

Project Title: Compact and efficient GaN-based back-up or portable power for electronics

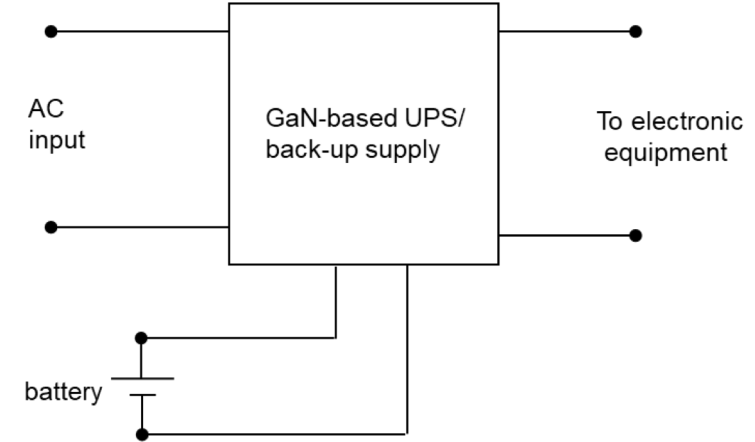
Objectives: The objective of the project is to develop a GaN-based portable or back-up power supply for electronics that is more power-dense and efficient than current silicon-based solutions.

Task No. BP5-4.40

PI: Name: Ravi Raju

Email: raju@fastwatt.com

Phone: 518-278-7017



WBG Technology Impact

1. Efficiency and power density improvement compared to silicon-based products
2. Application: Consumer UPS, consumer electronics back-up power supplies
3. Approach manufacturers by end of 2020 for potential manufacturing in 2021
4. Typical Si state-of-the-art products in the sub-100 W power range have an efficiency of $< 90\%$. The technology developed using GaN will have an efficiency of $> 95\%$.

Accomplishments/Outcomes

1. A tradeoff analysis to select a suitable circuit topology and components was undertaken during this period. This is expected to be completed by the end of the quarter (Apr2020). The results will be used to inform the prototype hardware design and assembly.