

# Activating USB dongle

***DENSO***

[www.densorobotics.com](http://www.densorobotics.com)

# Controller settings

Open the front panel of controller, insert the USB dongle into the IPC, and close the front panel.

Refer to ID10563 and ID10564 in the manual for how to open and close the front panel.

# TwinCAT3 installation

Install TwinCAT3 from the page below.

<https://www.denso-wave.com/en/robot/download/application/twincat3.html>

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## TwinCAT3


TwinCAT 3 is a software required to perform the following operations.


1. Settings of the device connected to RC9.  
(Master, IO-Link and Beckhoff expansion device settings)
2. Software PLC settings and programming
3. HMI (Visualization) design
4. Processing of USB license dongle file
5. Addition of PLC task & priority change

Please download this software on the Beckhoff Automation website according to the procedure manual.  
Beckhoff Automation | [TwinCAT 3 Download](#)

■ Procedure manual

  
English

  
中文

  
한국

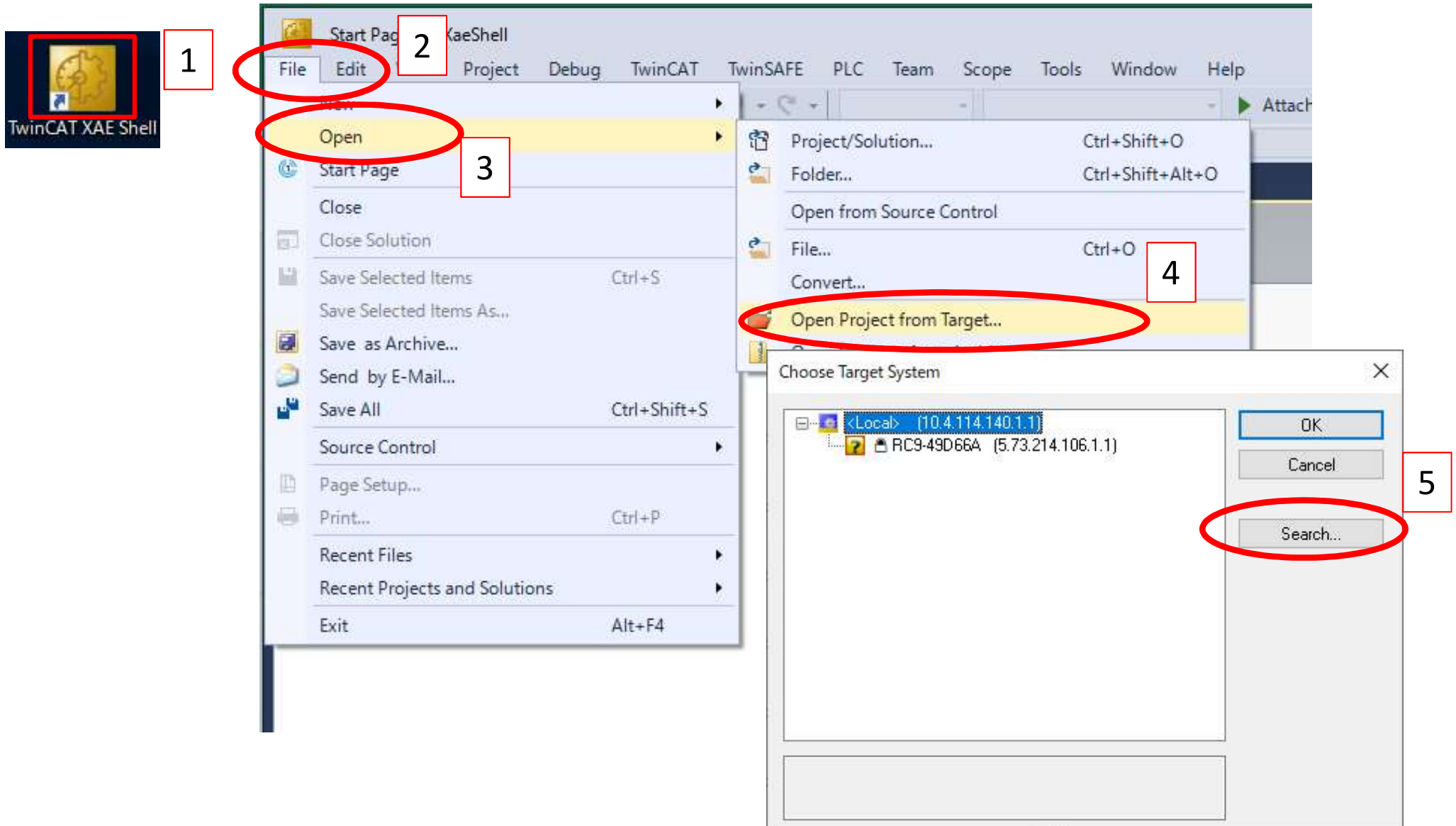
### Update

Version	Update contents	Updated date
-	Released the download link for TwinCAT 3.	Oct. 20th, 2020

# Connection from PC to controller

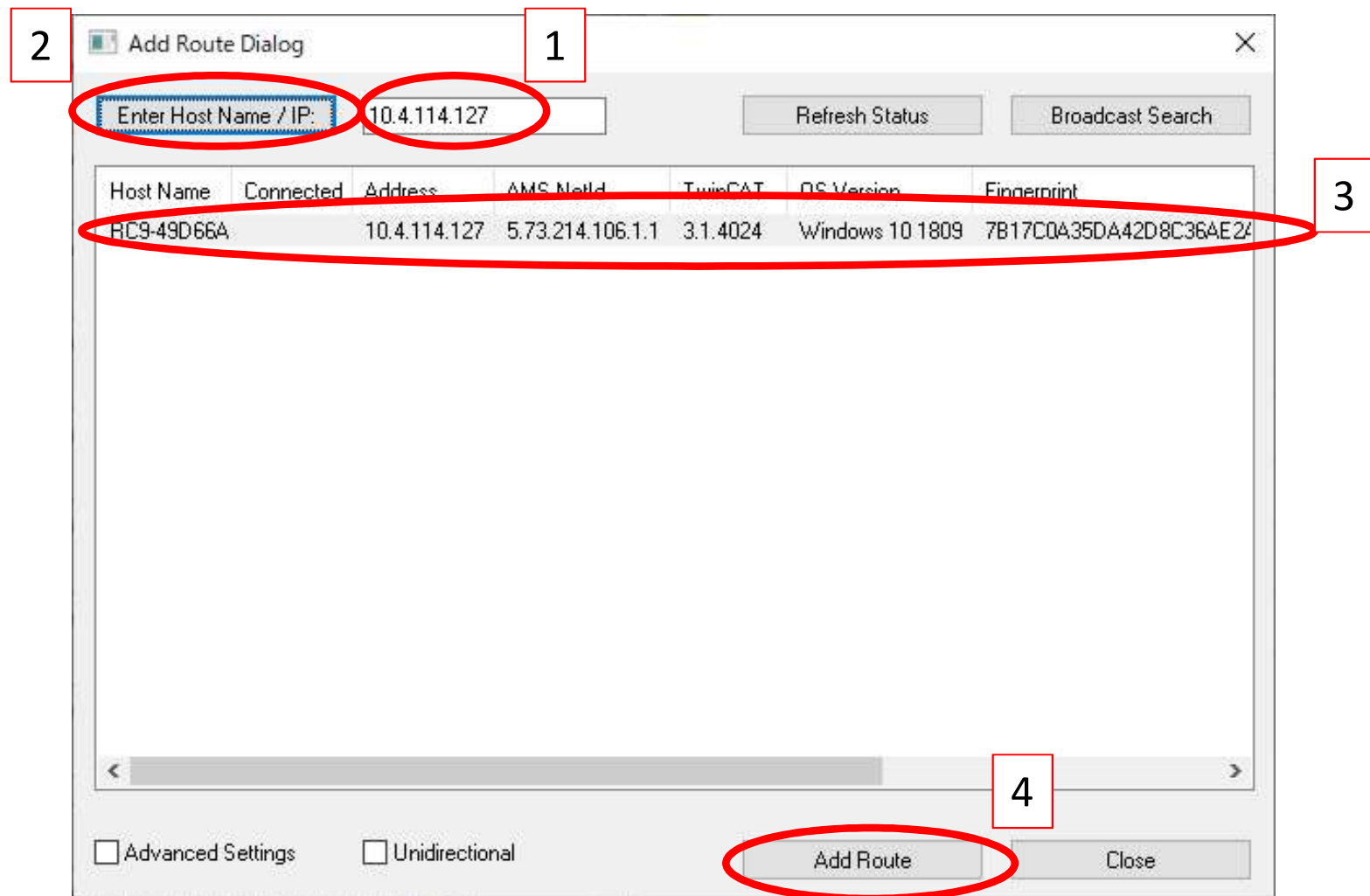
1) Launch TwinCAT XAE Shell and select 2) [File] – 3) [Open] – 4) [Open Project from Target]

When the [Choose Target System] screen appears, 5) click the [Search] button.



# Connection from PC to controller

When [Add Route Dialog] is displayed, 1) enter the IP of controller.  
2) Click the [Enter Host Name / IP:] button and select 3).  
4) Click the [Add Route] button.



# Connection from PC to controller

1) Check [Secure ADS], 2) select [Preshared key(PSK)], and 3) enter [Identity] and [Password].

The [Identity] and [Password] to be entered enter Maintainer with Smart TP or higher authority, and enter the information described on the [Setting] – [System Info] screen.

Smart TP screen

The Smart TP screen displays the following information:

System Info	General	Robot	Controller
<b>Controller</b>			
Controller ID	ZZZZZZ		
Controller name			
Controller software	1.1.0		
BPB software ver.			
<b>Robot</b>			
Robot type	VMB-2515		
Mecha software ver.	None		
<b>I/O board</b>			
Board type	NPN		
<b>Login user info</b>			
User ID	Administrator		
XAE remote access user name	RC9_Administrator		
XAE remote access password	9733		

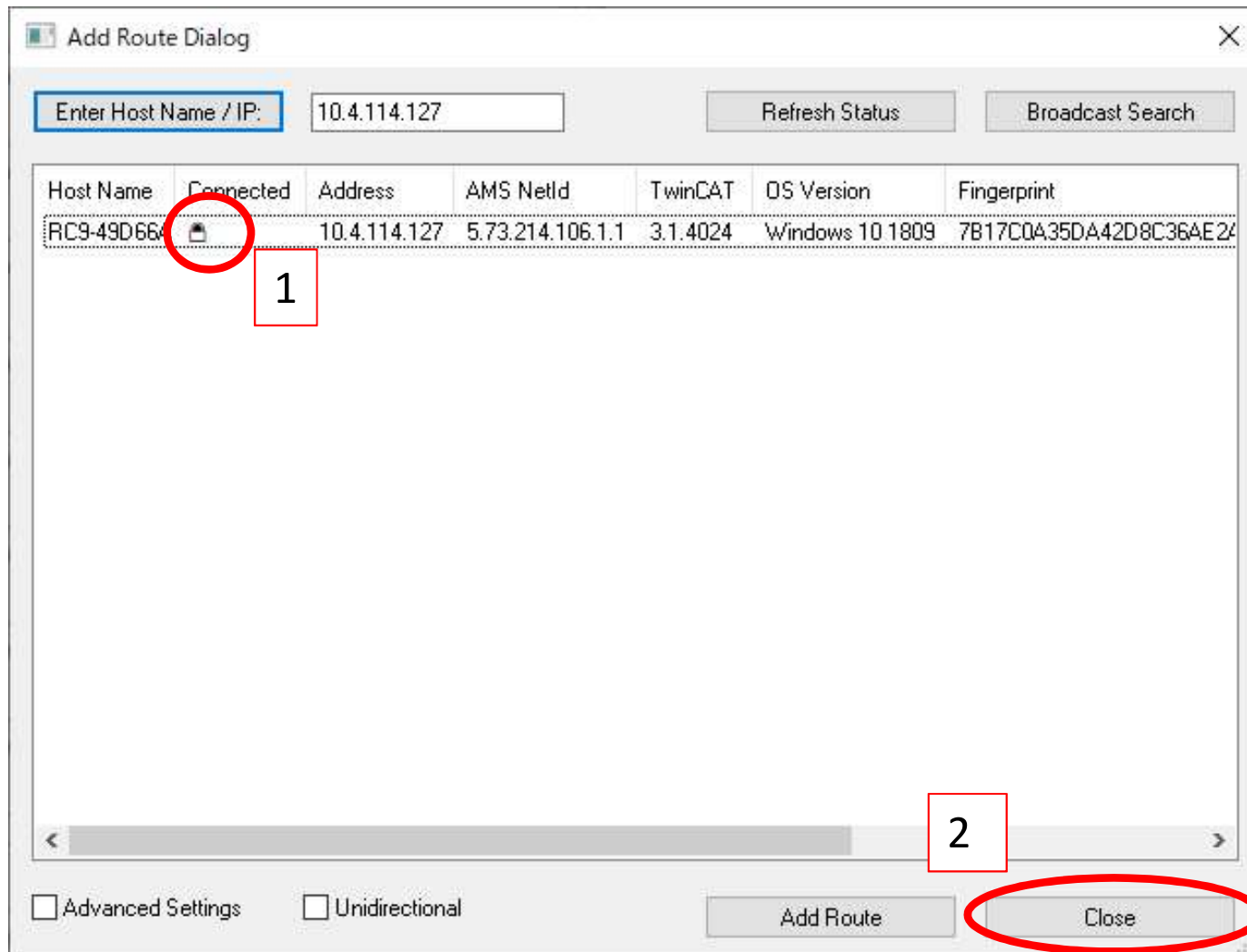
The 'Add Remote Route' dialog box shows the following configuration:

- 1) ☒ Secure ADS [TwinCAT 3.1 >= 4024]
- ☐ Self Signed Certificate
- ☐ Shared Certificate Authority
- 2) ☒ Preshared Key (PSK)
- Identity: RC9\_Administrator
- 3) Password: 9733
- ☐ Key (binary):

OK Cancel

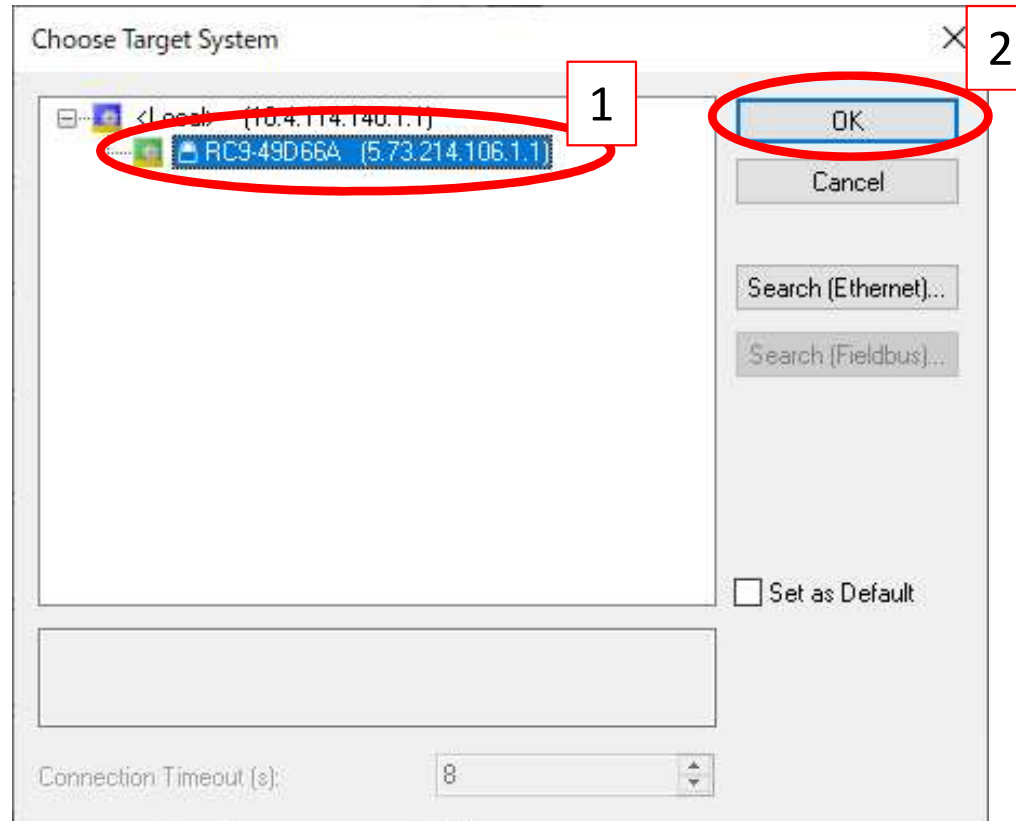
# Connection from PC to controller

Go back to the [Add Route Dialog] and 1) see the icon on the [Connected].  
2) Click the [Close] button.



# Connection from PC to controller

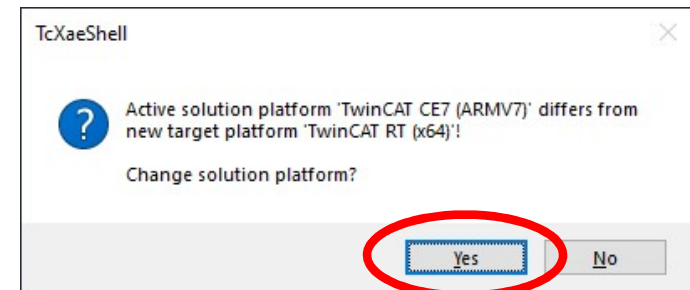
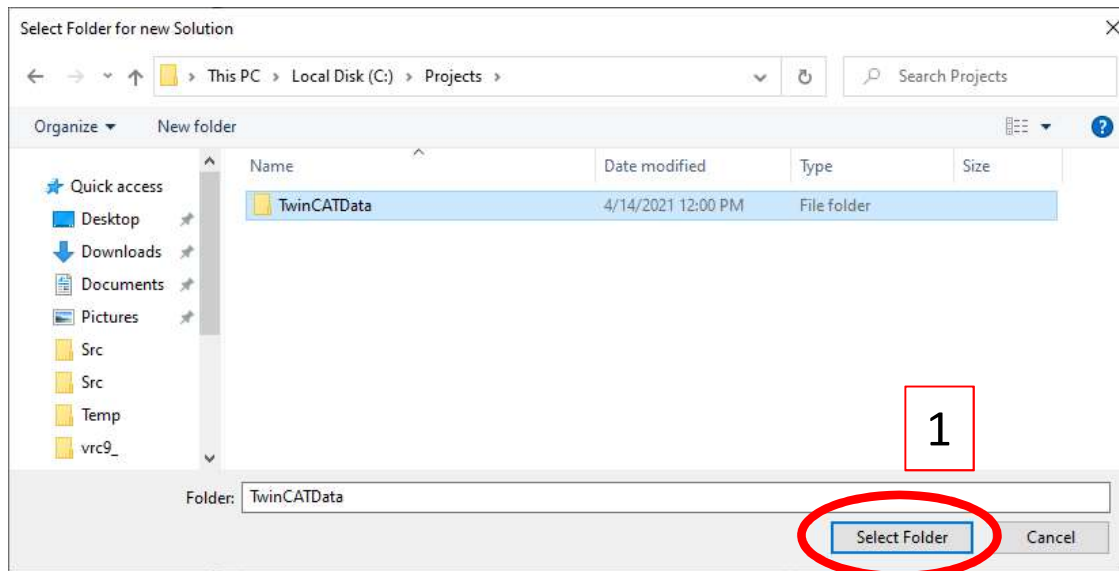
1) The item whose first icon is green (or blue) is displayed. Select it and 2) click the [OK] button.





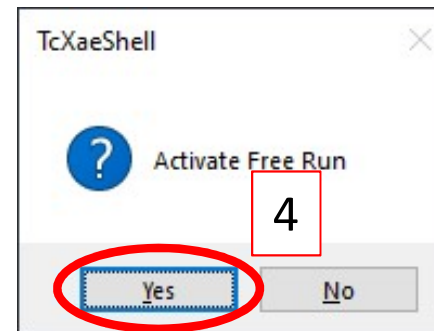
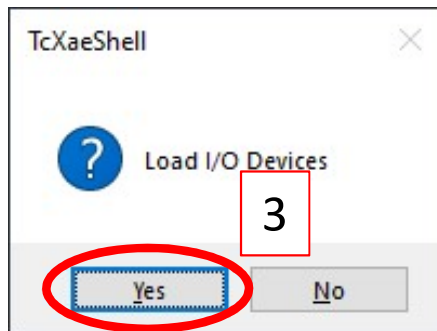
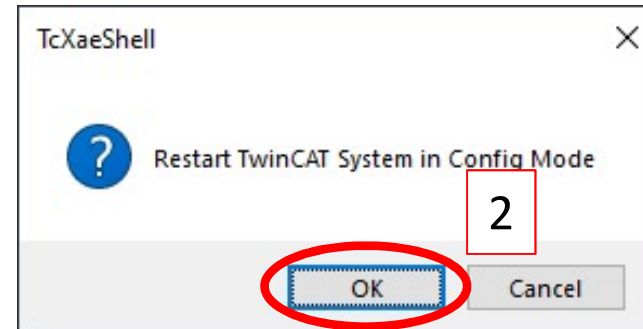
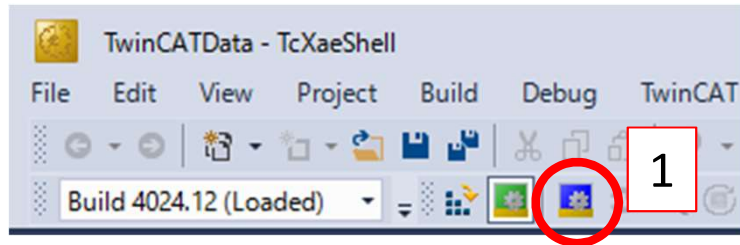
# Connection from PC to controller

- 1) Click the [Select Folder] button to save the TwinCATData loaded from the Controller.
- 2) Click the [Yes] button.



# Activating USB dongle

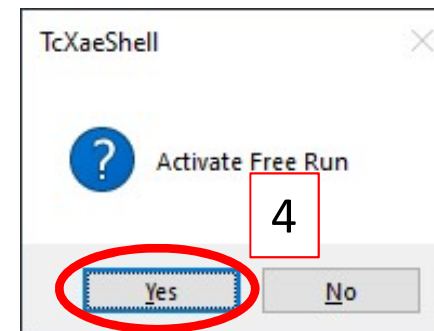
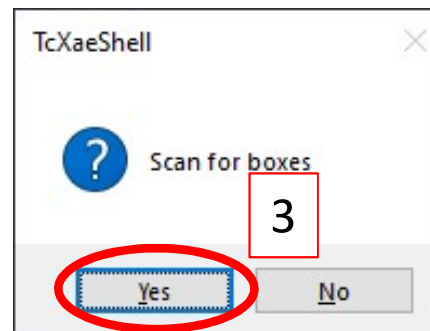
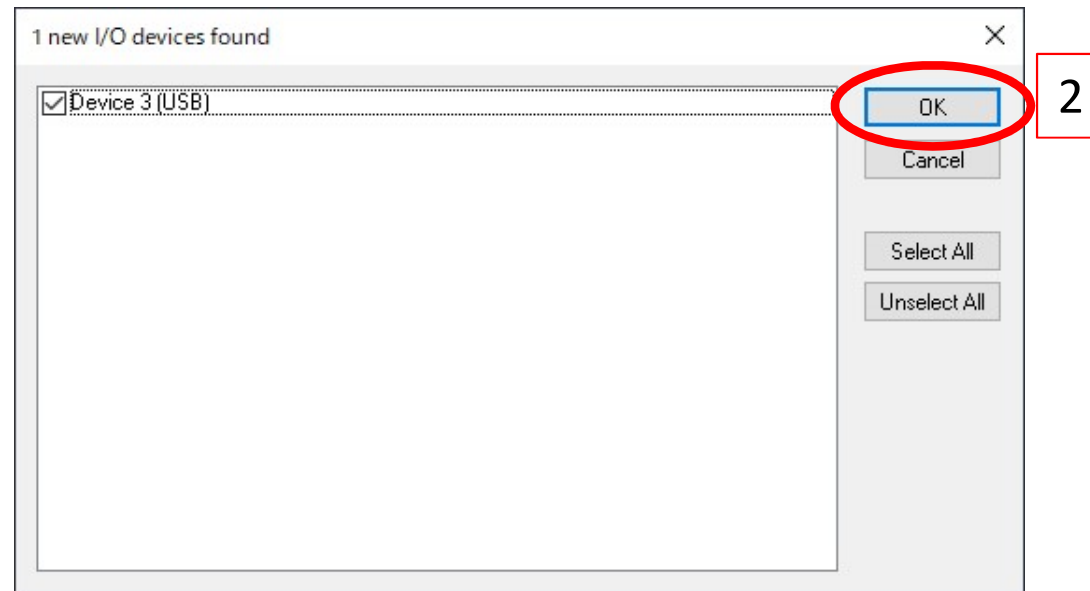
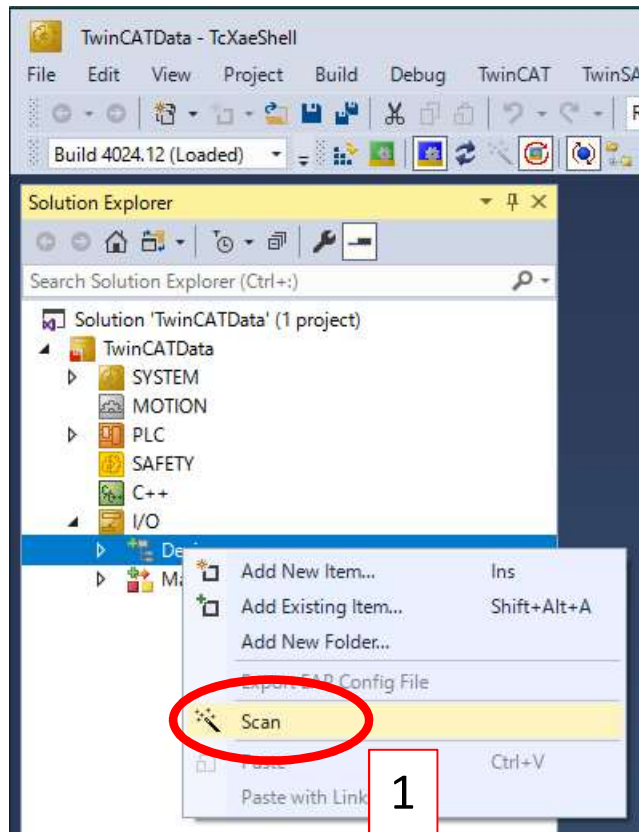
- 1) Click the Config Mode button.
- 2) to 4) Click the [OK]/[Yes] button.



# Activating USB dongle

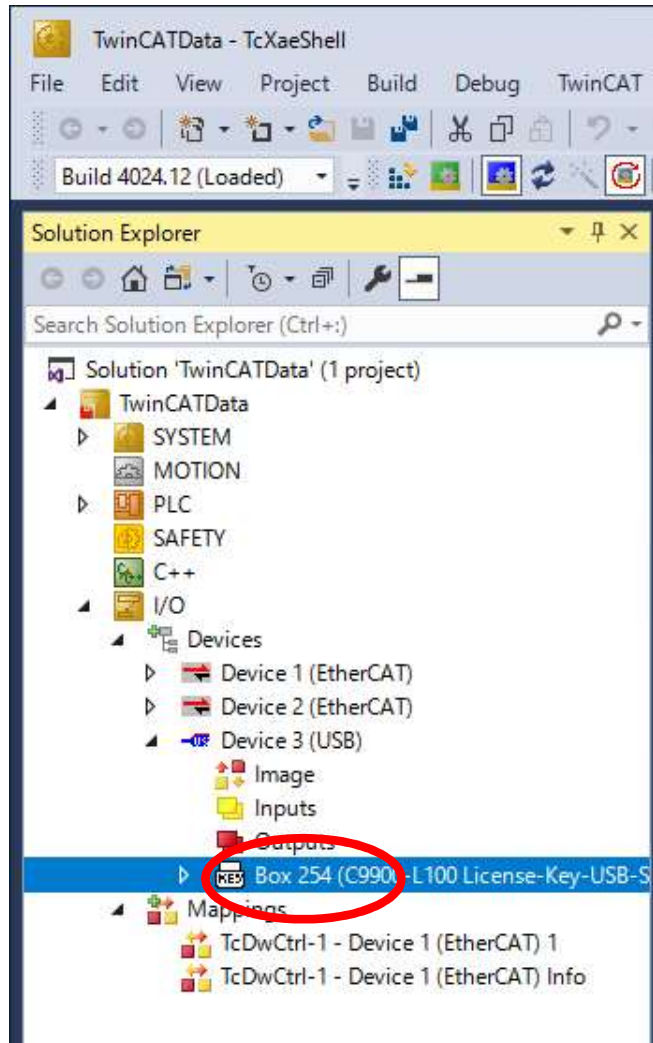
Right-click on the [I/O] – [Device] from [Solution Explorer] and 1) select the [Scan].

2) to 4) Click the [OK]/[Yes] button.



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The [Device 3] is added and the [Box 254] is displayed in it.

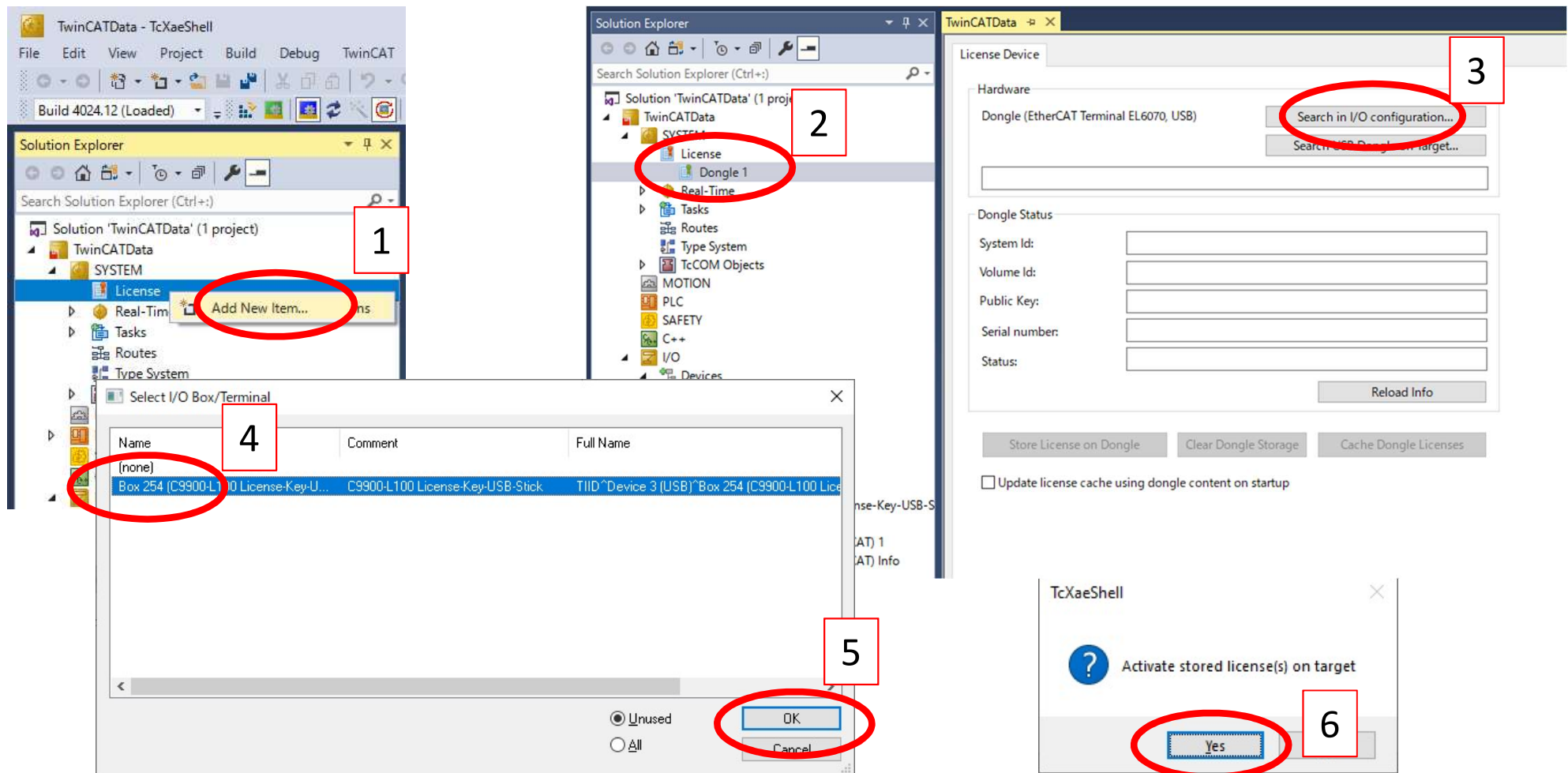


# Activating USB dongle

Right-click on the [SYSTEM] – [License] and 1) click the [Add New Item].  
2) Double-click on the created [Dongle 1] and 3) click the [Search in I/O configuration] button.

Select the [Box 254] on the [Select I/O Box/Terminal] screen and 5) click the [OK] button.

6) Click the [Yes] button.



# Activating USB dongle

- 1) Click the [Reload Info] button in the [License Device].
- 2) Confirm that the [System ID] has been registered and the [Status] becomes Valid.

TwinCATData - X

License Device

Hardware

Dongle (EtherCAT Terminal EL6070, USB)

Box 254 (C9900-L100 License-Key-USB-Stick)

Dongle Status

System Id:

Volume Id:

Public Key: D16948EDD3F09914

Serial number:

Status: Unknown

☒ Update license cache using dongle content on startup

TwinCATData - X

License Device

Hardware

Dongle (EtherCAT Terminal EL6070, USB)

Box 254 (C9900-L100 License-Key-USB-Stick)

Dongle Status

System Id: A9756 AF-28 28

Volume Id:

Public Key: D16948EDD3F099145A DF86

Serial number: 10021929

Status: Valid

☐ Update license cache using dongle content on startup

# Activating USB dongle

Check the 1) [TC3 PLC] and 2) [TC3 PLC-HMI Web].

The first screenshot (labeled 1) shows the 'Project Licenses' tab in the TwinCAT software. The table lists the following licenses:

Order No	License	Add License
TC1000	TC3 ADS	<input checked="" type="checkbox"/> cpu license
TC1100	TC3 IO	<input checked="" type="checkbox"/> cpu license
TC1200	TC3 PLC	<input checked="" type="checkbox"/> cpu license
TC1210	TC3 PLC / C++ / MatSim	<input type="checkbox"/> cpu license
TC1220	TC3 PLC / C++ / MatSim	<input type="checkbox"/> cpu license
TC1250	TC3 PLC / NC PTP 10	<input type="checkbox"/> cpu license
TC1260	TC3 PLC / NC PTP 10 / NC I	<input type="checkbox"/> cpu license

The second screenshot (labeled 2) shows the 'Project Licenses' tab in the TwinCAT software. The table lists the following licenses:

Order No	License	Add License
TE3520	TC3 Analytics Service Tool	<input type="checkbox"/> cpu license
TF1800	TC3 PLC-HMI	<input type="checkbox"/> cpu license
TF1810	TC3 PLC-HMI Web	<input checked="" type="checkbox"/> cpu license
TF1910	TC3 HMI	<input type="checkbox"/> cpu license
TF2000	TC3 HMI Server	<input type="checkbox"/> cpu license
TF2010	TC3 HMI Clients Pack 1	<input type="checkbox"/> cpu license
TF2015	TC3 HMI Clients Pack 2	<input type="checkbox"/> cpu license



# Activating USB dongle

- 1) Change the [TC3 PLC] and the [TC3 PLC-HMI Web] of the [License device] to the [Dongle 1(Hardware ID)].
- 2) Save all, 3) close the TcXaeShell and restart the controller.  
(Startup will take longer than usual.)

