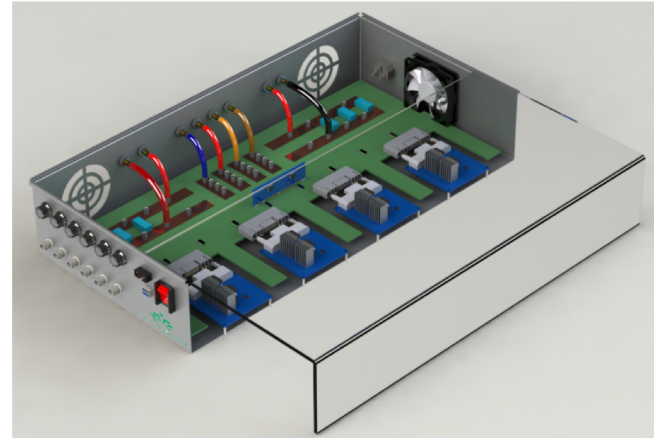


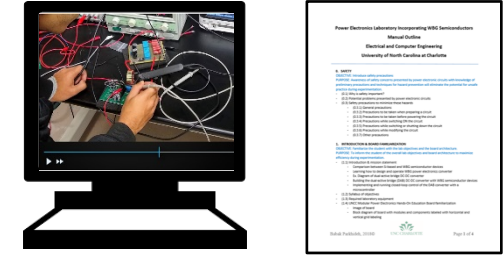
- Project Title: Extending the “Power Electronics Teaching Lab Incorporating WBG Semiconductors Switches and Circuits” for Wide-Scale Availability: Preparing Manufacturing-Ready Hardware and High-Quality Online Course Contents.
- Objectives: (1) to develop rugged, manufacturing-ready educational boards and (2) to create an online repository containing videos, hardware design materials, and teaching lab documents.
- Major Milestones: Hardware improvement & online contents outline (M3), Mid-term design review with PowerAmerica (M6), Upload final materials online (M9), Final report with lab demo review (M12).
- Deliverables: (1) Hardware improvement & online contents outline, (2) Mid-term design report after the critical review with PowerAmerica, (3) Final hardware manufacturing packet and online contents, (4) Final report with the lab demo review.

## Ruggedized hardware

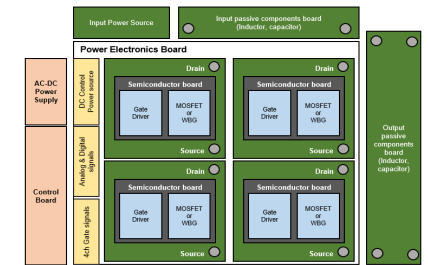


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## Online resources



## Modular education board



## WBG Technology Impact

1. Wide dissemination of the multi-function modular WBG power electronics education boards allowing “play-and-play” different semiconductor modules
2. Application sector: Academia teaching lab for students and industry training session for professionals
3. Expand WBG teaching lab and increase the number of trained WBG power electronics engineers

## Additional impacts

1. Training more WBG power electronics engineers
2. Expose more students to hands-on experience and practical knowledge of WBG semiconductors and increase job opportunities in WBG industry.
3. More safe and reliable (ruggedized) hardware to be available for other institutions and online modules that students can remotely access to utilize the hardware and perform the experiments developed at UNC Charlotte