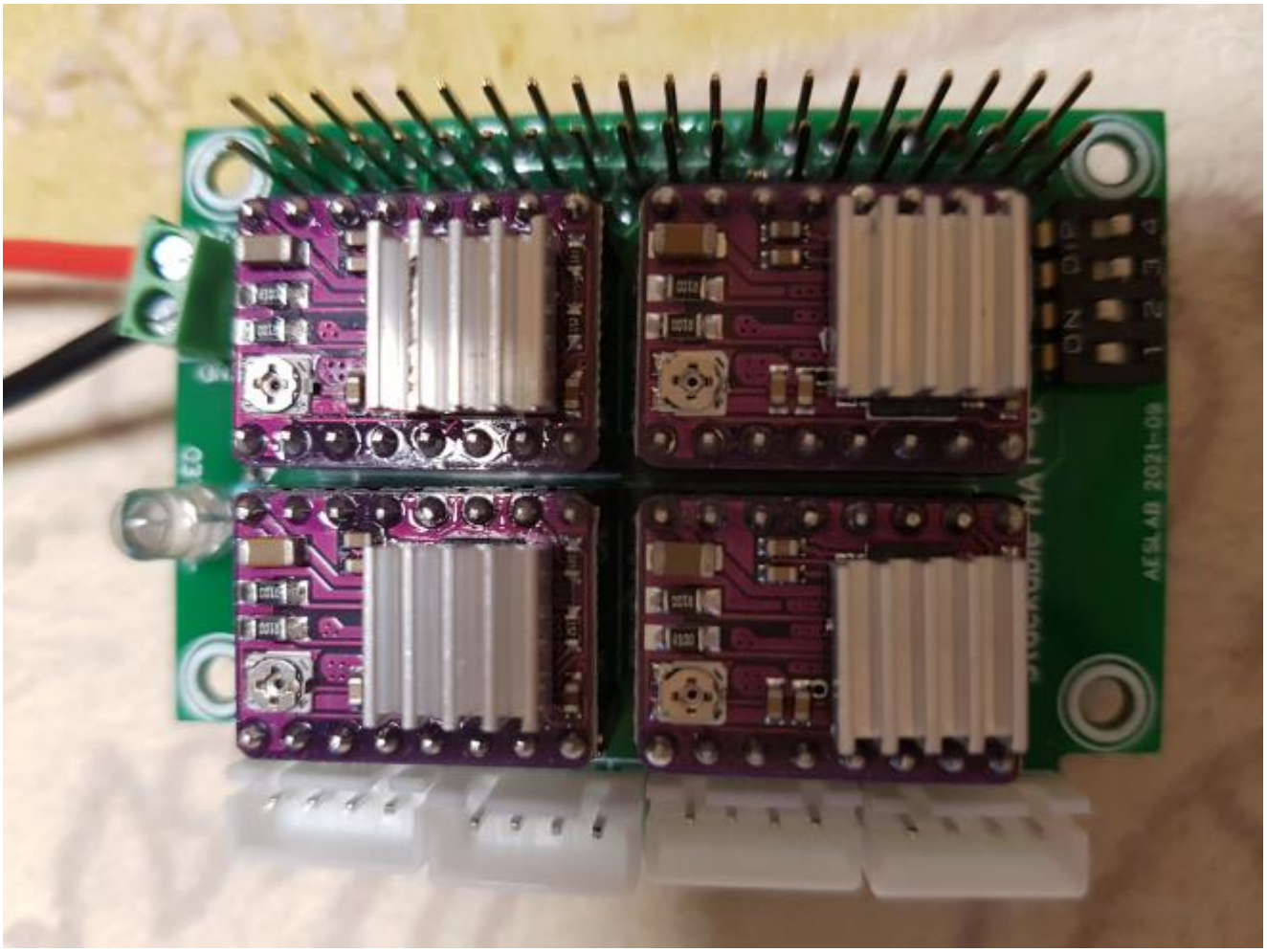
MLS (Multi Layer Stackable) Hat–6 User Guide



External 5~24V KF350-3.5-2P ... 1 EA for Stepping Motor Power

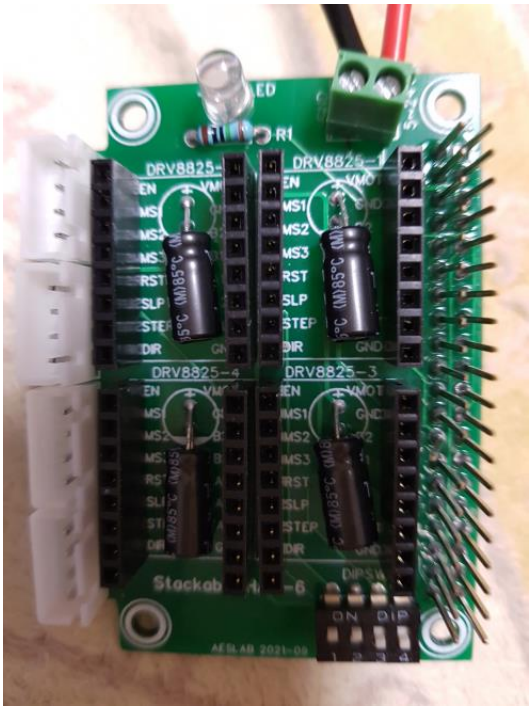
LED ... 1 EA

NEMA17 Connector ... 4 EA for Stepping Motor

Oct. 2021 AESLAB

1. Hardware Setup

a) PCBA (PCB Assembled)



Top Side

Bottom Side

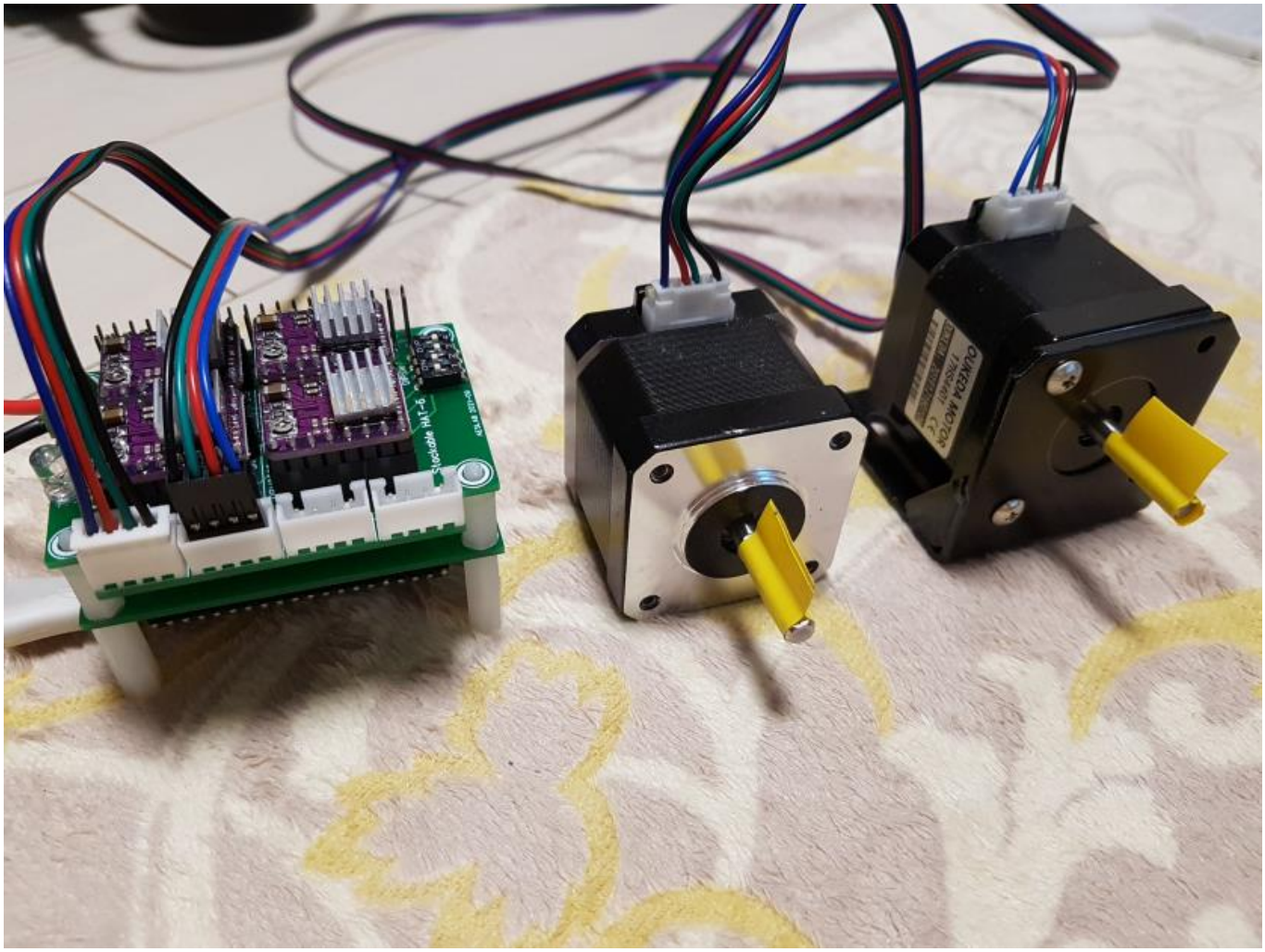
b) Used Pin List

GP6/7	DRV8825-1 STEP/DIR for NEMA17
GP8/9	DRV8825-2 STEP/DIR for NEMA17
GP10/11	DRV8825-2 STEP/DIR for NEMA17
GP12/13	DRV8825-2 STEP/DIR for NEMA17
GP22	LED

c) Power Enable (DIPSW On/Off)

1	3V3	DRV8825-1
2	3V3	DRV8825-2
3	3V3	DRV8825-3
4	3V3	DRV8825-4

d) Set Configuration



e) Parts

DRV8825 Stepping Motor Driver	… 2 EA or 4 EA
NEMA17 Stepping Motor	…. (NOT INCLUDED)

f) Parts Setup

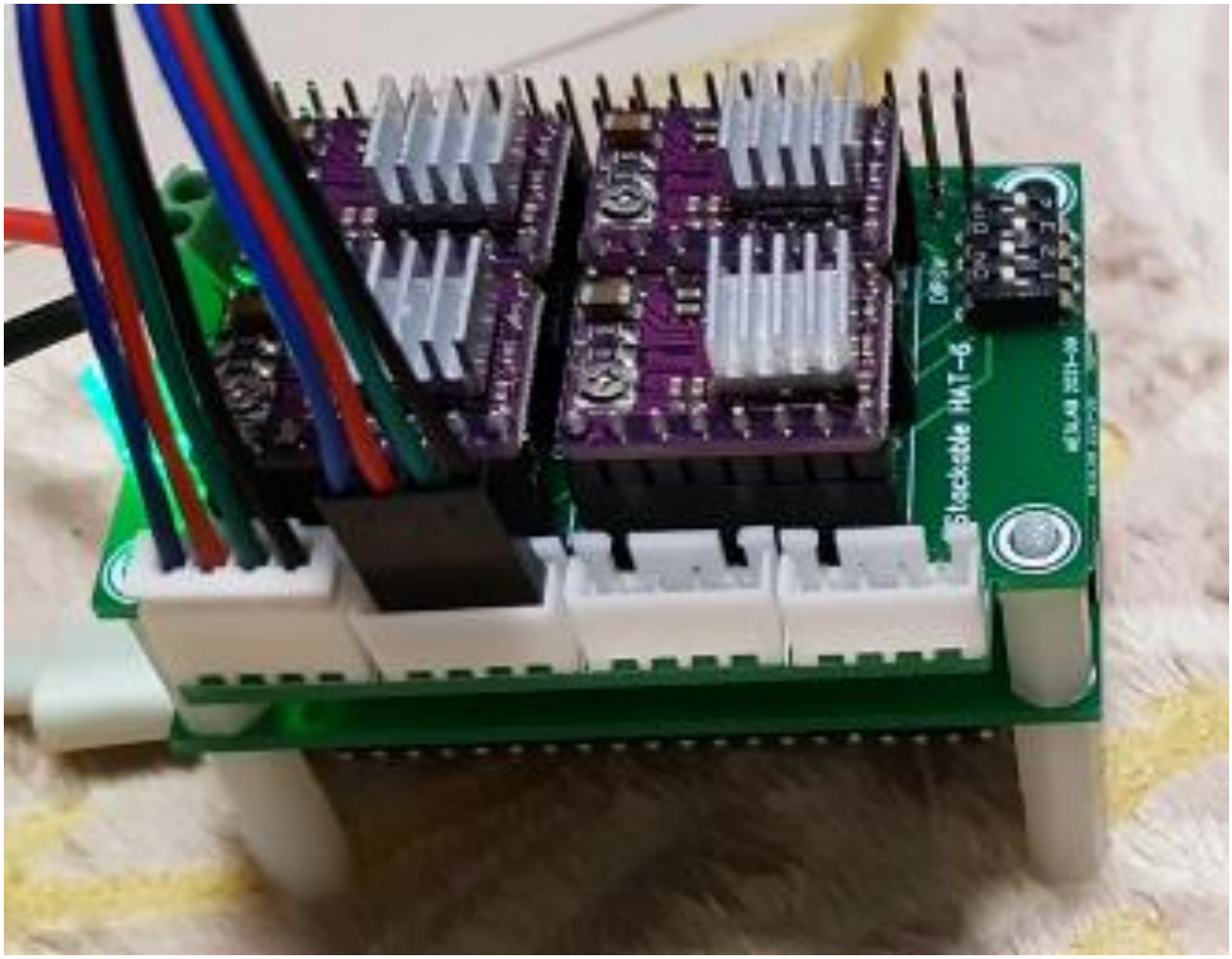
1. JST-XH-04 Female Connector for NEMA Stepping Motor will change to 1x4 2.54mm Male Connector

   To keep same motor rotation direction for easy use in script.

   FL (Front Left)
   FR (Front Right)
   RL (Rear Left)
   RR (Rear Right)

   should connect swapped connection required.

   Left Motor **Blue**-**Red**-**Green**-**Black**
   Right Motor **Black**-**Green**-**Red**-**Blue**



2. MicroPython with Thonny IDE

a) MicroPython Unit Test Code

GP22_Led.py

test_DRV8825.py