

CAN Generic 11-bit/29-bit Identifier Driver Information Sheet for Crimson v3.0+

Compatibility

CAN networks with standard messages.

Requirements

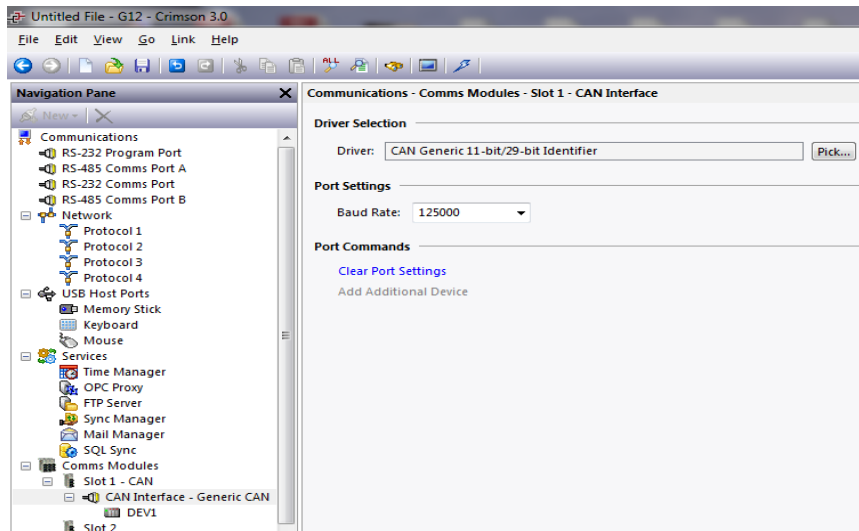
A Red Lion CAN option card or module (G3CN, XCCN or GMCAN) is mandatory for CAN communications.

Overview

The Generic CAN drivers are designed to work on a CAN network supporting standard CAN messages containing 8 data bytes or less.

Driver Option Configuration

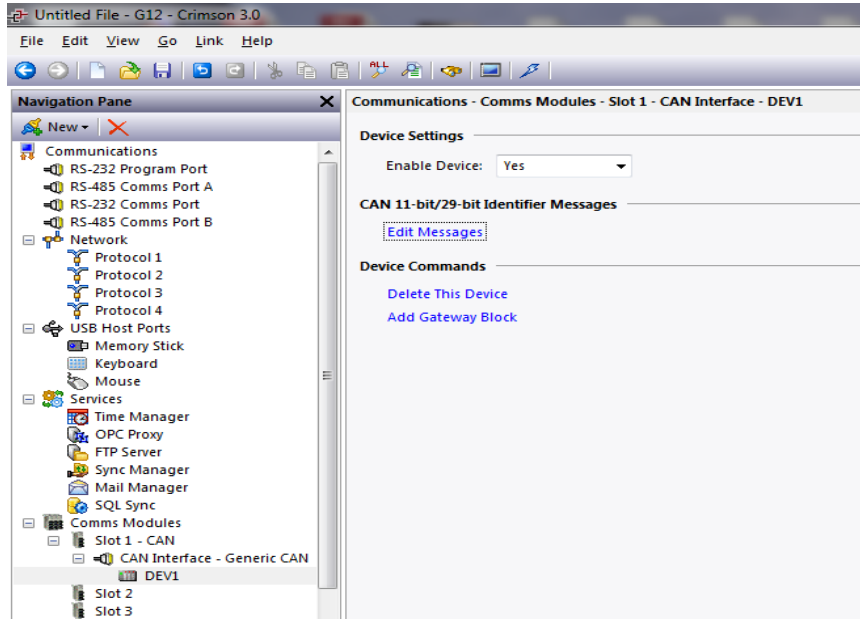
In Crimson 3.0+ with the Generic CAN driver selected in the Communications tree, click on the CAN Interface.



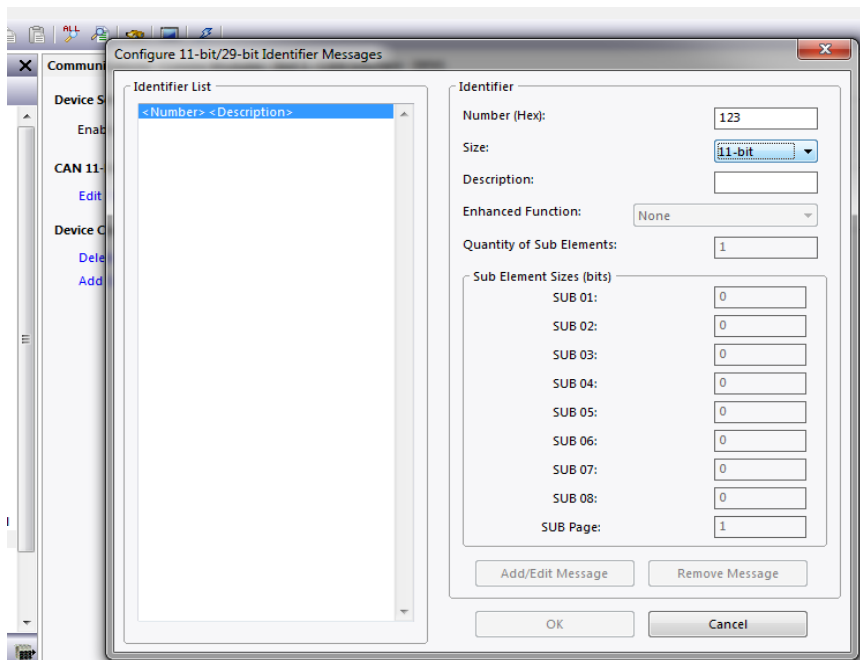
In Port Settings, select the baud rate of the CAN network.

CAN Message Configuration

In Crimson 3.0+ with the Generic CAN driver selected in the Communications tree, click on the Device within the CAN Interface.



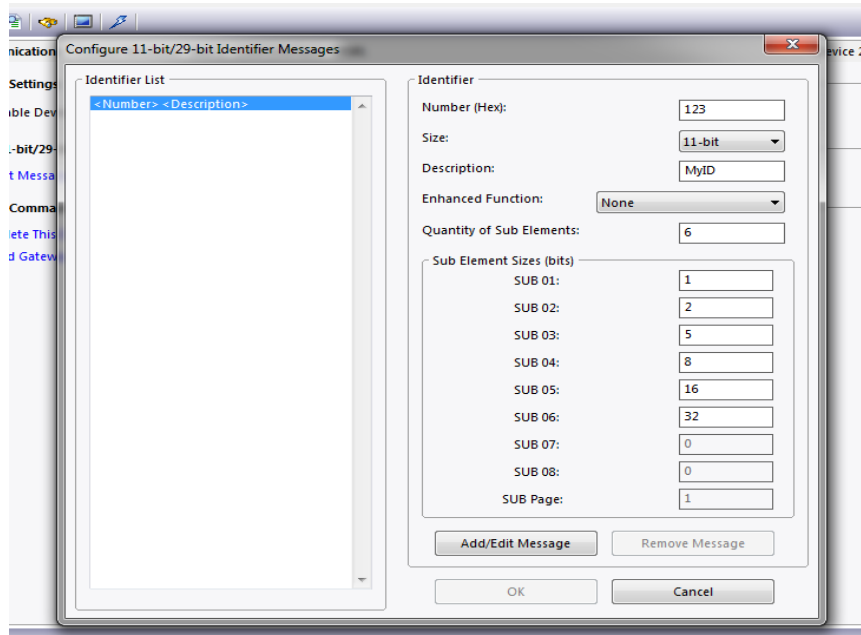
Then click Edit Messages in the CAN Identifier Messages section.



The Configure 11-bit/29-bit Identifier Messages dialog box will assist in creating each CAN message that this Red Lion device will send or receive.

First enter the identifier's number in hexadecimal then select the identifier size (11-bit CAN2.0A or 29-bit CAN 2.0B) that the target device utilizes. Note, the size field will only be enabled for CAN Identifier numbers that are 11 bits or less in size.

Next enter a Description for this CAN Identifier.

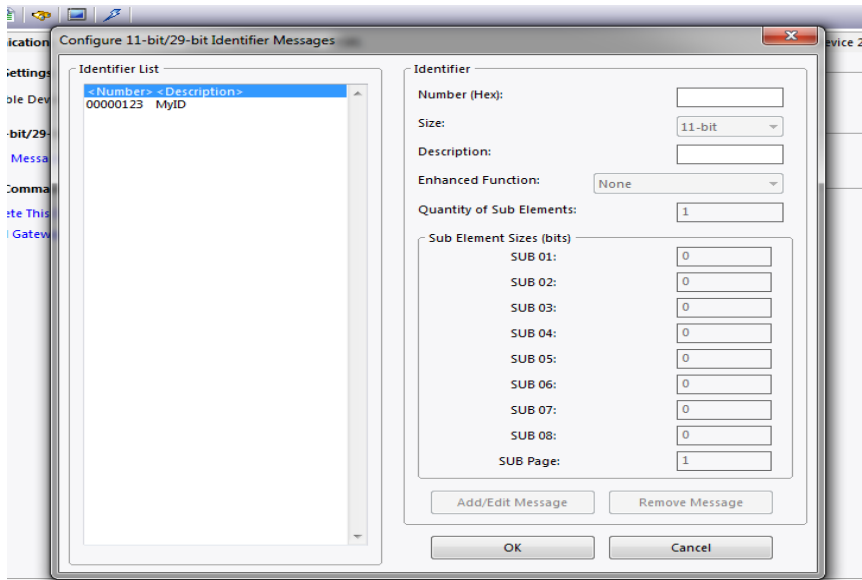


Select an Enhanced Function if necessary based on the following description:

Rapid Fire Message - Only use Rapid Fire Message enhancement when receiving CAN Messages that send multiple packet data within the same 8 byte frame overwriting the previous data. The first byte of each transaction will be considered a sequence number and will not be transferred as data. Set the repetition rate to the minimum interval that this CAN message will be received to ensure proper 'end of burst' detection.

Then enter the quantity of Sub-Elements within this message. This will enable the necessary amount of fields in the Sub Element Sizes group box. In each of the enabled fields enter the bit size of each data value within this CAN message.

Clicking Add/Edit Message will add this message to the Identifier List and reset the message configuration fields in preparation for configuration of the next CAN message.

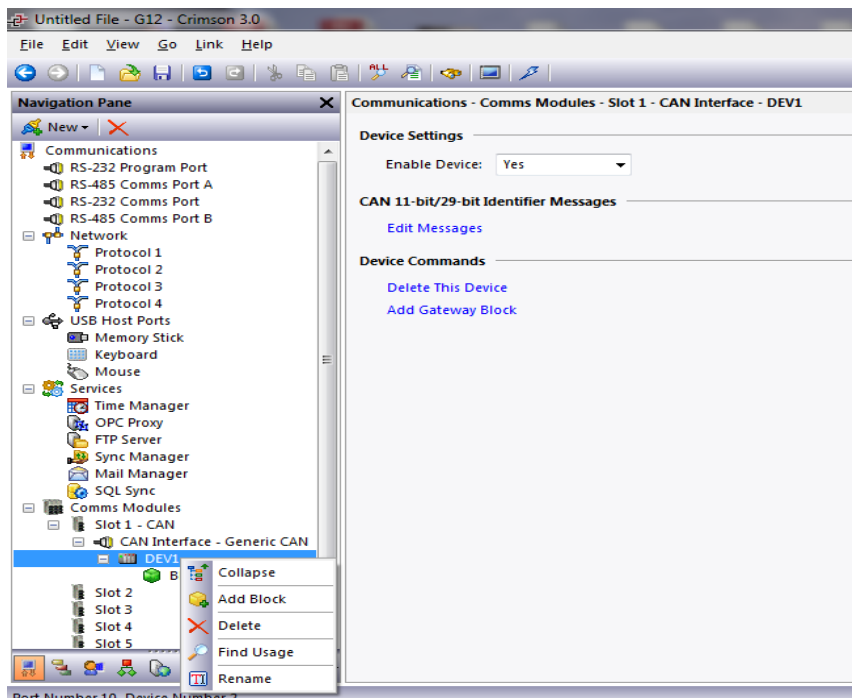


Repeat the process detailed on page 3 until all CAN messages are configured then click OK.

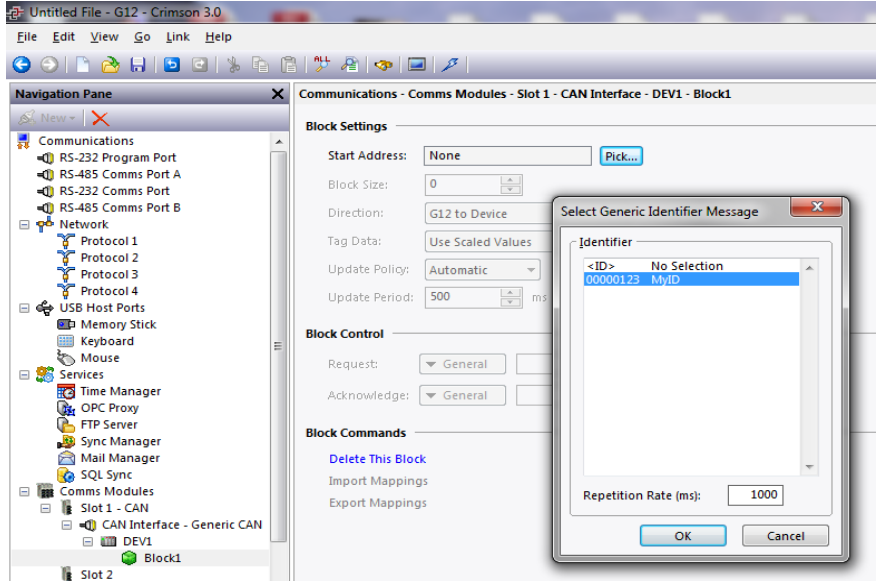
Accessing Data

In Crimson 3.0+ with the Generic CAN driver selected in the Communications tree, click on the Device.

For each CAN message configured, add a Gateway Block to the Generic CAN device by right clicking on the Device and selecting "Add Block".



CAN messages can then be mapped using the Select Generic Identifier Message dialog box, found by clicking on the Start Address's "Pick..." button within the Block Settings.



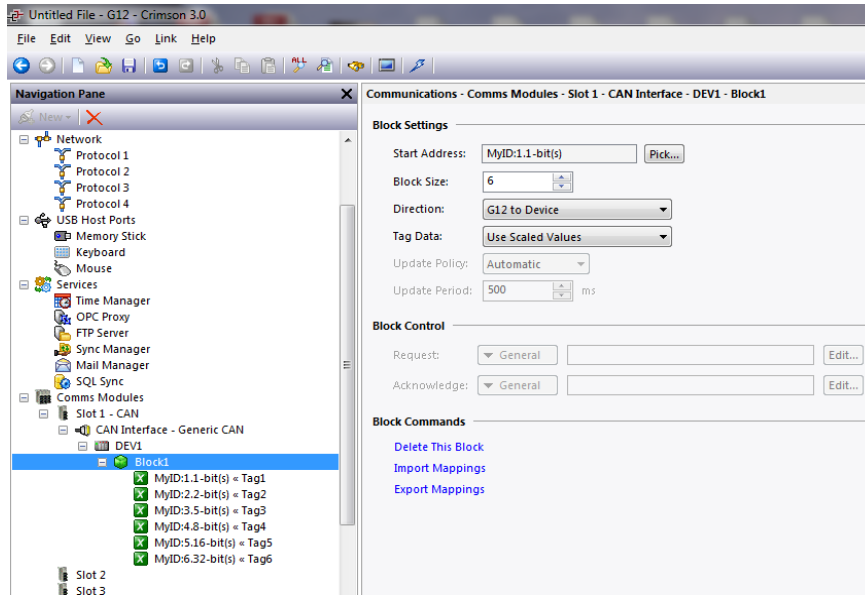
Select the desired CAN message then specify the Repetition Rate in milliseconds according to the guidelines below.

For CAN messages transmitted by the Red Lion device enter the interval in which messages should be sent. Note, a value of 0 will result in CAN messages being sent on a change of value event only.

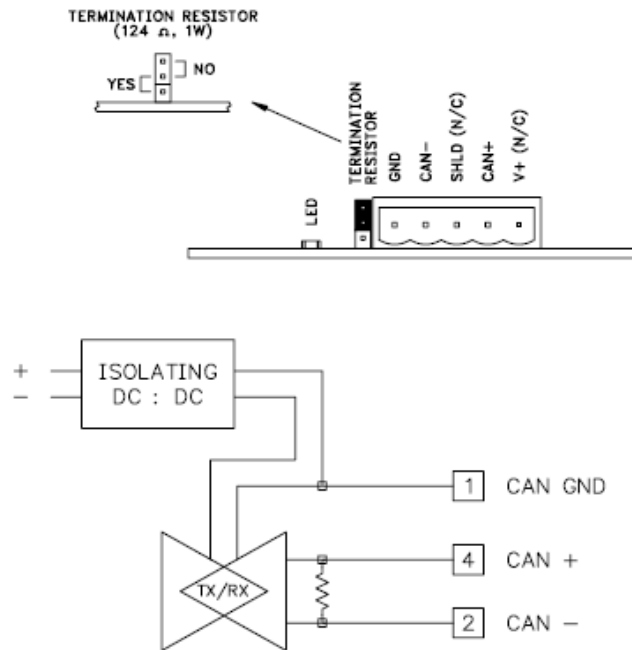
For CAN messages to be received by the Red Lion device enter the interval at which CAN messages are expected. A timeout of the current value will occur at three times the indicated time period.

Click OK to set the Block mapping address.

Under Block Settings set the Block Size and Block Direction consistent with the mapped CAN message definition. The Block Size should be set to the number of Sub Elements in the message. Transmitted CAN messages should be set to the direction of Red Lion to Device, likewise received CAN messages should be set to the direction of Device to Red Lion. Tags or device registers can then be mapped to each Sub Element of the message.



Cable Information



Revision History

06/30/2017 - Created