Installing and Configuring KINGSTAR

TUTORIAL

KINGSTAR
IntervalZero

Installing and Configuring KINGSTAR

KS-TUTORIAL-003

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Overview

KINGSTAR provides two installations: a Runtime and a Software Development Kit (SDK). The Runtime supplies the KINGSTAR Subsystem that will be deployed as part of your application, while the SDK supplies headers and libraries for you to develop your own KINGSTAR applications.

This tutorial will guide you through the installation of KINGSTAR Runtime, including the configuration of your network interface and the connection to your EtherCAT slaves. Therefore, it is important that you carefully read the section below labeled Product Edition & Requirements, especially the Hardware and Software requirements.

It provides important information about recommended Hardware: Processors types and number of cores, Network Interface Card, EtherCAT slaves and correct software configuration.

After the installation and testing of the KINGSTAR Runtime, this tutorial will help you to install the development environment (KINGSTAR SDK), which you will need to start your first application.

With KINGSTAR, you can develop your controllers in different languages and corresponding environments.

To build your first application, you can choose between C&C++, .NET and IEC61131-C languages.

Product Editions and Requirements

The difference between product editions and the hardware, software requirements for KINGSTAR are listed below:

Product Editions

The features of the product depend on the licenses you purchase. To learn more about the KINGSTAR licenses, see KINGSTAR Runtime components.

Hardware Requirements

This section lists hardware requirements for KINGSTAR and the considerations about processors.

Drives and I/O

KINGSTAR supports many servo drives, stepper drives, EtherCAT I/O modules and EtherCAT couplers. For the up-to-date list, see the KINGSTAR Supported Hardware PDF file available from the Customer Center.

Network Interface Cards (NIC)

KINGSTAR requires a dedicated NIC. This NIC is configured when the Install Wizard is run. For the up-to-date list of supported NICs, see the KINGSTAR Supported NIC PDF file available from the Customer Center.

EtherCAT

KINGSTAR uses EtherCAT technology for communication. The set-up of the EtherCAT network consists of the following steps below:

1. Make sure your computer and devices have network interface cards (NICs), or chips that support the EtherCAT protocol. To know whether your hardware supports EtherCAT:

    - **Computers**: In Windows, go to **Device Manager** and find the NIC under **Network adapters**. Make a note of the model number of the NIC. Check the KINGSTAR online help from kingstar.com > **Support > Help > Network Interface cards**, or check the offline help by clicking **Start> KINGSTAR Runtime > Help System > Network interface cards**.

If your NIC is listed in the document, it supports EtherCAT.

- **Devices**: See the manual of your device, or contact the device manufacturer.

2. Prepare the Ethernet cables that are CAT-5 (Category 5) or higher. The transmission rate needs to be at least 100 Mbps.

3. Connect your computer and devices using the Ethernet cables. Technically, the EtherCAT protocol allows up to 65,535 devices to be connected, but rarely an EtherCat master supports so many devices, which take large memory. By default, KINGSTAR support up to 256 devices, but you can increase the maximum number of supported devices by adding a registry key. For more information about how to increase the maximum number, see **Product TechNotes > KINGSTAR Fieldbus > General > Increase the maximum number of supported devices**. **Product TechNotes** are on the KINGSTAR website. Go to **Support > Support Login.**

Hardware Considerations

KINGSTAR requires a multiprocessor platform, which supports 64-bit Windows 10, Windows 11 and Windows 10 IoT Enterprise. Uniprocessor systems are not supported. A minimum, two cores are required; one core must be dedicated to Windows and another core must be dedicated to the KINGSTAR Subsystem. Systems with up to 64 cores are supported.

NOTE: If your system is hyper-threaded, you should assign an even number of processors between Windows and KINGSTAR real-time components. The Windows logical processor and real-time logical processor must not share the same physical processor.

Some hardware configurations are not supported by the KINGSTAR Runtime installations. Although KINGSTAR runs on most x64 platforms, unique attributes of certain processors require special consideration before using them.

- For a comprehensive list of approved and supported hardware, see the Windows hardware certification web page: https://docs.microsoft.com/en-us/windows-hardware/drivers/dashboards/windowscertified-product-list

- For a comprehensive list of system requirements for Windows 10, see the Windows 10 System Requirements web page: https://www.microsoft.com/en-us/windows/windows-10-specifications

- For a comprehensive list of system requirements for Windows 11, see the Windows 11 System Requirements web page: https://www.microsoft.com/en-us/windows/windows-11-specifications

Software Requirements

This section lists software requirements for KINGSTAR and things to know before you install the software.

Operating System Requirements

KINGSTAR is supported on 64-bit multiprocessor configurations for the following operating systems:

- Windows 11 September 2022 Update Version 22H2
- Windows 11 October 2021 Update Version 21H2
- Windows 10 October 2022 Update Version 22H2
- Windows 10 November 2021 Update Version 21H2
- Windows 10 May 2021 Update Version 2105
- Windows 10 October 2020 Update Version 2009
- Windows 10 May 2020 Update Version 2004
- Windows 10 November 2019 Update Version 1909
- Windows 10 May 2019 Update Version 1903
- Windows 10 November 2018 Update Version 1809
- Windows 10 IoT Entreprise Long Term Servicing Channel: LTSC 2021, LTSC 2019, LTSB 1607

Microsoft Visual Studio

Microsoft Visual Studio 2022, 2019 or 2017 must be installed in your system if you want to develop KINGSTAR applications.

Microsoft .NET Framework

Microsoft .NET Framework 4.7.2 is required. If the client is not detected; the Install Wizard installs the client for you.

Real-Time Subsystem

KINGSTAR requires, at minimum, the RTX64 4.0.2 Runtime. If it is not already installed in your system, the product installer installs and configures the RTX64 real-time Subsystem for you.

Real-Time Software Development Kit

KINGSTAR SDK is required for the KINGSTAR application development.

Administrator Privileges

Administrator privileges are required for installing and uninstalling KINGSTAR, which provides local Windows groups to control user access to KINGSTAR features. By default, all users can access the KINGSTAR features. You should modify the groups if you wish to limit the access to specific users.

Request a Free Trial

For access to evaluation kits, go to https://kingstar.com/download-trial. In the form that appears, select KINGSTAR from the product choices, fill out the contact information, and then click **Start Trial.**

Installing KINGSTAR Runtime

NOTE: The instructions in this section apply to KINGSTAR 4.x

After purchasing KINGSTAR Runtime, you will receive an email confirmation, which includes the activation key and a link to the KINGSTAR Runtime download page. After downloading the file, complete the following steps to install KINGSTAR Runtime:

1. Go to **Control Panel > Uninstall a program**. Select 3.x or earlier version of KINGSTAR Runtime from the list and uninstall it. The RTX64 Runtime should be uninstalled together with KINGSTAR Runtime. If not, uninstall it manually.

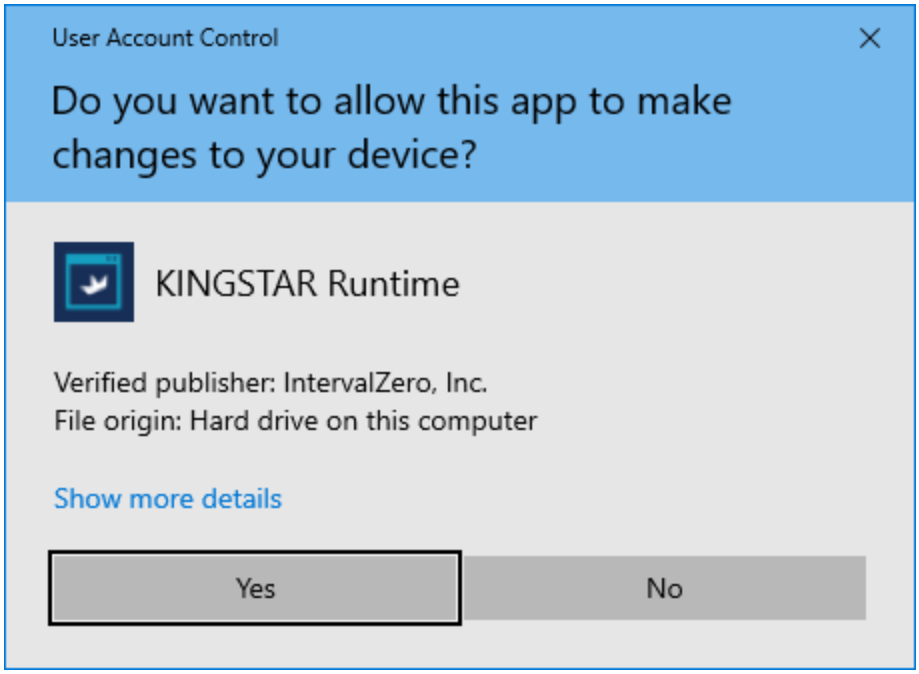
   NOTE: Because KINGSTAR Runtime 4.X and the included RTX64 Runtime are incompatible with their 3.x or previous versions, you must uninstall these versions before installing v4.X.

   NOTE: If either your previous Runtime is KINGSTAR Motion or KINGSTAR Fieldbus, you must remove it.

   NOTE: If you have installed KINGSTAR 4.X, you can upgrade directly using the installer of the latest version.

2. Double-click `KINGSTARRuntimeInstaller.exe`.

   NOTE: You must have the administrator permission to install the KINGSTAR Runtime. Before the installation begins, the User Account Control dialog box may ask if you want the installer to make changes to your computer. Click Yes to continue the installation.



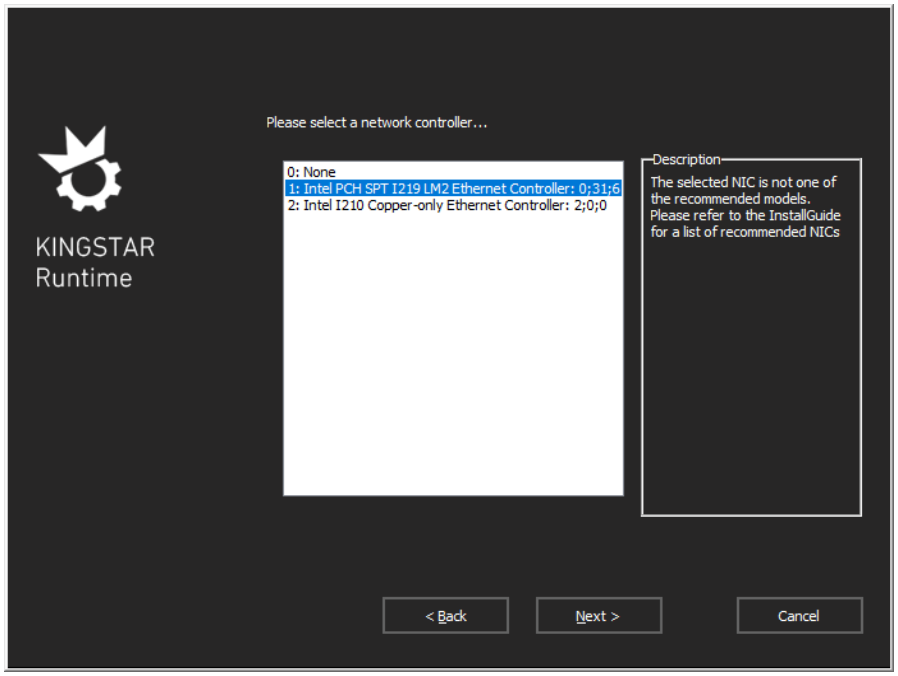
3. On the installation page, click **Next** to begin the installation.

4. Read the End User License Agreement, select *I accept the terms of the license agreement* and click **Next**.

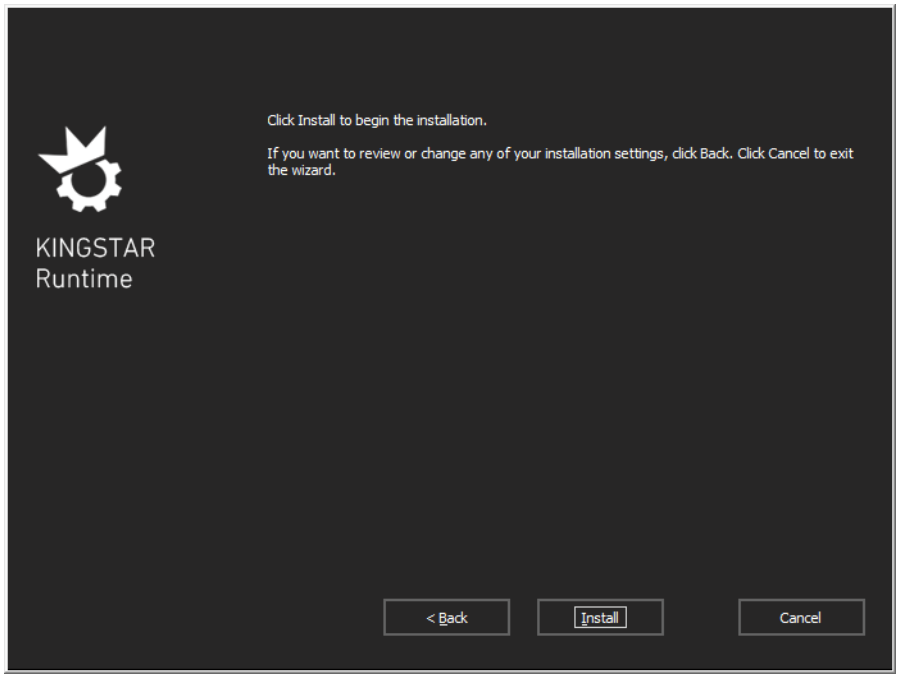
5. Choose the location you want to install the KINGSTAR Runtime. You can accept the default installation path, or click **Browse** to choose a different location. When you are finished, click **Next**.

6. On the **KINGSTAR Runtime Network Interface Setup page**, select a network interface card (NIC) for KINGSTAR to use, and then click **Next**: **None** - Do not associate a NIC with KINGSTAR Runtime now. You will need to manually associate a NIC and configure it before you can use KINGSTAR Runtime. **<NIC>** - Select a NIC to associate with KINGSTAR Runtime, and configure its interface to use this NIC for KINGSTAR network communication. We suggest you select a NIC. KINGSTAR Runtime will automatically associate and configure the card, so you don't need to manually configure it later.

   NOTE: When you select a NIC, KINGSTAR reminds you on whether it's a recommended model. The recommended list can be found in Network Interface Cards (online), or the PDF of supported Network Interface Cards (offline).



7. Click **Install** to install KINGSTAR Runtime



8. After the Installation is completed, click **Finish** to close the wizard. For more information about activating your KINGSTAR Runtime components, see Activate and Configure KINGSTAR.

Activating and Configuring KINGSTAR Runtime

NOTE: The instructions in this section apply to KINGSTAR 4.x versions. For more information about he 4.x license, see KINGSTAR Runtime components.

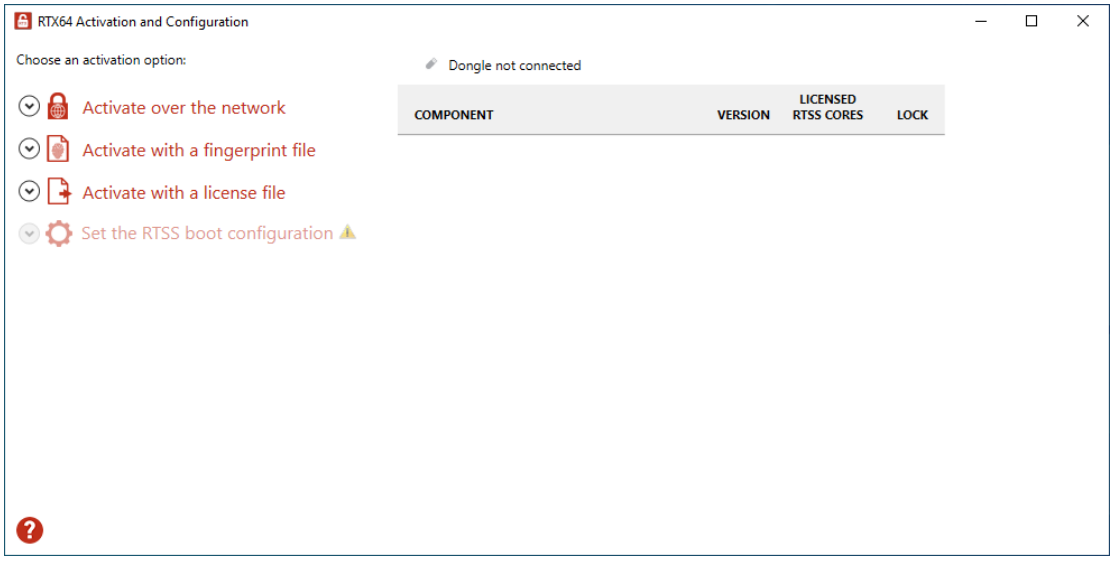
Activate over the Internet

These steps apply only if you can access the IntervalZero license server. If you do not have internet access, see the section Activate by the file.

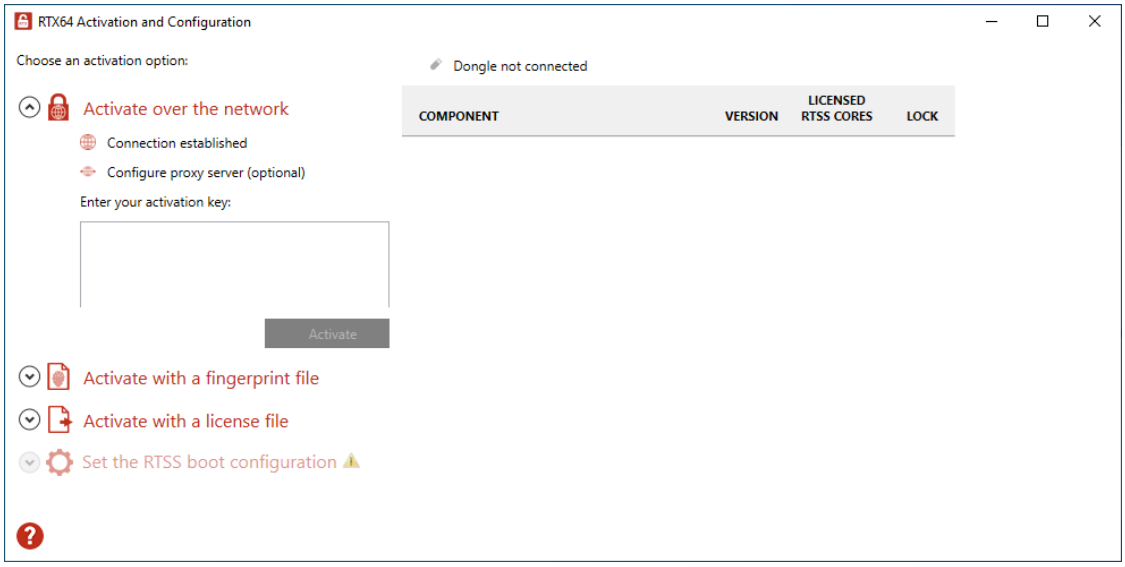
To activate over the Internet:

1. On the taskbar, click **Start > RTX64 4.x Runtime > RTX64 Activation and Configuration**.

   NOTE: You must have administrative permissions to launch this utility. Before the utility starts, the User Account Control dialog box may ask if you want the program to make changes to your computer. Click Yes to continue.



2. Click **Activate over the network**. Make sure your machine is connected to the internet with access to the IntervalZero license server. If a connection is available, you will see **Connection established**. If the connection is not available, make sure all network cables are plugged in and click on Unable to establish a connection to refresh. If the connection is still not available, you may need to configure a proxy server.

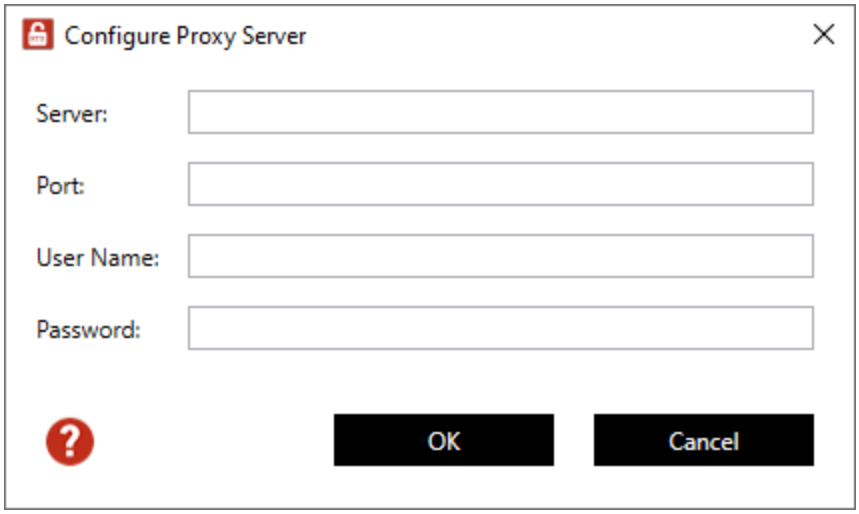


To configure a proxy server:

1. Click **Configure proxy server**.
2. In the *Configure Proxy Server* dialog box, enter the information in the empty boxes and click **OK**. The information should be available from your IT department.

NOTE: The proxy server must be able to process HTTP connections. SOCKS proxies are not supported.

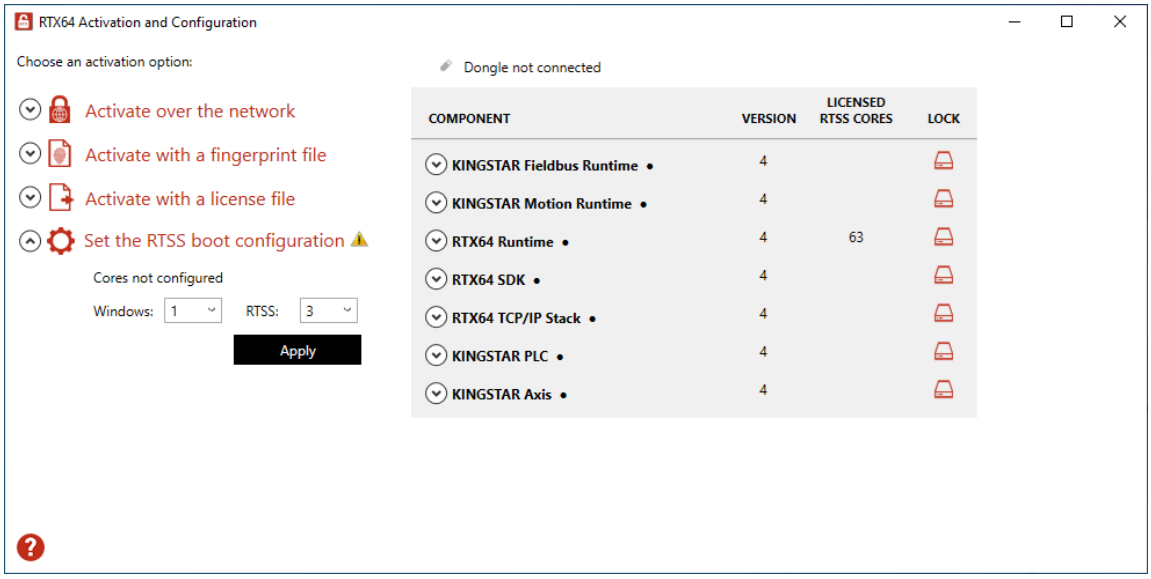
NOTE: If no network connection can be established, see the section Activate by the file.



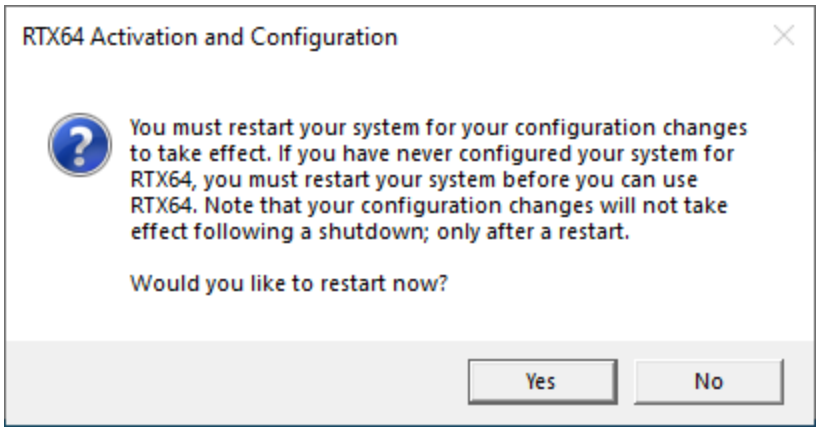
3. In the *Enter your activation key* box, enter your activation key and click **Activate**. The product components activated by your key are listed on the right. The order of components varies between keys. These are the possible components:

   - KINGSTAR Fieldbus Runtime
   - KINGSTAR Motion Runtime
   - RTX64 Runtime
   - RTX64 SDK
   - RTX64 RT-TCP/IP Stack
   - KINGSTAR PLC
   - KINGSTAR Axis

4. Click **Set the RTSS boot configuration** to assign processors between Windows and RTX64 (RTSS). There must be at least one processor for Windows. You must configure this setting and reboot before you use KINGSTAR. Click **Apply** after you complete the configuration.



5. When you are prompted to restart your computer, click **Yes**.



6. Choose the RTX64 boot configuration at system startup:

   - Windows 10 – RTX64

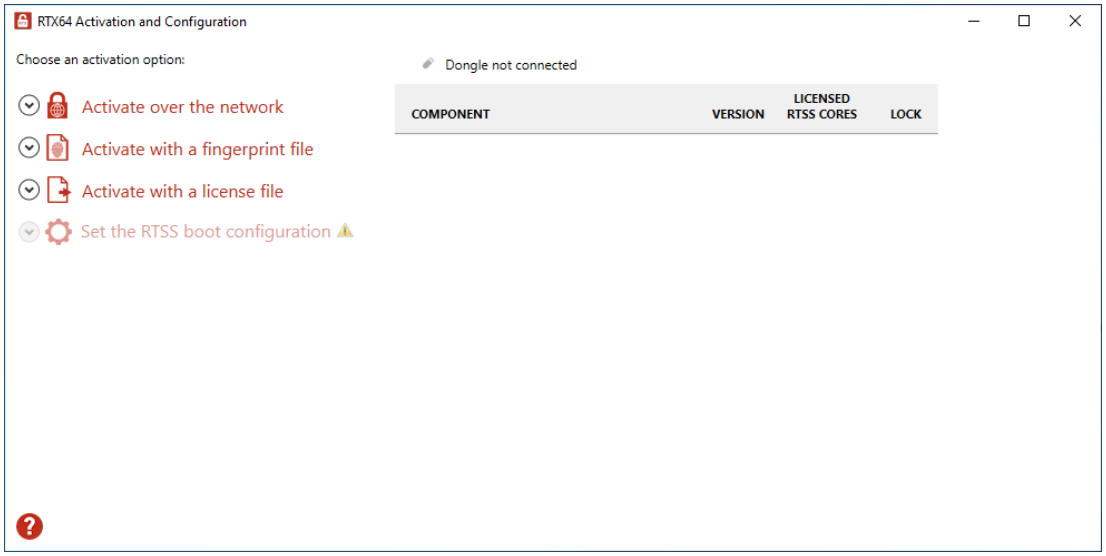
   NOTE: If you start your system with a configuration other than RTX64, KINGSTAR won't work properly.

Activate by Fingerprint File

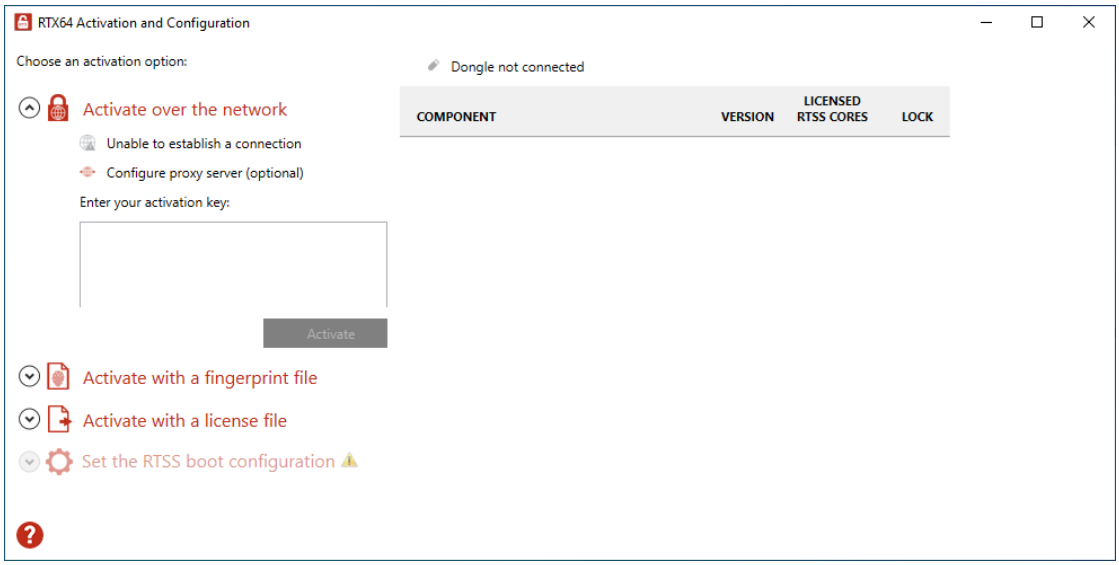
Follow the steps below if you cannot access the IntervalZero license server.

Step I. Create a fingerprint file:

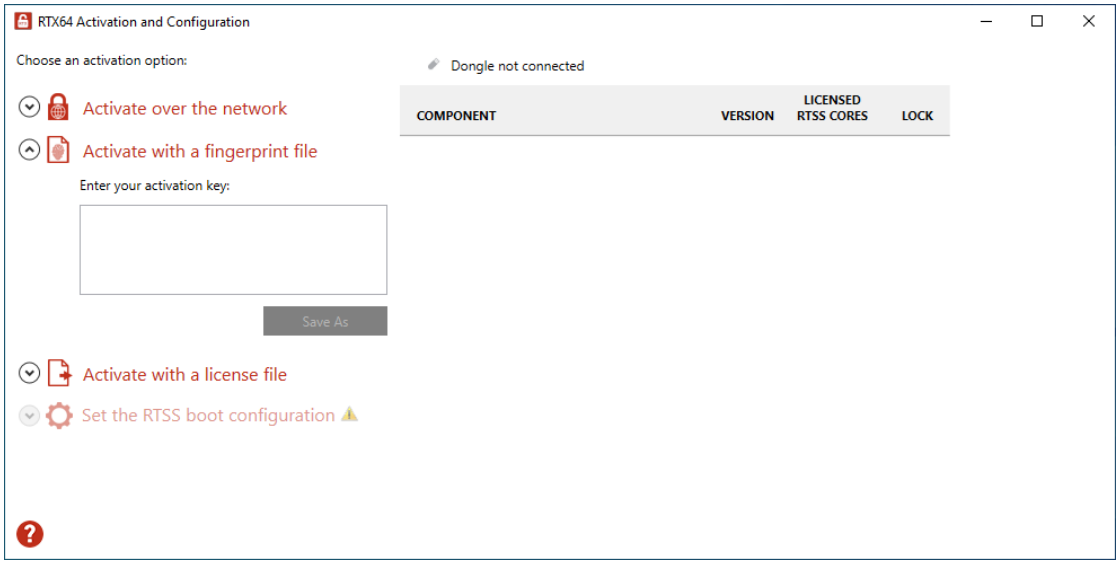
1. On the taskbar, click **Start > RTX64 4.x Runtime > RTX64 Activation and Configuration**. The *RTX64 Activation and Configuration* dialog box appears.



2. Click **Activate over the network**. If it doesn't connect to the IntervalZero license server, you'll see *Unable to establish a connection*. If the connection is available, you will see *Connection established*. For further details, see the section Activate over the internet.

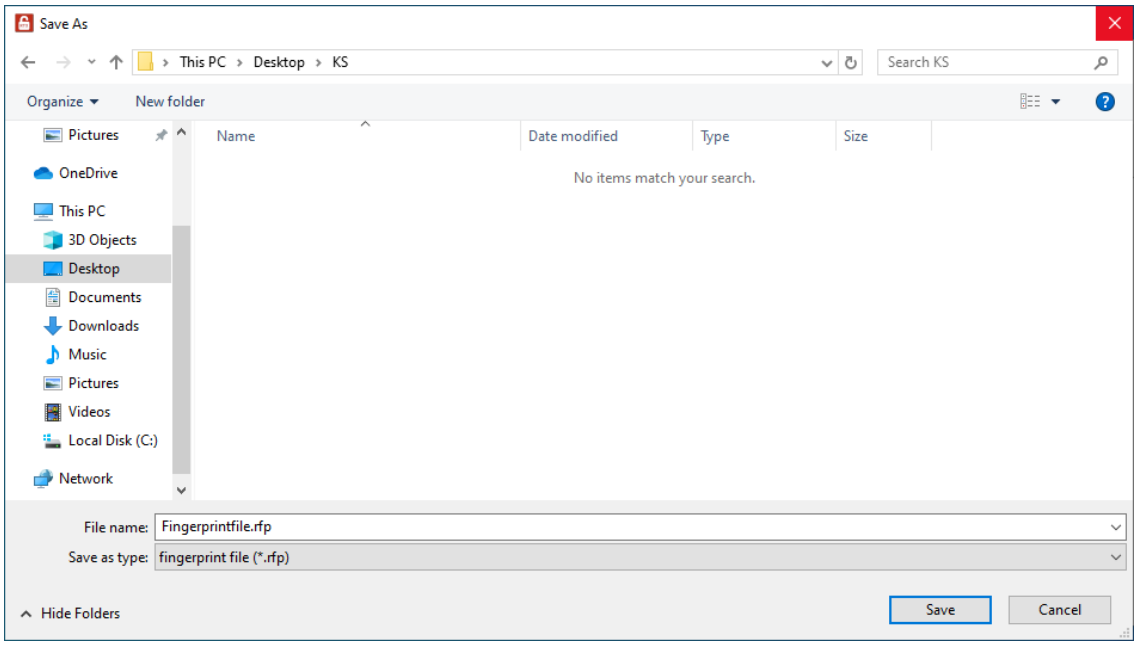


3. Click **Activate with a fingerprint file**.



4. In the *Enter your activation key* box, enter your activation key and click **Save As**.

5. In the *Save As* dialog box, the file is automatically named Fingerprintfile.rfp. Specify a path and click **Save**. .

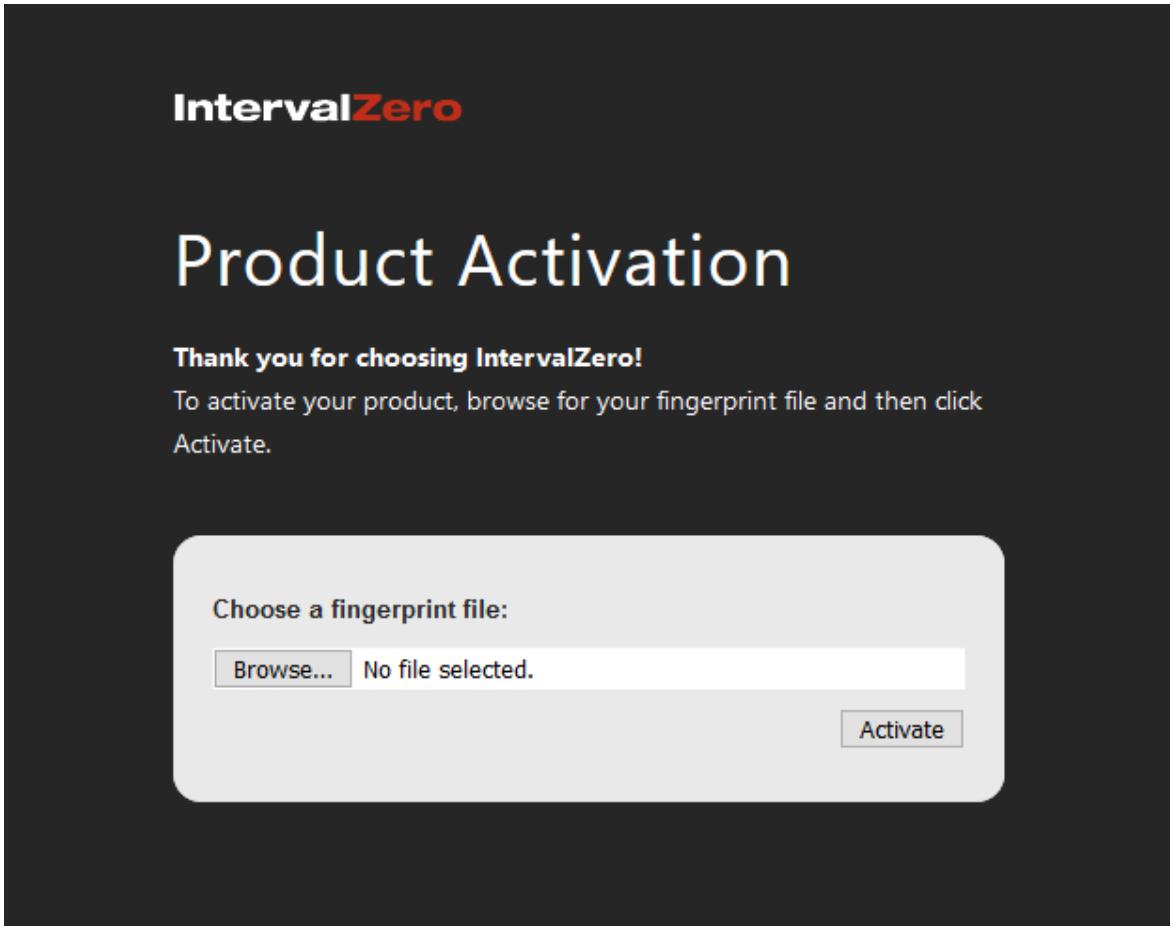


6. Navigate to the file location, and copy the Fingerprintfile.rfp file to your USB flash drive.

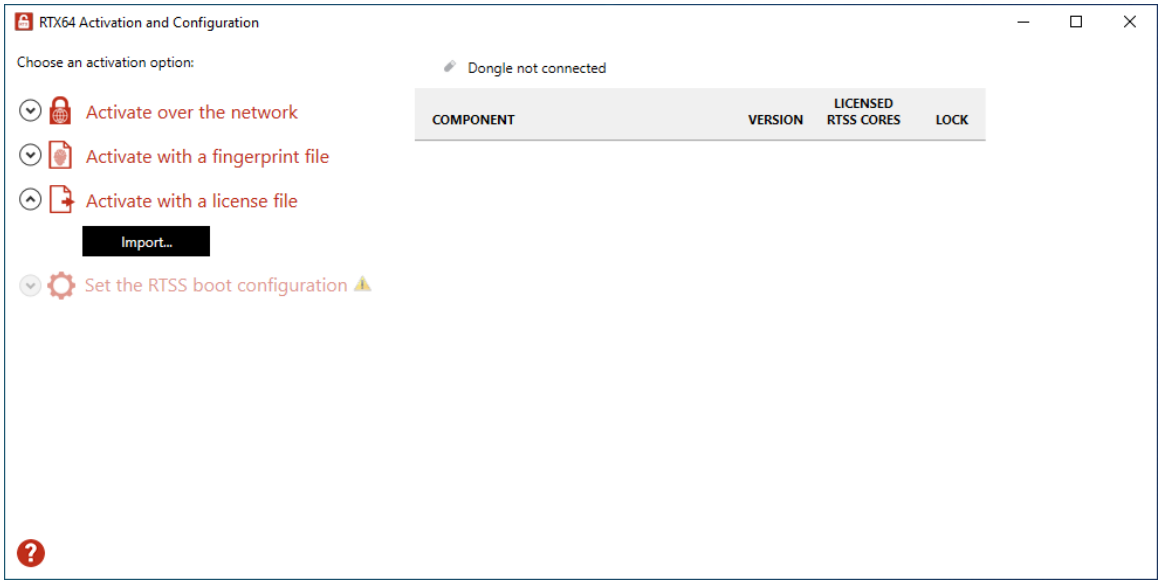
7. Plug the flash drive into a machine with internet connectivity.

Step II. Create the license file and activate the product:

1. Launch a web browser, and go to http://activation.intervalzero.com.

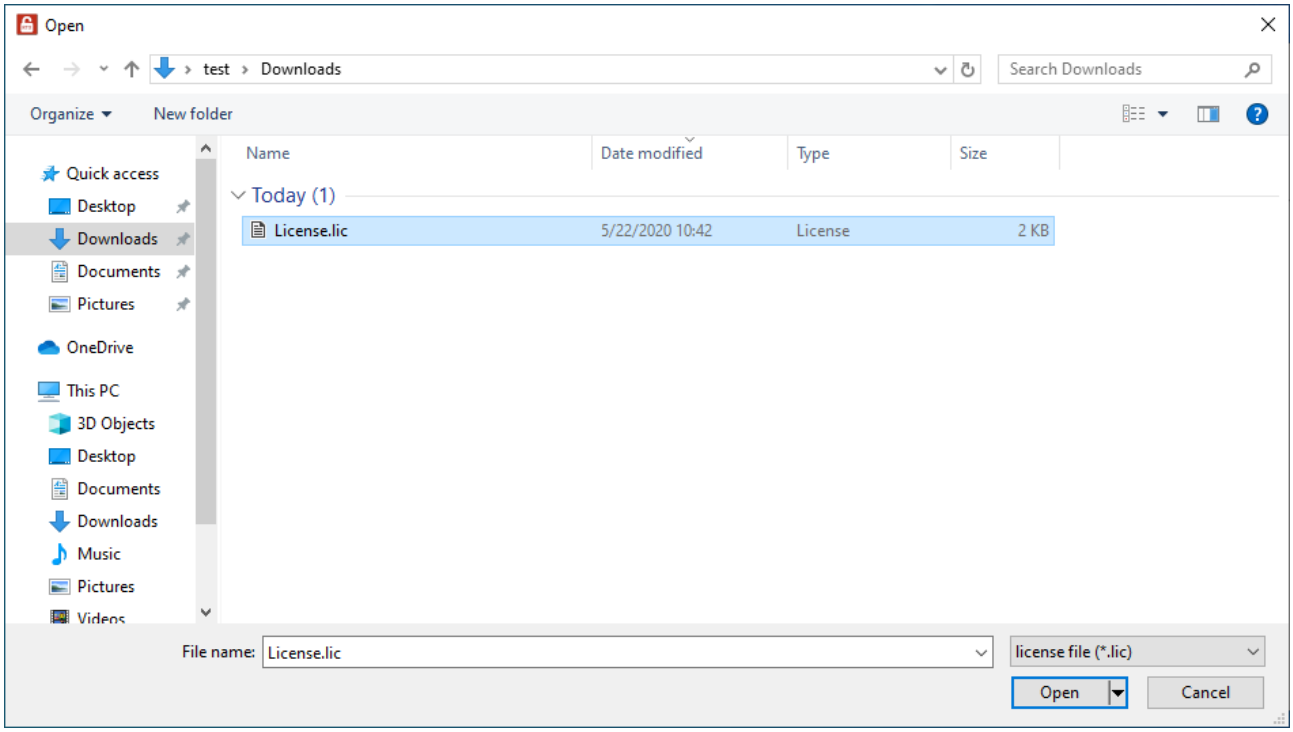


2. Click **Browse**, browse to and open the file Fingerprintfile.rfp.
3. Click **Activate** to generate a license (.lic) file.
4. Download the License.lic. Depending on your browser, you may be prompted to save the file.
5. Copy the file License.lic to your USB flash drive, and use it to transfer the license file to the machine on which KINGSTAR is installed.
6. In the *RTX64 Activation and Configuration* dialog box, click **Activate with a license file** and click **Import**.

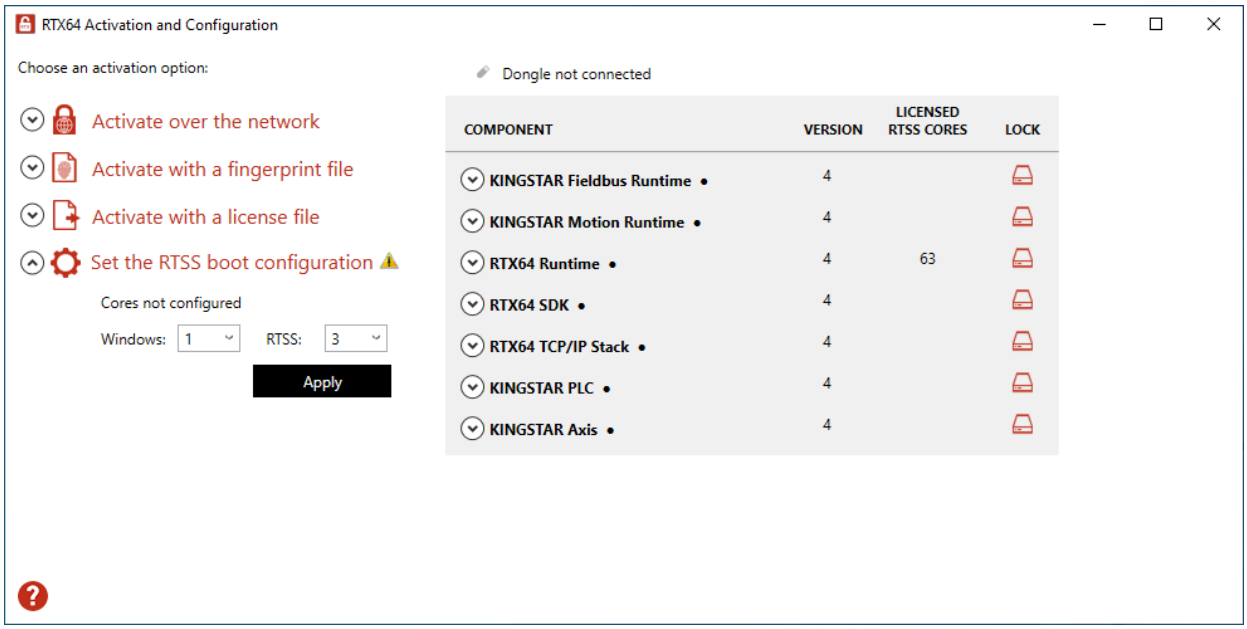


7. In the **Open** dialog box, browse to License.lic and click **Open**. The product components activated by your key are listed on the right. The order of the components varies between keys. These are the possible components:

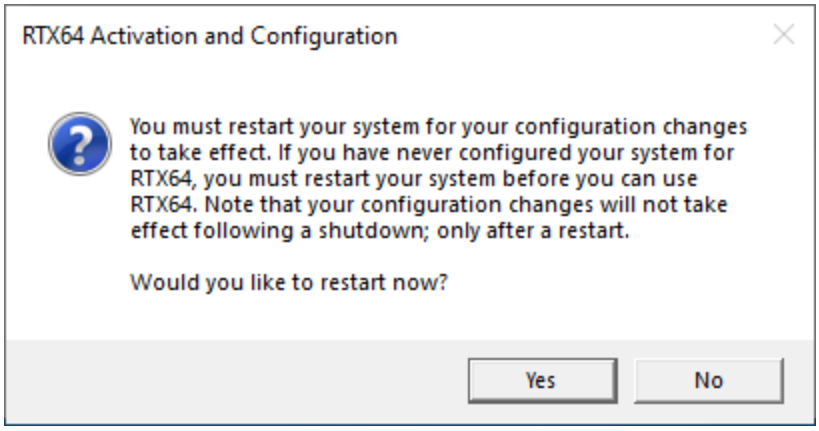
    - KINGSTAR Fieldbus Runtime
    - KINGSTAR Motion Runtime
    - RTX64 Runtime
    - RTX64 SDK
    - RTX64 RT-TCP/IP Stack
    - KINGSTAR PLC
    - KINGSTAR Axis



8. Click **Set the RTSS boot configuration** to assign processors between Windows and RTX64 (RTSS). There must be at least one processor for Windows. You must configure this setting and reboot before you use KINGSTAR. Click Apply after you complete the configuration.



9. When you are prompted to restart your computer, click **Yes**.



10. Choose the RTX64 boot configuration at system startup:

    - Windows 10 - RTX64

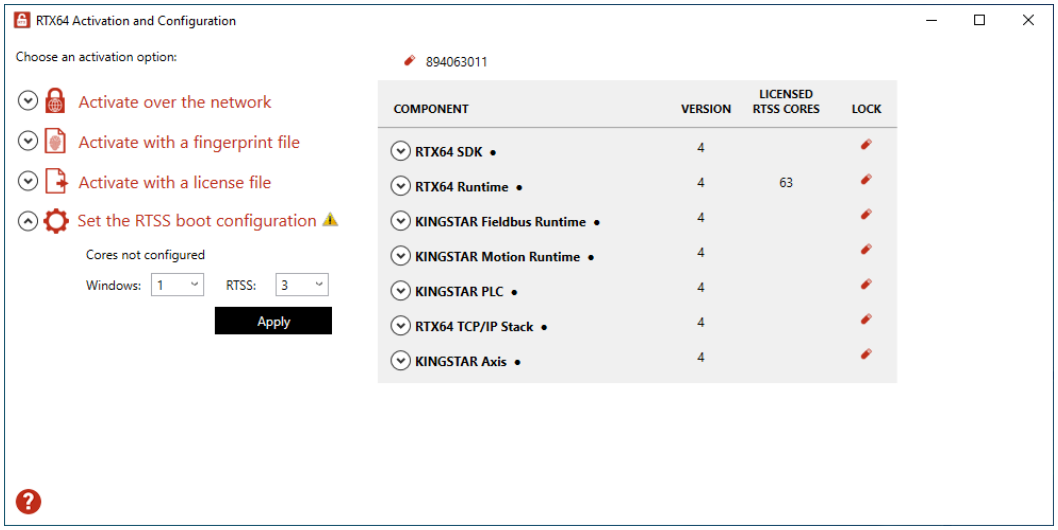
    NOTE: If you start your system with a configuration other than RTX64, KINGSTAR won't work properly.

Activate using the dongle

A dongle is a USB flash drive specifically designed for containing KINGSTAR license. It is convenient for people who need to take the license with them. When you purchase the KINGSTAR license you can optionally purchase a dongle.

- If you purchase the KINGSTAR licenses with the same number of dongles, we'll put the license files in the dongles and activate them in advance. Once you receive the dongles, plug them into the computers that have the corresponding KINGSTAR products to complete activation. After assigning the processors to Windows and RTX64 and restarting your computer, you can start to use KINGSTAR.
- If you purchase the KINGSTAR licenses with a different number of dongles, we'll send you the empty dongles so you can decide which dongle you want to put the license on. Once you activate a dongle, plug it into a computer that has the corresponding KINGSTAR product to complete activation. After assigning the processors to Windows and RTX64 and restarting your computer, you can start to use KINGSTAR. For more information about activating a dongle, visit the KINGSTAR website (kingstar.com), go to **Support > Support Login**, enter your support email and password to sign in. In KINGSTAR help center, go to **KINGSTAR Quick Links > Quick Links > Add-Ons, Tools & Utilities**, download Dongle Activation Utility, which includes the file and manual.

After the dongle is plugged in, a dongle icon is displayed above the component list, as shown below. Click Set the RTSS boot configuration to assign processors between Windows and RTX64 (RTSS). There must be at least one processor for Windows. You must configure this setting before you use KINGSTAR. Click Apply after you complete the configuration.



Configuring System Settings

KINGSTAR Control Panel is bundled with KINGSTAR Runtime. By default it is located at C:\Program Files\IntervalZero\KINGSTAR\bin\ControlPanelMain\IntervalZero.KingStarControlPanel.exe. Start it through the following procedure:

Click **Start >KINGSTAR 4.x Runtime > KINGSTAR Control Panel**.

The KINGSTAR installer installs and configures RTX64 for you. If you didn't select a network interface card (NIC) when you install the KINGSTAR Runtime, you have to manually configure it to RTX64. Please complete the following procedures.

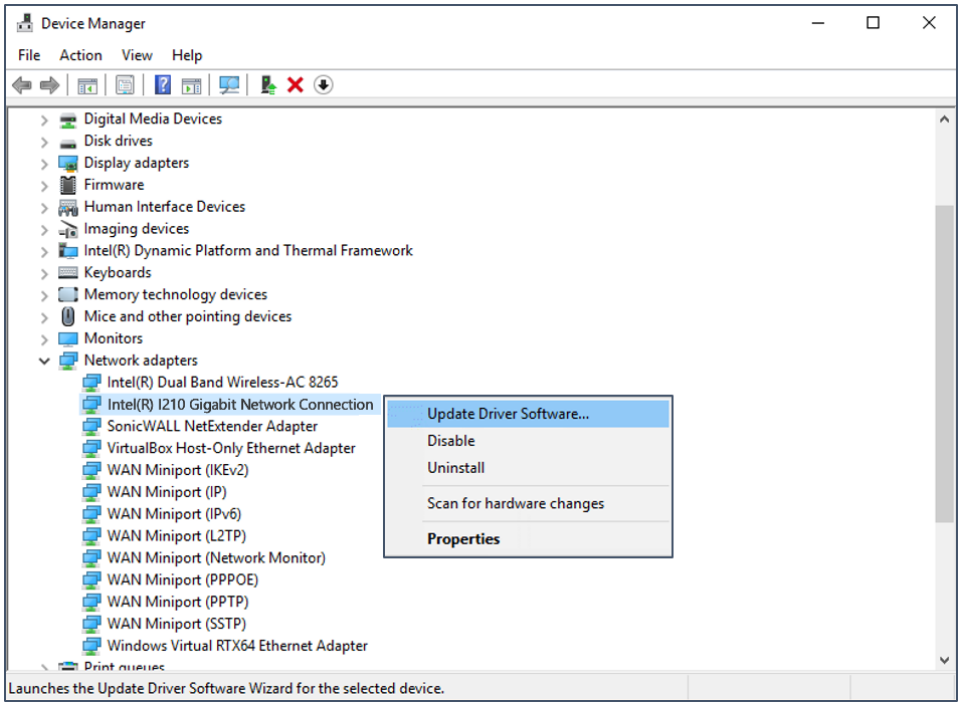
NOTE: The following procedures are only necessary if your NIC was not associated with KINGSTAR during installation.

Dedicating a Network Interface Card (NIC) to KINGSTAR

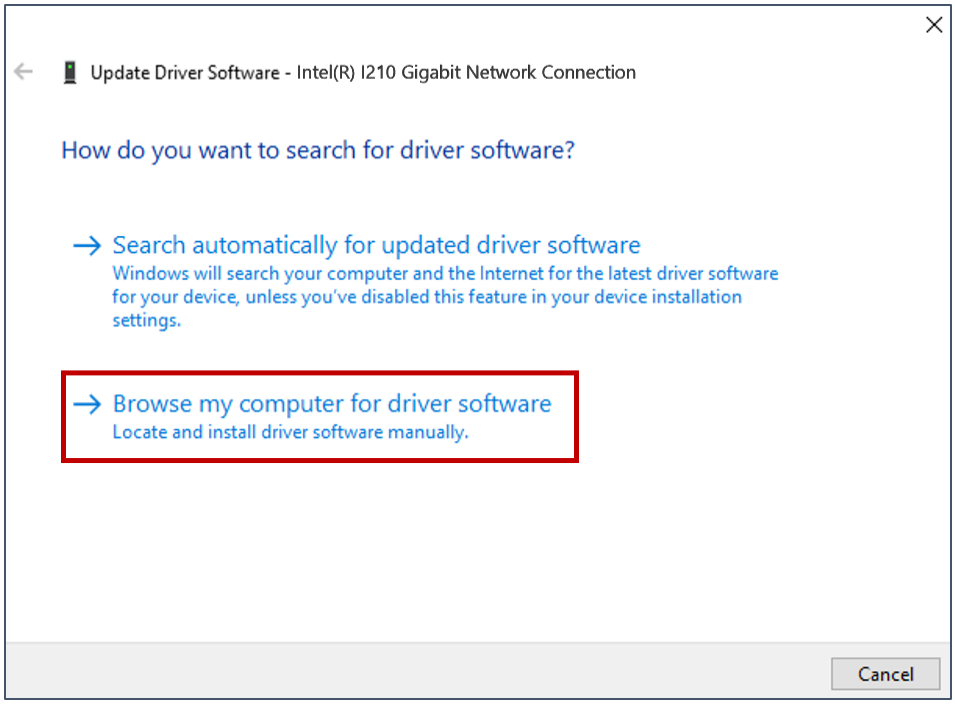
To manually dedicate a network interface card (NIC) for use with KINGSTAR:

1. On the taskbar, click **Start > All Programs > RTX64 4.X Runtime > Control Panel**.
2. In RTX64 Control Panel, click **Manage RTX64 devices** to launch Windows Device Manager.

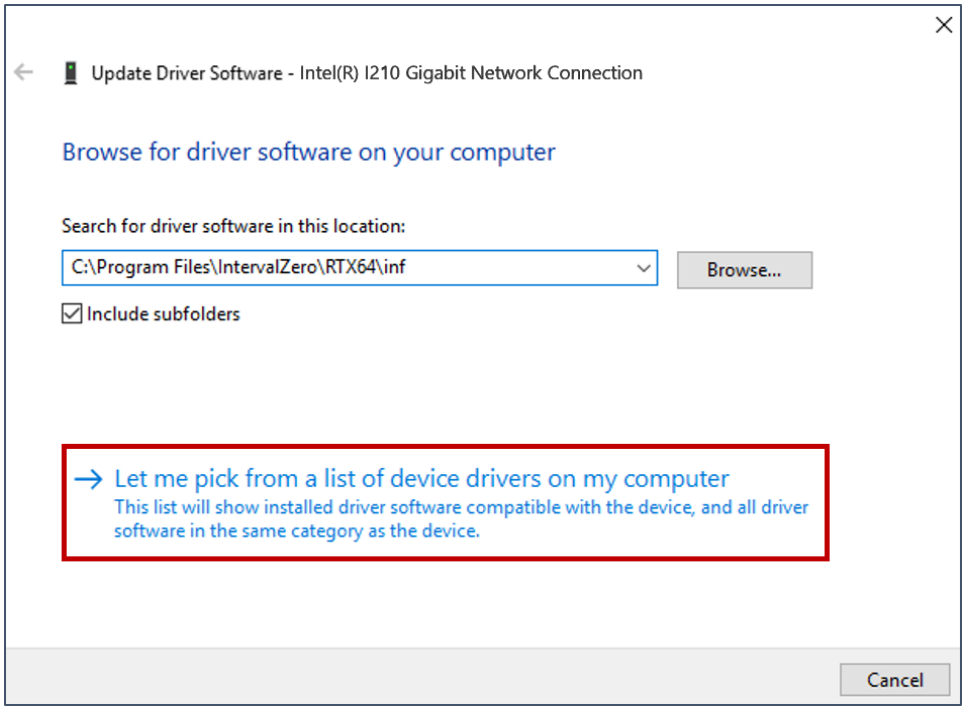
3. In the *Device Manager* dialog box, expand Network adapters, right-click on the network adapter to associate with KINGSTAR, and then click **Update Driver Software**. The adapter must be supported by both RTX64 and KINGSTAR.



4. In the Update Driver Software dialog box, click Browse my computer for driver software.

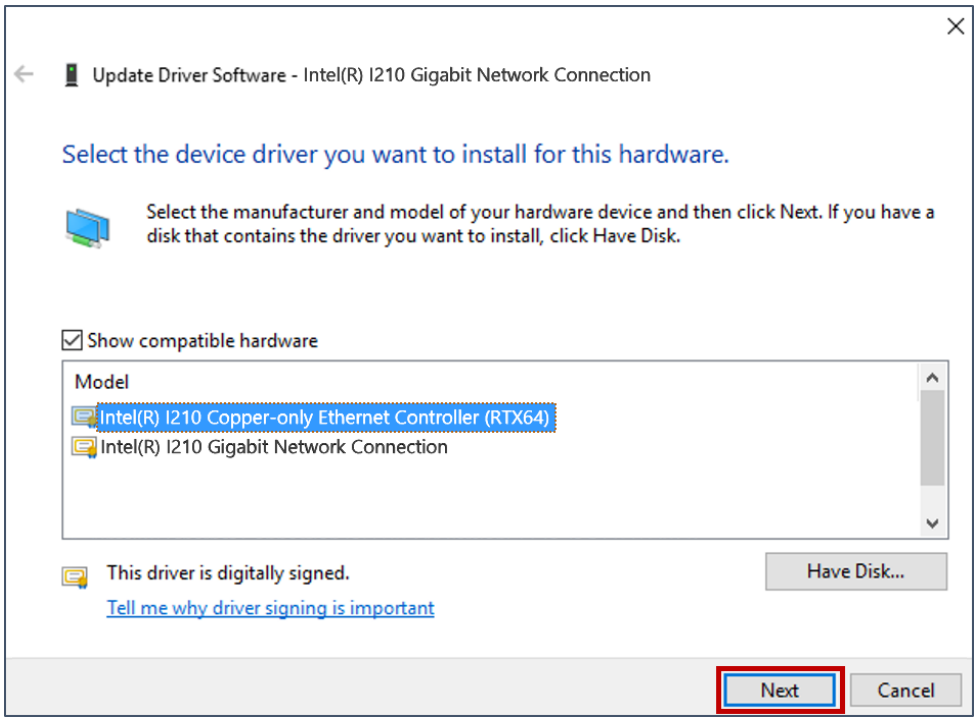


5. Click **Let me pick from a list of device drivers on my computer**.

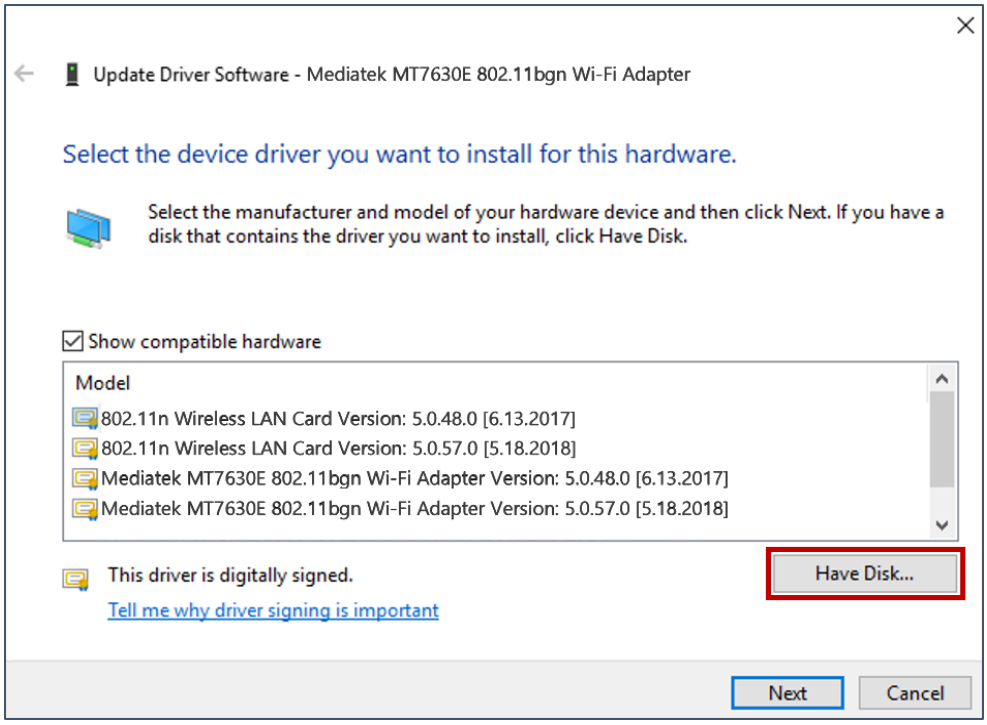


6. In the list of adapters, do one of the following:

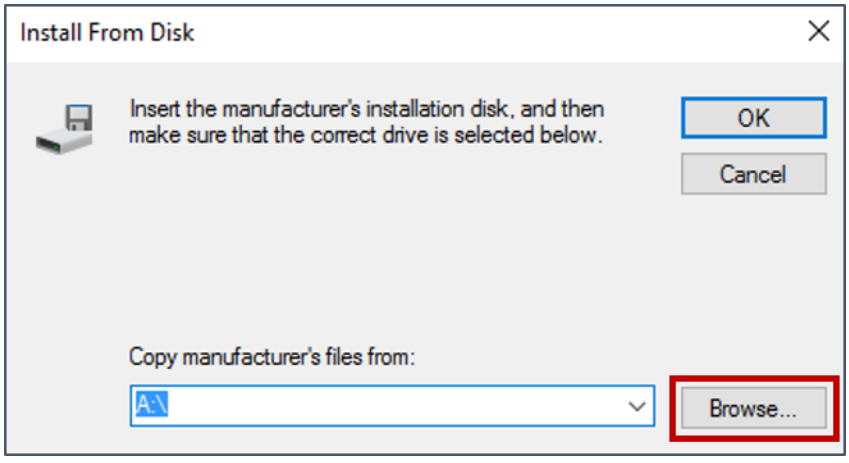
    - If your network adapter shows in the list, select the adapter that includes RTX64 in the name, and then click **Next**.



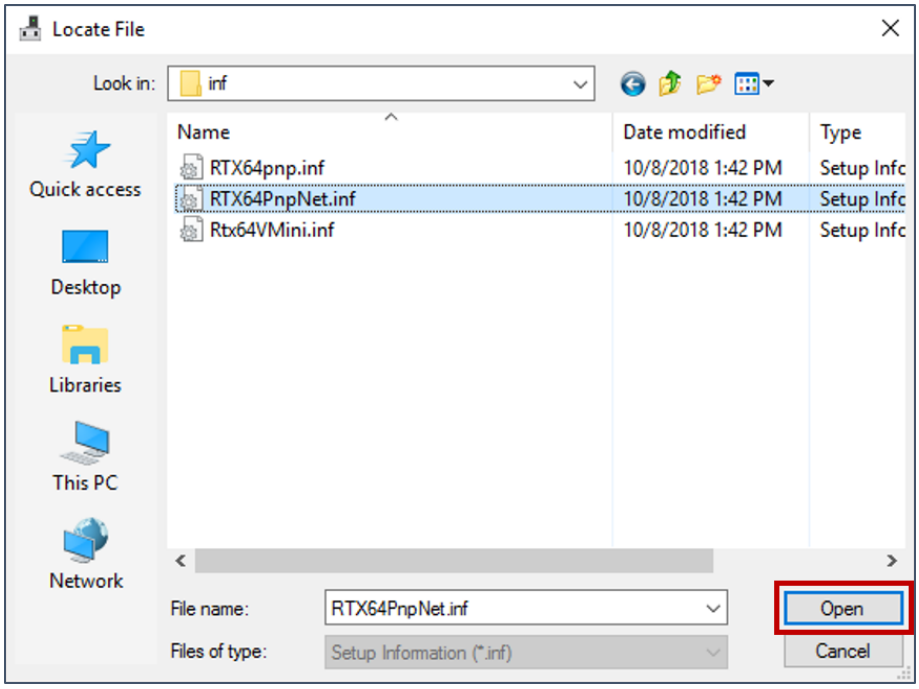
- If your network adapter does not show up in the list, click **Have Disk**.



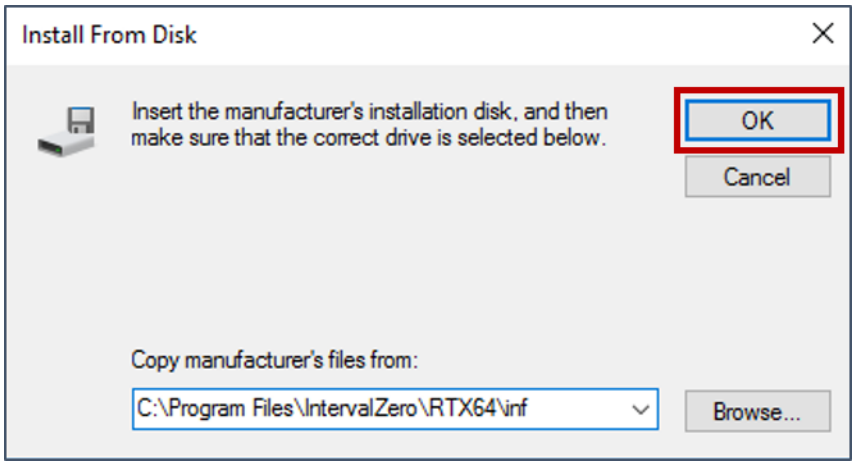
7. In the *Install From Disk* dialog box, click Browse and navigate to the RTX64 inf location `C:\program files\IntervalZero\RTX64\inf` if you installed RTX64 in the default location.



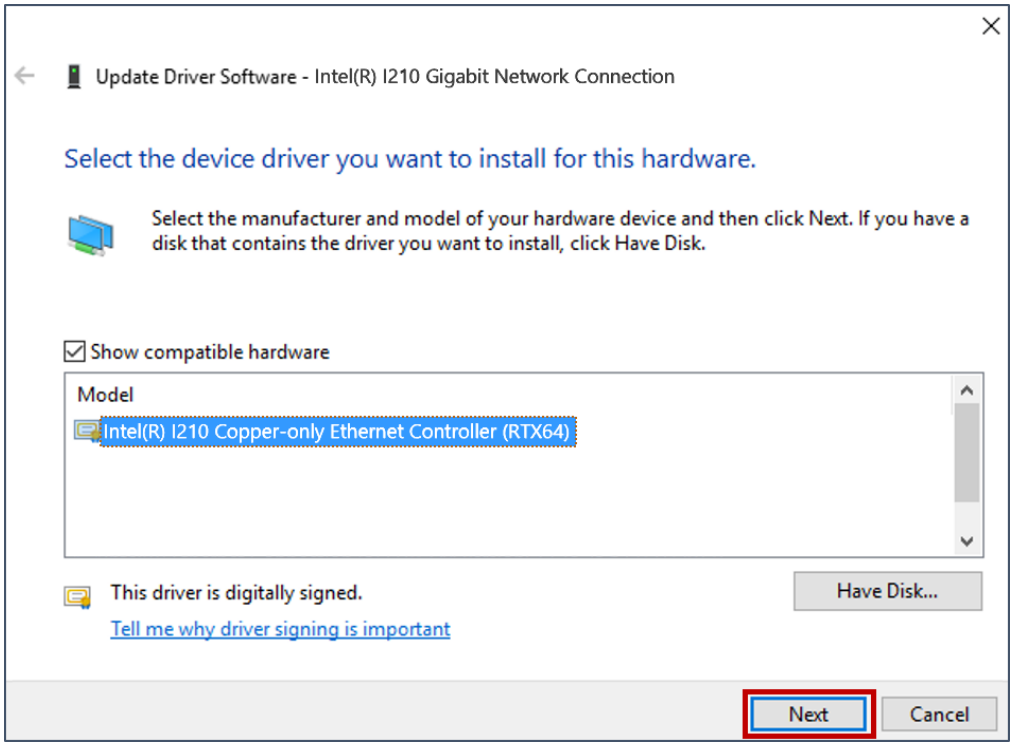
8. In the *Locate File* dialog box, select `RTX64PnpNet.inf` and click **Open**.



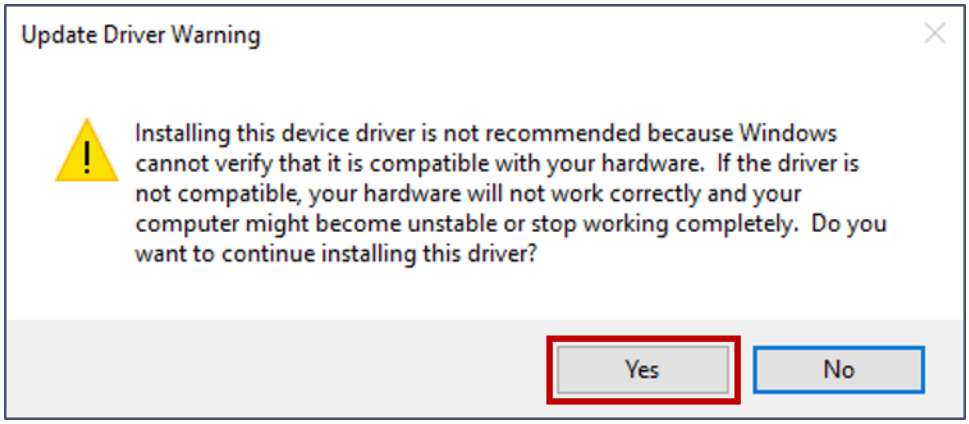
9. In the *Install From Disk* dialog box, click **OK**.



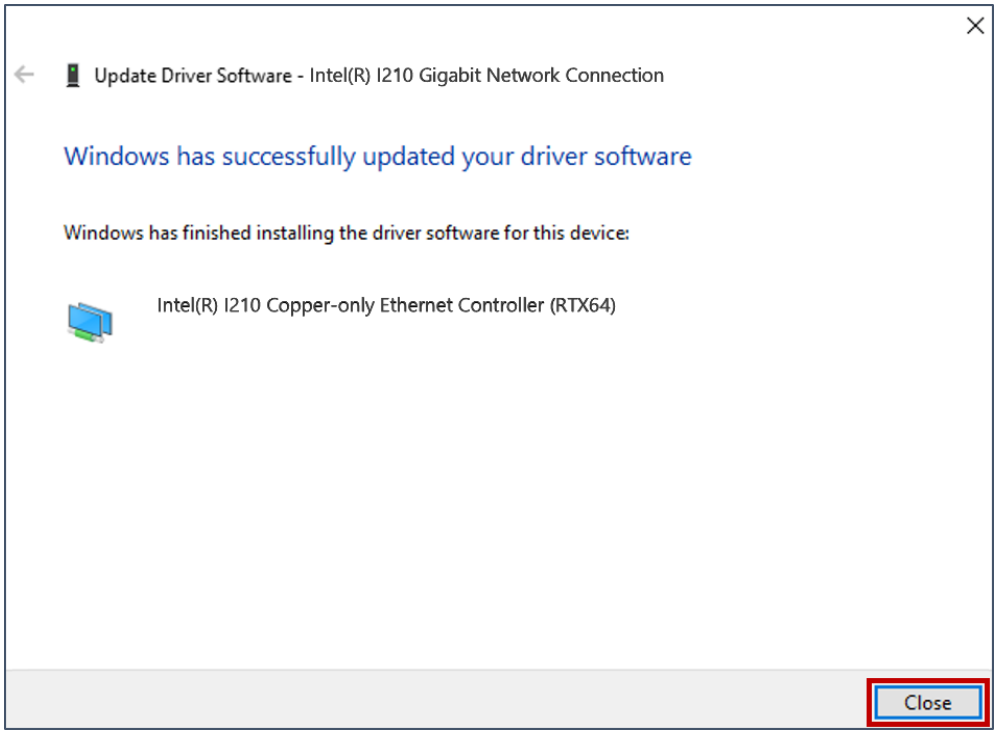
10. In the *Update Driver Software* dialog box, select the network adapter that includes RTX64 in the name, and then click **Next**.



11. A Windows Security dialog box may display asking if you would like to install the driver. Click **Yes**.



12. The RTX64 driver installs for the network adapter. Click **Close** after the installation is completed. The network adapter is now available for use with KINGSTAR.

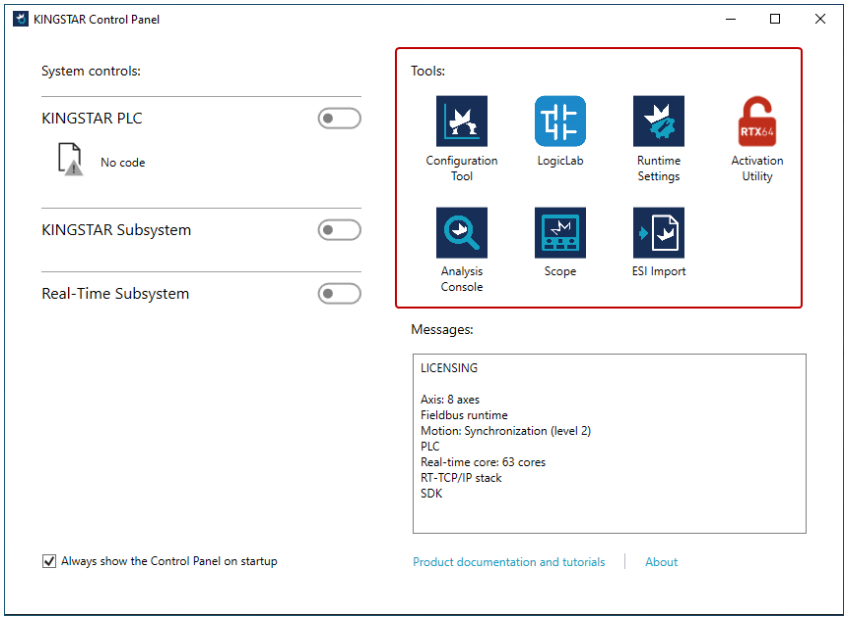


Assigning a Network Interface Card (NIC) to KINGSTAR

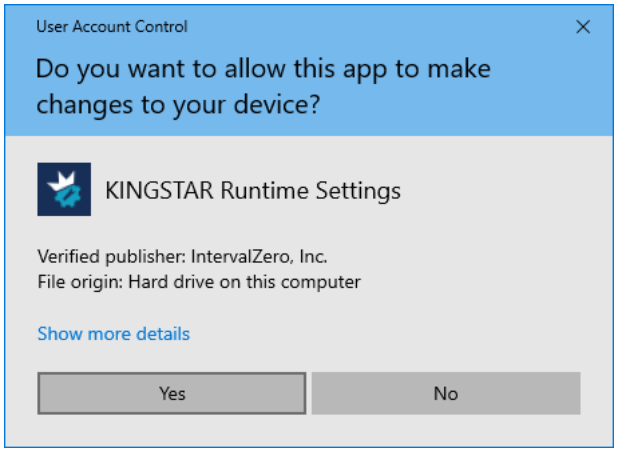
To assign a Network Interface Card to KINGSTAR:

1. Start the Control Panel

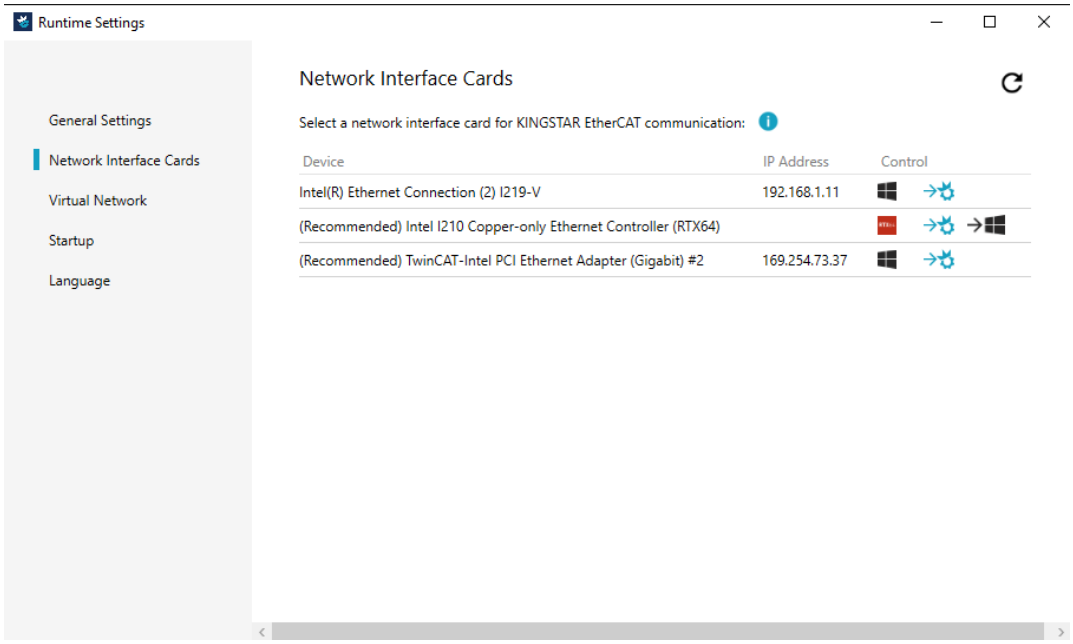
   KINGSTAR Control Panel is bundles with KINGSTAR Runtime. By default it is located at C:\Program Files\IntervalZero\KINGSTAR\bin\ControlPanelMain\KingStarControlPanel.exe. You can start it throught he following procedure:
   Click **Start >KINGSTAR 4.X Runtime > KINGSTAR Control Panel**.



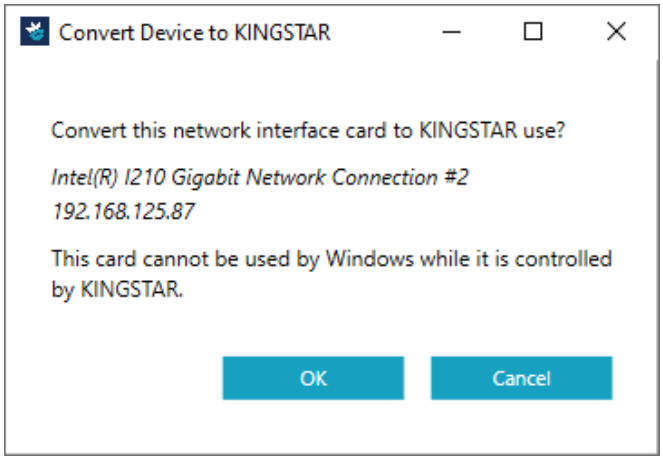
2. Choose the Runtime Settings in the Tools shortcuts of the KINGSTAR Control Panel. When you click Runtime Settings, the **User Account Control** dialog box may ask if you want the installer to make changes to your device. Click **Yes** to continue the installation.



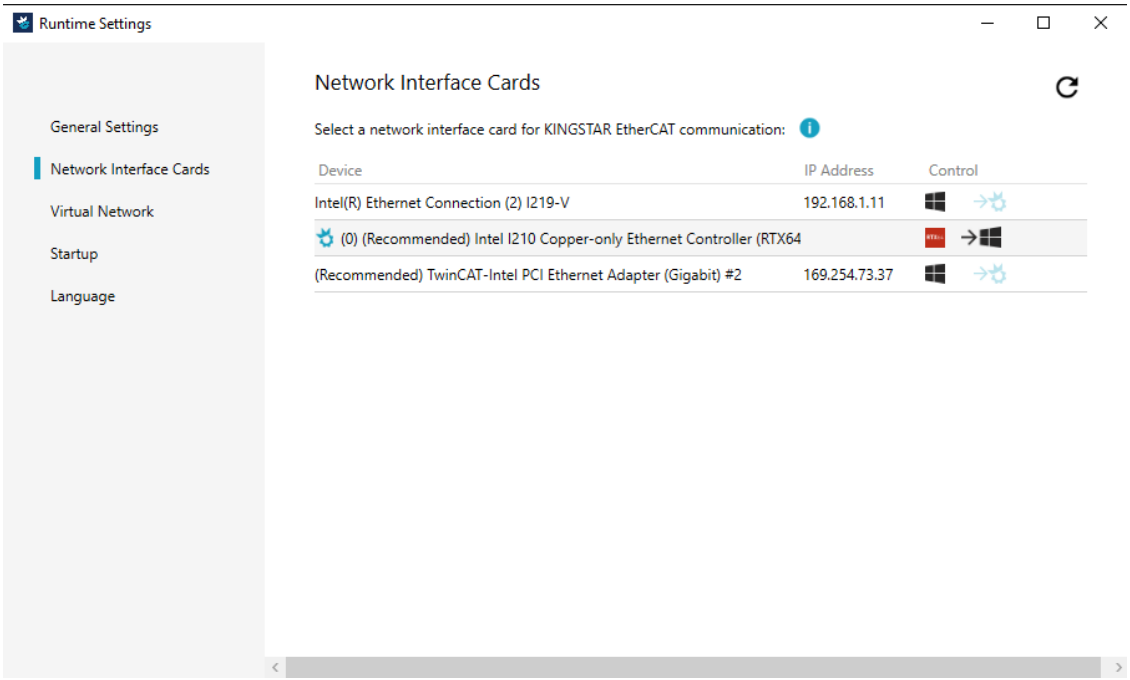
3. Runtime settings provides a friendly user interface that allows you to configure several KINGSTAR settings without tedious steps. Click on "Network Interface Cards".



4. Click in front of the NIC you want to assign to KINGSTAR. The system will ask if you want to assign this card to KINGSTAR. If you click **OK**, it will be assigned to KINGSTAR.



5. Check the KINGSTAR icon is in front of the card. The card can now be used with KINGSTAR.

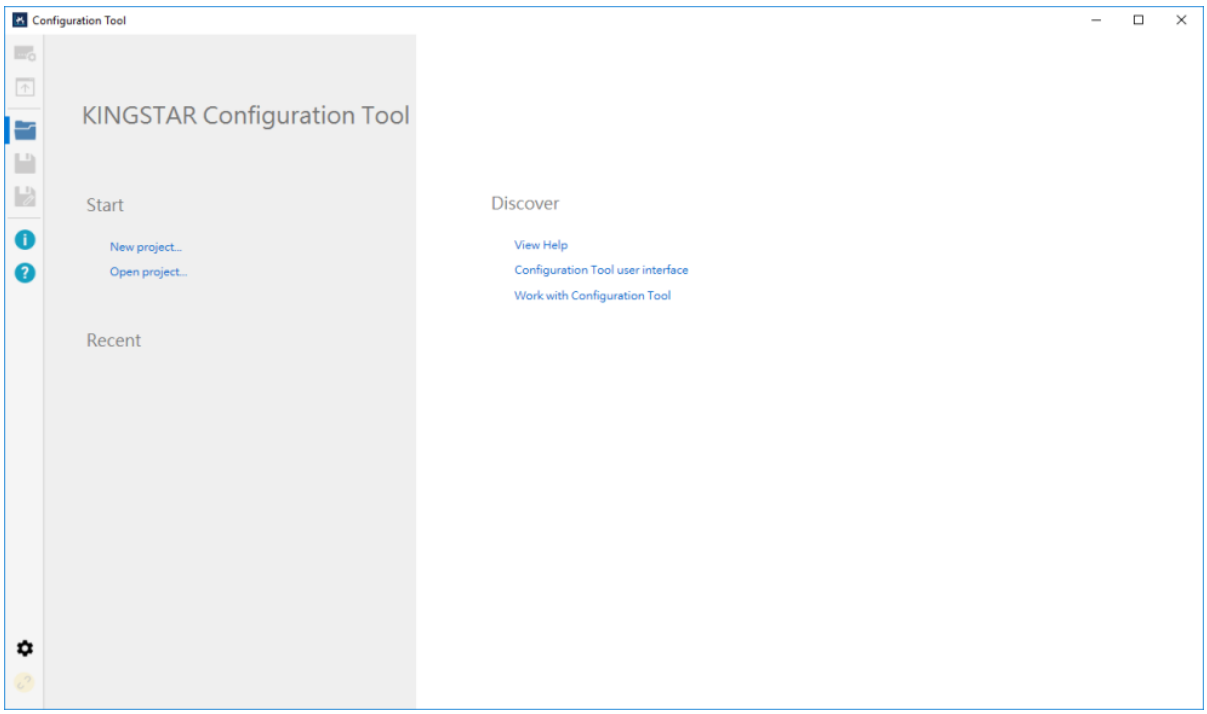


Testing the Installation

By default the configuration tool is located at *C:\Program Files\IntervalZero\KINGSTAR\bin\ksm64Tuning\KsTuning.exe*. You can start it through one of the following procedures:

1. Start configuration tool

    - Click **Start > KINGSTAR 4.x Runtime > KINGSTAR Configuration Tool**.
    - Click **Start > KINGSTAR 4.x Runtime > KINGSTAR Control Panel**. In KINGSTAR Control Panel, click **Configuration Tool**.



2. On the Startup page click **New Project**.

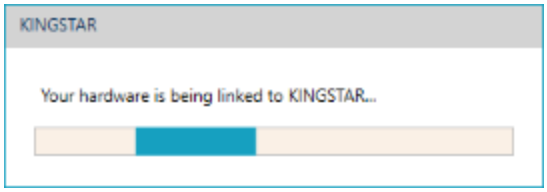
3. In Connection Settings, configure the settings for your servo drive.

   You need to change these settings:

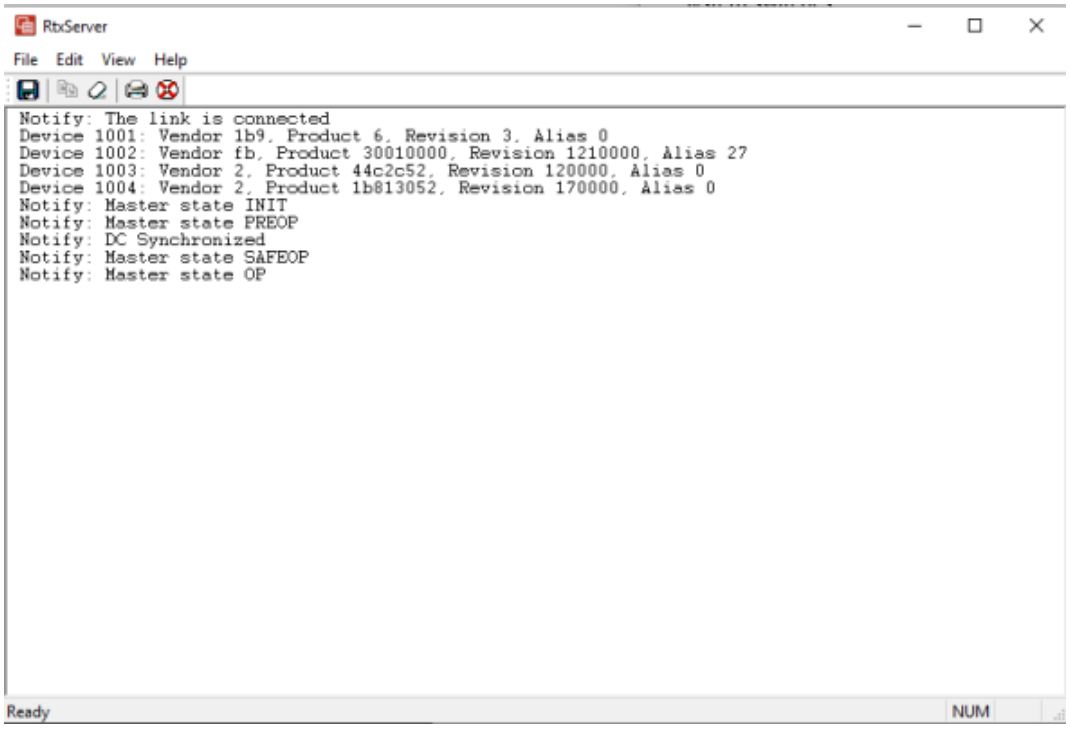
   - *Cycle time*: The cycle time for the KINGSTAR EtherCAT network.

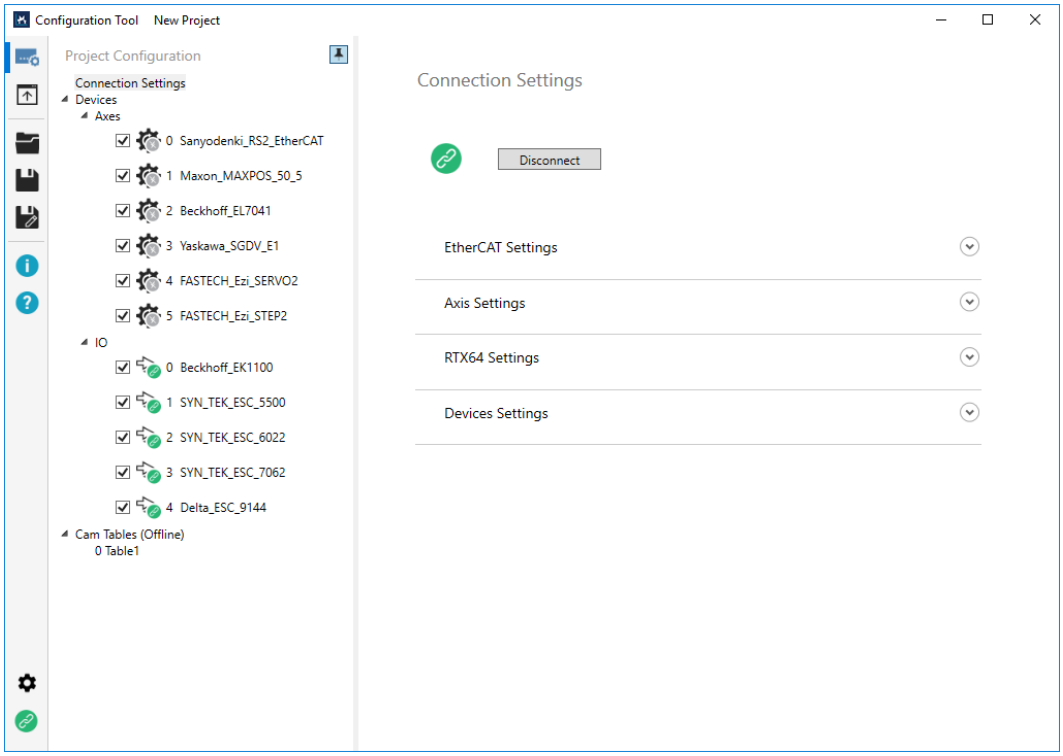
   - *Supported access mode*: Sets a data transfer mode for EtherCAT drives. If you want to use the torque mode, you must select a torque-enabled mode.

4. Click **Connect** to connect your computer to hardware.



5. Read the information displayed in the RTX64 Server console window to ensure the connection is successful. If it's not, click **Disconnect**, check your cables and then restart the link again.





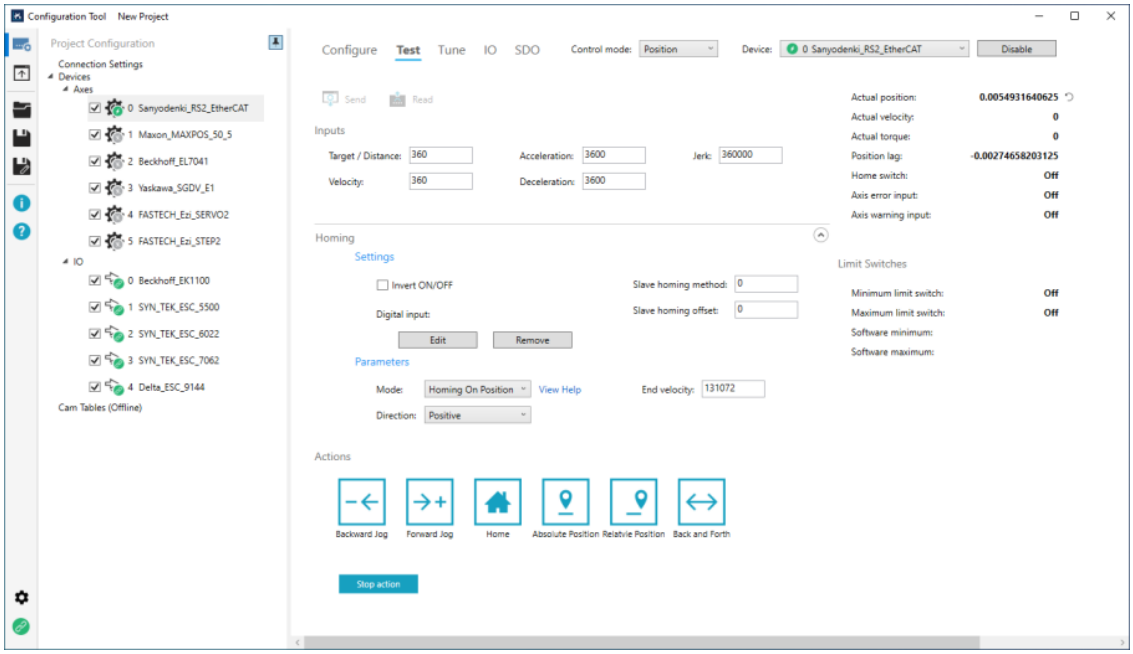
NOTE: You must connect first, and then you can switch to the Axis Configuration page.

NOTE: If you don't have real axes or I/O modules, enter values in the Required axes and Required IOs boxes to use simulated axes and I/O modules.

6. Select an axis and click **Enable**.

7. Click the Configure tab. In Feedback, click Start.

8. Verify that your axis or IOs are working.


Configuration Tool New Project
Project Configuration
Connection Settings
Devices
Axes
0 Sanyodenki_RS2_EtherCAT
1 Maxon_MAXPOS_50_5
2 Beckhoff_EL7041
3 Yaskawa_SGDV_E1
4 FASTECH_Ezi_SERVO2
5 FASTECH_Ezi_STEP2
IO
0 Beckhoff_EK1100
1 SYN_TEK_ESC_5500
2 SYN_TEK_ESC_6022
3 SYN_TEK_ESC_7062
4 Delta_ESC_9144
Cam Tables (Offline)
Configure Test Tune IO SDO
Control mode: Position
Device: 0 Sanyodenki_RS2_EtherCAT
Disable
Send
Read
Inputs
Target / Distance: 360
Velocity: 360
Acceleration: 3600
Deceleration: 3600
Jerk: 360000
Actual position: 0.0054931640625
Actual velocity: 0
Actual torque: 0
Position lag: -0.00274658203125
Home switch: Off
Axis error input: Off
Axis warning input: Off
Homing
Settings
Invert ON/OFF
Digital input:
Edit
Remove
Slave homing method: 0
Slave homing offset: 0
Limit Switches
Minimum limit switch: Off
Maximum limit switch: Off
Software minimum:
Software maximum:
Parameters
Mode: Homing On Position
View Help
Direction: Positive
End velocity: 131072
Actions
Backward Jog
Forward Jog
Home
Absolute Position
Relative Position
Back and Forth
Stop action

Installing KINGSTAR SDK

- If you plan to develop in C/C++, please install the KINGSTAR SDK, and start with your first KINGSTAR RTX64 project.
- If you plan to develop in IEC61131-C, please install KINGSTAR LogicLab and create your first project.
- If you plan to develop in .NET, no SDK installation is required, unless you want to access our .NET samples. In this case, you must install our KINGSTAR SDK and then start programming your .NET application.

You should have received an email confirmation that includes the activation key and a link to the KINGSTAR download page. After downloading the file, please complete the following steps to install KINGSTAR SDK:

NOTE: If you are using Visual Studio as your development environment and you want to create your application in the RT interface, you need to install Visual Studio before you install SDK. KINGSTAR will find the installation path of Visual Studio and install RTX64 extensions for Visual Studio automatically. If you install SDK first, you need to install RTX64 extensions manually: go to C:\Program Files\IntervalZero\KINGSTAR SDK\<Version Number>\VSExtensions. Double-click RTXProjectWizard.vsix to install the RTX64 templates.

NOTE: If you are using Visual Studio 2019 and the RTXProjectWizard.vsix installation is failed, double-click RTX64VSSupport.vsix, which installs RTX64 files for Visual Studio.

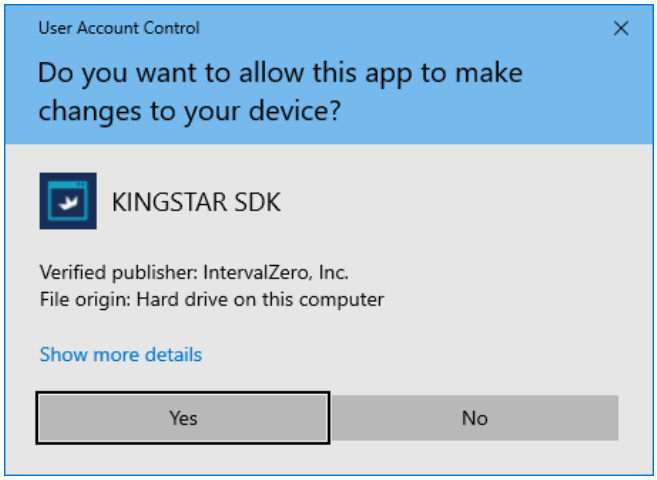
NOTE: If you have installed KINGSTAR SDK 4.X, you can upgrade directly using the installer of the latest version. If you have installed 3.x or earlier versions of KINGSTAR SDK, it can co-exist with 4.x.

1. Go to **Control Panel > Uninstall a program**. Select the previous version of the KINGSTAR SDK from the list and uninstall it. The RTX64 SDK should be uninstalled together with KINGSTAR SDK. If not, uninstall it manually.

   NOTE: Because the KINGSTAR SDK 4.x is incompatible with its 3.x SDK versions, you need to uninstall the 3.x version before installing v4.x.

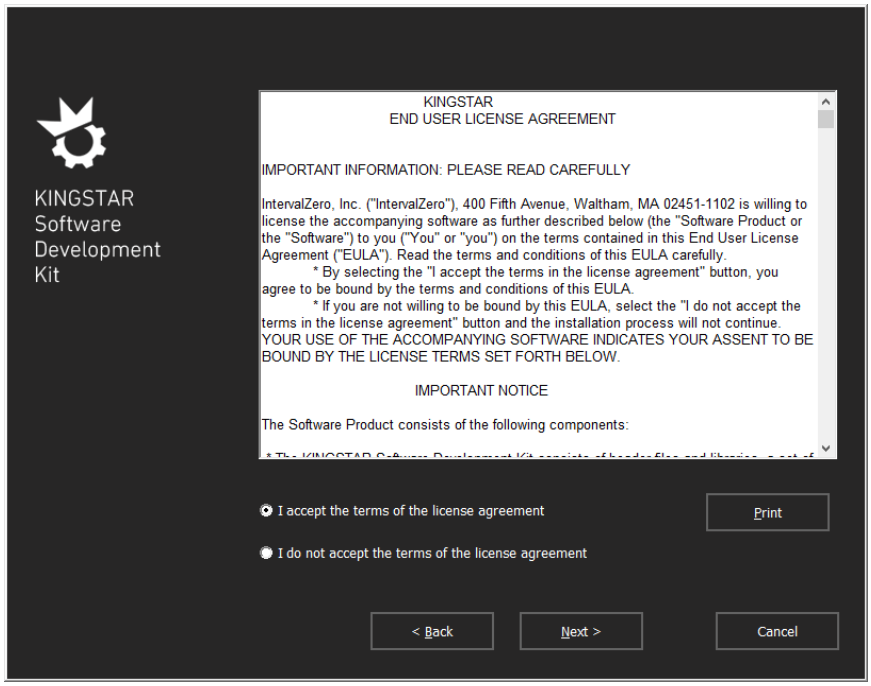
2. Double-click `KINGSTARSDKInstaller.exe`.

NOTE: You must have the administrator permission to install KINGSTAR SDK. Before the installation begins, the User Account Control dialog box may ask if you want the installer to make changes to your computer. Click Yes to continue the installation.



3. On the installation page, click **Next** to begin the installation.

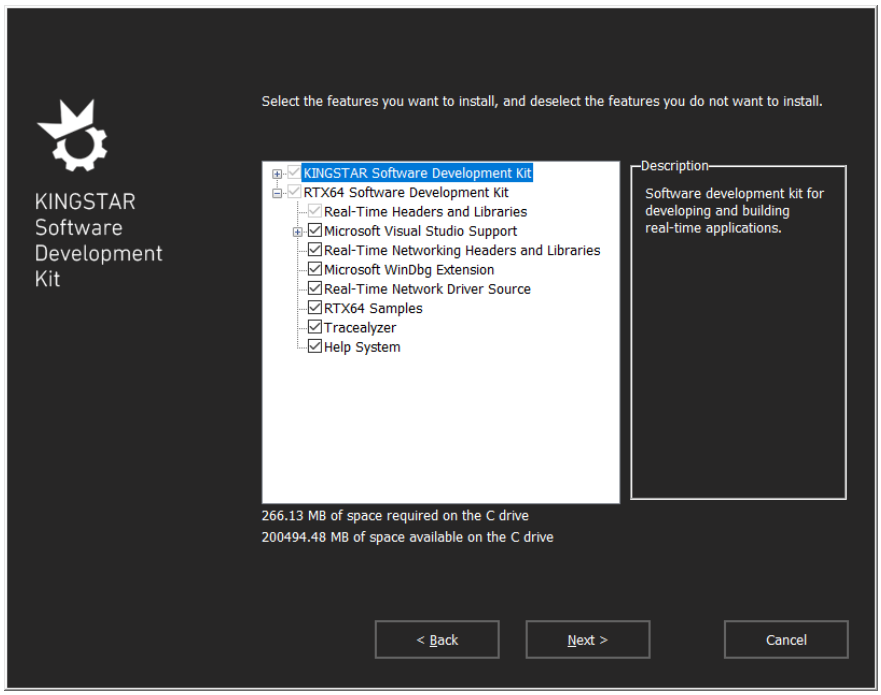
4. Read the End User License Agreement, select *I accept the terms of the license agreement* and click **Next**.



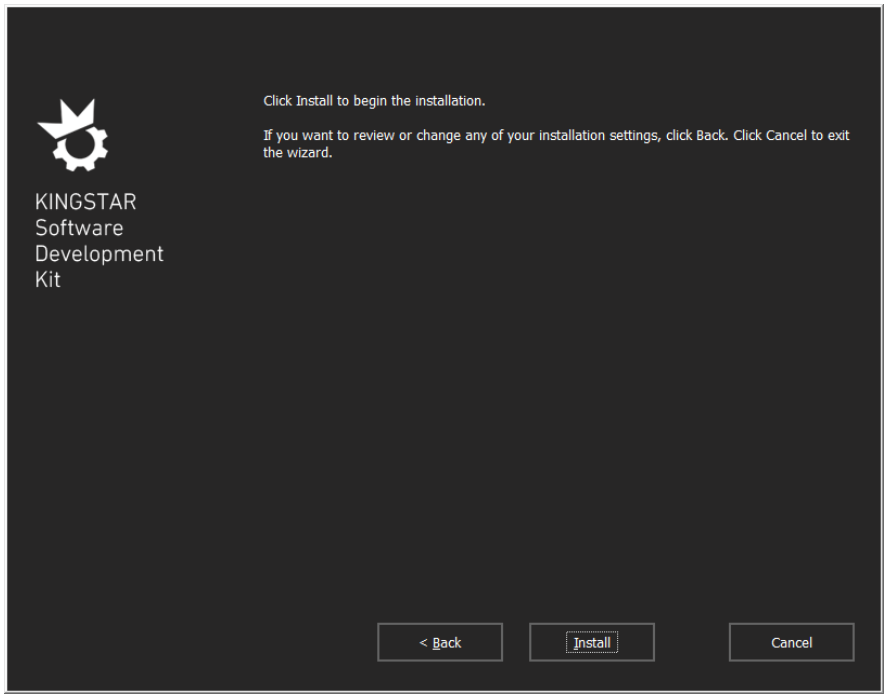
5. Choose the location you wish to install the KINGSTAR SDK. You can accept the default installation path, or click **Browse** to choose a different location. When you finished, click **Next**.

6. Expand **KINGSTAR Software Development Kit** and **RTX64 Software Development Kit** and select the features you want to install. The required components are not available for selection. When you're finished, click **Next.**

   NOTE: If you already have RTX64 SDK installed on your computer, only KINGSTAR Software Development Kit will be displayed.



7. Click **Install**, to install KINGSTARSDK.



8. After completing the installation, click **Finish** to close the wizard. For more information about activating your KINGSTAR components, see Activate and configure KINGSTAR.

Installing KINGSTAR LogicLab (Optional)

NOTE: This is only necessary if you plan to program in IEC 61131-3 standard language.

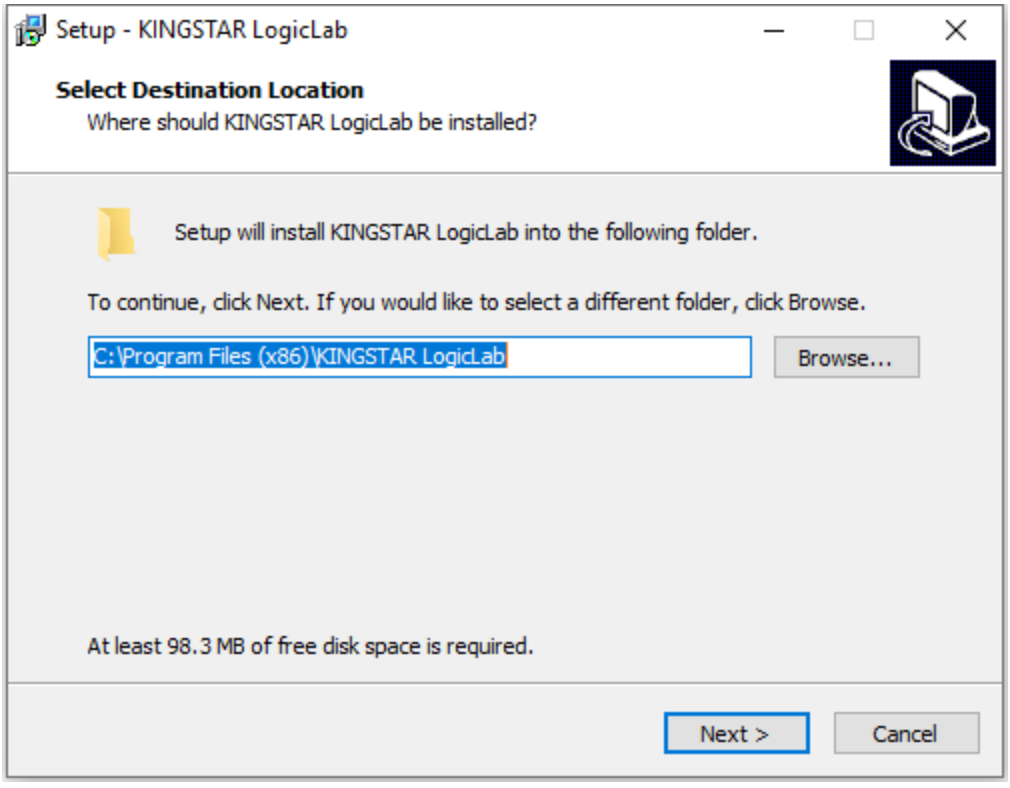
You have received an email confirmation that includes the activation key and a link to the KINGSTAR LogicLab download page. After downloading KINGSTAR LogicLab, complete the following steps to install it.

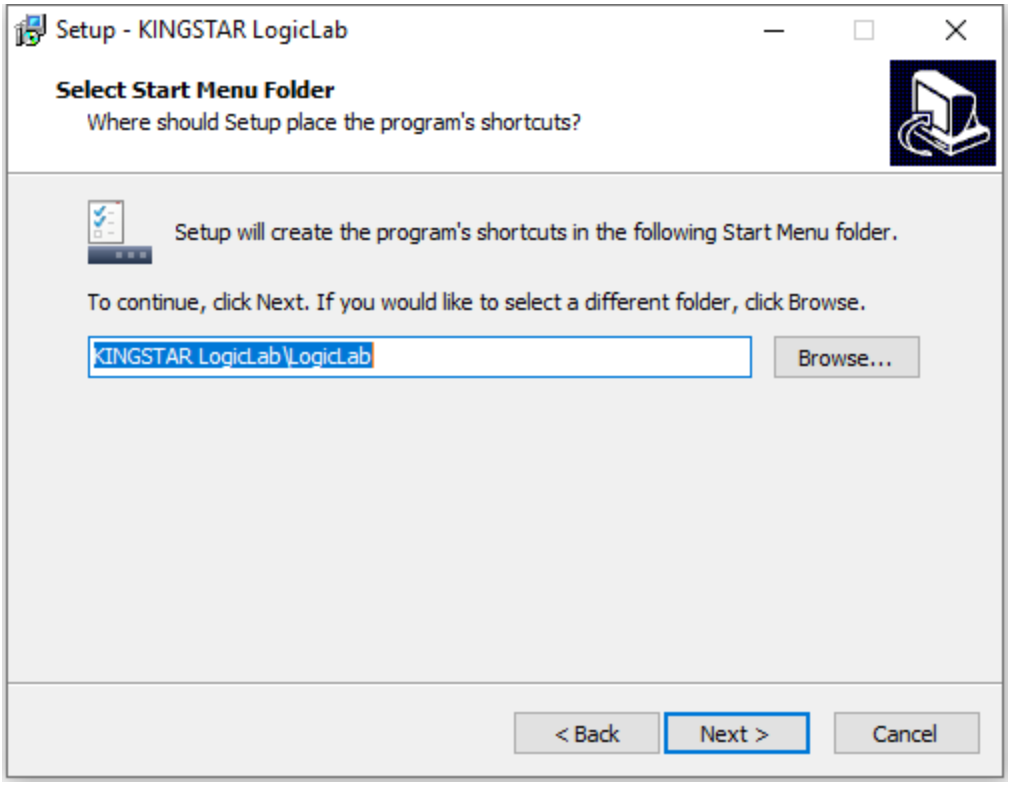
To install KINGSTAR LogicLab:

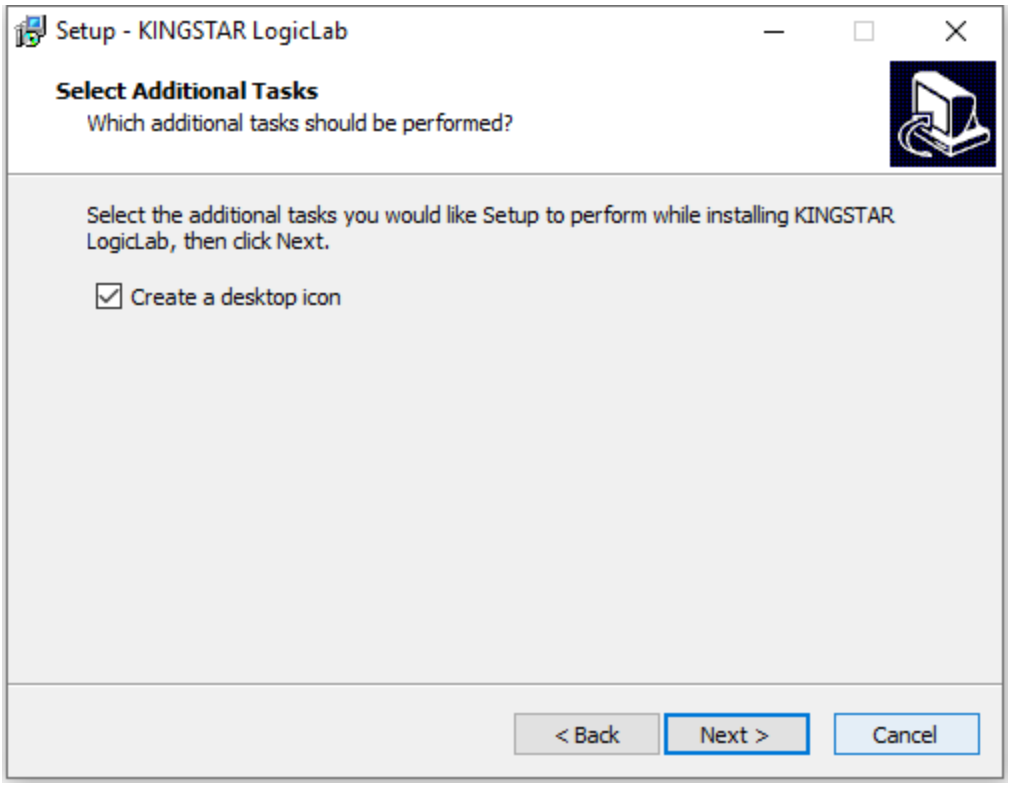
1. Double-click `KINGSTARLogicLabInstaller.exe`.

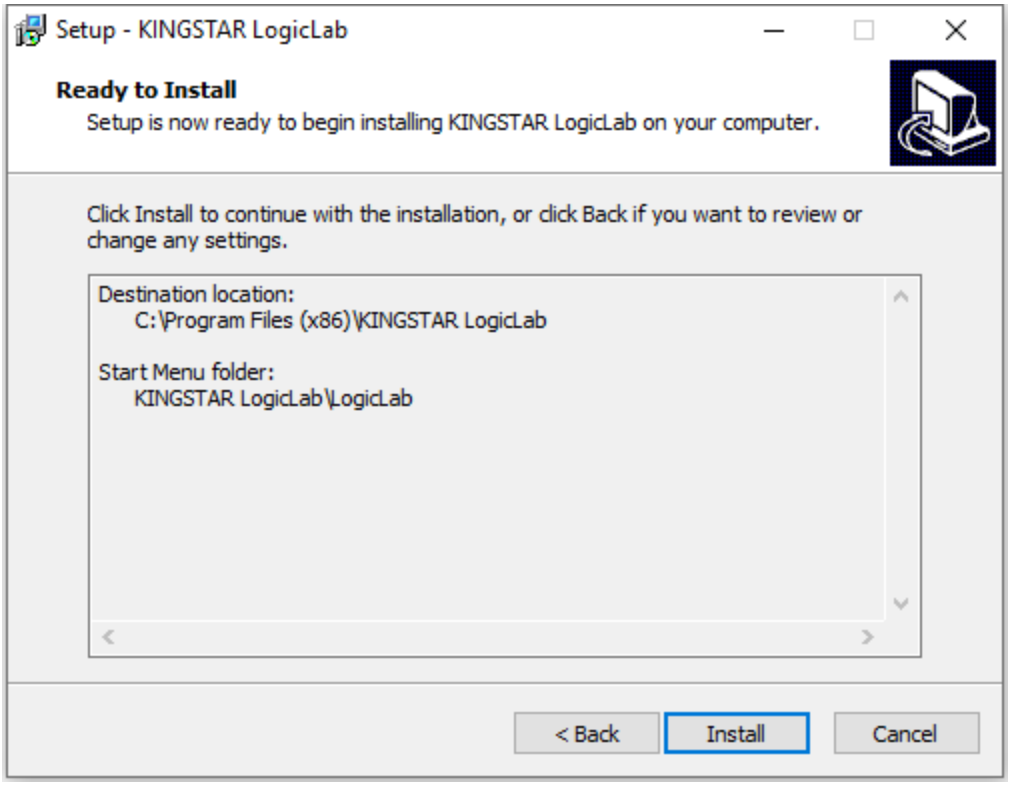
2. You must have the administrator permission to install KINGSTAR LogicLab. Before the installation begins, the *User Account Control* dialog box may ask if you want the installer to make changes to your computer. Click **Yes** to continue the installation.

3. Choose the location you want to install KINGSTAR LogicLab. You can accept the default installation path, or click **Browse** to choose a different location. When you finished, click **Next**.

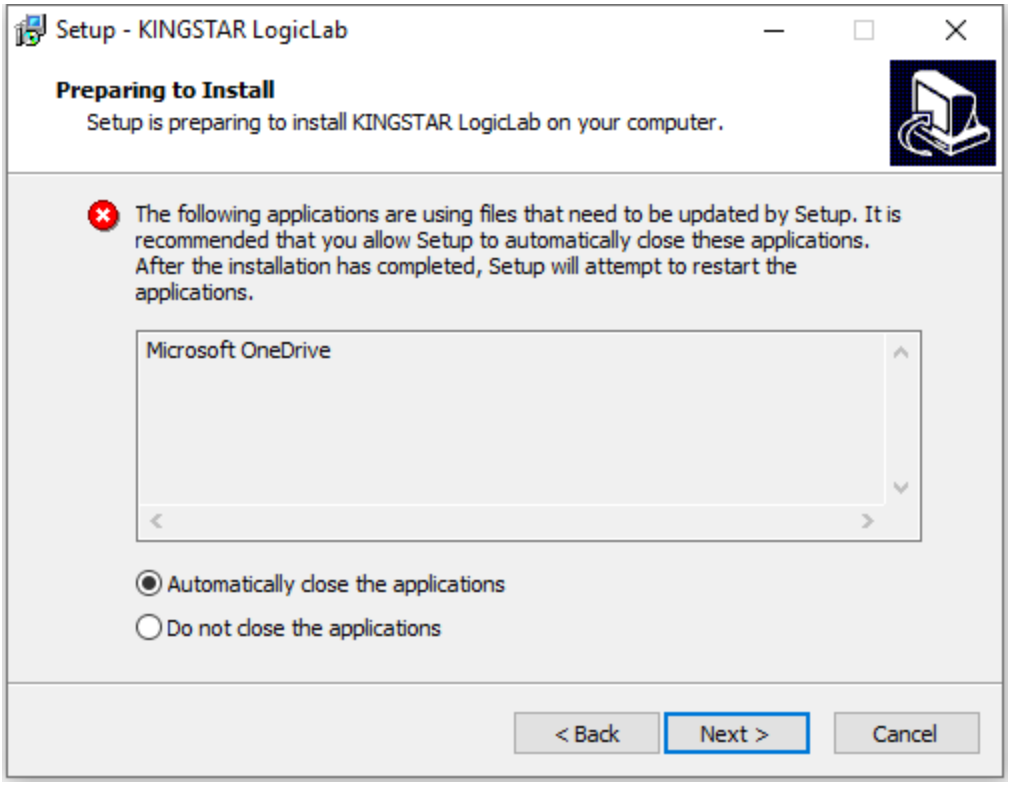



Setup - KINGSTAR LogicLab
Select Start Menu Folder
Where should Setup place the program's shortcuts?
Setup will create the program's shortcuts in the following Start Menu folder.
To continue, click Next. If you would like to select a different folder, click Browse.
KINGSTAR LogicLab\LogicLab
Browse...
< Back
Next >
Cancel

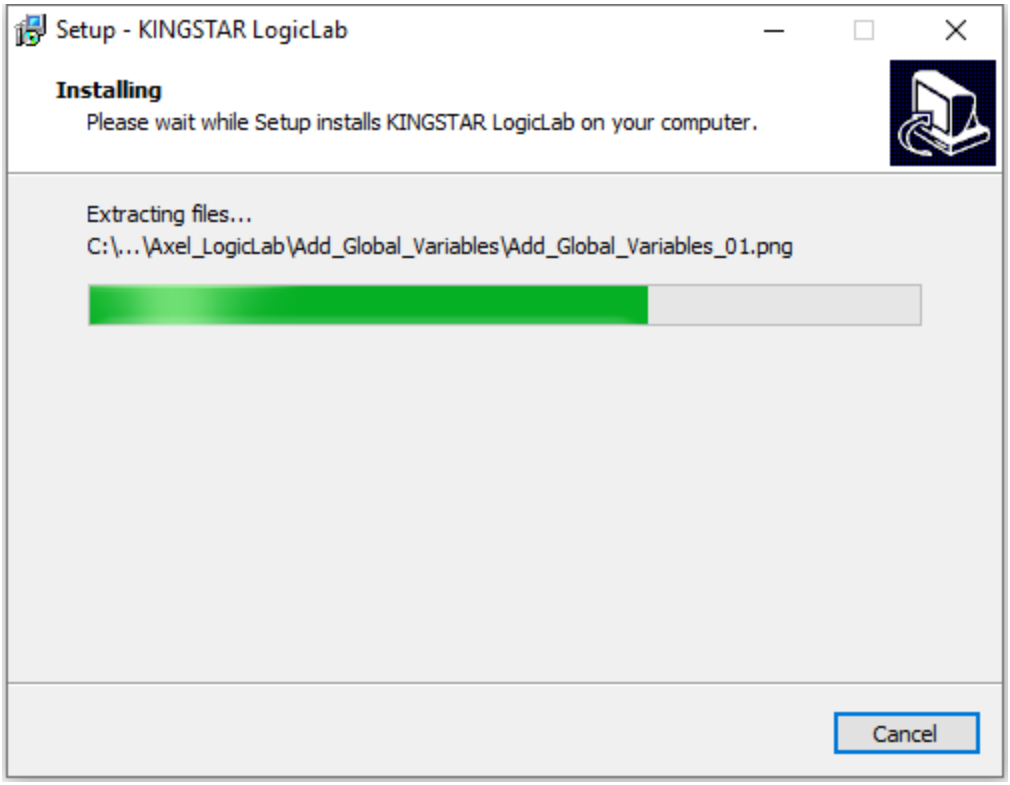

Setup - KINGSTAR LogicLab
Select Additional Tasks
Which additional tasks should be performed?
Select the additional tasks you would like Setup to perform while installing KINGSTAR LogicLab, then click Next.
Create a desktop icon
< Back
Next >
Cancel



4. If there are other applications running on your computer, LogicLab may ask you to close them before the installation starts. Select *Automatically close the applications* and click **Next**.


Setup - KINGSTAR LogicLab
Preparing to Install
Setup is preparing to install KINGSTAR LogicLab on your computer.
The following applications are using files that need to be updated by Setup. It is recommended that you allow Setup to automatically close these applications. After the installation has completed, Setup will attempt to restart the applications.
Microsoft OneDrive
Automatically close the applications
Do not close the applications
< Back
Next >
Cancel

5. Click **Next**.


Setup - KINGSTAR LogicLab
Installing
Please wait while Setup installs KINGSTAR LogicLab on your computer.
Extracting files...
C:\...\Axel_LogicLab\Add_Global_Variables\Add_Global_Variables_01.png
Cancel

6. After the installation is completed, click **Finish**.

NOTE: KINGSTAR LogicLab can be installed on a local computer or remote computer. If you install KINGSTAR LogicLab, KINGSTAR PLC Runtime and KINGSTAR Motion on the same computer, you can use Scanbus to add hardware to your PLC project automatically. If you install LogicLab individually on a computer, you won't be able to use Scanbus, but you can download your PLC program to the computer that has the KINGSTAR PLC Runtime installed and run it remotely.

Create a KINGSTAR LogicLab Project

For help creating a KINGSTAR LogicLab project, see the following project:

KINGSTAR Soft PLC / KINGSTAR LogicLab / Create a KINGSTAR LogicLab project

Getting Support

There are a number of support options for KINGSTAR users, including technical support and the KINGSTAR Website.

Third-Party Support

If you are a customer who purchased a KINGSTAR product through a third-party reseller, contact the reseller for support.

Contacting Technical Support by Phone

Location	Number	Hours
United States	1-781-996-4481 At the prompt, press 3 for Support.	Monday - Friday, 8:30 a.m. – 5:30 p.m. US Eastern Time (GMT-500), excluding holidays.
R.O.C. Taiwan	+ 886-2-2556-8117	Monday - Friday, 9:00 a.m. – 5:00 p.m. Taipei Standard Time (GMT+8), excluding holidays.

Before Calling Technical Support

Please have the following information ready before calling KINGSTAR Technical Support:

Your Support ID

Customers who purchase direct support receive an e-mail address and password for use when accessing the KINGSTAR support website.

The Version Number of Your RTX64 Software

Before calling technical support, determine the version of KINGSTAR installed on your system.

Online Support Resources

Visit the KINGSTAR Customer Support website at https://kingstar.com/support/

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