

# How2Power's APEC 2010 Product Showcase

This special advertising section highlights products and services from various companies in the power electronics field. Many of these products were on display at the Applied Power Electronics Conference and Exposition (APEC 2010), which was held February 21-25 in Palm Springs, California.

Products Included (click to jump to product):

- [VI-J00 and VI-200 DC-DC Converters](#) (Vicor)
- [IR3870M SuplIRBuck™ Integrated Voltage Regulator](#) (International Rectifier)
- [Power Solutions for Networking Infrastructure](#) (National Semiconductor)
- [NX9415™ DC/DC Switching Regulator](#) (Microsemi)
- [Paper Thin Planar Inductors](#) (Payton Planar Magnetics)
- [VIB0101THJ, a Sine Amplitude Converter™](#) (Vicor)
- [BKP 419-EH](#) (Absopulse Electronics)
- [PC-Controlled VNA Bode 100](#) (OMICRON Lab)
- [Custom AC/DC, DC/AC or DC/DC Converters](#) (BEAR Power Supplies)
- [MWide Input 28V Micro DC-DC Format Converters](#) (Vicor)
- [Flared Pin Fin Heat Sinks](#) (Cool Innovations)
- [IR11672A SmartRectifier™ IC](#) (International Rectifier)
- [Power over Ethernet \(PoE\) Technology](#) (Microsemi)
- [CCM250 Convection Cooled Power Supply](#) (XP Power)
- [Technical Writing](#) (Technika)
- [SMP1210S Surface Mount Power Inductor](#) (Gowanda Electronics)
- [VI BRICK BCM Array Heatsink](#) (Vicor)
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- [Aegis Single-Slot VME Power Supply](#) (Vicor)
- [Automotive DirectFET®2 Power MOSFETs](#) (International Rectifier)
- [Low Profile Power Modules for Solar Inverts](#) (Microsemi)
- [Military Filter Input Attenuator Module Converters](#) (Vicor)
- [High Performance Planar Transformers and Inductors](#) (Payton Planar Magnetics)
- [VI Chip Technology](#) (Vicor)
- [STRATO 35 W LED Driver Module](#) (ROAL Electronics)
- [VTM™ Transformer & V.I Chip™ VIV0005TFJ](#) (Vicor)



## How2Power's APEC 2010 Product Showcase



### Vicor

The VI-J00 and VI-200 DC-DC converter families now offer 24 V input, permitting operation from 12 V or 24 V sources such as those used in vehicle battery systems. The VI-J00 and VI-200 families feature a low-noise ZCS topology that greatly reduces the design effort and filtering costs required for power converters to meet agency-conducted emissions requirements. The new 24 Vdc VI-200 Series models offer 16 different output voltages ranging from 3.3 V to 48 V with a maximum power of 75 W, and four different environmental grades. Packaging options include a

flangeless model (SlimMod), a flangeless model with an integral heat sink (FinMod), and a chassis mount housing with screw/lug wiring interface (BusMod). The modules, which are optionally available in RoHS compliant models, are a compact 4.6 x 2.2 x 0.5 inch (117 x 56 x 12.7 mm) in size. For more information, see [www.vicorpower.com](http://www.vicorpower.com).

Visit Vicor at APEC Booth 113.



### International Rectifier

The IR3870M SupIRBuck™ Integrated Voltage Regulator simplifies design and maximizes system efficiency for dc-dc converter applications including those in notebook and desktop computers, game consoles, consumer electronics such as set top boxes, and general purpose point-of-load applications. The IR3870M features a hysteretic constant on-time modulator with adaptive dead-time control and  $R_{DS(ON)}$  current sensing to achieve maximum efficiency for notebooks.

The IR3870M is capable of delivering up to 10 A in environments with up to 60°C ambient temperatures and features diode emulation for improved light load efficiency. The device also offers a charge pump output (CPO) option for enhancing the MOSFET gate drive to deliver highest efficiency at medium to full load conditions. In addition, the IR3870M has a wide input voltage range of 3 V to 26 V and can be programmed for output voltages of 0.5 V to 12 V via an external resistor divider network. For more information, see [www.irf.com/whats-new/nr100107.html](http://www.irf.com/whats-new/nr100107.html).

Visit International Rectifier at APEC Booth 203.

# How2Power's APEC 2010 Product Showcase

## National Semiconductor



National's Power Solutions for Networking Infrastructure. Wired and wireless infrastructure equipment continue to demand higher power density, higher efficiency, and increased reliability. To address these demands, National Semiconductor's diverse portfolio of power management solutions optimize efficiency through the entire power chain—from the AC main power supply down to point of load.



Each of National's power products are designed for best-in-class performance with advance process technology, chip-scale packaging, and proprietary circuitry. The full range of power management solutions enable reliable, high-performance, cost-effective system design. For more information, see [www.national.com](http://www.national.com).

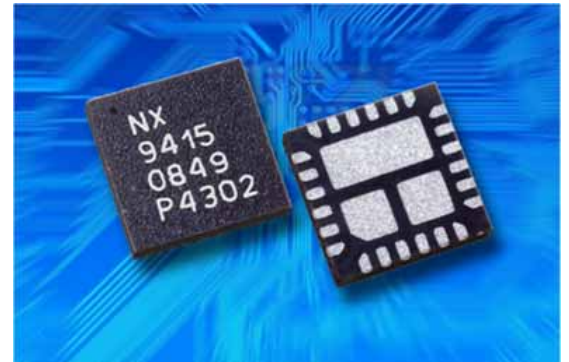


Visit National Semiconductor at APEC Booth 332.

## Microsemi

The NX9415™ DC/DC switching regulator from Microsemi Corporation is believed to be the industry's first fully integrated 22 V, 5 A, 2 MHz synchronous switcher with a compact 4 mm x 4 mm footprint. Its Vin range is from 8 V to 22 V, with a Vref of 0.8 V. It features Power Good and adjustable frequency.

Microsemi will showcase a line of ten additional DC/DC switching regulators at APEC 2010, in addition to its introduction of the NX9415 regulator. Iout specifications range from 1 amp to 8 amps, with a Vin range from 2.7 volts to 25 volts. For more information, see [www.microsemi.com](http://www.microsemi.com).



Visit Microsemi at APEC Booth 122.



## Payton Planar Magnetics

Payton Planar Magnetics Introduces Paper Thin Planar Inductors. Flexible Planar Inductors? Yes it's possible when you mix polymers with high permeability Nanocrystalline metal in order to create the world's 1<sup>st</sup> "Paper-Thin Flexible Planar Inductor". A line of low profile inductors were developed to address the needs of an industry that requires flexible parts. The size of the paper thin inductors are 0.5 mm x 10 mm x 10 mm. Inductance from 10  $\mu$ H to 120  $\mu$ H at currents up to 150 mA. For more information, see [www.paytongroup.com](http://www.paytongroup.com).

Visit Payton Planar Magnetics at APEC Booth 424.



# How2Power's APEC 2010 Product Showcase

## Vicor

The VIB0101THJ, a Sine Amplitude Converter™ (SAC™) with power density of 800 W/in<sup>3</sup>, may be used to power non-isolated POL converters or as an isolated voltage source for ATE, server, telecom and industrial control applications. The half-inch square package enables a low impedance interconnect to the system board and reduces the power system volume by 75 percent versus similar power-level converters. The BCM's low impedance SAC enables a 16x capacitance reduction—eliminating the need for limited-life aluminum electrolytic or expensive tantalum bulk capacitors. The bus converter increases overall system efficiency and lowers operating costs compared to conventional approaches. For more information, see [www.vicorpower.com/cms/home/technical\\_resources/Data\\_Sheets](http://www.vicorpower.com/cms/home/technical_resources/Data_Sheets).



Visit Vicor at APEC Booth 113.

## Absopulse Electronics



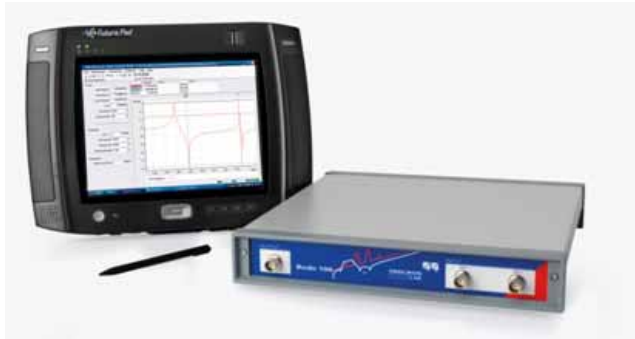
The BKP 419-EH is a rugged dc/dc plug-in converter module that generates up to 1,500 W output power. The natural air convection cooled version generates 1000 W and the unit with forced-air cooling by system fans delivers 1500 W. This heavy-duty plug-in module measures 4U x 16HP x 12" and is typically used in 19" rack-mount applications. The standard version operates from a 125 Vdc (105 to 140 Vdc range) line voltage and delivers a single output of either 24 V or 48 Vdc. Other input and output voltages are available.

A built-in redundancy diode allows for parallel connection or n+1 redundant operation, including hot insertion. An output voltage-on LED indicator, voltage adjustment potentiometer, and test points are located on the front-panel. Full electronic protection, low component count and large design headroom ensure a high MTBF. Absopulse Electronics' offers an extensive range of plug-in modules available individually or assembled in pre-wired 19" or 23" racks. For more information, see [www.absopulse.com/Absopulse\\_PressRel\\_BKP\\_419-EH\\_Nov09.php](http://www.absopulse.com/Absopulse_PressRel_BKP_419-EH_Nov09.php).

# How2Power's APEC 2010 Product Showcase

## OMICRON Lab

With its wide frequency range (1 Hz – 40 MHz) OMICRON Lab's PC-controlled VNA Bode 100 enables vector network analysis in a frequency spectrum not supported by most VNAs in the marketplace. Due to the switchable input impedance (50 Ohms / 1 MOhm) the Bode 100 can be used like a classic 50 Ohm S-Parameter test set as well as for gain/phase and impedance/reflection measurements. Due to its light weight and compact design the Bode 100 offers an outstanding portability to test wherever needed.



Besides its intuitive graphical user interface, the Bode 100 offers a flexible automation interface. To simplify the integration of the Bode 100 into existing automated measurement setups or the buildup of new automated test systems, automation examples for the most commonly used languages & programs are available on [www.omicron-lab.com](http://www.omicron-lab.com). OMICRON Lab's vector network analyzer Bode 100 is nowadays used by customers in 35 countries around the globe. For more information, see [www.omicron-lab.com](http://www.omicron-lab.com).

## BEAR Power Supplies

BEAR Power Supplies creates custom AC/DC, DC/AC or DC/DC converters, from mW to KW. We excel at meeting your most unusual requirements, including hard-to-meet electrical specs, unusual features, odd form factors, high reliability and extreme operating temperature ranges. We make open frame, enclosed and encapsulated custom power converters that are compact and rugged, designed and built for long life in demanding environments.

BEAR custom power supplies are used in a wide range of industrial, commercial and medical applications including military, telecom, transportation, smart grid and portable systems. Our engineering and manufacturing teams work together in one location, conveniently located in western New York. We focus on understanding your real needs, offering expert guidance on your specs, and creating highly manufacturable products. You'll go from concept to prototype to production quickly, with reasonable NRE charges and production volumes from 50 to more than 50 thousand units per year. For more information, see [www.bearpwr.com/products\\_custom.shtml](http://www.bearpwr.com/products_custom.shtml).



# How2Power's APEC 2010 Product Showcase



## Vicor

Targeting military and commercial vehicle applications, Vicor's lineup of wide-input 28-V dc-dc converters now includes eight models in the Micro dc-dc format, which measures 2.28 x 1.45 x 0.5 inches. Capable of operating over an input range of 9 V to 36 V with efficiencies up to 81 percent, these modules are ideal for either 12 or 24 V applications such as MIL-COTS or commercial battery systems in vehicles. They can also be used in a variety of vehicle or man-portable applications including lighting, communications, portable test equipment, display, and control systems. These converters also offer

nominal output voltages ranging from 3.3 to 48 Vdc and a maximum power of 100 W at an output of 12, 15, 24, 28, 36, and 48 V or 50 W at 3.3 and 5 V. Units are available in four environmental grades with operating temperatures as low as  $-55^{\circ}\text{C}$  and with six pin options and three baseplate options. For more information, see [www.vicorpower.com](http://www.vicorpower.com).

Visit Vicor at APEC Booth 113.

## Cool Innovations

Flared pin fin heat sinks are considered to be among the most innovative and powerful heat sink technologies available today for natural convection environments. The cooling power derived from flared pin fin heat sinks stems from a unique structure that was designed and optimized for natural convection. The flared structure is spacious by nature, yet features substantial surface area. This unique structure is therefore able to minimize friction, yet offer high total surface area. To further enhance cooling, the flared structure is complemented by the use of smooth round pins and highly conductive materials. Flared pin fin heat sinks can easily be customized to meet applications specific requirements in a cost effective fashion. For more information, see [www.coolinnovations.com](http://www.coolinnovations.com).





## How2Power's APEC 2010 Product Showcase

### International Rectifier

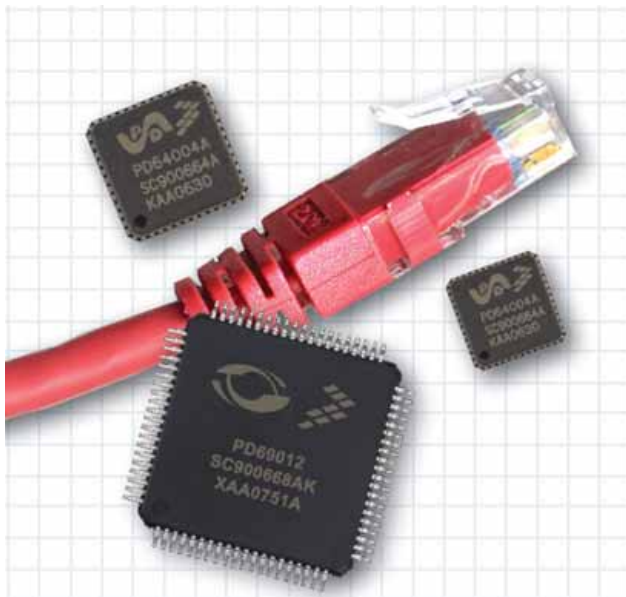
The IR11672A SmartRectifier™ IC delivers greater protection and higher system efficiency for ac-dc power converters for laptops, LCD and PDP televisions, game consoles, and server and telecom switch mode power supplies. Featuring IR's proprietary 200 V IC technology, the IR11672A is a smart secondary-side synchronous rectification (SR) controller designed to drive N-Channel power MOSFETs used as synchronous rectifiers in isolated flyback and resonant half-bridge converters.



As a result of the device's minimum on time (MOT) protection circuitry, reverse current is prevented at very light load or no load conditions in both flyback and resonant half-bridge converters, while power shutdown spikes that cause avalanche breakdown in resonant half-bridge converters are minimized during power off for highly reliable operation. The IR11672A SmartRectifier's advanced MOT protection circuit offers a high level of accuracy and reliability in a variety of transformer switching modes and applications that require optimum system efficiency and power density in a compact design. For more information, see [www.irf.com/whats-new/nr091203.html](http://www.irf.com/whats-new/nr091203.html).

Visit International Rectifier at APEC Booth 203.

### Microsemi



Microsemi Corporation will showcase its industry-leading Power over Ethernet (PoE) technology at APEC 2010 in Palm Springs. The company provides a portfolio of controller chipsets for single and multi-port Ethernet switches ranging from 1 to 24 ports. The line offers chipsets compliant with standard power IEEE 802.3af, standard power for pre-standard devices and high power compliant with the new IEEE 802.3at standards. The Microsemi PoE controller designs include advanced management capabilities for multi-port applications and single operating voltage sources from 44 volts to 57 volts. For more information, see [www.microsemi.com](http://www.microsemi.com).

Visit Microsemi at APEC Booth 122.

## How2Power's APEC 2010 Product Showcase



### XP Power

XP Power announces a new 250 W convection cooled AC/DC power supply, the CCM250, that achieves up to 95% efficiency, dramatically cutting the heat generated in medical, IT and industrial systems. Rival products typically operate at 85% maximum efficiency, with 44 watts of the input energy being converted to waste heat that needs to be removed. The 10% improvement in efficiency offered by the CCM250 means that it dissipates less than one third of the heat, reducing or eliminating the requirement for heatsinks, or fans for forced-air cooling.

The innovative interleaved resonant topology, coupled with lossless switching in the power factor correction circuit, main converter and output rectifier account for the dramatic improvement in power supply efficiency. Most significantly, exceptionally high efficiency is achieved under all load and input voltage conditions, not just at full load, as is often the case. For more information or to request a sample, please visit [www.xppower.com](http://www.xppower.com).

### Technika

Technika is a technology writing company specialized in offering research, writing and marketing services to electronics companies.

- Brings over 25 years of publishing experience in the electronics industry.
- Specialized in writing technology and product reports for trade publications, design articles, application notes and white papers for semiconductor manufacturers, opinion columns and custom e-newsletters.

Technika is led by Ashok Bindra, former editorial director of RF Design, Auto Electronics, and Power Electronics Technology magazines, and associated supplements and e-newsletters. With over 25 years of experience in technology writing and editing for major electronics magazines in the industry, Bindra holds an M.S. Degree in Electrical and Computer Engineering and a Master's Degree in Physics, as well as a Diploma in Radio Engineering. For more information, email [bindra1@verizon.net](mailto:bindra1@verizon.net).

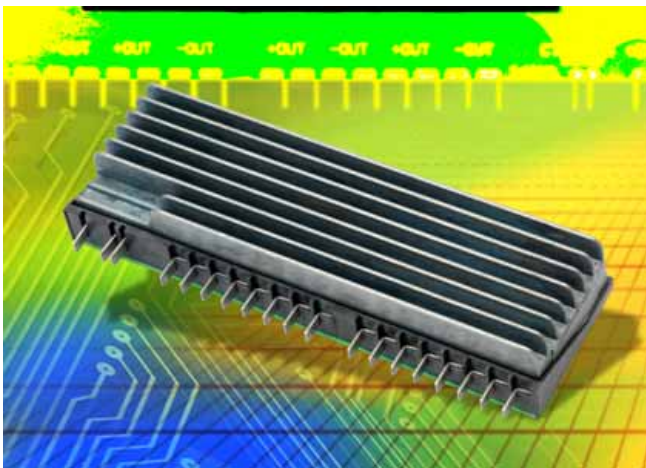
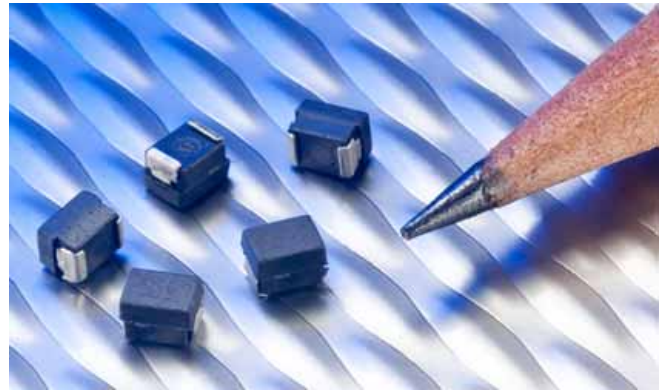




# How2Power's APEC 2010 Product Showcase

## Gowanda Electronics

Gowanda Electronics will feature their new SMP1210S Surface Mount Power Inductor at APEC 2010. This series combines high current, shielding and small size with inductance values from 1.0 to 100  $\mu\text{H}$  and current ratings from 205 to 1384 mA DC. Gowanda is the first inductor manufacturer to introduce a series with this performance and size. The current rating, coupling and package size offered by the SMP1210S is unique and addresses the challenge faced by design engineers to increase performance and reduce footprints. The SMP1210S is designed for use in power applications including filters for DC/DC converters, switching regulated power supplies, and other power supply applications where high current handling capability, shielding and small size are important. For product data sheets and other technical information go to: [www.gowanda.com/products\\_standard/power\\_surface\\_mount.asp#WSM](http://www.gowanda.com/products_standard/power_surface_mount.asp#WSM). For design details, technical assistance, and pricing information on the SMP1210S series please contact Gowanda Electronics at US (716) 532-2234 or by email at [sales@gowanda.com](mailto:sales@gowanda.com).



## Vicor

Built with a vertical mount heatsink for space constrained applications, the VI BRICK BCM Array provides isolated, high-efficiency (95% typ.), high-power (up to 650 W) power conversion from 380 V down to 12 or 48 V for low-voltage distribution near the point of load. It incorporates the superior technical attributes of VI Chip™ technology in a robust package that facilitates thermal management. Ideal for PFC front-end applications providing the capability of a high voltage bus with minimal distribution losses, the VI BRICK BCM Array provides a highly efficient solution for applications using point-of-load converters to provide multiple output voltages. They are available with 384 and 352 nominal input voltages and output voltages of 11, 12, 44, and 48 Vdc. The efficiency and compact size of these modules yields power density up to 290 W/in<sup>3</sup> and fast transient response. Less capacitance is required for energy storage near the load, which equates to space and cost savings. For more information, see [www.vicorpower.com](http://www.vicorpower.com).

Visit Vicor at APEC Booth 113.

## How2Power's APEC 2010 Product Showcase

### Payton Planar Magnetics

Payton Planar Magnetics introduces High Isolation High Creepage Welding Transformers. This particular example provides 5000 watts of output power, in a full bridge converter at 60 kHz. The primary current is more than 30 amps peak, with less than 50 watts of total power dissipation. The size is 120 mmL x 65 mmW x 20 mmH. The output current is more than 150 amps and the input voltage is 400 Vdc. Even with a power density of 500 W per cubic inch, the efficiency is better than 98.9%. Terminations are available per customer requirements. Custom design samples in few weeks. For more information, see [www.paytongroup.com](http://www.paytongroup.com).



Visit Payton Planar Magnetics at APEC Booth 424.



### OMICRON Lab

OMICRON Lab's B-WIT 100 universal injection transformer was developed for the stability analysis of switched-mode power supplies and control loops of any kind. Due to its special design, the B-WIT 100 combines a very wide frequency range (1 Hz to 10 MHz) with a 600-V CAT II compliant output. Together with OMICRON Lab's Bode 100 vector network analyzer, the B-WIT 100 achieves accurate measurement of the stability characteristic of

dc-dc converters. The 600-V CAT II compliant output of the injection transformer enables the analysis of switched-mode power supplies with output voltages ranging from a few volts up to mains voltage. The wide frequency range of the B-WIT 100 ensures its usability for slow, low-bandwidth control loops as well as for fast, high-bandwidth circuits. Due to this feature combination, a wide range of measurement applications, which demanded different injection transformers in the past, can be now covered with a single device. For more information, see [www.omicron-lab.com](http://www.omicron-lab.com).

## How2Power's APEC 2010 Product Showcase



### Vicor

The new Aegis single-slot VME power supply—filtered 28 Vdc, four output (3.3, 5,  $\pm 12$  V), 550 W—is a military COTS solution that is compliant to the vibration requirements of MIL-STD-810F and EMI per MIL-STD-461E. When compared to VME power supplies using conventional technology, the one-slot VME450 provides users with higher efficiency (85%), lower weight (2.4 pounds), and higher power (up to 550 W). Built with Vicor V-I Chips™, it uses two M-FIAM modules, six PRMs™ and six VTMs™. “The PRM-VTM chip set enables the high power and small size of the VME450 power supply,” says Bill

Dockery, President of Aegis Power Systems. For more information, see [www.aegispower.com](http://www.aegispower.com).

Visit Vicor at APEC Booth 113.

### International Rectifier

The AU1RF7739L2 and AU1RF7665S2 automotive DirectFET®2 power MOSFETs deliver exceptional power density, dual-sided cooling and low parasitic inductance and resistance in a robust, reliable and AEC-Q101 qualified package for automotive applications. These first automotive DirectFET2 devices from IR are entirely lead-free and offer overall system level size and cost reductions along with superior performance and efficiency when compared to traditional standard plastic packaged components.

“The AU1RF7739L2 and the AU1RF7665S2 combine the outstanding reliability and performance of the proven DirectFET packaging technology with IR’s latest trench silicon process. The new DirectFET2 devices may be optimized by application for next-generation vehicle platforms for ultra-low on-state resistance ( $R_{DS(ON)}$ ), gate charge ( $Q_g$ ) or logic level operation to deliver dramatically improved performance and efficiency, and reduced system size and part count,” said Benjamin Jackson, product manager, Automotive Products Business Unit.

For more information, see [www.irf.com/whats-new/nr100121.html](http://www.irf.com/whats-new/nr100121.html).



Visit International Rectifier at APEC Booth 203.



## How2Power's APEC 2010 Product Showcase



### Microsemi

Microsemi Corporation will showcase its line of low profile power modules for solar inverters at APEC 2010 in Palm Springs. The modules, which provide height compatibility with SOT-227 packages, include full bridge, boost chopper + full bridge and three-level inverter designs. A choice of five module packages can replace from two to six SOT-227 parts. The modules can be configured with mix-and-match components and assembly materials offering the best combination of cost, size, performance and reliability for solar inverter designs. For more information, see [www.microsemi.com](http://www.microsemi.com).

Visit Microsemi at APEC Booth 122.

### Vicor

The M-FIAM9 (Military Filter Input Attenuator Module) enables designers using Vicor's Maxi, Mini, Micro Series 24 V and Maxi Series 28 V DC-DC converters to meet conducted emission/susceptibility per MIL-STD-461E and input transients per MIL-STD-704A/E/F and MIL-STD-1275A/B/D. The M-FIAM9 accepts an input voltage of 10 to 36 Vdc, and delivers output power up to 500 W. It is housed in an industry-standard half-brick module measuring 2.28 x 2.2 x 0.5 inches and depending on the model selected, may be mounted onboard or inboard for height-critical applications. The M-FIAM is available in two environmental grades (including -55 to +100°C, operating and -65 to 125°C storage), with four pin options and three baseplate options. "With our ruggedized product platform, we've had a strong presence in the military COTS market for many years," says Kai Johnstad, Sr. Product Marketing Manager for defense products. "The M-FIAM9 adds one more Vicor filter to an already comprehensive line of MIL COTS filters." For more information, see [www.vicorpower.com](http://www.vicorpower.com).



Visit Vicor at APEC Booth 113.

# How2Power's APEC 2010 Product Showcase

## Payton Planar Magnetics

Payton Planar Magnetics has a complete custom line of planar transformer & inductors for high power renewable energy applications. The demand for low profile, high efficiency, conduction cooled and high current input/output converters is driving the need for high performance planar transformers and planar inductors to be used in power converters for High Power Renewable Energy.



This application combines the transformer and inductor in one structure. Custom designs include this example of a 20 kW application with 60 amps peak primary current and 160 vdc at 125 amps secondary with a 20  $\mu$ H filter inductor in a 230 mm (L) x140 mm (W) x60 mm (H) thermal package with 0.66°C/W thermal impedance designed specifically for a cool plate and a harsh environment. With 120 watts of dissipation on the transformer and 25 watts on the inductor, this design has a combined efficiency of 99.25%. The switching frequency is 40 kHz and the topology is resonant phase shift full bridge. For more information, see [www.paytongroup.com](http://www.paytongroup.com).

Visit Payton Planar Magnetics at APEC Booth 424.



## Vicor

An advanced modular power platform: the VI BRICK™ family incorporates the superior technical attributes of VI Chip™ technology and a robust packaging that facilitates thermal management and through-hole assembly. Models include high-current density/low-voltage DC-DC converters, a wide range of highly efficient bus converters, and individual modules for both regulation and transformation.

“Incorporation of VI Chip technology into the traditional brick environment gives power designers significantly increased power capabilities and greater design flexibility,” says Joe Sullivan, Product Marketing Manager. For example, VI BRICK BCMs™ provide a highly efficient solution for Intermediate Bus Architecture or point-of-load designs that require multiple output voltages. They are available with nominal input voltages including 48 Vdc (11 models) and high voltage up to 380 Vdc (three models) and a wide array of output voltages from 1.5 to 48 Vdc. The efficiency and compact size of these modules yields power density up to 390 W/in<sup>3</sup>. For more information, see [www.vicorpower.com](http://www.vicorpower.com).

Visit Vicor at APEC Booth 113.

# How2Power's APEC 2010 Product Showcase



## ROAL Electronics

ROAL Electronics' STRATO is a complete family of AC to DC LED driver modules designed to ease the frustration of finding the right driver for your next lighting project. They are simple to install—just select, connect and power on! With a typical efficiency of 90% and a power factor of > 0.9, the STRATO 35 W LED Driver Module has been designed for worldwide use in any luminaire operating from 120 VAC to 277 VAC. Coupled with a high operating temperature rating of 90°C case, long operating life, and 0-10 V dimming, the STRATO 35 W driver modules offer flexibility for use in architectural, general, street and

entertainment lighting.

STRATO 35 W driver modules comply with all required emissions standards, and ease Energy Star compliance at the fixture level. They carry a UL 8750 rating for damp locations and are available in both plastic and metal casings, with flexible mounting options for installation in virtually any lighting fixture. For more information, see [www.roallivingenergy.com](http://www.roallivingenergy.com) or email [info1@roallivingenergy.com](mailto:info1@roallivingenergy.com).



## Vicor

Vicor's new VTM™ transformer offers significant performance enhancements for server applications. The V.I Chip™ VIV0005TFJ operates with an upstream PRM™ regulator to drive low voltage, high current processor and memory arrays and is 130 A DC, 195 A peak rated. The high efficiency—greater than 90 percent—of this new Sine Amplitude Converter™ (SAC™) reduces both system power consumption and heat dissipated at the load. For more information, see [www.vicorpower.com/cms/home/technical\\_resources/Data\\_Sheets](http://www.vicorpower.com/cms/home/technical_resources/Data_Sheets).

Visit Vicor at APEC Booth 113.