

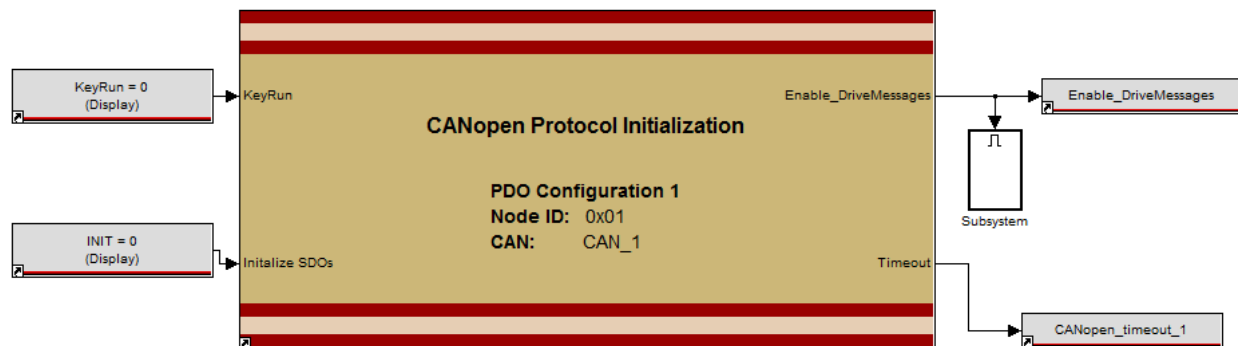
# New Eagle™ CANopen MotoHawk™ Library

NE-MH-CANOPEN-LIB-001

## User Guide

Revision 001

7/1/2015



## OVERVIEW

The New Eagle™ CANopen Library is the perfect toolbox to add the CANopen protocol to any Motohawk project. This library interface allows for complete customization of the CANopen initialization sequence and control of up to 64 slave nodes. The library enables you to quickly establish the communication protocol for a multi-node CANopen network in a familiar Motohawk environment, reducing development and complexity.

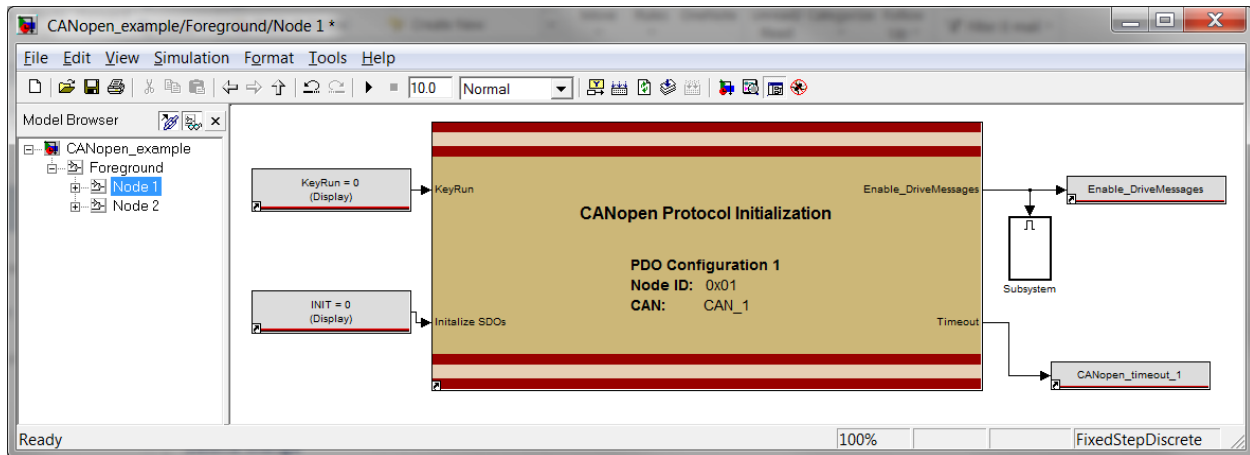
## PRIMARY SOFTWARE FUNCTIONS

Configuration of the library is narrowed to a PDO data definition file. From that file the library internalizes and manages the following protocols:

- CANopen Protocol Initialization
  - Network Management (NMT) protocol (*master*)
    - Module control protocol
    - Heartbeat protocol
  - Service Data Object (SDO) Protocol
    - Custom object dictionary definitions
- Process Data Object (PDO) Protocol
  - TPDOs 1-4 (Transmit PDOs) Customization
  - RPDOs 1-4 (Receive PDOs) Customization
- Synchronization Object (SYNC) Protocol
  - Configurable Sync-Producer

## EXAMPLE

An example model is included with the CANopen Library, 'CANopen\_example.mdl'. This model is sufficient for most applications to get started.



## SUPPORT

### INCLUDED SUPPORT

Eight (8) hours of general support is included with the purchase of the CANopen Library. Submit your inquiries to [support@neweagle.net](mailto:support@neweagle.net).

### POTENTIAL FUNCTIONALITY OPTIONS

With an additional contract, New Eagle can create custom software to meet your CANopen application's specific needs. This includes (but is not limited to):

- Customization of the CANopen library within your Motohawk project to meet a specific CANopen implementation
- Functioning as a slave node within the Network Management (NMT) protocol
- Compatibility with non-traditional CANopen implementations

## PRODUCT DISCLAIMER

This product is intended to be used by controls engineers familiar with the MotoHawk® and Simulink® model-based development environment. Please contact New Eagle for any necessary application assistance or product training.

## PRODUCT COMPATIBILITY

The library is compatible with recent versions of Motohawk and MATLAB 32/64bit. This library has been tested with the following versions: MATLAB 2009b 32-bit, MATLAB 2010a 64-bit, and MATLAB 2012a 64-bit.

If your version is not listed please contact New Eagle support ([support@neweagle.net](mailto:support@neweagle.net)) to check for compatibility.