



DCDC Board Design On Hexaboard

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Project Schedule



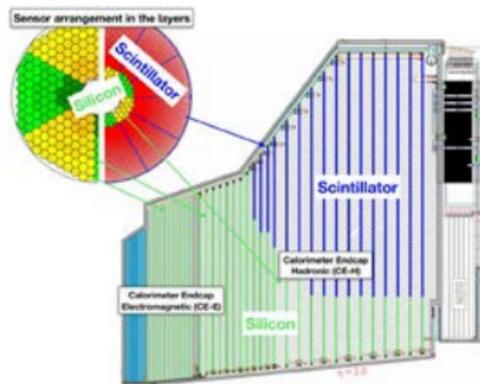
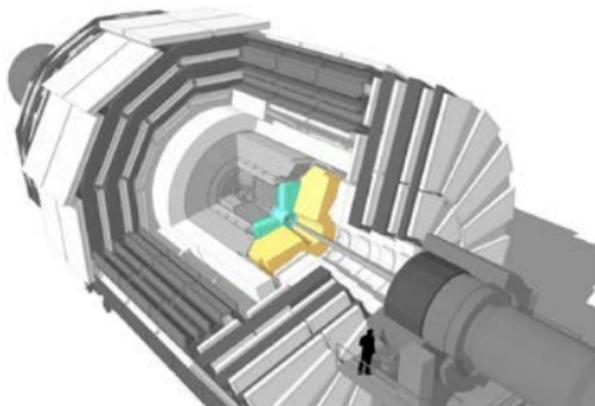
Ref : <https://project-hl-lhc-industry.web.cern.ch/content/project-schedule>

The LHC will be upgraded to collect ten times more data than the initial design.

Phase-2 upgrade of the CMS experiment, the High Granularity Calorimeter (HGCal) is developing.

CMS high granularity End-cap Calorimeter

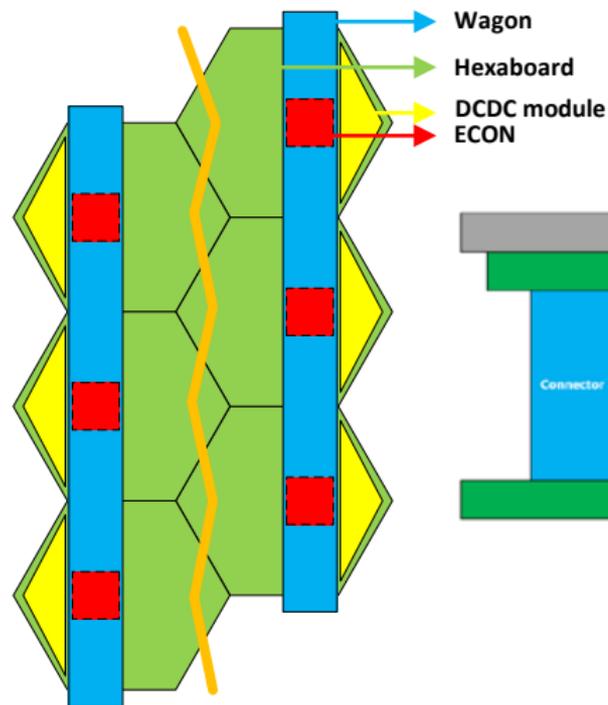
The electromagnetic calorimeter (green) and the hadronic calorimeter (yellow) will be replaced to meet the requirements of HGCal at the HL-LHC.



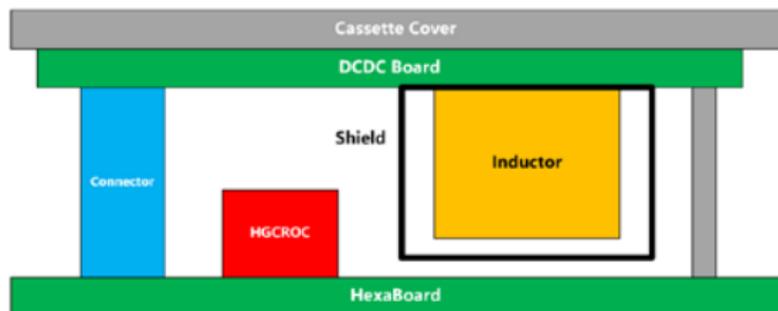


- We designed the DCDC board
- We converted hexaboard design from AD to CAD
- Technical considerations
 - Environment : temperature, radiation
 - Size : length and width, height
 - Assemble and debugging : automated assembly, connector position, test point

Layout around the Hexaboard



Top View

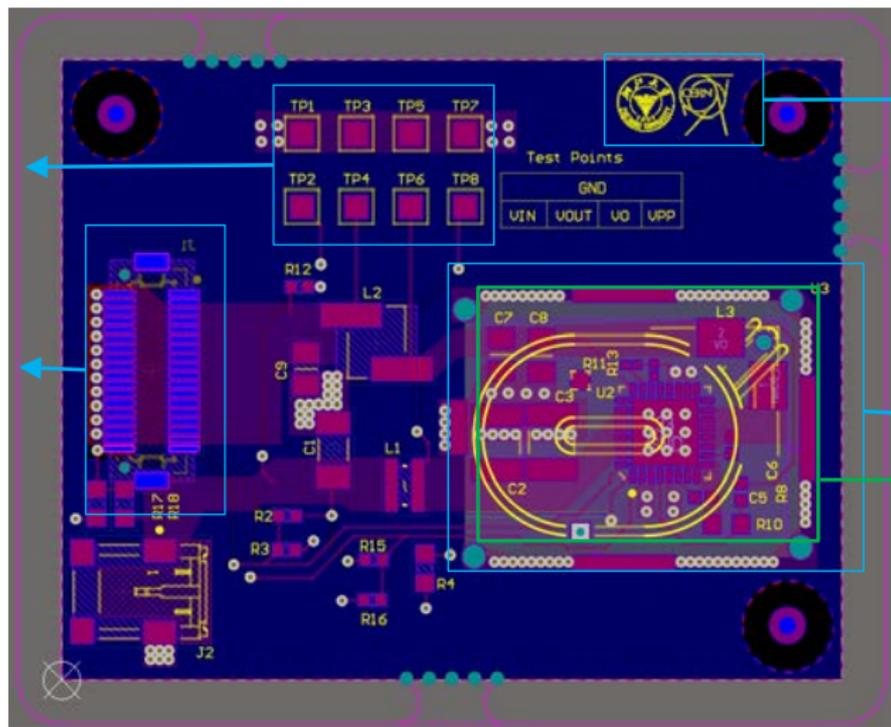


Side View

DCDC V3 Board

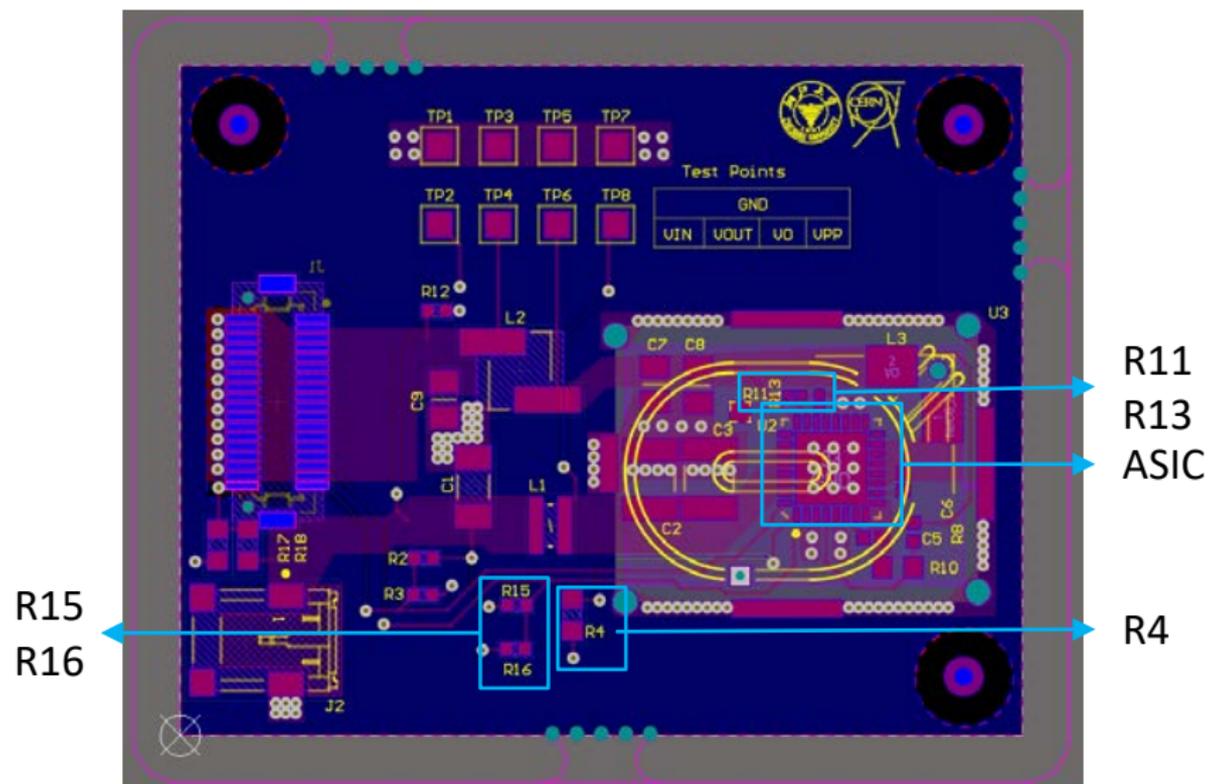
Test points

Connector


 CERN &
 Zhejiang
 University
 LOGO

 Shield
 Inductor

DCDC board has already been designed and fabricated.

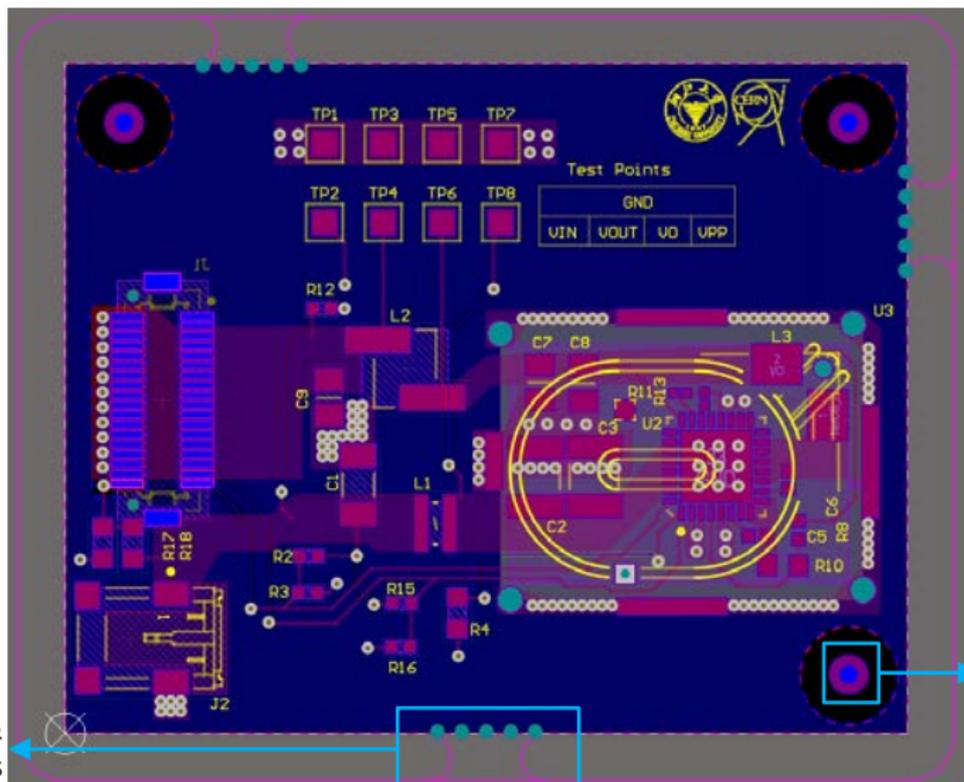


DCDC V3 Board

DCDC Board



Length:43 mm
Width :34 mm



fiducials

mouse-bites &
break-out tabs

DCDC V3 Board

DCDC Board

Length:148.8 mm

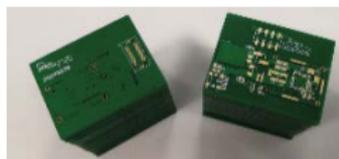
Width :126.0 mm



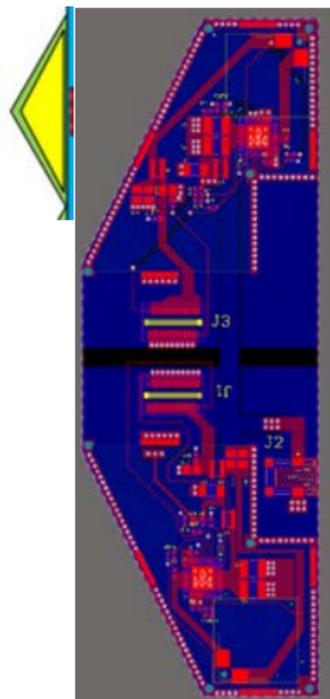
technical
edges

fiducials

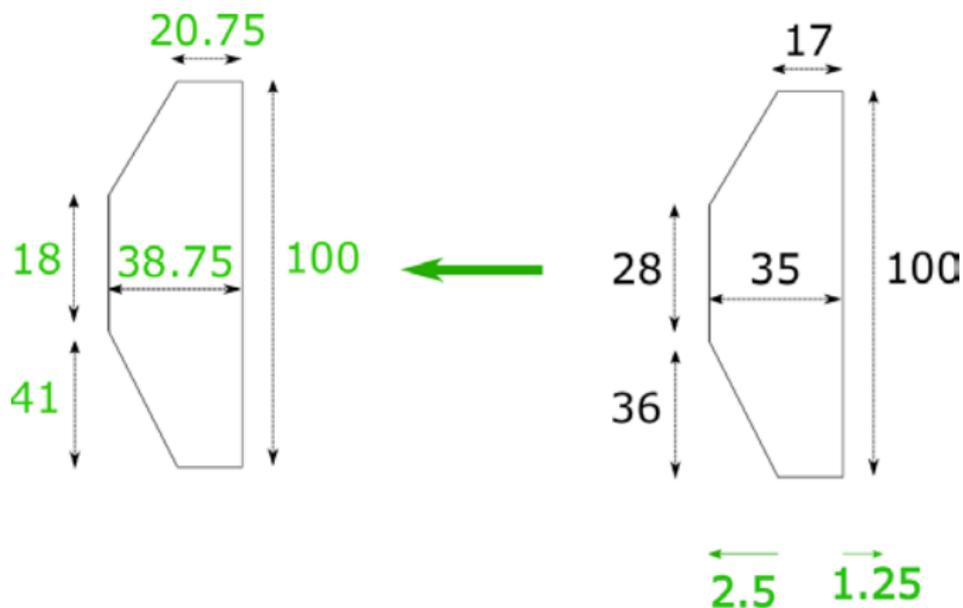
DCDC V3 Panel



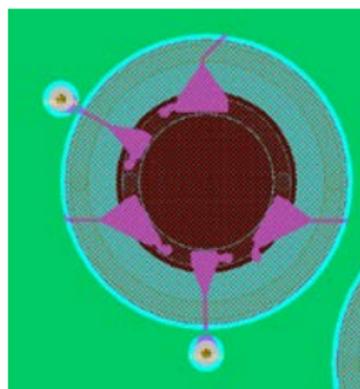
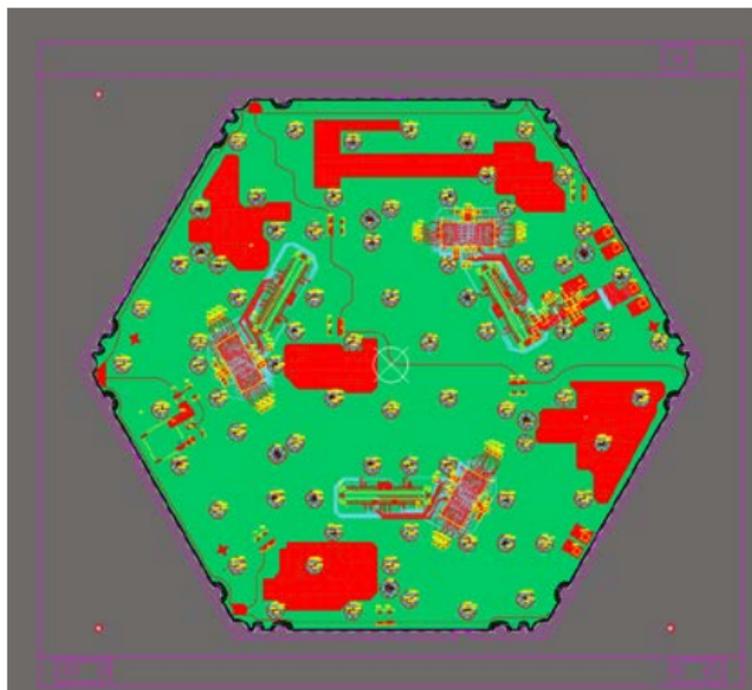
Fabricated DCDC board
@广州杰赛科技股份
有限公司



LD-DCDC



The pre-designed of LD-DCDC board has been done.



Hexaboard

Step hole

The Hexaboard design has been converted from AD to CAD



The End