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EAO_CNIV_06: LIA Web LIL Eurotion Wizard – Module Communication Conversion -								

How to Convert Modbus RTU / MQTT JSON or Modbus ASCII / MQTT JSON ? (Use M-7055D)

Modbus / MQTT JSON Conversion include the conversion of **MQTT** and **Modbus** RTU / TCP / ASCII three protocols. With the **MQTT Service** function, users can set the **MQTT client** to publish the message to the specified broker or subscribe the topic, and combine several messages that converted in JSON format into a group to read and write the multiple channels of the Modbus RTU devices that connected to the controller.

## • Convert Setting: Modbus RTU / ASCII and MQTT JSON



Note: The hardware/network connection methods please see the UA Manual Chapter 2.

When UA series controller connects the Modbus RTU or ASCII module (via RS-485 / RS-232, as the picture) and read/write the Modbus I/O via MQTT Broker, user can choose the item [Modbus RTU / MQTT JSON] or [Modbus ASCII / MQTT JSON] of the "Module Communication Conversion" in the Function Wizard.

Settin	Module Communication Conversion (Master) Modbus RTU / OPC UA
	(Master) Modbus TCP / OPC UA
	(Master) Modbus ASCII / OPC UA
	(Master) Modbus RTU / MQTT
	(Master) Modbus TCP / MQTT
	(Master) Modbus ASCII / MQTT
0.10	(Master) Modbus RTU / MQTT JSON
	(Master) Modbus TCP / MQTT JSON
0	(Master) Modbus ASCII / MQTT JSON

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[Step Box]: The Step Box of the [Modbus RTU / MQTT JSON] and [Modbus ASCII / MQTT JSON] has the same steps, here will introduce them together. When enabling the Step Box, it auto enters the first step setting page (The step with a bold underline means it is the current step.). The user just needs to follow the "Step Box" step-by-step and then can complete the project quickly and rightly.									
Controller COM Po	Controller COM Port Setting > Module Setting > MQTT Certificate > MQTT Broker Setting > MQTT Group Setting > Apply Connection & Enable Converting Module > Save Project > Run the project								

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•	Step 1. Controller COM Port Setting								
	Controller COM Port Setting > Module Setting > MQTT Certificate > MQTT Broker Setting > MQTT Group Setting								
	Apply Connec	ction & Enable Conver	ting Module	> Save Project	> Run the	e project			

This page allows display and set the COM port interface of the controller for the RS-232/RS-485 serial communication. The user can find the default communication values of our I/O modules from the module CD, manual or I/O Module website.

System Setting Modu	le Setting IoT Platform Setting	Convert Setting Advanced S		
System Setting COM Port In	erface Setting			
Controller Service Setting	COM Port Interface Set	tting Page		
Time Setting	Serial Port	ttyO2 🔹		
Network Setting	Baud Rate	115200		
Account Setting	Data Bits	8 bits		
Boot				
COM Port Interface Setting	Parity	None		
	Stop Bits	1 bit		
	Polling Rate(ms)	500		
		Save		

<b>COM Port Interface</b>	Setting Page
Serial Port	Choose the serial port of UA controller that links with the I/O
	module. ttyO2: RS-485 ; ttyO4: RS-232 ; ttyO5: RS-485
Baud Rate	Choose a baud rate to communicate with the module: 1200, 2400,
	4800, 9600, 19200, 38400, 57600 and 115200. The UA controller
	and the I/O module need have the same baud rate.
Data Bits	The number of bits used to represent one byte of data: 7 bits or 8
	bits. Default: 8 Bits.
Parity	Choose one way for the parity checking.
	Options: None, Even, and Odd. Default: None.
Stop Bits	Choose the number of stop bit: 1 bit or 2 bits. Default: 1.
Polling Rate(ms)	Set a time interval for the command. Default: 500 ms
Save	Click [Save] button could save the settings of this page.

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• Step 2. Mod	Step 2. Module Setting						
Controller CO	Controller COM Port Setting 🔌 Module Setting ≽ MQTT Certificate ≽ MQTT Broker Setting ≽ MQTT Group Setting ؼ						
Apply Connec	ction & Enable Convert	ing Module	> Save Project	> Run the	e project		

#### Click the next step, and enter the Step 2 [Module Setting] of the UI setting.

This page is for setting the communication values with the connected modules. First, choose the connected port with the module. If using ICP DAS module, select the model to auto load and setup the module. If not, give a module name (Default: Name) and click [ 💮 ] button to add a new module.

System Setting Modu	le Setting	IoT Platform Setting	Convert Se	etting Advanced	d Setting Logger Setting
I/O Status File Setting Module Setting RTU Module	g e (Master)	<b>1.</b> Select the seri	al port		
Modbus RTU Module (Master) TCP Module (Master)	Modbu	us RTU Module Li Serial Port	st ttyOs	<ol> <li>Select an give a nam</li> </ol>	ICP DAS Module, or ne, click '+' to add a module.
ASCII Module (Master)		Load ICPDAS Module	Selet The Mo	dule	Update ICPDAS Module Lis
MQTT MQTT Module	Select All	No.	*Module	Name / Nickname	Edit
5-1 N (#D	œ	2 🔹	Name		

Add a module (No.: 1, Name: M-7055D) as below, and then click [Edit] button to enter the "Module Content Setting" page.

Modbus RTU Module Li	st							
Serial Port	ttyO5	·						
Load ICPDAS Module	Selet The Module	Update ICPDAS Module List						
Select All No.	*Module Name / Nickname	3 Edit						
	Name							
1	M-7055D	Edit						
Copy Remov	/e	< 1 / 1 >						
Remove all Save								
If set up a wrong module, user can click the box in the left side of the module number and click the								
[Remove] button to delete the module.								
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Module Co	ontent	Setting	] page ca	n set up	the modu	le and th	e Mo	odbus addre	ess mappir	ng tab	le:
	Modu	le Cont	ent Settir	g			lf s	select ICP D	AS module	. svst	em will
No.			<b>o</b> . 3			au	to set up th	e Modbus	Mapp	ping Table,	
Module Name Slave ID Timeout(ms) Write Retry Modbus Mapping Table		ne M-70	M-7055D		or Mo	or user needs to check the module Modbus address or I/O number from			er from		
		Slave	D 2	2		the module user manual. > Modbus Mapping Table Setting:					
			Timeout(m	s) 500			Set module in the order of Data Mod Start Address and Data Number, the			ata Model, ber, then	
			Write Ret	<b>ry</b> 1			C Ex	lick "Add". : M-7055D ł	nas 8 Data	Mode	els of "01
		ping Tabl	e Settin	g		Co sel	Il Status (0x	)" (Mappir '01", Start	ng: DC Add.	), so "0",	
DO map	ping 0		Data Mod	el 01 Co	oil Status(0x)	~	Nu	ımber "8", a	nd click "A Coil Status(0	\dd″. ×)	
UA start a	ddress:	: 0	Start Addre	ss 0				A	.ddress	0	
If DO x 8	, enter	8	Data Numb	er 1				N	lumber Type B	8 8001	
Click	[Add]		Create Table	Add	]				E	Edit	
Module	e Conte	ent Set	ting The meet		h a u ta th a		:-+ />		h a va )		
NO.	- N	_	The mode	lie num	ber in the	module	IST (P	Not editable	nere)		
		5	Give a na	me, e.g.	model nu	mber or	nam	e. Default: $r$	lame.		
Slave IL	<u> </u>		Set the m	odule S	lave ID of t	the UA. (	Rang	ge: 1 ~ 247)			
Timeou	ut .		Set the til	<u>neout v</u>	value for tr	<u>ie modul</u>	<u>e. De</u>	efault: 500 n	ns r		
write F	ketry			retry wr	iting again	when tr	nere I	is no respon	se after tr	ie set	time is
D.C. alla a			up, and it	can be	set up to r	etry 3 tir	nes				
IVIOADU	is iviap	ping la	ible Setti	ng	4		-1 - 1 - 1	"04" at			1
Data M	lodel		System p	ovides		data mo	aeis	01 10 01	Coil Stat	us(0x	)
				napping	, to addres	S OF		02	Input Sta	itus(1	X)
			DU, DI, Al		1. (ex. UI: L			03	Input Re	Regis nister	s(3x)
Start A	ddroco			oz. DI,	05. AU, 04	- AI)	<u></u>	nd Notor+4	o Stort Ao	Idroce	of
Start A	uuress		ine start			anna col	uiiid wo bi	nu. <u>nute:</u> tr	re start AC	uress	
			is udss of to cot bor	o, even	i ii some fr	iouules a	neba	ass on 1, ne	re it needs	5 10 10	NOW UA
Data N	umbor		The num	$\frac{150110}{100}$	o Modhuc	addroce	Nor	d to give or	ough nur	hor f	or tho
Data N	unnnel			D. Al ch	annels of t	he modu	ile D	efault: 1			
Type			This item	only wh	en the dat	ta model	is 07	3 or 04 Cho	ose the su	itahle	data
., , , , ,			type: 16-l	oit Short	t. 16-hit U	nsigned 9	Short	: 32-hit I on	g. 32-hit II	nsign	ed
			Long. 32-	bit Float	t. 64-bit Dr	ouble.			5, 51 510		
Create	Tables		Click [Add		n. it will ad	ld a table	in tł	he Modhus	mapping t	able.	
0.0000		I			.,						

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The finished Modbus Mapping Table as below is in order of DO, DI, AO and AI.								
Address: Display and	d edit the Modbus N	lapping Tabl	e.					

Coil Status(0x)		Input St	atus(1x)	Holding Registers(4x)	Input Registers(3x)
Address	0	Address	0		
Number	8	Number	8		
Туре	Bool	Туре	Bool		
	Edit		Edit		

If user selects ICP DAS module, the system will auto set up the Modbus Mapping Table. If not, user needs to check the module Modbus address or I/O number from the module user manual.

Modbus Mapping	Table – Address Setting
Address Setting	The "Address Setting" page of the Modbus Mapping Table
Nickname Setting	Click can switch to the The "Nickname Setting" page of the Modbus
	Mapping Table. (Next page)
Modbus Mapping	Coil Status(0x): Mapping to DO Modbus address
Table	Input Status(1x): Mapping to DI Modbus address
	Holding Registers(4x): Mapping to AO Modbus address
	Input Registers(3x): Mapping to AI Modbus address
Address	The start address of the Modbus command. Default: 0. Note: the Start
	Address of UA is bass on 0, even if some modules are bass on 1, here it
	needs to follow UA to set bass on 0.
Number	The number of the Modbus address. Need to give enough number for
	the DO, DI, AO, AI channels of the module. At least 1.
Туре	DO/DI type: Bool (Boolean)
	AO/AI type: depend on setting of [Modbus Mapping Table Setting]
Edit	Click to change the address and Number.
Delete	Click to delete this address table.
Save	Click to save and exit this table editing.
Cancel	Click to exit without saving and back to the module list page.
ОК	Click to save this page settings and back to the module list page.

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## Nickname:

# Setting the variable nickname and description.

Modbus	Mapping Table	Address	Nickname	Scaling	Bitwise
01 Coil S	tatus(0x)				
	Table Display Show	Hide			
Address	Variable name	Data Type		Description	
0	DO0	Bool	Light (	)1	
1	DO1	Bool			
2	DO2	Bool			
3	DO3	Bool			
4	DO4	Bool			
5	DO5	Bool			
6	DO6	Bool			
7	D07	Bool			
02 Input	Status(1x)				
	Table Display Show	Hide			
Address	Variable name	Data Type		Description	
0	DIO	Bool			

Modbus Mappin	ng Table – Nickname Setting
Modbus	Coil Status(0x): Mapping to DO Modbus address
Mapping Table	Input Status(1x): Mapping to DI Modbus address
	Holding Registers(4x): Mapping to AO Modbus address
	Input Registers(3x): Mapping to AI Modbus address
Table Display	Click [Show] to display all fields, click [Hide] to hide some fields.
Address	Modbus address. System auto arrange.
Variable name	The variable name of the mapping address. Default: Tag0 and auto
	arrange the number. User can define the name.
Data Type	Display data type of the variable. (Not editable)
Swap	Check to swap the byte order (Lo-Hi/Hi-Lo) for 4-byte or 8-byte.
Description	Write a note for this variable.
ОК	Click to save this page settings and back to the module list page.

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### Scaling:

Scaling is only available in the AI/AO settings of Modbus RTU/TCP. When the variable value needs to be scaled or converted before output, click the "Advanced Setting" button of the variable on the Scaling page, input the Min./Max./Offset of the Reference/Output items, add a description, and check "Enable" box, The Scaling conversion function will be activated.

The M-7055D has no AI/AO, so here uses the screen of DL-302 for an example.

	ing Reg	aisters(4x	<b>`</b>					
	111g 1 (0)	Table Display	Show	Hide				
		Tuble Display	CHOW	Tilde				
Address	F	Reference	Ou	tput	Scaling	Enabled	Desc	ription
04 Input	t Regis	ters(3x)						
	1	Table Display	Show	Hide				
Address	Ret	ference	0	utput	Scaling	Enabled	Dese	cription
	CO2		Scale_CO2	2				
	Min.	0	Min.	0	Hide Detail		C03	
0	Max.	10000	Max.	10000	Hide Detail	*	002	
			Offset	0				
1	Relative_	humidity	Scale_Rela	tive_humidity	Show Detail	<b>~</b>	Relative_hur	midity
2	Temperat	ture_Celsius	Scale_Tem	perature_Cel	Show Detail	<ul> <li>Image: A start of the start of</li></ul>	Temperature	_Celsius
	Temperat	ture_Fahrenh	Scale_Tem	perature_Fah				
2	Min.	0	Min.	0	Hido Dotail	-	Temperature	Eabronhoit
5	Max.	10000	Max.	100	The Detail		remperature	
			Offset	0				
4	Dew_poir	nt_temperatu	Scale_Dew	_point_tempe	Show Detail			
5	Dew_poir	nt_temperatu	Scale_Dew	_point_tempe	Show Detail			

Modbus Mapping	g Table – Scaling
Modbus	Holding Registers(4x): Mapping to AO Modbus address
Manaina Takla	Input Registers(3x): Mapping to AI Modbus address
iviapping Table	Scaling do not support 01 Coil Status(0x):DO & 02 Input Status(1x):DI
Table Display	Click [Show] to display all fields, click [Hide] to hide some fields.
Address	Modbus address. System auto arrange.
Reference	The I/O variable of the Modbus address.
Output	The scaling variable for scaling output. User can define the variable name.
	Click [Show Detail] to set up the Scaling parameters, and click [Hide Detail] to hide
	the parameters.
Scaling	Fill in the Min/Max range values of the source in the Reference column. Fill in the
	Min/Max range values after scaling in the Output column. If needs offset, fill the
	offset value in the Offset item. Remember check "Enable" box.
Enable	Check the box of the variable can enable just that variable for scaling.
Description	Write a note for this variable.
ОК	Click to save this page settings and back to the module list page.
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<b>itwise:</b> itwise is only avail ne value of the spe ne value of the bit he M-7055D has n	lable in the AI, ecified bit, fill in can be output o AI/AO, so he	<b>/AO setti</b> n the vari to the fil ere uses o	ngs of Modbu able name in t led variable. ther module's	the specifies setting s	CP. When the of the fied Bit# of the creen as an ex	data neede e required a cample.	d to take out address, and
Modbus M	Apping Table	e	Addres	s Nic	kname Sc	aling B	itwise
03 Holding	Registers(4>	<)					
	Table Display	Show	Hide				
Address	;	Re	ference		Bi	twise	
14		Bit0         H           Bit2         H           Bit4         H           Bit6         H           Bit8         H           Bit10         H           Bit12         H           Bit14         H	IR14_Bit0 IR14_Bit2 IR14_Bit4 IR14_Bit6 IR14_Bit8 IR14_Bit10 IR14_Bit12 IR14_Bit14		Bit1 Bit3 Bit5 Bit7 Bit7 Bit9 Bit11 Bit13 Bit15	HR14_Bit3 HR14_Bit3 HR14_Bit5 HR14_Bit7 HR14_Bit7 HR14_Bit11 HR14_Bit13 HR14_Bit15	
15		Tag15			Advance	ed settings	<u> </u>
04 Input Re	egisters(3x) Table Display	Show	Hide			Bitwise	
Modbus Mapping Modbus Mapping Table	g Table – Bitw Holding Regi Input Registe Bitwise do n Bitwise do n	ise sters(4x): ers(3x): N ot suppo ot suppo	Mapping to A lapping to Al I rt 01 Coil Stat rts 32-bit Floa	AO Modbe Modbus a us(0x):D( it & 64-bi	us address ddress D & 02 Input S t Double data	tatus(1x):[ types.	)
Table Display	Click [Show]	to display	y all fields, clic	k [Hide] t	o hide some f	ields.	
Address	Modbus add	ress. Syst	em auto arrar	nge.			
Reference Bitwise	The Bit# vari Set up the v parameters, Fill in the va the fixed bit	ables of t variables and click riable nau number v	he Modbus ac for Bitwise. C [Hide] to hide mes to the Bit will be assigne	Idress. lick [Adva the para # that w d into the	anced Settings meters. anted to do the variable.	5] to set up ne Bitwise.	) the Bitwise The value in

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• Step 3. MQT	IT Certificate						
Controller COM	I Port Setting 📏 Mo	odule Setting	MQTT Certific	ate > N	IQTT Broker Settin	g 🔈 MQTT G	roup Setting 📏
Apply Connecti	on & Enable Convertin	g Module 🔰	Save Project 🔰	Run the	project		

The [MQTT Certificate] is for setting up security communications to upload the MQTT Trusted Certificate, Certificate and Private Key. The users upload the file to the UA controller according to the type of obtained certificate. If you want to perform Broker authentication, you need to upload the Trusted Certificate. If you want to perform the Broker/Client two-way authentication, you need to upload the upload the Credential and Private Key additionally. The user can skip this step if the user project does not use certificate transmission security.

I/O Status File Setting	_	
File Setting MQTT Certificate		
Project File	MQTT Client	
OPC UA Certificate	Remove the File	
MQTT Certificate	Trusted Certificate	Remove
Log FileDownLoad	Certificate	Remove
	Private Key	Remove
	Upload the file to the cor	ntroller
	Trusted Certificate	Select File Upload
	Certificate	Select File Upload
	Private Key	Select File Upload

File Setting >	MQTT Certificate > Upload the file to the controller
Trusted	Select File: select the MQTT Trusted Certificate file of the device.
Certificate	<b>Upload</b> : upload the MQTT Trusted Certificate file to the UA controller.
	• File format must be <b>PEM</b> . Extension name must be " <b>pem / cer / crt</b> ".
	• If select a wrong file, the system will show an error message.
	Trusted Certificate Select File Certificate_192.168.255.10 Certificate type is wrong. Upload
Certificate	Select File: select the MQTT Certificate file of the device.
	<b>Upload</b> : upload the MQTT Certificate file to the UA controller.
	• File format must be <b>PEM</b> . Extension name must be " <b>pem / cer / crt</b> ".
	• If select a wrong file, the system will show an error message.
Private Key	Select File: select the MQTT Private Key of the device.
	<b>Upload</b> : upload the MQTT Private Key file to the UA controller.
	• File format must be <b>PEM</b> . Extension name must be ".key".
	• If select a wrong file, the system will show an error message.
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Step 4. MQTT Broken	e <b>r Setting</b> ting <b>&gt;</b> Modu	ule Settin	g 🔰 MQTT Certif	ficate 📏	MQTT Broker S	etting ≽ MQ	TT Group Settin
Apply Connection & Enab Click the next step, ar This page is for settin broker, port, login inf We select the "Modb auto enter the [ <b>MQT</b>	ble Converting I nd enter th 1g the IoT p formation, ous RTU (or <b>T Connecti</b>	Module ne <b>Step</b> latforn etc. ASCII) ion > Lo	Save Project	Run ther <b>er Settir</b> T Broker convers ge of IoT	e project <b>ng]</b> of the UI connection tion at the be Platform Se	setting. , e.g. the loc eginning, so etting. The "S	al or remote this step wi Step Box" w
the MQTT connection	n selecting n. Broker.	the wr	ong platform. (	Jser can	choose the	local or rem	IOTE Droker
al Broker							
System Setting M	Aodule Setting	j lo	T Platform Setting	Con	vert Setting	Advanced Se	etting F
al Broker System Setting M IoT Platform Setting Loc MQTT Connection Local Broker	Aodule Setting cal Broker	al Bro	T Platform Setting ker Setting Port	Con 1883	vert Setting	Advanced So	etting F
al Broker System Setting M IoT Platform Setting Loc MQTT Connection Local Broker Remote Broker MQTT Group Connection	Nodule Setting	al Bro	T Platform Setting ker Setting Port Anonymous Login	Con 1883 I Enab	vert Setting	Advanced Se	etting F
System Setting M IoT Platform Setting Loc MQTT Connection Local Broker Remote Broker MQTT Group Connection Microsoft Azure Platform	Nodule Setting cal Broker Loc ion m	al Bro	T Platform Setting ker Setting Port Anonymous Login	Con 1883 I Enab	vert Setting	Advanced So	etting f
Al Broker System Setting M IoT Platform Setting Loc MQTT Connection Local Broker Remote Broker MQTT Group Connection Microsoft Azure Platform	Aodule Setting cal Broker Loc ion m	a lo xal Bro	T Platform Setting ker Setting Port Anonymous Login	Con 1883 Enab	vert Setting	Advanced So	etting f
Al Broker System Setting M IoT Platform Setting () Loc MQTT Connection Local Broker Remote Broker MQTT Group Connection Microsoft Azure Platform MQTT Connection > Port Anonymous Login	Aodule Setting cal Broker Loc ion m • Local Brok The COl	ker Set	T Platform Setting ker Setting Port Anonymous Login ting of the Local M	Con 1883 Enab QTT Bro pein Def	vert Setting bled Save	Advanced Sol	etting f

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If users apply a remote Broker, the screen will as follow.

## Remote Broker:

IoT Platform Setting Remote Broker							
MQTT Connection	ection er Remote Broker List						
Remote Broker		Broker Name	IP / Domain	Port	Edit		
MQTT Group Connection	٠	Name					
Microsoft Azure Platform		Broker1	127.0.0.1	1883	Edit		
OPC UA Connection		Remove	< 1	/ 1 >			
			Save				

MQTT Connection	MQTT Connection > Remote Broker List					
Broker Name	The name of the remote MQTT Broker.					
	User can define the name, e.g. Broker1. Default: Name.					
Ŧ	Click to add a new remote Broker.					
Save	Click to save the settings of this page.					

## After creating a new Remote Broker (as below) :

Remote Broker List						
	Broker Name	IP / Domain		Port	Edit	
Ð	Name1	]				
	Broker1	127.0.0.1		1883	Edit	
	Remove		< 1	/ 1 >		
		Save				

MQTT Connection > Remote Broker List					
Broker Name	The name of the remote MQTT Broker.				
	User can define the name, e.g. Broker1. Default: Name.				
IP / Domain	The IP address of the remote Broker. Default: 127.0.0.1				
Port	The COM port of the remote Broker. Default: 1883				
Edit / Remove	Click [Edit] can set the Broker.				
	Click the left box and [remove] can delete the Broker.				
Save	Click to save the settings of this item.				

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	Broker Content Settings								
	Broker Name				Bro	ker1			
	IP / Domain			omain	127	7.0.0.1			
	Port				188	33			
	Keep Alive Time(second)				60				
	SSL/TLS			L/TLS		Enabled	ł		
	Anonymous Login					Enabled	ł		
							OK	Cancel	

MQTT Connection > Remote Broker > Broker Content Settings					
Broker Name	The name of the remote MQTT Broker. (Editable)				
IP / Domain	The IP address of the remote Broker. Default: 127.0.0.1				
Port	The COM port of the remote Broker. Default: 1883				
Keep Alive Time	The keep alive time. Default: 60 (second)				
SSL/TLS	Check to enable the supporting of SSL/TLS security communication. Default: uncheck.				
Anonymous Login	Check to allow anonymous login. Default: Check.				
ОК	Click to save the settings and exit.				

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• Step 5. MQ Controller CC	TT Group Setting	Module Settin	g 🔰 MQTT Certi	ficate ≽	MQTT Broker Set	ting 📏 MQTT	Group Setting
Apply Conne	Apply Connection & Enable Converting Module ≽ Save Project ≽ Run the project						

Click the next step, and enter the **Step 5 [MQTT Group Setting]** of the UI setting. This page is for setting the MQTT Group connection, setting with the MQTT JSON function in the Convert Transmission, It can make the I/O module messages in groups and then mapping to the user-defined publish and subscribe topics.

We select the "Modbus RTU (or ASCII) / MQTT JSON" conversion at the beginning, so this step will auto enter the [**MQTT Connection > MQTT Group Connection**] page of IoT Platform Setting. The "Step Box" will prevent from selecting the wrong platform.

System Setting	Module	Setting	IoT Platform Setting	Convert Setting	Advanced Setting	File Setting
IoT Platform Setting	MQTT Gro	oup Connecti	on			
		MQTT	Connection Group	o Name List		
Remote Broker			]	Group Name		
MQTT Group Conne	ection	e		Name		
Microsoft Azure Plat	tform		Remove		<	0 / 0 >
OPC UA Connection Local Server				Save		

MQTT Connection > MQTT Group Connection > MQTT Connection Group Name List						
Group Name	MQTT group name, user can define, e.g. Group1. Default: Name.					
+	Click add button to add a new MQTT Group.					
< 1 / 1 >	The page number of the group list: Current page / Total pages. Click < or > to go to the previous or next page.					
Save	Click to save the setting of this page.					

Enter a name and click add button to create a new group (as below).

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	MQTT Connecti Remove	onnection Group Name List Group Name Name			Edi	t	
		Default Edit					
	Remove < 1 / 1 >						
	Save						

Click [Edit] botton to enter the [MQTT Client Setting] page:

MQTT Client Setting	
No.	1
Group Name	Default
Scan Rate(ms)	1000
Dead Band	0
Will Topic	
Will	
MQTT Connection	<ul> <li>Broker (Local)</li> <li>Name (Remote)</li> </ul>

IoT Platform Sett	ing > MQTT Group Connection > MQTT Client Setting
No.	The group number in the MQTT Client list (Not editable here)
Group Name	Give a name, e.g. Group1. Default: Name.
Scan Rate(ms)	Set an update frequency for the data. Default: 1000 (Unit: ms)
Dead Bend	Give a dead bend value for updating a float signal. Default: 0
Will Topic	Enter the title of a disconnect notice. Default: Null.
Will	Enter a disconnect notice. Default: Null.
MQTT	Check the Broker want to use Local Broker or Remote Broker.
Connection	

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P	ublish & Subs	cribe					
		Ρ	ublish Topic	/Name/Pเ	ublish		
		F	Publish QoS	2			T
		Sub	scribe Topic	/Name/Sเ	ubscribe		
		Sub	oscribe QoS	2			T
			Retain	No			¥
						OK	cel

IoT Platform Settir Subscribe	ng > MQTT Group Connection > MQTT Client Setting – Publish &
Publish Topic	The topic of sending/publishing data message.
Publish Qos	The publish Qos (Quality of Service) levels. Default: 2
	0: Delivering a message at most once.
	1: Delivering a message at least once.
	2: Delivering a message at exactly once.
Subscribe Topic	The topic of receiving/subscribing data message.
Subscribe Qos	The subscribe Qos (Quality of Service) levels. Default: 2
	0: Delivering a message at most once.
	1: Delivering a message at least once.
	2: Delivering a message at exactly once.
Retain	Whether to store a broker message. Default: No
ОК	Click to save the settings and exit.

UA-Series Engl	ish Functi	on Wizard FAC	2-cnv-06			
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W Port Setting         Ction & Enable Convert	Enable Co	ponverting Mod	ule ficate 🗲	MQTT Broker Setti ∋ project	ing 🗲 MQTT	Group Setting 💙
t step, and enter or applying the o	r the <b>Step</b>	6 [Apply Conn n and enabling	ection &	Enable Conv verting module	erting Modu e.	l <b>e]</b> UI setting
e "Modbus RTU ne [ <b>Convert Sett</b> i "Step Box" will p	(or ASCII) i <b>ng &gt; MQT</b> revent the	/ MQTT JSON" <b>T JSON - Modl</b> e user from sel	conversi bus RTU ecting th	on at the beg (or ASCII) (Ma e wrong platfo	inning, so thi I <b>ster)</b> ] page o orm.	s step will of Convert
	Eva Li  y Connection &  M Port Setting  T  t step, and enter for applying the o  e "Modbus RTU  f (Convert Setting "Step Box" will p	Eva Li       Version         y Connection & Enable Co         M Port Setting       Module Setting         t step, and enter the Step         or applying the connection         e "Modbus RTU (or ASCII)         be [Convert Setting > MQT         "Step Box" will prevent the	Eva Li       Version       1.0.0         y Connection & Enable Converting Mod         M Port Setting > Module Setting > MQTT Certi         tion & Enable Converting Module       > Save Project         t step, and enter the Step 6 [Apply Connection and enabling         or applying the connection and enabling         e "Modbus RTU (or ASCII) / MQTT JSON"         ie [Convert Setting > MQTT JSON - Modil         "Step Box" will prevent the user from sel	Eva Li       Version       1.0.0       Date         y Connection & Enable Converting Module         M Port Setting > Module Setting > MQTT Certificate >         tion & Enable Converting Module       > Save Project > Run the         t step, and enter the Step 6 [Apply Connection & For applying the connection and enabling the conversion of applying the connection and enabling the conversione         e "Modbus RTU (or ASCII) / MQTT JSON" conversione         istep Box" will prevent the user from selecting the	Eva Li       Version       1.0.0       Date       2021, 04         y Connection & Enable Converting Module         M Port Setting > Module Setting > MQTT Certificate > MQTT Broker Setting         etion & Enable Converting Module > Save Project > Run the project         t step, and enter the Step 6 [Apply Connection & Enable Converting module         e "Modbus RTU (or ASCII) / MQTT JSON" conversion at the begins [Convert Setting > MQTT JSON - Modbus RTU (or ASCII) (Mater Setting > MQTT JSON - Modbus RTU (or ASCII) (Mater Setting > MQTT JSON - Modbus RTU (or ASCII) (Mater Setting > MQTT JSON - Modbus RTU (or ASCII) (Mater Setting > MQTT JSON - Modbus RTU (or ASCII) (Mater Setting > MQTT JSON - Modbus RTU (or ASCII) (Mater Setting > MQTT JSON - Modbus RTU (or ASCII) (Mater Setting > MQTT JSON - Modbus RTU (or ASCII) (Mater Setting > MQTT JSON - Modbus RTU (or ASCII) (Mater Setting > MQTT JSON - Modbus RTU (or ASCII) (Mater Setting > MQTT JSON - Modbus RTU (or ASCII) (Mater Setting > MQTT JSON - Modbus RTU (or ASCII) (Mater Setting > MQTT JSON - Modbus RTU (or ASCII) (Mater Setting > MQTT JSON - Modbus RTU (or ASCII) (Mater Setting > MQTT JSON - Modbus RTU (or ASCII) (Mater Setting > MQTT JSON - Modbus RTU (or ASCII) (Mater Setting > MQTT JSON - Modbus RTU (or ASCII) (Mater Setting > MQTT JSON - Modbus RTU (or ASCII) (Mater Set PSON - Modbus RTU (or A	Eva Li       Version       1.0.0       Date       2021, 04       Page         y Connection & Enable Converting Module         M Port Setting > Module Setting > MQTT Certificate > MQTT Broker Setting > MQTT         etion & Enable Converting Module > Save Project > Run the project         t step, and enter the Step 6 [Apply Connection & Enable Converting Module or applying the connection and enabling the converting module.         et "Modbus RTU (or ASCII) / MQTT JSON" conversion at the beginning, so this is [Convert Setting > MQTT JSON - Modbus RTU (or ASCII) (Master)] page of "Step Box" will prevent the user from selecting the wrong platform.

Convert S	etting Modbus RTU (Master)			
Modb	ous RTU Module List			
No.	*Module Name / Nickname	Edit	Connection Name	All Enabled
1	M-7055D	Edit	Default  Apply	
			< 1 /1 >	
		Save		

Convert Setting >	MQTT JSON > Modbus RTU (Master) Module List
No.	The module number in the module list (Not editable here)
*Module Name	The module name set in the module list (Not editable here)
Connection	Select a group connection name, and then click [Apply]
Name	Select a group connection name, and then click [Apply].
	Check [All Enabled] box to enable all modules in list for conversion.
All Enabled	Default: Uncheck. Check the box of each module can enable just that
	module for conversion.
Гd:+	If user wants to enable some I/O channels for conversion, click [Edit]
Edit	of that module to enter the "Variable Tale" setting.
	The page number of the module list: Current page / Total pages. Click <
	or > to go to the previous or next page.
Save	Click to save the settings of this page.

ssification	UA-Series	English Funct	ion Wizard	FAQ-cnv-0	)6		
hor	Eva Li	Version	1.0.0	Date	2021, 04	Page	18 / 18
Step 7. Save The setting of an animation project is sav Controller CO	Project of this exam n as below red complet M Port Setting	ple is finished picture, that r tely. Module Setti	now. Click neans the p ng > MQTT	the next st project is sa Certificate	ep <b>[Save Proj</b> e wing. When t MQTT Broker S	ect], the Ste he animatio etting <b>&gt;</b> MQ	ep Box will s on vanished, TT Group Settir
Step 8. Run The project,	the Project after saving	g, needs to be	Save	Project	kt step [ <b>Run t</b>	he Project].	This step ca
Controller CO	M Port Setting	Module Setti	ng 📏 MQTT	Certificate	MQTT Broker S	etting 📏 MQ	TT Group Settir
Apply Connec	ction & Enable (	Converting Module	> Save Pro	oject 📏 Run	the project		
Apply Conner	Run the p	Converting Module	Save Pro	rject > Run Run	the project	Success	S.
Apply Connect When the w controller is and back to t The new pro process the c more about t	rords <b>"Pleas</b> rords <b>"Pleas</b> running ne the first scre oject now o conversion the Web UI	converting Module coroject Ple se wait" disap w project suc een view of th completes the communicatic settings, plea	> Save Pro ase wait. opears, the cessfully. T e Web UI. setting, up n. Users ca se refer to	piect Run Run new word hen the Ste ploading ar n see the I/ UA Manual	the project <b>he project</b> <b>S "Success"</b> and p Box will dis d running in O status from CH4 and CH5.	Success opears, that appear auto the UA con the menu [	t means the omatically r ntroller and [ <b>I/O Status</b> ]
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