Assembly steps for the VRUZEND 18650 battery pack assembly kit.
Each cap has a dove tail pattern made up of two adjacent tails and sockets.

This makes it easy for you to slide the caps in and out.

Make sure to orient all the caps in the same direction at the time of assembly.

*For in depth detail visit http://vruzend.com/tech-center/how-to-connect-vruzend-caps/
Start out by first deciding upon the size of pack you need.

Start assembling the caps. Make sure to make the columns first.

So a 13s4p pack will have 13 columns of 4 red caps and 13 columns of 4 blue caps.

Similarly a 10s5p pack will have 10 columns of 5 red caps and 10 columns of 5 blue caps.
Make the columns!
There are two ways you can make a pack using these caps.

First method is placing the cells in the individual columns made.

Pay attention to the orientation of your tails/socket. Example, if at the bottom your tails are facing the left then at the top they should face the right.

View this step at https://youtu.be/9Pqx4Au5iuc?t=4m57s
Push the caps down gently using a block of wood or a clamp.

https://www.youtube.com/watch?v=9Pxq4Au5iuct=5m20s

From one leg end to the other the distance should be 90mm-92mm.
Using the voltmeter check that every cell has made a connection.

Once you have all your groups assembled line them up such that the tails and the sockets can slide into each other.

*This is why we had asked you to keep the tails/socket facing the opposite sides at the top and bottom ;)*
For method 2, once you are done assembling the columns, Start sliding them in to form a block.

You may want to use a light hammer (100g) to gently tap on the cap legs to slide them in and level the block.
Notice how the two blocks for the top and bottom side mirror each other. That is for a red row on one side there will be a blue row on the other side, to mimic the positive negative cell polarity.
Place the cells into the block.

Make sure that it is the positive terminal going INSIDE the red cap and the negative terminal going INSIDE the blue cap.

It is a very common mistake to insert the negative terminal into the red cap and keeping the positive terminal upwards facing you. So be careful!
Place the block on top of the cells (Match the polarity of the cells to the colour coded block).

Once done use clamps to secure the caps onto the cells.
Start of by clamping at the centre. Then move the clamps to the corner of the pack and repeat.

Maintain clamping distance as 90mm-92mm from one leg end to the other.

Add the thickness of your wooden plank to this clamping distance and then maintain this distance throughout.

You can make a mark on your clamps so as to not to tighten it further.

This mark will prevent you from over clamping at the centre as measuring the cap distance for a cell at the centre of the pack will be difficult.
Like done in method one, using a Voltmeter check that every cell has made a connection with the internal contact of the cap.

If the clamping step was done right, every cell will make a connection.

In the rare case where a single cell might not have made a connection, press down on the cap gently with a blunt tool like the butt of a screw driver.
Your blocks are ready!!
Mount the bus bars and do the connections
High Amp draw applications

Advice able to make parallel modules and have them connected in series.

Use copper wires along with the bus bars to facilitate the flow of extra current.

Sandwich the copper wire between the bus bars and use the nuts to firmly fix it in place.
The gauge of your wire would depend upon your amp draw. The pic shows the copper wires connecting groups of 4 cells i.e 8 columns and 4 rows. The module is 8x4 module. Instead of using 8 copper wires, you could use just 4 copper wires by making groups of 8 i.e 4 columns and 8 rows. However that would mean a lot more current would be flowing through the wires which may require your gauge to be thicker.
Micah St Clair uses electrical insulating tape to insulate his pack for his kids quad bike!

Stanley Dimant uses a plastic box as an outer housing for his 16s4p pack which he uses for astro photography!
Now that you are done building it, what if you need to dismantle the pack?

Undo the bus bars from the part of the pack from where you want to replace/remove the cells (Pic is for illustration).

Say you do away with bus bars for 5 columns from the right.

Slide in a steel foot scale (ruler) or a thick strip into the columns and leverage it upwards.

Work your way inwards from the corner leveraging one column at a time.

Do this a couple of times before the caps begin to lift.

Notice how the caps at the bottom are still in place but the ones at the top have begin to pop.
How to connect a BMS to the kit?

P- from BMS will form the negative lead to the load

To Load (P+), To Charger (C+), BMS balance wires

C- from BMS will form the negative lead for charger

View the detailed video at https://www.youtube.com/watch?v=m4DGDkwFr54&
How to incorporate cell level fuses?

Wound the fuse wire around the threaded post and secure it with the nuts.

Simple and straightforward.
Custom/Alternative parallel connections.

Normal bus bar parallel connections

Preparing wires for parallel connections

Parallel connections made with wires instead of bus bars
A 10s4p battery in 10*2 config built for a skate board.

The parallel wires can be set up in a way as shown in the previous pic.
Power it up!!
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