

2012 Darnell Power Forum Program Announced; Includes Half-Day Pre-Conference Seminar "Putting GaN to Work in Your Power Supply"

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The Plenary speakers at the **2012 Darnell Power Forum** will feature senior executives from **California Institute for Energy & Environment, Efficient Power Conversion, GeneSiC Semiconductor, Maxim Integrated Products, Qualcomm, Tyndall National Institute**, and the **USNAP Alliance**. Plenary session topics will include digital power, advanced GaN and SiC devices, wireless charging technologies, renewable energy, and the smart grid. To be hosted at the San Jose Double Tree hotel September 18-21, the 2012 Darnell Power Forum (DPF '12) overall schedule includes sessions on Digital Control, Energy Harvesting, Digital Power Applications, Case Studies, Microgrids Data Centers and Server Power, Improving Energy Efficiency, GaN Devices, High-Density Power Conversion, and more. In addition to a strong focus on today's "best practices," DPF '12 will look forward toward next-generation solutions. This year's program is here.

DPF '12 will start with a half-day, pre-conference seminar on "**Putting GaN to Work in Your Power Supply**" to be presented by Robert V. White, Chief Engineer at Embedded Power Labs and a widely recognized expert in power systems architecture and digital power management. This seminar will start with a comparison of the material properties of silicon, silicon carbide, and gallium nitride. With an understanding of the GaN switches, the discussion will move on to explore the circuit techniques needed to drive the gates of both depletion mode and enhancement mode GaN devices. Examples of a 48 V to 1.2 V buck converter and a dual active bridge isolated dc-dc converter using GaN devices will be presented, including experimental data. The advantages and disadvantages of GaN devices in each are discussed. The last section of the seminar addresses the application issues of paralleling GaN devices, PCB layout, and thermal management.

This focused three-day international forum will serve the needs of an audience of decision makers and technology developers who are interested in learning about and contributing to practical advancements related to the latest powering solutions. Some of the advanced technologies to be presented at DPF '12 will include: new digital controller ICs, SiC power devices, high-voltage and low-voltage GaN switches, power measurement, power factor correction, powering LEDs, using microcontrollers, micro power management and energy storage for wireless sensor networks, wireless charging of portable devices, the latest developments in power system-on-chip (PwrSoC) devices and technologies, and more.

"Darnell Group has always been focused on the leading edge of emerging technologies and advancing power applications. Now, these areas come together in Darnell's Power Forum," stated Jeff Shepard, president of Darnell Group. "We are excited about the breadth of practical leading-edging technology developments that

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will be presented at DPF and about the opportunity to bring an international group of power and energy experts to the Silicon Valley," Shepard concluded.

Mouser Electronics is the Marquee sponsor for this year's DPF and **PMBus** and **Vicor** have joined as Platinum sponsors. The exhibition area will include a full range of active and passive electronic components, energy harvesting devices, batteries and energy storage components, ac-dc power supplies, dc-dc converters, uninterruptible power supplies, power management ICs, and cooling equipment. Exhibitors will have an opportunity to network with key technical personnel in a relaxed and positive atmosphere. DPF will maximize exhibitors' productivity. The Exhibit Hall will only open when there are no technical sessions. Focused exhibit hours will maximize productivity and efficiency and the addition of food and drink during the exhibits ensures that the Exhibit Hall is THE place to be during exhibit hours. A Welcome Reception and Lunch are served for all delegates in the Exhibit Hall.

This year's program is [here](#) [1].

More news and information regarding the latest developments in Smart Grid electronics can be found at Darnell's [SmartGridElectronics.Net](#) [2].

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Links:

[1] <http://dpf.darnell.com/schedule.php>

[2] <http://www.smartgridelectronics.net>