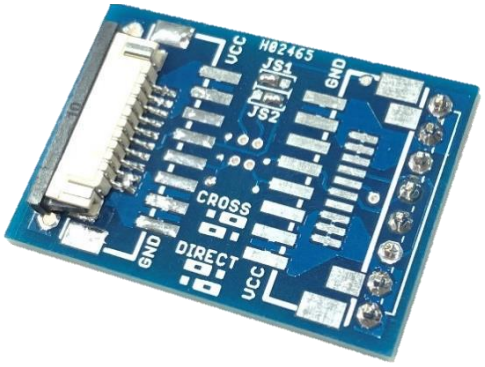
Represented by:
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+39 0332 1888005

PAB_01V01

Universal Connector



Description

Proculus Accessory Board Model 01 (PAB_01) is a universal connector adaptor, intended to provide flexible physical connection between the various connection types used by Proculus LCMs.

PAB_01 is provided in different variants, each with the adequate connectors for your application.

This board only converts between connector type. No electrical or protocol conversion.

Features

- Makes connections between different connector types simple.
- RX and TX signals can be easily reversed by solder jumpers.
- Orderable in several different connector combinations.

Applications

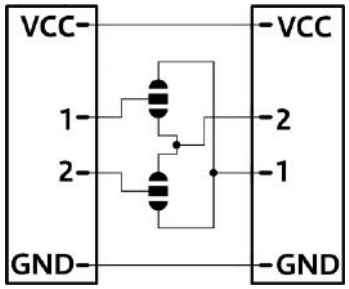
- Prototyping and testing.
- Development.

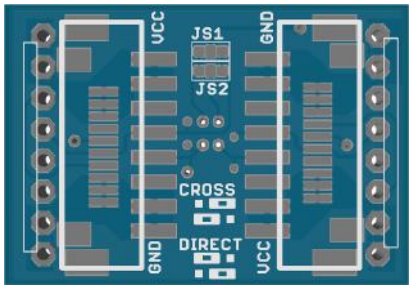
While PAB_01 is primarily intended for **development** environments, it can be used in production runs.

Simplified Diagram and Appearance

Diagram

Input Output Top View Bottom View







Solder jumpers for reversingRX/TX

Conventions used in this document

- The **Input Connector** is on the left side of the board.
- The **Output Connector** is on the right side of the board.
- The LCM is connected to the Input Connector.
- RX (receive) and TX (transmit) signals are, unless specified, respective to the LCM's point of view. Considering this, signal 1 is RX and signal 2 is TX.

Pinout

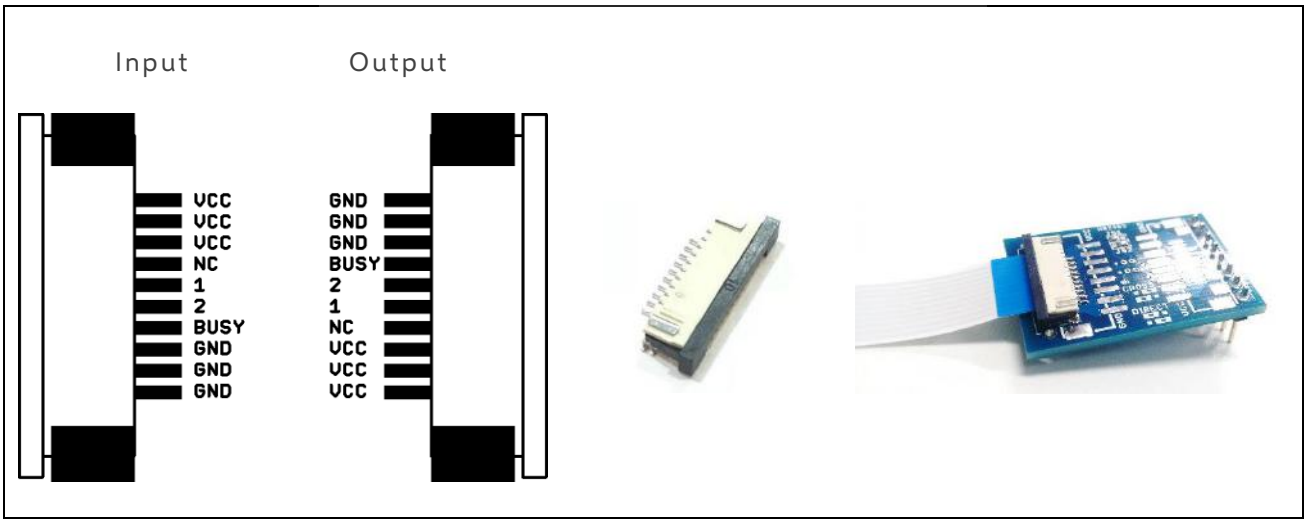
Signal Description

Signal	Details
VCC	Supply Voltage
GND	Common Supply Ground
1	LCM(1) RX(2) or TX
2	LCM(1) TX(2) or RX
NC	Not Connected. Do not use this pin
BUSY	Not used on AD LCMs. Do not use this pin

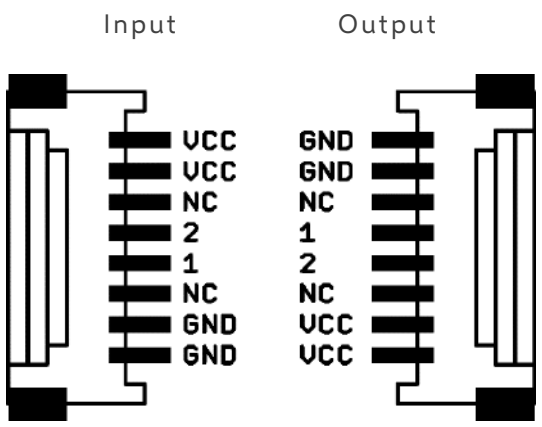
Note 1: RX and TX naming, unless specified, refers to the LCM's point of view.
Note 2: See chapter "RX/TX Connection Configuration" for defaults.

FFC (Flat Flexible Cable) Connector

Caution — The FFC Cable contacts should be facing down (towards the board), with the blue tape facing up (away from the board), as shown in the picture.

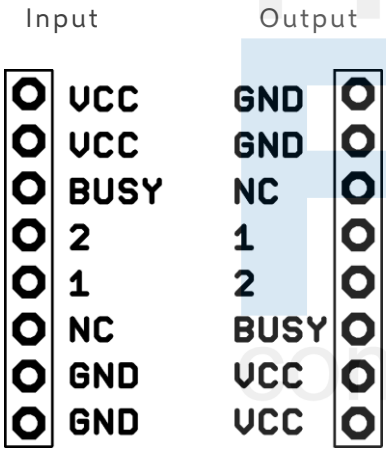


Ribbon Connector





Pin Header Connector





No Connector

No connectors available.

Wires can be soldered to the Pin Connector empty through-holes.

Typical Applications

PAB_01 is commonly used to:

- Connect the LCM to a breadboard or header
- Connect an LCM with a type of connector not compatible with the application board connector.
- Power a stand-alone LCM without a controlling board.
- Connect a USB/Serial converter to a microcontroller.

Note

PAB_01 is provided *as is* and doesn't necessarily comply to any certifications or standards. As such, we recommend PAB_01 to be used **only for development purposes**.

RX/TX Connection Configuration

When PAB_01 is used to establish communication between an LCM and a microcontroller or USB/Serial converter, **signal 1** (or 2) from the **Input Connector** (conventionally, where the LCM is connected to) is tied to **signal 1** (or 2) from the **Output Connector**.

However, there are some cases where it's desirable to reverse this connection, making **signal 1** (or 2) from the **Input Connector** connect to **signal 2** (or 1) from the **Output Connector**.

For example, you might want to use PAB_01 to connect two microcontrollers to one another. Or you might want to connect a USB/Serial converter to a microcontroller.

To deal with those scenarios, PAB_01 has two solder jumpers used to select the connection configuration between signals 1 and 2 from input to output.

There are two configurations, **Direct** and **Cross**:

Direct	
Input Signal	**Output Signal**
1 (RX)	1 (RX)
2 (TX)	2 (TX)

Cross	
Input Signal	**Output Signal**
1 (RX)	2 (TX)
2 (TX)	1 (RX)

The **default configuration**, Direct, is the most common, used to connect an LCM in the input to a microcontroller or breadboard in the output.

Solder jumpers **JS1** and **JS2** select the Connection Configuration:

	Configuration	
Jumper	**Direct**	**Cross**
JS1	Left	Right
JS2	Right	Left

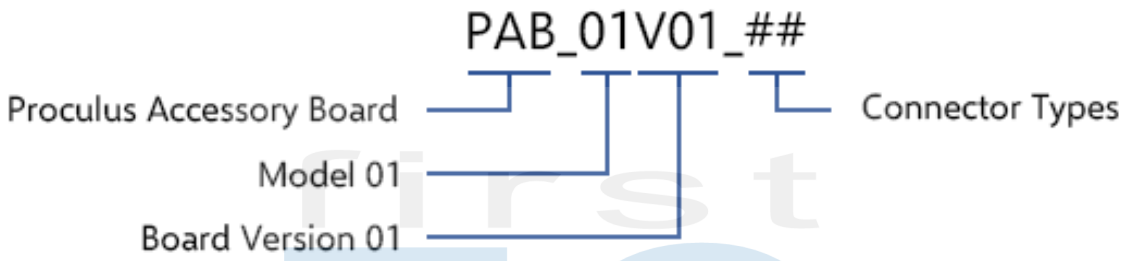
Ordering Information

Connector Types

The following table describes the available connectors and their respective symbols.

Connector	Symbol	Details
FFC (Flat Flexible Cable) Connector	F	10-pin, 1.0 mm pitch, Dual contact
Ribbon Cable Connector	R	8-pin, 2.0 mm pitch
Pin Header	P	8-pin, 2.56 mm pitch, Straight
No Connector	N	None

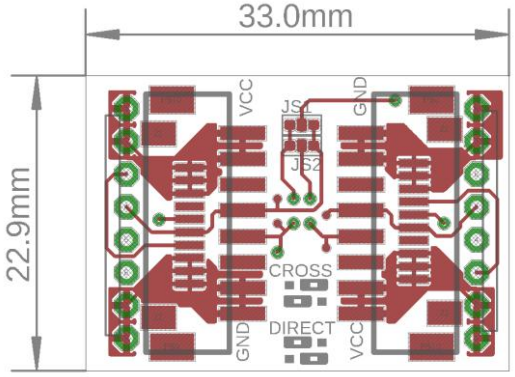
Part Number Selection



You can order PAB_01 in any configuration of pre-assembled connector types. The following table lists part numbers for the most common (and readily available) configurations:

Connector Types	Input Connector	Output Connector
PAB_01V01_FR	FFC	Ribbon
PAB_01V01_FP	FFC	Pin Header
PAB_01V01_FN	FFC	No Connector
PAB_01V01_RF	Ribbon	FFC
PAB_01V01_RP	Ribbon	Pin Header
PAB_01V01_RN	Ribbon	No Connector

Mechanical Information



Dimensions are given in millimeters.

Revision History

Revision Number	Revision Date	Description	Pages Changed
1	July 2018	Initial release.	-
2	July 2019	• Actual part numbers added in the "Part Number Selection" section. • Minor grammatical corrections. • Minor layout adjustments. • Some pictures have been updated.	2, 3, 4, 5

first FC components

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