

NEWS RELEASE

Power Integrations Rolls Out Reference Design Kit for Solar Race Cars Featuring High-Efficiency Gallium-Nitride IC

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PowiGaN runs 95 percent efficient for light- and full-load critical operational and safety features

DARWIN, Australia & SAN JOSE, Calif.--(BUSINESS WIRE)-- Power Integrations is rolling out a new reference design kit tailored specifically for solar-powered race cars as 37 student teams prepare to race across the Outback in the **Bridgestone World Solar Challenge** starting August 24.

RDK-85SLR includes everything needed to create a 46-watt power supply. Solar race car teams can get the kit free by registering online.

The kit, RDK-85SLR, features the PI™ **InnoSwitch™3-AQ** IC , which incorporates PI's **PowiGaN™**

gallium-nitride switch technology. The kit is inspired by a design created by PI's **PowerPros™** online support engineers in collaboration with the ETH Zurich **aCentauri team**, whose #85 'Silvretta' challenger-class car is using the design to maximize efficiency in its auxiliary power supply.

"Thousands of engineering students participate in **solar car challenges** around the world each year, and these innovators will help bring about a more sustainable future," said Andy Smith, director of technical outreach and training for Power Integrations. "We are providing this reference kit to help young engineers take advantage of the latest, most energy-efficient technologies, such as PowiGaN, in their designs."

The design kit includes everything needed to create a 46-watt power supply that delivers up to 80 watts for short periods—making it ideal for use as an auxiliary power supply in a solar race car. It employs the company's InnoSwitch3-AQ flyback power supply IC with a highly efficient PowiGaN switch and eliminates the need for a

heatsink, enabling more compact, lightweight, and cost-effective designs. Contents of the kit include a sample power supply, four InnoSwitch3-AQ ICs, and an unpopulated PCB. It is backed by a report containing power supply and magnetics transformer build instructions, schematics, a PCB layout guide, a parts list and comprehensive performance data. Live tech support is available from Power Integrations' PowerPros team.

"We proved PowiGaN's reliability, performance and efficiency in the Bridgestone World Solar Challenge in 2023," stated Aaron Griesser, lead electrical engineer from the 2023 aCentauri team. "We achieved 95 percent efficiency across both light and full loads with a broad output range of 5 to 60 W. Additionally, the scrutineering judges were astounded to see an auxiliary power supply without a heatsink."

Power Integrations is a proud sponsor of the aCentauri team and will be reporting on the race from **Mr. Green's Blog** and PI's social media channels using hashtag #PowiGaNVan.

Availability & Resources

Reference design kit RDK-85SLR is priced at \$50. Solar race car teams can get the kit free by **registering online**.

About Power Integrations

Power Integrations, Inc., is a leading innovator in semiconductor technologies for high-voltage power conversion. The company's products are key building blocks in the clean-power ecosystem, enabling the generation of renewable energy as well as the efficient transmission and consumption of power in applications ranging from milliwatts to megawatts. For more information, please visit **www.power.com**.

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