

QUICK START GUIDE FOR SDUENETIPCARD

Quick Start Guide – SOLA HD

Setting up a IO connection with an Allen Bradley Logix Processor and Studio 5000

For setting up a Class 1 IO connection with an Allen Bradley Processor there are two approaches that will be covered;

-Generic Ethernet Module

Using a Generic Ethernet Module is the most generic way to add the SOLA HD to the IO tree of a Logix processor. The user must know the assembly instances (input, output and config) and the data sizes for each one of these instances. This also includes knowing the most convenient data type, for SOLA HD this is SINT.

-EDS (Electronic Data Sheet) file specific to the SOLA HD device

EDS files are simple text files used by network configuration tools to help you identify products and easily commission them on a network. A file with the EDS file extension is an Electronic Data Sheet file.

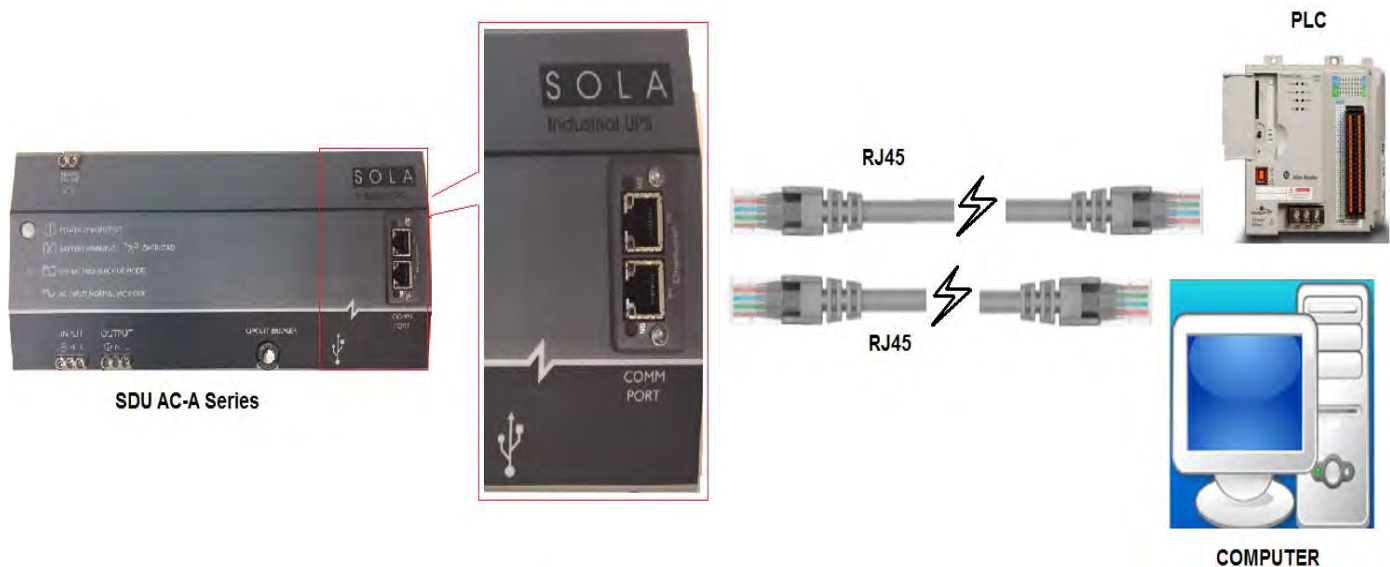
Using an EDS file that was made for the devices prevents the user from needing to know the Assembly instance numbers and the data sizes.

For both methods, the user will have needed to set up a Studio 5000 project (PLC Programming software) and added the PLC to the configuration. For further details of using specific Allen Bradley Processor please visit website:

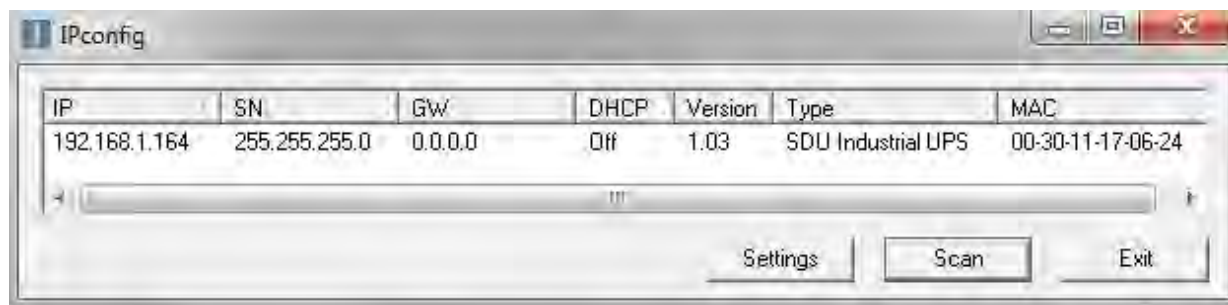
<http://www.rockwellautomation.com/global/literature-library/overview.page>

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Prior creating a new project in STUDIO 5000 the user must set the IP address of the module using the **IPconfig** tool that is provided on the website (www.solahd.com or contact technical support) and the Ethernet connection from your PC to the SDU AC-A Series.



Wiring Connection of SDU AC-A Series UPS to Computer and PLC



IPconfig Set-up

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Creating a Project

Objective:

- Create a new project

Launching Studio 5000 Configuration Software

In this section, you will launch the Studio 5000 software, which will allow you to configure and program a controller.

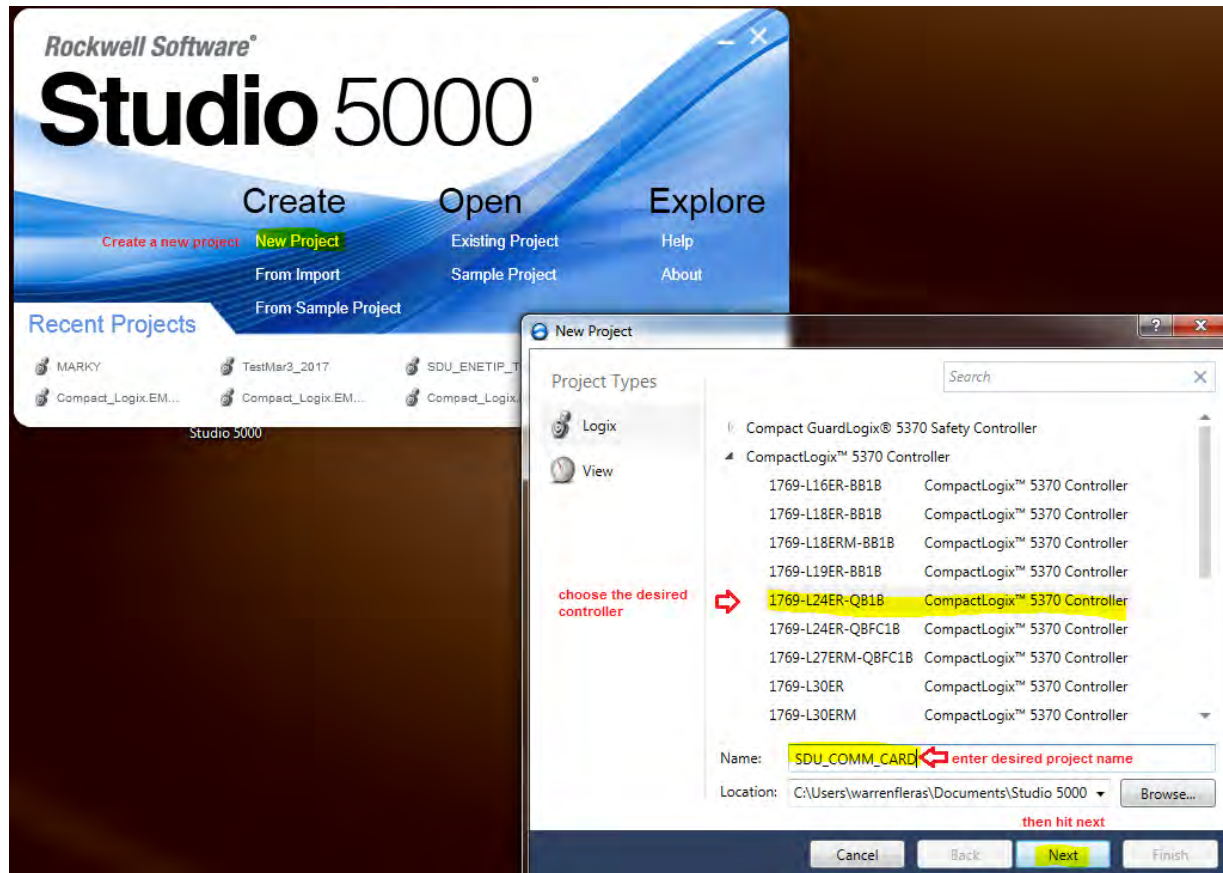
1. Double-click on the **Studio 5000** icon on the Desktop to launch Studio 5000 software.



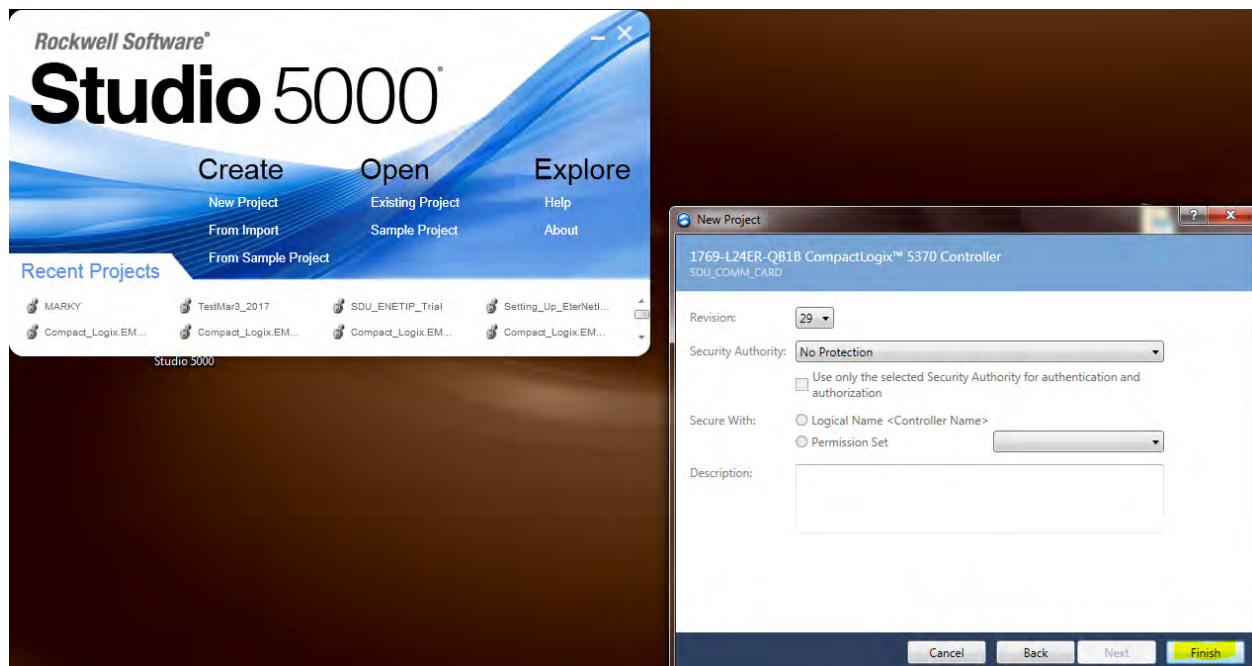
The Studio 5000 Splash Screen appears. Then Select **New Project** and select the correct PLC you are using.



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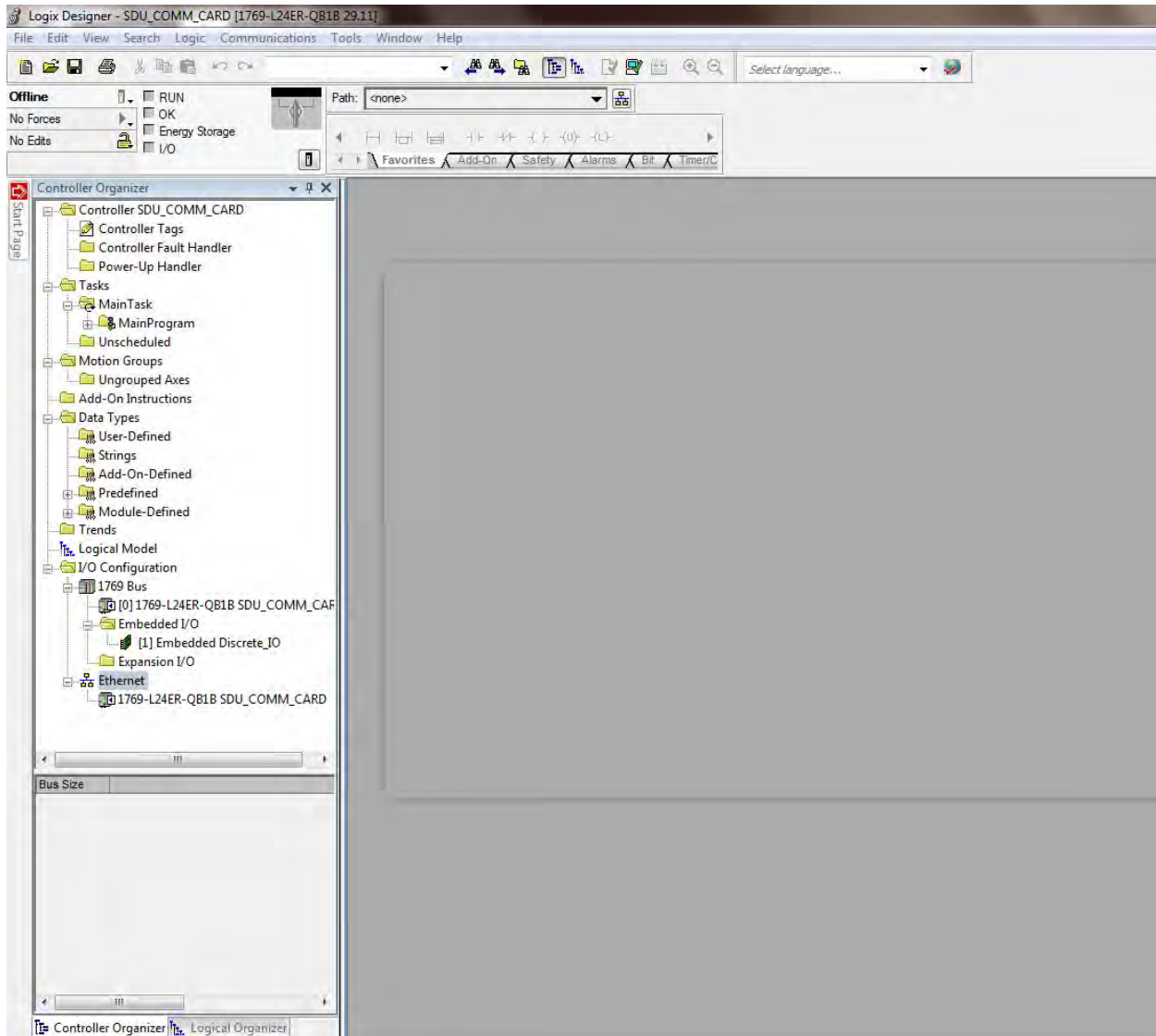


Creating a New Project in Studio 5000



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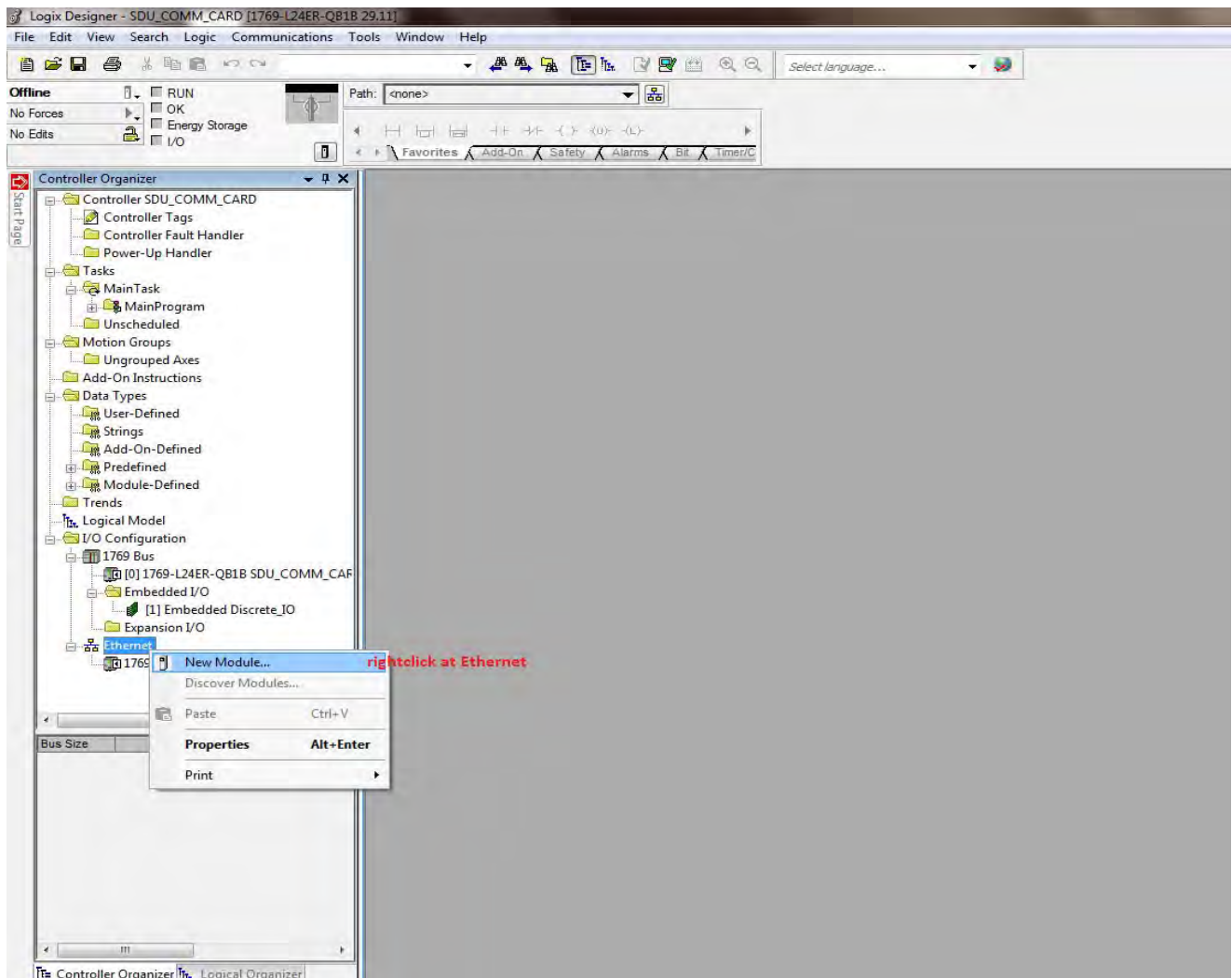
Once created it will start loading the Start Page.



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Configuring I/O

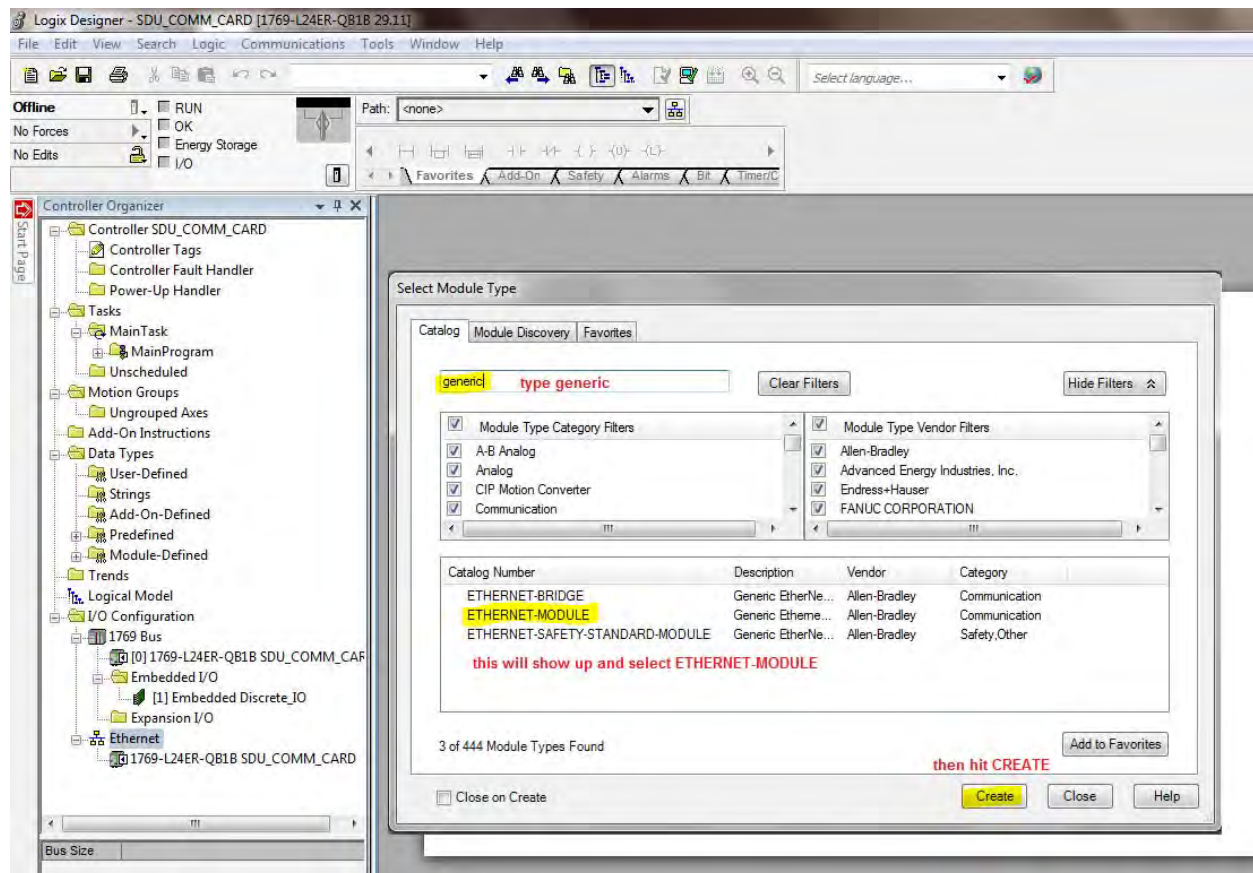
We will now look at configuring I/O for our project. To communicate with I/O modules you must add modules to the I/O Configuration folder. User must go Offline first through the STUDIO 5000 with the PLC right click the PLC Ethernet network that has been automatically added by Studio for the project. From there you click “New Module”. This is where you can choose whether to use a Generic Ethernet Module or the EDS file.



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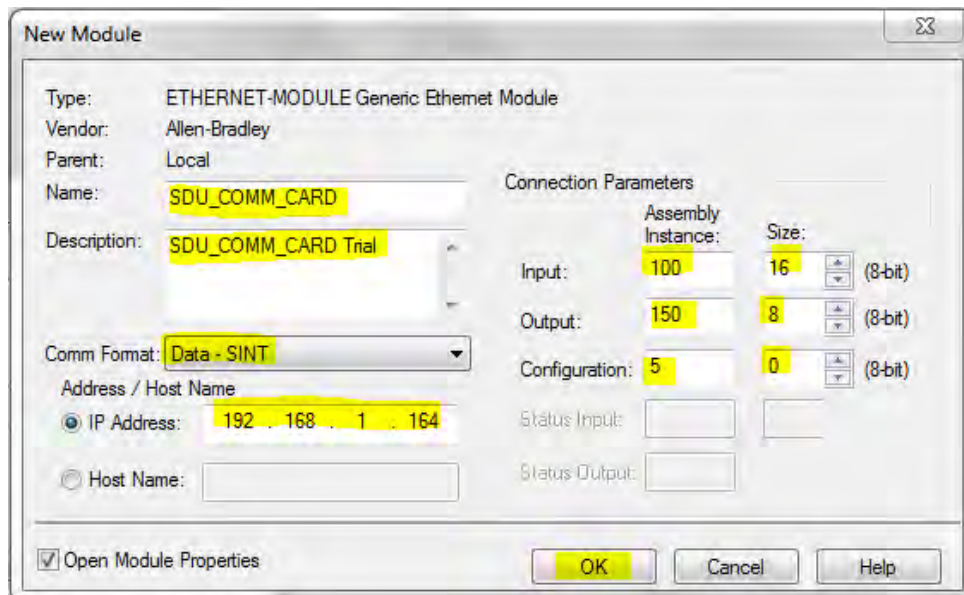
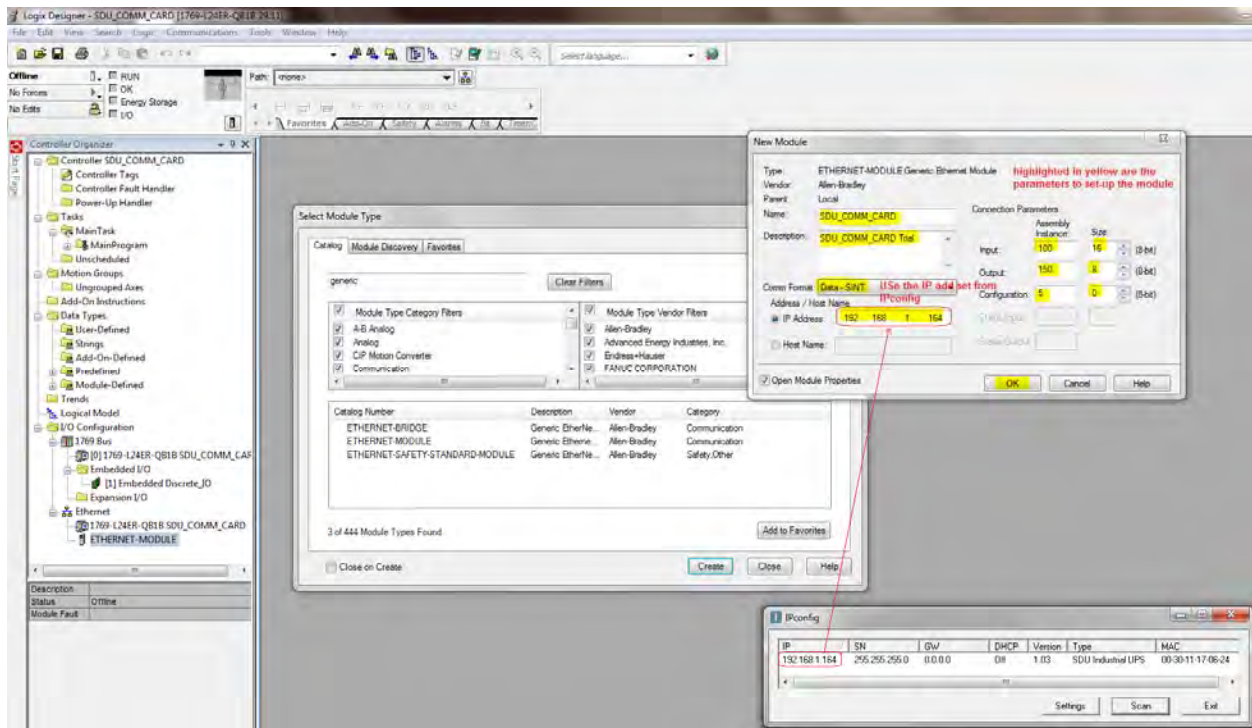
Procedure for adding the SDU AC-A Series to the PLC configuration as a Generic Ethernet Module

In the search box of the “Select Module Type” window, type “generic Ethernet module”. The Catalog Number “ETHERNET-MODULE” will appear, select it and hit the “Create” button.



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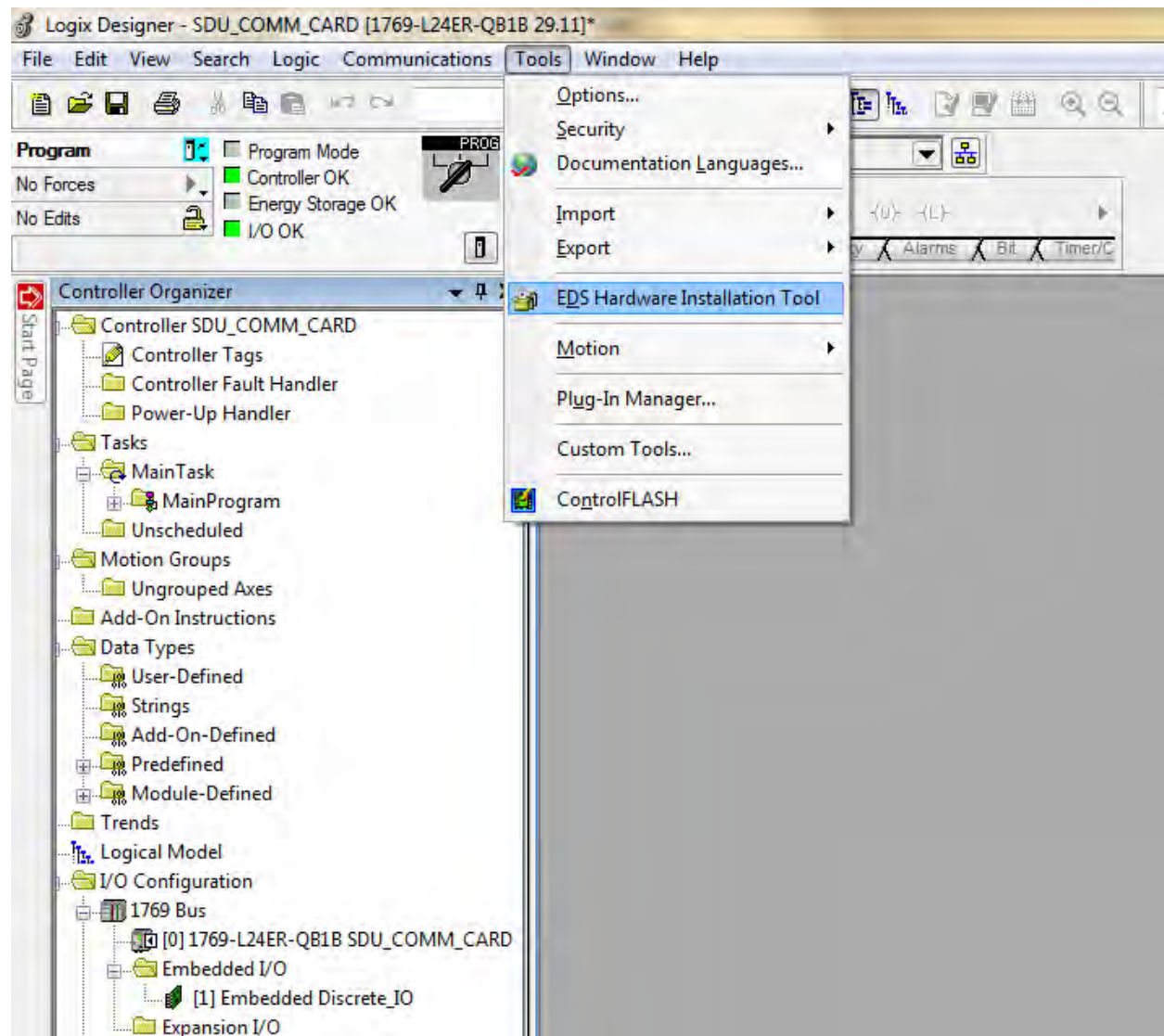
The Module properties window will appear, it will look like this. For the SOLA HD, you will want to put in the Assembly Instance numbers, sizes and Comm Format from the image below. You will also want to make sure that the IP address is what you set and Ipconfig and that it is in the same subnet as the PLC. Select “Ok” to add the device to the I/O configuration. The Controller tags will be available for the SolaHD UPS.



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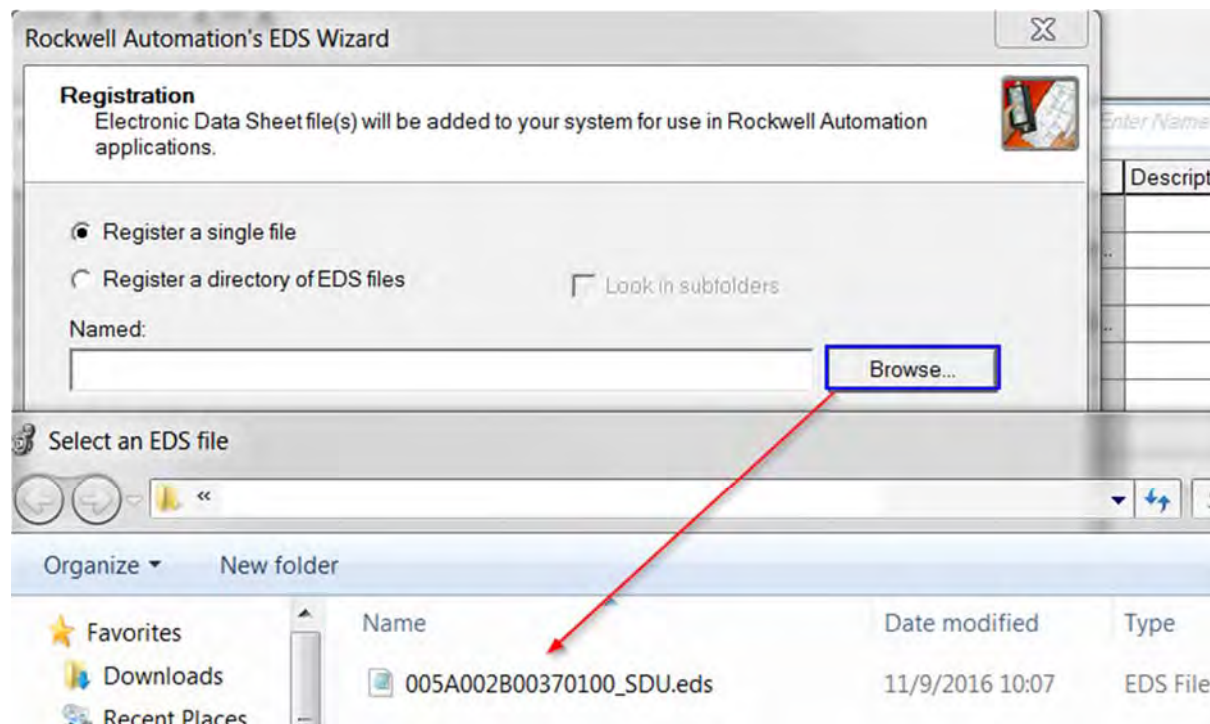
Procedure for adding the SDU AC-A Series to the PLC configuration with the EDS file

To use the EDS file, it must first be imported into the EDS repository for the Rockwell software to access. This can be done from right inside Studio 5000 by going to **Tools>EDS Hardware Installation Tool**.



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This will open the wizard for installing an EDS, click next twice to “Register an EDS file(s)”. Make sure the radial button for “Register a single file” is selected and then Browse the EDS file on your PC.



Hit “Next>” for the remainder of the prompts, the default options are correct.

Now that the EDS is imported, the device can be added to the Ethernet network. As with the Generic Ethernet module, right click the Ethernet Network in the “Controller Organizer” window and hit “New Module”. The EDS can be filtered or searched by using the keyword “SolaHD”. Select “SolaHD” and hit create.

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Enter the name to reference that will be seen in the controller tags as well as the IP address of the module. Additionally, it is possible to hit “Change” in the module definition in order to change the data type that will be set for the controller tags. By default it is set to SINT (8-bit), it is recommended to keep this type because this is logical for the data coming from the SOLA HD UPS. Select “Ok” to add the device to the I/O configuration. The Controller tags will be available for the SolaHD UPS.

Module Properties: Local (SolaHD 1.003)

General* | Connection | Module Info | Internet Protocol | Port Configuration | Network

Type: SolaHD SDU Industrial UPS
Vendor: SolaHD
Parent: Local
Name: test
Description:

Ethernet Address
☐ Private Network: 192.168.1.
☒ IP Address: 192.168.0.57
☐ Host Name:

Module Definition
Revision: 1.003
Electronic Keying: Compatible
Connections: Exclusive Owner

Change ...

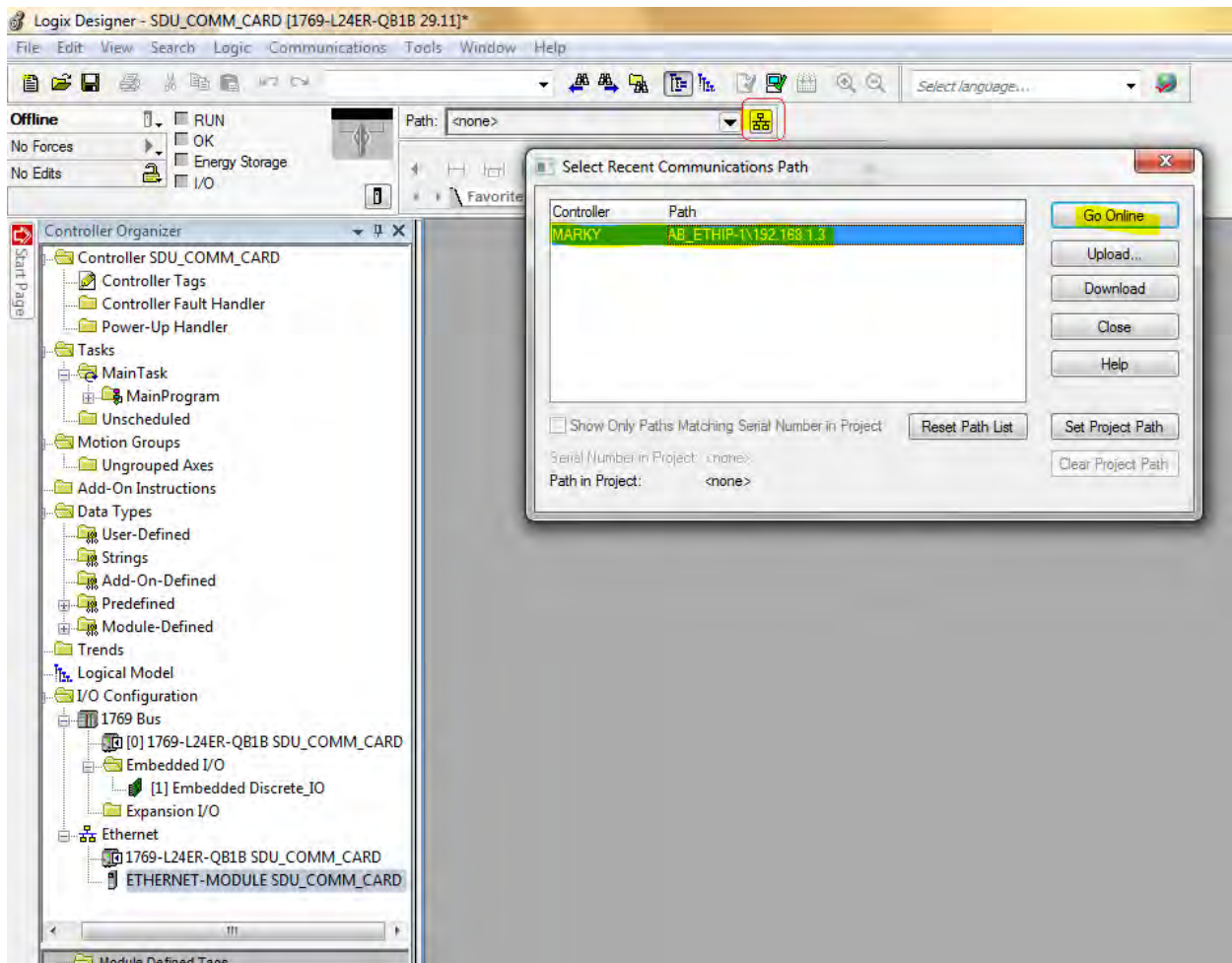
Status: Offline

OK Cancel Apply Help

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Selecting the path and downloading the program to the PLC

Highlighted below is setting the device path. The **RSWho** button (boxed in red in screen capture below) will scan the network using your Network interface card in your PC to find the PLC. Make sure PLC is set to **PROG** or **REM** before going on line and downloading.



Now download to the PLC, the class 1 connection should be made. This can be verified if there are no faults in the Generic Ethernet Module that was created and by the LED indicators on the COMM CARD module. When a class 1 connection is made and the PLC is in RUN, both the MS and NS status will be solid green.

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Now you can access the data through the Controller tags.

The screenshot displays the Logix Designer software interface for the SDU_COMM_CARD module. The main window shows a table of Controller Tags. The table has columns for Name, Value, Force Mask, Style, Data Type, Description, and Constant. The tags are organized into a hierarchy under the SDU_COMM_CARD module. The Properties window on the right shows the General tab for the selected tag, displaying details such as Name, Description, Type, Alias For, Base Tag, Data Type, Scope, External Access, Style, Constant, and Visible.

Name	Value	Force Mask	Style	Data Type	Description	Constant
+ Local TC	[...]	[...]	[...]	AB Embedded_D		
+ Local TI	[...]	[...]	[...]	AB Embedded_D		
+ Local TO	[...]	[...]	[...]	AB Embedded_D		
+ SDU_COMM_CARD.C	[...]	[...]	[...]	AB ETHERNET_		
+ SDU_COMM_CARD.C...	[...]	[...]	[...]	Hex	SINT[400]	
+ SDU_COMM_CARD.I	[...]	[...]	[...]	AB ETHERNET_		
+ SDU_COMM_CARD.I.D...	[...]	[...]	[...]	Decimal	SINT[16]	
+ SDU_COMM_CARD...	0			Decimal	SINT	
+ SDU_COMM_CARD...	100			Decimal	SINT	
+ SDU_COMM_CARD...	60			Decimal	SINT	
+ SDU_COMM_CARD...	60			Decimal	SINT	
+ SDU_COMM_CARD...	88			Decimal	SINT	
+ SDU_COMM_CARD...	-1			Decimal	SINT	
+ SDU_COMM_CARD...	60			Decimal	SINT	
+ SDU_COMM_CARD...	0			Decimal	SINT	
+ SDU_COMM_CARD...	0			Decimal	SINT	
+ SDU_COMM_CARD...	0			Decimal	SINT	
+ SDU_COMM_CARD...	72			Decimal	SINT	
+ SDU_COMM_CARD...	78			Decimal	SINT	
+ SDU_COMM_CARD...	80			Decimal	SINT	
+ SDU_COMM_CARD...	0			Decimal	SINT	
+ SDU_COMM_CARD...	0			Decimal	SINT	
+ SDU_COMM_CARD...	0			Decimal	SINT	
+ SDU_COMM_CARD...	3			Decimal	SINT	
+ SDU_COMM_CARD.O	[...]	[...]	[...]	AB ETHERNET_		
+ SDU_COMM_CARD.O...	[...]	[...]	[...]	Decimal	SINT[16]	
+ SDU_COMM_CARD...	0			Decimal	SINT	
+ SDU_COMM_CARD...	0			Decimal	SINT	
+ SDU_COMM_CARD...	0			Decimal	SINT	
+ SDU_COMM_CARD...	0			Decimal	SINT	
+ SDU_COMM_CARD...	0			Decimal	SINT	
+ SDU_COMM_CARD...	0			Decimal	SINT	
+ SDU_COMM_CARD...	0			Decimal	SINT	
+ SDU_COMM_CARD...	0			Decimal	SINT	

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