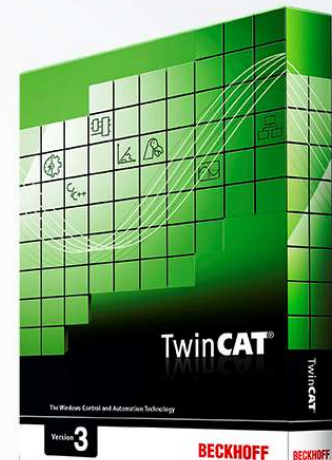
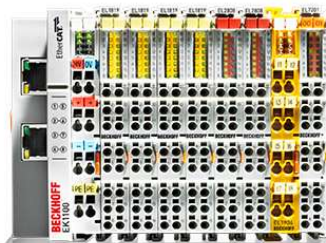


Scoping Hardware

BECKHOFF





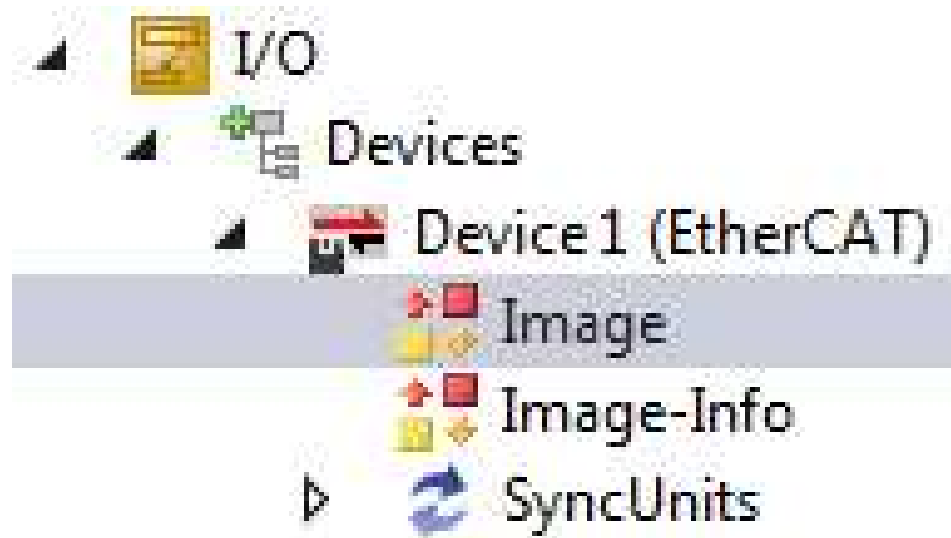
1. Overview
2. Enable ADS Server and Create Symbols
3. Add Scope View Project to Solution
4. A few notes
5. Add Scope Project
6. Target Browser
7. Start Scope

- Scope View is a software oscilloscope that records data from TwinCAT.
- Values are read from the internal ADS Server based on the update rate of the task they are assigned to.

Enable ADS and Create Symbols

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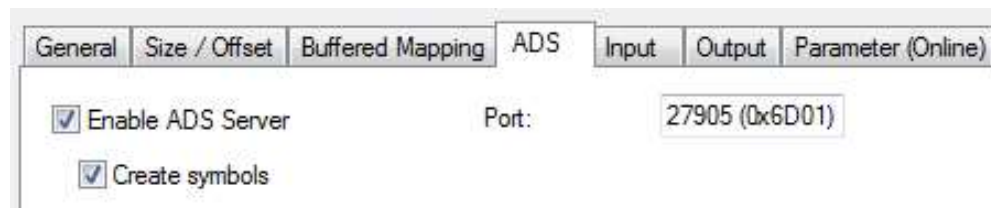
- Expand the 'EtherCAT' device and select 'Image'



Enable ADS and Create Symbols

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- Select the 'ADS' tab
- Click in the check boxes to 'Enable ADS Server' and 'Create symbols'
- Notice the Port number on the right side
- The Port number will be used by Scope View to locate the data to be recorded.

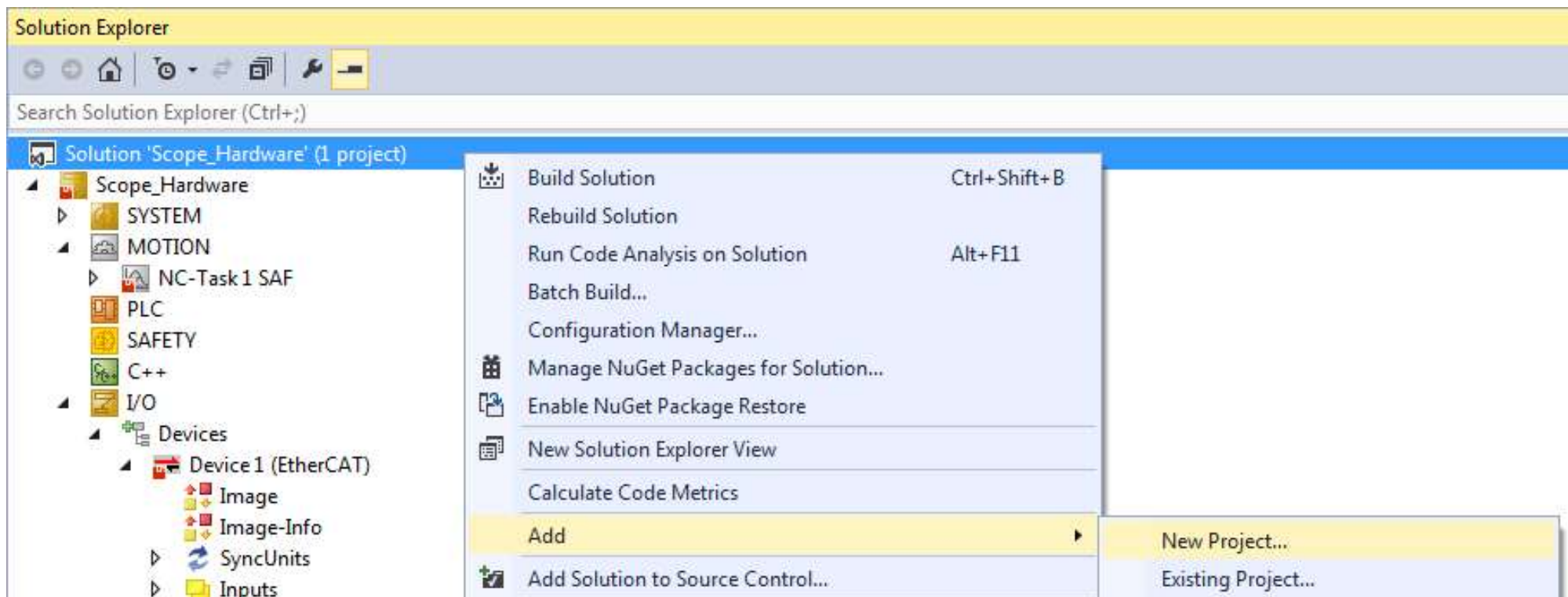


- The symbols will not be created until TwinCAT goes into Run mode
- Scope View can record data in Run mode or in Config Mode with Free Run enabled
- In either Run Mode or Config Mode, a Link must exist between the hardware and a task variable (typically the PLC or NC task)

Add Scope Project

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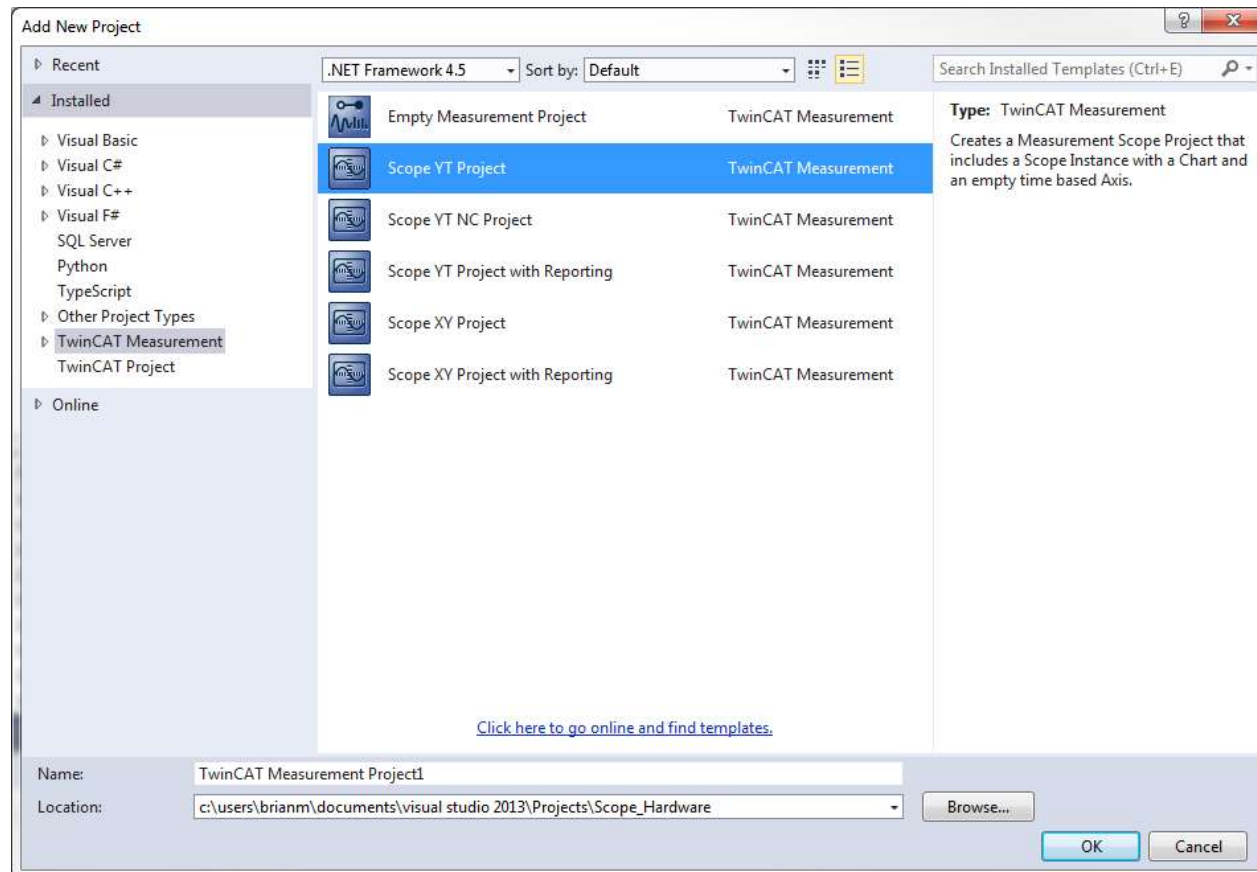
- In the Solution Explorer, Right-Click on the Solution and select Add -> New Project



Add Scope Project

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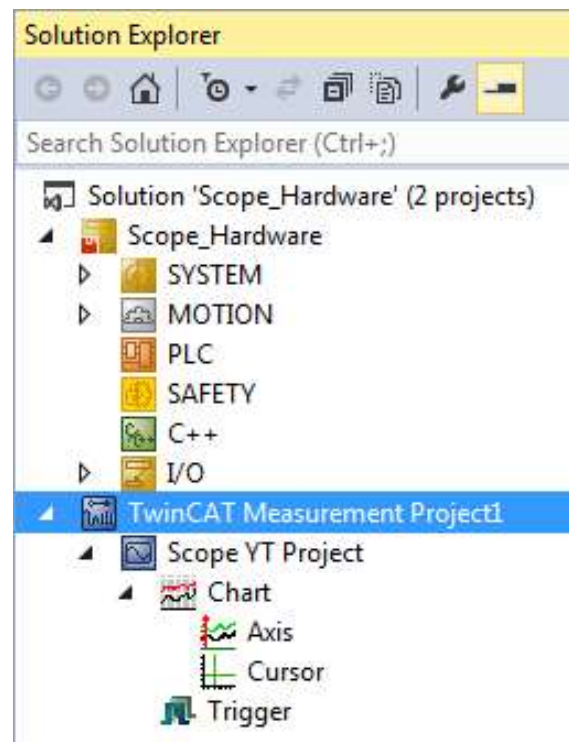
- Select 'TwinCAT Measurement'
- Select 'Scope YT Project'
- Click 'OK'



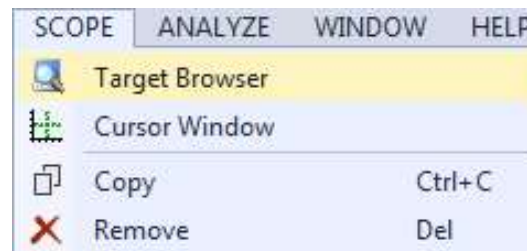
Add Scope Project

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- The Scope Project will be added to the Solution



- From the Scope menu select Target Browser



- The Routes are listed on the left side.
- The color code represents the mode of TwinCAT on that device.



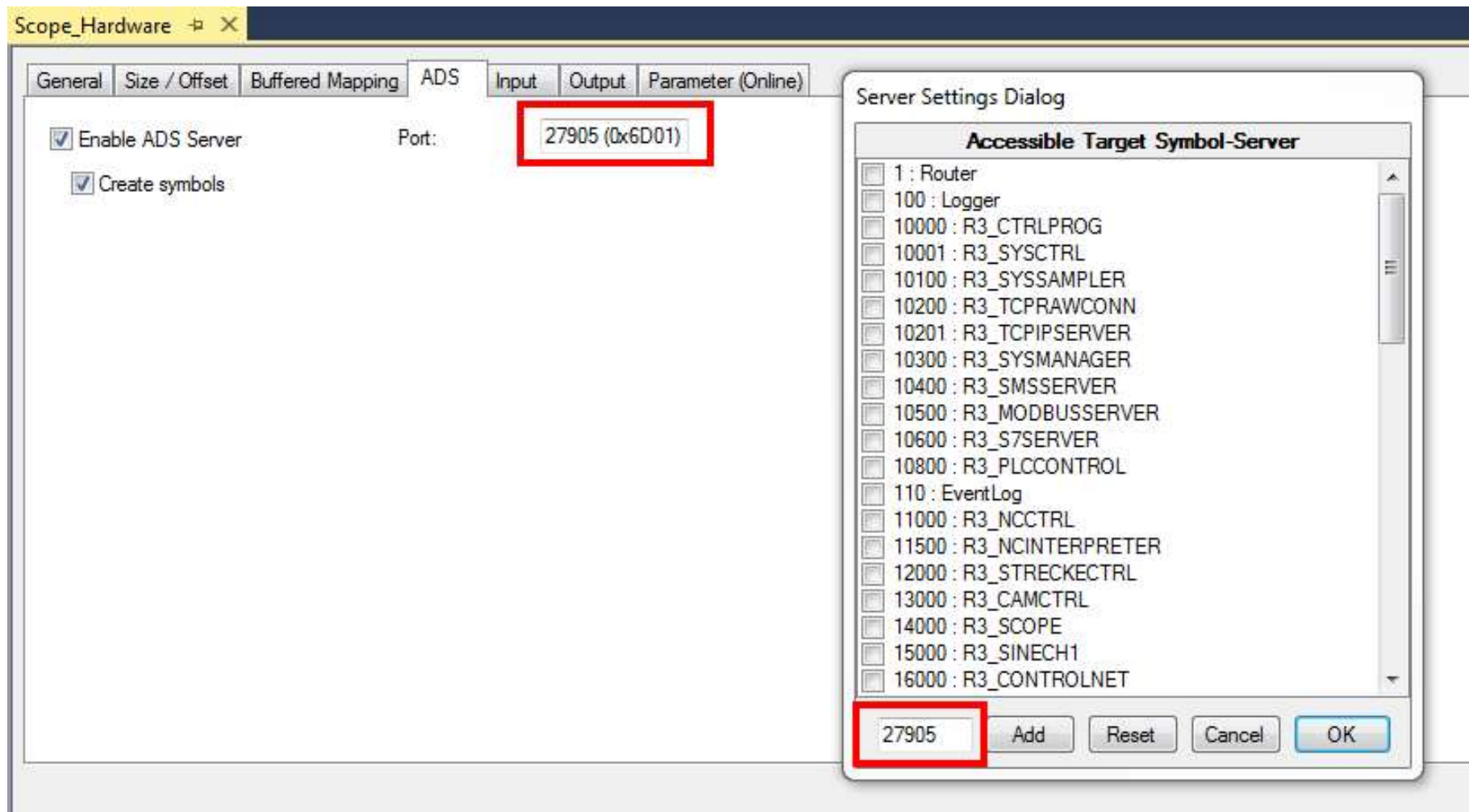
The screenshot shows the 'Target Browser' window. On the left, under the 'ROUTES' heading, there is a tree view with three items: 'BRIANM-NB01' (blue), 'WIN7X86BASE' (red), and 'CX-14DA28' (green). On the right, a table displays the details for these routes.

Routes	NetId	Ads-Stat	IsReachable
BRIANM-NB01	192.168.4.247.1.1	Config	True
WIN7X86BASE	10.0.2.15.1.1	Invalid	True
CX-14DA28	192.168.2.120.1.1	Run	True

- Click on the Enable Server Ports button



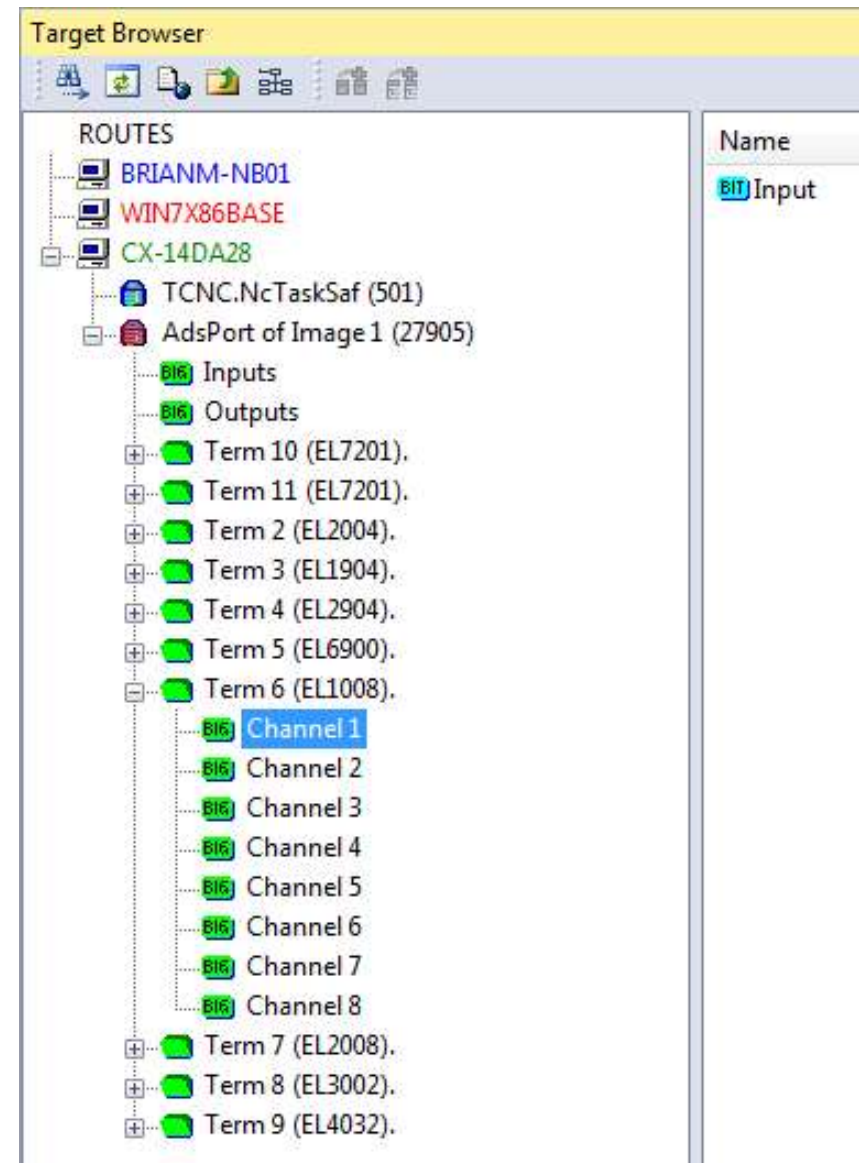
- Type in the Port number from the ADS Tab and click 'Add', then click 'OK'



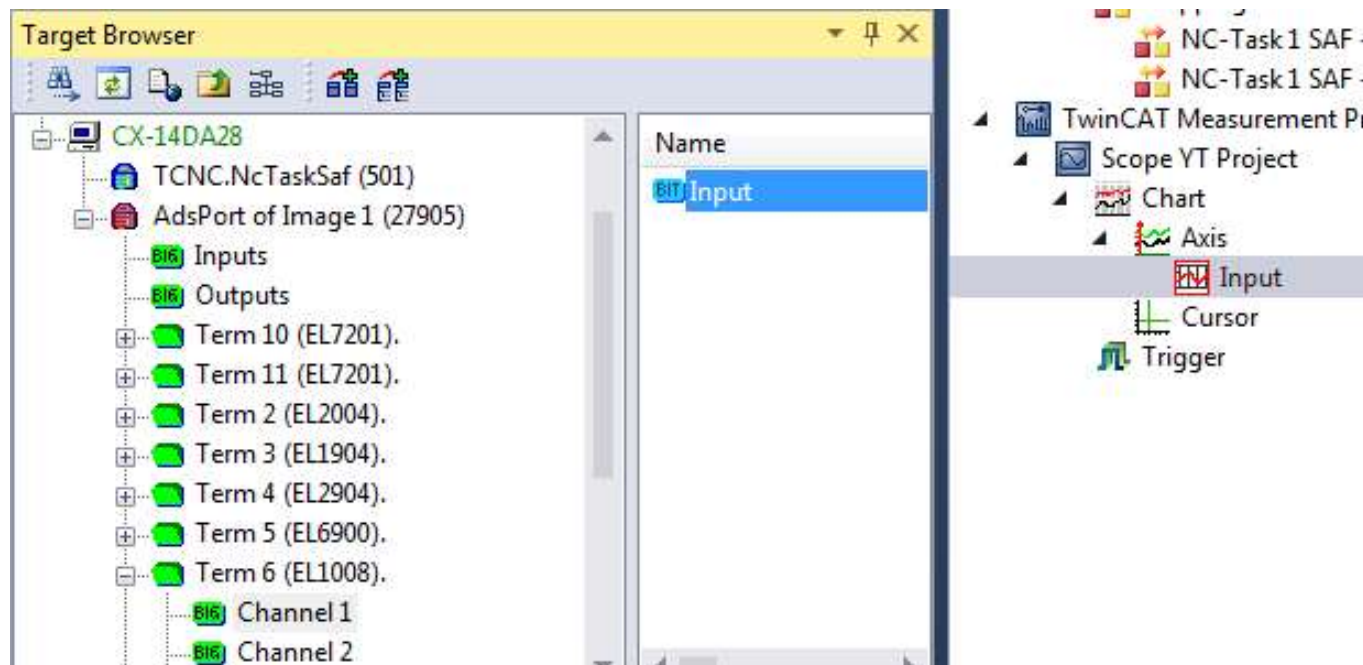
Target Browser

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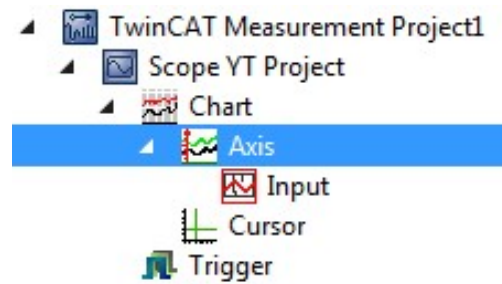
- In the Target Browser you can now double click an item in the left column.
- This will expand that item and also display variables on the right side that can be added to the scope.



- Double click the item in the Name column to add it to the scope.



- Click on Axis to open the Scope View



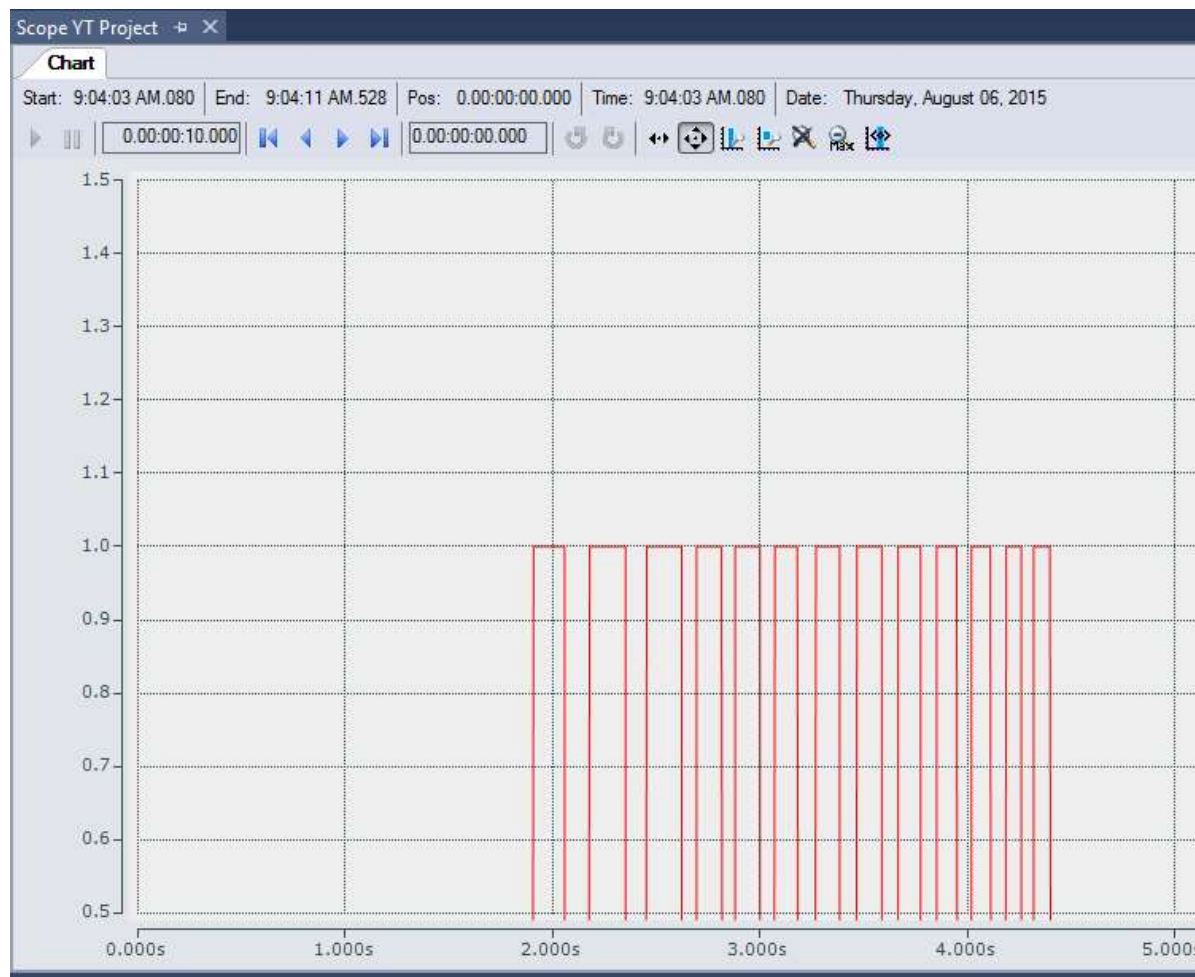
- Click on the Record button to start recording data



Start Scope

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- Data will be displayed on the graph



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