PARAGON INNOVATIONS

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News in Brief...

Paragon Names New Director of Technical Operations

To support and enhance the sales process and customer care, Paragon Innovations recently named Kris Stafford as director of technical operations. The new position is a promotion for Kris, who has been an engineer at Paragon for seven years.

Kris is responsible for maintaining client relationships, as well as improving proposals and estimation by addressing the engineering side of the equation. Additionally, Kris will be responsible for trade show support and technical support to the sales team.

SHORTAGES: Components Availability is Tight! Below is a list of some of the lead times we have been quoted recently by our vendors.

Greater than 20-week lead times

- Tantalum capacitors
- Discrete power semiconductors
- Crystals
- Static RAM
- FLASH
- Hitachi H8/3847 processors
- Cypress 64kB by 16 SRAM (52 weeks)
- Hitachi HD64F3067F Microcontroller

14- to 20-week lead times

- Most popular microcontrollers
- Linear devices
- Integrated power devices (Regulators, etc.)
- Optical components (LEDs, opto-isolators)
- Hitachi H8/3887 processors
- LCD FEMA Display (80-M-035)

On allocation now or very soon

- LCD Components
- Ceramic capacitors
- Ferrite beads
- EPROM, EEPROM
- SOT-23 devices

Engineering Services

- PCB Layout is 4 - 6 weeks out

Paragon's Open House: The Party, The People, The Place to Be

On Nov. 30, 2000, Michael Wilkinson, founder and chief executive officer of Paragon Innovations, and his wife, Sandy, invited employees, vendors, customers and members of the community to join them at Paragon's "Christmas in the Caribbean" party. The party celebrated the 10-year anniversary of Paragon, the opening of its new 9,600-square-foot facility, and the holiday season.

Paragon welcomed more than 300 guests, who enjoyed a steel drum band, hand rolled cigars, a Caribbean menu, frozen margaritas and a 10th anniversary cake. The evening also featured give-aways, including Paragon golf shirts, a Handspring Visor Deluxe, a session of CPR training sponsored by CD&Y consultants, a pair of Dallas Stars hockey tickets sponsored by FAI, and a digital camera sponsored by Ion.

The Paragon team, dressed for the occasion in island shirts, hats and leis, join Mike Wilkinson to cut the ribbon to Paragon's new 9,600 square-foot facility.

More than 300 guests partook of the Caribbean feast that featured multiple kinds of cheeses, exotic fruit, chocolate-covered strawberries, chicken kabobs, and banana chips with mango and black bean dips.

Mike and Sandy Wilkinson pose with the cake commemorating Paragon's 10- years anniversary. The cake was shaped as the number 10 and decorated as a beach and water with a sailing ship.

(Photos continued on other side.)

Brad Stevens, advisory board member, shares a toast with Mike Wilkinson.

Paragon's guests enjoyed hand-rolled cigars made by Sabino of Natalie's Cigars.

Mike Caranfa gives away one of three Paragon golf shirts.

DeWayne Gibson, with FAI, gets his caricature drawn by Mark Burton of Bill Cody's Party Time Productions.

Be sure to visit Paragon Innovations at these upcoming trade shows

Jan 8-10, 2001 - Exhibiting at the Medical Design & Manufacture show in Anaheim, Calif.

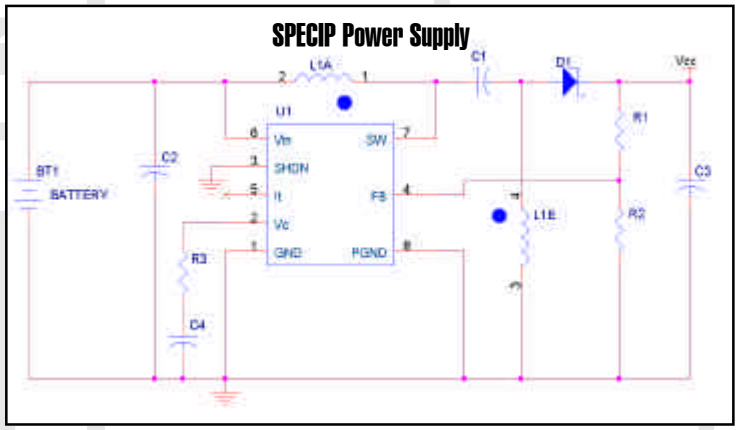
March 27-28, 2001 - Attending the Embedded Systems Conference (East) in Chicago, Ill.

April 9-13, 2001 - Exhibiting at the Embedded Systems Conference (West) in San Jose, Calif.

Design Ideas!
Alternative to the Buck/Boost

One of the challenges, when designing battery powered systems, is converting battery voltage to Vcc, with a reasonable efficiency in a minimum amount of space. This is further complicated when the battery voltage range overlaps the required Vcc. In this case, a boost stage can be followed by a buck stage, but the efficiency of this configuration varies greatly depending on the input voltage.

There are several alternative approaches to solving this problem. One useful approach is a boost converter configured in the SEPIC (Single Ended Primary Inductor Converter) topology. This topology uses coupled inductors rather than a transformer (which conserves cost) and does not invert the output voltage. It also provides DC isolation between the input and output voltages via a coupling capacitor. A SEPIC power supply is shown in the figure below.



The SEPIC topology requires only a limited number of support components and has a relatively consistent efficiency over its input voltage range. Depending on the batteries used and how they are arranged, this topology may not be needed; but it can be an useful tool in a designer's power design arsenal.

References on the SEPIC topology:

- Unitrode Design Note DN-48
- Unitrode Desine Note DN-109
- Linear Technology Design Note #109
- Linear Technology Design Note #110

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