Classification	UA-Series E	nalish Functio	n Wizaro	FAO-cnv-03	3		
Author	Eva Li	Version	1.0.0	Date	2021, 04	Page	1 / 8
FAQ-CNV-03: How to Conve EIP / OPC UA Co Service function controller.	UA Web UI ert (EtherNe nversion inclu n, the OPC U	Function Wi et/IP) EIP / O ude the conver A Server can	<b>PC UA</b> <b>PC UA</b> sion of C read and	<b>Vodule Co</b> <b>(Use EIP-2</b> PC UA and <b>E</b> I write the E	mmunicatio 2060) therNet/IP p EIP-2000 dev	rotocols. W ice that co	r <b>sion -</b> /ith the <b>OPC U/</b> nnected to the
Convert Set	tting: EIP and Conve	OPC UA	erNet/IP	and OPC UA			
LAN: E	UA Series Controller thernet Port	E de alla	Etherne	et Et	EtherNet/ Module (EIP-2000 hernet Port	P ))	
When UA series through the OPC [(EtherNet/IP) E	controller co C UA server to IP / OPC UA]	network conne onnects the EIP o read/write th of the "Module	ection me P-2000 m e I/O dat e Commu	odule (via Et a of the EIP- inication Con	hernet, as El 2000 module version" in tl	P-2060 in t r, user can o re Function	<u>pter 2</u> . he picture) an choose the iter Wizard.
		Function Wiza	rd (Click h	nere)			
		Function Wiza Module Com (Master) M (Master) M (Master) M MOTT / OF	ard (Click munication odbus RTI odbus TCI odbus ASI odbus ASI	here) on Conversion U / OPC UA P / OPC UA CII / OPC UA	1		
[Step Box]: The Step Box of auto enters the user just needs rightly.	the [ <b>(EtherNe</b> first step sett to follow the	et/IP) EIP / OP ing page (The s e "Step Box" s	<b>C UA</b> ] ha step with tep-by-st	s the steps as a bold unde ep and then	s below. Whe erline means can comple	en enabling it is the cur te the proj	the Step Box, i rent step.). Th ect quickly an
Module Setting Run the project	OPC UA Cer	rtificate ≽ OPC	UA Conne	ction ≽ Enat	ole Converting Mo	odule 🗲 Sa	ave Project 📏
		ICP DAS Co., L	td. Tech	nical Docume	ent		

Classification	UA-Series Engl						
Author	Eva Li	Page	2 / 8				
Step 1. Module Setting							
Module Setting	Setting > OPC UA Certificate > OPC UA Connection > Enable Converting Module > Save Project >						
Run the projec	t						

It auto-enters the first step of **Step 1 [Module Setting].** This page is for setting the communication values of the connected modules.

The Ethernet port is LAN for connecting with the EtherNet/IP module. Select one EIP-2000 series model and click [ ] button could add a new module.

System Setting Modul	e Setting	IoT Platform Setting	Convert Setting	Advanced Setting L	ogger Setting
I/O Status File Setting		<u> </u>			
Module Setting   ICPDAS Mod	lule		1. Ethernet por	t: LAN	
Modbus RTU Module (Master)	EtherNe	et/IP Module List LAN	LAN V	2 Salast Mas	
<b>3.</b> Click to add	Select All	No.	ModuleName	Ex: EIP-206	i <b>0</b> Edit
MQTT	•	Ell	-2060 🔻		
MQTT Module		Copy Remov	/e	< 0	/ 0 >

Add a module (No.: 1, Name: EIP-2060) as below. Then click [Edit] button to enter the "Module Content Setting" page.

LAN	LAN V		
No.	ModuleName	NickName 4	Edit
<b>T</b> E	IP-2060 ▼		
1	EIP-2060	EIP-2060	Edit
Copy Rem	ove	< 1 /1 >	
	Save		
	LAN No. T Copy Remaind	LAN   No.   ModuleName   T   EIP-2060   1   EIP-2060   Copy   Remove   Save	LAN       Image: Copy Remove         LAN       Image: Copy Remove         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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Clas	sification	UA-Series Engl	ish Functi	on Wizard FA	}			
Autł	nor	Eva Li	Version	1.0.0	Date	2021, 04	Page	3 / 8
Module Content Setting] page:								
	Module C	ontent Settin	g					
		No. 1						
		Module Nam	EIP-20	060				
		NickNam	e EIP-20	060		Use	er enters the	real
		I	P 192	. 168 . 13	. 5	conr	nected IP add	dress.
		ChannelNumbe	er 12-ch	(6DI+6DO)	T			

Module Content Setting					
No.	The module number in the module list (Not editable here)				
Module Name	The selected model number. (Not editable here)				
NickName	User can give a nick name, default: selected model number				
IP	Enter the IP address of the connected EIP module.				
	This example: IP address of the EIP-2060 is 192.168.13.5				
ChannelNumber	Select the number of the I/O channels.				

The system will auto-display the selected I/O table by the order of Digital Input / Digital Output / Analogy Input / Analogy Output. This example: EIP-2060 have 6 DI and 6 DO.

Channel	Name	Attributes	Data Type	Description
0	DI0	Read •	Bool	
1	DI1	Read	Bool	
2	DI2	Read	Bool	
3	DI3	Read	Bool	
4	DI4	Read	Bool	
5	DI5	Read	Bool	
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sification	UA-Series Eng	lish Funct	ion Wizard	FAQ-cnv-03			
nor	Eva Li	Version	1.0.0	Date	2021, 04	Page	4 / 8
Digital Out	put						
Channel	Name		Attributes	Data Type	Des	cription	
0	DO0	R	ead / Write 🔻	Bool			
1	DO1	R	ead / Write 🔻	Bool			
2	DO2	R	ead / Write 🔻	Bool			
3	DO3	R	ead / Write 🔻	Bool			
4	DO4	R	ead / Write 🔻	Bool			
5	DO5	R	ead / Write 🔻	Bool			
Analogy In	put						
Channel	Name	Attrik	outes	Data Type	Desc	ription	
Analogy O	utput						
Channel	Name	Attrik	outes	Data Type	Desc	ription	
			OK Car	ncel			
Digital Input	t / Digital Outp	out / Analo	gy Input /	Analogy Out	put		
Channel	Chann	el number	will auto-d	lisplay accord	ling to the m	odel. (Not e	ditable)

	Character where "It is the disease of the testing and det (New Altertist)
Channel	Channel number will auto-display according to the model. (Not editable)
	Default: Number from 0.
Name	User can define the name. Default: DI#, DO#, AI#, AO#
	Available: number, English character, underline "_", dash line "-", cannot
	be a space, slash "/", Chinese character, and other symbols.
Attributes	Display data attribute of the variable. (Not editable)
	Include Read, Read/Write
Data Type	Display data type of the variable. Include: Bool, Short, Unsigned Short,
	Long, Unsigned Long, Float, Double, String
Description	For users set up the description for the channel.
OK / Cannel	Click [OK] to save and exit the page settings.
	Click [Cancer] to exit without saving.

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Classification	UA-Series Eng	lish Funct	ion Wizard FAC	Q-cnv-03			
Author	Eva Li	Version	1.0.0	Date	2021,04	Page	5 / 8
• Step 2. C	PC UA Certificate						
Module Se	etting 📏 OPC UA Cer	tificate	OPC UA Connecti	ion 📏 Ei	nable Converting	Module ≽ S	ave Project 📏
Run the p	roject						
Click the next	step, and enter the	e Step 2 [C	OPC UA Certific	<b>ate]</b> of th	ne UI setting.		
This step is at delete certific	oout setting the OP cate. If the user's p	C UA Cert oroject do	tificate for the : es not need to	security a <b>use the</b>	and encryptio secure encry	n, e.g. uploa p <mark>tion conne</mark>	d, download, ction, please
In the <b>OPC</b> U	IA Certificate step	. users ca	n add mutual c	redentia	ls on both sid	le's devices t	o strengther
security encry	ption. n the <b>OPC UA Clier</b>	<b>nt</b> trust ce	ertificate file of	the devi	ce from the c	onnected pa	rtv. save it to
the PC. In file in UA,	this step, select the remove it first.)	is file and	upload it to th	ne UA coi	ntroller. (If th	ere was an o	old certificate
2 The device certificate	of the other side r file ( <b>Certicate_IPA</b>	needs the ddresst	UA certificate ar) to the othe	also. In t er party,	his step, dow so that they	nload the <b>O</b> can decom	<b>PC UA Server</b> press the file
(icpdasuas	erver.der) and uplo	oad to the	eir device.				
	I/O Status File Se	etting					
	File Setting OPC UA Ce	OPC	UA Server				
	OPC UA Certificate	Remo	ove the File				
	MQTT Certificate		Trusted Certific	ate Remo	ove		
	Log File Download		OPC UA Server Certific	cate Remo	ove		
		Uploa	ad the file to the	controller	r 👝		
			Trusted Certific	cate Selec	t File	Upload	
		Dowr	nload the file from	m controll	er		
			OPC UA Server Certific	cate Down	nload 2		
File Setting	> OPC LIA Cortificat		d the file to th	e control	lor		
Trusted	Select File: select	the OPC I	IA Trusted Cert	ificate fil	e in PC		
Certificate	Upload: upload th	ne Trusted	Certificate file	to the U	A controller.		
certificate	• File format must	t he DFR	Extension name	- must he	e "der / cer / i	ort"	
		isted Certificat	e Select File licoda	asuaserver.de	r Upload		
Eilo Sotting			bystem will Sho	om contr	oller		
File Setting	> OPC UA Certificat				oller		
OPC UA	Download: Downl	load the C	DPC UA Server (	Lertificate	e file to the PC	J.	
Certificate	e.g. Certif	icate_19	2.168.255.10	2tar	Sefore using, (	decompress	to
	icpdasuaserver.	<b>der</b> , as be	low. 🔄 icpo	dasuase	erver.der		
	IC	P DAS Co.	, Ltd. Technical	Docume	nt		

Classification	UA-Series English Function Wizard FAQ-cnv-03						
Author	Eva Li	Version	1.0.0	Date	2021, 04	Page	6 / 8
• Step 3. OPC	UA Connection						
Module Setting	g 🔈 OPC UA Cer	tificate 📏	OPC UA Connecti	on 📏 E	nable Converting	Module ≽ S	Save Project 📏
Run the projec	xt						

Click the next step, and enter the **Step 3 [OPC UA Connection]** of the UI setting. This page is for setting the IoT platform and the OPC UA connection, e.g. the server name, port, login

identity information, etc.

We select the "EIP / OPC UA" conversion at the beginning, so this step will auto enter the [**OPC UA Connection > Local Server**] page of IoT Platform Setting. The "Step Box" will prevent the user from selecting the wrong platform.

System Setting Modu	le Setting IoT Platform Setting	Convert Setting Advan
I/O Status File Setting		-
IoT Platform Setting Local S	erver	
MQTT Connection	Server	
Local Broker	Server Name	ICPDAS OPC UA Server
Remote Broker		
MQTT Group Connection	Port	48010
Microsoft Azure Platform		Save
OPC UA Connection	User Identity Tokens	
Local Server	Anonymous Login	Enabled
Cloud Connection	User Password Login	✓ Enabled
	Certificate Login	Enabled
		Save

OPC UA Connection >	Local Server Setting –Server
Server Name	Display the active OPC UA Server name. Not editable.
	System value: ICPDAS_OPC_UA_Server
Port	The communication port number of the OPC UA Server.
	System Default: 48010.
Save	Click to save the settings of this item.
OPC UA Connection >	Local Server Setting –User Identity Tokens
Anonymous Login	Check to enable the anonymous login of clients. Default: check.
User Password Login	Check to enable the user password login of clients.
	Default: uncheck.
Certificate Login	Check to enable the certificate login of clients.
	Default: uncheck.
Save	Click to save the settings of this item.
	ICP DAS Co., Ltd. Technical Document

Classification	UA-Series Engl	ish Functi	ion Wizard FAC	2-cnv-03			
Author	Eva Li	Version	1.0.0	Date	2021, 04	Page	7 / 8
• Step 4. Enak	ole Converting N	lodule					
Module Setti	ng 📏 OPC UA Ce	ertificate 📏	OPC UA Connec	tion 📏	Enable Converting	Module 📏 S	Save Project 📏
Run the proje	ect						

Click the next step, and enter the **Step 4 [Enable Converting Module]** UI setting This step is for enabling the EIP / OPC UA conversion.

We select the "EIP / OPC UA" conversion at the beginning, so this step will auto enter the [**OPC UA > EtherNet/IP**] page of Conversion setting. The "Step Box" will prevent the user from selecting the wrong platform.

Check the box of the module to enable all I/O. If want to enable some I/O, click "Edit" to select I/O one by one.

System Setting Modu	le Setting	IoT Platform Setting	Convert Setting	Advanced Setting	Logger Setting
I/O Status File Setting	9				
Convert Setting EtherNet/IP					
OPC UA Modbus RTU (Master)	EIP Mo	dule List			
Modbus TCP (Master)	No.	Module Name	Nickname	Edit	All Enabled
Modbus ASCII (Master)					
MQTT	1	EIP-2060	EIP-2060	Edit	
EtherNet/IP				< 1	/1>
MQTT			Save		
Modbus PTLL (Master)					

Convert Setting >	OPC UA > EtherNet/IP - EIP 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)
/ Nickname	
Edit	If user wants to enable some I/O channels for conversion, click [Edit] of
	that module to enter the "Variable Tale" setting. It is normal to set all
	channels as enabled, and the conversion will not affect the unconnected
	channels.
All Enabled	Check [All Enabled] box to enable all modules in list for conversion.
	Default: Uncheck.
	Check the box of each module can enable just that module for conversion.
< 1 / 1 >	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.

ICP DAS Co., Ltd. Technical Document

lassification	UA-Series English Function Wizard FAQ-cnv-03						
uthor	Eva Li	Version	1.0.0	Date	2021, 04	Page	8 / 8
Step 5. Save	e Project						
The setting of an animation project is say	of this example is n as below pictu ved completely.	s finished re, that m	now. Click the leans the proje	next step ect is sav	o <b>[Save Projec</b> ing. When the	<b>t],</b> the Step I animation	Box will show vanished, the
Module Setti Run the proj	ing ≽ OPC UA Ce ect	rtificate 📏	OPC UA Connec	tion 🗲 E	nable Converting	Module ≽ Sa	ave Project
		>	Save Pro	ject			
Step 6. Run The project, also via the [	the Project after saving, nee System Setting	eds to be e > <b>Controll</b>	executed. Click er Service Sett	the next ing > Rur	step <b>[Run the</b> 1 <b>Project</b> ] to S	e <b>Project]</b> . Th top and Run	is step can the project.
Module Setti Run the proj	ing 📏 OPC UA Ce	ertificate 🗲	OPC UA Connec	tion 🗲 E	nable Converting	Module 📏 Sa	ave Project 📏
	Run the projec	t Pleas	se wait.	Run the	e project	Success.	]
When the w controller is	vords " <b>Please w</b> a running new pro	ait" disapı oject succ	pears, the nev essfully. Then	v words ' the Step	" <b>Success"</b> app Box will disa	pears, that m ppear autom	neans the UA natically now,

The new project now completes the setting, uploading and running in the UA controller and can process the conversion communication. Users can see the I/O status from the menu [**I/O Status**]. For

and back to the first screen view of the Web UI.

I/O Status					
Modbus RTU Module (Master)	Related Settings				
No. Name Serial Pol	t Number of variables	10	OUpdated 10 points per second)		
1 M-7055D ttyO5	Display Update Time (ms)	1000			
< 1 / 1 >	I/O Status		I/O Scaling		
Modbus TCP Module	Variable Name Data	a Type Value	e Description		
Master) No. Name LAN	DIO	Bool			
1 DL-302 LAN	DI1 E	Bool			