

DESCRIPTION

The **MMA02-3001** is a USB to RS485/I²C/SPI converter tool, which contains the MotionLAB communication kit, the USB cable and dupont wires. Together with MotionLAB software, it provides a quick and easy way to setup, configure and evaluate the performance of the MMS series all-in-one smart motor and MMP series motor driver module products.

This tool can convert the USB communication to RS-485, I²C or SPI, which enables the communication between PC and the servo system. The communication type can be configured by the MotionLAB software.

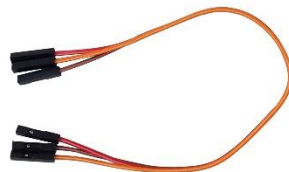
It supports a wide baud rate range, from 9600 to 2Mbps in USB to RS-485 mode.

In USB to I²C mode, maximum 1MHz clock frequency is supported. It's recommended to work at 400kHz fast mode or 100kHz normal mode.

For USB to SPI mode, up to 12MHz clock frequency is supported.

FEATURES

- 5V Build-in Power Supply via USB
- USB to RS-485/I²C/SPI Communication
- Configurable RS-485 Baud Rate, 9600 to 2Mbps.
- Configurable I²C Clock Frequency, up to 1MHz.
- Configurable SPI Clock Frequency, up to 12MHz
- Work with MotionLAB Software
- Simple and Easy to Use



PRODUCT INFORMATION

MMA02-3001 contents are listed as below:

Part Number	Component	Description	Quantity
MMA02-3001	MotionLAB Communication Kit	USB to RS-485/I ² C/SPI converter	1
	USB Cable	1.5m, USB Type-A to USB Type-B cable	1
	Dupont wire	Dupont wires, 3-pin	1

PIN DEFINITION

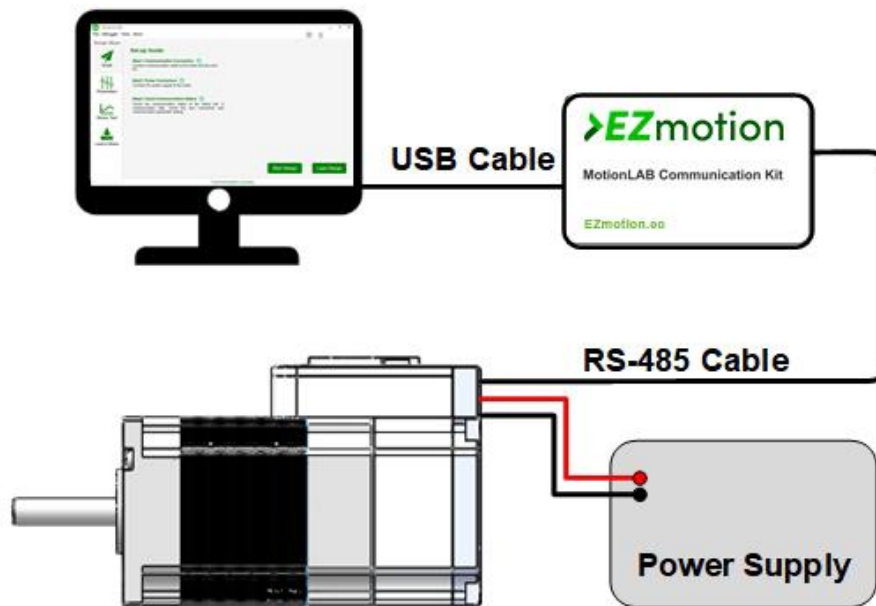
The MotionLAB Communication Kit adopts a 10-pin socket to connect to the communication interface on the MMS series all-in-one smart motors or MMP series motor driver modules.



MotionLAB Communication Kit

Pin Number	Designation	Pin Description
1	FG	Not Used
2	GND	Ground
3	GND	Ground
4	CS	SPI chip selection
5	RS485_B	RS485 node B
6	MOSI	SPI data out
7	GND	Ground
8	SCLK/SDA	SPI serial clock/I ² C serial data
9	RS485_A	RS485 node A
10	MISO/SCL	SPI data in/I ² C serial clock

HARDWARE CONNECTIONS



MMA02-3001 Connection Example

The figure above shows a connection example between EZmotion all-in-one servo motor and the PC, using MMA02-3001 Communication Kit.

For the driver module, mount the driver module at the back of a compatible motor and connect as shown in the figure above.

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