

Application Note

Configuring an Exor UniOP HMI to communicate with an MPiec Controller using the ProConOS driver

Applicable Products:

MPiec Series Controller

Exor UniOP HMI



Subject: Application Note	Product: MPiec Series Controller	Doc#: AN.MPIEC.11
Title: Configuring an Exor UniOP HMI to communicate with an MPiec Controller using the ProConOS Driver		

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Application Overview:

This document guides the user through the steps of configuring an Exor UniOP HMI to communicate with the MPiec Series Controller using the ProConOS driver in JMobile software. This is a simple solution because it uses the native communication interface into the IEC application (ProConOS) and does not require Modbus to transfer data between the HMI and MP controller. Easy importing of the variables used in the Yaskawa motion application is possible via Exor's JMobile software.

NOTE: The MPiec controllers that can communicate with the ExorUniOP HMI using the ProConOS driver are MP2300Siec and MP2310iec. The MP2600iec and MP3000iec controllers must be configured as MODBUS slaves with the Exor UniOP configured to use the MODBUS master driver. This configuration is detailed in Application Note [AN.MPIEC.10](#) available on www.yaskawa.com.

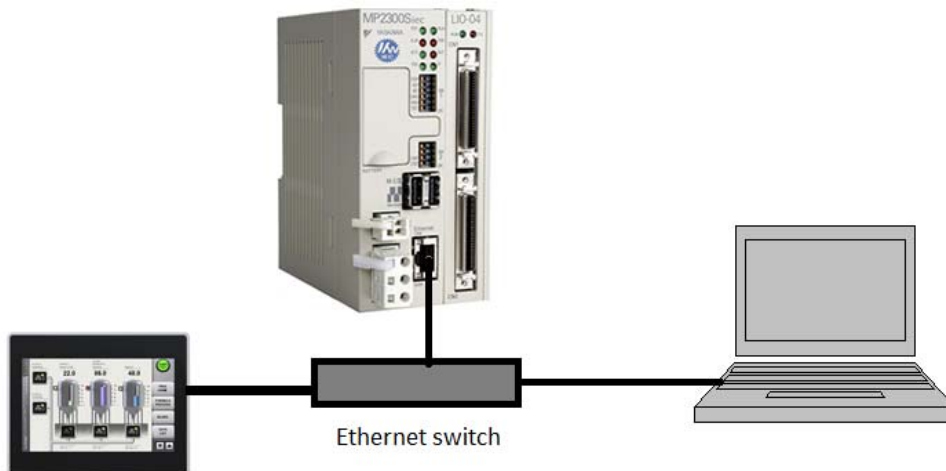


Figure 1: Overview of hardware setup





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Yaskawa MPiec Configuration:

Create variables in MotionWorks IEC. Simply check the OPC checkbox for each variable to be shared with the HMI as shown in Figure 2 below.

Exor ProCon OS Group						
IEC_To_Exor_BOOL	BOOL	VAR_GLOBAL			<input type="checkbox"/>	<input checked="" type="checkbox"/>
Exor_To_IEC_BOOL	BOOL	VAR_GLOBAL			<input type="checkbox"/>	<input checked="" type="checkbox"/>
IEC_To_Exor_REAL	REAL	VAR_GLOBAL			<input type="checkbox"/>	<input checked="" type="checkbox"/>
Exor_To_IEC_REAL	REAL	VAR_GLOBAL			<input type="checkbox"/>	<input checked="" type="checkbox"/>

Figure 2: Adding variables in MotionWorks IEC

Compile the project and download it. Run the IEC application by pressing warm start on the Resource Dialog box.

Exor UniOP Configuration:

The minimum version of JMobile required to run the ProConOS driver is 1.80.



Figure 3: JMobile version number

Open the new Jmobile project. On the Protocols page, select the ProConOS ETH driver. Set the IP address of the MPiec controller.



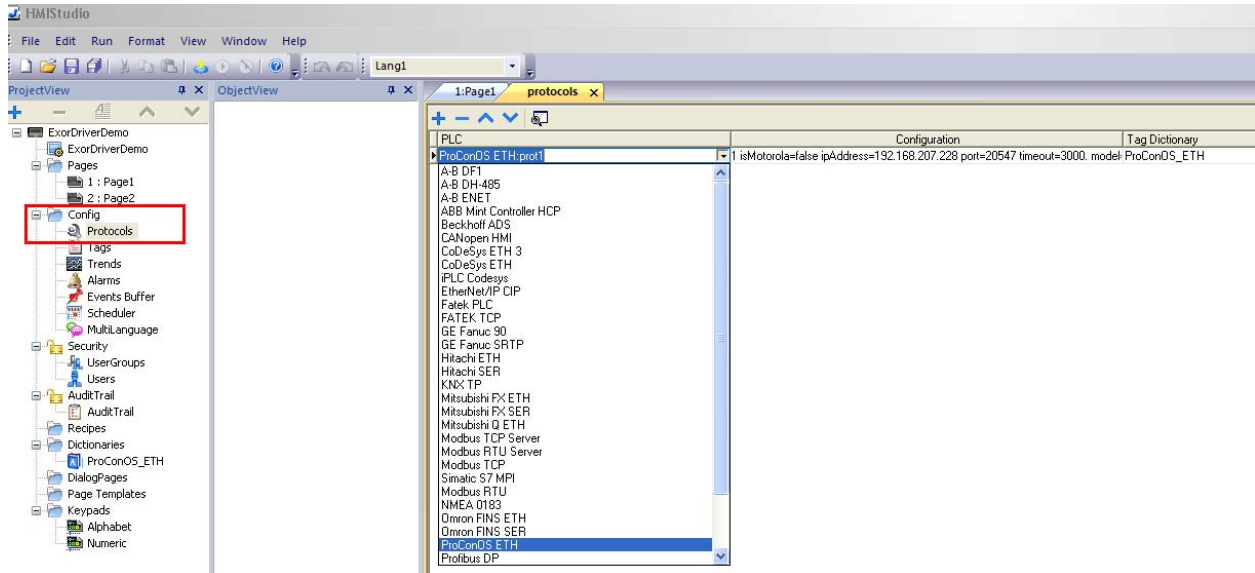


Figure 4: Selecting the ProConOS driver in JMobile

In the tags tab, click on “Import Tags”. Choose the target import device and point to the sr.csv file in the MotionWorks IEC project. The Path is ‘ProjectFolder’> C > Configuration > R > Resource.

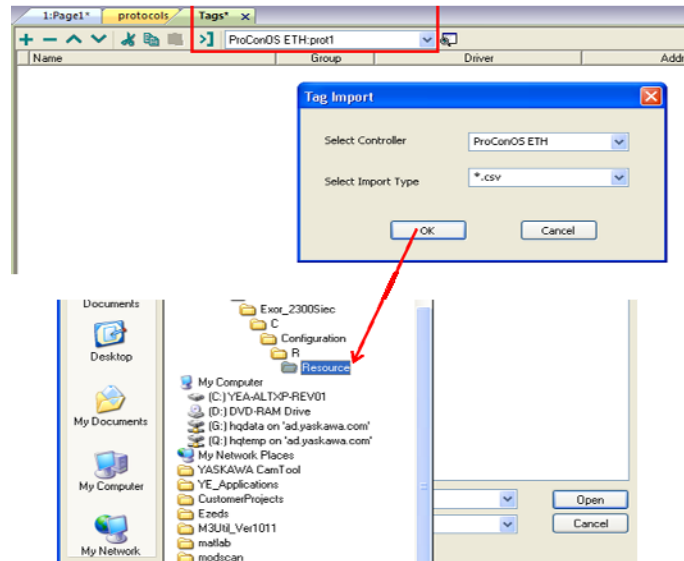


Figure 5: Choosing the tag import file location

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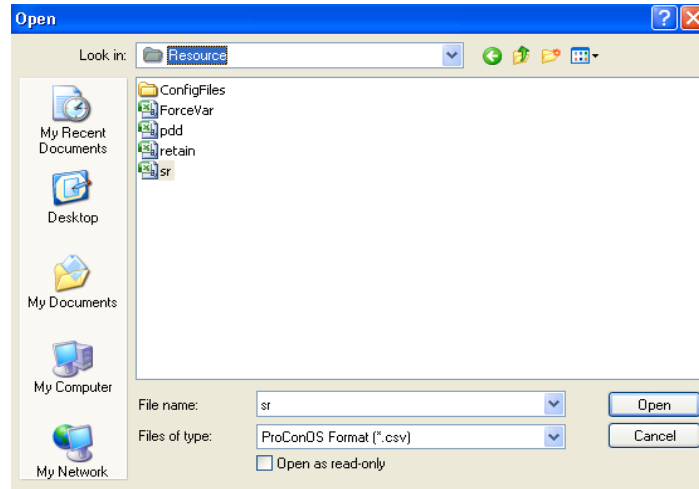


Figure 6: Selecting the sr.csv file

Select the desired variables and add to the tag list as shown in Figure 7 below.

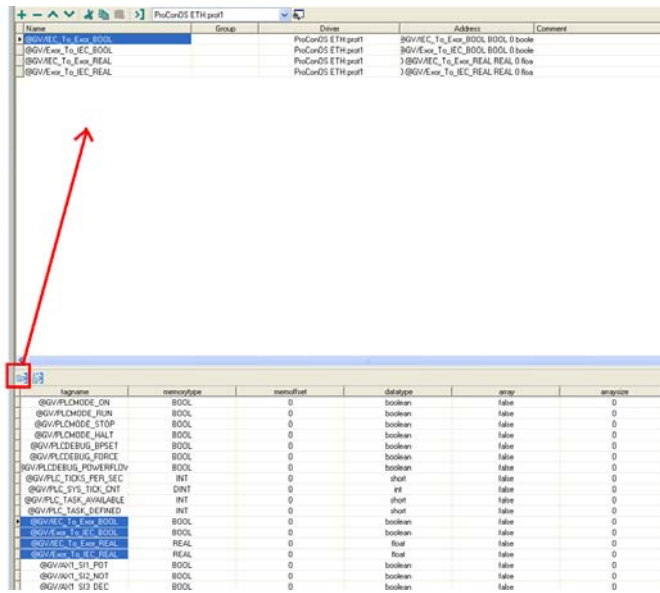


Figure 7: Choosing variables

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On the JMobile's design page, add widgets. Right click on the widget and attach to a tag from the tag database.

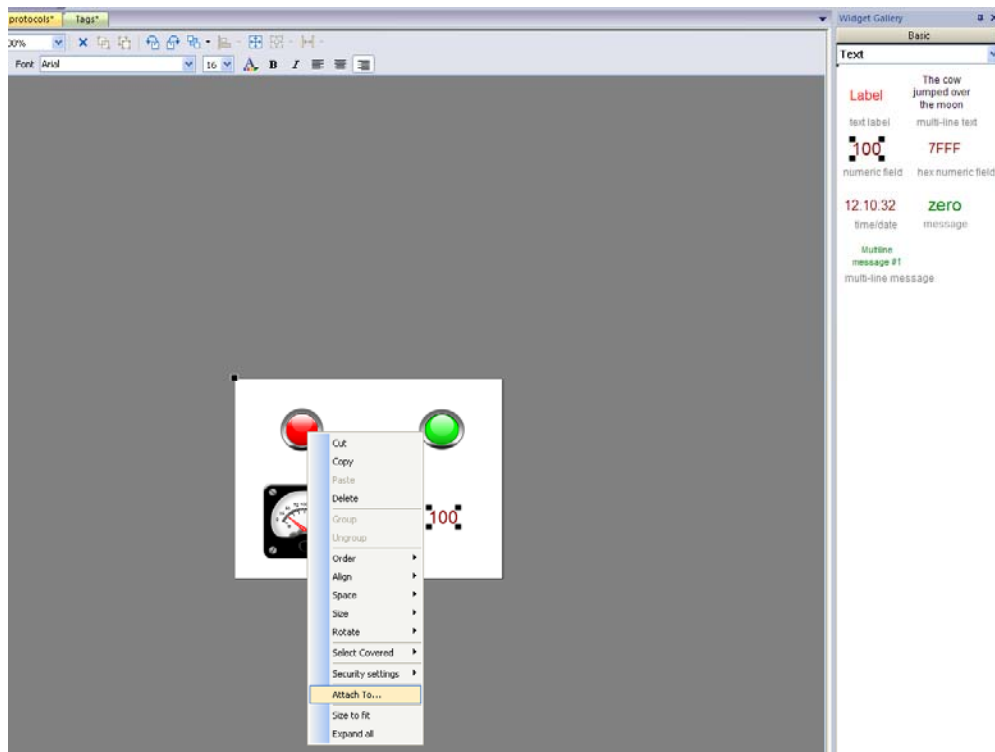


Figure 8: Adding widgets on the design page

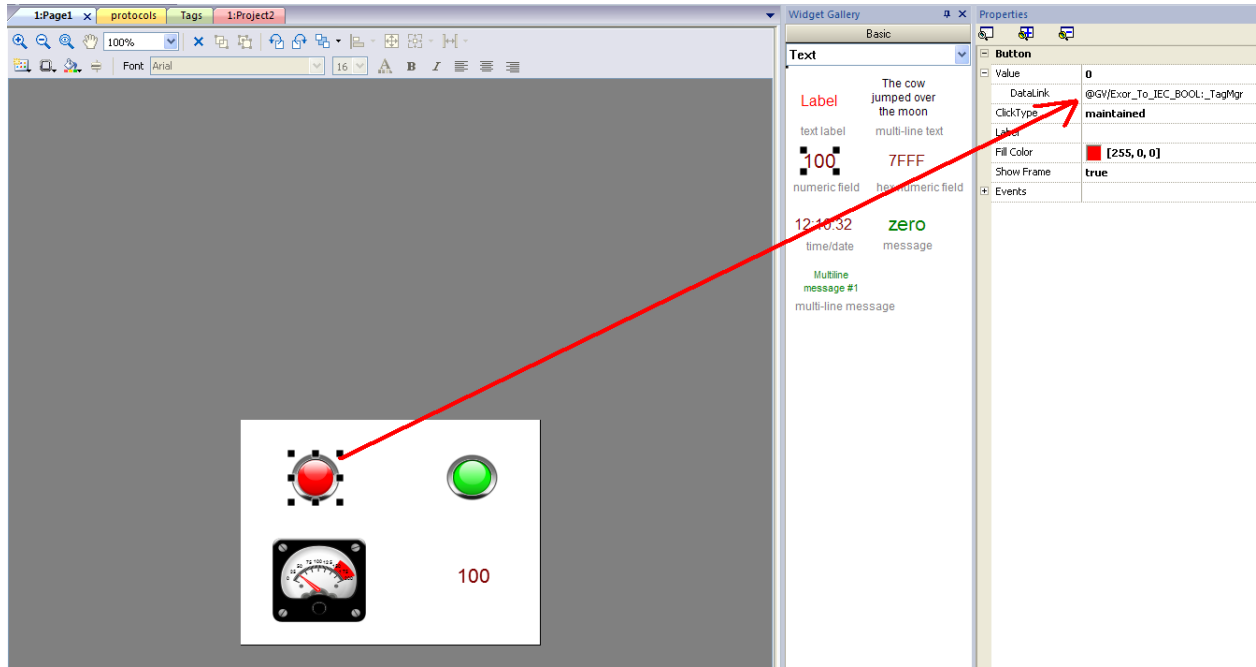


Figure 9: Attaching a tag to the selected widget

Once all the widgets are attached to desired tags imported from the MotionWorks IEC project, download and run the JMobile project.

Execution:

Communication between the Exor UniOP HMI and the MPiec controller should commence as soon as the two projects start running.

Table 1: variable mapping

Exor_To_IEC_BOOL	←	Exor_To_IEC_BOOL
Exor_To_IEC_REAL	←	Exor_To_IEC_REAL
IEC_To_Exor_BOOL	→	IEC_To_Exor_BOOL
IEC_To_Exor_REAL	→	IEC_To_Exor_REAL