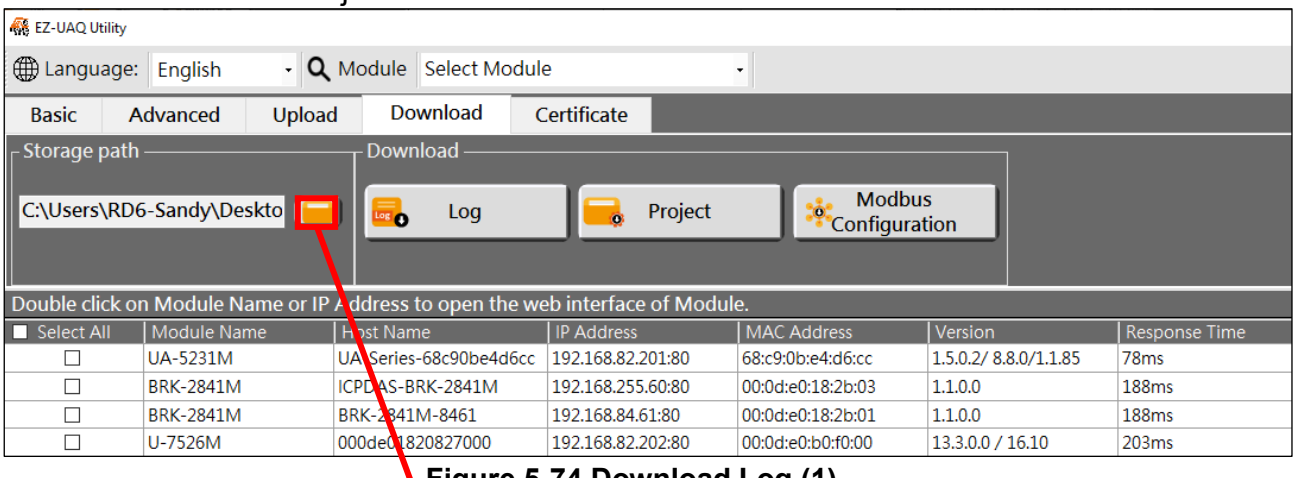
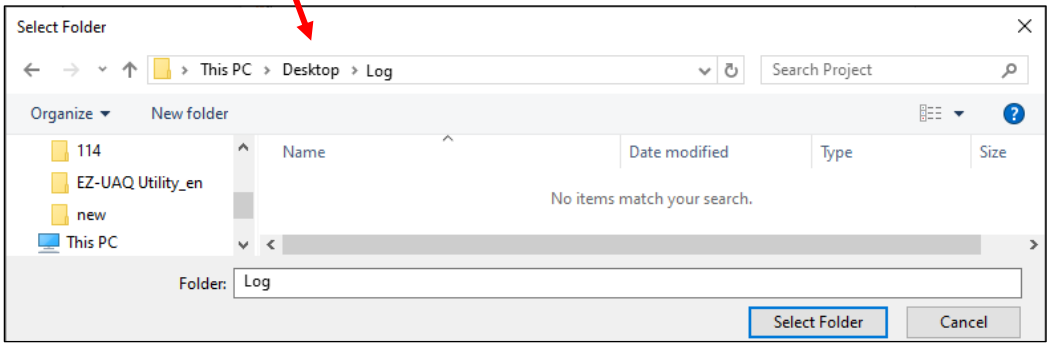


Figure 5-74 Download Log (1)



Step2: Please check the module that needs to be downloaded, and then click the [Log] button. The interface will display "**Downloading Log file, please wait**", indicating that the download action has started.

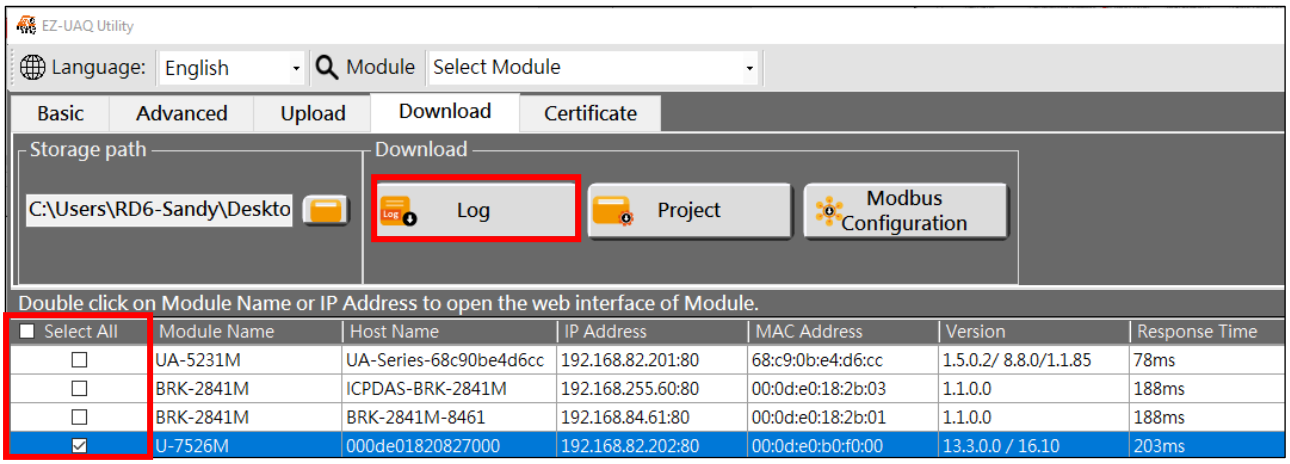


Figure 5-75 Download Log (2)

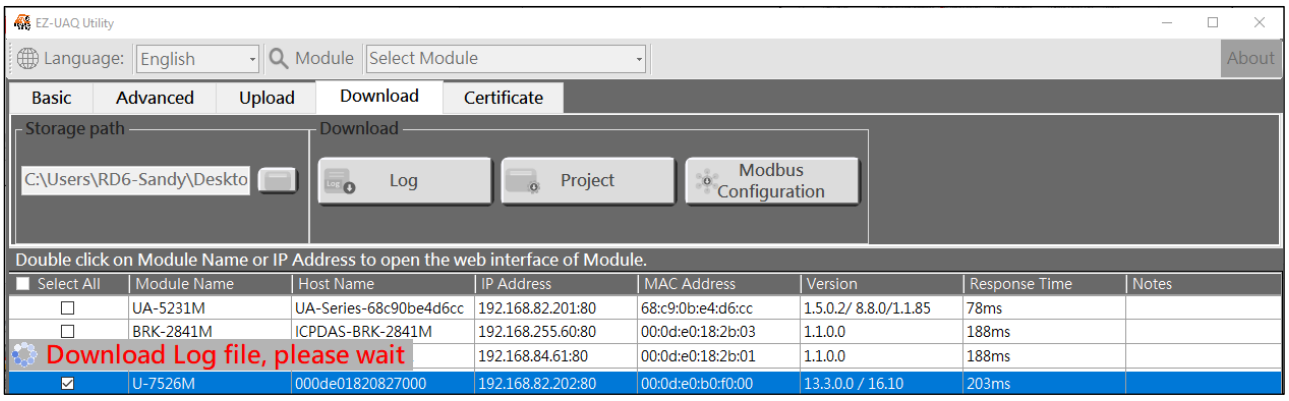


Figure 5-76 Download Log (3)

Step3: When the download is successful, the words "Download successful" will be displayed in the [Notes] column of the selected module.

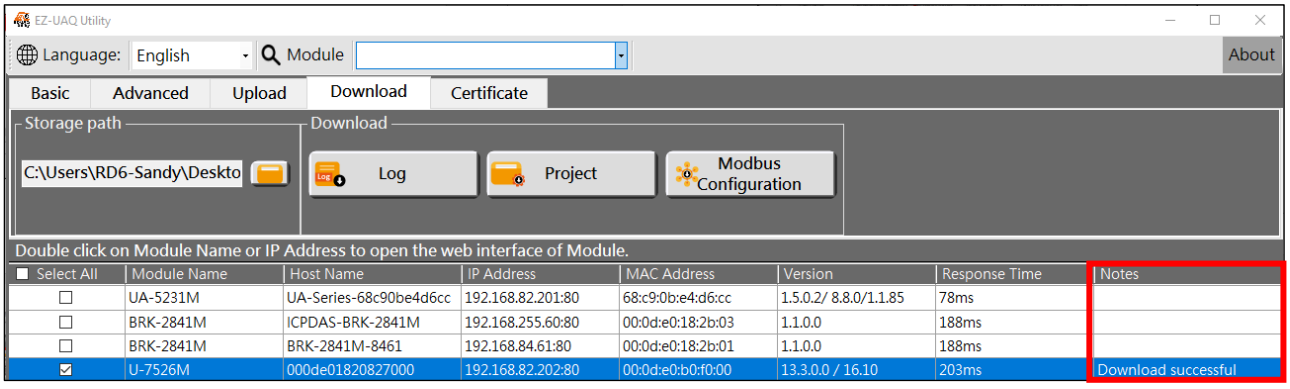
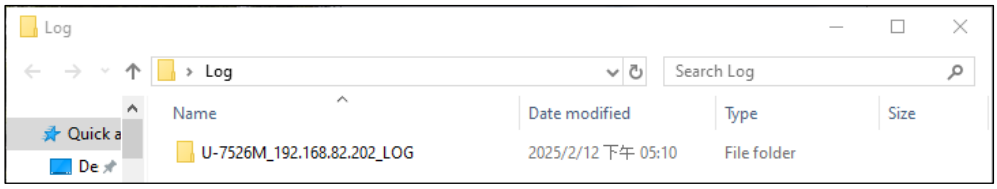


Figure 5-77 Download Log (4)

Step4: The following figure shows the downloaded files and the storage folder..When the software is downloaded, a Log file folder will be created with "Module Name_IP_Log".



***Note: If a warning message box pops up or [Notes] displays a warning message (refer to 6. Warning message)**

➢ Download Project

Warnings: To increase the level of information security, activating this function needs to first set the password in the module. If users would not set the password, the activating will use the default password which will be in higher risk. We suggest to use same password for the same series of modules.

Users can use the "Download Project" function to Download the Project of multiple UA Communication Server, UA I/O, and BRK modules in batches. The following screen shows the process of Downloading a single U-7526M module:

Step1: Click  to select the Project file you want to download. The image below shows the file extension of the Project file.

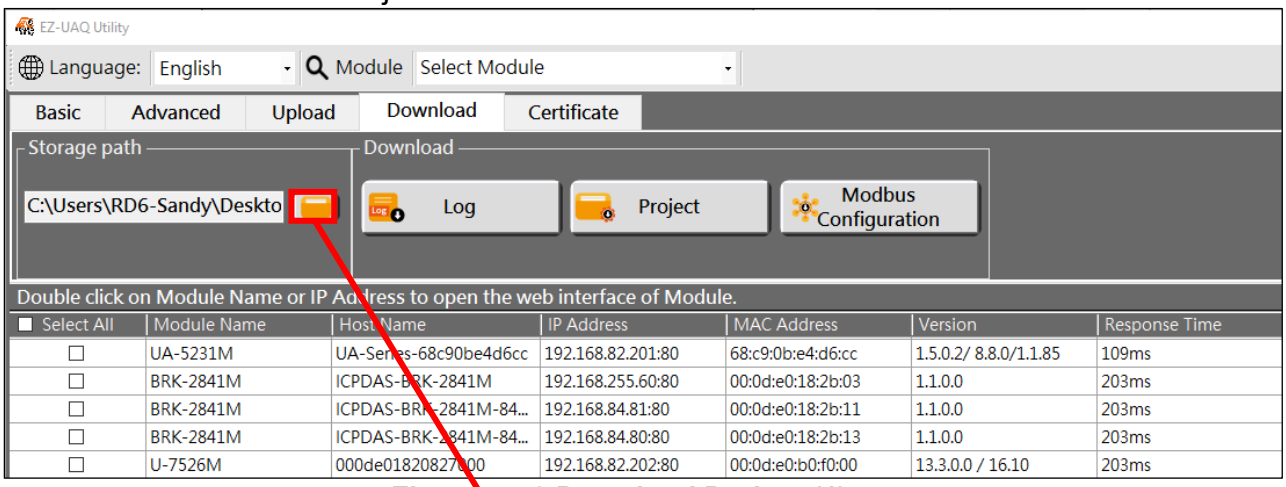
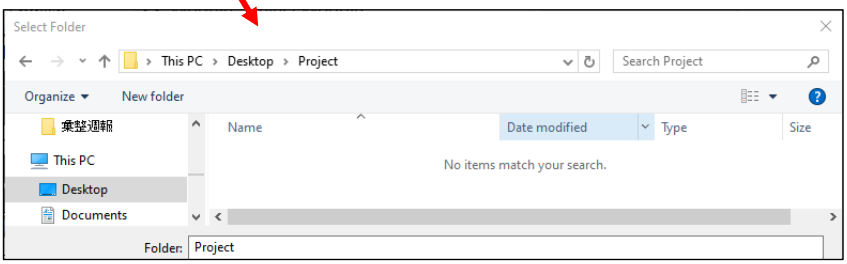


Figure 5-78 Download Project (1)



Step2: Please check the module you want to download, and then click the [Project] button. The Password window will pop up. Please enter the EZ-UAQ Utility password set in the module, and then click OK. The interface will display "**Downloading project file, please "wait**" means starting the download action.

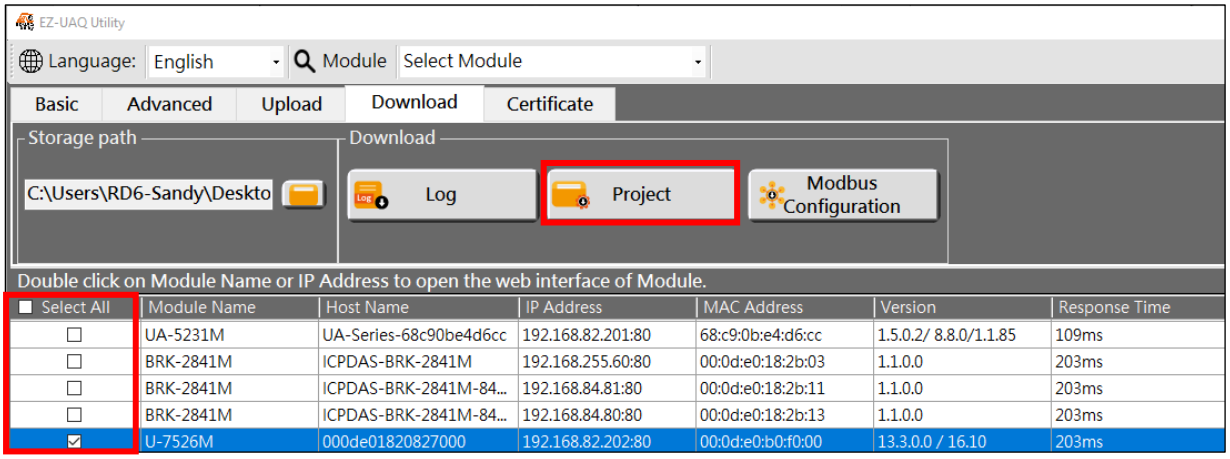


Figure 5-79 Download Project (2)

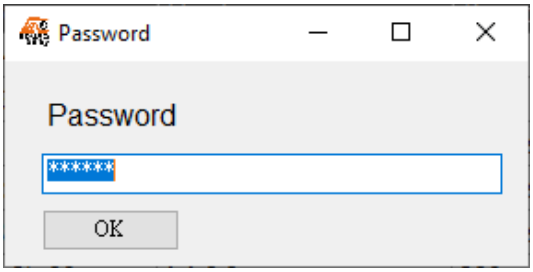


Figure 5-80 Download Project (3)

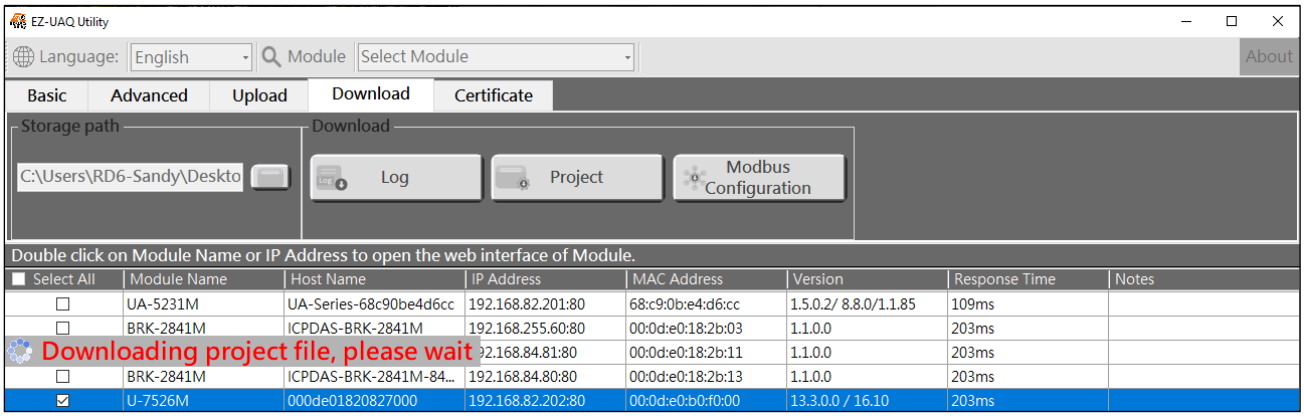


Figure 5-81 Download Project (4)

Step3: When the download is successful, the words "Download successful" will be displayed in the [Notes] column of the selected module.

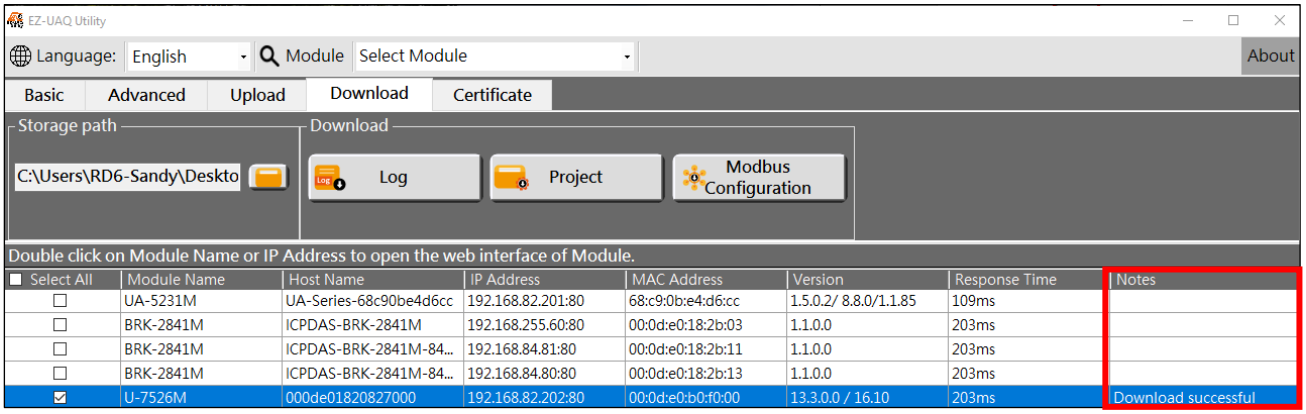
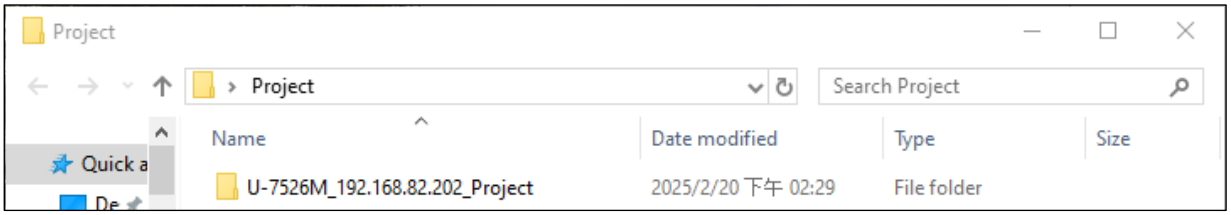


Figure 5-82 Download Project (5)

Step4: The following figure shows the downloaded files and the storage folder.
When the software is downloaded, the project file folder and compressed file will be created with "Module Name_IP_Project".

The compressed files in the project are password protected (please enter the EZ-UAQ Utility password set in the module).



***Note: If a warning message box pops up or [Notes] displays a warning message (refer to 6. Warning message)**

➢ Download Modbus Configuration

***Note: This function can only be used by UA communication server**

Using the [Download Modbus Configuration] function allows users to quickly understand the Modbus of UA communication server and OPC UA information such as TCP, RTU, Module Name and OPC UA Node ID,... etc.

Step1: When users download Modbus Configuration, please click  to select the storage folder.

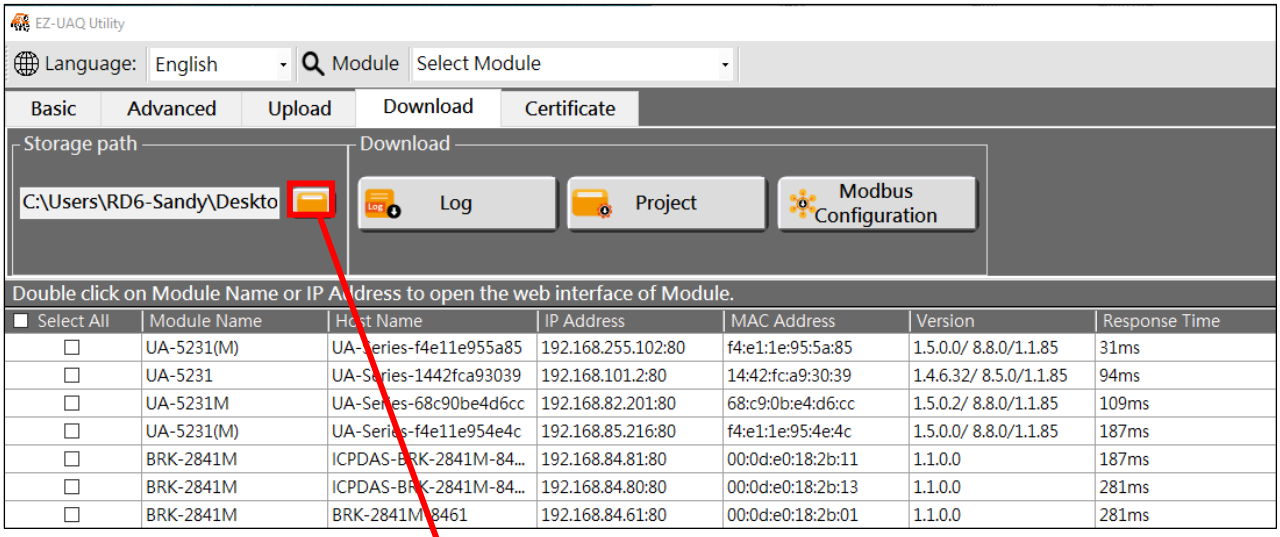
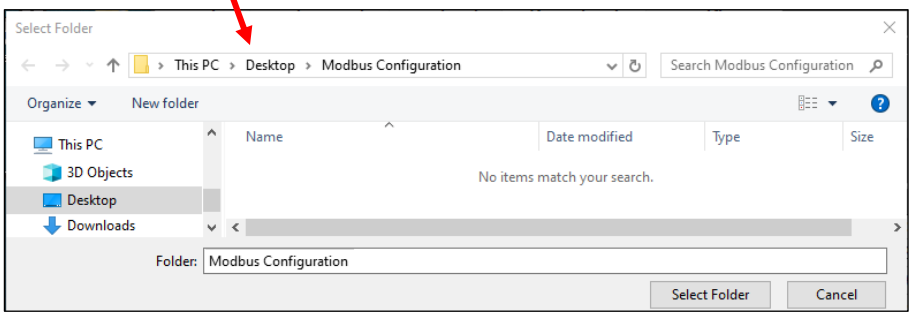


Figure 5-83 Download Modbus Configuration (1)



Step2: Please select the module first, and then click the [Modbus Configuration] button. The interface will display "**Downloading the Modbus Configuration file, please wait**", indicating that the download action has started.

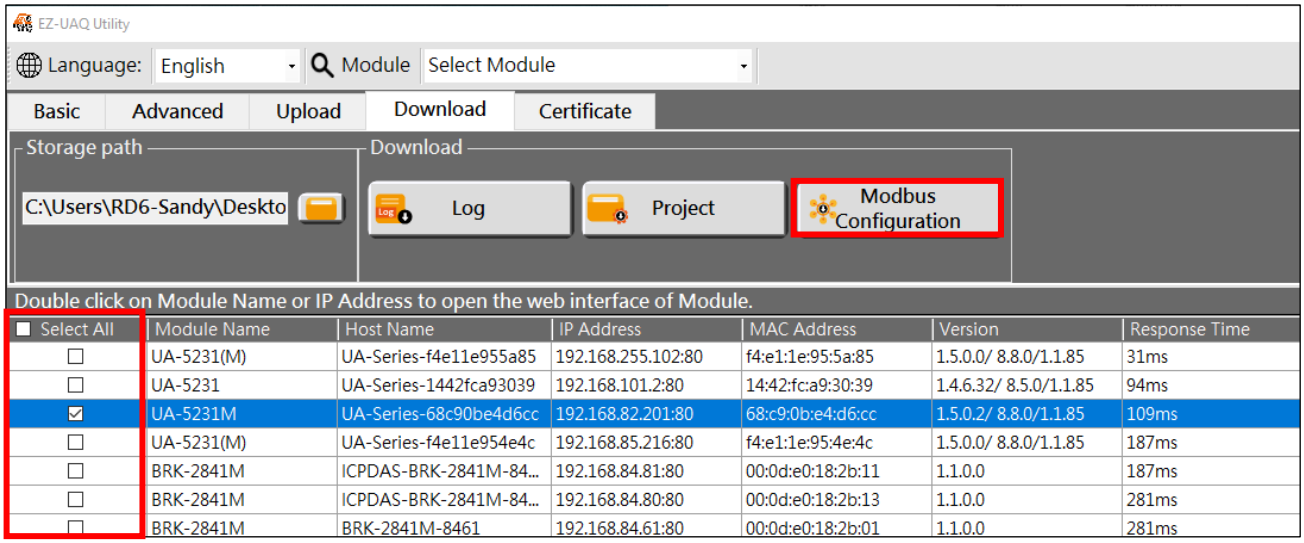


Figure 5-84 Download Modbus Configuration (2)

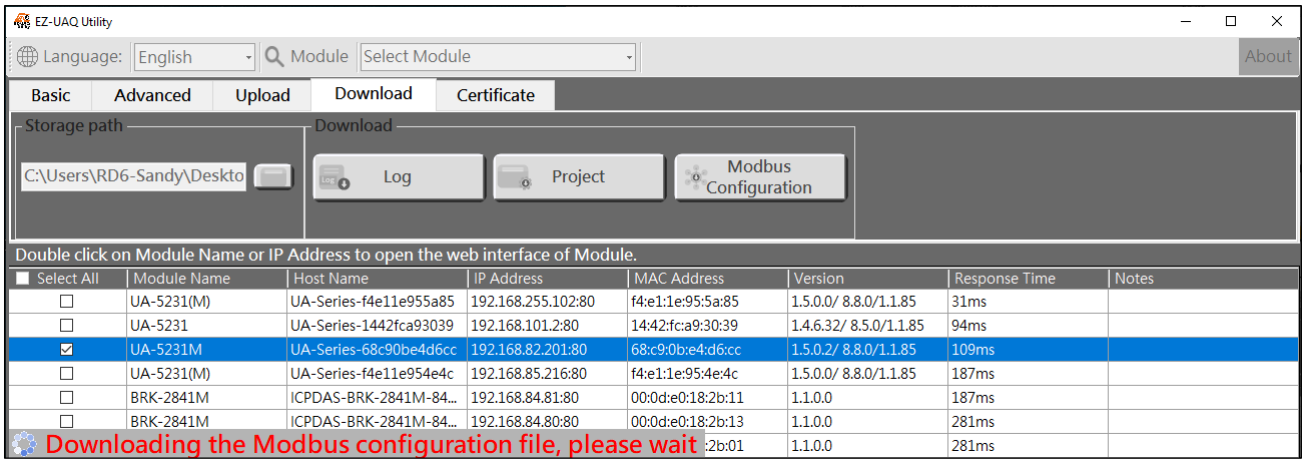


Figure 5-85 Download Modbus Configuration (3)

Step3: When the download is successful, the words "Download Successfully" will be displayed in the [Notes] column of the selected module.

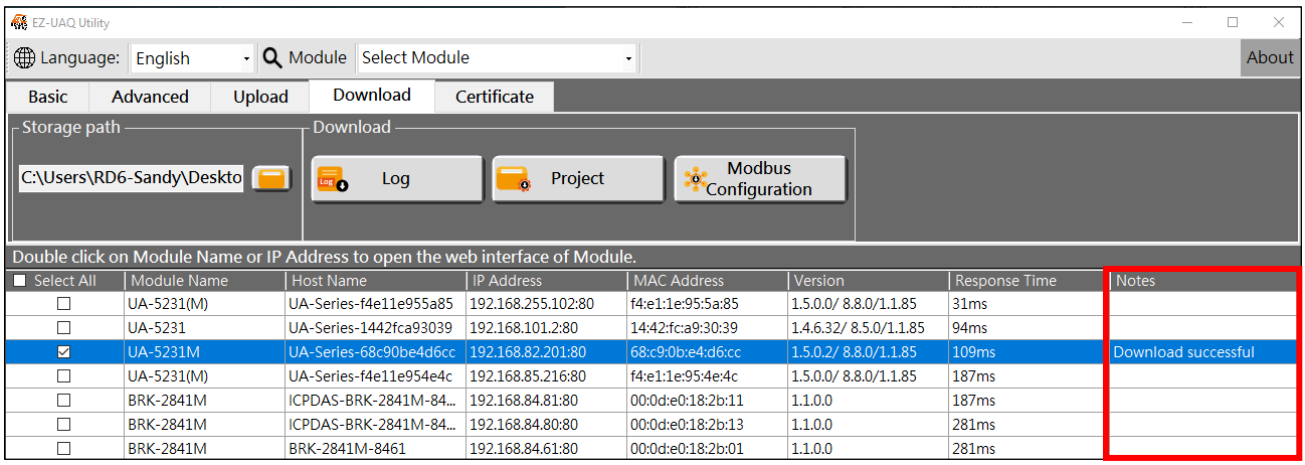
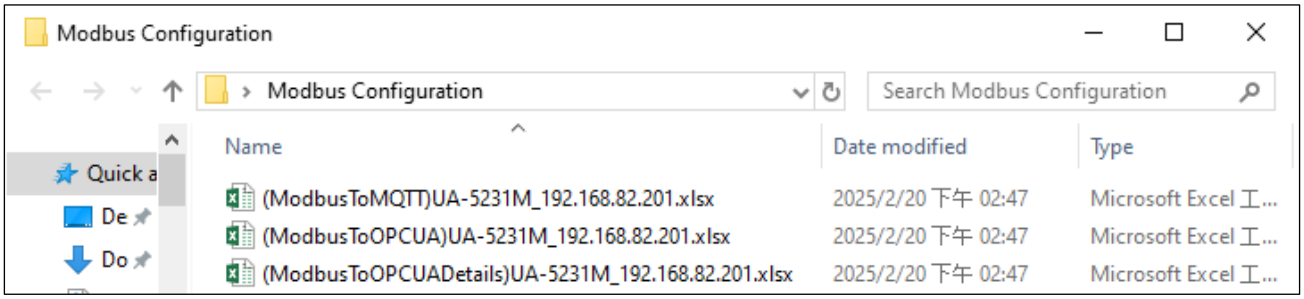


Figure 5-86 Download Modbus Configuration (4)

Step4: The image below is for the downloaded file and storage path.
There will be three downloaded files: (ModbusToMQTT)Module_IP.xlsx, (ModbusToOPCUA)Module_IP.xlsx, and (ModbusToOPCUADetails)Module_IP.xlsx. The two Excel files starting with (ModbusToMQTT) and (ModbusToOPCUA) are associated with the 'Update Modbus Configuration' function in the upload feature.



***Note: If a warning message box pops up or [Notes] displays a warning message (refer to 6. Warning message)**

5.2.5 Certificates

❖ **Summary:**

The EZ-UAQ Utility provides an efficient and convenient certificate management function for generating certificates and updating them to modules. With this tool, users can easily configure secure communication among UA, UA I/O, and BRK series modules, supporting HTTPS, OPC UA, and MQTT protocols.

1. **Efficient certificate generation and updates to reduce operational complexity.**
   - Users can quickly generate certificates that meet security requirements and update them to all modules in the field with one click, significantly reducing configuration time.
   - The certificate configuration process is simplified, eliminating the need for manual operations on multiple modules, reducing error risks, and improving efficiency.
2. **Comprehensive control over certificate status**
   - Provides unified management of all certificates within the field. Users can query certificate information to ensure that certificates have not expired and are operating normally.
3. **Enhance field security**
   - Supports mainstream encryption protocols such as HTTPS, OPC UA, and MQTT to ensure the security of data transmission.

Certificates are divided into two types of authentication methods: One-Way Authentication and Two-Way Authentication, both designed to ensure communication security. One-Way Authentication is the most common method, frequently used in communication between web browsers and applications, such as HTTPS and MQTT Brokers. Two-Way Authentication, also known as Mutual Authentication or Two-Way SSL, is a more advanced method. In addition to the server presenting its certificate, the client is also required to present its own certificate. Examples include communication between OPC UA Servers and OPC UA Clients, as well as between MQTT Brokers and MQTT Clients.

***Note: The UA and UA I/O series must connect to the module web page to enable the certificate function before module certificate communication can be activated.**

➢ **Add CA Certificate**

Use **[Add CA Certificate]** feature to create a new CA certificate. Since certificates in the MQTT series must use a CA certificate as the root certificate, MQTT certificates are generated accordingly.

Step 1: Click the **[New]** button to open the 'Certificate Validity Date' window.

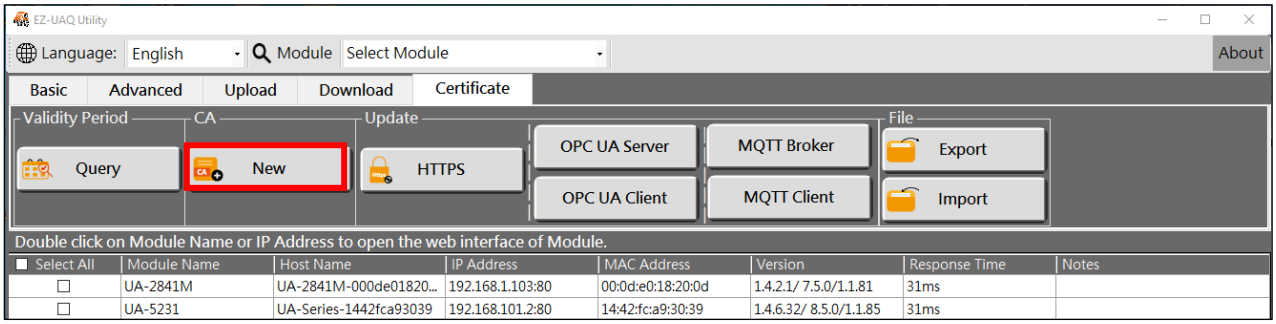


Figure 5-87 Add CA Certificate (1)

Step 2: Please enter the expiration days for the CA certificate in the 'Certificate Validity Date' window, then click OK.

❖ Please refer to Appendix C for the certificate date input restrictions, which explain the limitations and recommendations for input.

Figure 5-88 Add CA Certificate (2)

Step 3: Next, a 'Creation Successful' message will pop up, indicating that the CA certificate has been successfully created. Click OK to complete the CA certificate creation process.

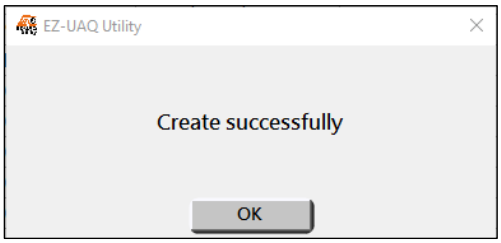


Figure 5-89 Add CA Certificate (3)

➢ Update HTTPS Certificate

Use the [**Update HTTPS Certificate**] feature to allow users to quickly replace the HTTPS certificate on the module. This enables users to access the module's web page using HTTPS mode when logging in.

Step 1: Select the modules requiring certificate updates, then click the [HTTPS] button. A prompt box will appear, as shown in Figure 5-91, to ensure it is not an operational error. Then, click YES.

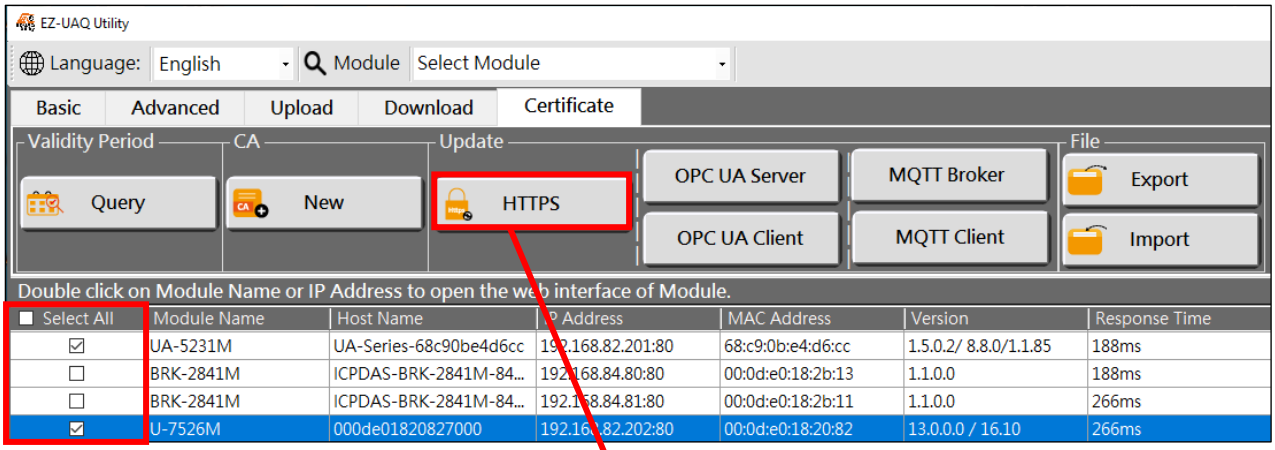


Figure 5-90 Update HTTPS Certificate (1)

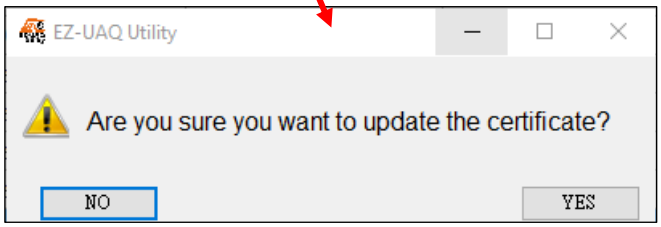


Figure 5-91 Update HTTPS Certificate(2)

Step 2: Please enter the expiration days for the CA certificate in the 'Certificate Validity Date' window, and then click OK.

❖ Please refer to Appendix C for certificate date input restrictions, which detail the limitations and recommendations for input.

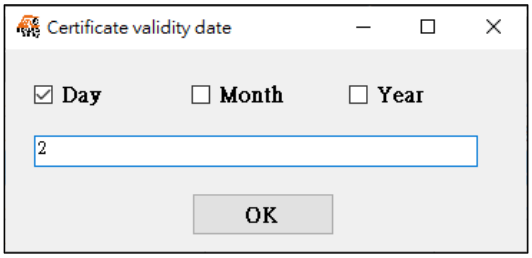


Figure 5-92 Update HTTPS Certificate (3)

Step 3: A Password window will pop up. Please enter the EZ-UAQ Utility password set in the module, then click OK. The interface will display 'Updating Certificate, Please Wait,' indicating that the update process has started.

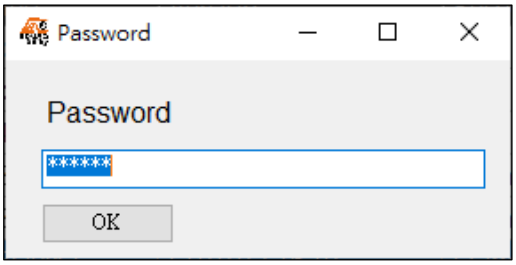


Figure 5-93 Update HTTPS Certificate (4)

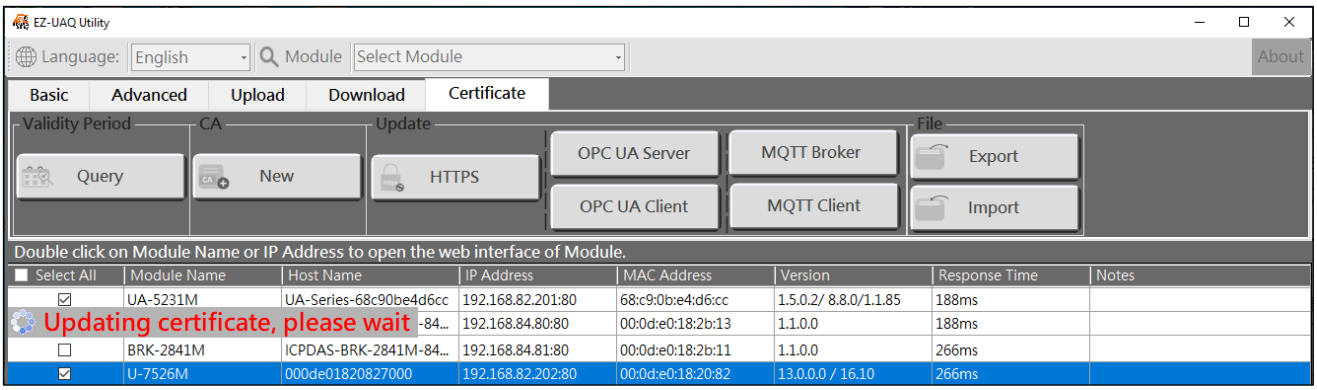


Figure 5-94 Update HTTPS Certificate (5)

Step 4: When the update is successful, the word 'Update Successful' will appear in the [Notes] column of the selected module.

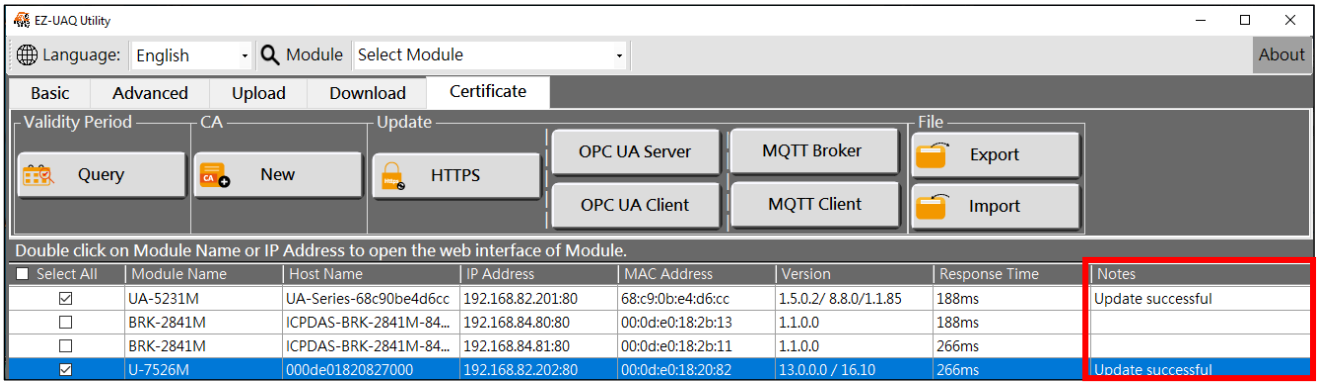


Figure 5-95 Update HTTPS Certificate (6)

After completing the steps above, use the Port number to access the webpage. This will indicate whether the HTTPS connection has been enabled. (Please refer to Appendix_D)

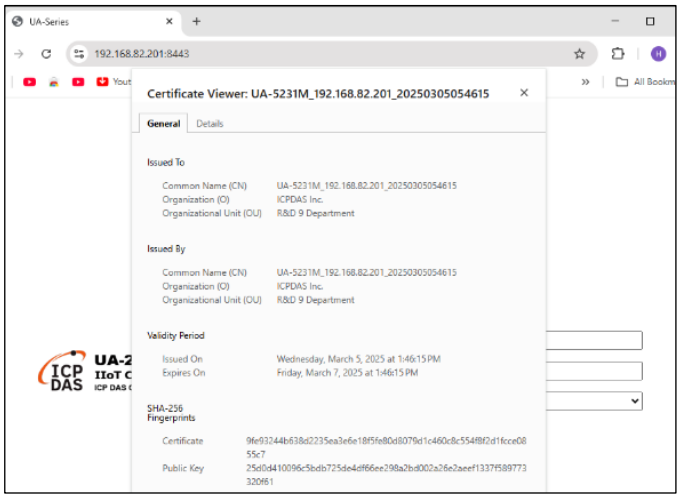


Figure 5-96 Update HTTPS Certificate Web

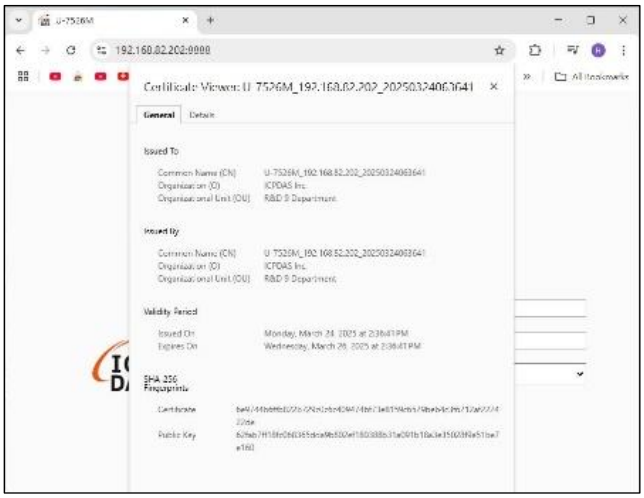
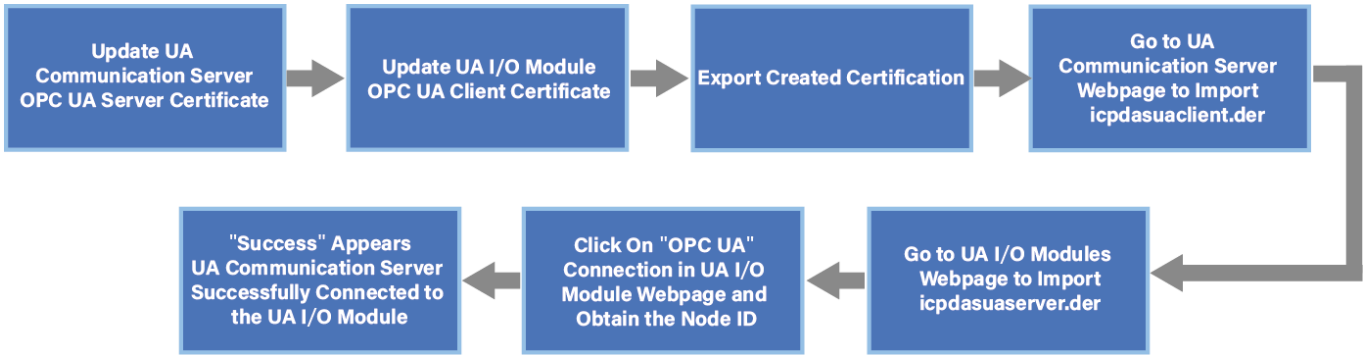


Figure 5-97 Update HTTPS Certificate Web

➢ Update OPC UA Server & OPC UA Client Certificate

Use the【**Update OPC UA Server Certificate**】、【**Update OPC UA Server Certificate**】feature to allow users to quickly replace the OPC UA Server and OPC UA Client certificates on the module. When users communicate using the OPC UA protocol to exchange messages, certificates enhance security during the message exchange. The following explains how UA and UA I/O modules handle OPC UA certificates for secure data transmission via OPC UA encryption. (Please refer to Appendix_A Module function Support)



◆ Use the UA communication server and UA I/O modules for handling OPC UA certificates

UA Step Process: Select the UA modules that need certificate updates, then click the [OPC UA Server] button. A prompt box will appear, as shown in Figure 5-99, to confirm that it is not an operational error. Then, click YES.

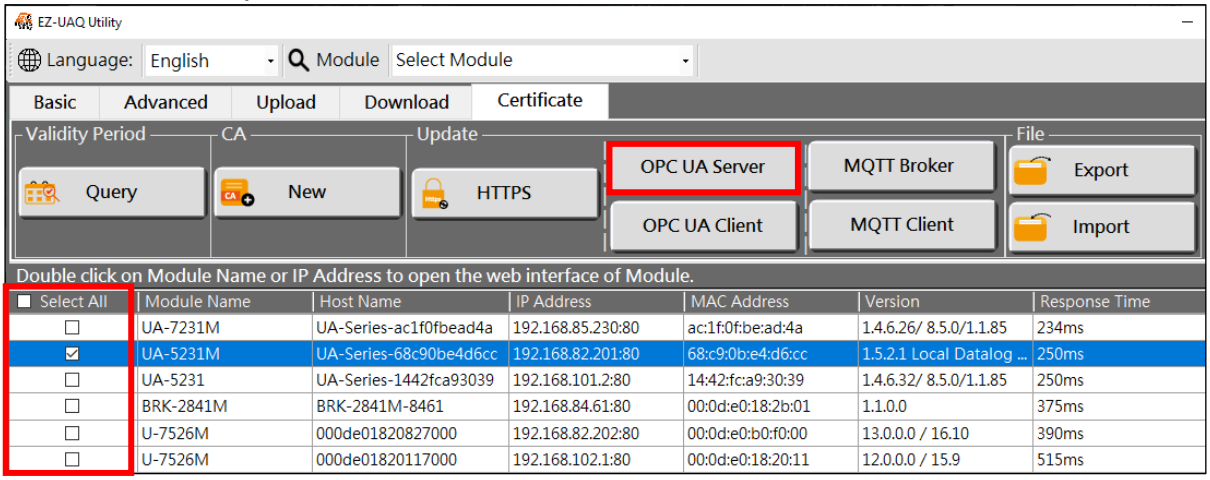


Figure 5-98 UA and UA I/O Modules - Updating OPC UA Server Certificates (1)

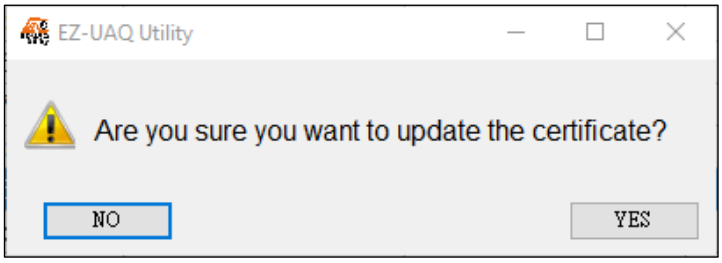


Figure 5-99 UA and UA I/O Modules - Updating OPC UA Server Certificates (2)

Please enter the expiration days for the CA certificate in the 'Certificate Validity Date' window, and then click OK.

- ❖ Please refer to Appendix_C for certificate date input restrictions, which detail the limitations and recommendations for input.

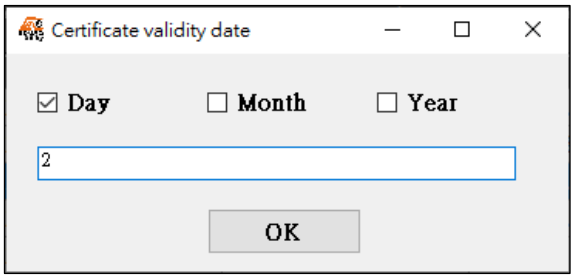


Figure 5-100 UA and UA I/O Modules - Updating OPC UA Server Certificates (3)

A Password window will pop up. Please enter the EZ-UAQ Utility password set in the module, then click OK. The interface will display 'Updating Certificate, Please Wait,' indicating that the update process has started.

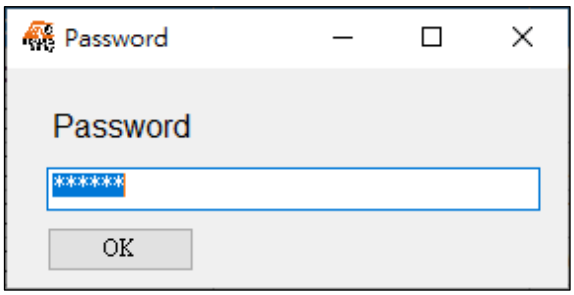


Figure 5-101 UA and UA I/O Modules - Updating OPC UA Server Certificates (4)

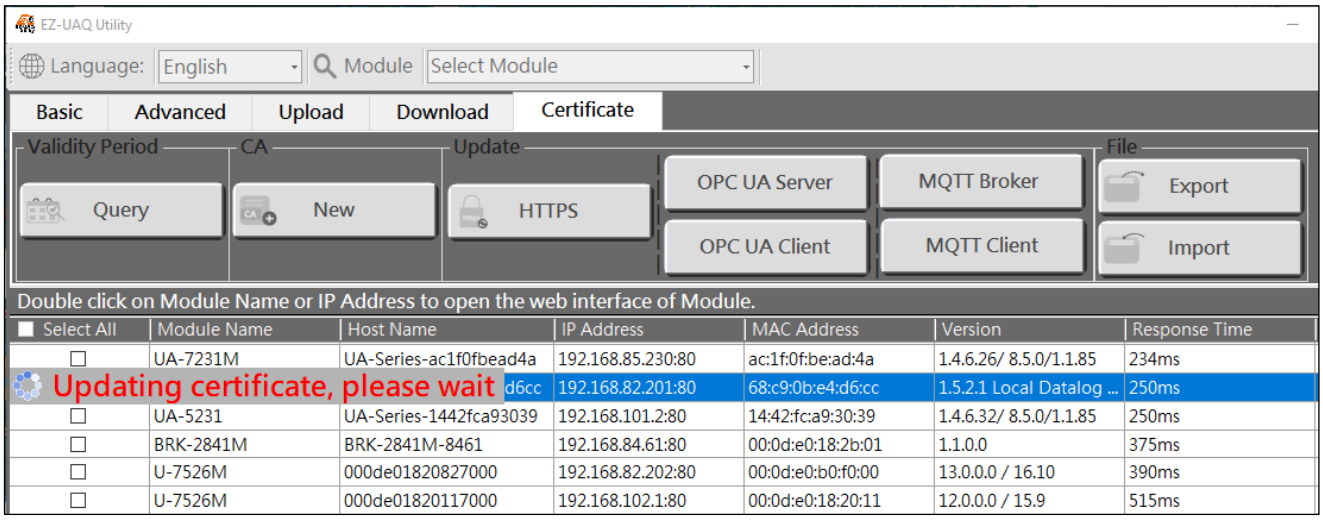


Figure 5-102 UA and UA I/O Modules - Updating OPC UA Server Certificates (5)

When the update is successful, the word 'Update Successful' will appear in the [Notes] column of the selected module.

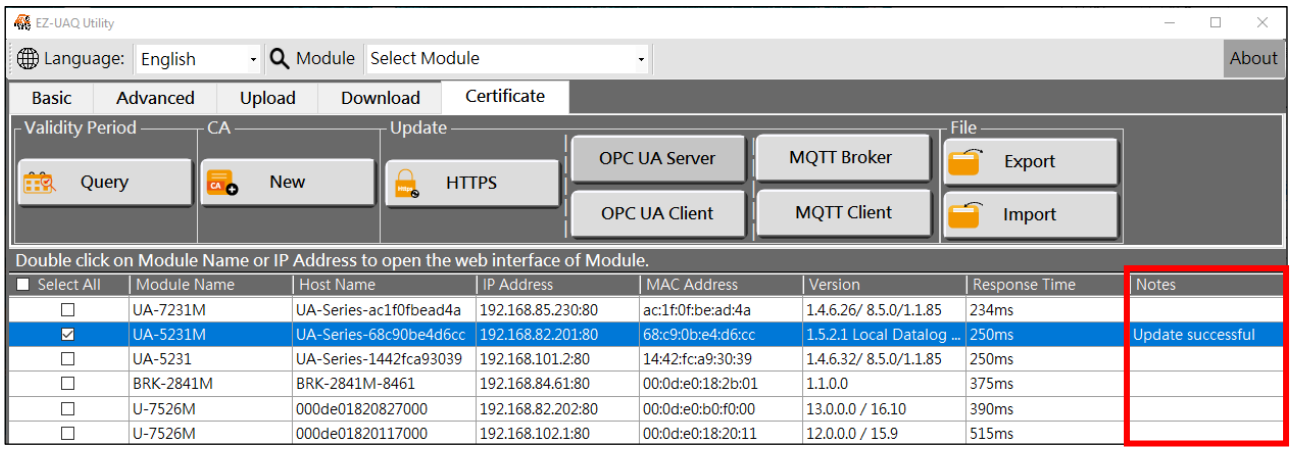


Figure 5-103 UA and UA I/O Modules - Updating OPC UA Server Certificates (6)

UA I/O Procedure Flow: Select the UA module that requires a certificate update, then click the **[OPC UA Client]** button. A prompt will appear, as shown in Figure 5-105, to ensure the action was not accidental. Next, click "YES."

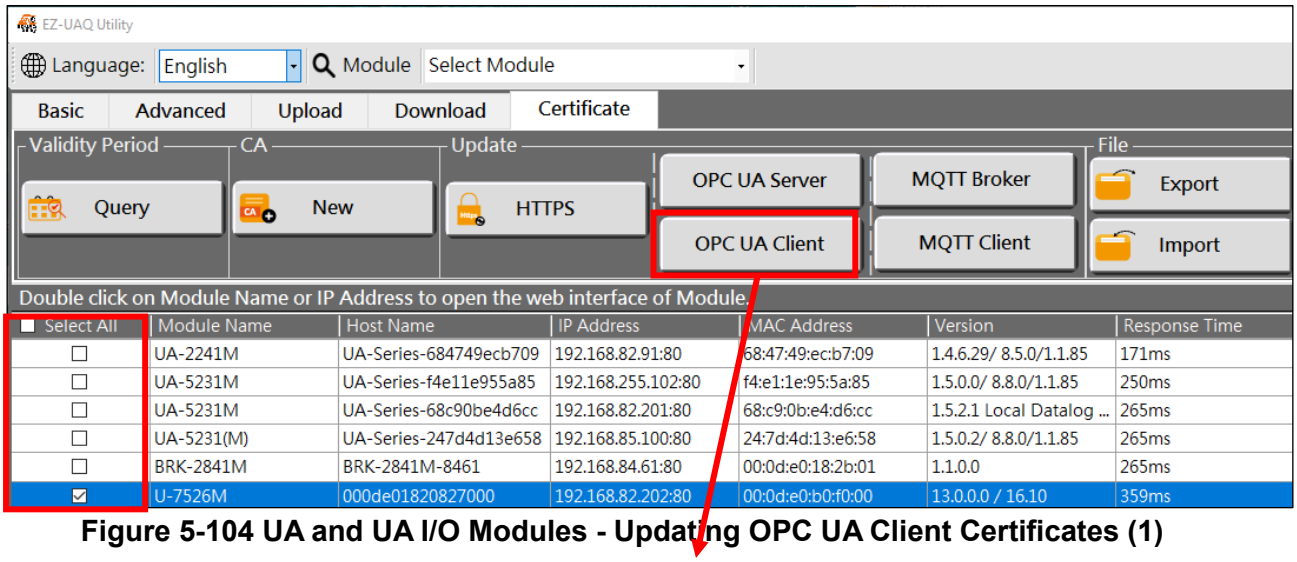


Figure 5-104 UA and UA I/O Modules - Updating OPC UA Client Certificates (1)

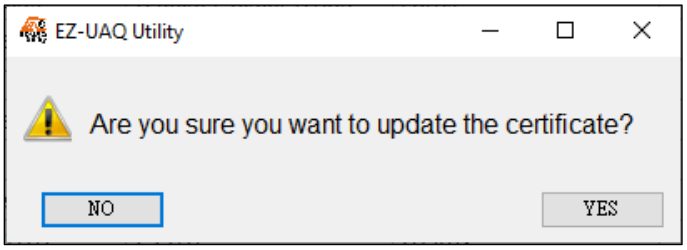


Figure 5-105 UA and UA I/O Modules - Updating OPC UA Client Certificates (2)

Please enter the expiration days for the CA certificate in the 'Certificate Validity Date' window, and then click OK.

❖ Please refer to Appendix C for certificate date input restrictions, which detail the limitations and recommendations for input.

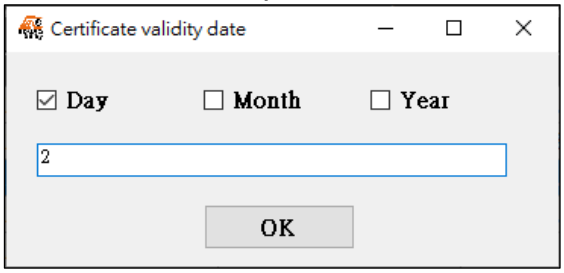


Figure 5-106 UA and UA I/O Modules - Updating OPC UA Client Certificates (3)

A Password window will pop up. Please enter the EZ-UAQ Utility password set in the module, then click OK. The interface will display 'Updating Certificate, Please Wait,' indicating that the update process has started.

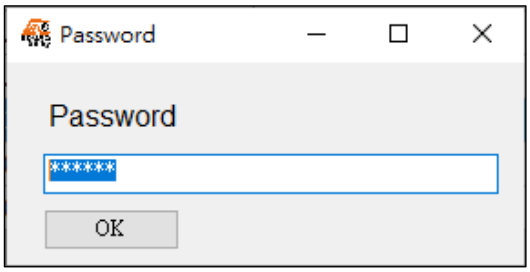


Figure 5-107 UA and UA I/O Modules - Updating OPC UA Client Certificates (4)

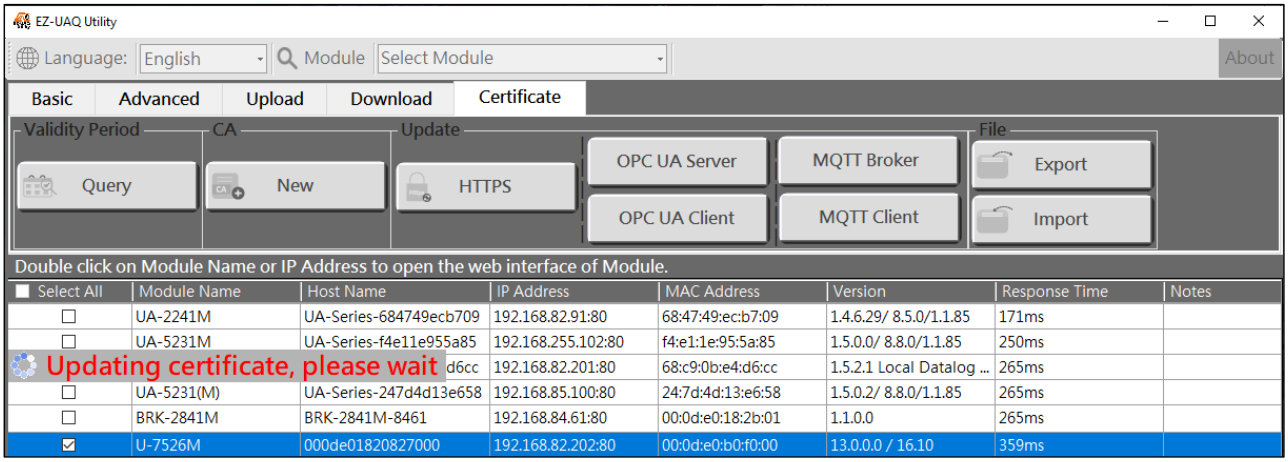


Figure 5-108 UA and UA I/O Modules - Updating OPC UA Client Certificates (5)

When the update is successful, the word 'Update Successful' will appear in the [Notes] column of the selected module.

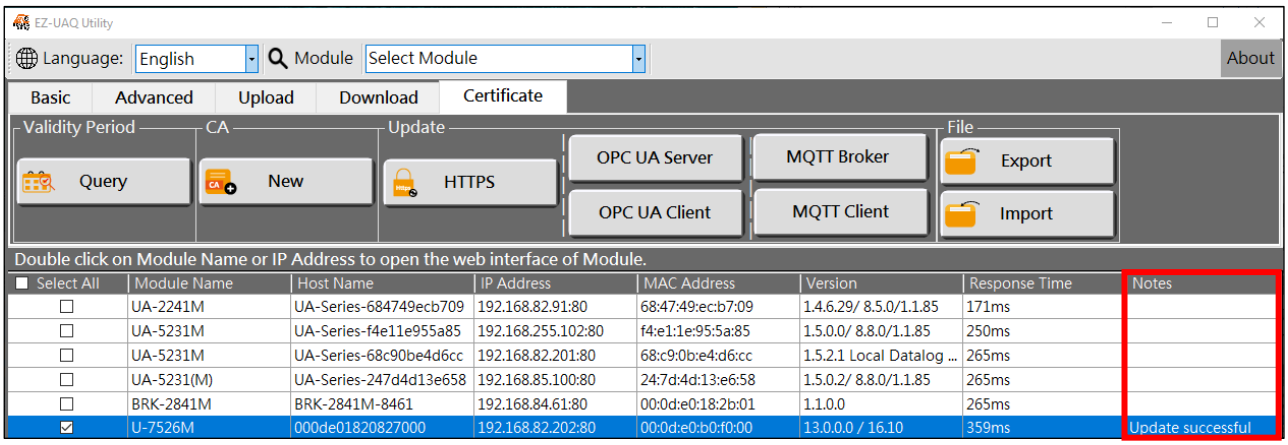


Figure 5-109 UA and UA I/O Modules - Updating OPC UA Client Certificates(6)

Next, upload the trusted certificate. The process is as follows.

1. Click the **[Export]** function in the EZ-UAQ Utility and enter the password for the compressed file. Then, select the storage path. After exporting the OPC UA certificate, first decompress the exported certificate file (the compressed file password will be required).

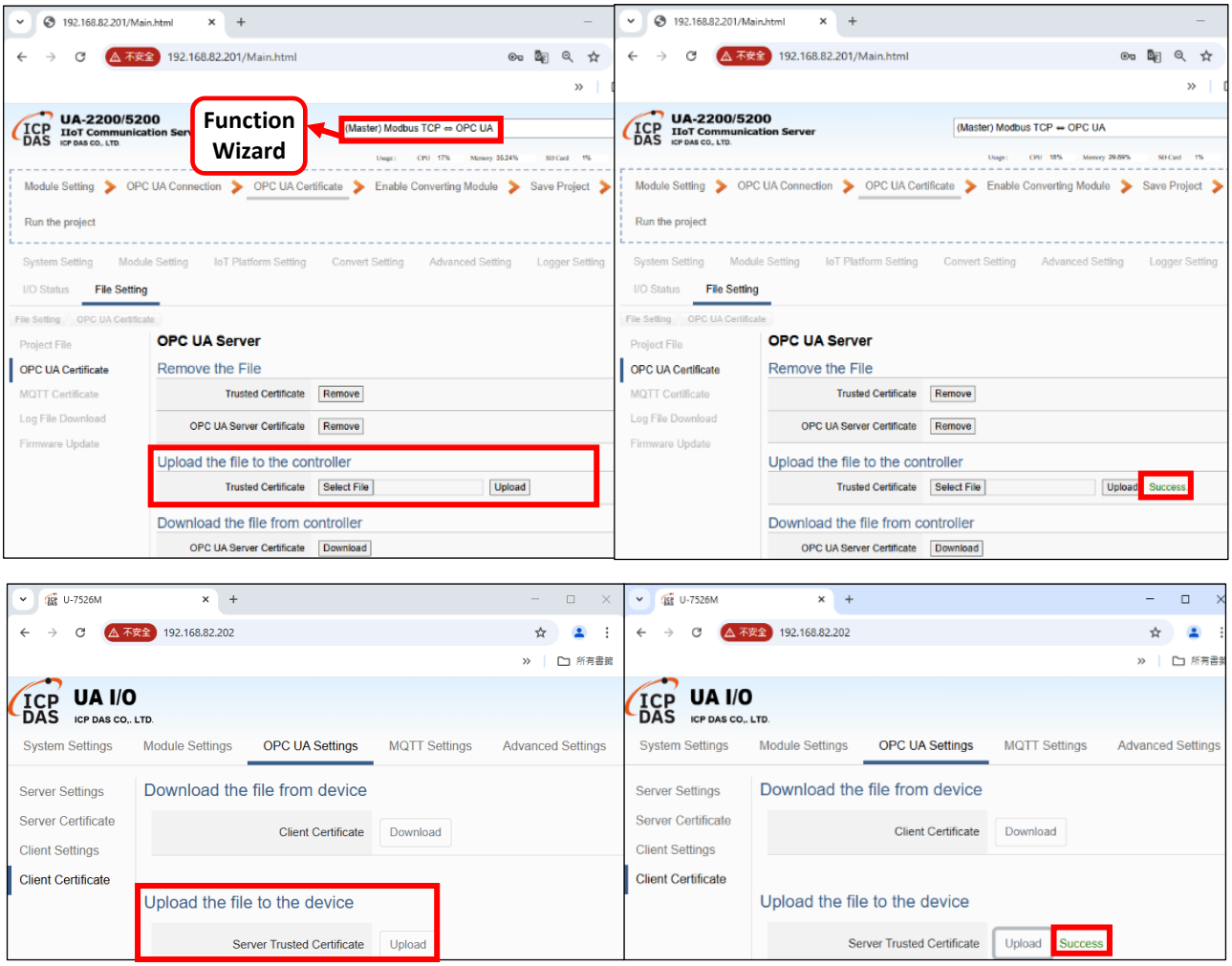
2. **Import File Certificate**: Then, use the UA and UA I/O web pages to import the certificates separately.

   UA Webpage: First, go to the Functional Area and select (Master) Modbus TCP ⇔ OPC UA. Then, click on OPC UA Certificate > Choose File > Upload. Select the file: (icpdasuaclient.der)

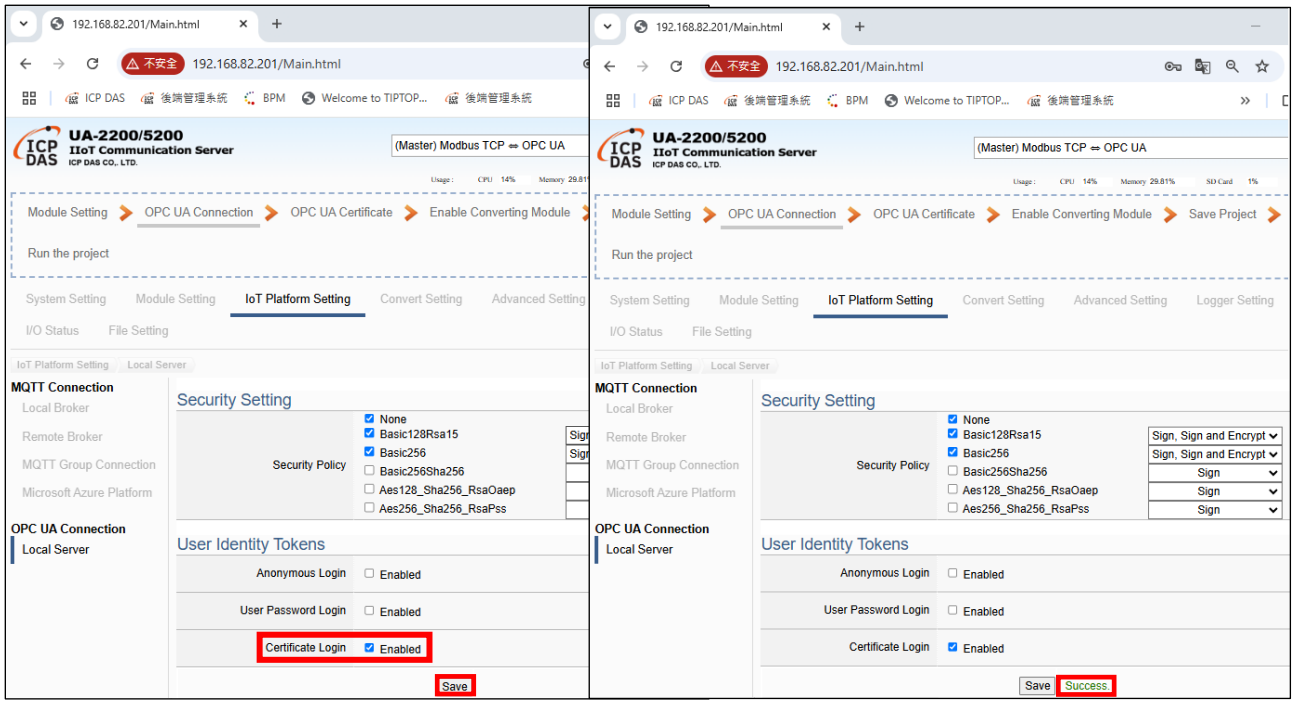
   UA I/O Webpage: Click on OPC UA Settings > Client Certificate > Upload. Select the file: (icpdasuaserver.der)

Open the “EZ-UAQ Utility_Certificate_2xxx_xx_xx” folder, navigate to the OPC UA folder, select the required file, and then import the file.

The “Upload” button showing success on the right indicates that the OPC UA certificate has been successfully imported.

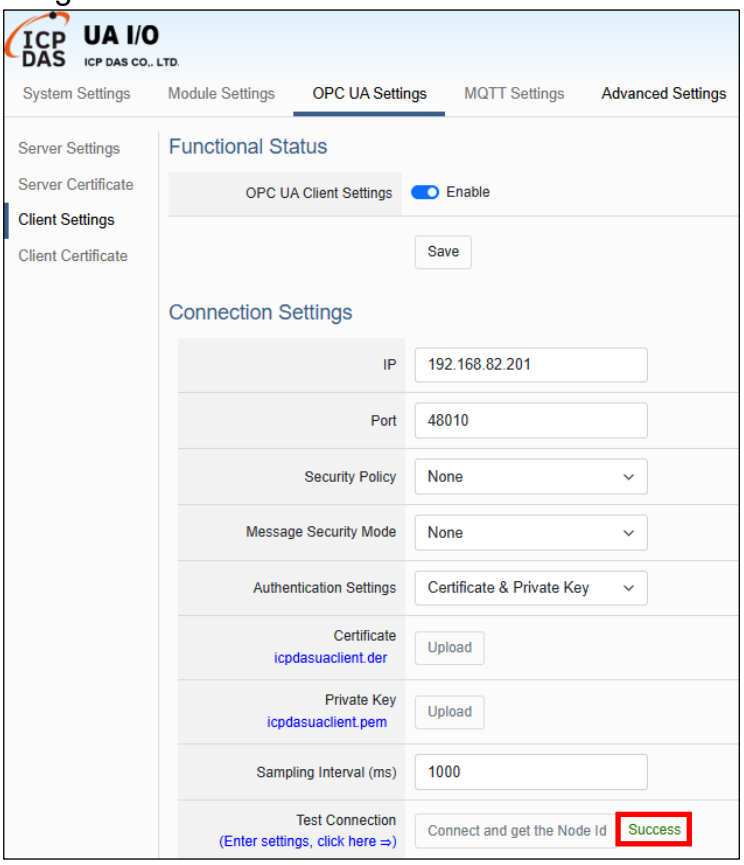


Next, click on OPC UA Connection on the UA webpage > Local Server Settings, and enable the certificate login function (as shown in the figure).



After completing the above steps, go to the UA I/O webpage, click on OPC UA Settings > Client Settings > Connect and Get Node button.

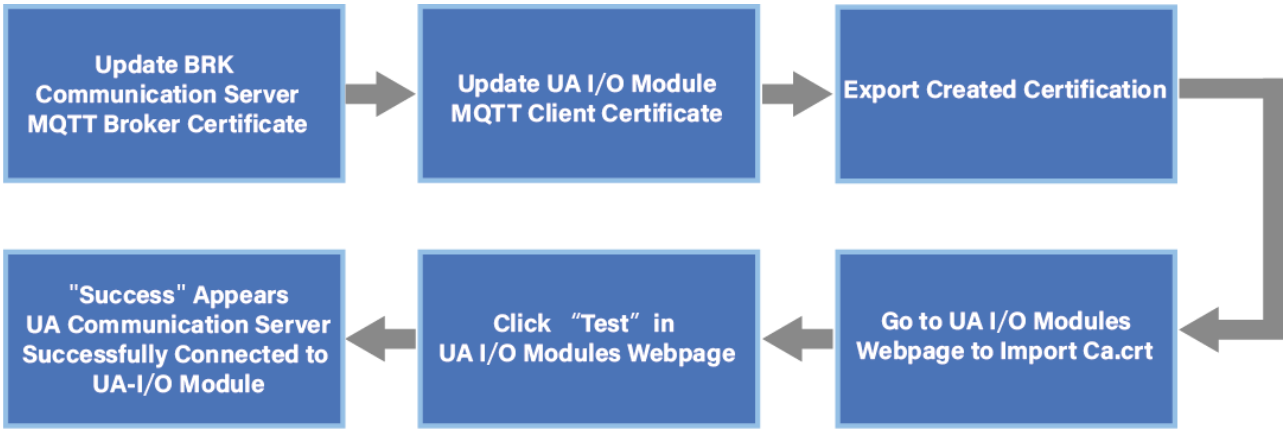
When the “Connect and Get Node ID” button shows success on the right, it indicates that the connection test using the certificate was successful.



➢ Update MQTT Broker & MQTT Client Certificates

Use the **[Update MQTT Broker Certificate]** and **[Update MQTT Client Certificate]** functions to allow users to quickly replace the MQTT Broker & MQTT Client certificates on the module. When users communicate and exchange messages using the MQTT protocol, certificates can enhance security during message exchanges.

The following explains how to use the BRK module, UA I/O module, and UA module for MQTT certificates. (Please refer to Appendix A Module Function Support)



◆ Using the BRK Communication Server and UA I/O Module for MQTT Certificate

BRK Procedure Flow: Select the BRK Communication Server that requires a certificate update, then click the **[MQTT Broker]** button. A prompt will appear, as shown in Figure 5-111, to ensure the action was not accidental. Next, click "YES."

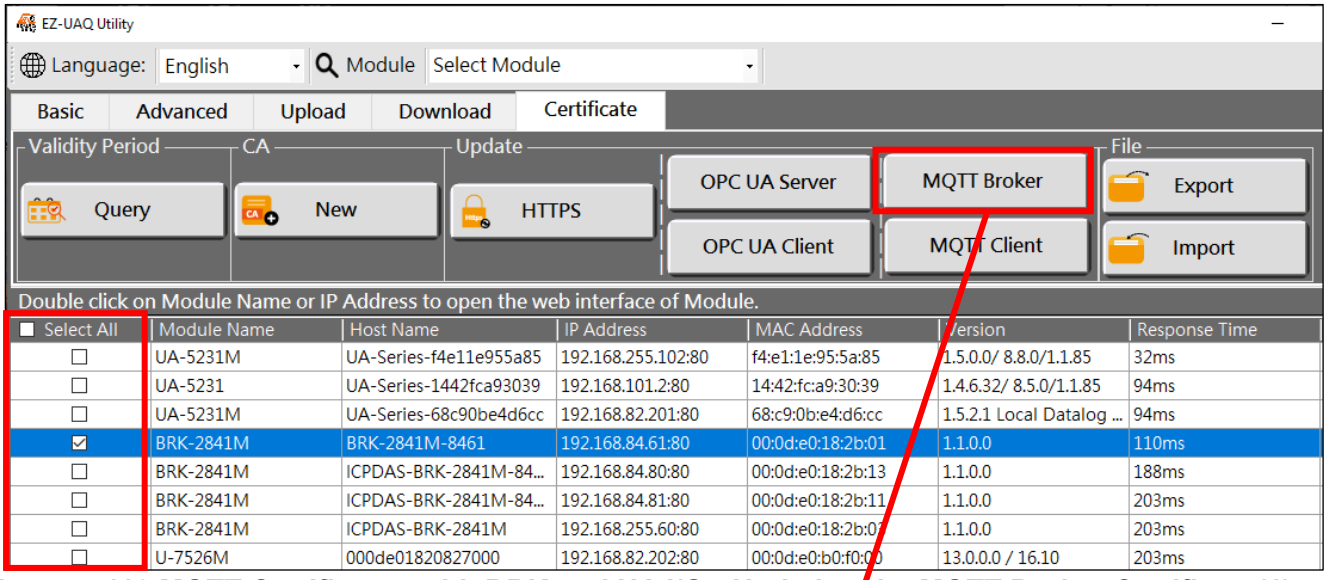


Figure 5-110 MQTT Certificates with BRK and UA I/O - Updating the MQTT Broker Certificate(1)

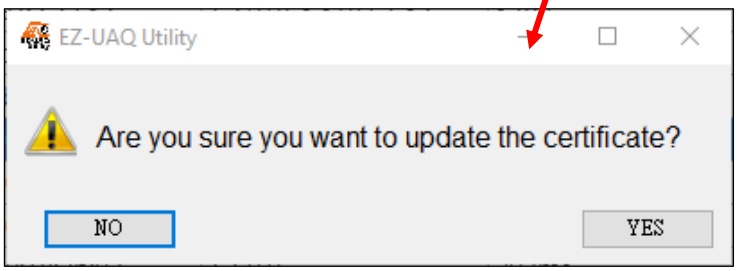


Figure 5-111 MQTT Certificates with BRK and UA I/O - Updating the MQTT Broker Certificate(2)

If the following message appears, it indicates that the EZ-UAQ Utility has not generated a CA certificate. Users can choose whether to generate a 5-year CA certificate using the EZ-UAQ Utility. If this function is not used, users can alternatively use the [Add] function to create a

new CA certificate, or use the [Import] function to import third-party CA certificate and key files as the basis for MQTT certificates.

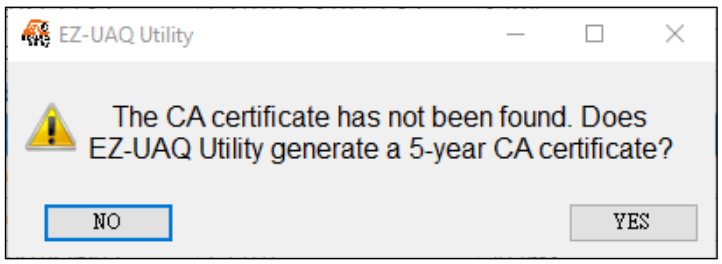


Figure 5-112 MQTT Certificates with BRK and UA I/O - Updating the MQTT Broker Certificate(3)

Please enter the expiration days for the CA certificate in the 'Certificate Validity Date' window, and then click OK.

❖ Please refer to Appendix C for certificate date input restrictions, which detail the limitations and recommendations for input.

Figure 5-113 MQTT Certificates with BRK and UA I/O - Updating the MQTT Broker Certificate(4)

A Password window will pop up. Please enter the EZ-UAQ Utility password set in the module, then click OK. The interface will display 'Updating Certificate, Please Wait,' indicating that the update process has started.

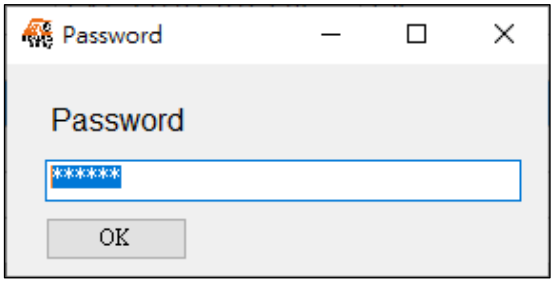


Figure 5-114 MQTT Certificates with BRK and UA I/O - Updating the MQTT Broker Certificate(5)

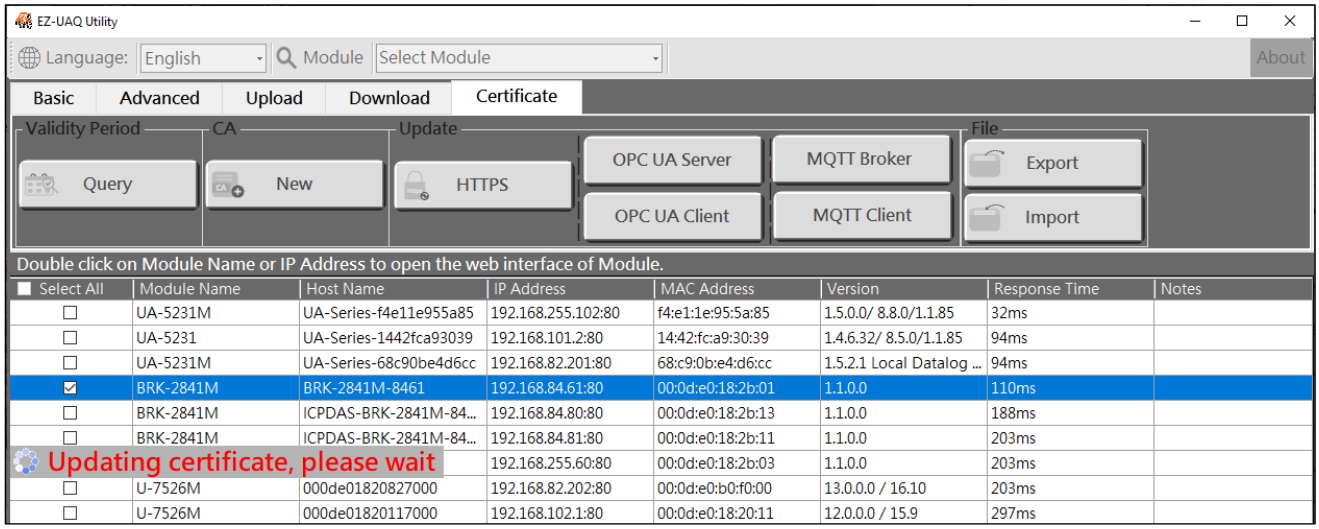


Figure 5-115 MQTT Certificates with BRK and UA I/O - Updating the MQTT Broker Certificate(6)

When the update is successful, the word 'Update Successful' will appear in the [Notes] column of the selected module.

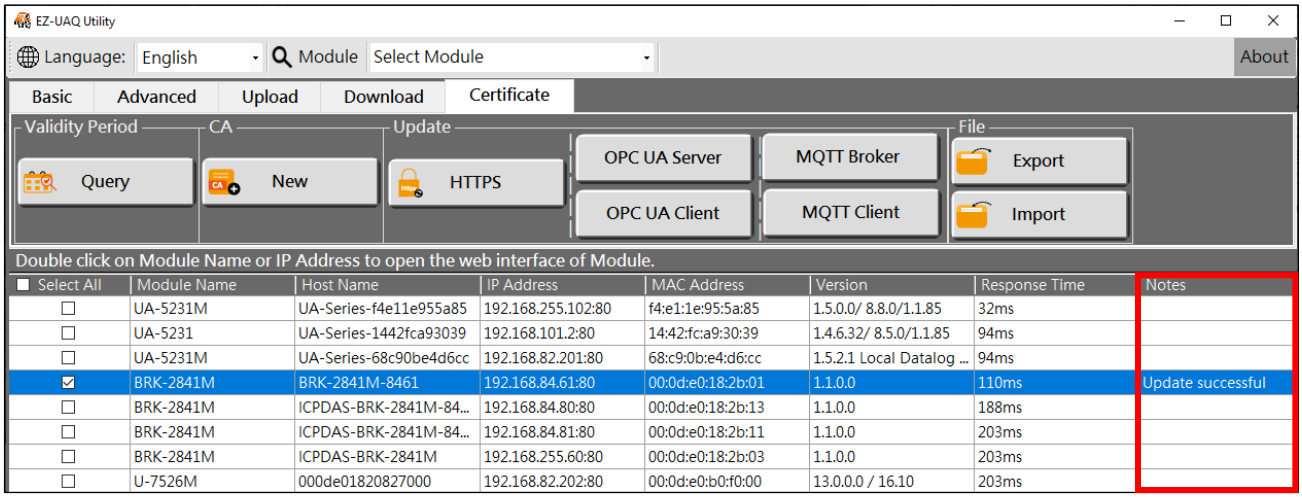


Figure 5-116 MQTT Certificates with BRK and UA I/O - Updating the MQTT Broker Certificate(7)

- **For the BRK series, after updating the certificates through the EZ-UAQ Utility, the MQTT Broker certificate function will be automatically enabled.**

UA I/O Procedure Flow: Select the UA I/O module that requires a certificate update, then click the [MQTT Client] button. A prompt will appear, as shown in Figure 5-118, to ensure the action was not accidental. Next, click "YES."

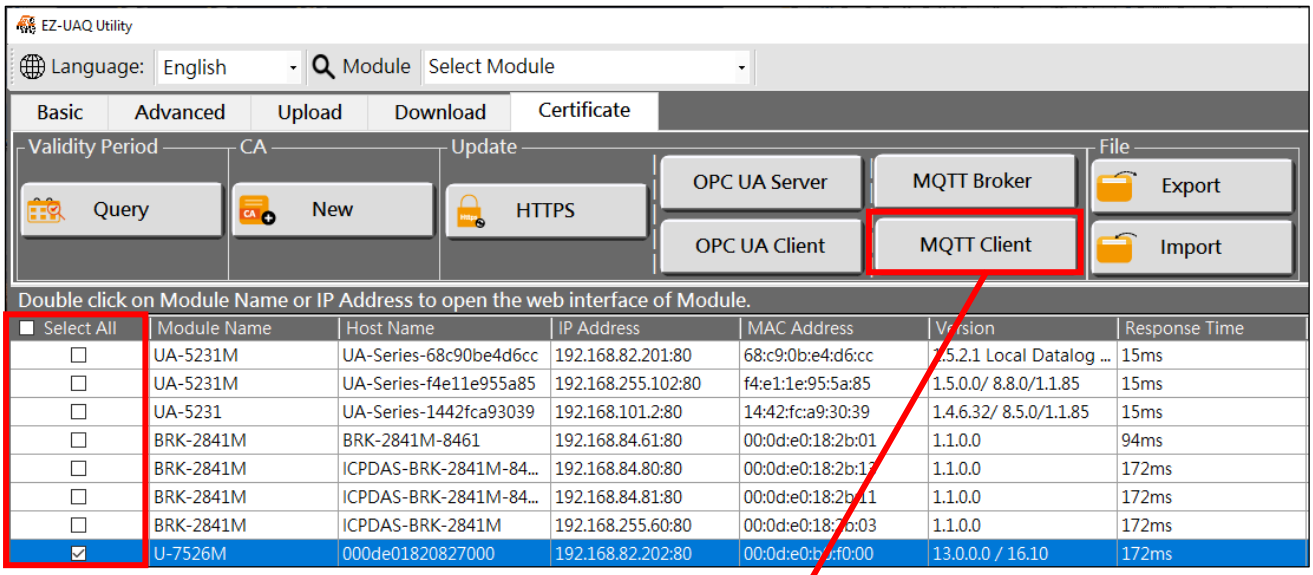


Figure 5-117 MQTT Certificates with BRK and UA I/O - Updating the MQTT Client Certificate(1)

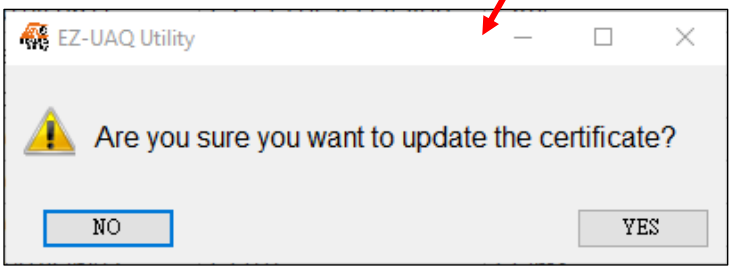


Figure 5-118 MQTT Certificates with BRK and UA I/O - Updating the MQTT Client Certificate(2)

If the following message appears, it indicates that the EZ-UAQ Utility has not generated a CA certificate. The user can choose whether to have the EZ-UAQ Utility generate a 5-year CA certificate. If this function is not used, the user can also use the [Add] function to generate a new CA certificate, or use the [Import] function to import third-party CA certificate and Key files as the basis for the MQTT certificate.

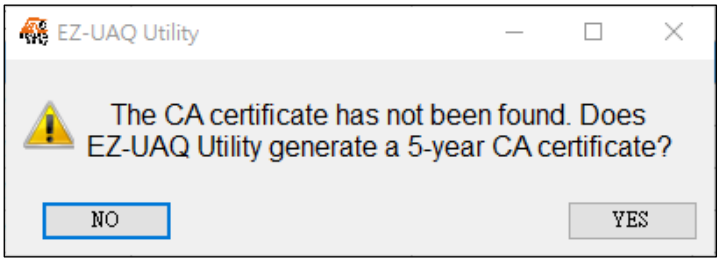


Figure 5-119 MQTT Certificates with BRK and UA I/O - Updating the MQTT Client Certificate(3)

Please enter the expiration days for the CA certificate in the 'Certificate Validity Date' window, and then click OK.

- ❖ Please refer to Appendix C for certificate date input restrictions, which detail the limitations and recommendations for input.

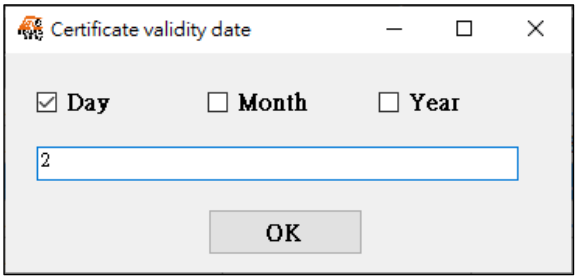


Figure 5-120 MQTT Certificates with BRK and UA I/O - Updating the MQTT Client Certificate(4)

A Password window will pop up. Please enter the EZ-UAQ Utility password set in the module, then click OK. The interface will display 'Updating Certificate, Please Wait,' indicating that the update process has started.

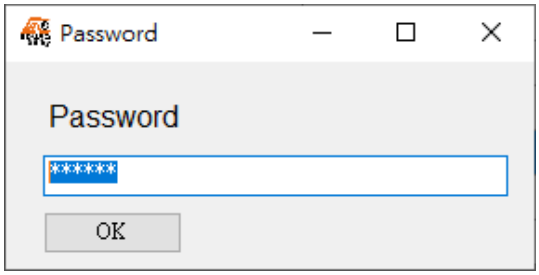


Figure 5-121 MQTT Certificates with BRK and UA I/O - Updating the MQTT Client Certificate(5)

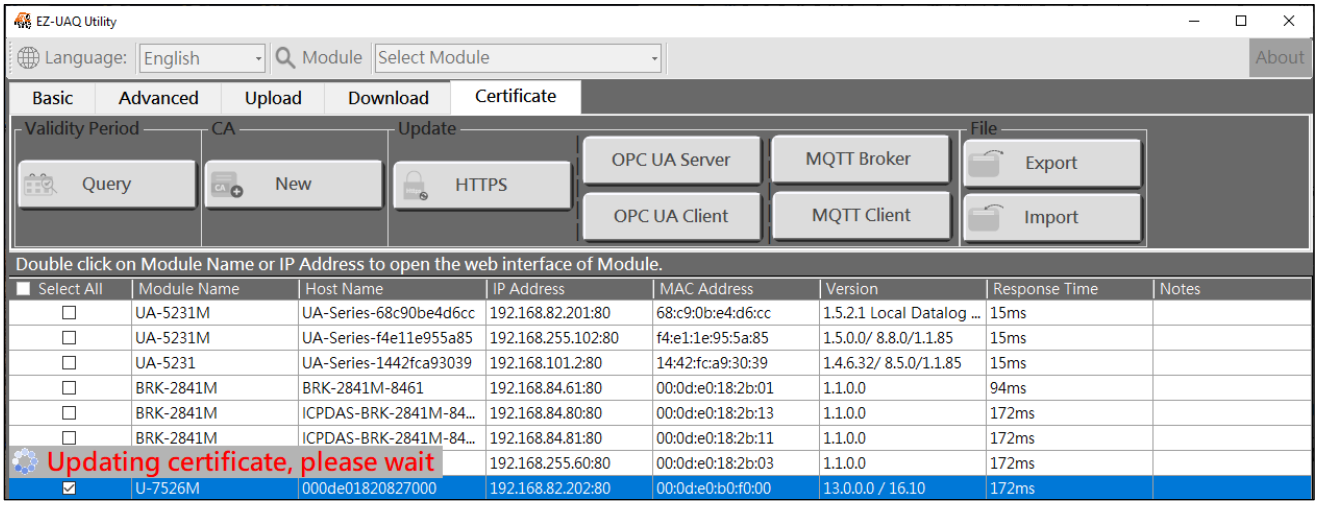


Figure 5-122 MQTT Certificates with BRK and UA I/O - Updating the MQTT Client Certificate(6)

When the update is successful, the word 'Update Successful' will appear in the [Notes] column of the selected module.

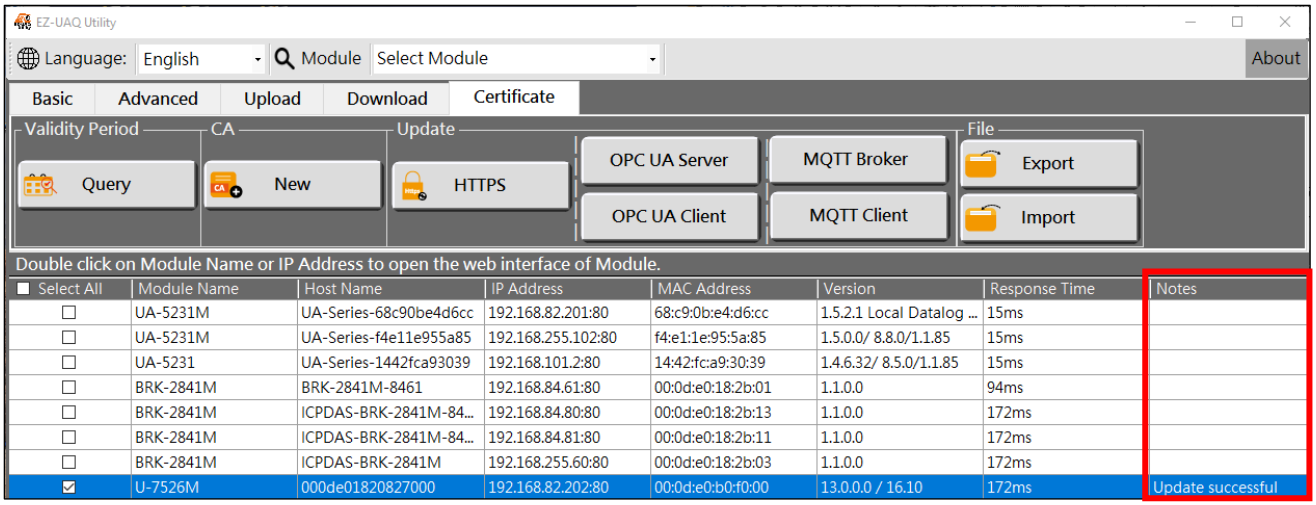
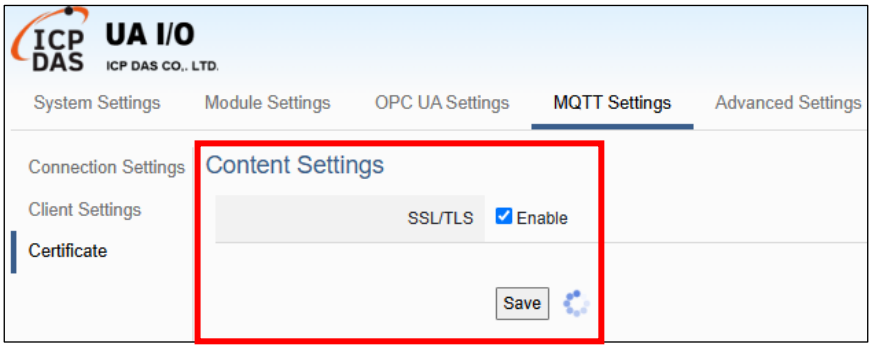
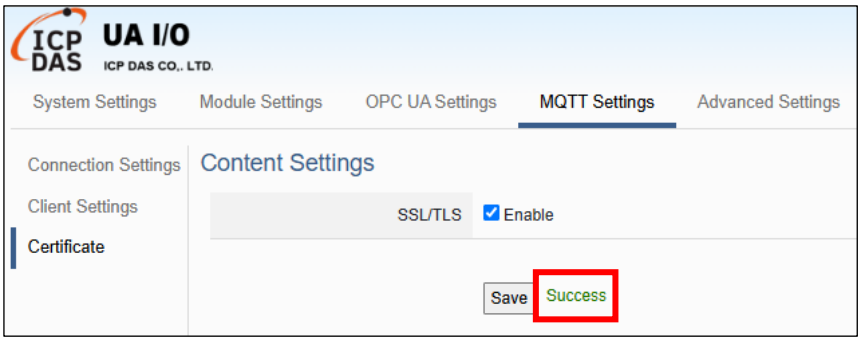


Figure 5-123 MQTT Certificates with BRK and UA I/O - Updating the MQTT Client Certificate(7)

After completing the above steps, go to the UA I/O webpage, click on MQTT Settings > Certificates > check Enable SSL/TLS, and then click Save.



After enabling SSL/TLS and successfully saving the settings, the "Save" button will display success on the right, indicating that the configuration has been saved.

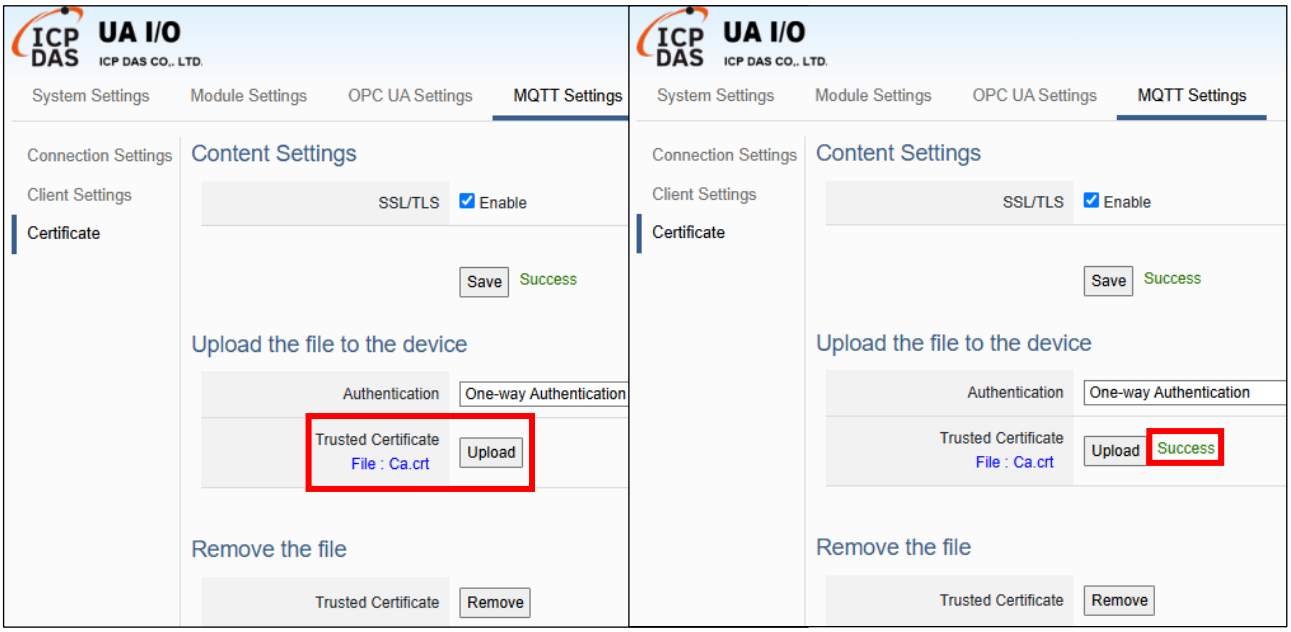


Next, upload the trusted certificate. The process is as follows.

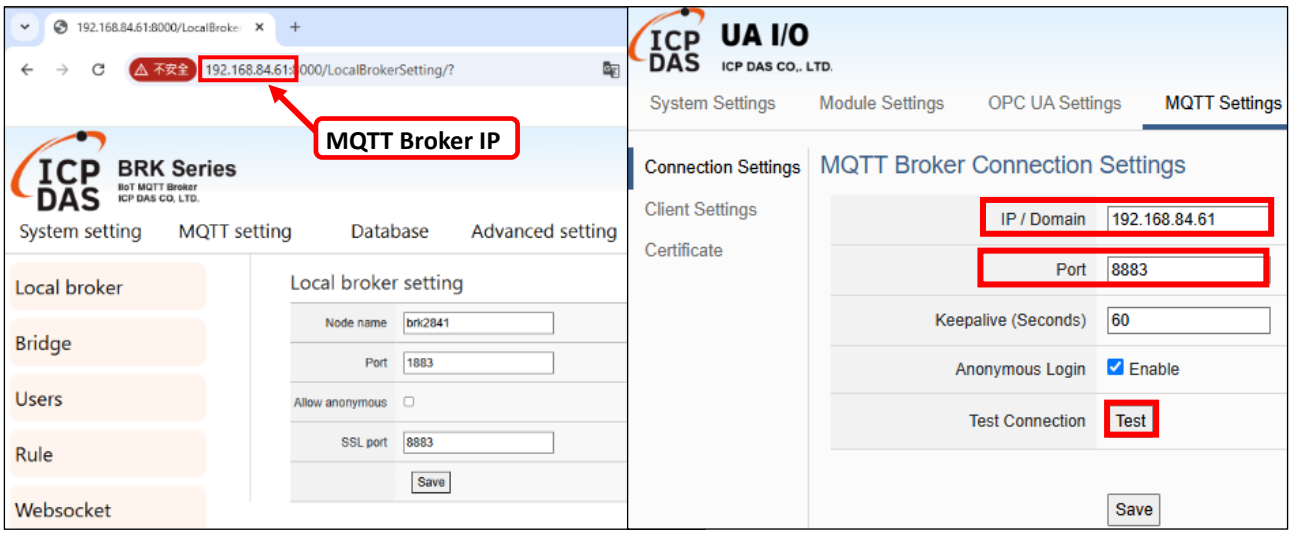
1. Click the **[Export]** function in the EZ-UAQ Utility and enter the password for the compressed file. Then, select the storage path. After exporting the MQTT certificate and CA certificate, first decompress the exported certificate file (the compressed file password will be required).

2. Certificate Import Webpage: Then, import the certificate via the UA I/O webpage.
UA I/O Webpage: Please click on MQTT Settings > Certificates > Upload. Select the file: (Ca.crt).
Open the "EZ-UAQ Utility_Certificate_2xxx_xx_xx" folder, navigate to the CA folder, and then select the Ca.crt file to import it.

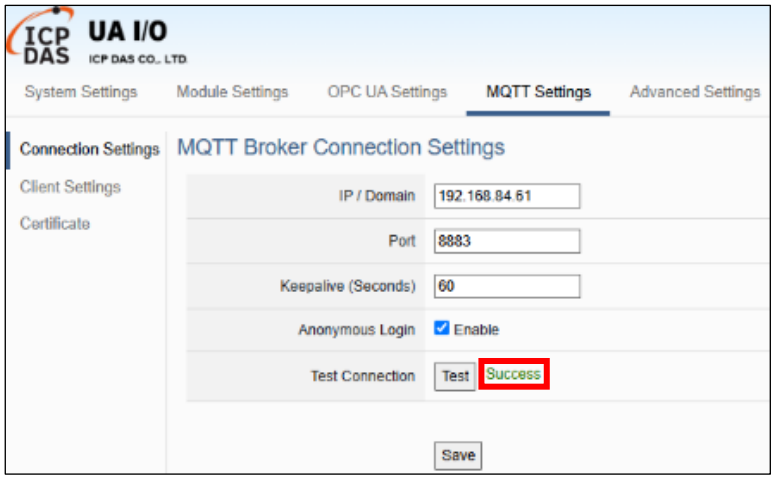
The "Upload" button showing success on the right (as shown in the figure) indicates that the CA certificate has been successfully imported.



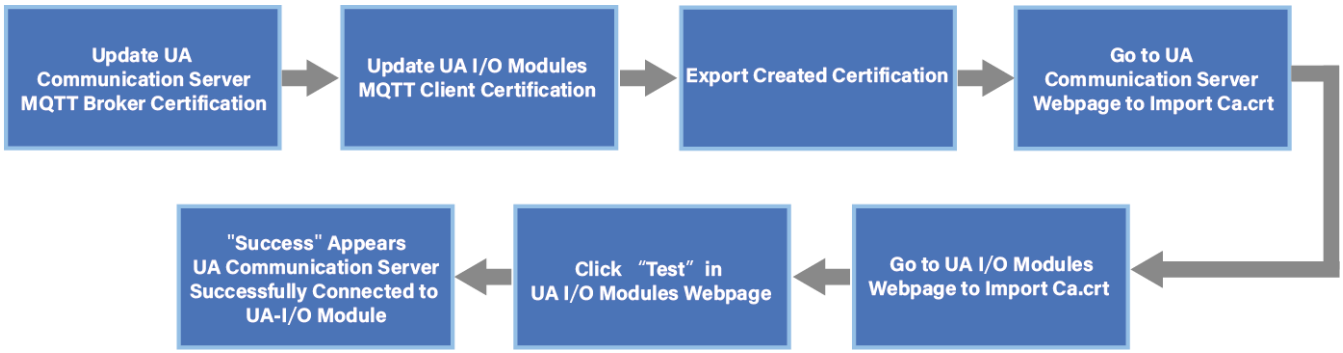
On the UA I/O webpage, go to MQTT Settings > Connection Settings > IP/Domain. Enter the IP address of the MQTT Broker and set the Port to 8883 (if using certificate-based connection, the original unencrypted connection Port 1883 must be changed to 8883). Then, click the "Test" button to perform a connection test.



The "Test" button showing success on the right indicates that the connection test using the certificate was successful.



◆ Using the UA Communication Server and UA I/O Module for MQTT Certificate



UA Procedure Flow: Select the UA module that requires a certificate update, then click the **[MQTT Broker]** button. A prompt will appear, as shown in Figure 5-125, to ensure the action was not accidental. Next, click "YES."

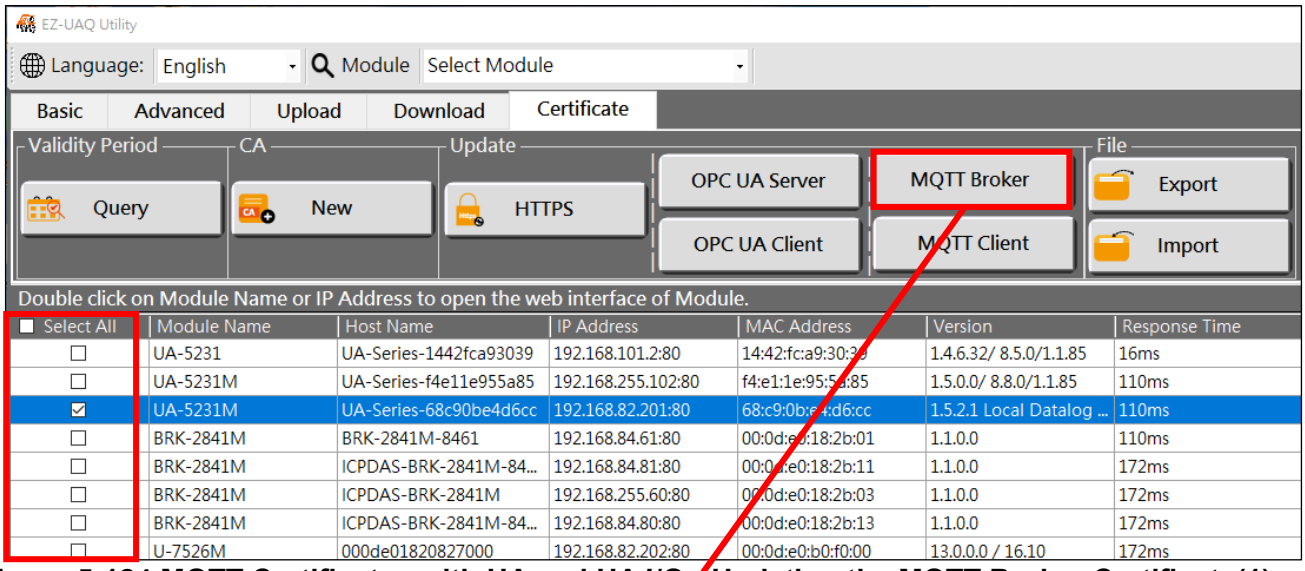


Figure 5-124 MQTT Certificates with UA and UA I/O - Updating the MQTT Broker Certificate(1)

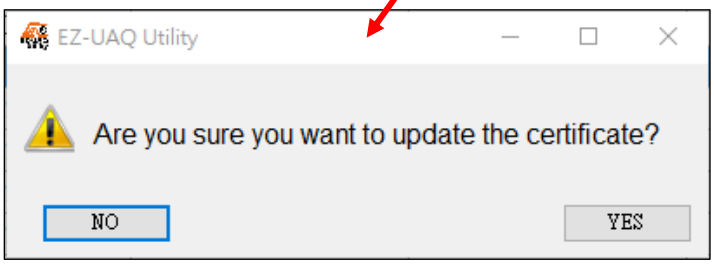


Figure 5-125 MQTT Certificates with UA and UA I/O - Updating the MQTT Broker Certificate(2)

If the following message appears, it indicates that the EZ-UAQ Utility has not generated a CA certificate. The user can choose whether to have the EZ-UAQ Utility generate a 5-year CA certificate. If this function is not used, the user can also use the [Add] function to generate a new CA certificate, or use the [Import] function to import third-party CA certificate and Key files as the basis for the MQTT certificate.

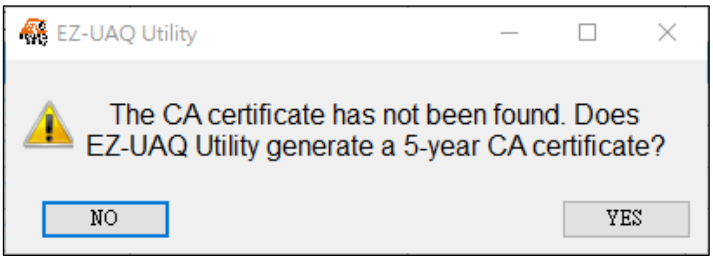


Figure 5-126 MQTT Certificates with UA and UA I/O - Updating the MQTT Broker Certificate(3)

Please enter the expiration days for the CA certificate in the 'Certificate Validity Date' window, and then click OK.

❖ Please refer to Appendix C for certificate date input restrictions, which detail the limitations and recommendations for input.

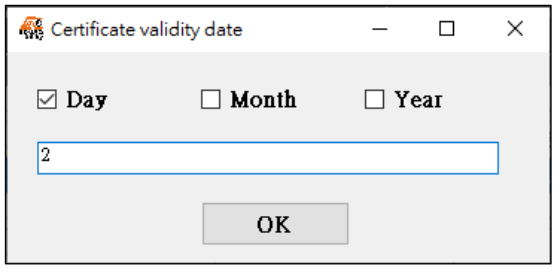


Figure 5-127 MQTT Certificates with UA and UA I/O - Updating the MQTT Broker Certificate(4)

A Password window will pop up. Please enter the EZ-UAQ Utility password set in the module, then click OK. The interface will display 'Updating Certificate, Please Wait,' indicating that the update process has started.

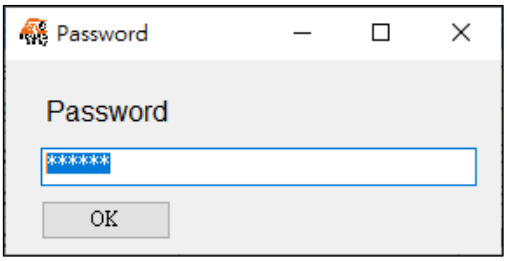


Figure 5-128 MQTT Certificates with UA and UA I/O - Updating the MQTT Broker Certificate(5)

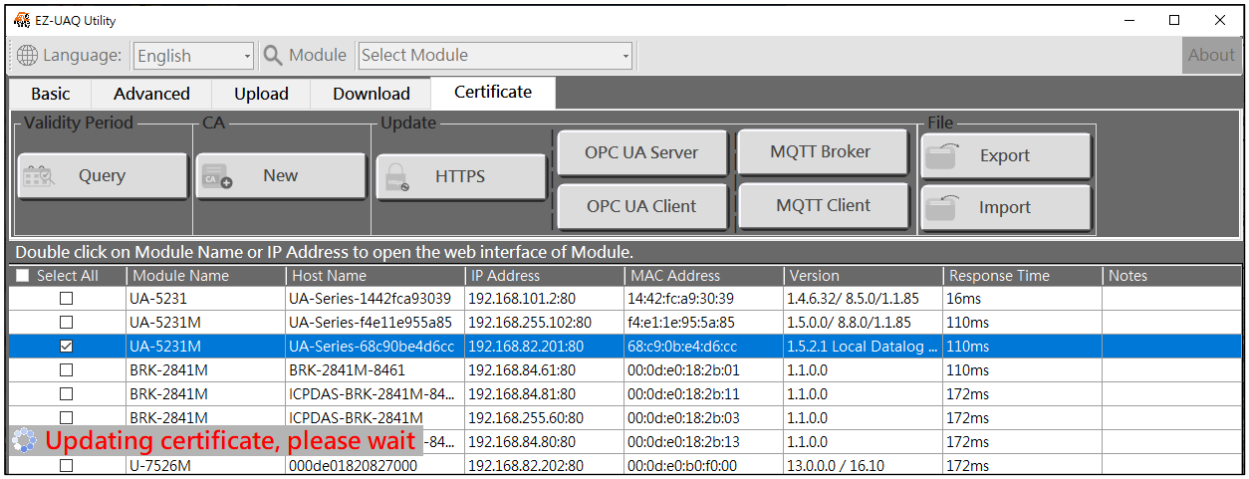


Figure 5-129 MQTT Certificates with UA and UA I/O - Updating the MQTT Broker Certificate(6)

When the update is successful, the word 'Update Successful' will appear in the [Notes] column of the selected module.

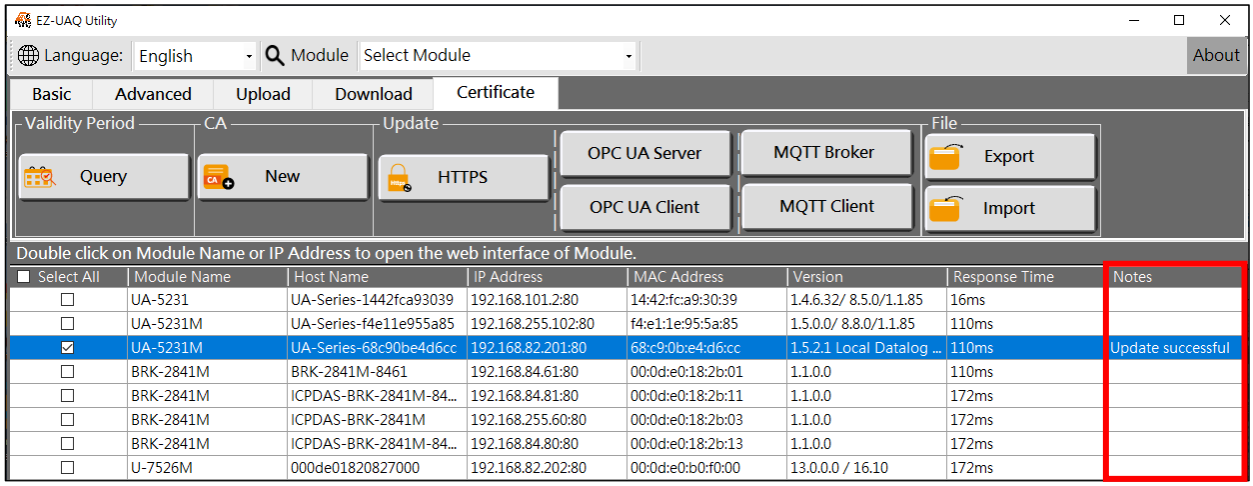


Figure 5-130 MQTT Certificates with UA and UA I/O - Updating the MQTT Broker Certificate(7)

UA I/O Procedure Flow: Select the UA I/O module that requires a certificate update, then click the **[MQTT Client]** button. A prompt will appear, as shown in Figure 5-132, to ensure the action was not accidental. Next, click "YES."

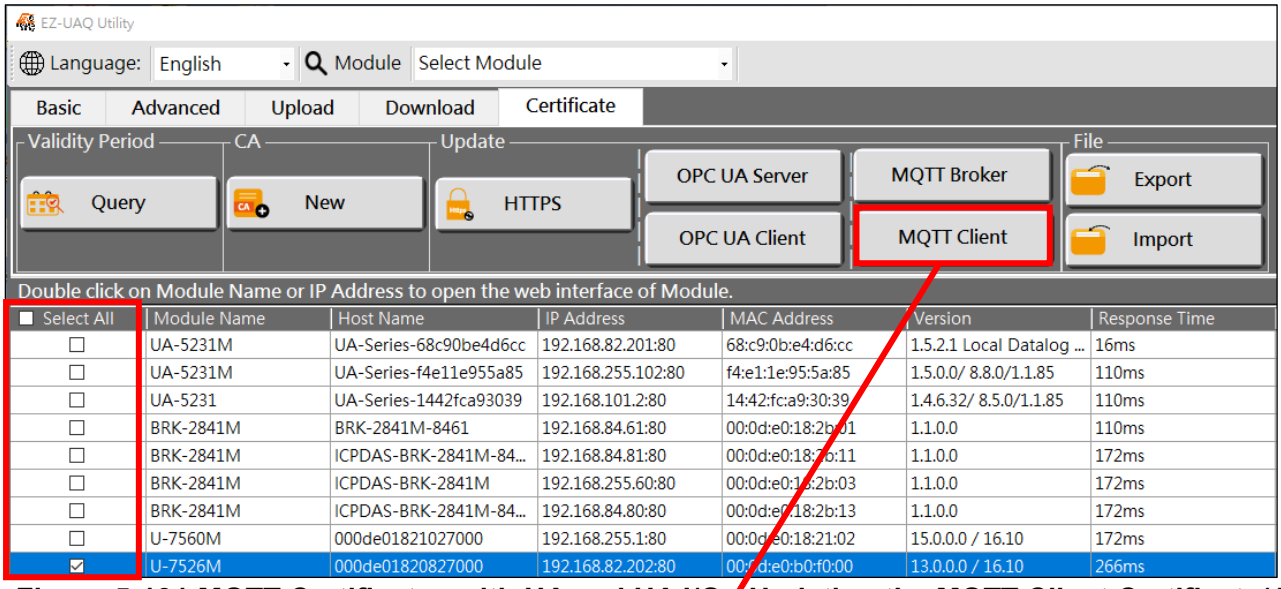


Figure 5-131 MQTT Certificates with UA and UA I/O - Updating the MQTT Client Certificate(1)

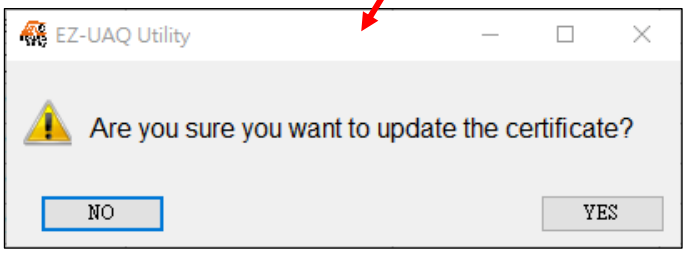


Figure 5-132 MQTT Certificates with UA and UA I/O - Updating the MQTT Client Certificate(2)

If the following message appears, it indicates that the EZ-UAQ Utility has not generated a CA certificate. The user can choose whether to have the EZ-UAQ Utility generate a 5-year CA certificate. If this function is not used, the user can also use the [Add] function to generate a new CA certificate, or use the [Import] function to import third-party CA certificate and Key files as the basis for the MQTT certificate.

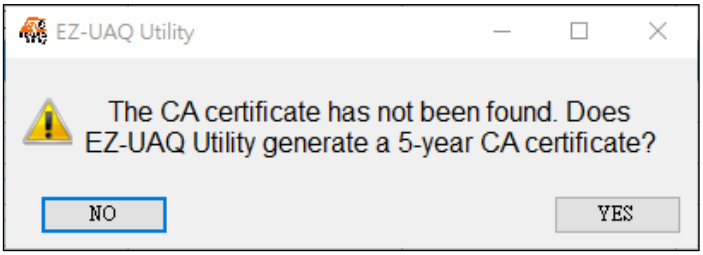


Figure 5-133 MQTT Certificates with UA and UA I/O - Updating the MQTT Client Certificate(3)

Please enter the expiration days for the CA certificate in the 'Certificate Validity Date' window, and then click OK.

- ❖ Please refer to Appendix C for certificate date input restrictions, which detail the limitations and recommendations for input.

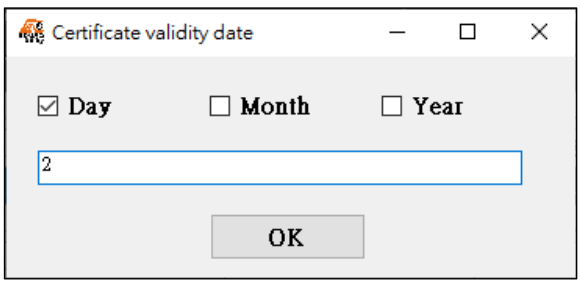


Figure 5-134 MQTT Certificates with UA and UA I/O - Updating the MQTT Client Certificate(4)

A Password window will pop up. Please enter the EZ-UAQ Utility password set in the module, then click OK. The interface will display 'Updating Certificate, Please Wait,' indicating that the update process has started.

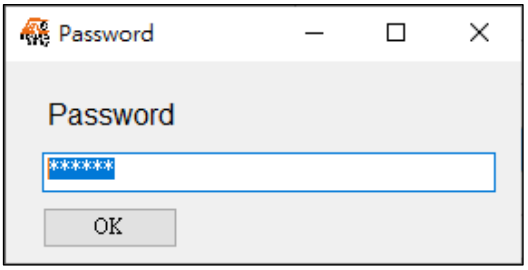


Figure 5-135 MQTT Certificates with UA and UA I/O - Updating the MQTT Client Certificate(5)

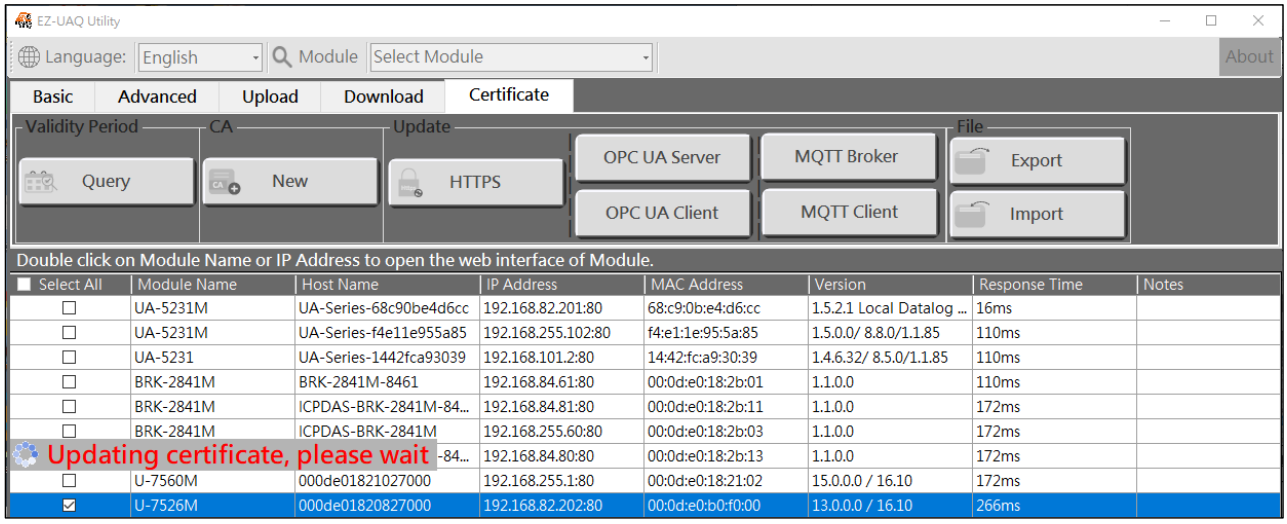


Figure 5-136 MQTT Certificates with UA and UA I/O - Updating the MQTT Client Certificate(6)

When the update is successful, the word 'Update Successful' will appear in the [Notes] column of the selected module.

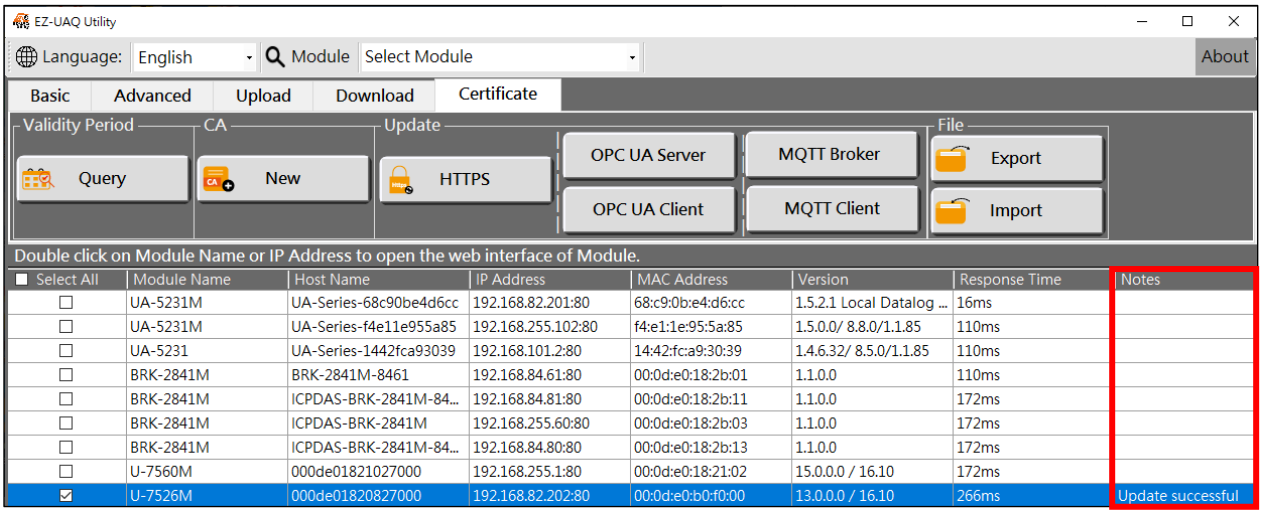
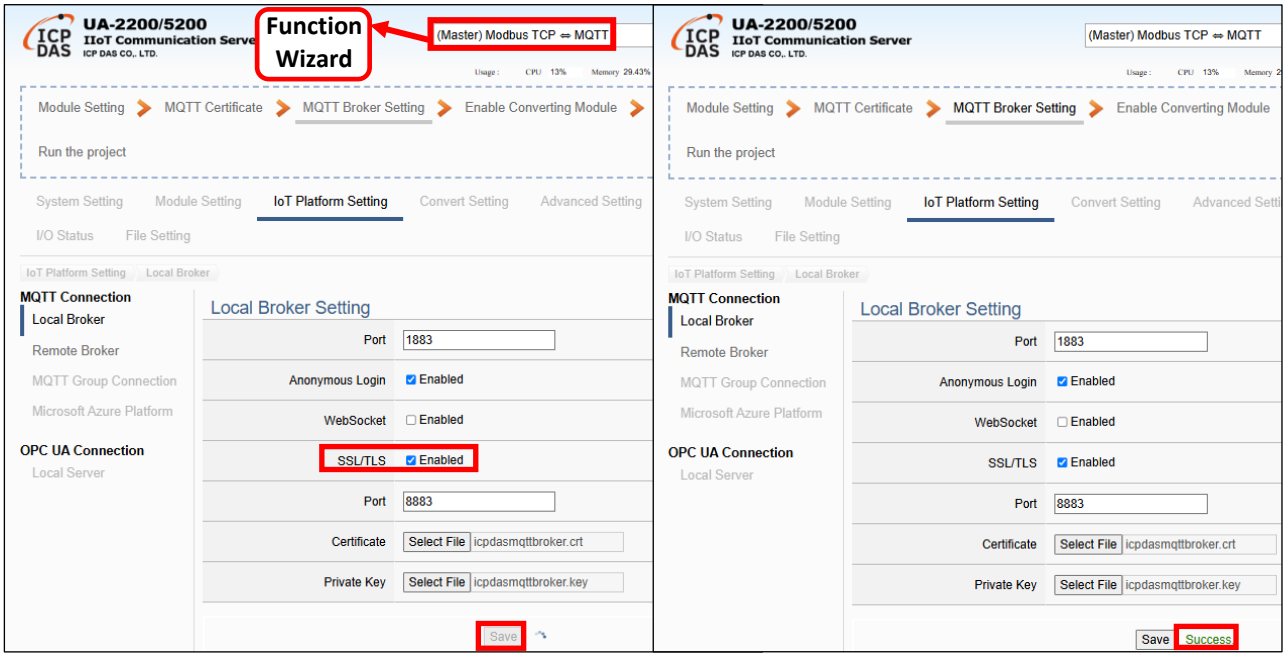


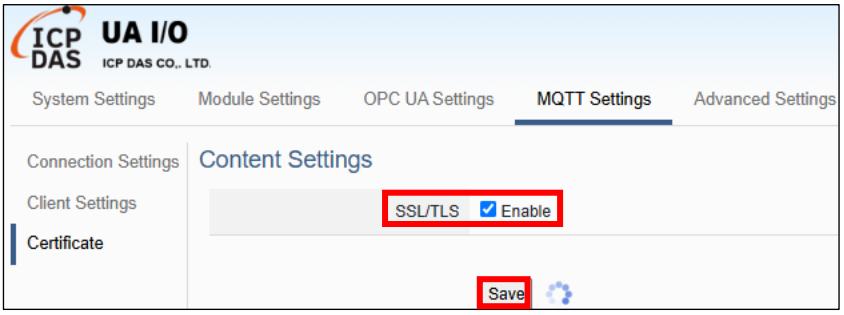
Figure 5-137 MQTT Certificates with UA and UA I/O - Updating the MQTT Client Certificate(7)

❖ **For the UA series, updating certificates through the EZ-UAQ Utility does not automatically enable the MQTT Broker certificate function. To enable this feature, please configure it on the UA or UA I/O webpage.**

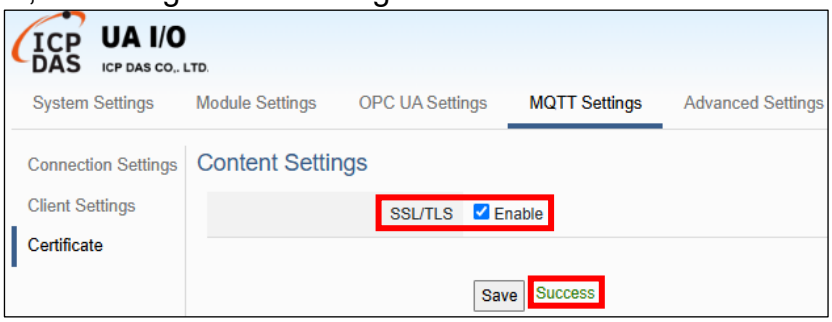
UA Web Page Settings: Select Function Area (Master) > Modbus TCP⇔ MQTT > MQTT Broker Settings > Local Broker > Check Enable SSL/TSL > Save. A "success" message will appear to the right of the "Save" button, indicating that the settings have been successfully saved.



After completing the above steps, go to the UA I/O webpage, click on MQTT Settings > Certificates > check Enable SSL/TLS, and then click Save.



After enabling SSL/TLS and successfully saving the settings, the “Save” button will display success on the right, indicating that the configuration has been saved.



Next, upload the trusted certificate. The process is as follows.

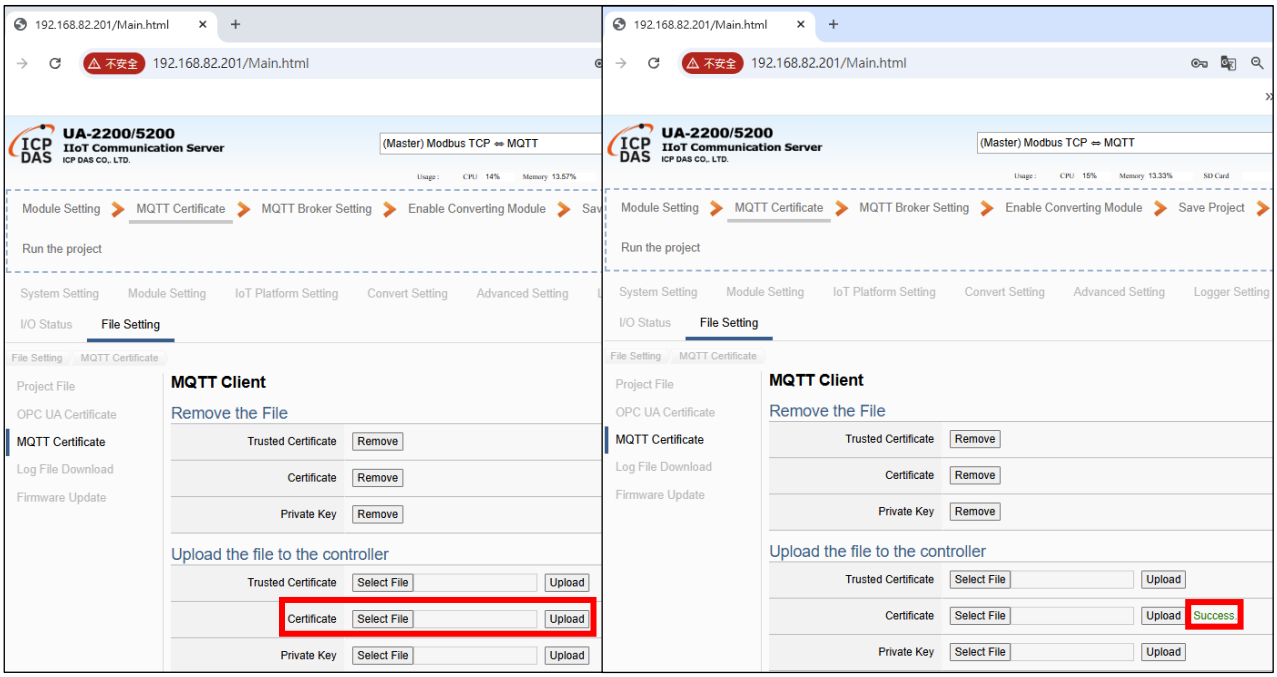
1. Click the **Export** function in EZ-UAQ Utility, enter the password for the compressed file, and then select the storage path. After exporting the MQTT certificate and CA certificate, first extract the exported certificate file (you will need to enter the password for the compressed file).

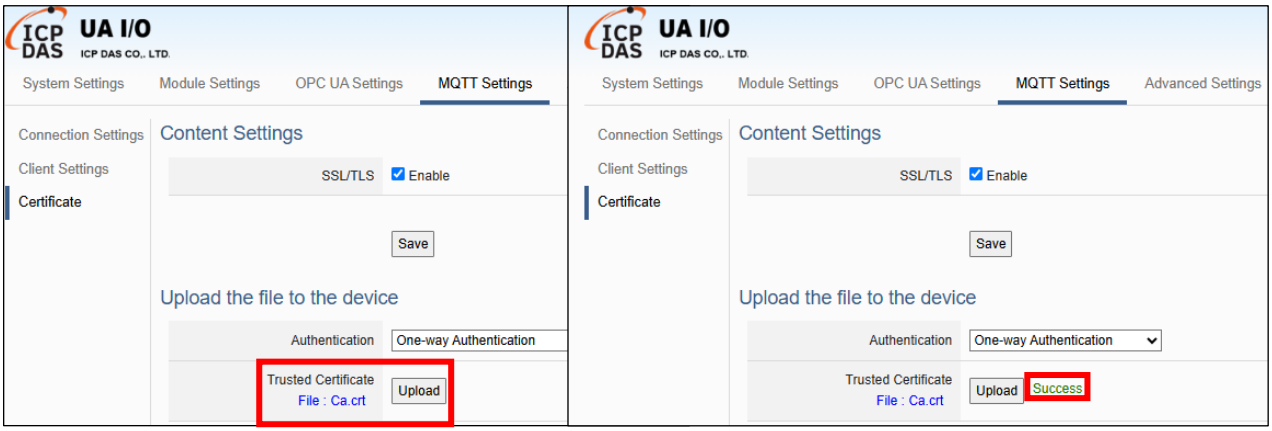
2. **Import File Certificate:** Then import the certificate through the UA I/O web page.
   UA Web Page: First, go to the Function Area, select (Master) Modbus TCP ⇔ MQTT, then click MQTT Certificate > Select File > Upload. Select File: (Ca.crt)

UA I/O Web Page: Click MQTT Settings > Certificate > Upload. Select File: (Ca.crt)

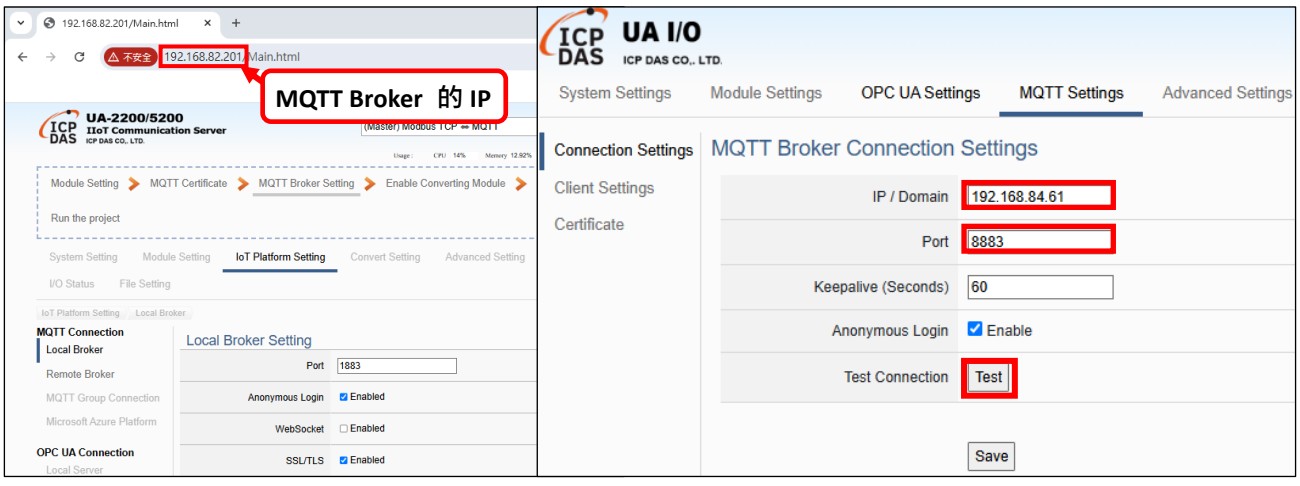
Open the "EZ-UAQ Utility_Certificate_2xxx_xx_xx" folder, go to the CA folder, then select the Ca.crt file and import it.

A "success" message appears to the right of the Upload button (as shown in the image), indicating that the CA certificate has been successfully imported.

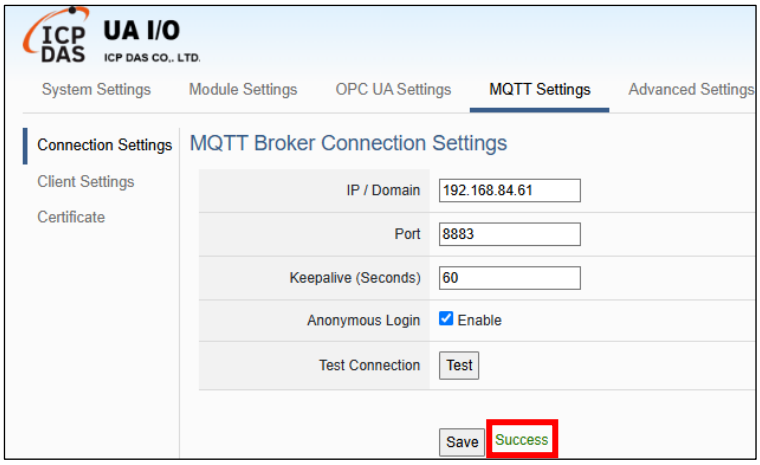




In the **UA I/O web page**, go to MQTT Settings > Connection Settings > IP/Domain, enter the MQTT Broker's IP, and set the port to 8883 (if using certificate-based connection, the original unencrypted connection port 1883 must be changed to 8883). Then, click the Test button to perform a connection test.



A "success" message appears to the right of the Test button, indicating that the connection test using the certificate was successful.



➢ Check Validity Period

The【Query】function is used to check the validity period of the certificate used by the module. Expiration indicates that the certificate has expired. If the certificate validity is more than 30 days, it will display >30. Not enabled means the certificate has not been activated.

Check the box for the module certificate whose validity period needs to be queried, then click the 【Query】 button. The interface will display "Checking certificate activation and expiration dates," indicating that the check process has begun. Next, a "Certificate Information" window will pop up (Figure 5-140), where you can view the module certificate's validity period.

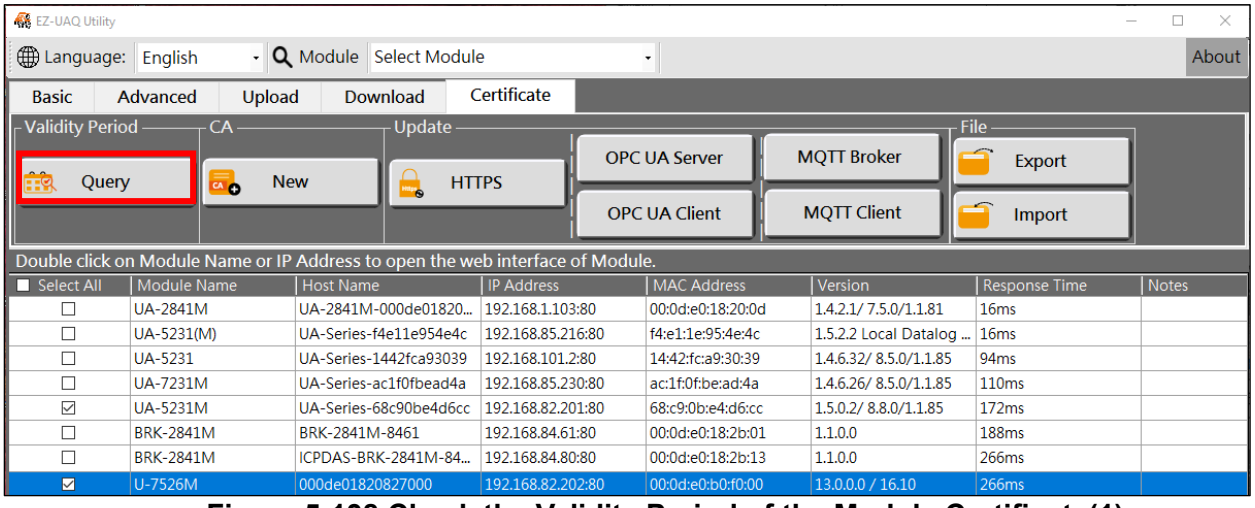


Figure 5-138 Check the Validity Period of the Module Certificate(1)

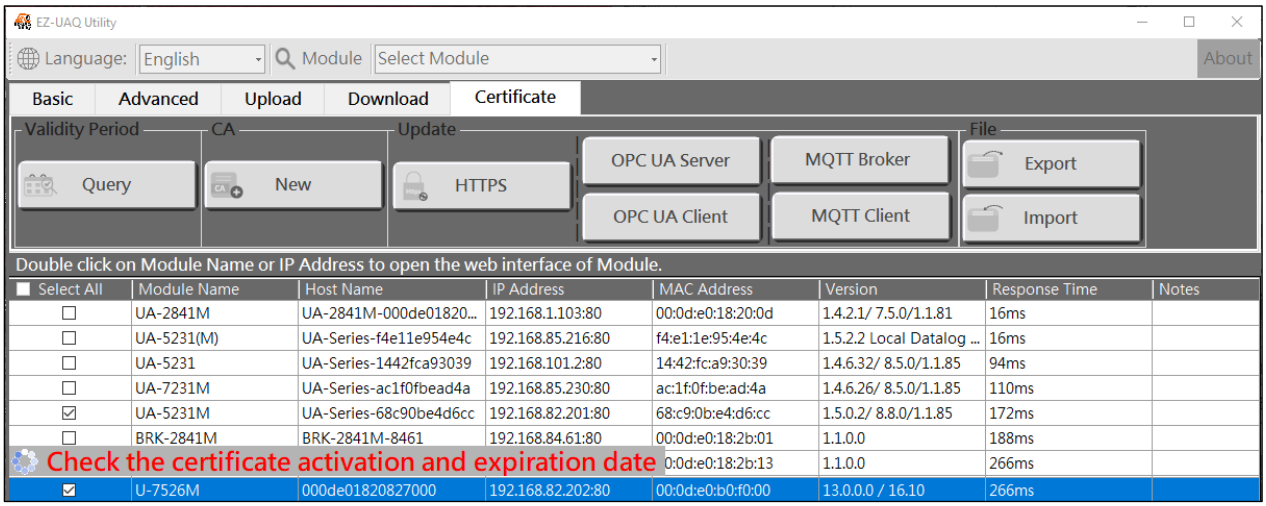


Figure 5-139 Check the Validity Period of the Module Certificate(2)

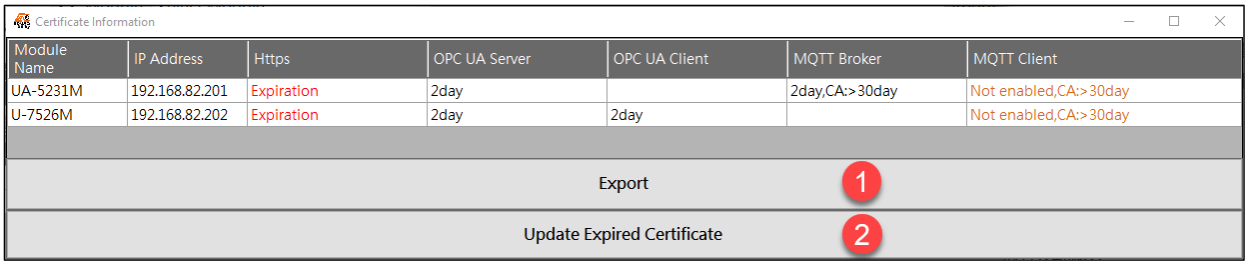
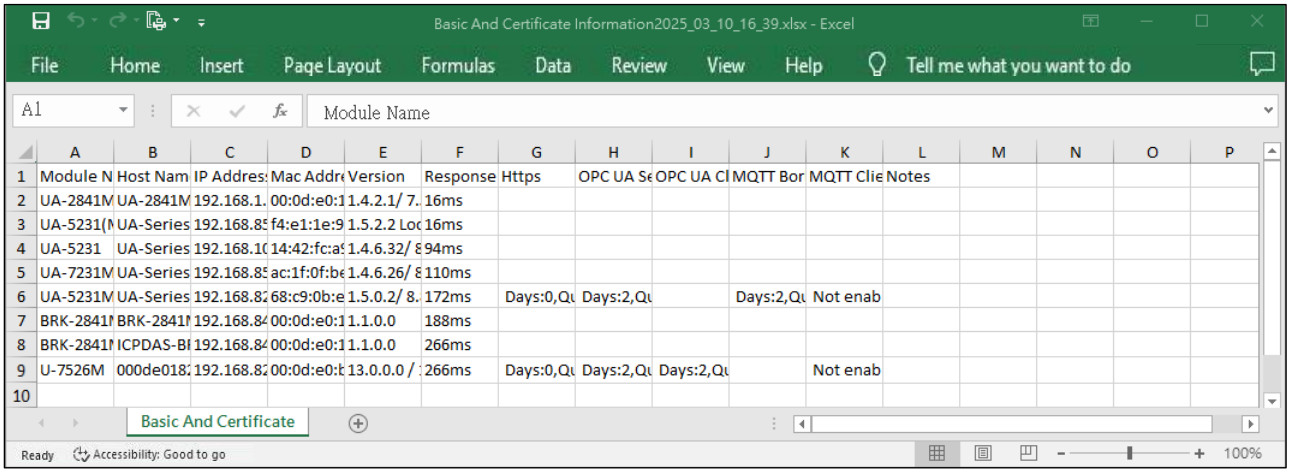


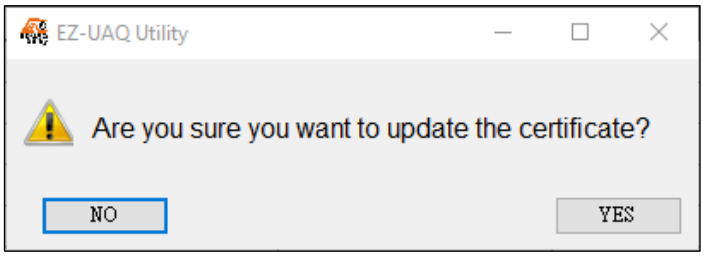
Figure 5-140 Check the Validity Period of the Module Certificate(3)

"Certificate Information" window description:

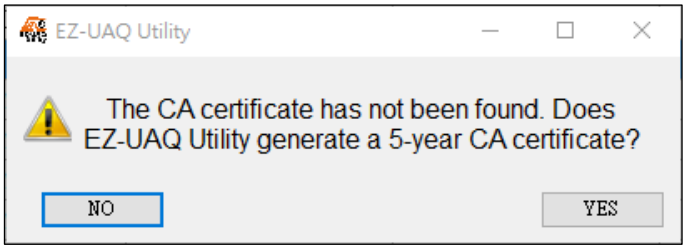
1. Export: Both certificate information and basic information are exported together. The exported Excel data is shown in the diagram below.



2. Update Expired Certificates: Update all module certificates with a validity period of <= 1 day or marked as Expiration.

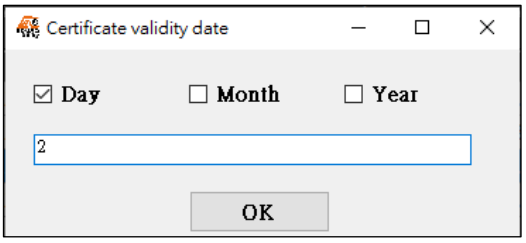


If the following message appears, it indicates that the EZ-UAQ Utility has not generated a CA certificate. The user can choose whether to have the EZ-UAQ Utility generate a 5-year CA certificate. If this function is not used, the user can also use the [Add] function to generate a new CA certificate, or use the [Import] function to import third-party CA certificate and Key files as the basis for the MQTT certificate.

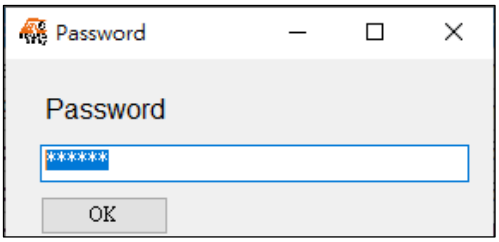


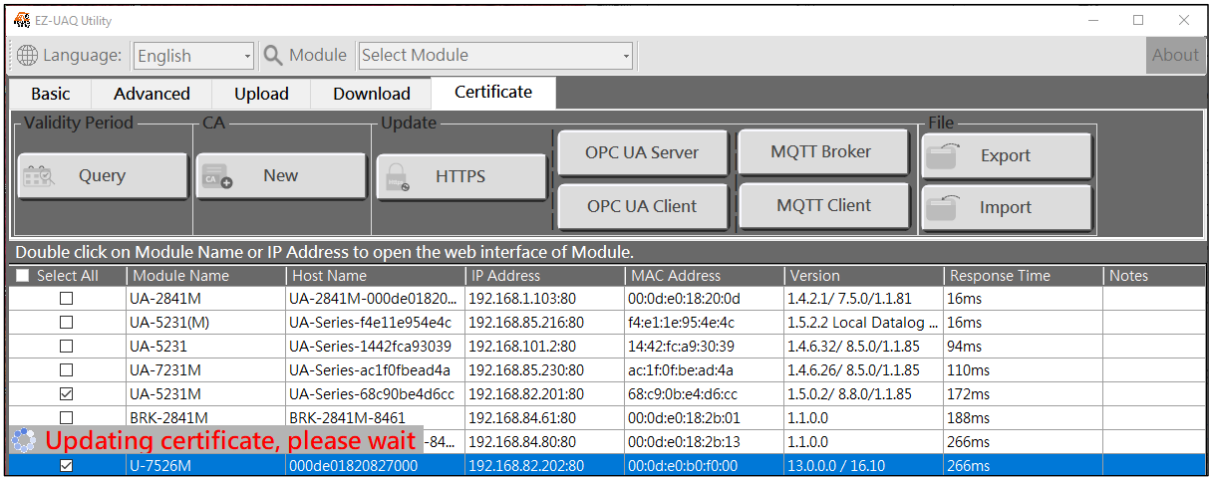
Please enter the expiration days for the CA certificate in the 'Certificate Validity Date' window, and then click OK.

- ❖ Please refer to Appendix C for certificate date input restrictions, which detail the limitations and recommendations for input.

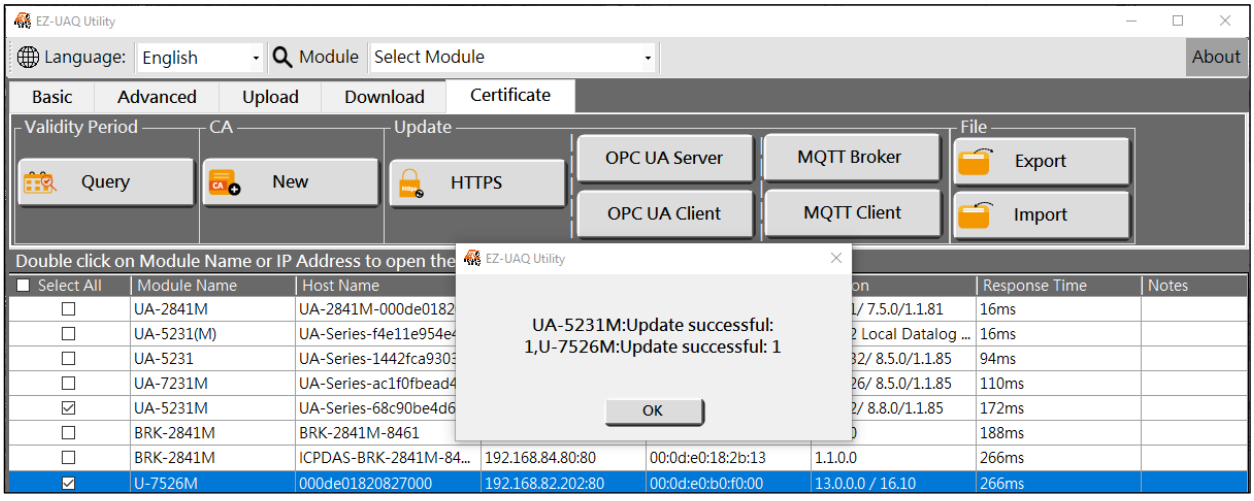


Enter the password for the module settings in EZ-UAQ Utility, then click OK. The interface will display "Updating certificate, please wait", indicating that the update process has begun.

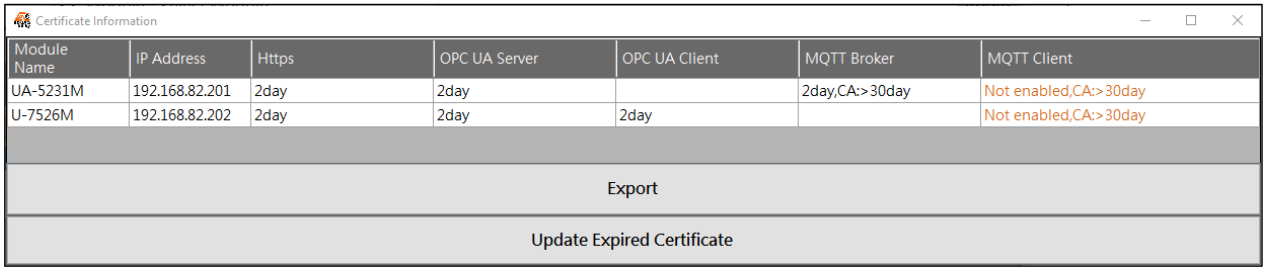




When the update is successful, the word 'Update Successful' will appear in the [Notes] column of the selected module.



After completing the above steps, click the 【**Query**】 button again. You will see that all expired certificates have been successfully updated.



➢ Export Files

【**Export**】 Function: This function exports certificates generated by EZ-UAQ Utility into a zip file. The exported zip file will require the user to input a password. If EZ-UAQ Utility has not generated any certificates, a message will appear. The following explanation assumes that certificates have already been generated using EZ-UAQ Utility.

Step 1: Click the 【**Export**】 button, and a password window will pop up.

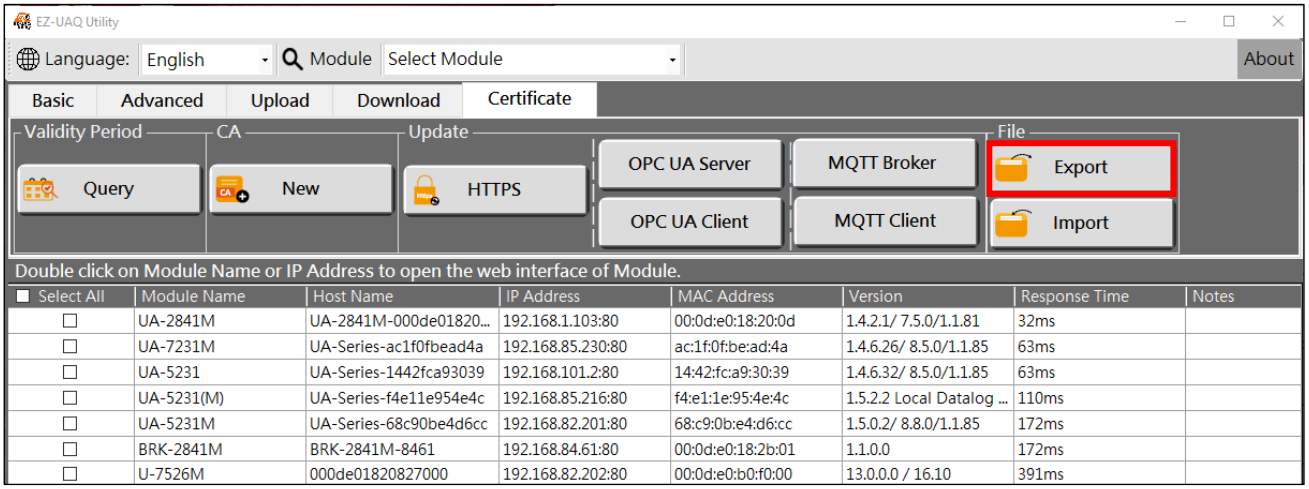


Figure 5-141 Export Files (1)

Step 2: In the password window, enter the password for the compressed file (a minimum of 3 characters is required). Then, select the storage path. A success message will appear indicating that the file has been saved. Click OK to proceed.

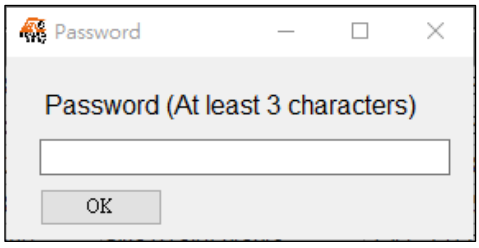


Figure 5-142 Export Files (2)

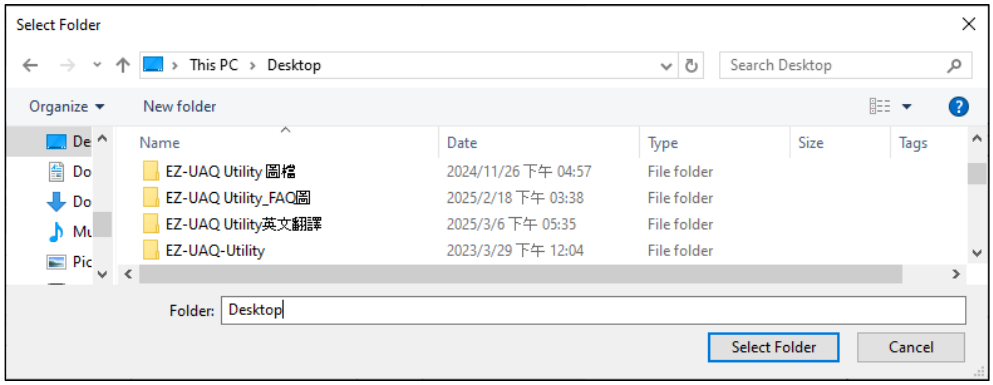


Figure 5-143 Export Files (3)

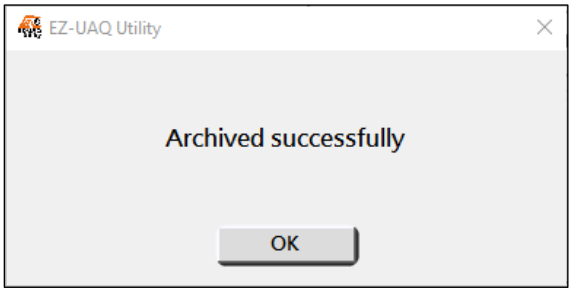


Figure 5-144 Export Files (4)

Step 3: Next, a message will pop up asking, "Do you want to delete the certificates in the EZ-UAQ Utility directory?" Please select YES.

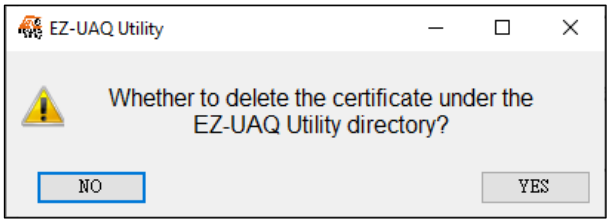
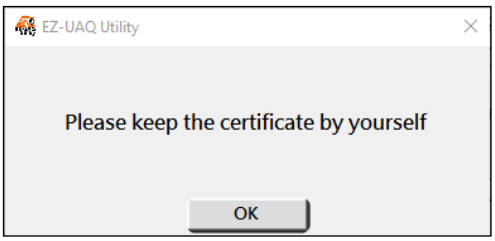


Figure 5-145 Export Files (5)

When the user selects "YES", the certificates generated by EZ-UAQ Utility will be deleted. After deletion, the user must manually save the certificates. On the other hand, selecting "NO" will retain the certificates generated by EZ-UAQ Utility.



Step 4: The following diagram shows the exported file and its file name.

Exported File Name:
EZ-UAQ Utility_Certificate_Year_Month_Day.zip

➢ Import Files

【**Import**】function: Users are allowed to import their own CA certificates into EZ-UAQ Utility to generate MQTT certificates. At the same time, they can also import certificates exported from EZ-UAQ Utility.

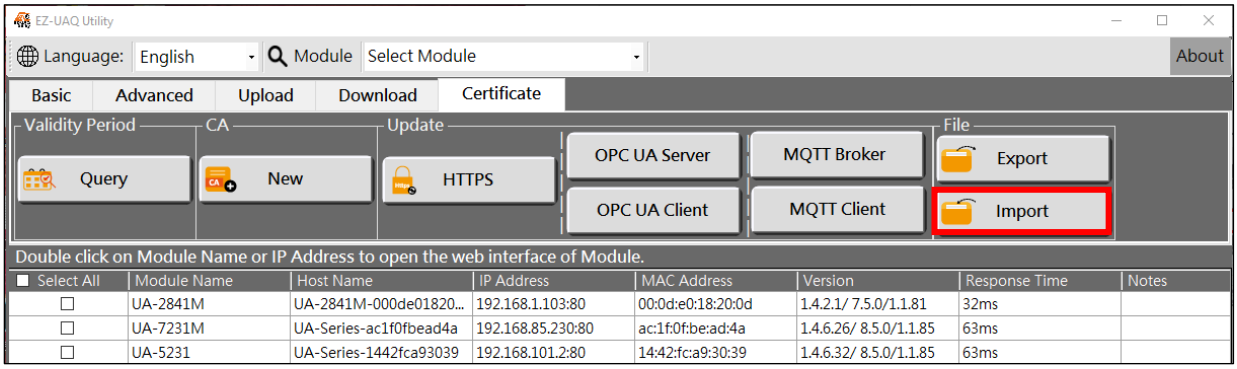


Figure 5-146 Import Files(1)

[CA Certificate Key]: Users can import third-party CA certificate keys.

[Compressed File]: After generating and exporting the certificate via EZ-UAQ Utility, users can import the exported zip file back into EZ-UAQ Utility.

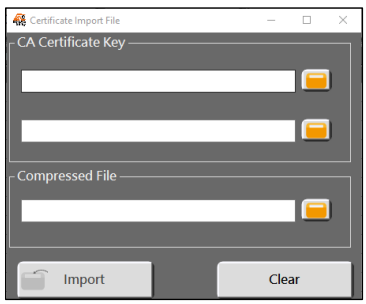


Figure 5-147 Import Files(2)

5.3 Display Area

It can display Module Name, Host Name, IP Address, MAC Address, firmware version, product response time when searching, comments and other information, and has the functions of setting hidden/show fields, sorting, opening module setting webpage, etc... .

Select All	Module Name	Host Name	IP Address	MAC Address	Version	Response Time	Notes
☐	UA-5231	UA-Series-a0f6fd48918f	192.168.1.63:80	a0:f6:fd:48:91:8f	1.4.6.0/ 7.8.0/1.1.85	15ms	
☐	UA-5231	UA-Series-1442fca93039	192.168.101.2:80	14:42:fc:a9:30:39	1.4.2.0/ 6.6.0/1.1.81	47ms	
☐	UA-5231(M)	UA-Series-68c90be4d6cc	192.168.1.201:80	68:c9:0b:e4:d6:cc	1.4.6.0/ 7.8.0/1.1.85	47ms	
☐	UA-5231(M)	UA-Series-40bd32c78696	192.168.85.30:80	40:bd:32:c7:86:96	1.4.6.5/ 7.8.0/1.1.85	47ms	
☐	UA-5231M-4GE	UA-Series-684749ec41d9	192.168.85.212:80	68:47:49:ec:41:d9	1.4.6.5/ 7.8.0/1.1.85	47ms	

Figure 5-148 Display Area Information

Module Name: Displays the name of the module shell.
Host Name: The Host Name can be obtained on the EZ-UAQ Utility. In terms of the OPC UA protocol, for example, when using UaExpert and graphics control software, the software will display the Host Name of the module connected to it, allowing the user to confirm the software. Whether the connected module is correct or not.

- **[hide/unhide all]**
  When there is too much information in the display area, use the [hide] function to hide the unimportant fields and then use the [unhide all] function to display all the information. if you want to hide the [Version] field please use the mouse to right-click on any position in the [Version] field, then [hide] and [unhide all] will appear. Click [hide] to hide the [Version]. Field.

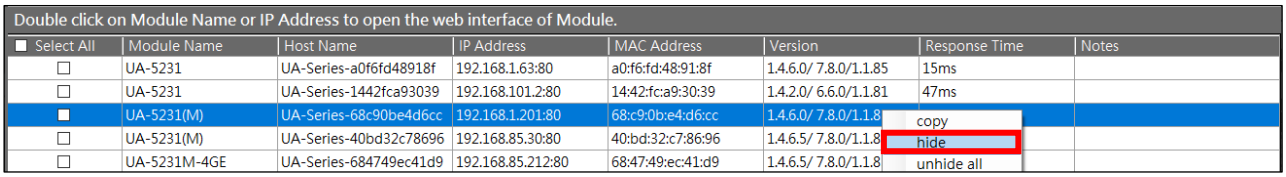


Figure 5-149 Hidden Fields Function

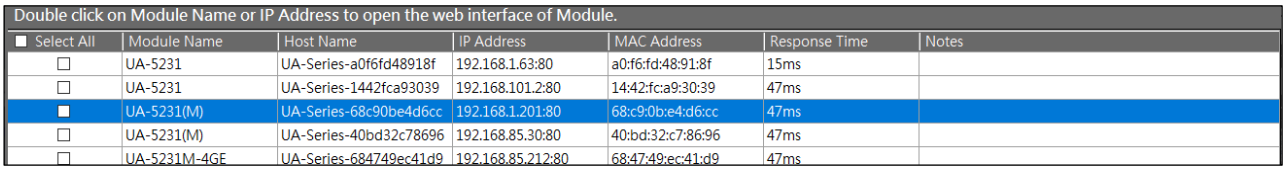


Figure 5-150 Hide Version Field

If you want to display the hidden message again, just right-click [unhide all] anywhere in the display area to display the hidden information, as shown below.

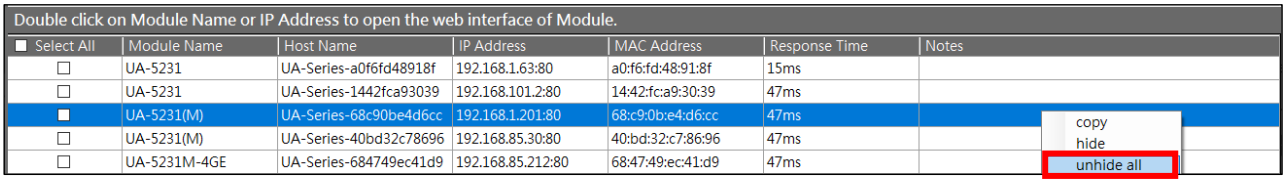


Figure 5-151 Display Fields Function

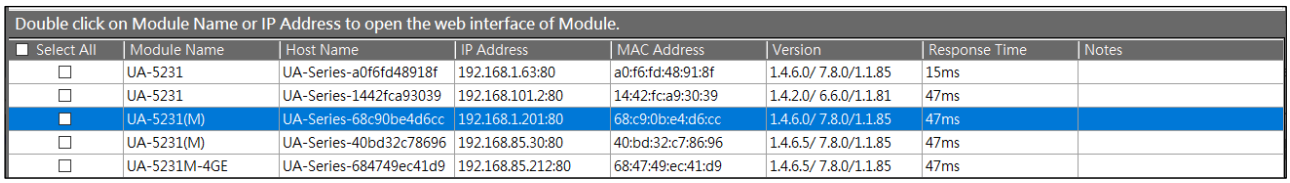


Figure 5-152 Display the Hidden Version Field

➢ Open the module's setting web page

Open the module's setting web page by double-clicking on the module column, The click is between the [Module Name] and [IP Address] fields, as shown in the figure below, for example, the UA I/O module UA, and BRK series also support this function, which is convenient to modify the various settings.

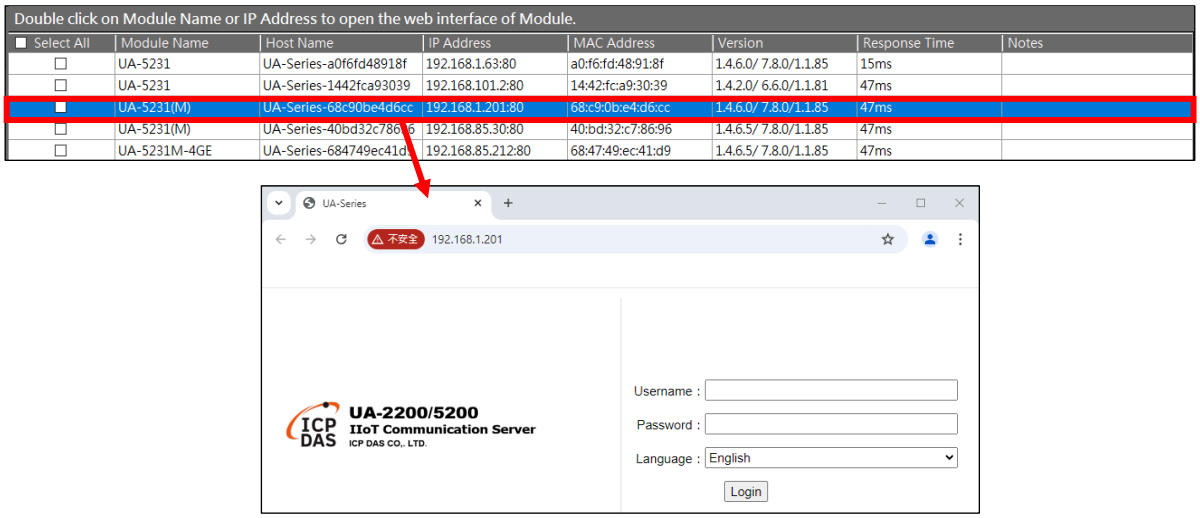


Figure 5-153 Open the module's setting web page

➢ Copy

Click the "Copy" function to directly paste the Host Name, IP, and other information on the module to the third-party software, facilitate module connections with UaExpert, MQTTX, or other third-party software.

Copy the UA IP address as shown in the example below and paste it to MQTTX for connection.

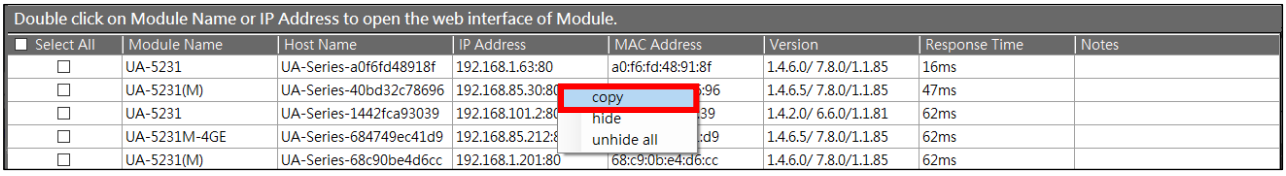
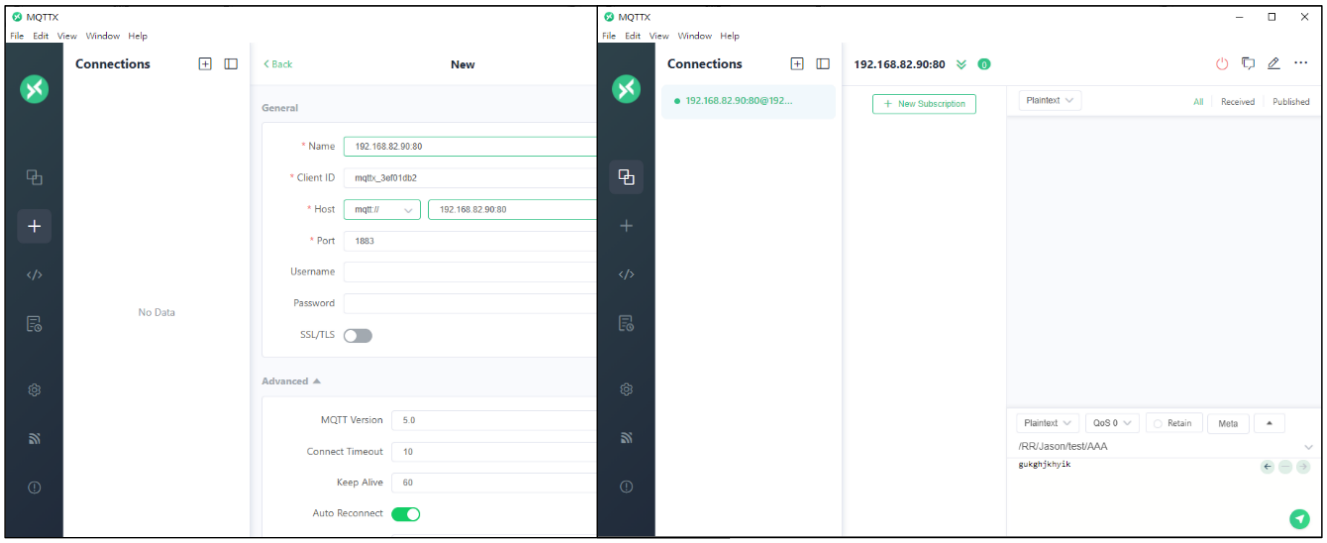


Figure 5-154 Copy Function



6. Warning Message

*** Note: If a warning message box pops up or [Notes] displays a warning message, please refer to this chapter for instructions.**

6.1 Warning Message Form

When the software pops up a warning message box or [Notes] displays a warning message, you can query the corresponding warning message through the table below.

Warning Message	Description	page
This version does not support this feature	The modules already support some Utility functions, but new functions are not yet avaliable.	P.80
Server not responding	The module must be updated to a version that supports Utility, or there may be network problems.	P.80
Please select an updated file	File not selected for update.	P.80
Tick the module(s) that need to be updated	The update file has been imported, but no module is checked for an update.	P.81
Please confirm whether the selected module(s) are the same (##Module Name)	When updating multiple modules, select different modules to update.	P.81
The updated file is different from the selected module(s) series	The firmware update package is different from the checked module series.	P.81
Update Fail	Same series but the firmware update package is different from the checked module.	P.81
Please check the same series of module(s)	Check the different series of modules.	P.82
The remote module(s) does not have any LOG files	There is no Log file on the module.	P.82
Download fail	There is a file download error when downloading.	P.82
Please check to download the file module(s)	No module is checked for download.	P.83
Password error no response	The entered password is different from the module setting utility password, so the action is cancelled.	P.83
EZ-UAQ Utility Already Running	Only one Utility can be opened at a time.	P.83
Unable to download or uploadUnable to download	Unable to download or upload files in the moduleUnable to download	P.84

Table 6-1 Warning Message Form

6.2 Warning Message Description

1. Message:[This version does not support this feature]
   Context:[Module Details、Reduce CPU、Protocol security、Update Firmware、Update Project、Update Modbus Configuration、Download Log、Download Project、Download Modbus Configuration、HTTPS、OPC UA Server/Client、MQTT Broker/Client]

   When the message below appears, it means that the module does not support this function or the password must be entered with an empty string. Entering an empty string is a function that can only be used in older versions. Please refer to Appendix A for each series of versions. If the version has not been updated, please first Use the module setting web page to update the firmware, or update via Utility.

Select All	Module Name	Host Name	IP Address	MAC Address	Version	Response Time	Notes
☐	UA-5231M	UA-Series-68c90be4d6cc	192.168.82.201:80	68:c9:0b:e4:d6:cc	1.4.6.29/ 8.5.0/1.1.85	0ms	
☐	BRK-2841M	BRK-2841M-8460	192.168.84.60:80	00:0d:e0:18:2b:05	1.0.0.79	140ms	
☑	U-7526M	000de01820827000	192.168.82.202:80	00:0d:e0:18:20:82	13.2.0.0 / 16.10	140ms	This version does not support this feature

Figure 6-1 Warning Message: This version does not support this feature

2. Message:[Server not responding]and[Unable to receive messages from the server]
   Context:[Module Details、Reduce CPU、Protocol security、Update Firmware、Update Project、Update Modbus Configuration、Download Log、Download Project、Download Modbus Configuration、HTTPS、OPC UA Server/Client、MQTT Broker/Client、Query validity period]

   When the message below appears, please check the network is in good condition. Please refer to Appendix A. If the version has not been updated, please use the module's setting web page to update the firmware.

Select All	Module Name	Host Name	IP Address	MAC Address	Version	Response Time	Notes
☐	UA-5231M	UA-Series-68c90be4d6cc	192.168.82.201:80	68:c9:0b:e4:d6:cc	1.4.6.29/ 8.5.0/1.1.85	16ms	
☐	UA-5231	UA-Series-1442fca93039	192.168.101.2:80	14:42:fc:a9:30:39	1.4.6.32/ 8.5.0/1.1.85	47ms	
☐	UA-5231M-4GE	UA-Series-684749ec41d9	192.168.85.200:80	68:47:49:ec:41:d9	1.4.6.32/ 8.5.0/1.1.85	62ms	
☐	BRK-2841M	BRK-2841M-8461	192.168.84.61:80	00:0d:e0:18:2b:01	1.0.0.79	109ms	
☐	BRK-2841M	BRK-2841M-8460	192.168.84.60:80	00:0d:e0:18:2b:05	1.0.0.79	141ms	
☑	U-7526M	000de01820827000	192.168.82.202:80	00:0d:e0:18:20:82	13.2.0.0 / 16.10	156ms	Server not responding

Select All	Module Name	Host Name	IP Address	MAC Address	Version	Response Time	Notes
☐	UA-5231M	UA-Series-68c90be4d6cc	192.168.82.201:80	68:c9:0b:e4:d6:cc	1.4.6.29/ 8.5.0/1.1.85	16ms	
☐	UA-5231	UA-Series-1442fca93039	192.168.101.2:80	14:42:fc:a9:30:39	1.4.6.32/ 8.5.0/1.1.85	47ms	
☐	UA-5231M-4GE	UA-Series-684749ec41d9	192.168.85.200:80	68:47:49:ec:41:d9	1.4.6.32/ 8.5.0/1.1.85	62ms	
☐	BRK-2841M	BRK-2841M-8461	192.168.84.61:80	00:0d:e0:18:2b:01	1.0.0.79	109ms	
☐	BRK-2841M	BRK-2841M-8460	192.168.84.60:80	00:0d:e0:18:2b:05	1.0.0.79	141ms	
☑	U-7526M	000de01820827000	192.168.82.202:80	00:0d:e0:18:20:82	13.2.0.0 / 16.10	156ms	Unable to receive messages from the server

Figure 6-2 Warning Message: Server not responding and Unable to receive messages from the server

3. Message:[Please select an updated file]
   Context:[Update Firmware、Update Project、Update Modbus Configuration]

   If you don't select the update file, click the [Update Firmware]、[Update Project]、[Update Modbus Configuration] button and this dialog box will pop up. Please click  to select the update package as shown below.

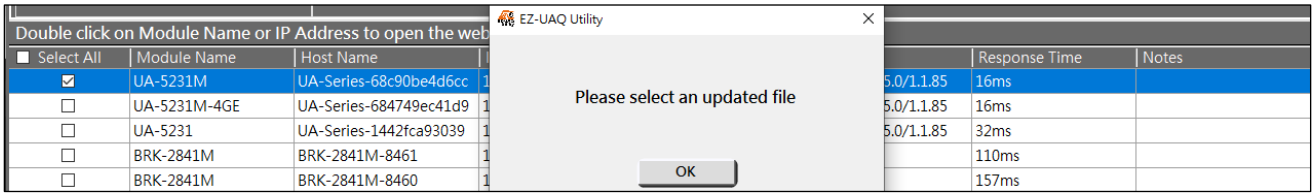


Figure 6-3 Warning Message: Please select an updated file

4. Message:[Tick the module(s) that need to be updated]
   Context:[Update Firmware、Update Project、Update Modbus Configuration、HTTPS、OPC UA Server/Client、MQTT Broker/Client]

   If no module is checked, click the [Update Firmware]、[Update Project]、[Update Modbus Configuration] buttons directly, and this dialog box will pop up. Please first check the module model that needs to be updated, as shown below:

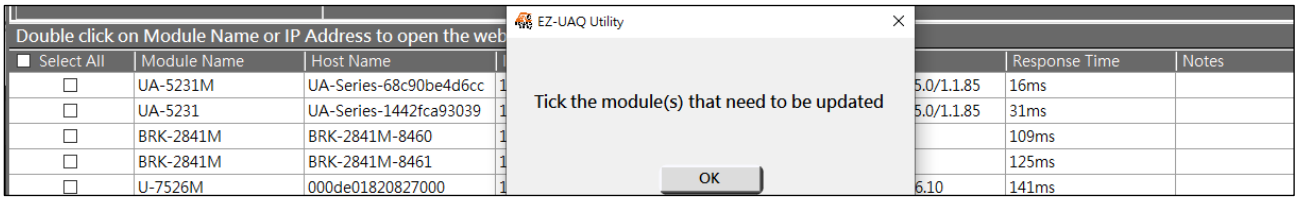


Figure 6-4 Warning Message: Tick the module(s) that need to be updated

5. Message:[Please confirm whether the selected module(s) are the same (##Module Name)]
   Context:[Update Firmware、Update Project]

   When updating multiple modules, this dialog box will pop up if you select different models. Please select the same model.

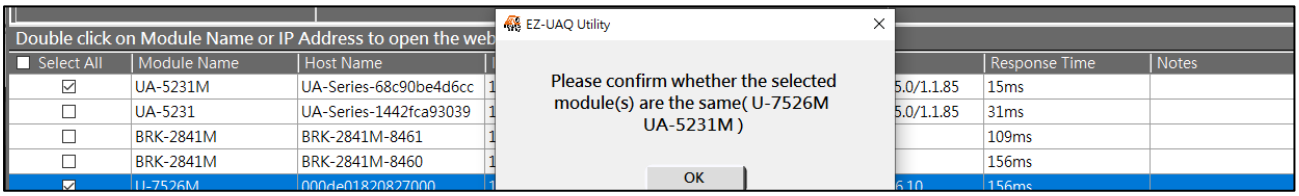


Figure 6-5 Warning Message: Please confirm whether the selected module(s) are the same

6. Message:[The updated file name is different from the selected module(s) series]
   Context:[Update Firmware]

   The following message appears, indicating that the firmware update package is different from the selected module series. Please use the installation package of the corresponding module to update. For example, the installation package of the UA communication module series will start with ua-, the installation package of the UA I/O series will start with u-, and the installation package of the BRK series will start with brk-.

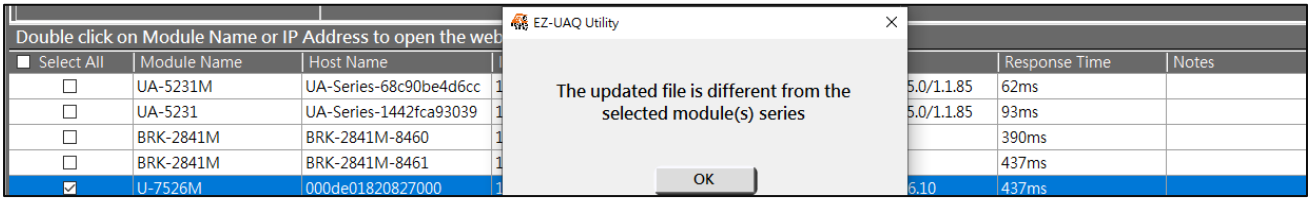


Figure 6-6 Warning Message: The updated file name is different from the selected module(s) series

7. Message:[Update Fail]
   Context:[Update Firmware、Update Project、Update Modbus Configuration、HTTPS、OPC UA Server/Client、MQTT Broker/Client]

   For the same series but the firmware update package is different from the selected module model, or when the firmware package is updated through an update project, "Update Failed" will be displayed in the [Notes] field.

Select All	Module Name	Host Name	IP Address	MAC Address	Version	Response Time	Notes
☑	UA-5231M	UA-Series-68c90be4d6cc	192.168.82.201:80	68:c9:0b:e4:d6:cc	1.4.6.29/ 8.5.0/1.1.85	16ms	Update Fail
☐	UA-5231	UA-Series-1442fca93039	192.168.101.2:80	14:42:fc:a9:30:39	1.4.6.32/ 8.5.0/1.1.85	32ms	
☐	BRK-2841M	BRK-2841M-8461	192.168.84.61:80	00:0d:e0:18:2b:01	1.0.0.79	110ms	
☐	BRK-2841M	BRK-2841M-8460	192.168.84.60:80	00:0d:e0:18:2b:05	1.0.0.79	141ms	
☐	U-7526M	000de01820827000	192.168.82.202:80	00:0d:e0:18:20:82	13.2.0.0 / 16.10	157ms	
☐	U-7567M	000de01821027000	192.168.81.100:80	00:0d:e0:18:21:02	7.0.0.0 / 16.10	250ms	
☐	U-7526M	000de01820117000	192.168.102.1:80	00:0d:e0:18:20:11	12.0.0.0 / 15.9	297ms	

Figure 6-7 Warning Message: Update Fail

When [updating firmware], the module will keep the red light on. You only need to turn off the power of the module, or select the correct model update package and then update it to eliminate the problem of the red light always on.

8. Message:[Please check the same series of module(s)]
   Context: [Download Log、Download Project、Download Modbus Configuration]

   Check different series of modules and directly click the [Download Project], [Download Log], [Download Modbus Configuration] button. This dialog box will pop up. Please check the module models of the same series, as shown below:

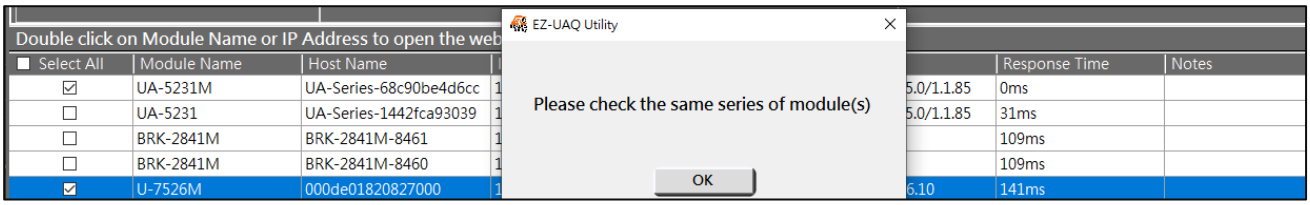


Figure 6-8 Warning Message: Please check the same series of module(s)

9. Message:[The remote module(s) does not have any LOG files]
   Context:[Download Log]

   When no log is opened in the module, the dialog box below will pop up as shown below.

Select All	Module Name	Host Name	IP Address	MAC Address	Version	Response Time	Notes
☐	UA-5231	UA-Series-1442fca93039	192.168.101.2:80	14:42:fc:a9:30:39	1.4.6.32/ 8.5.0/1.1.85	31ms	
☐	UA-5231M	UA-Series-68c90be4d6cc	192.168.82.201:80	68:c9:0b:e4:d6:cc	1.4.6.29/ 8.5.0/1.1.85	31ms	
☐	BRK-2841M	BRK-2841M-8461	192.168.84.61:80	00:0d:e0:18:2b:01	1.0.0.79	156ms	
☐	BRK-2841M	BRK-2841M-8460	192.168.84.60:80	00:0d:e0:18:2b:05	1.0.0.79	156ms	
☑	U-7526M	000de01820827000	192.168.82.202:80	00:0d:e0:18:20:82	13.2.0.0 / 16.10	203ms	The remote module(s) does not have any LOG files
☐	U-7526M	000de01820117000	192.168.102.1:80	00:0d:e0:18:20:11	12.0.0.0 / 15.9	312ms	

Figure 6-9 Warning Message: The remote module(s) does not have any LOG files

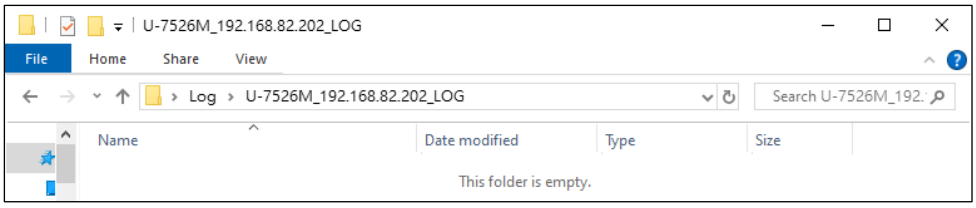
10. Message:[Download fail]
    Context:[Download Log、Download Project、Download Modbus Configuration]

    The download failure might be due to poor network quality in the environment, causing the file to not download successfully. If there is any issue with the downloaded file, a reload mechanism will be triggered. If the reload fails three times, the folder will be retained.

Select All	Module Name	Host Name	IP Address	MAC Address	Version	Response Time	Notes
☐	UA-5231M	UA-Series-68c90be4d6cc	192.168.82.201:80	68:c9:0b:e4:d6:cc	1.4.6.29/ 8.5.0/1.1.85	16ms	
☐	UA-5231	UA-Series-1442fca93039	192.168.101.2:80	14:42:fc:a9:30:39	1.4.6.32/ 8.5.0/1.1.85	16ms	
☐	BRK-2841M	BRK-2841M-8461	192.168.84.61:80	00:0d:e0:18:2b:01	1.0.0.79	109ms	
☐	BRK-2841M	BRK-2841M-8460	192.168.84.60:80	00:0d:e0:18:2b:05	1.0.0.79	141ms	
☑	U-7526M	000de01820827000	192.168.82.202:80	00:0d:e0:18:20:82	13.2.0.0 / 16.10	156ms	Download fail
☐	U-7560M	000de01821027000	192.168.81.100:80	00:0d:e0:18:21:02	14.0.0.0 / 16.10	234ms	
☐	U-7526M	000de01820117000	192.168.102.1:80	00:0d:e0:18:20:11	12.0.0.0 / 15.9	281ms	

Figure 6-10 Warning Message: Download fail

The picture below shows the selected storage path.



11. Message:[Please check to download the file module(s)]
Context: **[**Download Project、Download Log、Download Modbus Configuration]

The message below appears, indicating that the module that needs to be downloaded is not selected.

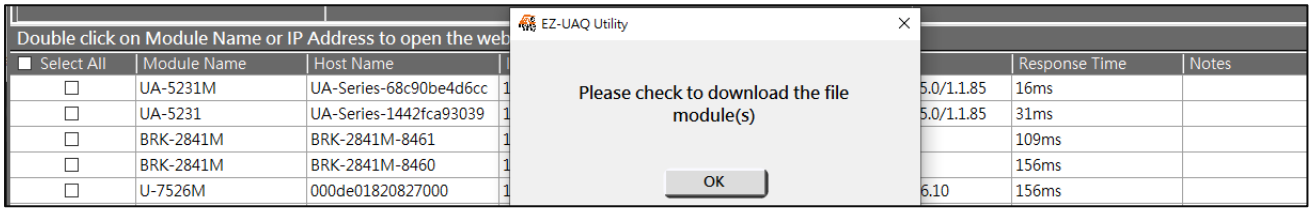


Figure 6-11 Warning Message: Please check to download the file module(s)

12. Message:[Password error no response]
Context:[Reduce CPU、Protocol security、Update Firmware、Update Project、Update Modbus Configuration、Download Log、Download Project、Download Modbus Configuration、HTTPS、OPC UA Server/Client 、MQTT Broker/Client]

The figure below shows that when modules of the same series but different models are used in the [Download Project] at the same time, the passwords set for the models are different, resulting in the two modules being unable to download at the same time. It is recommended that the passwords of the same series be set to same.

*** Note: Only the [Update Firmware] and [Update Project] functions require the same model to be updated in batches at the same time.**

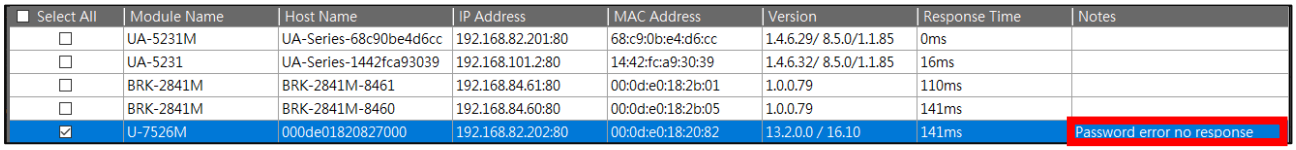


Figure 6-12 Warning Message: Password error no response

13. Message:[EZ-UAQ Utility Already Running]
Context:[Unable to open Utility repeatedly]

As long as the Utility is open, it is not possible to open another one.

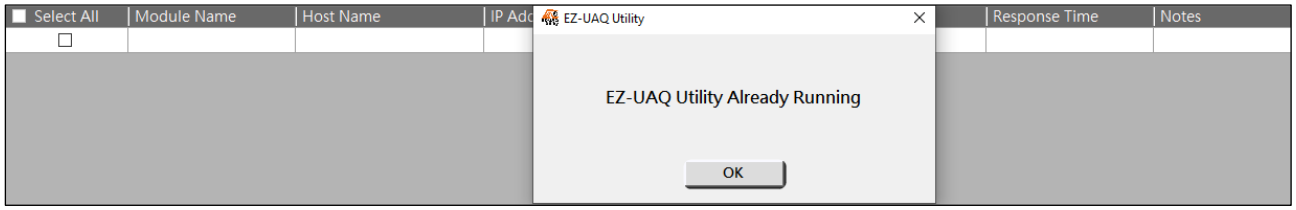


Figure 6-13 Warning Message: EZ-UAQ Utility Already Running

14. Message:[Unable to download]or[Unable to upload]

Context:[Update Firmware、Update Project、Update Modbus Configuration、Download Log、Download Project、Download Modbus Configuration、HTTPS、OPC UA Server/Client、MQTT Broker/Client]

The message in the image indicates that the EZ-UAQ Utility is unable to download files from the module or upload files to the module. When encountering this issue, the module needs to be restarted to resolve the upload and download problems.

Select All	Module Name	Host Name	IP Address	MAC Address	Version	Response Time	Notes
☐	UA-5231M	UA-Series-68c90be4d6cc	192.168.82.201:80	68:c9:0b:e4:d6:cc	1.4.6.29/ 8.5.0/1.1.85	16ms	
☐	UA-5231	UA-Series-1442fca93039	192.168.101.2:80	14:42:fc:a9:30:39	1.4.6.32/ 8.5.0/1.1.85	16ms	
☐	BRK-2841M	BRK-2841M-8461	192.168.84.61:80	00:0d:e0:18:2b:01	1.0.0.79	109ms	
☐	BRK-2841M	BRK-2841M-8460	192.168.84.60:80	00:0d:e0:18:2b:05	1.0.0.79	141ms	
☐	U-7526M	000de01820117000	192.168.102.1:80	00:0d:e0:18:20:11	12.0.0.0 / 15.9	156ms	
☑	U-7526M	000de01820827000	192.168.82.202:80	00:0d:e0:18:20:82	13.2.0.0 / 16.10	187ms	Unable to download
☐	U-7560M	000de01821027000	192.168.81.100:80	00:0d:e0:18:21:02	14.0.0.0 / 16.10	250ms	

Select All	Module Name	Host Name	IP Address	MAC Address	Version	Response Time	Notes
☐	UA-5231	UA-Series-1442fca93039	192.168.101.2:80	14:42:fc:a9:30:39	1.4.6.32/ 8.5.0/1.1.85	0ms	
☑	UA-5231M	UA-Series-68c90be4d6cc	192.168.82.201:80	68:c9:0b:e4:d6:cc	1.4.6.29/ 8.5.0/1.1.85	15ms	Unable to upload
☐	BRK-2841M	BRK-2841M-8461	192.168.84.61:80	00:0d:e0:18:2b:01	1.0.0.79	109ms	
☐	BRK-2841M	BRK-2841M-8460	192.168.84.60:80	00:0d:e0:18:2b:05	1.0.0.79	156ms	
☐	U-7526M	000de01820827000	192.168.82.202:80	00:0d:e0:18:20:82	13.2.0.0 / 16.10	156ms	
☐	U-7526M	000de01820117000	192.168.102.1:80	00:0d:e0:18:20:11	12.0.0.0 / 15.9	156ms	
☐	U-7560M	000de01821027000	192.168.81.100:80	00:0d:e0:18:21:02	14.0.0.0 / 16.10	281ms	

Figure 6-14 Warning Message: Unable to download or Unable to upload

Appendix A

Module Function Support:

1. UA Series

Factory version	Basic Function	Update Firmware	Download Project	Download Log	Update Project	Module Details	Reduce CPU usage	Download Modbus Configuration
After 1.4.2.0 (inclusive)	✓	✓	✓	✓	✓	✓	✓	✓

Starting from 1.4.6.32, the following new features have been added:

Factory version	HTTPS	OPC UA Server	OPC UA Client	MQTT Broker	MQTT Client	Protocol security	Update Modbus Configuration
After 1.4.6.32 (inclusive)	✓	✓	✗	✓	✓	✓	✓

2. UA I/O Series

Factory version	Basic Function	Update Firmware	Download Project	Download Log	Update Project	Module Details	Reduce CPU usage	Download Modbus Configuration
Before 13.8	✓	✓	✓	✓	✗	✗	✗	✗
After 13.8 (inclusive)	✓	✓	✓	✓	✓	✓	✓	✗

Starting from 16.10, the following new features have been added:

Factory version	HTTPS	OPC UA Server	OPC UA Client	MQTT Broker	MQTT Client	Protocol security	Update Modbus Configuration
After 16.10 (inclusive)	✓	✓	✓	✗	✓	✗	✗

3. BRK Series

Factory version	Basic Function	Update Firmware	Download Project	Download Log	Update Project	Module Details	Reduce CPU usage	Download Modbus Configuration
1.0.0.0	✗	✗	✗	✗	✗	✗	✗	✗

Starting from 1.1.0.0, the following new features have been added:

Factory version	HTTPS	OPC UA Server	OPC UA Client	MQTT Broker	MQTT Client	Protocol security	Update Modbus Configuration
After 1.1.0.0 (inclusive)	✗	✗	✗	✓	✗	✓	✗

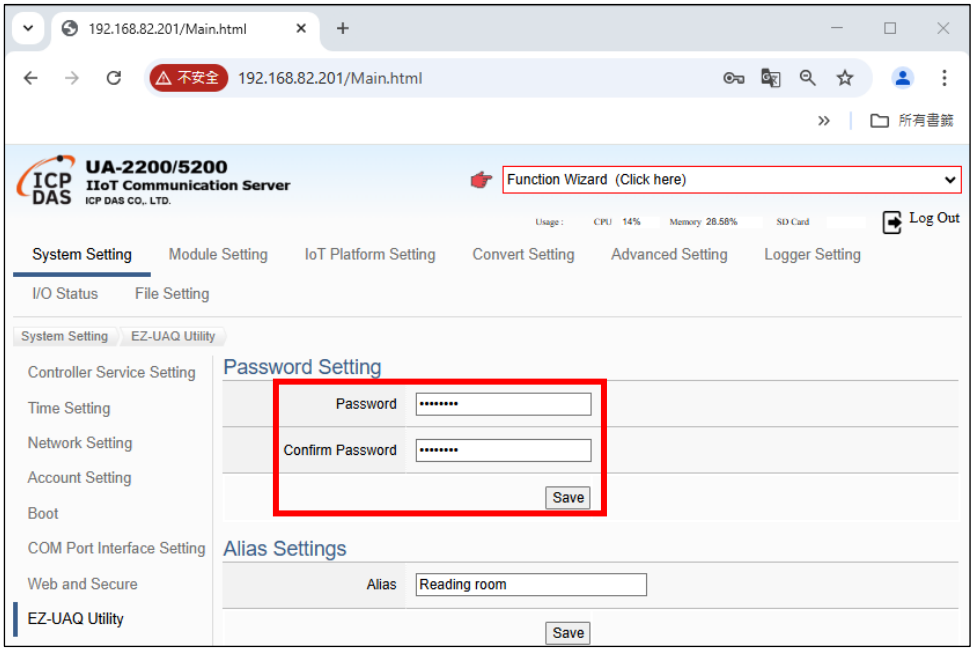
Appendix B

Set EZ-UAQ Utility password:

1. UA communication server series

Please go to the UA web interface to configure, and then click System Setting => EZ-UAQ Utility to set the password.

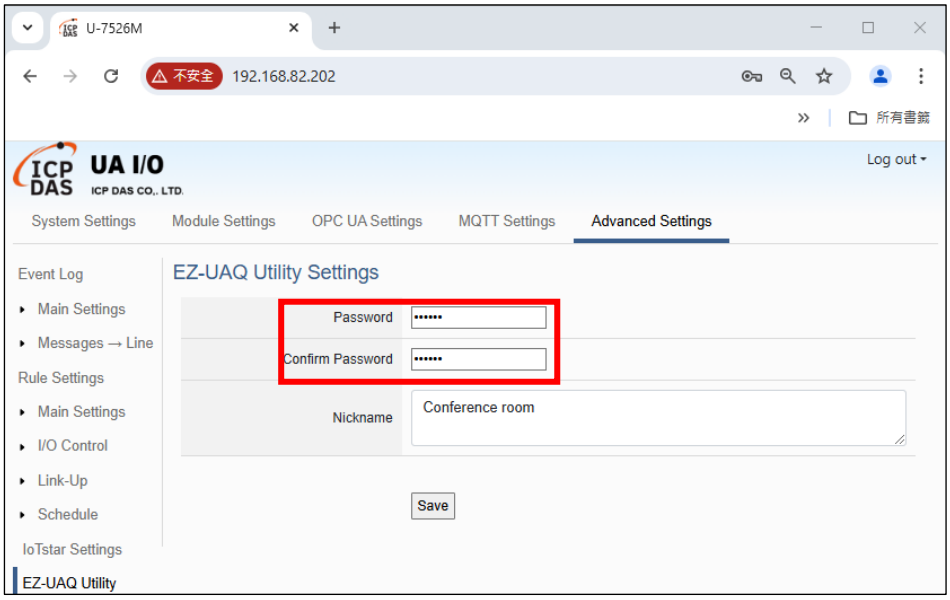
***Before setting the password, the password displayed on the communication server and EZ-UAQ Utility software is the default password.**



2. UA I/O module series

Please go to the UA I/O web interface to configure the module, and then click Advanced Setting => EZ-UAQ Utility to set the password.

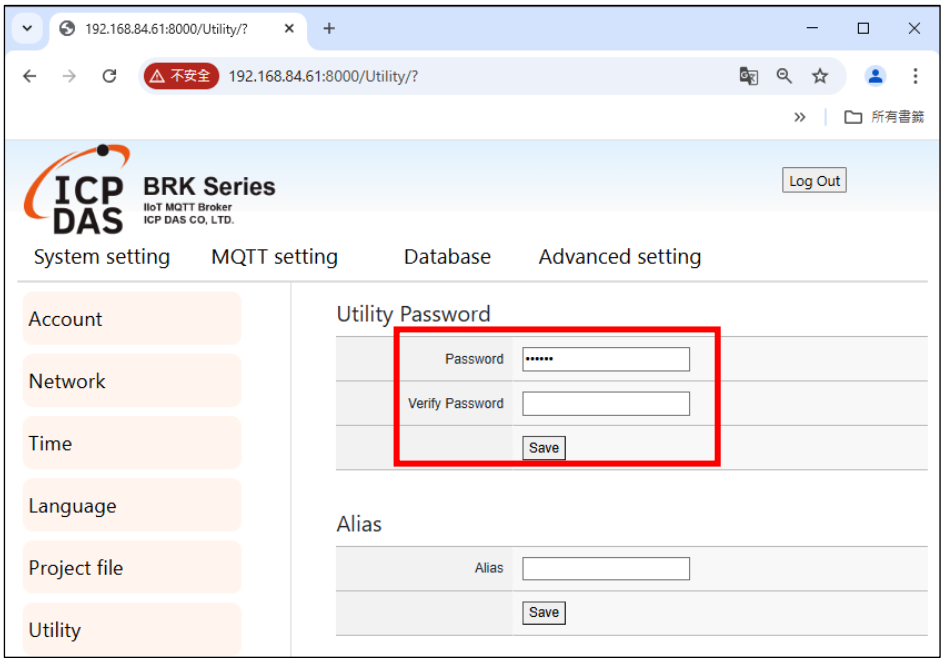
***Before the password is set, the password displayed on the module and EZ-UAQ Utility software is the default password.**



3. BRK communication server series

Please go to the BRK web interface to configure, and then click Utility => Utility to set the password.

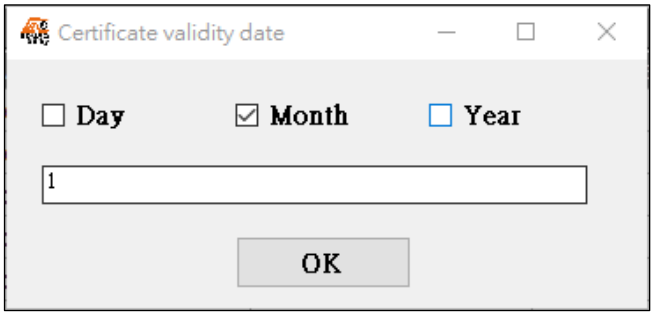
***Before setting the password, the password displayed on the communication server and EZ-UAQ Utility software is the default password.**



Appendix C

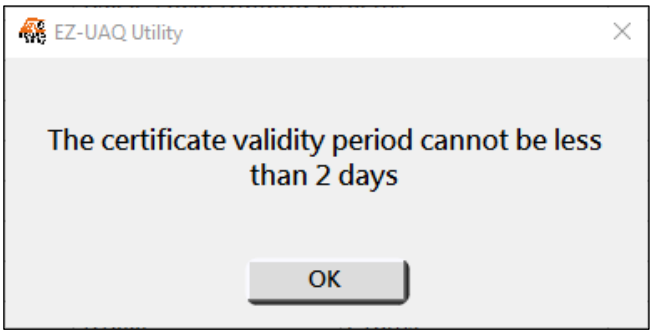
Certificate Date Input Restrictions:

EZ-UAQ UtiThe maximum validity period of the EZ-UAQ Utility certificate is two years. It is recommended that users set the certificate expiration date to one month.

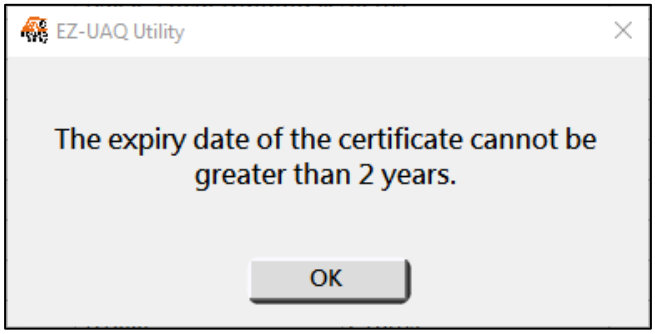


Have to enter the expiration days of the certificate

- **Minimum Value**:
  Day: The minimum value is 2. If it is lower than this, the message below will be triggered.



- **Maximum Value**:
  Year: The maximum value is 2; **Month:** the maximum value is 24; **Day:** The maximum value is 730. If it exceeds this value, the message below will be triggered.



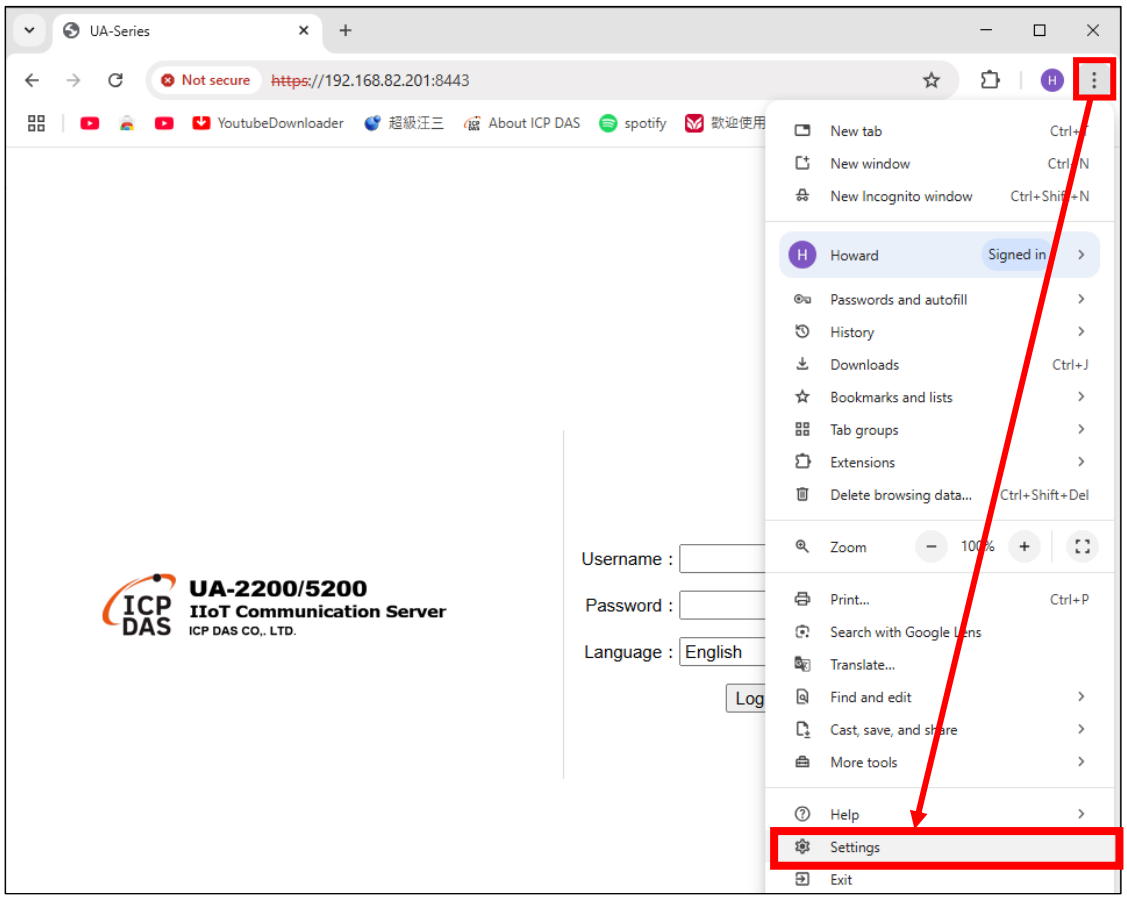
Appendix D

Resolving UA, UA I/O, and BRK Web Connection Security Issues

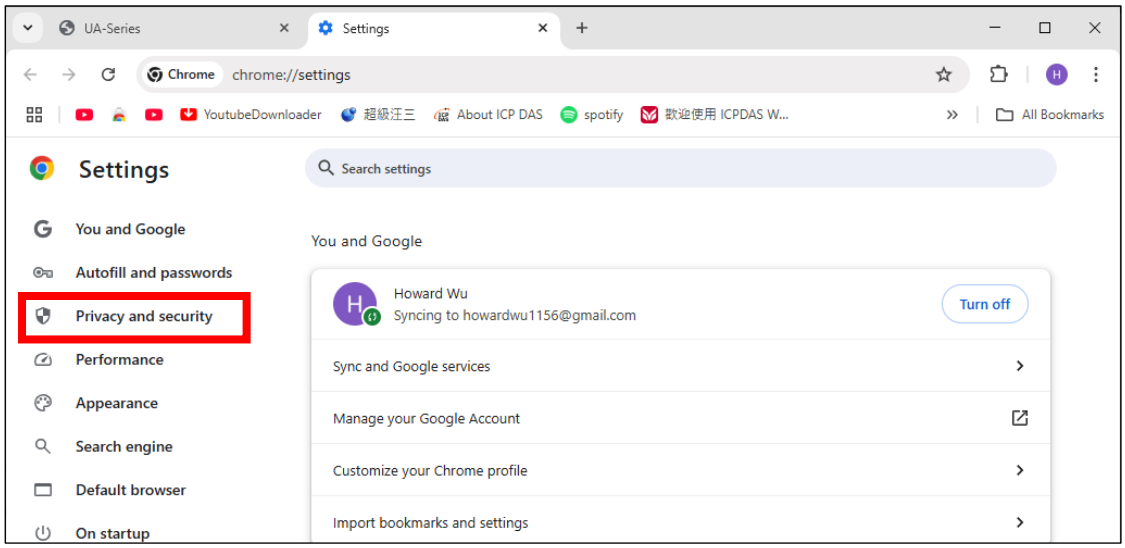
If the UA, UA I/O, or BRK web pages display as insecure, please update the HTTPS certificate, export it, and then import it into the browser to resolve the issue.

Taking UA Communication Server as an example, the steps are as follows:

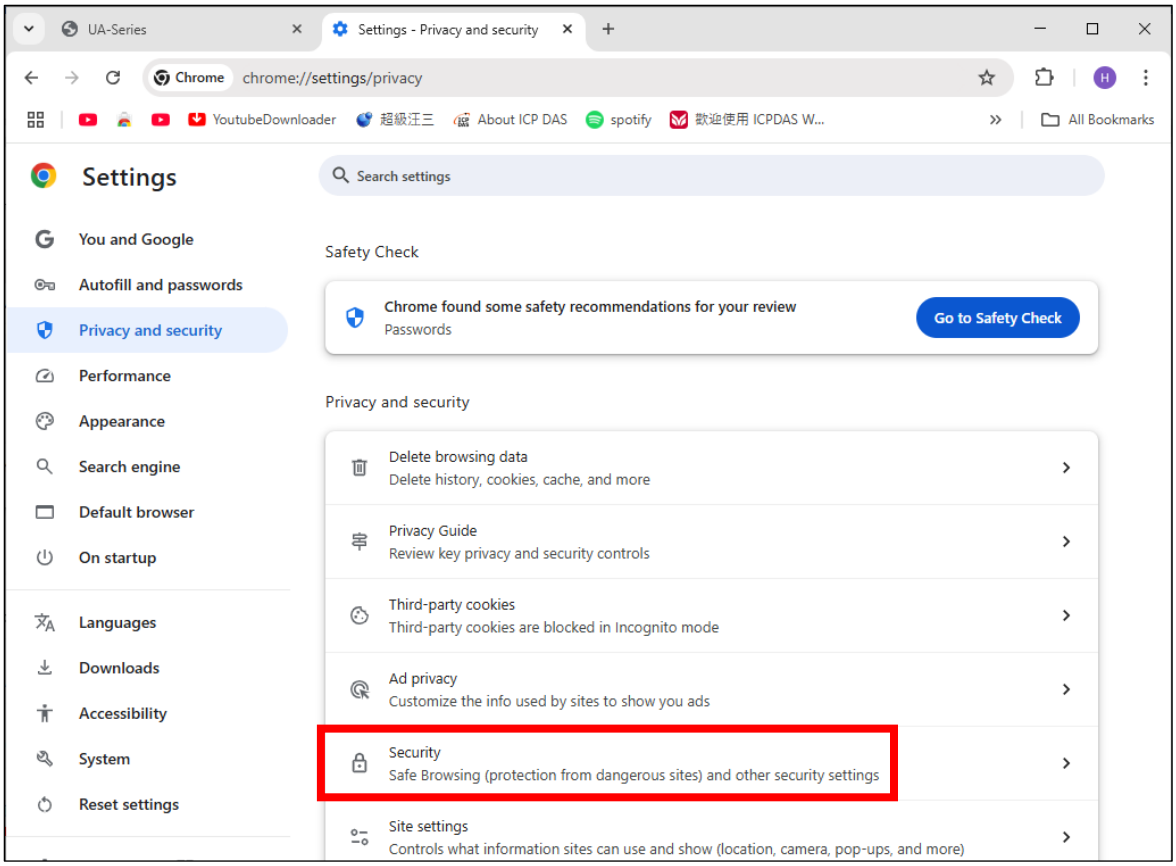
Step 1: Open the browser and enter the IP address of the UA Communication Server, then click the ⋮ button in the upper-right corner, and select 'Settings.



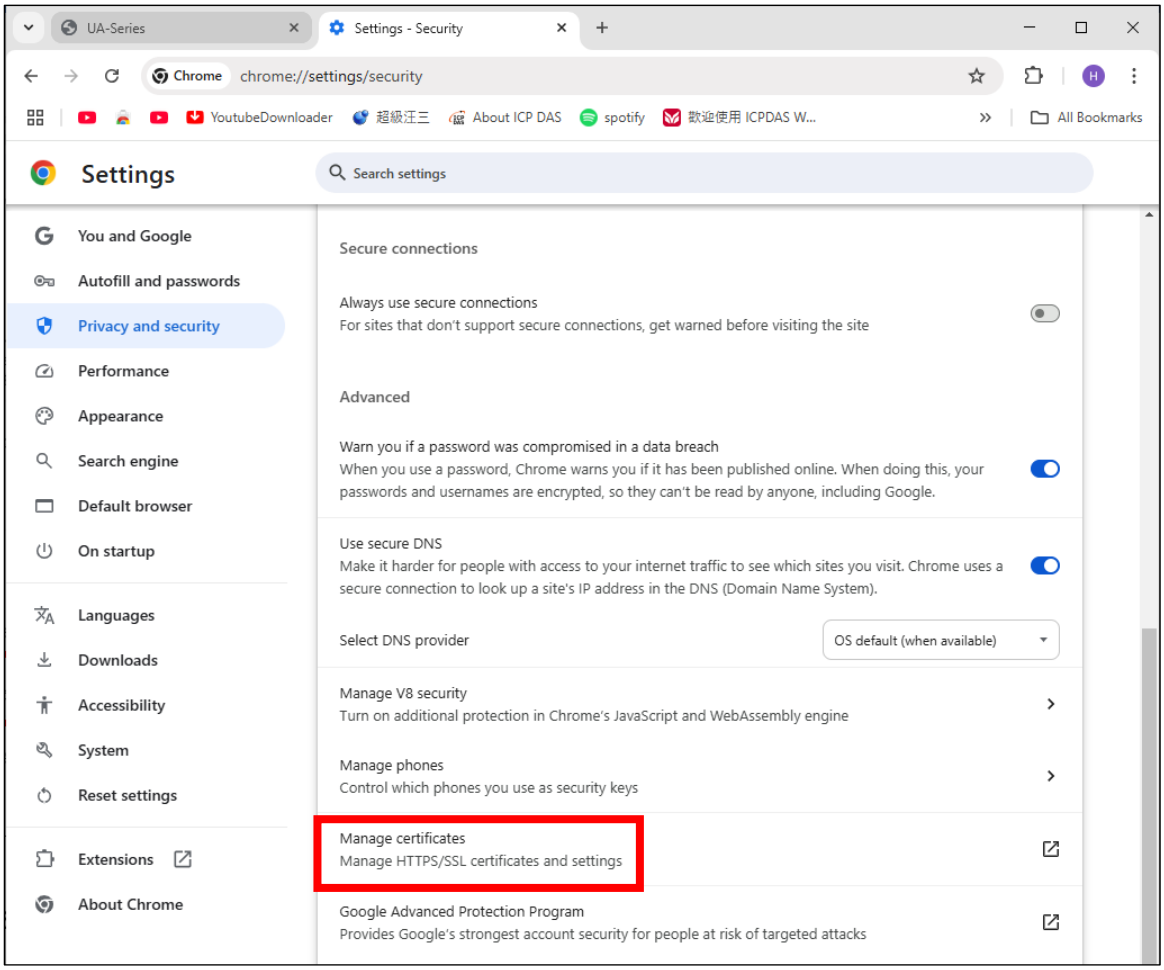
Step 2: Click on [Privacy and Security].



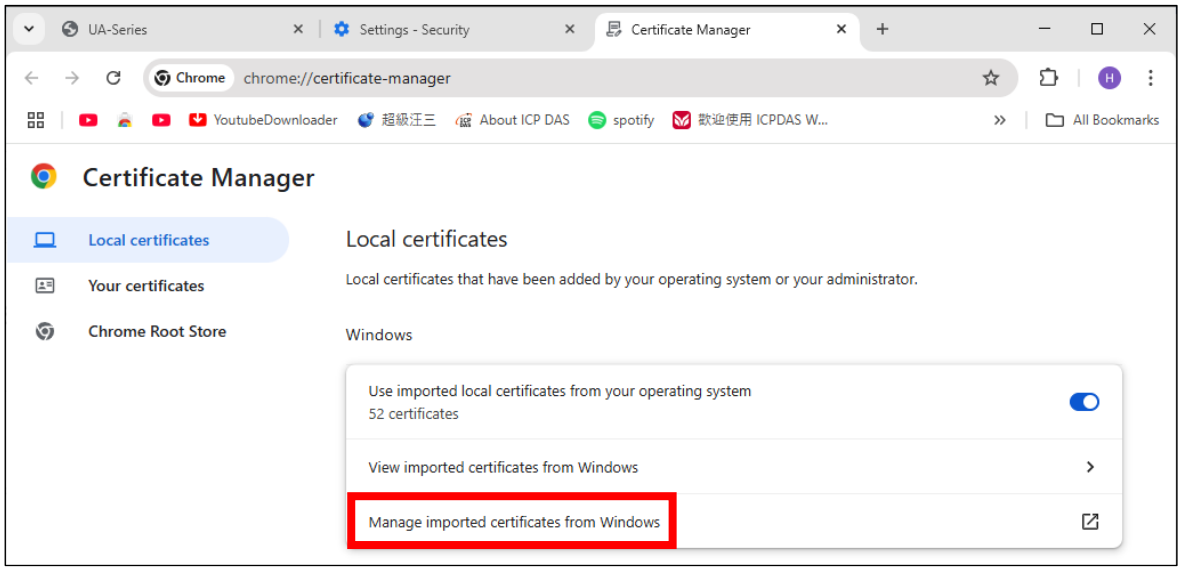
Step 3: Click on [Security]



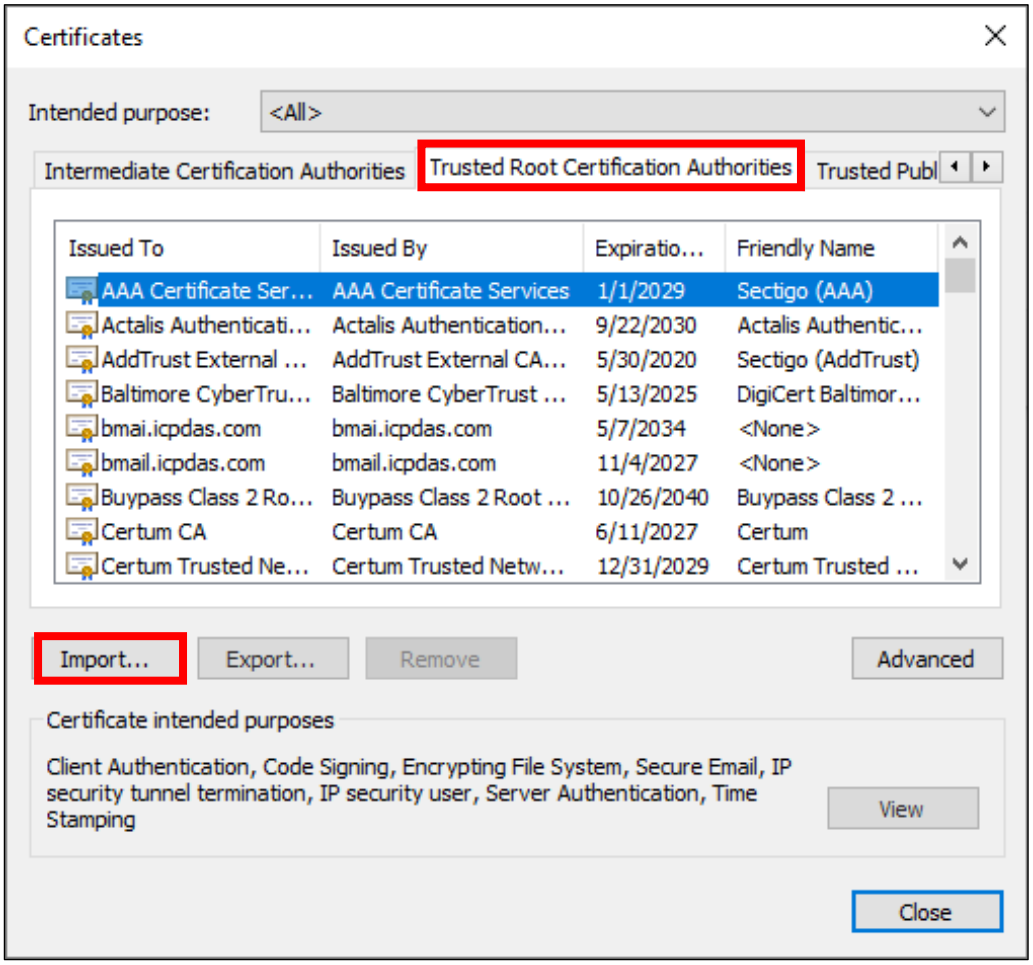
Step 4: Click on [Manage certificates]



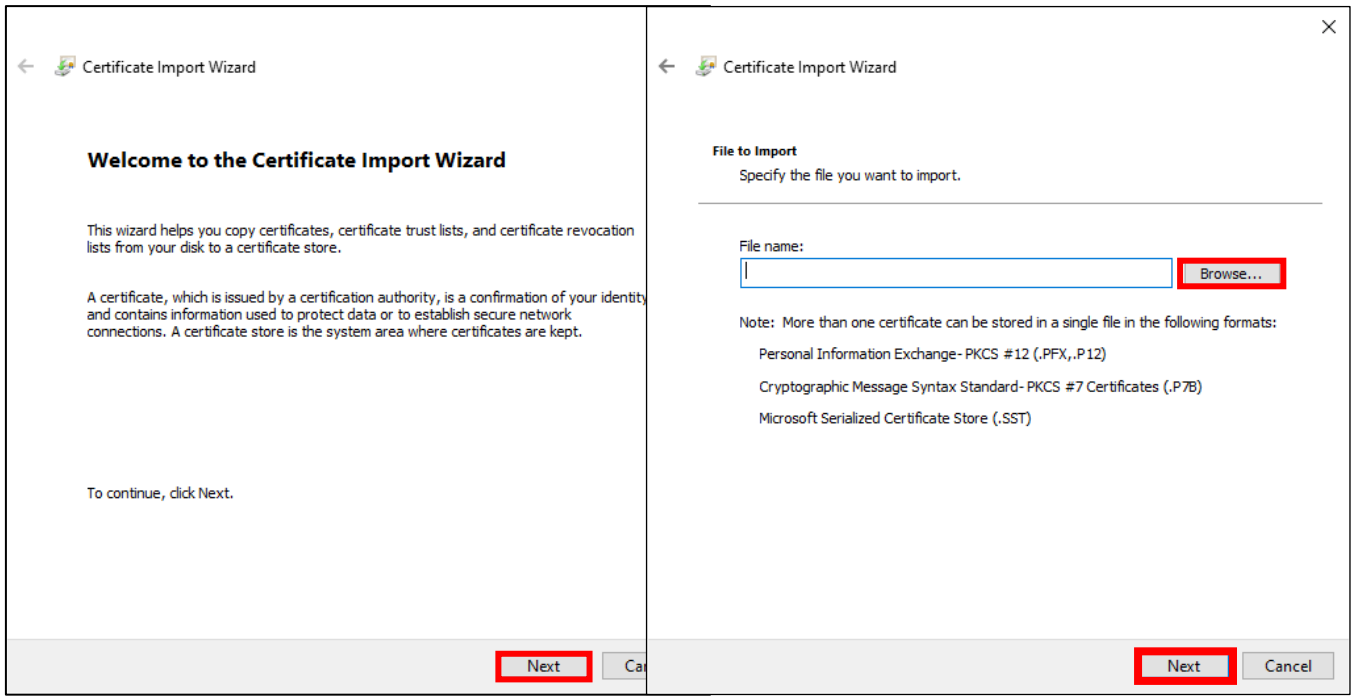
Step 5: Click on [Manage imported certificates from Windows]



Step 6: Click on [Trusted Root Certification Authorities], Click 'Import' to import the certificate generated by the software.

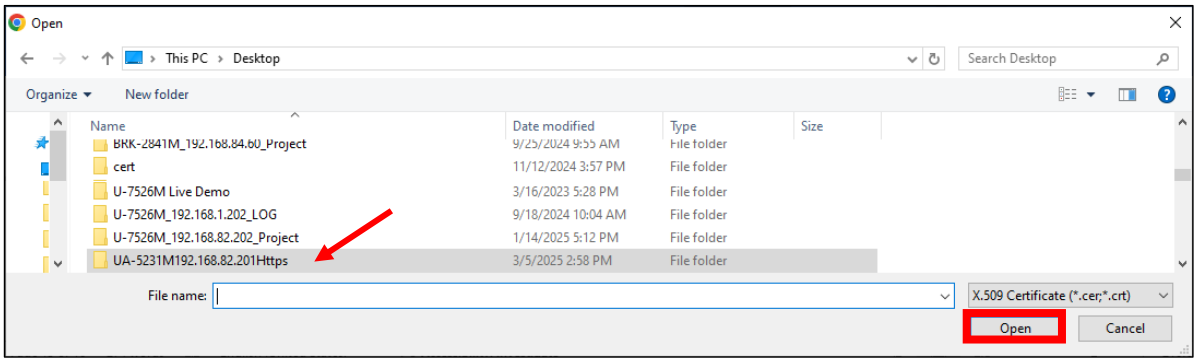


In the [Certificate Import Wizard] page, click 'Next,' and then select 'Browse.'

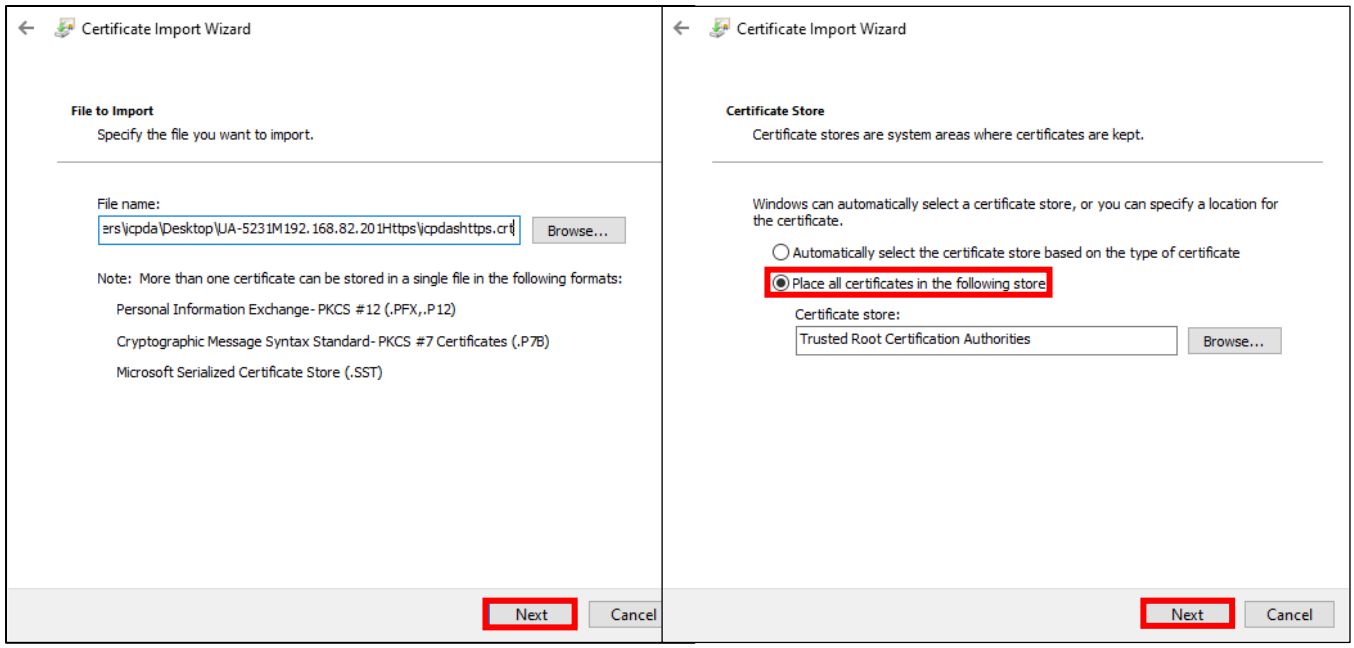


Step 7: Then, select the HTTPS certificate.

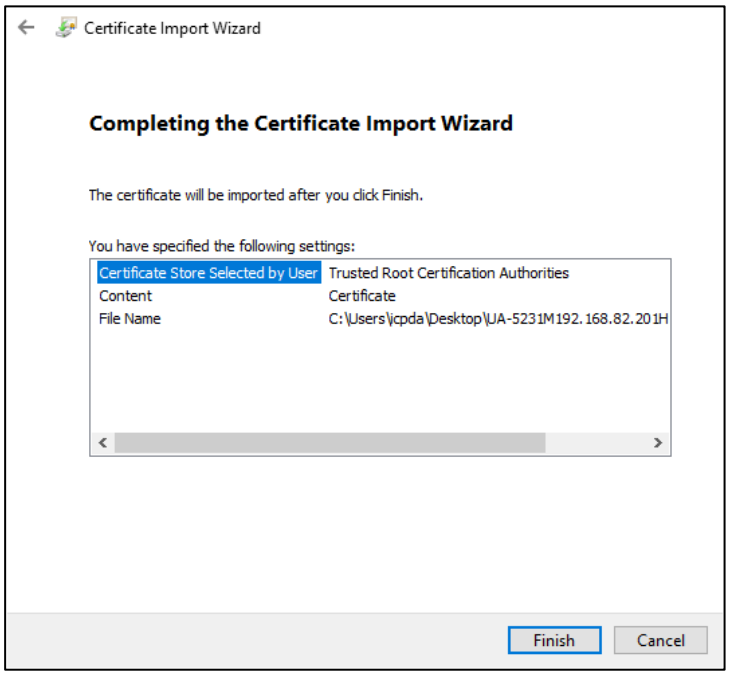
❖ Export the updated HTTPS certificate as a compressed certificate file using the certificate export function, then decompress it to retrieve the HTTPS certificate.



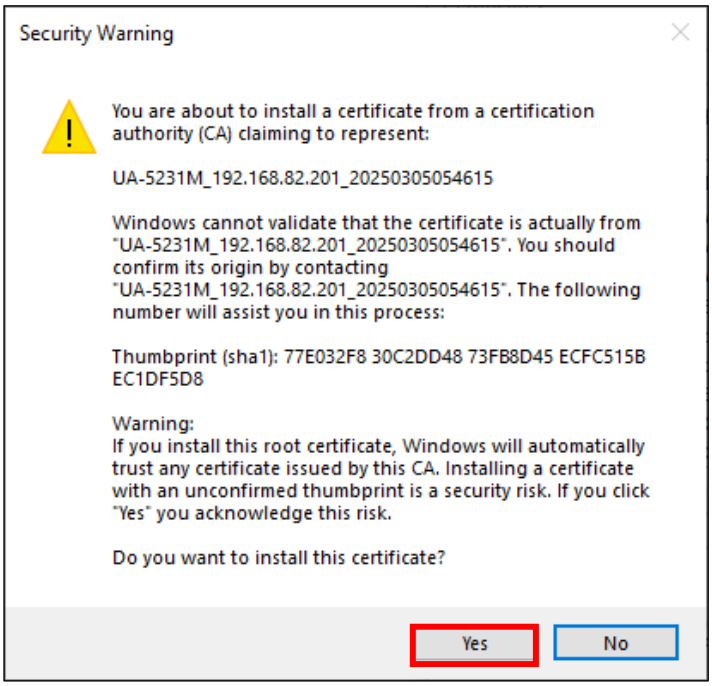
In the [Certificate Import Wizard] page, Click 'Next,' then select [Place all certificates in the following store (P)], and then click 'Next' again.



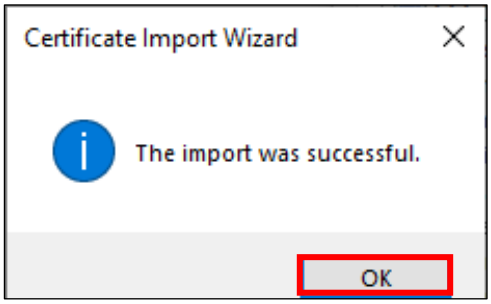
In the [Certificate Import Wizard] page, click ‘Finish.’



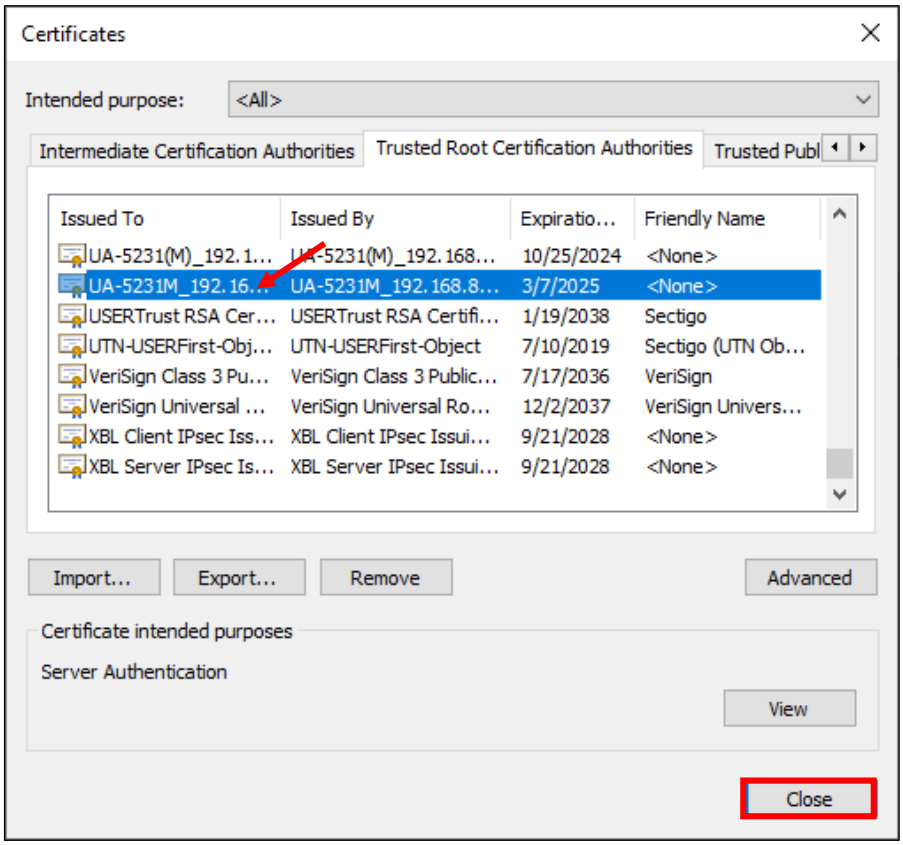
Next, a [Security Warning] window will appear. Please click 'Yes (Y).'



In the [Certificate Import Wizard] window, a message will appear indicating that the import was successful, meaning the HTTPS certificate has been successfully imported into the browser. Please click 'OK.'



Step 8: Verify that the certificate has been successfully imported into the browser, and then click 'Close.'



Step 9: After closing the browser, please reopen it and enter the HTTPS IP address of the UA Communication Server.

❖ To open the [Certificate Viewer window], first click the button in the upper-left corner, then click [Secure Connection Established] > [Certificate Valid].