

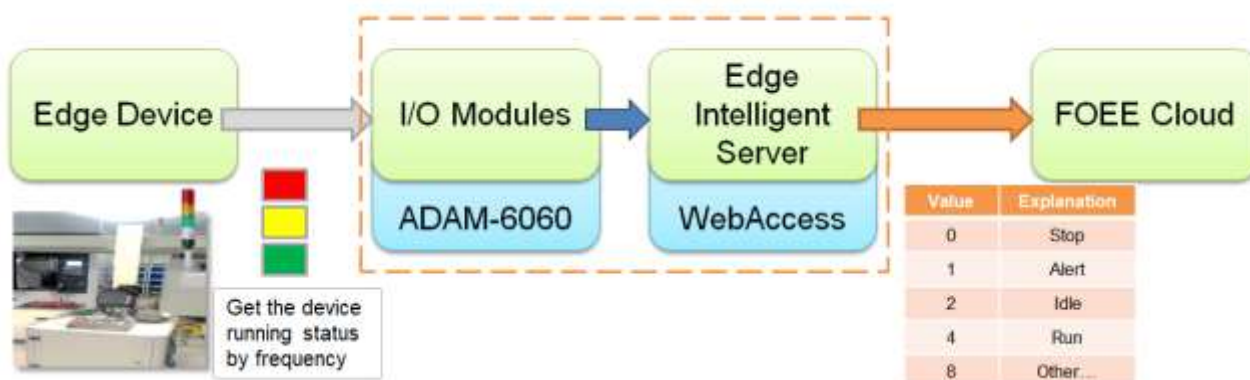
Advantech SE Technical Share Document

Date	2018 / 12 / 14		Related Product	FOEE, WebAccess, ADAM-6060	
Category	■ FAQ □ SOP □ Driver Tech Note				
Abstract	How to use WebAccess to turn frequency value to FOEE driver status				
Keyword	FOEE, WebAccess, ADAM-6060				
Related OS					
Revision History					
Date	Version	Author	Reviewer	Description	
2018/12/14	V1.0	Eden.Sun		Initial Release	

■ Problem Description & Architecture:

How to use WebAccess to turn frequency value to FOEE driver status?

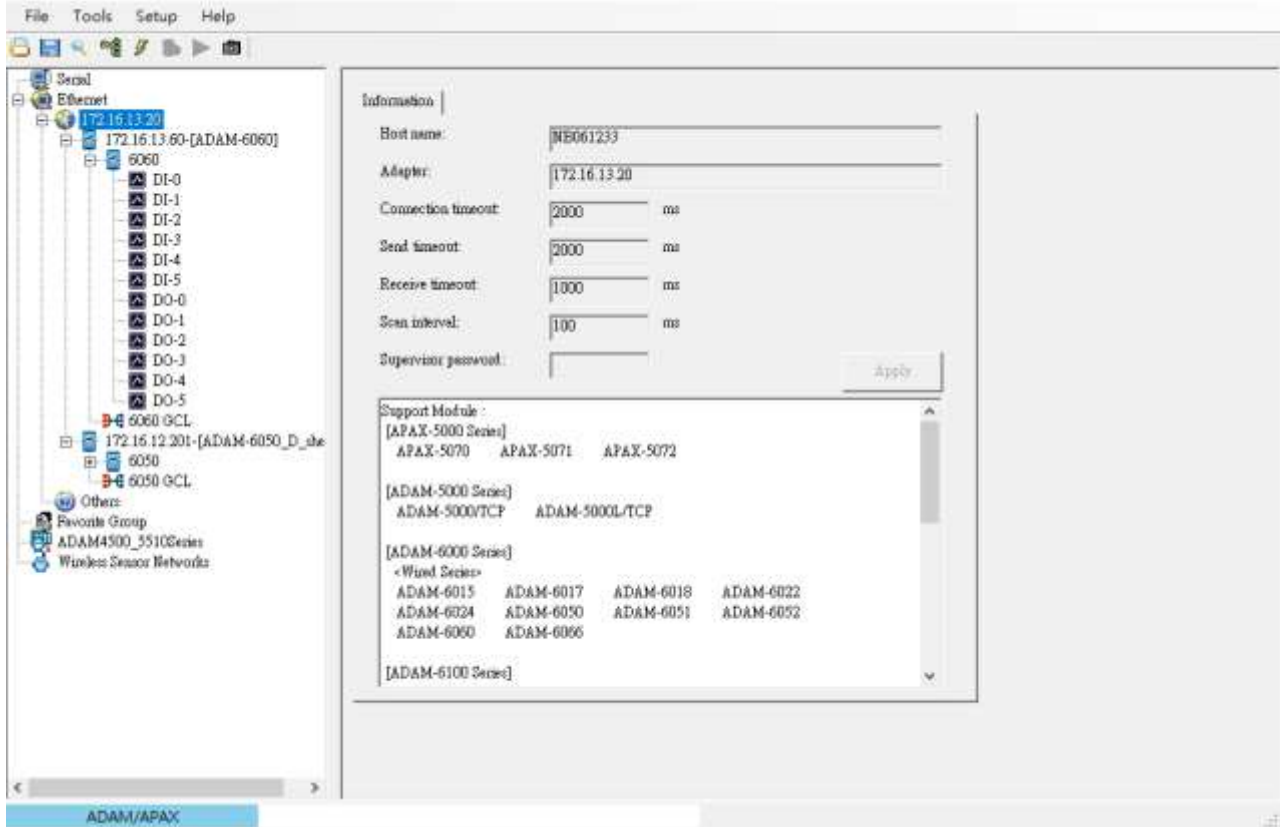
When the edge device upload frequency value to I/O modules (ADAM-6060) for send to edge intelligent server (WebAccess) then transform tag value to 0, 1, 2, 4 and 8, final to give for FOEE cloud.



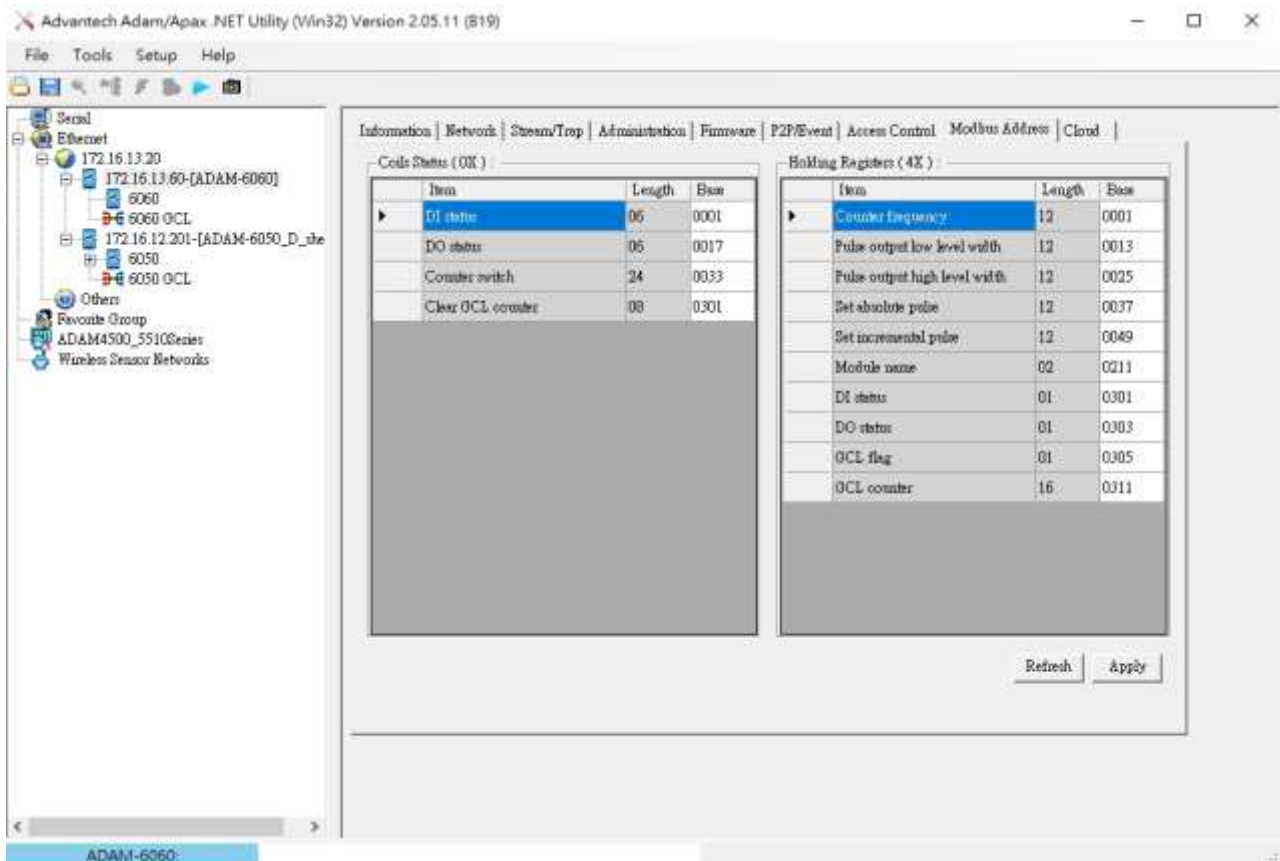
■ Brief Solution - Step by Step:

✧ Advantech Adam/Apax Utility software

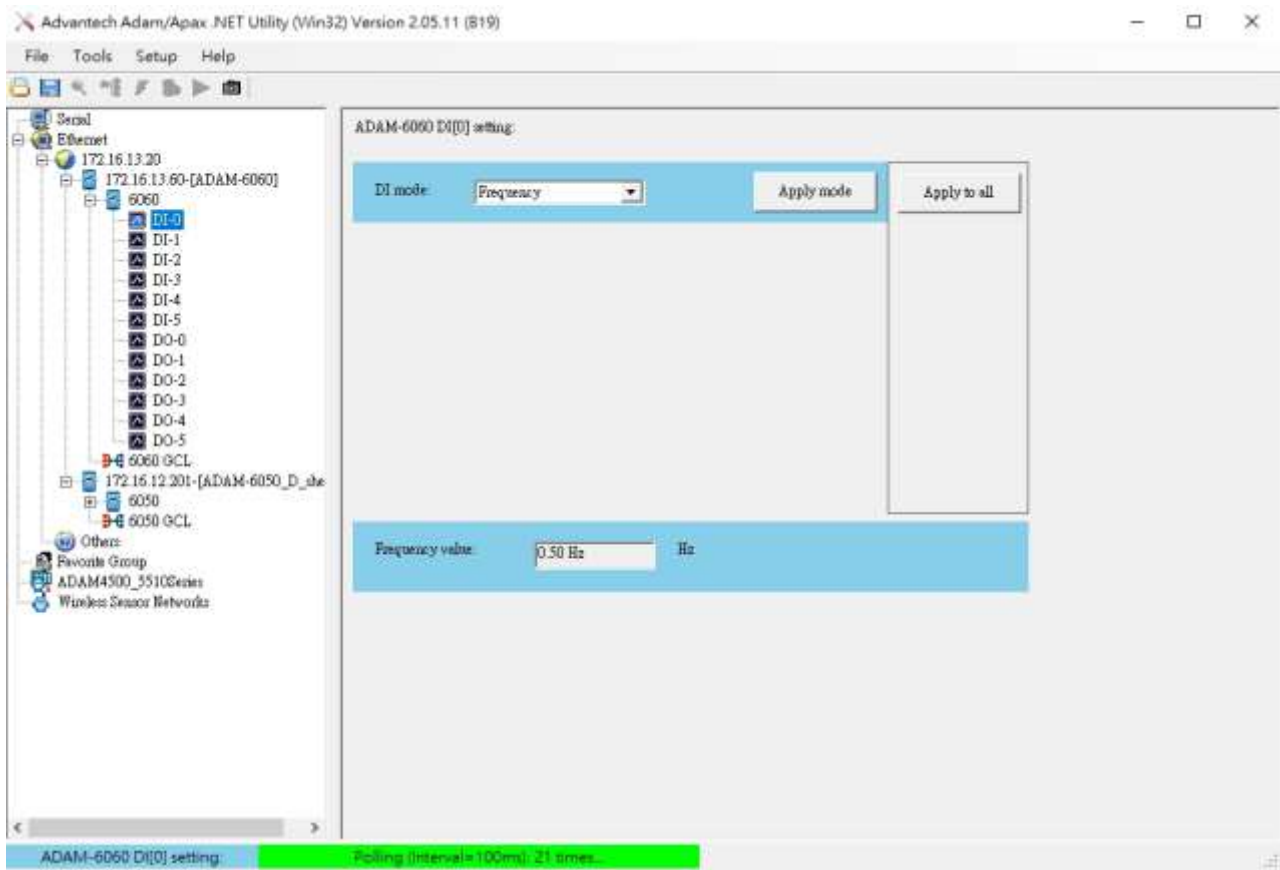
1. Use the Advantech Adam/Apax Utility software to search device ADAM-6060. (The computer and the device must be in the same Network domain.)



2. Select IP-Address (ADAM-6060) to check Modbus Address.



3. Select channel 1 (DI-0) from Device 6060, choose Frequency for DI mode and then Apply mode.
(Assume device connect to channel 1)



✧ WebAccess/SCADA Software - Project Home

4. Start the Internet Explorer Web Browser to Enter IP address of the project node.



5. Select WebAccess Configuration and Open or Create a Project.

The screenshot shows the 'Project Configuration' window with the 'Create New Project' tab selected. The form contains the following fields:

- Project Name: PCEE
- Project Description: Project Description
- Project Node IP Address: 172.16.12.47
- Project Node HTTP Port: 0
- Project Primary TCP Port: 4592
- Project Timeout: 0
- Remote Access Code:
- Retype Remote Access Code:
- Log Changes to System Log: ☐ Yes ☒ No

At the bottom right, there is a 'Submit for New Project' button.

6. Select a SCADA Node or use Add SCADA node to create one. (A SCADA node is the PC that will connect to the automation hardware)

The screenshot shows the 'Create New SCADA Node' form. The form contains the following fields:

- Node Name: PCEE
- Node Description:
- SCADA Node IP Address: 172.16.12.47
- Primary TCP Port: 4592
- Secondary TCP Port: 14592
- Node Timeout: 0 (Node Timeout=0, >15)
- Remote Access Code:
- Retype Remote Access Code:
- Outgoing Email (SMTP) Server:
- Email Port: 0
- Use SSL/TLS: ☐ Yes ☒ No
- Email Address:
- Email Account Name:
- Email Password:
- Retype Email Password:
- Email From:
- Report Email To:
- Report Email Cc:
- Alarm Email To:
- Alarm Email Cc:
- Reply Alarm Email To Ack: ☐ Yes ☒ No
- Global Script Via Email: ☐ Yes ☒ No
- Global Script Security Code:
- Retype Global Script Security Code:
- Incoming Email (POP3) Server:
- Email Port: 0
- Use SSL/TLS: ☐ Yes ☒ No
- Email Account Name:
- Email Password:
- Retype Email Password:
- Check Email Every: 10 seconds

7. Select Add Comport for the SCADA Node, and choose TCPIP for Interface Name in Create New Comport page.

Create New Comport [Cancel] [Submit]

Interface Name: TCP/IP

Comport Number: 1

Description: Description

Scan Time: 1 ☐ Millisecond ☒ Second ☐ Minute ☐ Hour

Timeout: 1000 ☐ Millisecond ☒ Second ☐ Minute ☐ Hour

Retry Count: 1

Auto Recover Time: 60 ☐ Millisecond ☒ Second ☐ Minute ☐ Hour

Backup Port Number: 0

Scan Devices in Parallel: ☐ Yes ☒ No

[Cancel] [Submit]

8. Select the Comport to open Comport Properties, select Add Device, and choose ADAM6K for Device Type, fill in IP Address, and write 502 in Port Number in Create New Device page.

Create New Device [Cancel] [Submit]

Device Name: ADAM-6060

Description: Description

Unit Number: 1

Device Type: ADAM6K

Primary

IP Address: 172.16.13.60

Port Number: 502

Device Address: (if other than Unit Number)

Secondary

IP Address:

Port Number:

Device Address:

[Cancel] [Submit]

9. Use Add Tag or Add Block to Create New Tag and setting parameters. (Address is 40001, Length is 32, Scaling Type choose Linear Scale-MX+B, and Scaling factor 1 is 0.1.)

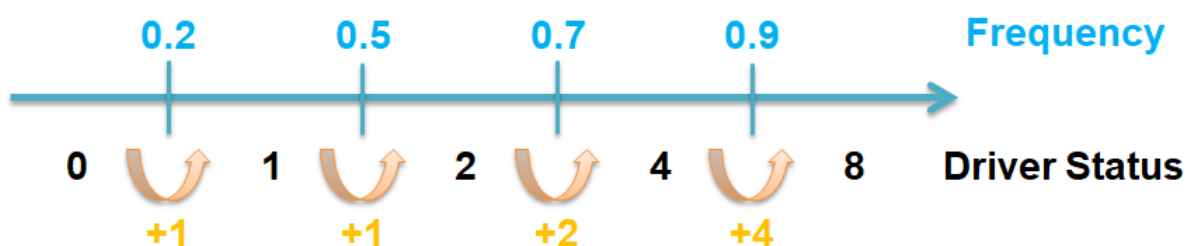
Create New Tag [Cancel] Submit

Parameter	AI	Point (analog)
Alarm	No Alarm	
Tag Name	FrequencyValue	
Description	AI	
Scan Type	Constant Scan	
Address	40001	
Conversion Code	Unsigned Integer	
Start Bit	0	
Length	32	
Signal Reverse	<input type="radio"/> Yes <input checked="" type="radio"/> No	
Scaling Type	Linear Scale, MX+B	
Scaling factor 1	0.1	
Scaling factor 2	0	
Log Data	<input type="radio"/> Yes <input checked="" type="radio"/> No	
Data Log Dead Band	3	%
Write Action Log	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Read Only	<input type="radio"/> Yes <input checked="" type="radio"/> No	
Keep Previous Value	<input type="radio"/> Yes <input checked="" type="radio"/> No	
Initial Value	0	
Security area	0	
Security level	0	
Span high	1000	
Span low	0	
Value Clamp	<input type="checkbox"/> Clamp to Span High <input type="checkbox"/> Clamp to Span Low <input type="checkbox"/> Clamp to Zero	
Output High Limit	1000	
Output Low Limit	0	
Eng Unit		
Display digits(integer)	4	
Display digits(fraction)	2	
Log To ODBC Frequency	0	<input type="radio"/> Second <input checked="" type="radio"/> Minute
Analog Change Log	<input type="radio"/> Yes <input checked="" type="radio"/> No	
Analog Change Log Dead Band	0	%
ODBC Log Data Source	Default	
Array Size	0	

10. Back to SCADA node under your Project Name in the Project/Node List and select CalcPoint from tool bar.



11. Select Add Calculation Point to Create New Tag and setting parameters. (Formula is $(A \geq 0.2 ? 1 : 0) + (A \geq 0.5 ? 1 : 0) + (A \geq 0.7 ? 2 : 0) + (A \geq 0.9 ? 4 : 0)$ [0.2, 0.5, 0.7 and 0.9 are the constant values of the device status range interval, and put the number in ascending order], A is FrequencyValue [This is previously established side point on step 9.])



Calculation Point List

Create New Tag [Cancel] Submit

Parameter CalcAns Calculation (analog)

Alarm No Alarm

Tag Name DeviceStatus

Description Description

Evaluate frequency 1 Second

Log Data ☐ Yes ☒ No

Date Log Dead Band 1 %

Write Action Log ☒ Yes ☐ No

Read Only ☐ Yes ☒ No

Keep Previous Value ☐ Yes ☒ No

Initial Value 0

Security area 0

Security level 0

Span high 100

Span low 0

Output High Limit 100

Output Low Limit 0

Eng Unit

Display digits(integer) 4

Display digits(fraction) 2

Log To ODBC Frequency 0 Second Minute

Analog Change Log ☐ Yes ☒ No

Analog Change Log Dead Band 0 %

ODBC Log Data Source Default

Formula $(A >= 0.271 \cdot Q) + (A >= 0.571 \cdot Q) + (A >= 0.772 \cdot Q) + (A >= 0.974 \cdot Q)$

A FrequencyValue

B

C

D

E

F

G

H

- Back to SCADA node under your Project Name in the Project/Node List and select Download then Submit, final to start kernel.

Advantech WebAccess Project Manager

Quick Start Help Home Logout

Node Property: Delete Add Component Add Point: Calc Point: Control Point: Ext Point: Face Plate: Real Time Trend: Data Log Trend: Alarm Group: Script: Video: Global Script: User Program: Data Transfer: Export: In: Export: Out: Report: Scheduler: Classroom Scheduler: Alarm Management System: Event Log: Key Mapping: Import External Data: Demand Control: BACNet Server Config: Modbus Server Config: Map: Event Report: MQTT Connection Setting: WAClient Database

Start View: Start Data: Download: Graph Only: Start Node: Stop Node

Node: FOEE • HandOn

Please select Download options

Download to Primary SCADA Node * Yes No

[Cancel] [Submit]

Global Script Security Code

Incoming Email (POP3) Server

Email Port 0 Use SSL/TLS: No

Port 14592

Email Port 0 Use SSL/TLS: No

Project/Node

FOEE

HandOn

Part 1

ADAM-6060

FrequencyValue

HandOn

Calc Point

DeviceStatus

Device Driver

AD101

ABMEGX

ABPLC1

ABPLCEIP

ABSLC1

AssFAM3

ADAMK

ADAMK6

ADAM3160

ADAMKASC

ADAMK6

ADAMK6

ADMD

AbDand

AbEAC

AER000

Ap1471A

AlarmRTD

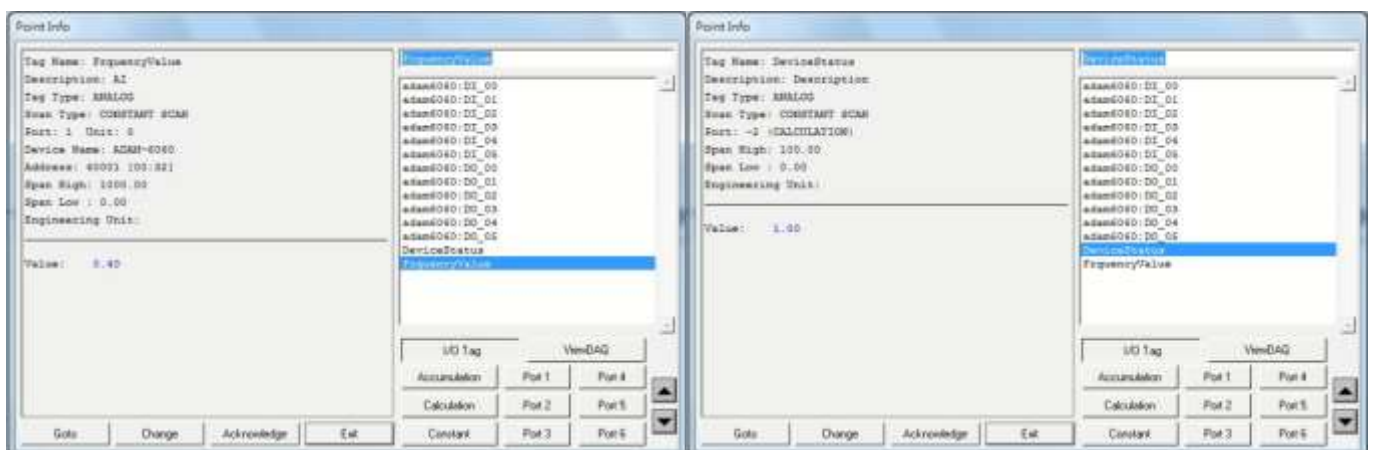
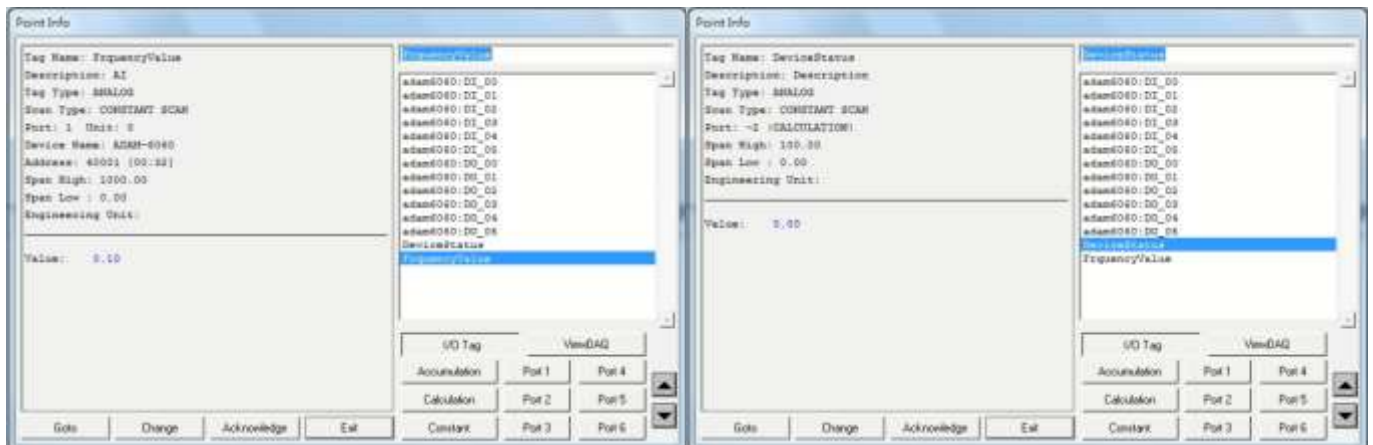
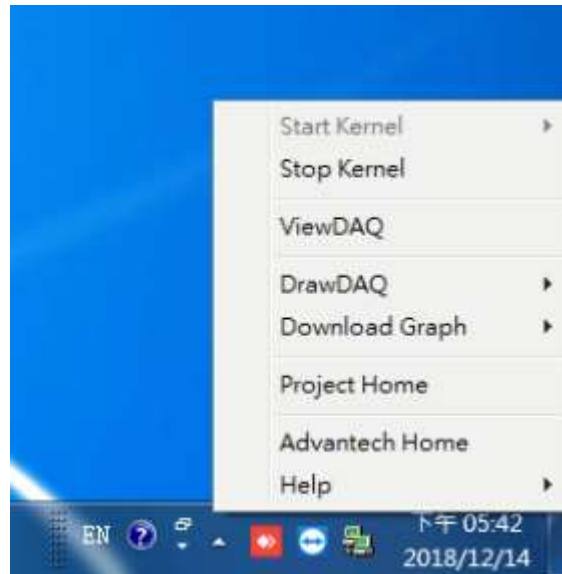
APAX

APAX3180

BAS3000

❖ WebAccess/SCADA - Software ViewDAQ

13. Open the ViewDAQ to check Tags value.



Point Info

Tag Name: FrequencyValue

Description: AL

Tag Type: ANALOG

Scan Type: CONSTANT SCAN

Port: 1 Unit: 0

Device Name: ADM-0060

Address: 40003 100:821

Span High: 100.00

Span Low: 0.00

Engineering Unit:

Value: 0.00

admm040:DI_00

admm040:DI_01

admm040:DI_02

admm040:DI_03

admm040:DI_04

admm040:DI_05

admm040:DO_00

admm040:DO_01

admm040:DO_02

admm040:DO_03

admm040:DO_04

admm040:DO_05

DeviceStatus

FrequencyValue

UD Tag

VendAQ

Accumulation

Calculation

Constant

Port 1

Port 2

Port 3

Port 4

Port 5

Port 6

Goto

Change

Acknowledge

Exit

Point Info

Tag Name: DevicelStatus

Description: Description

Tag Type: ANALOG

Scan Type: CONSTANT SCAN

Port: -2 (CALCULATION)

Span High: 100.00

Span Low: 0.00

Engineering Unit:

Value: 2.00

admm040:DI_00

admm040:DI_01

admm040:DI_02

admm040:DI_03

admm040:DI_04

admm040:DI_05

admm040:DO_00

admm040:DO_01

admm040:DO_02

admm040:DO_03

admm040:DO_04

admm040:DO_05

DeviceStatus

FrequencyValue

UD Tag

VendAQ

Accumulation

Calculation

Constant

Port 1

Port 2

Port 3

Port 4

Port 5

Port 6

Goto

Change

Acknowledge

Exit

Point Info

Tag Name: FrequencyValue

Description: AL

Tag Type: ANALOG

Scan Type: CONSTANT SCAN

Port: 1 Unit: 0

Device Name: ADM-0060

Address: 40003 100:821

Span High: 100.00

Span Low: 0.00

Engineering Unit:

Value: 0.00

admm040:DI_00

admm040:DI_01

admm040:DI_02

admm040:DI_03

admm040:DI_04

admm040:DI_05

admm040:DO_00

admm040:DO_01

admm040:DO_02

admm040:DO_03

admm040:DO_04

admm040:DO_05

DeviceStatus

FrequencyValue

UD Tag

VendAQ

Accumulation

Calculation

Constant

Port 1

Port 2

Port 3

Port 4

Port 5

Port 6

Goto

Change

Acknowledge

Exit

Point Info

Tag Name: DevicelStatus

Description: Description

Tag Type: ANALOG

Scan Type: CONSTANT SCAN

Port: -2 (CALCULATION)

Span High: 100.00

Span Low: 0.00

Engineering Unit:

Value: 4.00

admm040:DI_00

admm040:DI_01

admm040:DI_02

admm040:DI_03

admm040:DI_04

admm040:DI_05

admm040:DO_00

admm040:DO_01

admm040:DO_02

admm040:DO_03

admm040:DO_04

admm040:DO_05

DeviceStatus

FrequencyValue

UD Tag

VendAQ

Accumulation

Calculation

Constant

Port 1

Port 2

Port 3

Port 4

Port 5

Port 6

Goto

Change

Acknowledge

Exit

Point Info

Tag Name: FrequencyValue

Description: AL

Tag Type: ANALOG

Scan Type: CONSTANT SCAN

Port: 1 Unit: 0

Device Name: ADM-0060

Address: 40003 100:821

Span High: 100.00

Span Low: 0.00

Engineering Unit:

Value: 0.00

admm040:DI_00

admm040:DI_01

admm040:DI_02

admm040:DI_03

admm040:DI_04

admm040:DI_05

admm040:DO_00

admm040:DO_01

admm040:DO_02

admm040:DO_03

admm040:DO_04

admm040:DO_05

DeviceStatus

FrequencyValue

UD Tag

VendAQ

Accumulation

Calculation

Constant

Port 1

Port 2

Port 3

Port 4

Port 5

Port 6

Goto

Change

Acknowledge

Exit

Point Info

Tag Name: DevicelStatus

Description: Description

Tag Type: ANALOG

Scan Type: CONSTANT SCAN

Port: -2 (CALCULATION)

Span High: 100.00

Span Low: 0.00

Engineering Unit:

Value: 8.00

admm040:DI_00

admm040:DI_01

admm040:DI_02

admm040:DI_03

admm040:DI_04

admm040:DI_05

admm040:DO_00

admm040:DO_01

admm040:DO_02

admm040:DO_03

admm040:DO_04

admm040:DO_05

DeviceStatus

FrequencyValue

UD Tag

VendAQ

Accumulation

Calculation

Constant

Port 1

Port 2

Port 3

Port 4

Port 5

Port 6

Goto

Change

Acknowledge

Exit

■ Pin Definition (in case of serial connection):

■ Reference: