# PAY SPECIAL ATTENTION

1. The Difference Between Split Port And The Same Port: Split port means that the positive and negative poles of charging and discharging should be separated; The charging current and discharging current of the same port are the same, and the charging and discharging are in the same interface.

2. Enhanced Version And Balanced Version: Balanced refers to the use of resistors to discharge high voltage cells during charging, waiting for low voltage cells to charge up the voltage to achieve consistent voltage across all voltages and improve the performance of the entire battery.

3. Before installing protection, the batteries must be properly matched (the voltage difference between each battery should not exceed 0.05v. The difference in internal resistance is not greater than 5m, and the difference in capacity is 30mAh lower). The better the battery consistency, the longer the distance traveled, and the more stable the protection performance achieved.

4. Batteries should be connected in parallel before being connected in series, and ensure correct welding (18650 batteries should be spot welded with nickel plates, and other batteries should be soldered with solder). Do not screw them down, as it may burn out the IC of the protective plate.TZT.

5. Confirm Whether The Battery Model Is A Lithium Battery Or An Iron Lithium Battery: the protection parameters for the two are different. Lithium batteries include: (ternary lithium, lithium cobalt oxide, manganese oxide), all of which have a reference voltage of 3.7V, collectively referred to as lithium batteries. Therefore, when selecting a protective plate, it is necessary to choose a lithium battery protective plate. The reference voltage of lithium iron phosphate battery is 3.2V, so the lithium iron phosphate protection board must be used when selecting the protection board.

# PRODUCT 3S/4S/5S 20A Ternary Lithium/Lithium Iron Phosphate Lithium Battery Protection Board

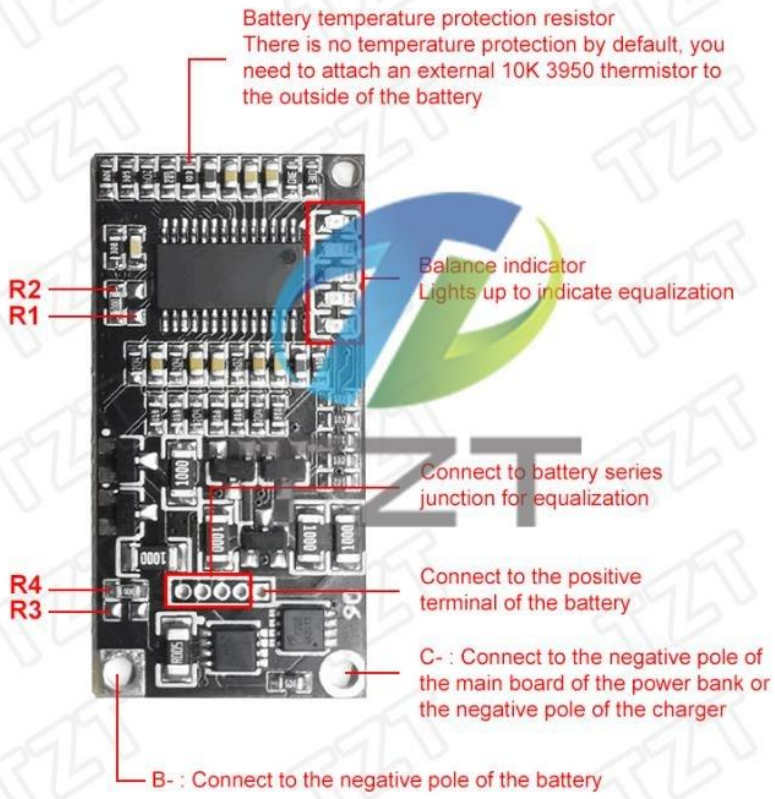
## INTRODUCTION

This module is mainly used for lithium battery protection of 100W power bank motherboard. The charging and discharging overcurrent protection current is 20A. Support 3S, 4S and 5S 3.7V/4.2V lithium battery protection or 3.65V lithium iron phosphate battery protection.

The default is how many strings to take. We have set it, no need to set it again, just wire it. If you need to change the number of strings, you can change it yourself as shown in the figure below. You can only change the number of strings. If you want to replace the type of ternary lithium or lithium iron phosphate, you need to replace the chip. If you are not familiar with it, do not replace it at will. The default protection current is 20A.We Are The Distributor Of TZT Brand In Hong Kong, China.

By default, the balanced pin headers will be soldered to the socket and given a cable. Do not arbitrarily connect wires on the mainboard pin headers, but only solder B- and C-.

## DETAILS




**SET 3 STRINGS:**

R1 is left floating, R2 is welded with 1K resistor or short-circuited, and R3 and R4 are both short-circuited or welded with 0R resistor.

**SET 4 STRINGS:**

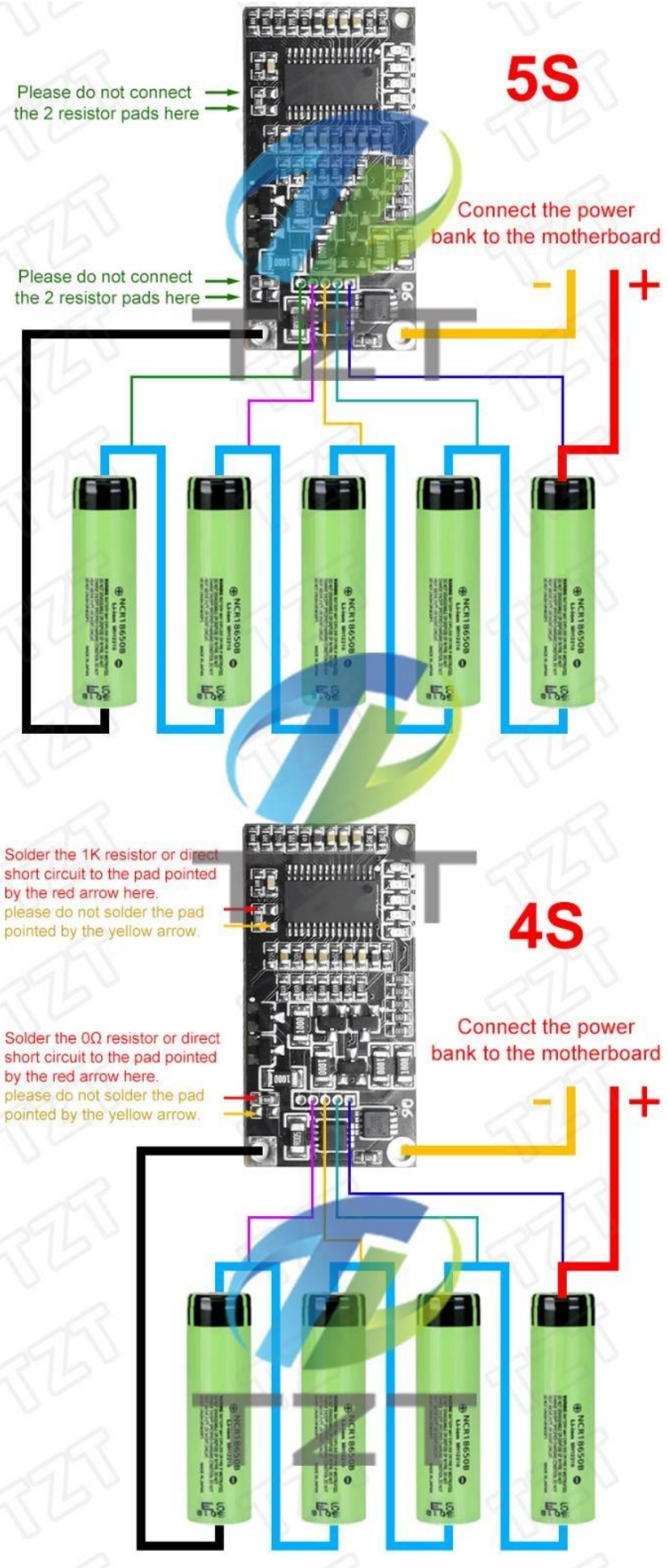
R1 is welded with a 1K resistor or short-circuited, R2 is left open, R3 is left open, and R4 is welded with a 0R resistor or short-circuited.

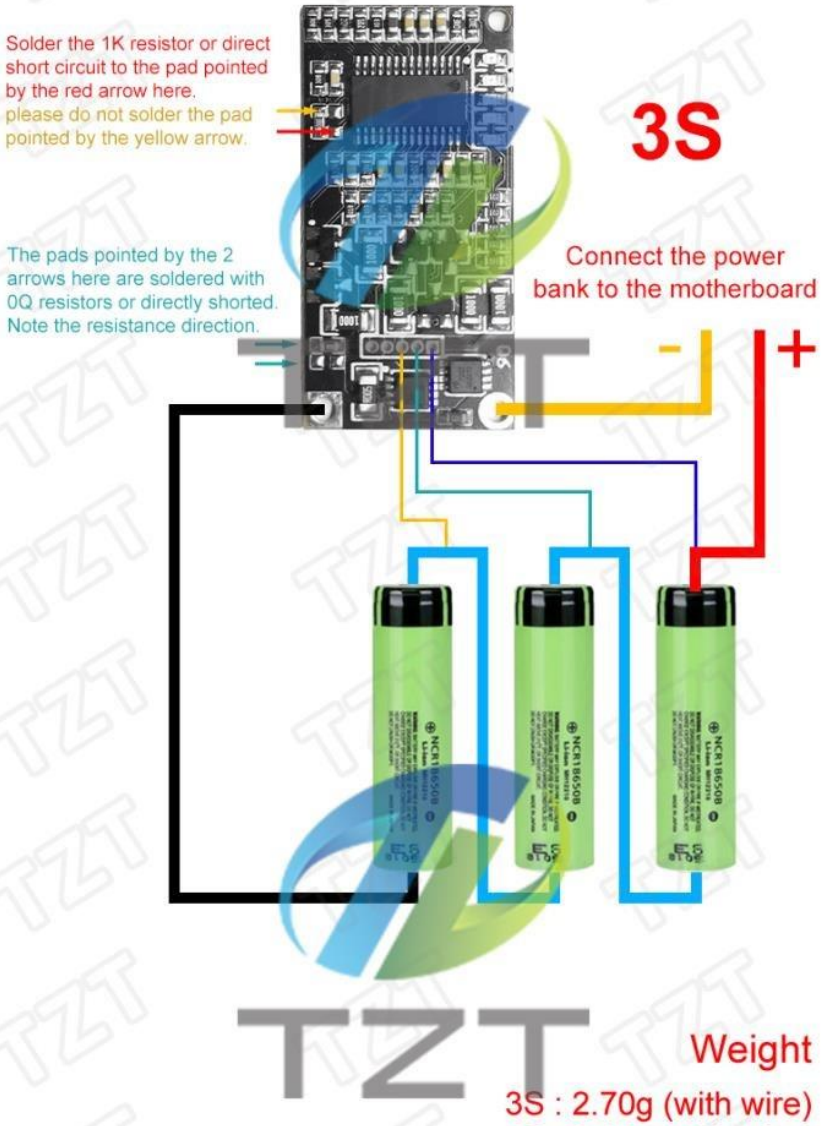
**SET 5 STRINGS:**

R1, R2, R3, R4 are all suspended without welding.

## WIRING DIAGRAM

**The thin line in the 3 pictures is the balance line, you can make it thinner, and the thick line is the power line, it must be thick, don't connect the wrong line.**


5S
Please do not connect
the 2 resistor pads here
Please do not connect
the 2 resistor pads here
Connect the power
bank to the motherboard
-
+
4S
Solder the 1K resistor or direct
short circuit to the pad pointed
by the red arrow here.
please do not solder the pad
pointed by the yellow arrow.
Solder the 0Ω resistor or direct
short circuit to the pad pointed
by the red arrow here.
please do not solder the pad
pointed by the yellow arrow.
Connect the power
bank to the motherboard
-
+




## Weight

3S : 2.70g (with wire)
4S : 3.00g (with wire)
5S : 3.30g (with wire)