

Lexium Motion Module

Developer's Kit LMM-KIT2

In the box

The Lexium Motion Module Developer's Kit contains everything necessary to begin developing LMM applications. Items included are

- **Lexium Motion Module**
- **1-axis Development Board**
- **USB to CANopen Converter**
- **NEMA 17 (42mm) motor + encoder**
- **24 VDC Power Supply**

LMM Developer's Kit

PCB module, development board and motor

Prerequisites

In addition to the included components, setup also requires a PC running Windows 7 or greater.

Starting up

1. Connect the components shown in Figure 1. The individual components come pre-wired for ease of setup.
2. Connect the enable input. The “Enable” input must be at a level in relation to the Input Reference that results in current flow. See Figure 2 for interface options.

NOTE: The default, disconnected state of the enable input is “disabled.” Motion will not occur if this input is left floating and an error 14 will assert.

3. Download and Install and open Lexium Software Suite from the SEM website at <http://motion.schneider-electric.com>.
4. From the Software Suite Launch dialog, install the CANopen Interface

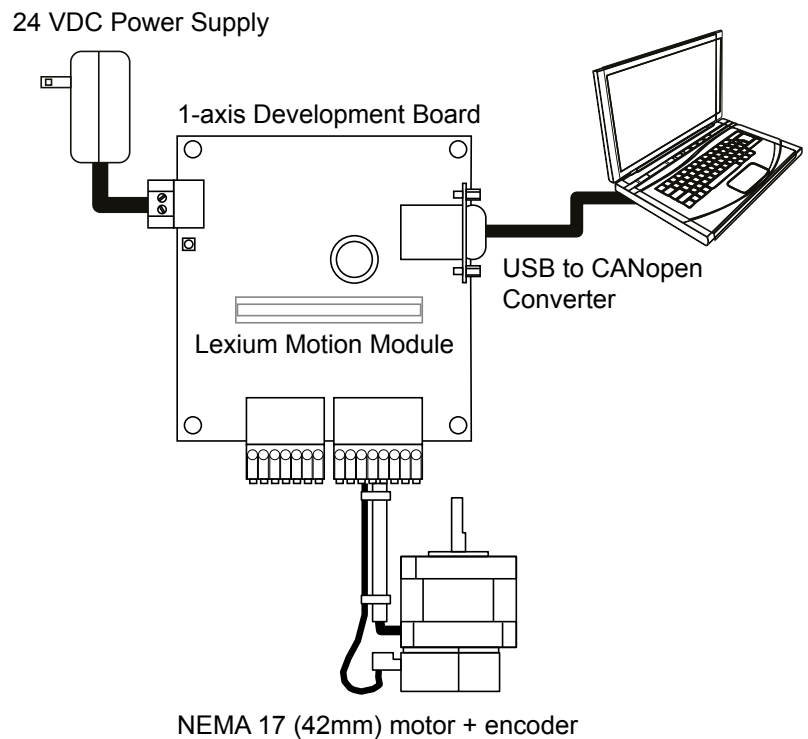
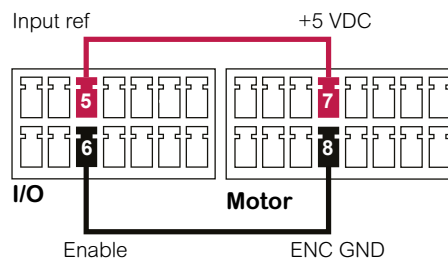


Figure 1: Connect LMM Developer's Kit components

Enable input

always enabled, sinking



Enable input

switched enable, sourcing

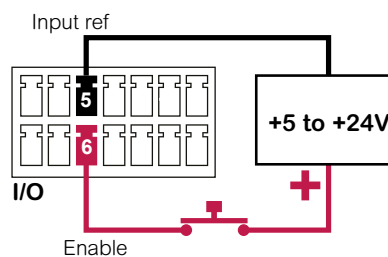


Figure 2: Connect the enable input

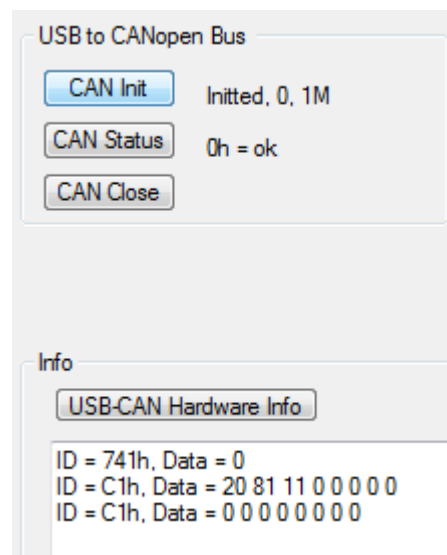
Resources



<http://j.mp/int-lmm1>
[Interface Board](#)
[Schematic](#)

Initialize communication

- ▶ With DC power and CAN bus connected, apply power to the Lexium MDrive.
- ▶ Open the CANopen Configuration Utility
- ▶ Click the button «CAN Init»
 - ◁ The USB to CANopen Bus container will display the connection status as shown at right. Additionally the LED on the MD-CC501-000 should be blinking rapidly.



Change Node ID/BAUD rate

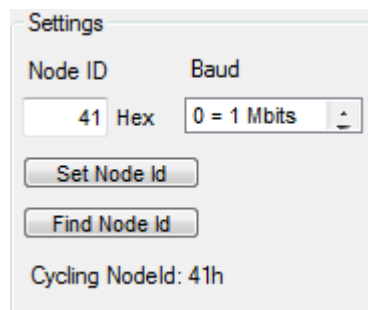
The defaults for the Lexium MDrive are:

- Node ID: 41 hex
- BAUD rate: 1 Mbps

NOTE: when changing the Node ID, the change takes place instantaneously, changing the BAUD rate requires a power cycle of the Lexium MDrive when using the CANopen Configuration Utility.

To change the settings

- ▶ Change the default Node ID to the desired ID
- ▶ Change the BAUD rate to the desired setting
- ▶ Click the «Set Node Id» button
- ▶ Click the «CAN Close» button to close the connection to the CAN bus.
 - ◁ Cycle power to the Lexium MDrive
- ▶ Click the «Find Node Id» button
 - ◁ The Lexium MDrive will be reconnected at the new Node ID/BAUD rate



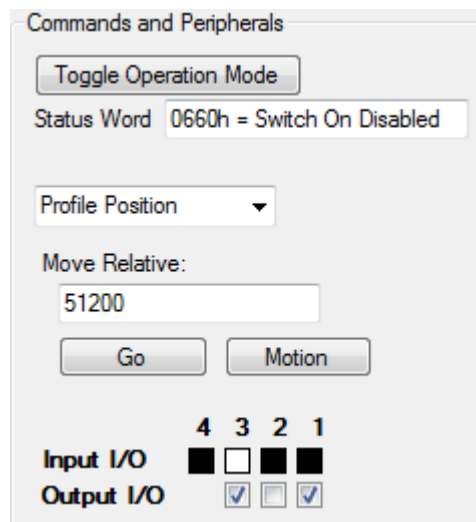
Perform functional testing

Toggle the state machine

- ▶ Click Toggle Operation Mode to cycle through the state machine. You are ready to perform functional testing when the Status word field reads 0637h - Operation Enabled

Move the motor

- ▶ Select the DSP402 motion profile.
- ▶ Enter a value the field (by default 51200 steps, or one revolution is entered).
- ▶ Click «Go»
 - ◁ The motor will move, verifying functionality
 - ◁ NOTE: If profile velocity was selected the motor will accelerate to the entered velocity. Motion may be halted by clicking «Motion» and resumed again by clicking «Halt».



Intelligent motion systems



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