

# Certificate Generating & Installing Tools

Certificate Generate Tool/ Certificate Write Tool

### **INSTRUCTION MANUAL**

Read this Instruction Manual before using the product. Read the safety notes carefully. Keep this Instruction Manual in a safe place and be careful not to lose it.

### PREFACE

This instruction manual describes how to generate the certificate required for security communication as well as to install and use the certificate installation tool for the remote I/O RT series OPC UA compatible device unit. Please read this Instruction Manual thoroughly and use the product properly.

Keep this Instruction Manual in a safe place and be careful not to lose it.

Product specifications and appearances presented in this Instruction Manual are subject to change without notice.

CKD does not offer any warranties whatsoever regarding information provided in relation to this software. This includes any warranties regarding descriptions, accuracy, safety, marketability, and fitness for particular uses or purposes. CKD Corporation shall not be responsible for any damage arising from the software.

### SAFETY INFORMATION

In order to use our products safely, it is important to select, use, handle, and maintain the products properly.

Observe the warnings and precautions described in this Instruction Manual to ensure device safety.

Handling not described in this Instruction Manual may lead to an accident. Thoroughly read and understand this Instruction Manual before using the product.

To explicitly indicate the severity and likelihood of a potential harm or damage, precautions are classified into three categories: "DANGER", "WARNING", and "CAUTION".

Indicates an imminent hazard. Improper handling will cause death or serious injury to people.
Indicates a potential hazard. Improper handling may cause death or serious injury to people.
Indicates a potential hazard. Improper handling may cause injury to people or damage to property.

Some statements classified as "CAUTION" may still lead to serious results depending on the situation.

All statements that follow these labels are important and must be observed.

#### <Types of warning symbols>

$\bigcirc$	A general symbol indicating a prohibited (not permitted) action.		A symbol prohibiting touching objects or equipment.
	A symbol prohibiting putting fingers into openings.		A general symbol warning of dangers such as electric shock and burns.
	A symbol warning of dangers that occur when starting an automatic equipment.		A general symbol indicating that a specific course of action must be taken.
	A symbol instructing to read an instruction manual carefully.	ļ	A symbol indicating that the earth terminal must be connected to the ground.

Other general precautions, tips on using the product, or technical information and terminology are indicated by the following icon.



• Contains useful information such as general precautions, supplementary information, and reference information.

### CONTENTS

PREFACE		2
SAFETY INFO	ORMATION	3
CONTENTS .		5
1. Tool Overv	iew	6
1.1. Operatiı	ng Environment	7
1.2. License	Agreement	
2. Certificate	Generate Tool (Certificate Generate Tool)	9
2.1. Structur	е	9
2.2. Screen	Description	9
2.3. Usage		
2.3.1.	Obtaining the installer	
2.3.2.	Installation Procedure	
2.3.3.	Generating a certificate	15
2.3.4.	Displaying the certificate	19
3. Certificate	Write Tool (Certificate Write Tool)	20
3.1. Structur	'e	20
3.2. Screen	Description	
3.3. Usage		
3.3.1.	Obtaining the installer	22
3.3.2.	Installation Procedure	24
3.3.3.	Installing the certificate	26
4. ERROR DE	SCRIPTIONS	31
4.1. Troubles	shooting	
4.1.1.	Certificate Generate Tool	31
4.1.2.	Certificate Write Tool	31

### **1.** TOOL OVERVIEW

This software is a tool to manage the certificates required for the communication of the remote I/O RT series OPC UA compatible device unit. Each chapter explains the following two tools:

#### Certificate Generate Tool

A tool to generate a certificate, private key and Certificate Signing Request(CSR) for OPC UA communication.

#### Certificate Write Tool

A tool to install and upload the certificate and private key to and from the OPC UA compatible device unit.

2	<ul> <li>Before using the device unit, thoroughly read and understand the instruction manual for the industrial network communication system used.</li> <li>Unexpected operation of this product may result in injury or damage to equipment.</li> </ul>
	Do not connect or disconnect the USB communication cable or turn the unit's power on or off while transmitting to or receiving from the unit. • The device unit may malfunction.
0	<ul> <li>Do not start and use this tool on one computer at the same time.</li> <li>This may cause communication failure and may lead to unexpected operation of the unit or valve.</li> </ul>
0	<ul> <li>If a communication error occurs, check the connection status of the USB communication cable (whether or not it is disconnected, etc.).</li> <li>Close other communication software when using this software.</li> <li>This cannot be used simultaneously with other communication software that uses the USB communication interface.</li> </ul>
	<ul> <li>Use a USB communication cable to communicate with the unit.</li> <li>To connect to a USB communication cable, refer to the Instruction Manual for the corresponding device.</li> </ul>

### 1.1. Operating Environment

The following environment is required to operate this software.

OS (Operating system)	Windows <sup>®</sup> 11、Windows <sup>®</sup> 10
Display	640 x 480 or higher (1280 x 800 pixels or higher recommended)
Required memory size	4 GB or more recommended
Hard disk	500MB of free space or more
Interface	Using a Micro-B cable with the remote I/O system is required.

• Windows is a registered trademark of Microsoft Corporation in the United
<ul> <li>States, Japan and other countries.</li> <li>Other company and product names mentioned herein are trademarks or registered trademarks of their respective companies.</li> </ul>

### **1.2. License Agreement**

CKD Corporation retains all rights to this software (including programs, data, text, photographs, manuals, etc.). Customers may use this software by agreeing to each of the following articles.

- Customers shall not reproduce or modify the contents of this software, nor transfer, sell, lend, or distribute the software to any third party.
- Customers shall not reverse-engineer, decompile, or disassemble this software.
- Customers shall not reproduce the manual or any other printed materials.
- CKD Corporation may terminate this License Agreement if the customer breaches this Agreement. In such case, the customer shall not be able to use the software at all.
- CKD Corporation provides no warranty of any kind regarding the information provided in this software, including any warranty of content, accuracy, safety, merchantability, or fitness for a particular use or purpose.
- CKD Corporation shall not be responsible for any damage arising from this software.
- The contents of this software are subject to change without notice.

## 2. Certificate Generate Tool

### 2.1. Structure

The Certificate Generate Tool can be used on any PC on which this software is installed.

### 2.2. Screen Description

#### Main window

📑 Certifica	te Generate Tool			×
NEW				HELP
Certificates				
File Name	Common Name	Valid Date From	Valid Date To	
3				
Information				
Name	Value			
		Delete Ge	nerate Citation	Show Certificate File
		(5)	(6)	(7)

No.	Name	Description	Reference
1	[NEW] button	Generate a new.	-
2	[HELP] button	Displays the instruction manual.	-
3	"Certificates" display	Displays the generated certificate, private key, and CSR.	-
4	"Information" display	Displays the information of generated certificate, private key, and CSR.	-
5	[Delete] button	Deletes the selected files.	-
6	[Generate Citation] button	Generates the certificate by citing the saved certificate information.	-
Ø	[Show Certificate File] button	Displays the folders various files are saved.	-

#### ■ Sub window

	Certificate Generate Tool	×	]
	(*)File Name	Country Name(C)	
	(*)Valid Days	State or Province(ST)	
(2)	Key Size	Locality(L)	(8)
3	2048 V	Organization Name(O)	9
4	RSA (*)IP Address	Organizational Unit(OU)	10
( <b>5</b> )	(*)Serial Number	(*)Common Name	( <u>II</u> )
6	(*)Require field	E-mail Address	(12)
		OK Cancel	ப

No.	Name	Description	Necessity
1	File Name	Enter the file name (up to 64 English letters).	Required
2	Valid Days	Enter the number of days the certificate is valid. (1 to 7300 days)	Required
3	Key Size	Selects the key size. (1024/2048/4096)	Required
4	Key Algorithm	Displays the key algorithm (RSA: cannot be changed).	Required
5	IP Address	Enter the IP address of the OPC UA compatible device unit.	Required
6	Serial Number	Enter the IP address of the OPC UA compatible device unit. (8 hexadecimal digits)	Required
7	Country Name(C)	Enter the country name in two uppercase English letters. (Example: JP (Japan)	Arbitrary
8	State or Province(ST)	Enter the state or province name (up to 128 English letters).	Arbitrary
9	Locality(L)	Enter the area name (up to 128 English letters).	Arbitrary
10	Organization Name(O)	Enter the organization name (up to 64 English letters).	Arbitrary
1	Organizational Unit(OU)	Enter the affiliation name (up to 64 English letters).	Arbitrary
12	Common Name	Enter the common name for identification (up to 64 English letters).	Required
13	E-mail Address	Enter the email address (up to 128 English letters).	Arbitrary

### 2.3.1. Obtaining the installer

Obtain the installer for the Certificate Generate Tool from the CKD website. RT product page: https://www.ckd.co.jp/kiki/en/product/detail/1064

#### <Procedure to obtain>

### **1** Click the above URL or select from the CKD website to display the product detail page.

Select in this order: CKD website  $\rightarrow$  COMPONENTS TOP  $\rightarrow$  Controllers (Category)  $\rightarrow$  Remote I/O (Product Category). Also searchable with the "RT."

### 2. Click "Software" on the "Remote I/O" page.

	DUCTS INFORMATION DOCUMENTS / D	OWNLOAD COR	PORATE INFORMATION	SUPPORT
HOME > Product Information > Product List > Re	mote I/O			
Q Product Details				
Search Conditions				
Model No. rt	Remote I/O Remote I/O			
Product Category All	NEW			
New Products Only		[New] Digital inp [New] Web API of	ut/output push-in terminal block 32 p device unit added (Japan only)	points added
Discontinued Products Only Q Search		Waterproof remo Link master. Up information (ove contributing to th EtherNet/IP, Eth IO-Link master u number of conne	te I/O compatible with digital I/O, ani to 18 units can be added for use. Dia rcurrent, short-circuit, error, etc.) can le IoT of equipment. Supported con arCAT, PROFINET, IO-Link (as a net unit and the subordinate IO-Link devi acted units: 18	alog I/O and IO- agnosis a be acquired, mmunications: twork between the ices) Maximum
Selection Guide		Industry : Clamp Enviro	Conveyance Jig related Inmental durability Assembly Insp toos.	pection
Recently Viewed	Documents / Download		6 c	CKD plus Members Only

### 3. Click the installer [Certificate Generate Tool.zip] on the "Software" select screen to download.



#### 4. Download complete

Extract the zip file and a "Certificate Generate Tool" folder containing "Setup\_en.msi" will be created on the desktop.

□   □ マ   RTXTools_jp ファイル ホーム 共有 表示								-	× ^ ?
★ 切り取り クイックアクセス コピー 貼り付け ■ バスのコ にビン留めする ジョートブ	ピー Jットの貼り付け	移動先 コピー先	× 前除 変更	● 新しいアイテム マ 新しい フォルダー	<ul> <li>ブロパティ</li> <li>□ 編集</li> <li>⑦ 編集</li> <li>● 履歴</li> </ul>	➡ すべて選択 書 選択解除 書 選択の切り	替え		
クリップボード		塑	理	新規	開く	選択			
← → ヾ ↑	(スク(C:) > ユ	-ザ- → · · · · ·	デスクトップ → R	TXTools_jp		~	Ö		
	名前	^		更新日時	種類	サイズ			
★ クイック アクセス	👸 Setup	_en.msi		2024/03/21 15:58	Windows インストー	5,671 KB			
<ul> <li>OneDrive</li> </ul>									
PC									
🌛 ネットワーク									

\*This image is from the Japanese version of the Windows OS.

### 2.3.2. Installation Procedure

#### 1. Double-click "Setup\_en.msi" to start the "Setup Wizard".

If a message that warns of installing a program from an unknown publisher is displayed at the start of the installation, select [Yes] to continue the installation.

### 2. Click [Next] in the "Setup Wizard" dialog box.



### **3** Read the "License Agreement" dialog box and check the "Agree," then click [Next].



### **4** Check the destination folder and click [Next].

The folder name is displayed by default. To save the file in a different folder, select it with "Browse."

🛃 Certificate Generate Tool	-		×
Select Installation Folder			
The installer will install Certificate Generate Tool to the following folder.			
To install in this folder, click "Next". To install to a different folder, enter it be	low or	click "Bro	wse".
Eolder: C¥Program Files (x86)¥CKD¥Certificate Generate Tool¥		Browse.	
		Disk Cos	t
Install Certificate Generate Tool for yourself, or for anyone who us	es this	: compute	er:
⊖ Everyone			
● Just me			
< Back Next >		Car	ncel

## 5. Follow the "Confirm Installation" dialog box and click [Next]

🕼 Certificate Generate Tool	-		×
Confirm Installation			
The installer is ready to install Certificate Generate Tool on your computer.			
Click "Next" to start the installation.			
< Back Next >		Ca	ncel

## 6. Follow the "Installation Complete" dialog box and click [Close] to close the dialog box

🙀 Certificate Generate Tool	_		×
Installation Complete			5
Certificate Generate Tool has been successfully installed.			
Click "Close" to exit.			
( Deels	Class	C	
< Back	CIOSE	La	ncei

#### Generating a certificate 2.3.3.

### 1 Launch [Certificate Generate Tool] Select [Certificate Generate Tool] from the [CKD] folder in the Windows Start

menu.



### **2** Click [NEW] when the Certificate Generate Tool starts up and a window appears.

📑 Certificate Gene	rate Tool			×
NEW				HELP
Certificates				
File Name	Common Name	Valid Date From	Valid Date To	
Information				
Name	Value			
	De	lete Generate	Citation Show Certif	icate File

### **3.** Enter each item and click [OK].

Certificate Generate Tool	X
(*)File Name	Country Name(C)
Example_certificate	
(*)Valid Days	State or Province(ST)
365	
Key Size	Locality(L)
2048 ~	
Key Algorithm	Organization Name(O)
RSA $\sim$	
(*)IP Address	Organizational Uint(OU)
192 . 168 . 1 . 1	
(*)Serial Number	(*)Common Name
0000001	RemoteIO
(*)Doguiro fold	E-mail Address
	OK Cancel
	OK Cancel



• Fields marked with (\*) are required.

2.2Screen DescriptionEnter the required information according to the instructions in the "Sub window".

#### ■ Checking the [Serial Number]

The serial number of the OPC UA device unit must be entered in the [Serial Number] field. The serial number can be checked using RTXTools, the RT series setting software. Follow these steps for checking.

 RTXTools, the RT Series Setting Software and instruction manual can be downloaded from the following URL.
 RT product page: https://www.ckd.co.jp/kiki/en/product/detail/1064

### **1** Start RTXTools and click the [Connect] button.

🗓 Software Configure	_	×
COM Port	~	
USB シリアル デバイス	(COM14) RT Device unit O	PPC UA ~ Connect
English	~	
Software Version	2.0.1	

### **2** Double-click the OPC UA device unit.

	in COMM	<ul> <li>WEB</li> </ul>	-		
Error No error					
Unit configuration	I/O Monitor	I/O Memory	Error	Exp/Imp Setting	
Zoom in Zoo	om out		Min	imum current con	sumption 230 mA
Lipit No					Main
Madal averabas					
Model number					
Model number Unit features Connector					

### **3.** Check the number

A sub window will appear and the serial number can be checked.

nit curren	t status Unit SETS	100-0000
	Unit No. Model number Unit features Connector Process data size(byth Minimum current cor Latch reset	0 RT-XTEUN00N Device unit OPC UA e) IN : 0 , OUT : 0 Isumption 100 mA
NO.	Item	Value
1	Serial number	0000001
2	MAC address	3C-83-1E-10-00-10
3	Dip SW (0)	40
4	Rotary dip SW (×16)	02
5	Rotary dip SW (×1)	07

### 2.3.4. Generating files

#### The following file is generated when a certificate is generated.

Name	extension	Description
Certificate	.crt	A file that verifies the server's identity and establishes secure communication. It is signed by a trusted Certificate Authority (CA) and used by browsers or clients to authenticate the server.
Private Key	.key	A crucial key used for encryption and decryption, paired with a certificate. It enables secure communication and must be kept secret, as its exposure compromises security.
CSR (Certificate Signing Request)	.csr	A request file submitted to a Certificate Authority (CA) to obtain a certificate. It includes the public key and organizational information and is created using a private key. It is used when certifying by CA is needed.

### 2.3.5. Displaying the certificate

## **1** Select the certificate to view and click [Show Certificate File].

Certificate Generat	e Tool			×
NEW				HELP
Certificates				
File Name	Common Name	Valid Date From	Valid Date To	
Example_certificat	RemoteIO	2025-02-20 15:51:48	2026-02-20 1	5:51:48
Example_certificat				
Example_certificat				
Information Name	Value			
Signature Algorithm	SHA256RSA			
Alternative Name(U	urn:00000001:www	.ckd.co.jp		
Alternative Name(IP.,	. 192.168.1.1	7		
Common Name	RemoteIO			
Key Size	2048			
Valid Date From	2025-02-20 15:51:	48		
Valid Date To	2026-02-20 15:51:	48		
	Dele	ete Generate (	Ditation Sho	w Certificate File

### **2** Check the view

The generated certificate is displayed.

名前 ^	更新日時	種類	サイズ	
🔄 Example_certificate.crt	2025/02/20 15:51	セキュリティ証明書		1 KB
Example_certificate.csr	2025/02/20 15:51	CSR ファイル		1 KB
Example_certificate.key	2025/02/20 15:51	KEY ファイル		2 KB

## 3. Certificate Write Tool

### 3.1. Structure

Connect the PC the Certificate Write Tool is installed to the remote I/O system with a cable.



PC the Certificate Write Tool installed

### 3.2. Screen Description

#### ■ Main window



No.	Name	Description	Reference
1	[COM] select list	Select the COM port for communication with the OPC UA compatible device unit from the drop-down list.	-
2	[Connect] button	Starts communication with an OPC UA compatible device unit. When connected, this button changes to [Disconnect], the disconnect button.	-
3	[HELP] button	Displays the instruction manual.	-
4	[Read] button	Upload the certificate and private key selected in the server or client Information window.	-
5	[Write] button	Installs the certificate and private key to the selected index in the server or client Information pane.	-
6	[Remove] button	Deletes the certificate and private key of the index selected in the server or client Information window.	-
7	Server Information list	Displays a list of server certificates (Certificate) and private keys (Key) written to OPC UA device unit.	-
8	Client Information list	Displays a list of client certificates (Certificate) written to OPC UA device unit. A maximum of 13 client certificates can be registered.	

### 3.3.1. Obtaining the installer

Obtain the installer for the Certificate Website Tool from the CKD website. RT product page: https://www.ckd.co.jp/kiki/en/product/detail/1064

#### <Procedure to obtain>

## **1** Click the above URL or select from the CKD website to display the product detail page.

Select in this order: CKD website  $\rightarrow$  COMPONENTS TOP  $\rightarrow$  Controllers (Category)  $\rightarrow$  Remote I/O (Product Category). Also searchable with the "RT."

### 2. Click "Software" on the "Remote I/O" page.

COMPONENTS TOP PI	RODUCTS INFORMATION E	OCUMENTS / DOWNLOAD	CORPORATE INFO	RMATION	SUPPORT
HOME > Product Information > Product List >	Remote I/O				
Q Product Details					
Saarah Candiliana					
	Remote I/O				
rt	Remote I/C				
	Model No.) RT				
Product Category	NEW				
			Neud Disitel insuties das d	h in terminal black 22 nak	to added
New Products Only			[New] Web API device unit ac	ided (Japan only)	its added
Discontinued Products Only	0-00		Waterproof remote I/O compa	atible with digital I/O, analc	g I/O and IO-
		000.000	Link master. Up to 18 units ca	an be added for use. Diagr	nosis
Q, Search		0.0 0.0	contributing to the IoT of equi	pment. Supported comm	unications:
		0.000.00	EtherNet/IP, EtherCAT, PROF	INET, IO-Link (as a netwo ubordinate IO-Link devicer	rk between the s) Maximum
			number of connected units: 1	8	
Selection			Industry : Clamp Conveyan Environmental dur	.ce Jig related ability Assembly Inspec	tion
Guide 🟓					
	2		Search Part Nos. 🧖	Add to Favourites	
Recently Viewed	Documents / Download			E CKD	plus Members Only
reconny ronog					

## 3. Click the installer [Certificate Write Tool.zip] on the "Software" select screen to download.

COMPONENTS TOP	PRODUCTS INFORMATION	DOCUMENTS / DOWNLOAD	CORPORATE INFORMATION	SUPPORT
HOME > Product Information >	Software			
Q Product List	> RT Series EDS file (EtherNet/IP).zip	5		
Search Conditions	> RT Series ESI file(EtherCAT) zip			of 2 items, item No. 1 to 2
Model No.	> RT Series GSDML file(PROFINET).	tip		
	> Certificate Generate Tool.zip			
Product Category	> Certificate Write Tool.zip			
Controllers	> RTXTools.zip			
L Remote I/O	> Function Block for ISDU Communica	ation(For Siemens TIA Portal (S7-1200)).zip		
Specific Lise				
Specific Use Exclusio		CLOSE 🗙		
Industry All		Industry : Clamp C	onveyance Jig related Environmental	durability Assembly
New Products Only		Click here for details	Search Part Nos.	Add to Favourites 🕅
Discontinued Products On	Documents / Down	nload		G CKD plus Members Only
	PDE Catalon	Safety Precauti	ions 🛛 🛛 User's Manual	
	, and a second sec			

#### 4. Download complete

Extract the zip file and a "Certificate Write Tool" folder containing "Setup\_jp.ms" will be created on the desktop.

📕 I 🕑 📙 🖛 I	RTXTool:	s_jp											_	×
ファイル ホーム	共有		表示											~ <b>?</b>
クイックアクセス コ にピン留めする	ビー 貼り	】 付け	从 切り取り ┉ パスのコピ・ 剤 ショートカッ	- トの貼り付け	移動先 コピー先	× 削除 変更	新しい フォルダ	「計 新しいアイテム ▼ 1 ショートカット ▼ -	レンジェンジョン 20パティ 20パティ 2010 展歴		て選択 解除 の切り	! ! ! 替え		
	クリッ	プボー	۲		횊	理		新規	開く	選	訳			
$\leftarrow \rightarrow \cdot \uparrow$	<mark> </mark> → P	°C →	ローカル ディス	(ク(C:) → ユ·	-ザ- → ÷	デスクトップ →	RTXTools_	ip		,	~	ē		
	_			名前	^		更新	新日時	種類	サイズ				
🖈 9199 F91	27			👘 Setup	p_jp.msi		202	4/03/21 15:58	Windows インストー	5,67	71 KB			
<ul> <li>OneDrive</li> </ul>														
PC														
🥔 ネットワーク														

\*This image is from the Japanese version of the Windows OS.

#### 3.3.2. Installation Procedure

### 1. Double-click "Setup\_jp.msi" to start the "Setup Wizard".

If a message that warns of installing a program from an unknown publisher is displayed at the start of the installation, select [Yes] to continue the installation.

### 2. Click [Next] in the "Setup Wizard" dialog box.



### **3** Read the "License Agreement" dialog box and check the "Agree," then click [Next].



### **4** Check the destination folder and click [Next].

The folder name is displayed by default. To save the file in a different folder, select it with "Browse."

妃 Certificate Write Tool	-		×
Select Installation Folder			5
The installer will install Certificate Write Tool to the following folder.			
To install in this folder, click "Next". To install to a different folder, enter it be	ow or	click "Br	owse".
Eolder:			
C:¥Program Files (×86)¥CKD¥Certificate Write Tool¥		Browse	L
		Disk Co:	st
Install Certificate Write Tool for yourself, or for anyone who uses th	iis co	mputer:	
◯ Everyone			
● Just me			
< Back Next >		Ca	ncel

## 5. Follow the "Confirm Installation" dialog box and click [Next]

🕼 Certificate Write Tool —		×
Confirm Installation		
The installer is ready to install Certificate Write Tool on your computer.		
Click "Next" to start the installation.		
< Back Next >	Ca	ncel

## 6. Follow the "Installation Complete" dialog box and click [Close] to close the dialog box



### 3.3.3. Installing the certificate

Follow the steps below to install the certificate. Installing the certificate (up to step 6 below) is requested to connect from an OPC UA client to an OPC UA compatible device unit.

Also, perform steps 8 and onwards to communicate with the client encrypted.

#### **1** Start [Certificate Write Tool]

Select [Certificate Write Tool] from the [CKD] folder in the Windows Start menu.



# **2** After starting the Certificate Write Tool and a window appeared, select the COM port of the unit to install to and click [Connect].



 When the remote I/O is connected to a PC with a USB cable, the COM port is automatically detected.

### **3.** Select [Certificate] under [Server] and click [Write].

COM14	<ul> <li>✓ Disconnect</li> </ul>	
Read	Write	Remov
Server	Information	
Certificate		
Key		
Client	Information	
Certificate 1		
Certificate 2		
Certificate 3		
Certificate 4		
Certificate 5		
Certificate 6		
Certificate 7		
Certificate 8		
Certificate 9		
Certificate 10		
Certificate 11		

### **4** Select the certificate file to be installed.

名前	更新日時	種類	サイズ
RemotelO.crt	2025/02/20 15:41	セキュリティ証明書	1 KB

### **5.** Certificate installation completed.

Certificate Write	Tool	:
COM14	<ul> <li>✓ Disconnect</li> </ul>	
Read	Write	Remove
Server	Information	
Certificate	SHA256RSA, RT, 2026-02-20 15:41:39	
Кеу		
Client	Information	
Certificate 1		
Certificate 2		
Certificate 3		
Certificate 4		
Certificate 5		
Certificate 6		
Certificate 7		
Certificate 8		
Certificate 9		
Certificate 10		
Certificate 11		
Certificate 12		
Certificate 13		

 After installing or uploading the server or client certificate or private key, be sure to turn the power of the OPC UA slave station back on to reflect the settings.

### **6.** Select [Key] and click [Write]

COM14	✓ Disconnect	
Read	Write	Remove
Server	Information	
Certificate	SHA256RSA, RT, 2026-02-20 15:41:39	
Кеу		
Client	Information	
Certificate 1		
Certificate 2		
Certificate 3		
Certificate 4		
Certificate 5		
Certificate 6		
Certificate 7		
Certificate 8		
A 100 1 A		
Certificate 9		
Certificate 9 Certificate 10		
Certificate 9 Certificate 10 Certificate 11		

### **7** Select the private key file to be installed.

名前 ^	更新日時	種類	サイズ
RemotelO.key	2025/02/26 14:33	KEY ファイル	2 KB

### **8.** Private key installation completed

Certificate Write	Tool	×
COM14	✓ Disconnect	HELP
Read	Write	Remove
Server	Information	
Certificate	SHA256RSA, test_02, 2026-03-17 13:16:42	
Key	File Size : 1216Bytes	
Client	Information	
Certificate 1		
Certificate 2		
Certificate 3		
Certificate 4		
Certificate 5		
Certificate 6		
Certificate 7		
Certificate 8		
Certificate 9		
Certificate 10		
Certificate 11		
Certificate 12		
Certificate 13		

### **9.** Select [Certificate] under [Server] and click [Write].

COM14	<ul> <li>✓ Disconnect</li> </ul>	HELP
Read	Write	Remove
Server	Information	
Certificate	SHA256RSA , test 02 , 2026-03-17 13:16:4	2
Key	File Size : 1216Bytes	
Client	Information	
Certificate 1		
Certificate 2		
Certificate 3		
Certificate 4		
Certificate 5		
Certificate 6		
Certificate 7		
Certificate 8		
Certificate 9		
Certificate 10		
Certificate 11		
Certificate 12		

=\_

### **10.** Select the server certificate file to be installed.

名前 ~	更新日時	種類	サイズ
🛱 RemotelO.crt	2025/02/20 15:41	セキュリティ証明書	1 KB

### **11.** Client installation completed.

Certificate write	1001	
COM14	<ul> <li>✓ Disconnect</li> </ul>	HELP
Read	Write	Remove
Server	Information	
Certificate	SHA256RSA , test_02 , 2026-03-17 13:16:42	
Кеу	File Size : 1216Bytes	
Client	Information	
Certificate 1	SHA256RSA sumple 2026-02-26 14:33:01	
Certificate 2	Stritzon Str, Sumple ; 2020 02 20 14:00:01	
Certificate 3		
Certificate 4		
Certificate 5		
Certificate 6		
Certificate 7		
Certificate 8		
Certificate 9		
Certificate 10		
Certificate 11		
Certificate 12		
Certificate 13		



Refer to each client software for the installing client certificate.
A maximum of 13 client certificates can be registered.

### **4.** ERROR DESCRIPTIONS

### 4.1. Troubleshooting

### 4.1.1. Certificate Generate Tool

#### The list of errors is as follows:

Problem	Cause	Solution	
Certificate generation failed.	Required fields have not been entered.	Enter the needed information	
	Prohibited characters are being used in the input field.	Do not use prohibited characters when entering password.	
		Prohibited characters: ¥, /, :, *, ?, ", <, >,	
	The number of characters in the input field is outside the limit.	Follow the message and change the number of characters.	
	The entered value is outside the validity period.	Enter a value within the validity period. Validity period: 1 to 7300 days	

### 4.1.2. Certificate Write Tool

#### The list of errors is as follows:

Problem	Cause	Solution
Cannot connect to OPC UA device unit	The specified port does not exist	Check the port currently connected and select the correct one
Cannot upload the certificate/private key	There is no certificate/private key to be uploaded in the target index	
Failed to install the certificate/private key	The file extension selected when installing is different	The file may be incorrect or corrupted. The available extensions for each file are as follows: Certificate: ".crt", ".cer", ".der" Private key: ".key"
	Communication was lost before installation was completed.	If communication is lost during installing, turn the power of the OPC UA device unit off and on again they retry the installation.