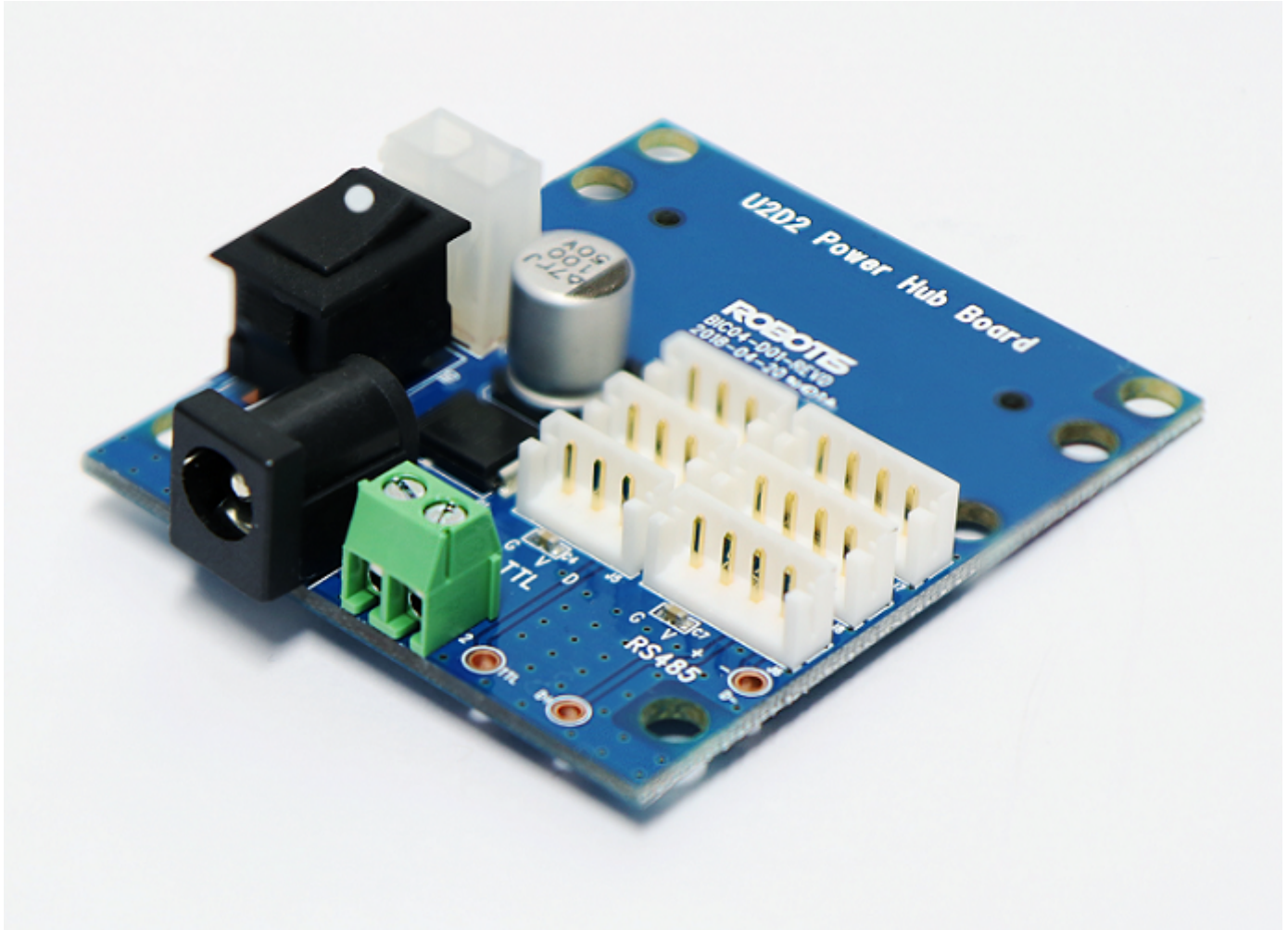


1. Introduction

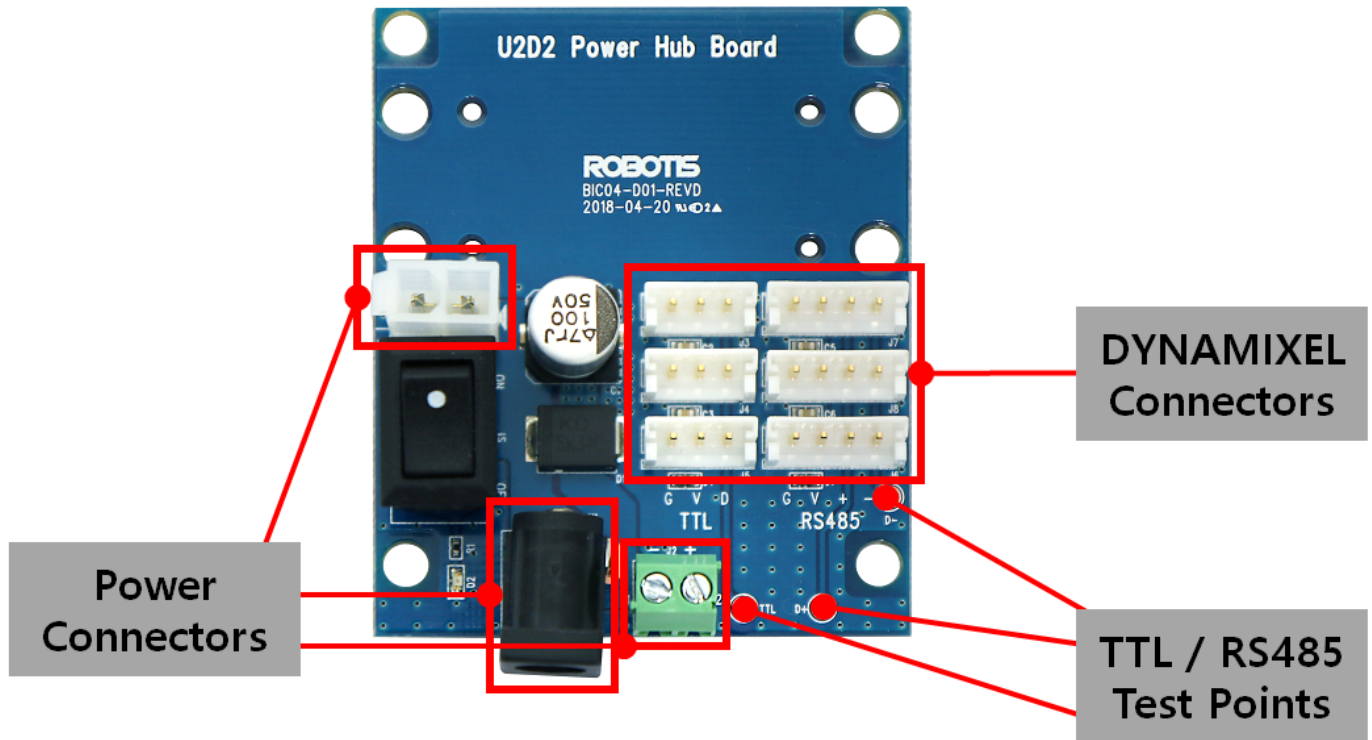
Combined with U2D2, it can supply various kinds of external power supply to supply stable power to DYNAMIXEL.



2. Specifications

Item	Details
Operating Voltage	7.4V ~ 24.0V
Maximum Current	10.0A

3. Layout



3. 1. Description

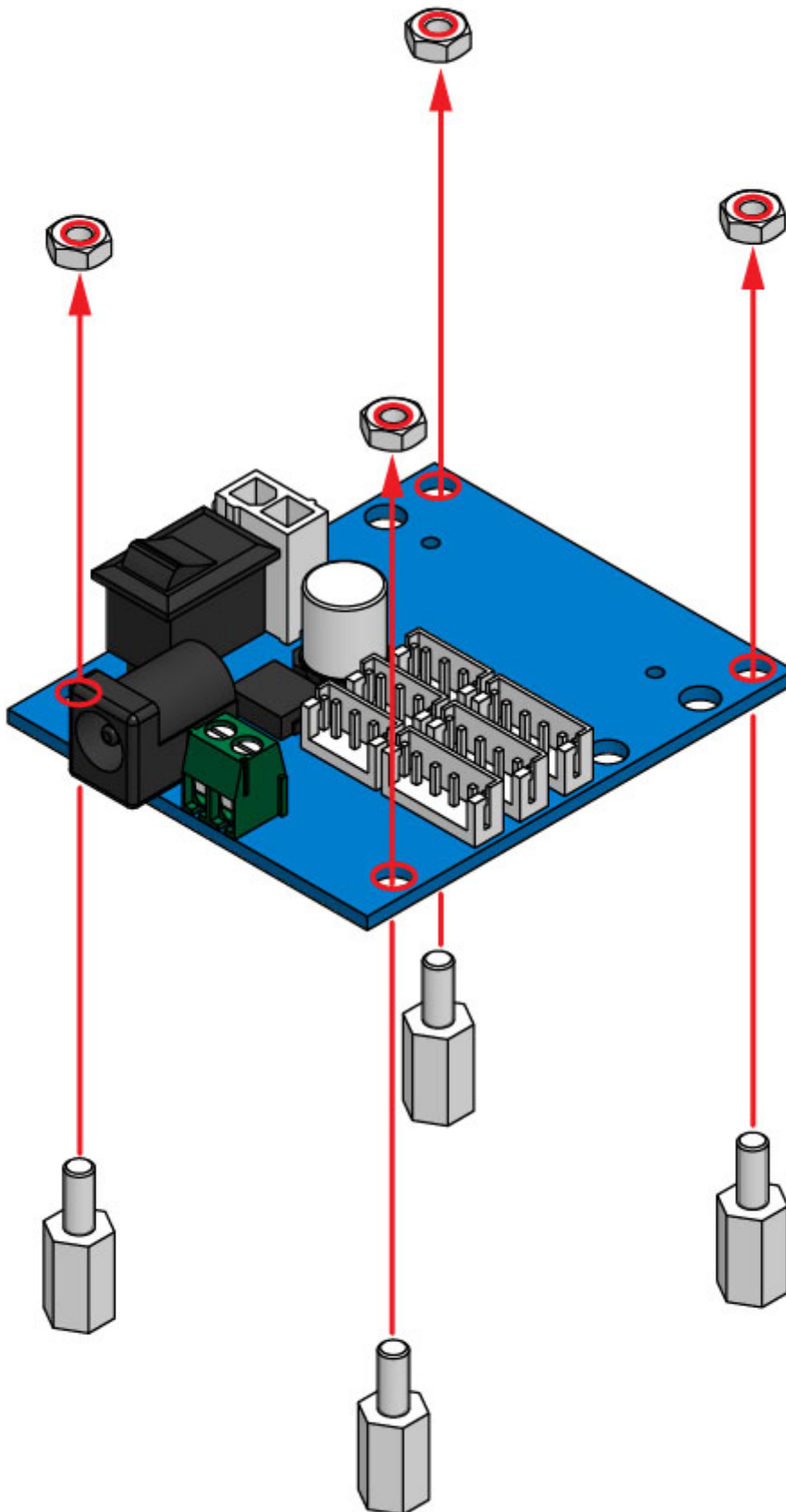
1. **DYNAMIXEL Connectors:** 3 and 4-pins JST connectors are installed for communication. See [Connector Information](#) for more details.
2. **TTL/RS485 Test Points:** TTL data line, RS485 D +, D-line signals can be easily identified via the test points
3. **Power Connectors:** U2D2 PHB provides three different types of power connectors to supply a diverse voltage and current to DYNAMIXEL.
 - SMPS DC Connector (2.5mm ID / 5.5mm OD, [Center Positive](#))
 - MOLEX Power connector (See [Connector Information](#) for more details)
 - PCB Screw Terminal Block Connector
 - Left: -
 - Right: +

CAUTION:

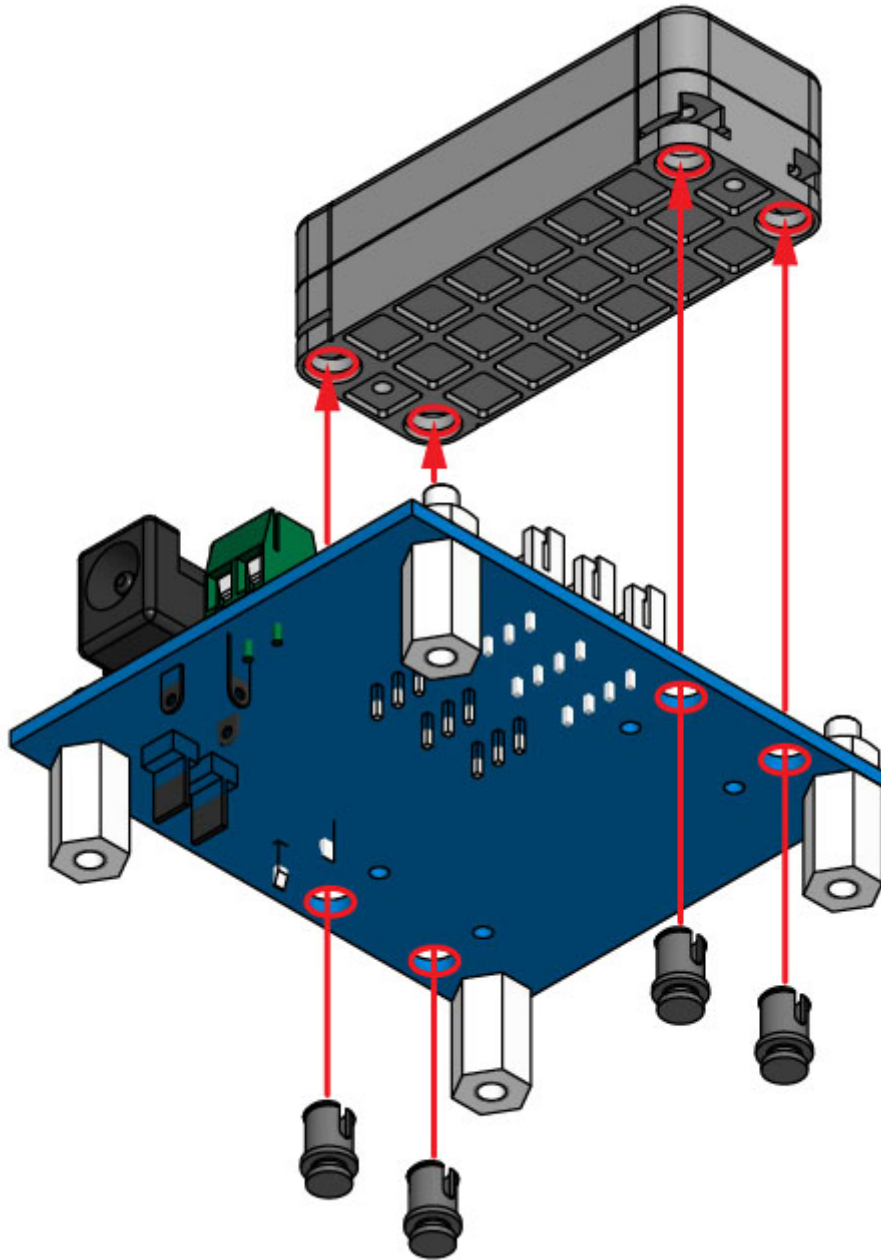
- Be sure to check the polarity of the terminal block connector when using an external power supply, to enhance the user safety.
- Some pins stick out on the bottom of the board, which are prone to touch the floor. To prevent from touching a floor, assemble the board with the supplied supporters following [How to Assemble](#) instruction.

4. How to Assemble

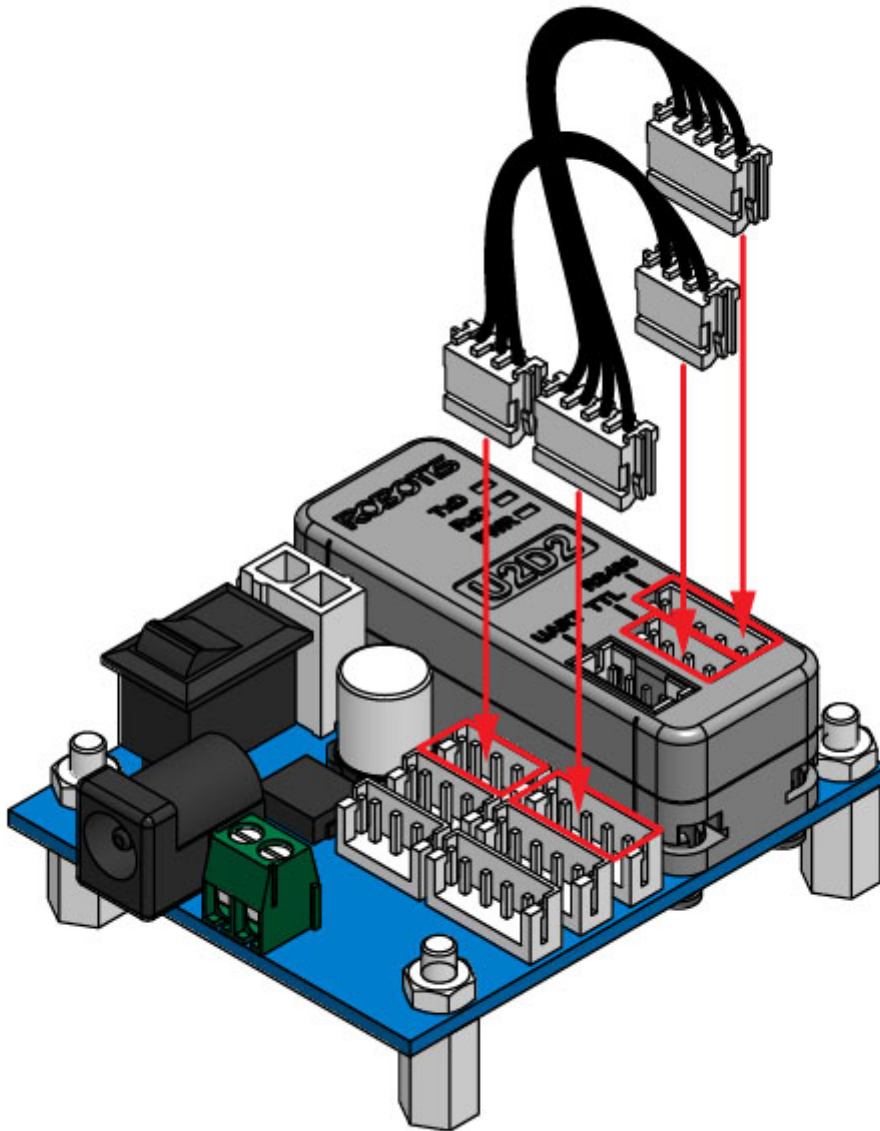
1. Assemble four(4) plastic supporters at each corner of the U2D2 Power Hub Board as shown below.



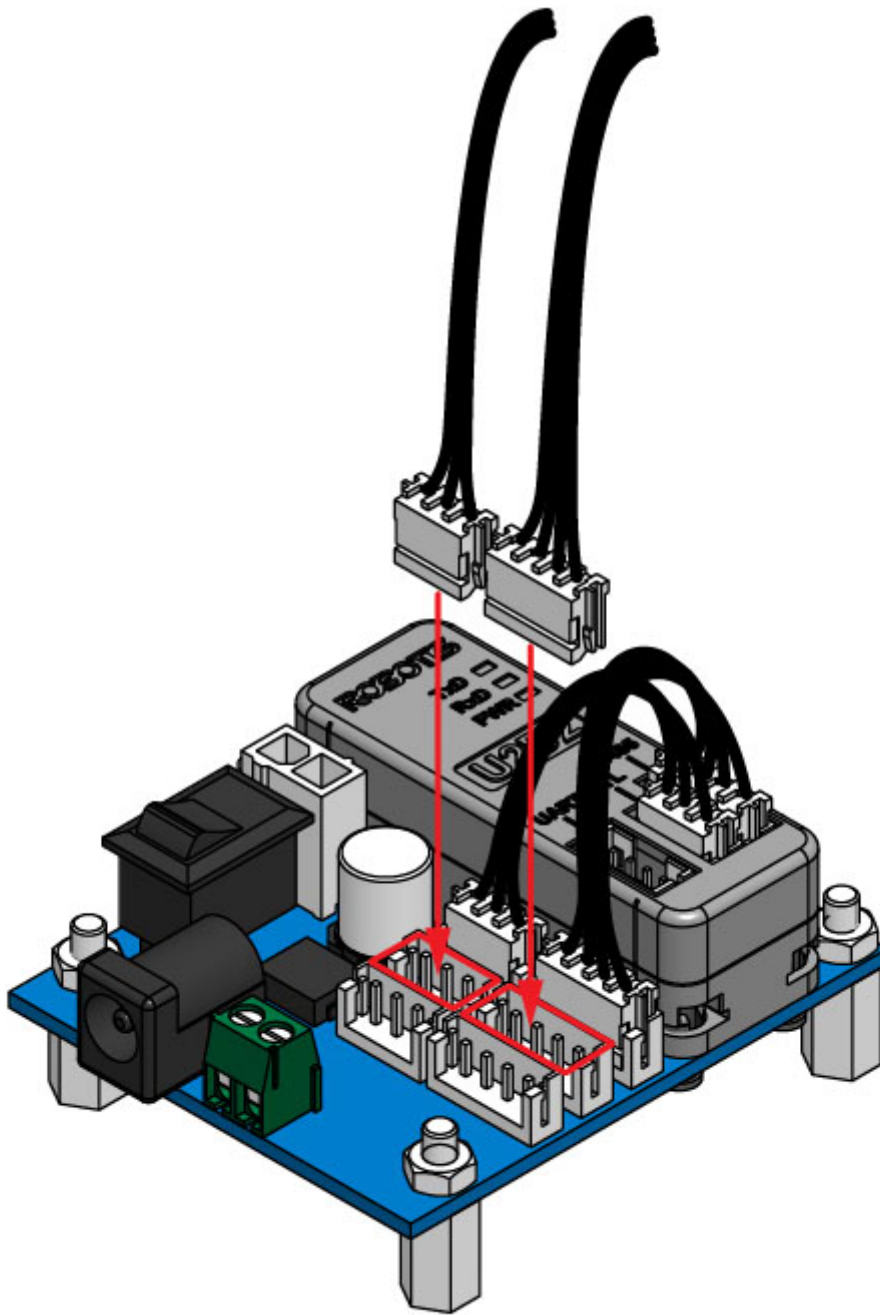
2. Use plastic rivets to mount U2D2 on the U2D2 Power Hub Board.



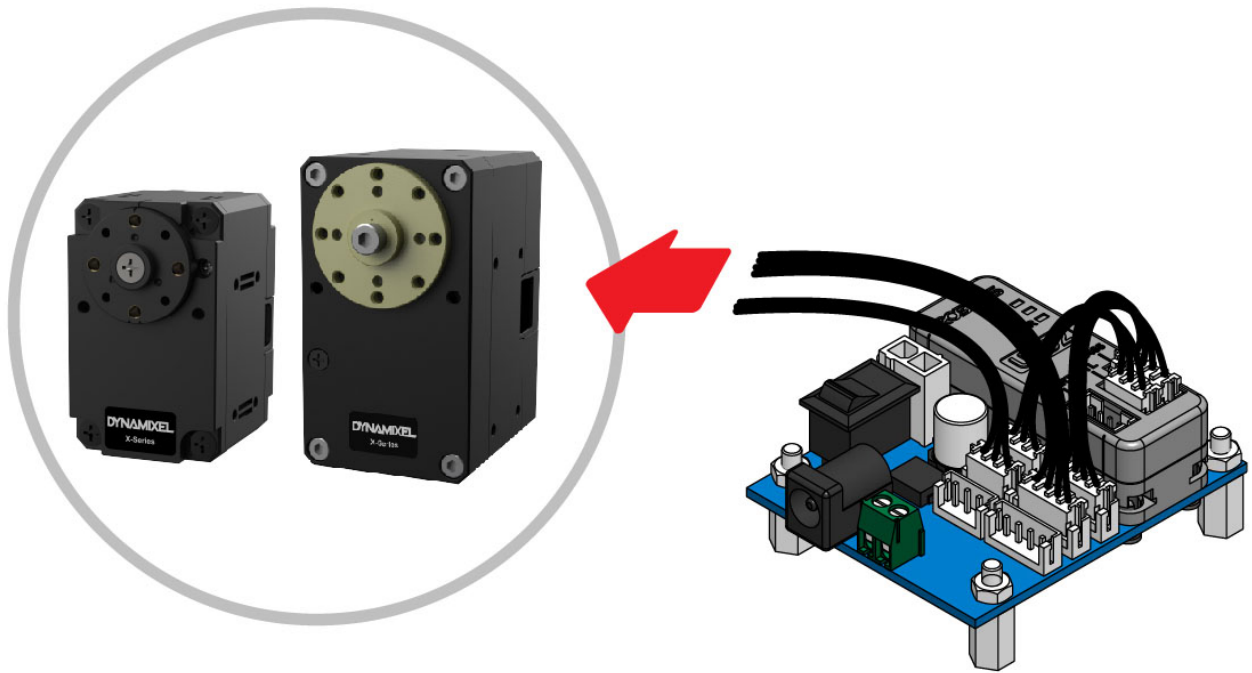
3. Connect **U2D2** and **U2D2 Power Hub Board** with 3P or 4P cables (Both 3P and 4P cables can be connected at the same time).



4. Connect additional cables that will connect **U2D2** and **DYNAMIXEL** (Depending on DYNAMIXEL model, converting cables may be required).



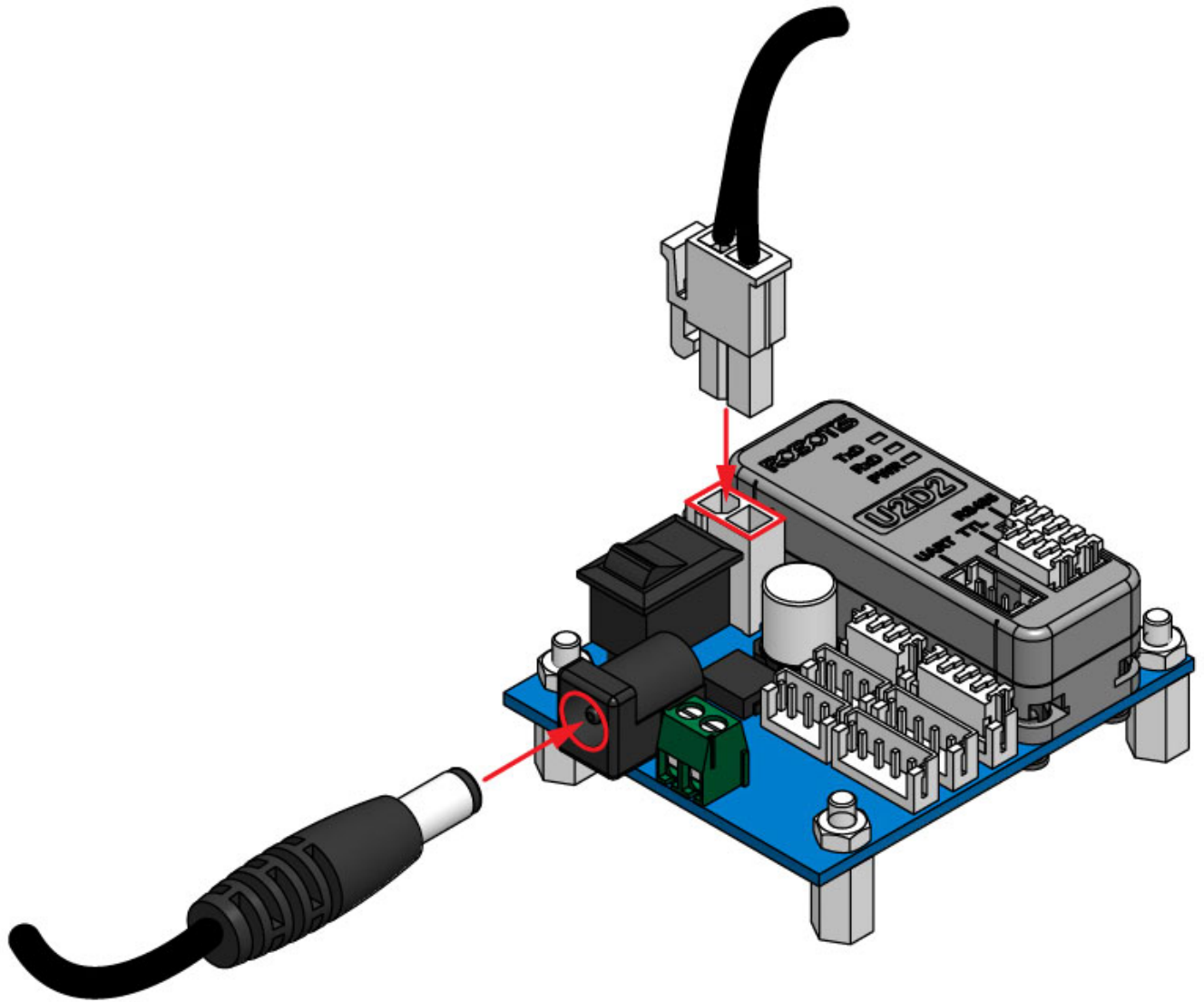
5. Connect the other side of the cable to DYNAMIXEL (Depending on DYNAMIXEL model, converting cables may be required).



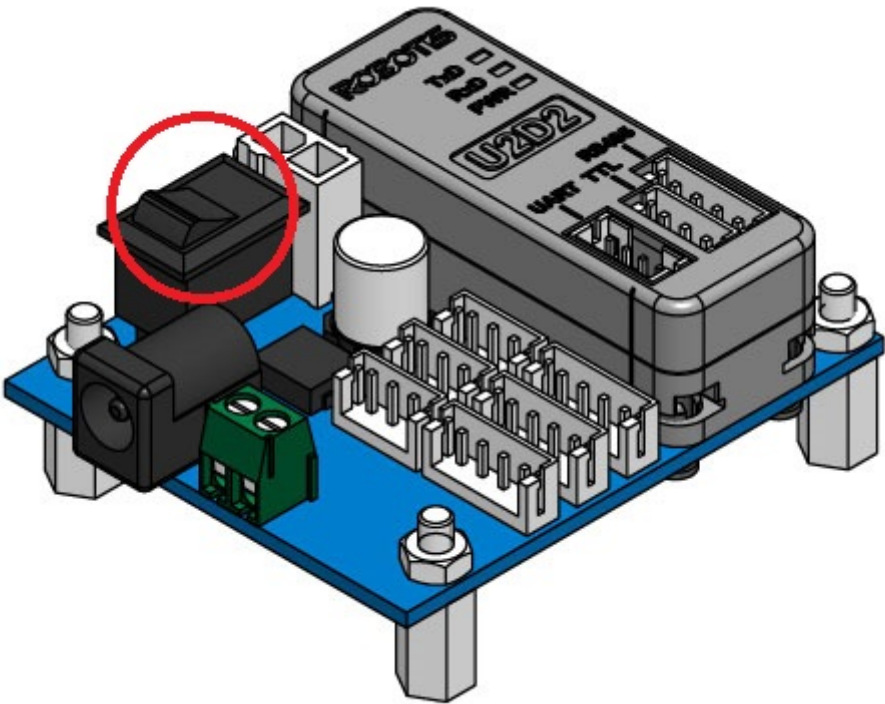
6. Connect power to U2D2 Power Hub Board.

DANGER : Do NOT use multiple power inputs at the same time. Select ONLY one of the power source to connect.

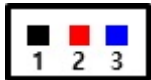



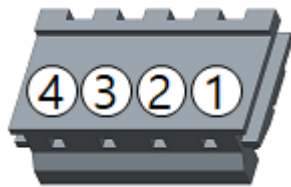




WARNING : Check the Recommended Voltage for DYNAMIXEL before supplying the power.



7. Turn the power switch on U2D2 Power Hub Board to supply power to DYNAMIXEL



5. Connector Information

Item	TTL	RS-485	Power
Pinout	<div><div>1</div>GND</div> <div><div>2</div>VDD</div> <div><div>3</div>DATA</div>	<div><div>1</div>GND</div> <div><div>2</div>VDD</div> <div><div>3</div>DATA+</div> <div><div>4</div>DATA-</div>	<div><div>1</div>GND</div> <div><div>2</div>VDD</div>
Diagram			
Housing	 JST EHR-03	 JST EHR-04	 MOLEX 39-01-2020
PCB Header	 JST B3B-EH-A	 JST B4B-EH-A	 MOLEX 39-28-1023
Crimp Terminal	JST SEH-001T-P0.6	JST SEH-001T-P0.6	MOLEX 39-00-0038

4

DATA-

12/1/2020

U2D2 Power Hub

Item	TTL	RS-485	Power
Wire Gauge for DYNAMIXEL	21 AWG	21 AWG	20 AWG

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