



LV17

WHY



!



LV18 群主

张弼弘

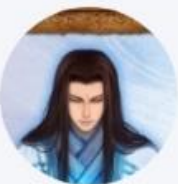


会称重的小东西Little smart

Revolutions from Version 1.0 to 3.0

Team member:

张睿贤、周宇轩、张弼弘、冯硕



LV18

周宇轩



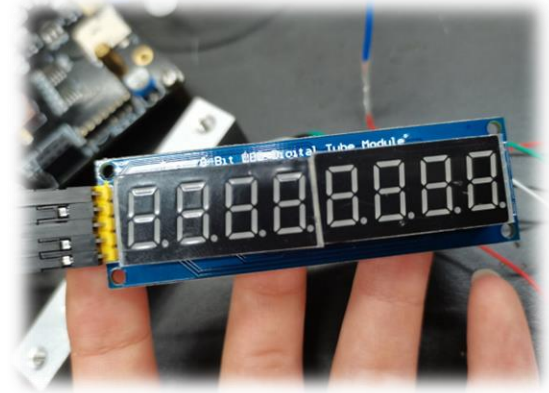
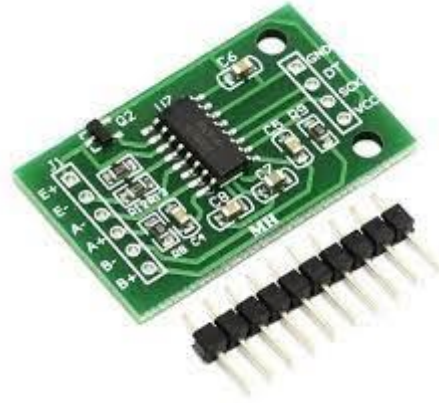
啊这

LV19

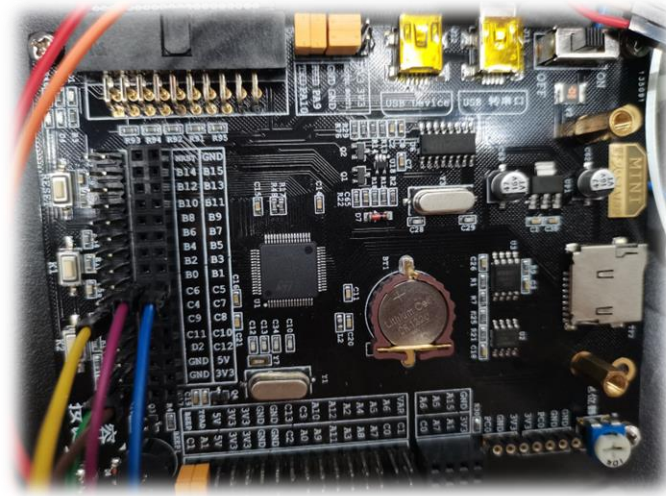
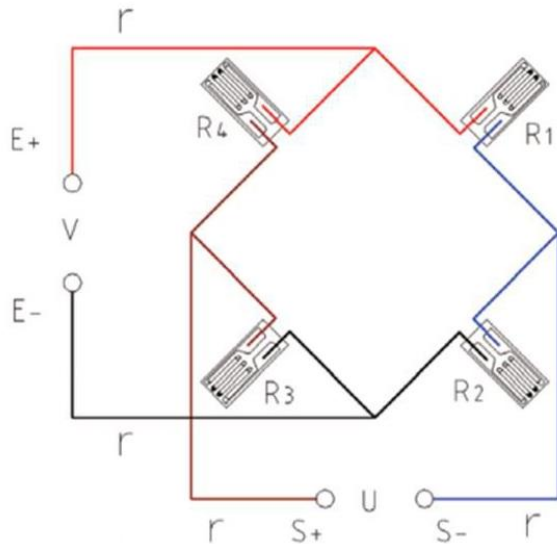
冯硕



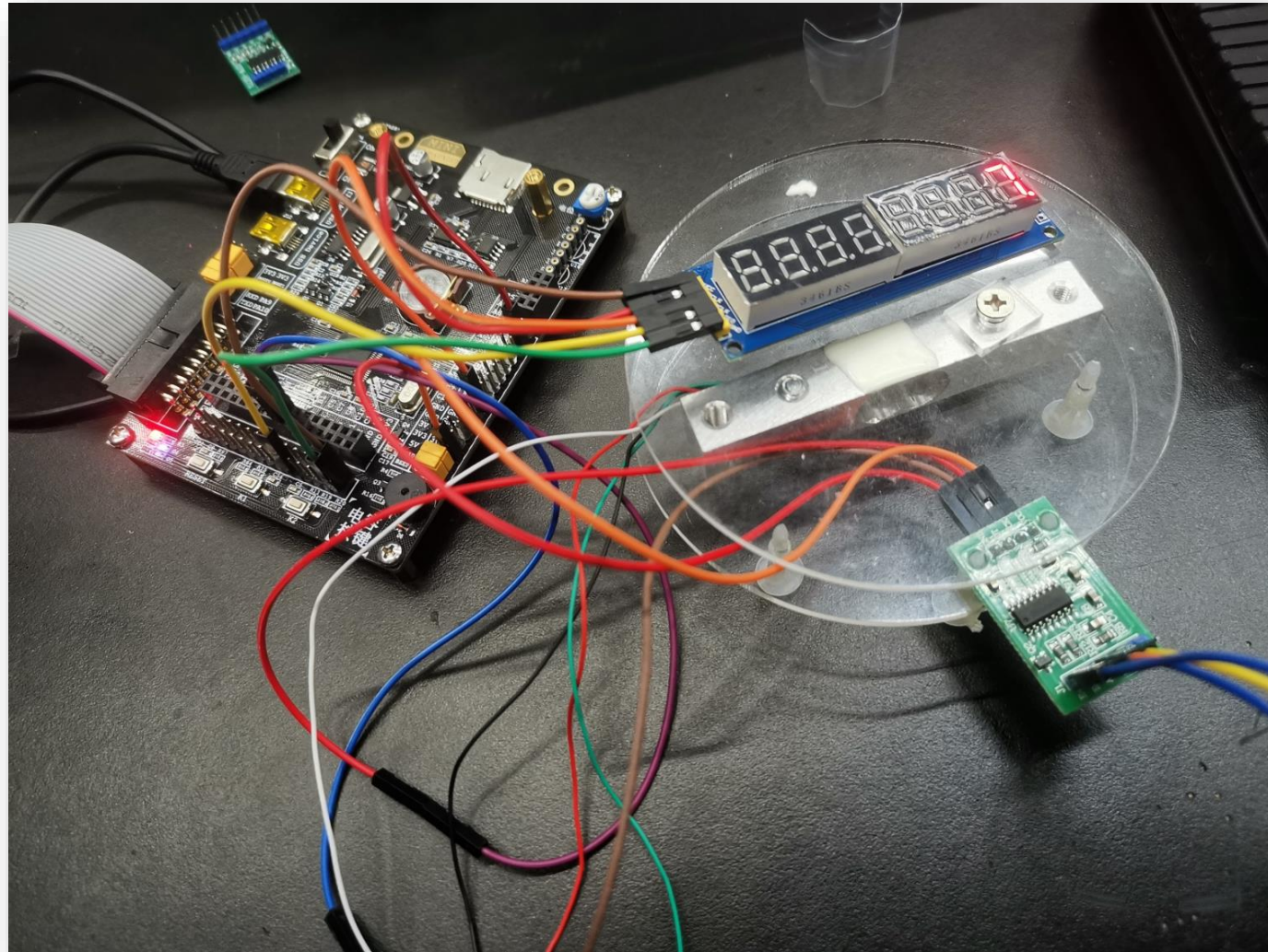
Overall structure: Strain gauge system



Full bridge circuit \rightarrow Hx711 \rightarrow STM32 \rightarrow 8 digit LED/USART

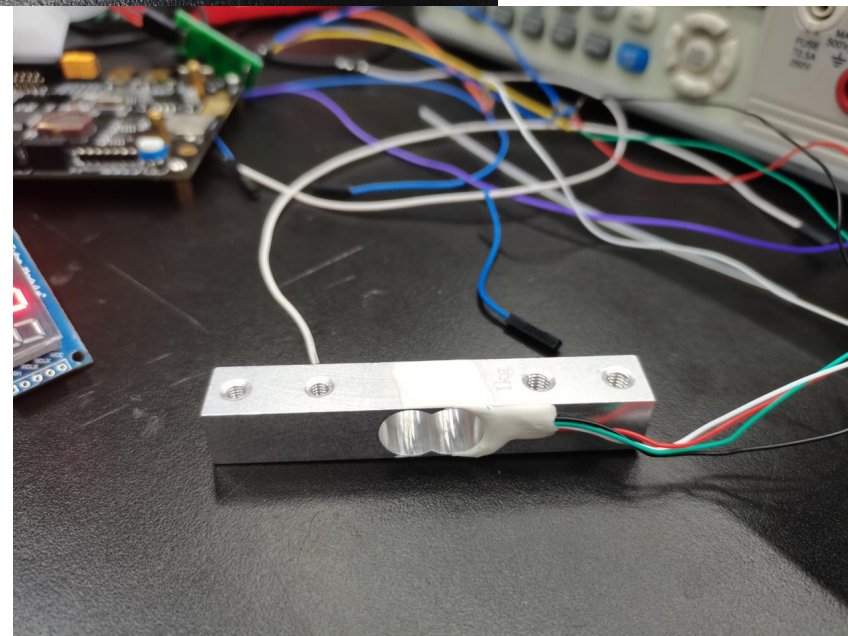
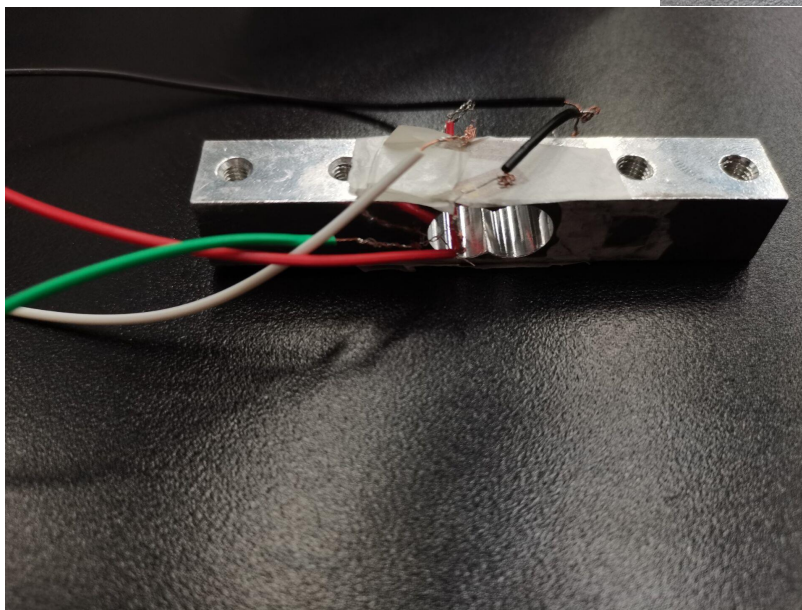
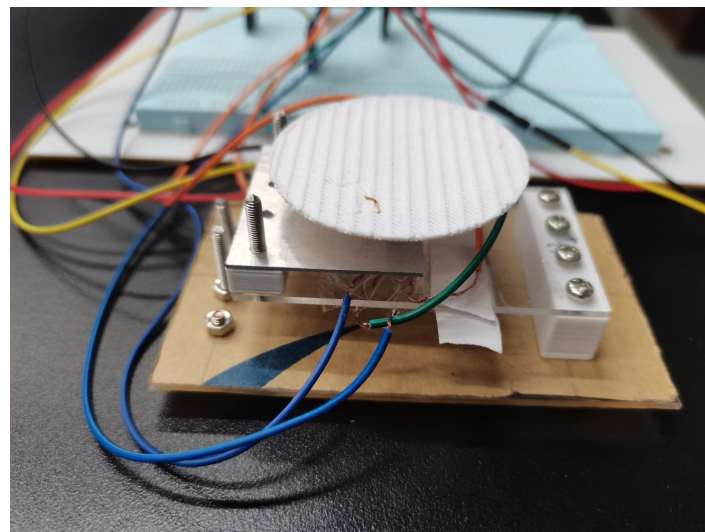


Overall structure: Strain gauge system



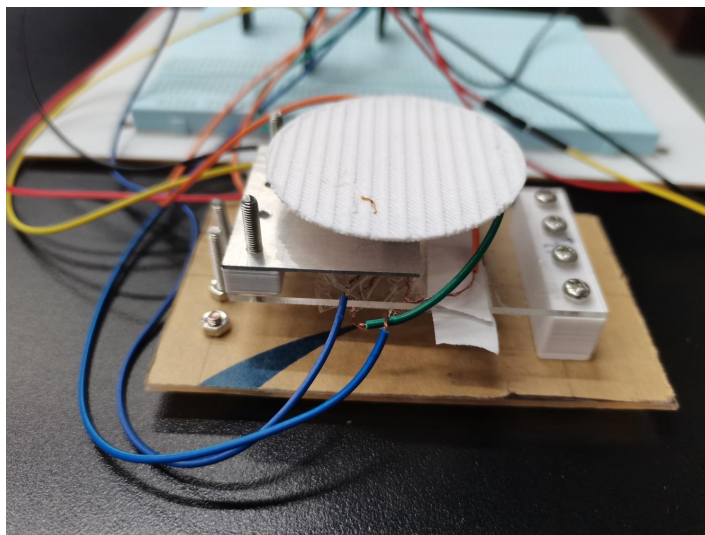
Versions of Little Smart

- 小东西 1.0
- 小东西 2.0
- 小东西 3.0

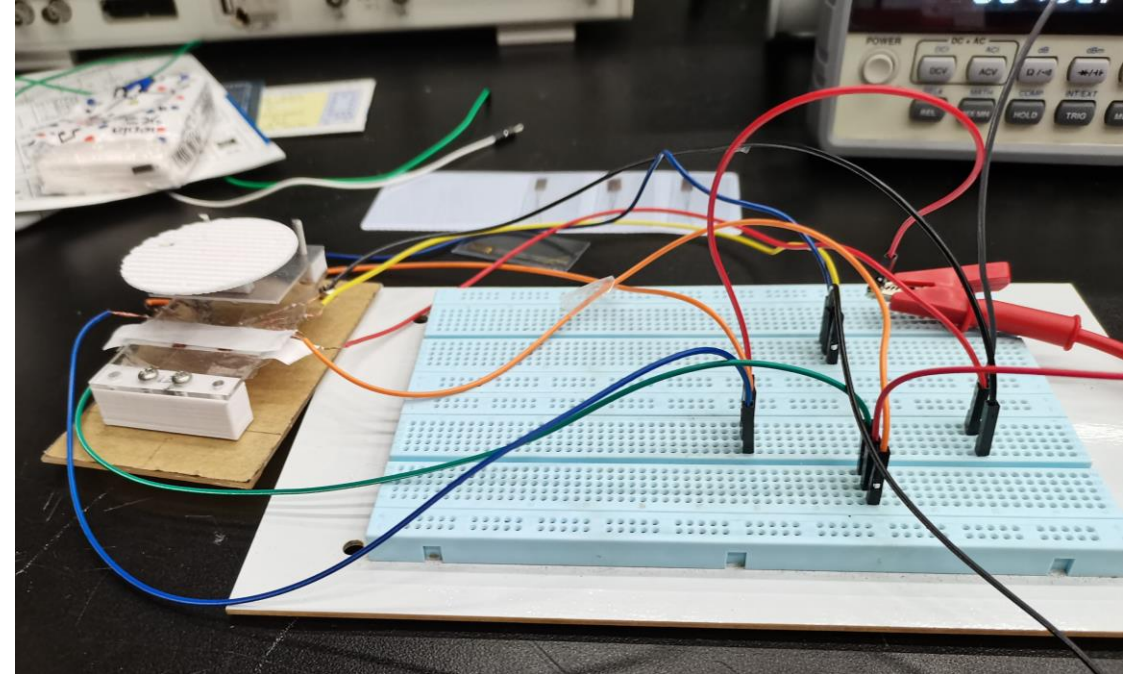
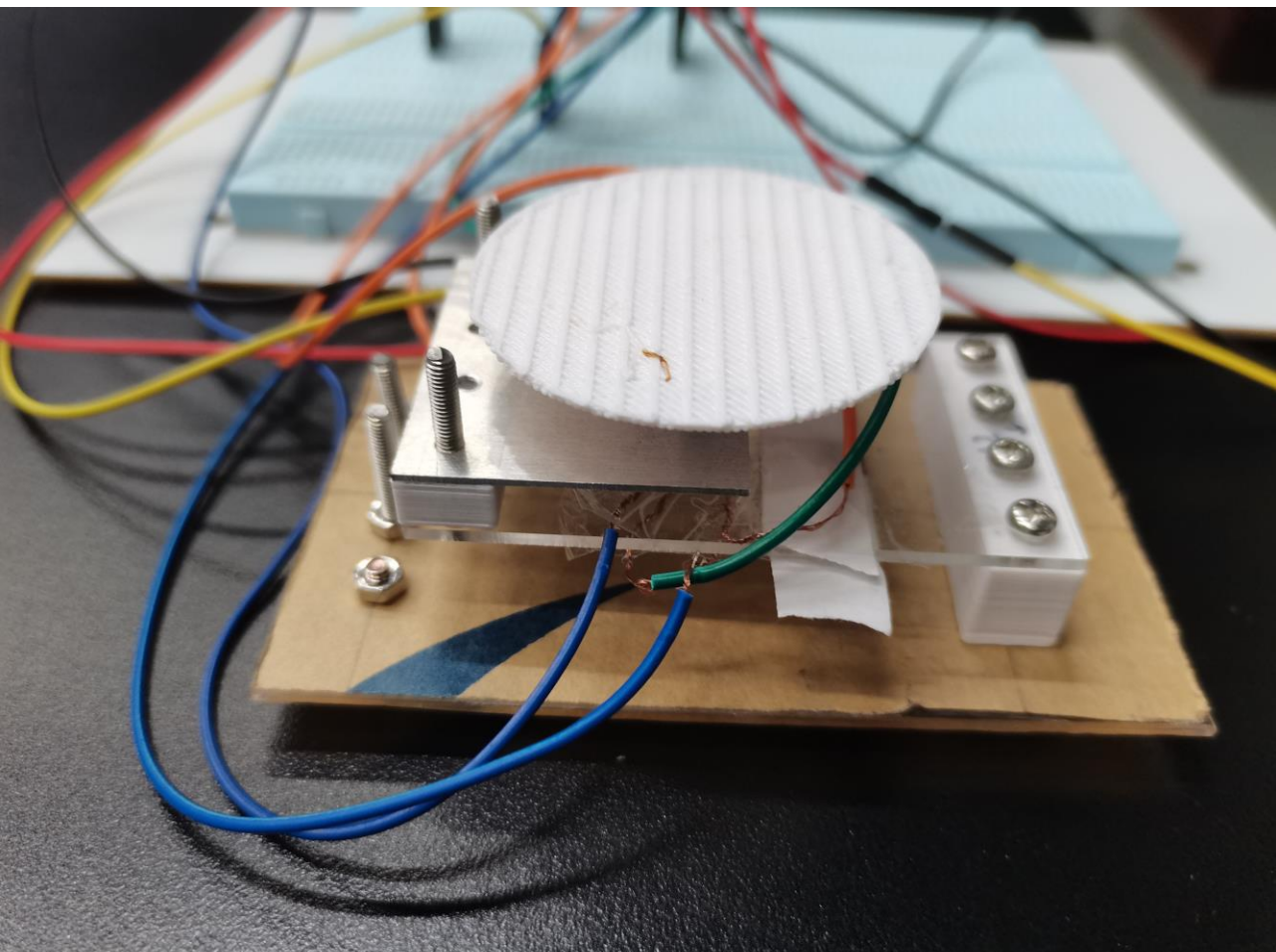


Versions of Little Smart

- 小东西 1.0
- 小东西 2.0
- 小东西 3.0

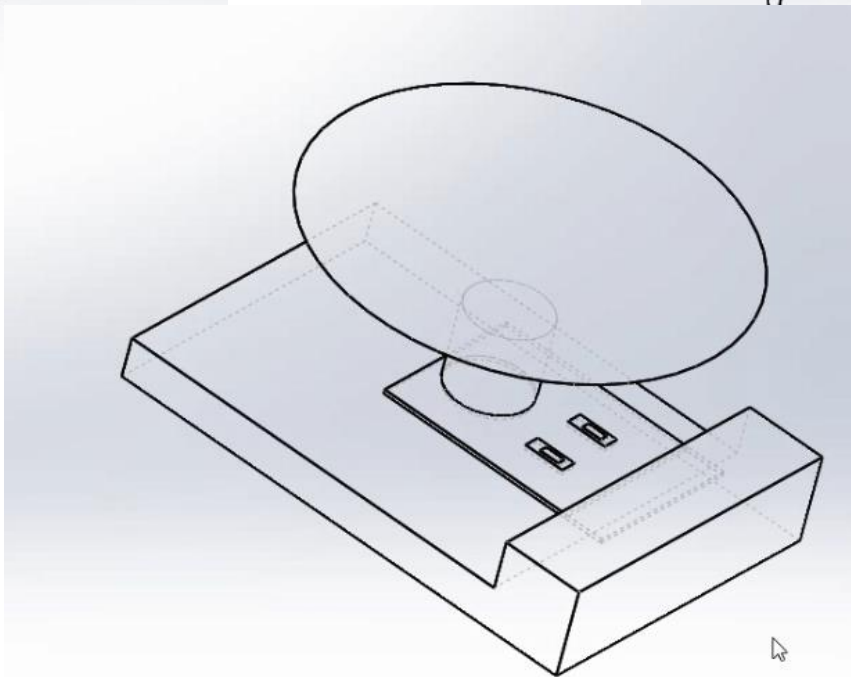
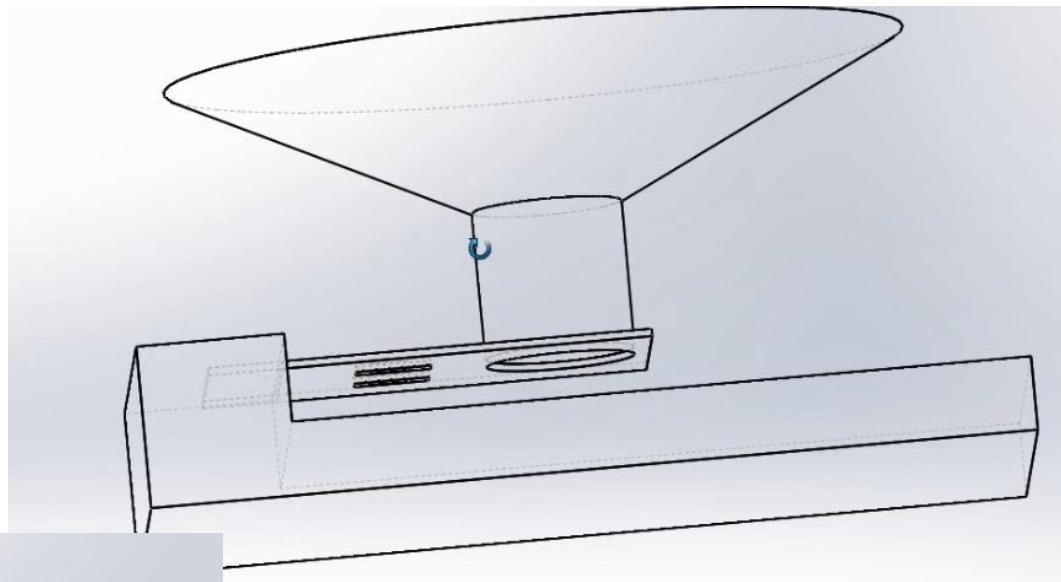
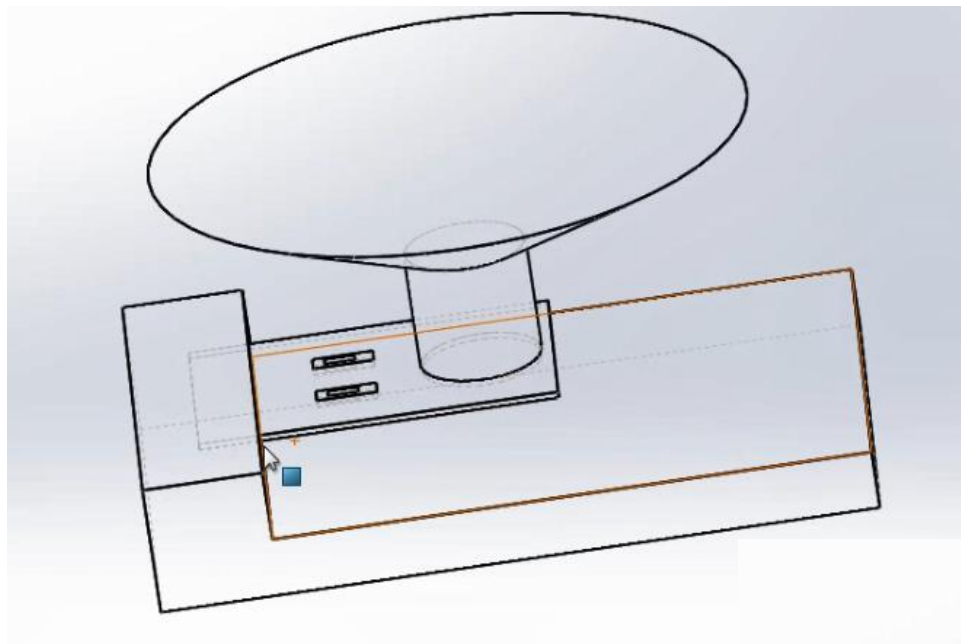


小东西1.0 (Little Smart 1.0)

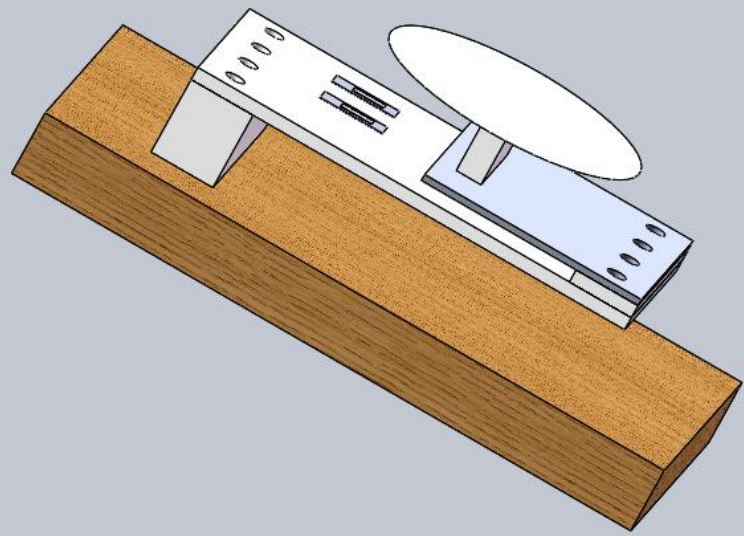


亚克力板作为秤盘
小巧可爱，但过于敏感
过阻尼后恢复较慢，数值不
稳定
尺寸：40*60*2mm

小东西1.0 (Little Smart 1.0) – 结构初版



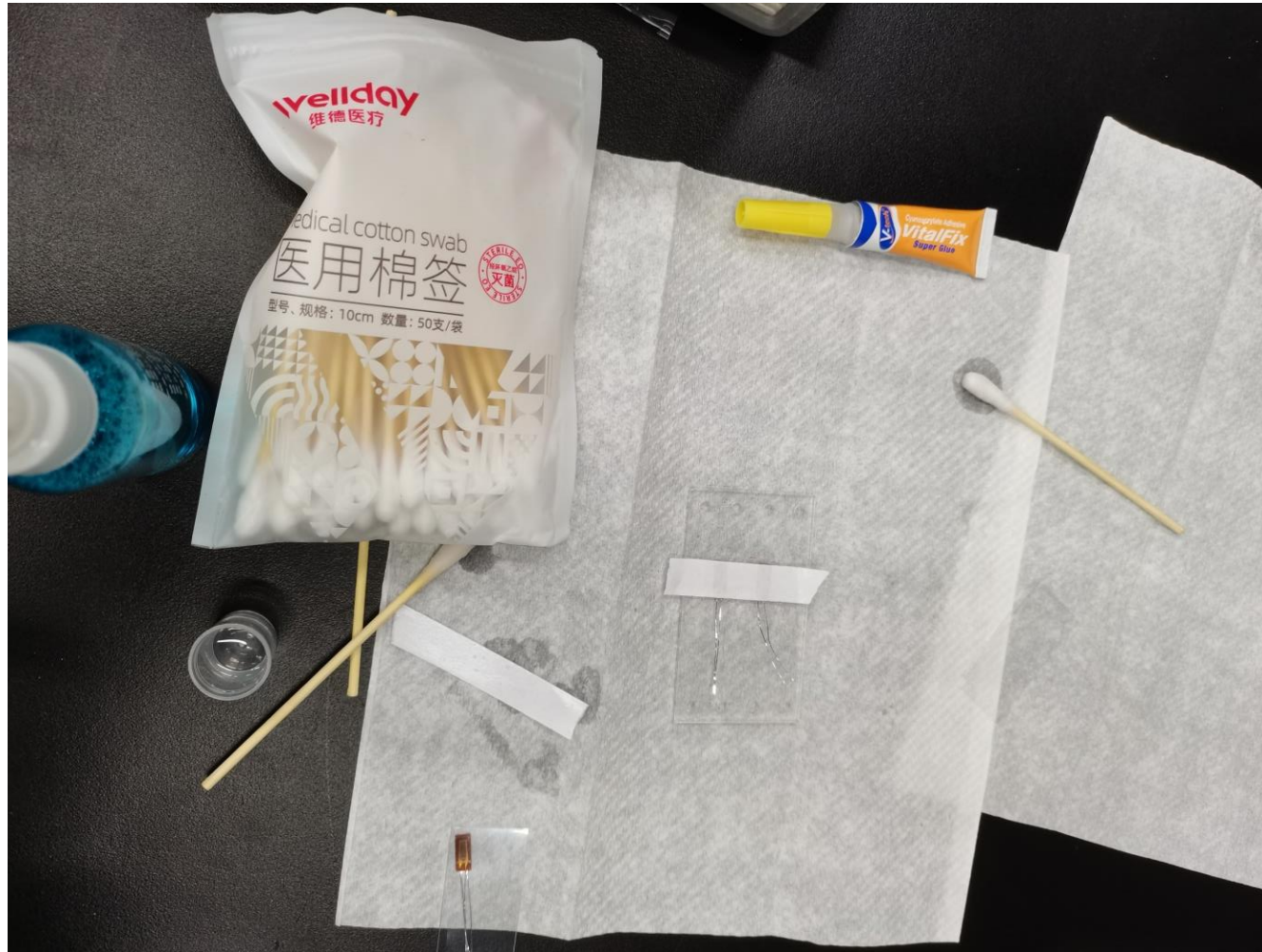
小东西1.0 (Little Smart 1.0) – 结构终版



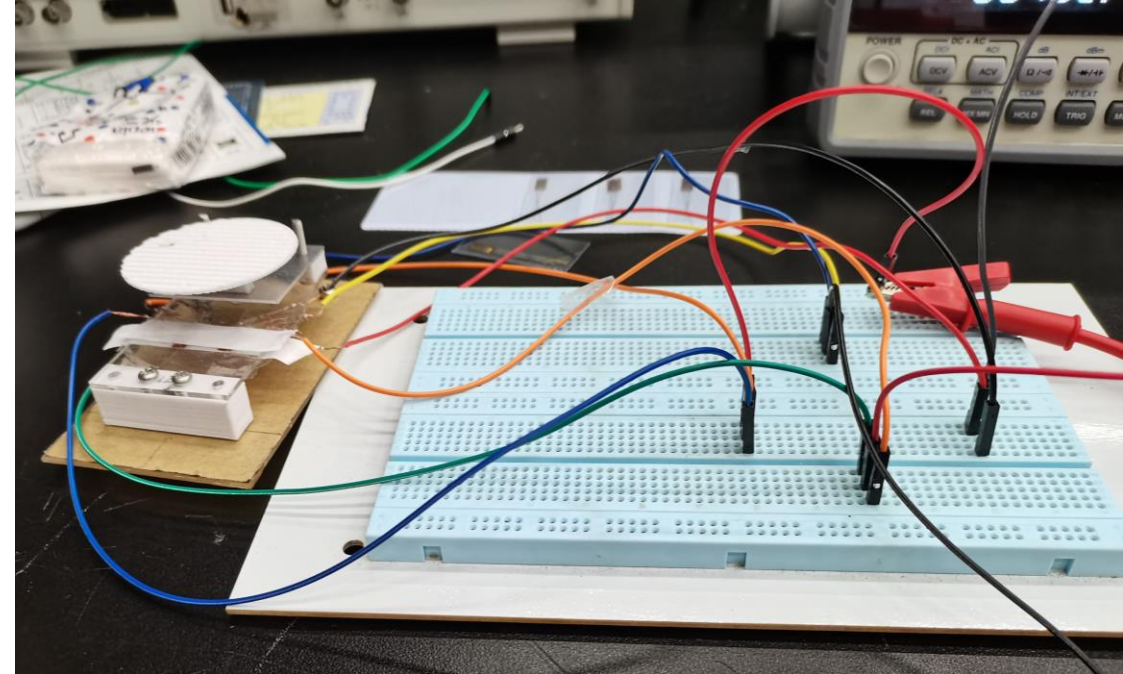
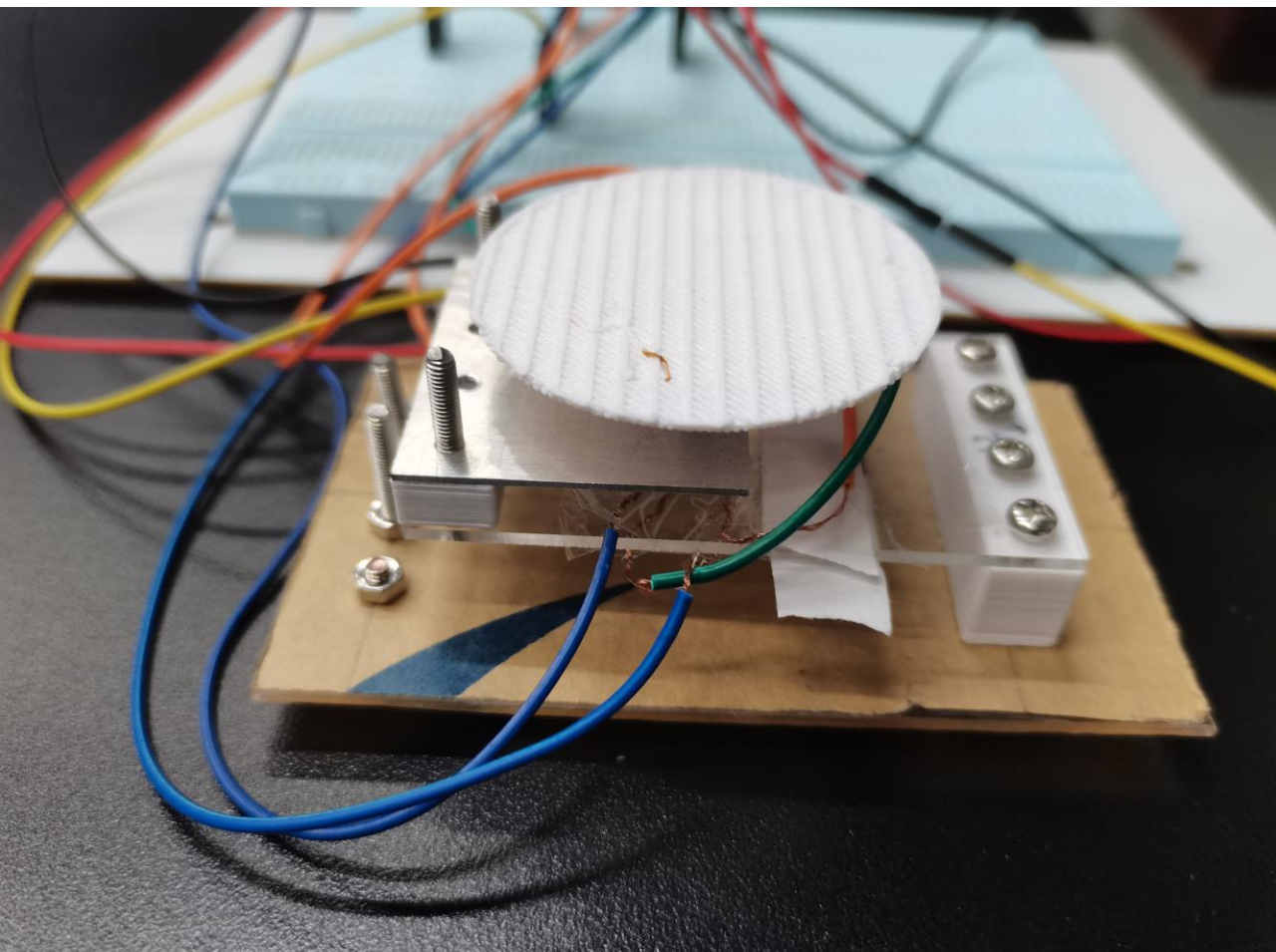
改进

- 整体结构 \Leftrightarrow 零件组装装配体
- 金属材料 \Leftrightarrow 亚克力

小东西1.0： 粘应变片

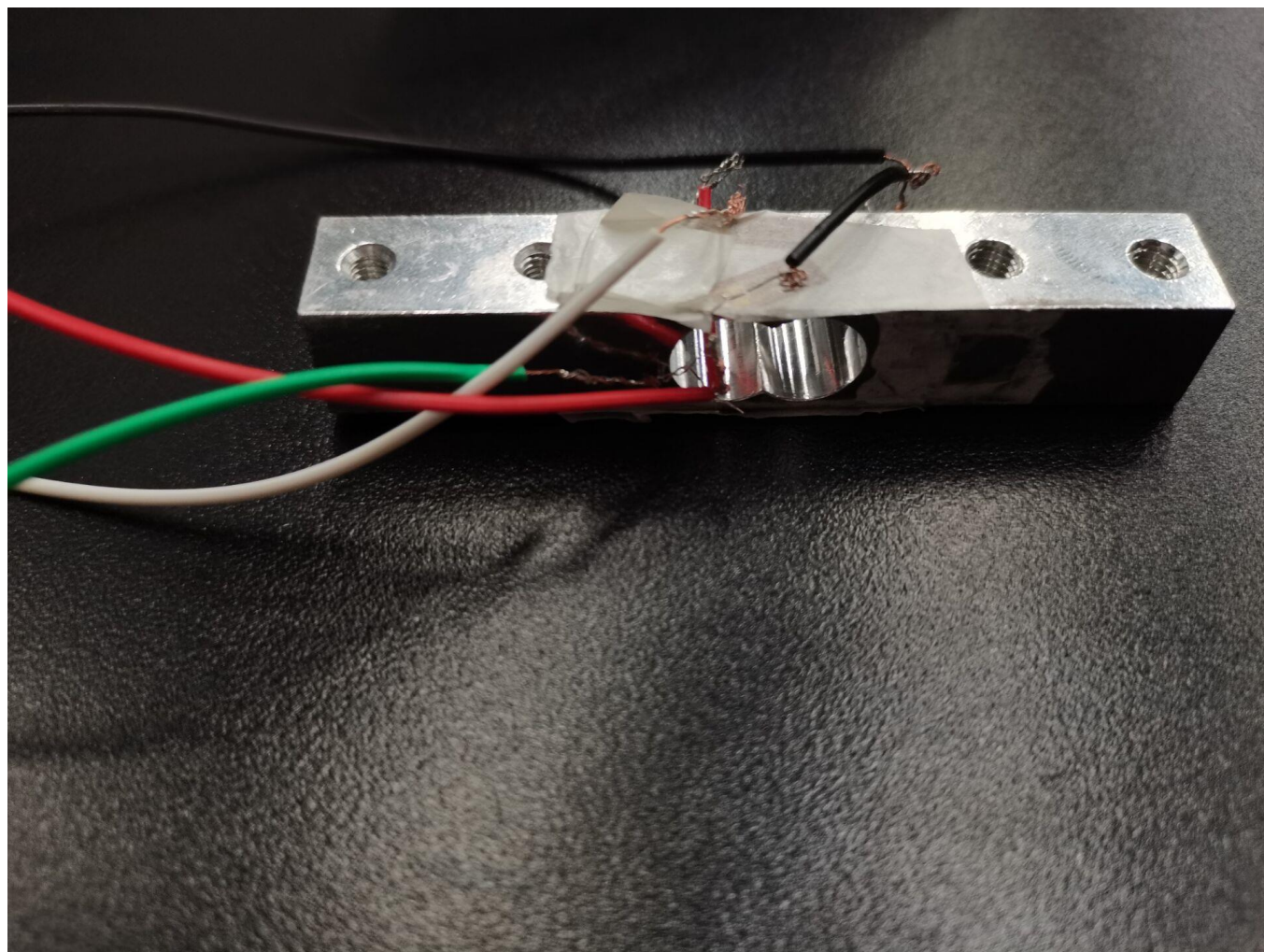


小东西1.0 (Little Smart 1.0)



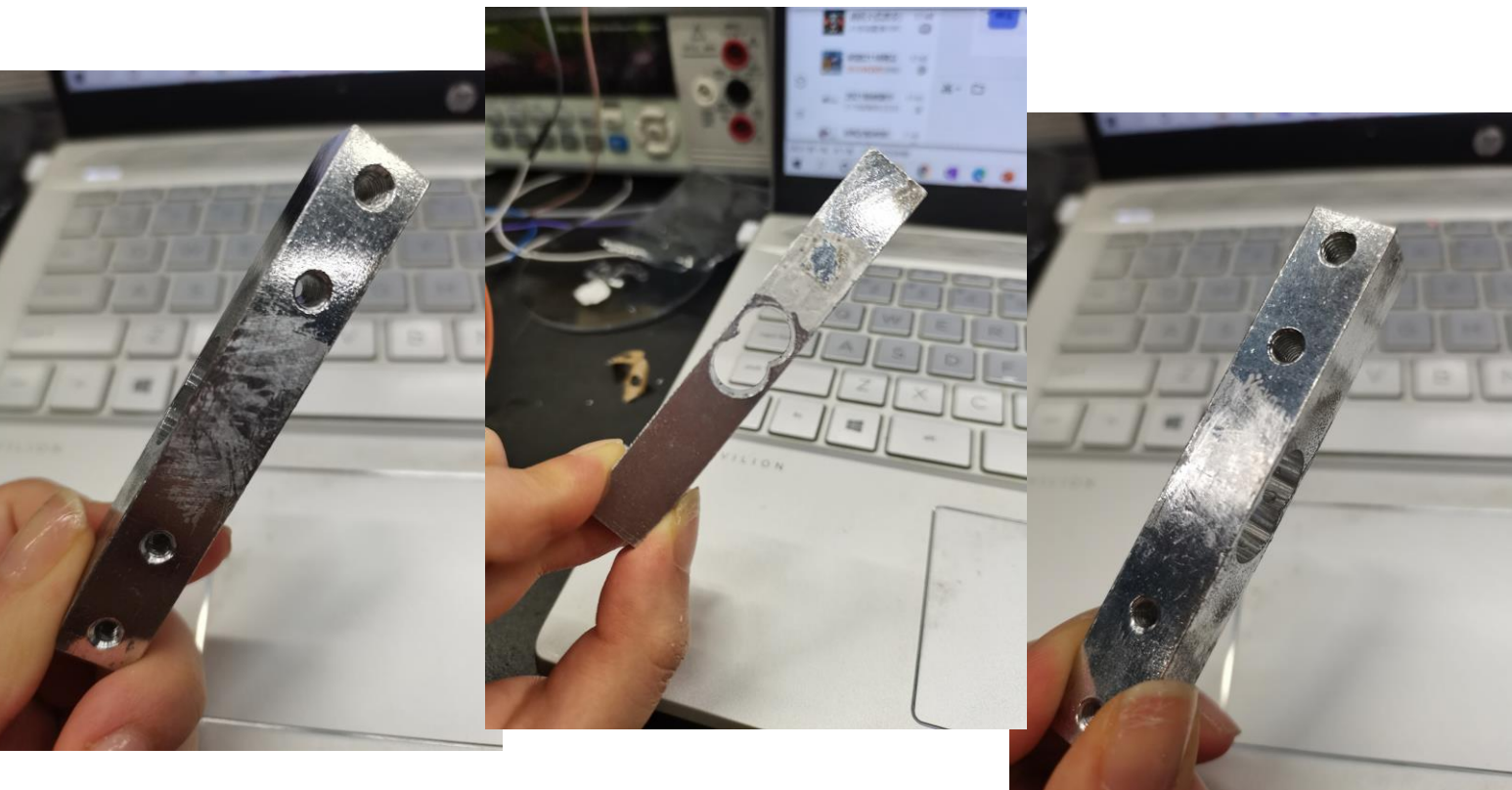
亚克力板作为秤盘
小巧可爱，但过于敏感
过阻尼后恢复较慢，数值不
稳定
尺寸：40*60*2mm

小东西2.0 broken down

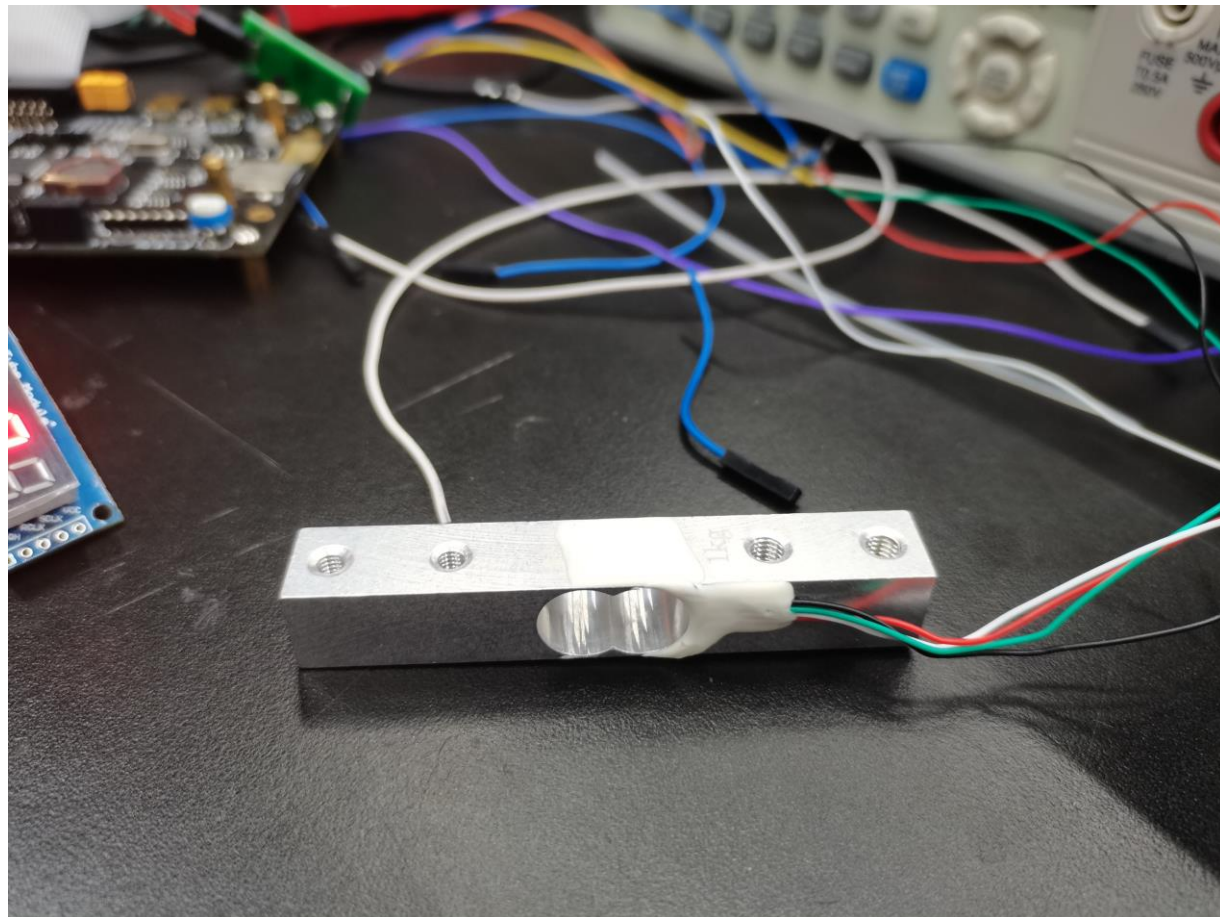


- 高高瘦瘦，可可怜怜
- 用了很久以后，拉线不小心拉断了引脚，**壮烈牺牲**

小东西3.0 粘应变片



小东西3.0



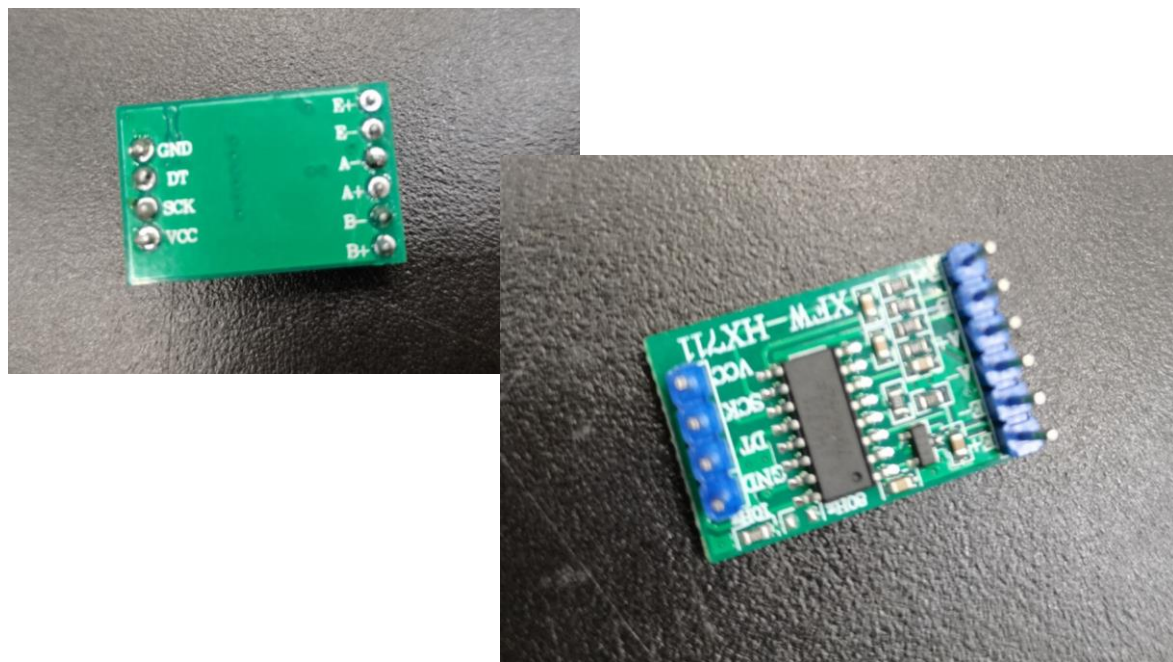
- 高高瘦瘦，健健康康
- 经过很多尝试，经验丰富，效果理想！

STM32数据处理

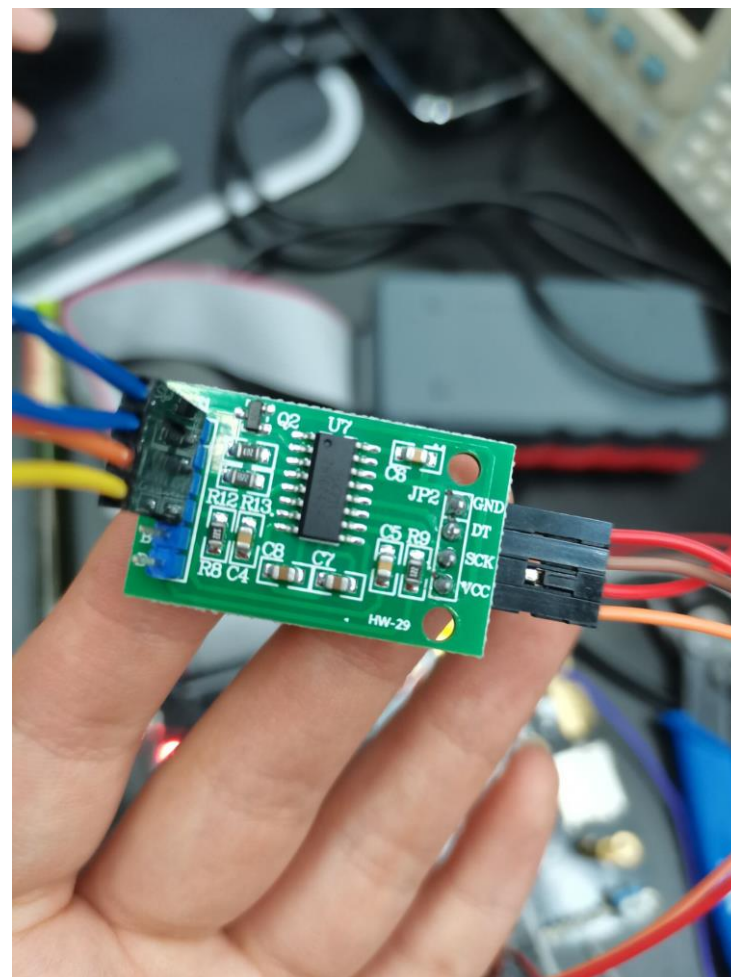
- 原本输出小数位 由于较灵敏导致读数过于不稳定→舍掉小数位
- 数据的代码很复杂 不展示了

Hx711: ADC

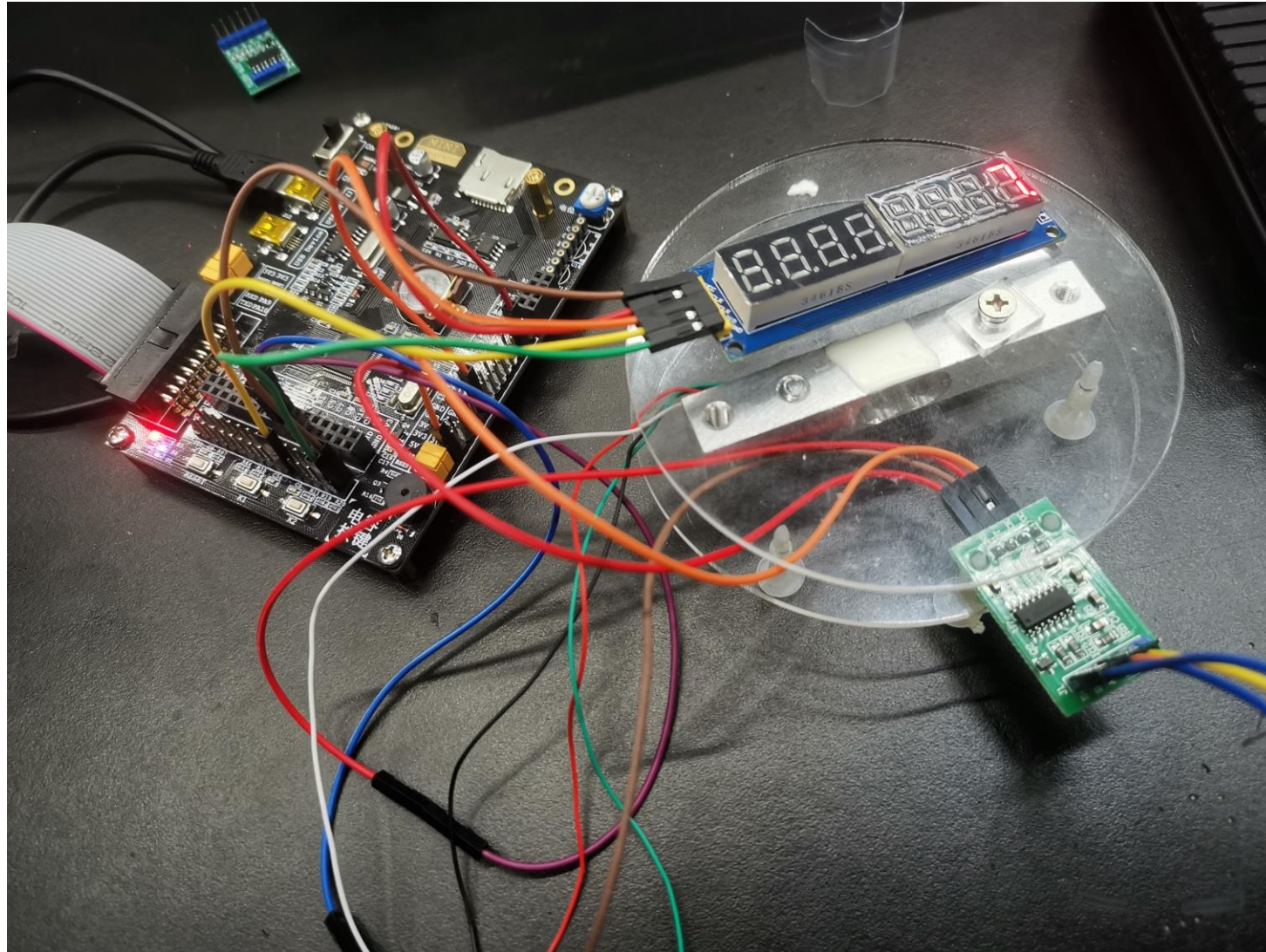
- 1号片：焊了3次，还是坏了

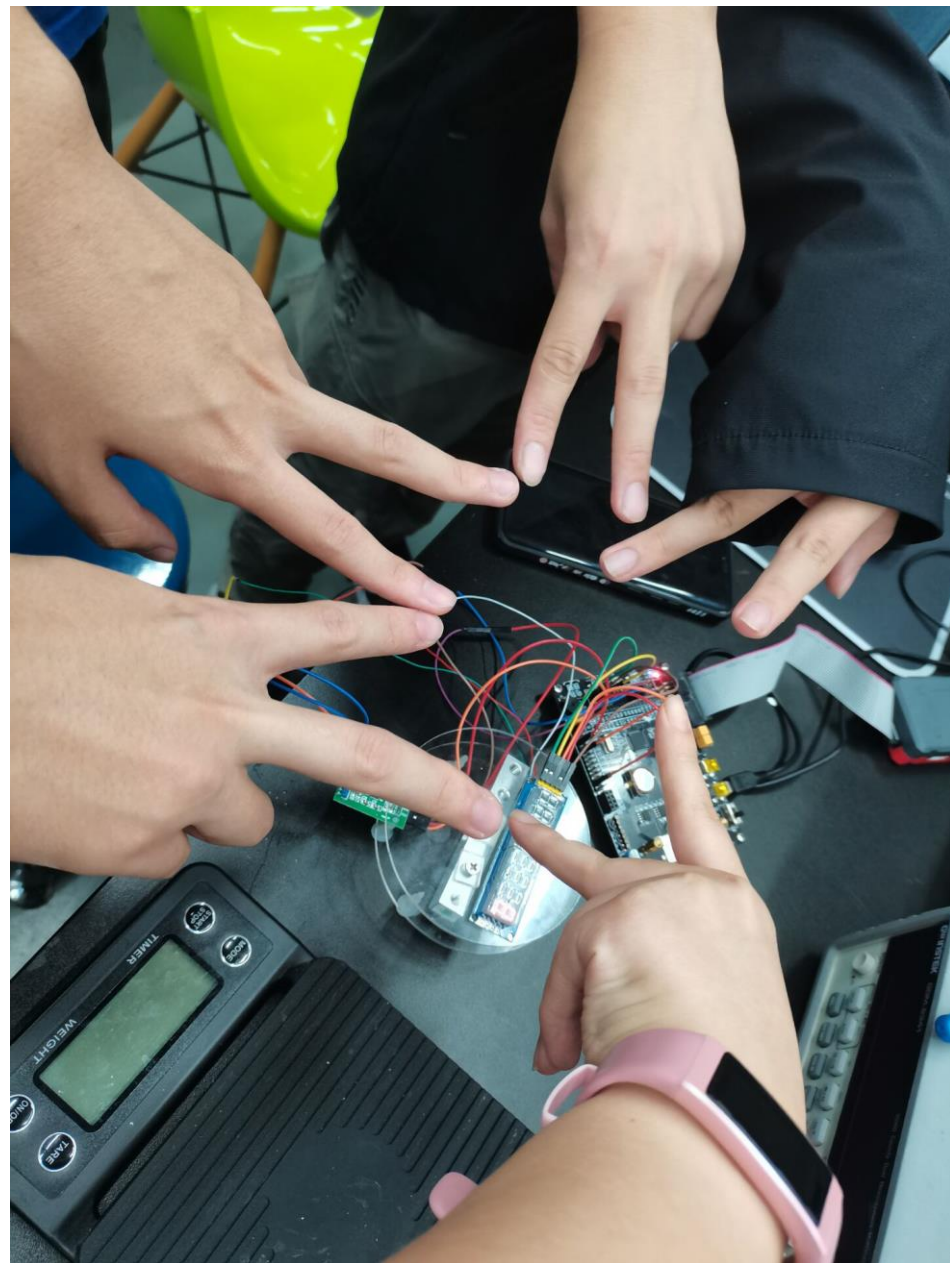


- 2号片：工作很好 ☆



Finally!!!!





Q&A
Thank you!

