EVKT-MOTOR-00A

Communication Interface Device for USB Motor Driver Interface

DESCRIPTION

The EVKT-MOTOR-00A is a communication interface device that provides an interface between a USB and a serial peripheral interface (SPI) or I²C communication interface. It is designed to work with MPS's motor drivers that use a serial interface, as well as the motor driver programming graphic user interface (GUI) tool.

The EVKT-MOTOR-00A kit includes one USB communication device interface, one USB cable, and one 10-pin ribbon cable. By working with MPS's Motor Driver Programming GUI, the EVKT-MOTOR-00A provides a quick and simple way to evaluate the performance of MPS motor drivers with serial interfaces.

EVKT-MOTOR-00A

Figure 1: EVKT-MOTOR-00A

EVKT-MOTOR-00A CONNECTION

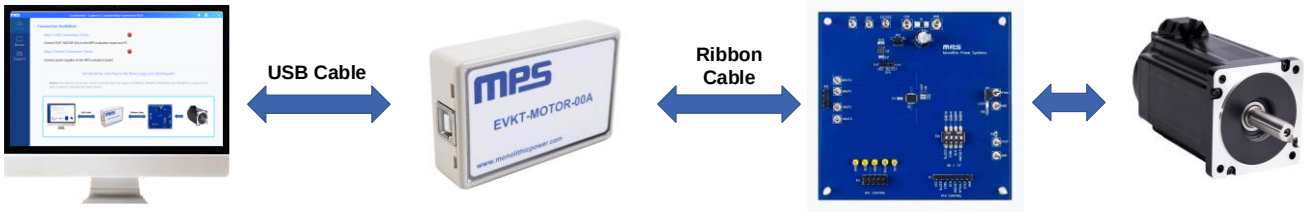

Figure 2: EVKT-MOTOR-00A Connection

RIBBON CABLE DESCRIPTION

The EVKT-MOTOR-00A supports a 10-pin ribbon cable connection between the communication interface device and the evaluation board. Figure 1 shows the bottom view of the 10-pin ribbon cable.

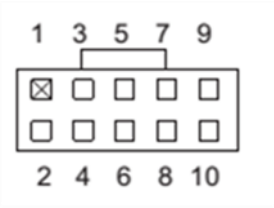

Figure 3: 10-Pin Ribbon Cable Bottom View

On certain evaluation boards, MOSI may be called SDI, and MISO may be called SDO.

Table 1 shows the pin descriptions.

Table 1: 10-Pin Ribbon Cable Pins

Pin #	Description	Pin #	Description
1	SCL	2	GND
3	GND	4	MOSI
5	SDA	6	MISO
7	GND	8	SCLK
9	GND	10	SCS

QUICK START GUIDE (1)

1. Connect the EVKT-MOTOR-00A to the evaluation board with the 10-pin ribbon cable and ensure that they are connected.
2. Connect the EVKT-MOTOR-00A to the computer using the supplied USB cable.
3. Turn on the power supply of the evaluation board, then start the motor driver GUI software; the GUI should check the connections automatically.
   a. If USB and device connections are successful, the GUI's home page should display two green lights (see Figure 4).

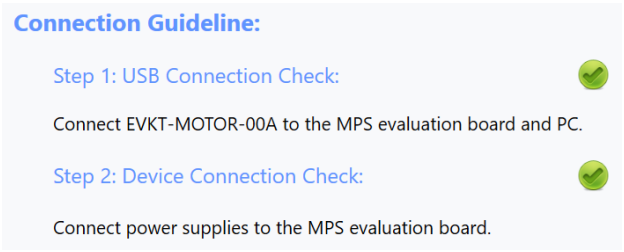

Figure 4: Successful Connection

   b. If the USB connection is successful but the device connection is not successful, the GUI's home page should display red and green lights (see Figure 5). The light to check the device connection can be ignored for the MP6605C, MP6605D, MP6605E, MP6606, MPQ6526-AEC1, and MPQ6527-AEC1.

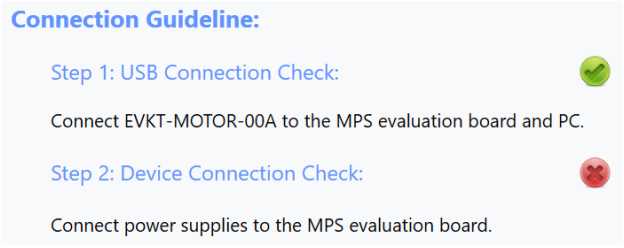

Figure 5: Device Connection Failure

   c. If the USB connection is not successful, the GUI's home page should display two red lights (see Figure 6).

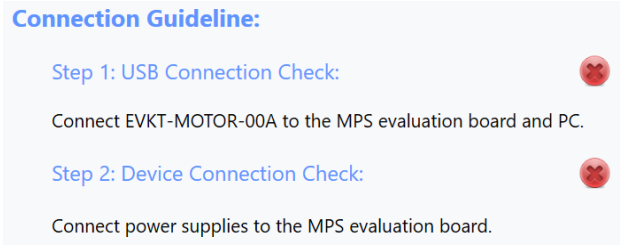

Figure 6: USB Connection Failure

4. Select the device, then click "Details". The configuration register information should be displayed.

Note:

1) It is important to adhere to the order of steps 1 and 2. Failing to do so may cause damage to the communication pins during a hot-plug event.

REVISION HISTORY

Revision #	Revision Date	Description	Pages Updated
1.0	5/2/2023	Initial Release	-