



DC motors powered by hydrogen fuel cell technology are gaining ground. Fuel cell monitoring equipment design from Orchid makes this technology possible.

Low Cost Hydrogen Fuel Cell Monitor

Continuous monitoring of individual cells within a fuel cell stack is essential to ensure proper fuel cell operation and maintenance. Orchid designed a new low cost fuel cell monitor to measure individual fuel cell voltages. This new low cost unit measures up to eighty cells with millivolt accuracy. The entire eighty channels are measured once every 35 milliseconds. Not limited to laboratory use, the low cost nature of this design makes it suitable for production use.

Embedded Kinetis K10 ARM Processor

A single Kinetis K10 ARM processor performs all the measurement sequencing and data communications tasks. Preprogrammed modes support various operational configurations. Statistical calculations monitor group and individual cell performance on a continuous basis.

LTC6806 from Linear Technologies

New LTC6806 from Linear Technologies make this design possible at a remarkably low price per channel. Multiple LTC6806 devices allow this design to monitor up to eighty channels. The high common mode voltage specifications of the LTC6806 make it ideal for this application.

Precision Analog Circuit Design

Orchid specializes in the rapid design of complex analog electronics. Analog design requires careful circuit board layout. Fuel cell design requires multiple isolation regions. Orchid's expert understanding of layout and isolation requirements greatly accelerated the overall design timeline.

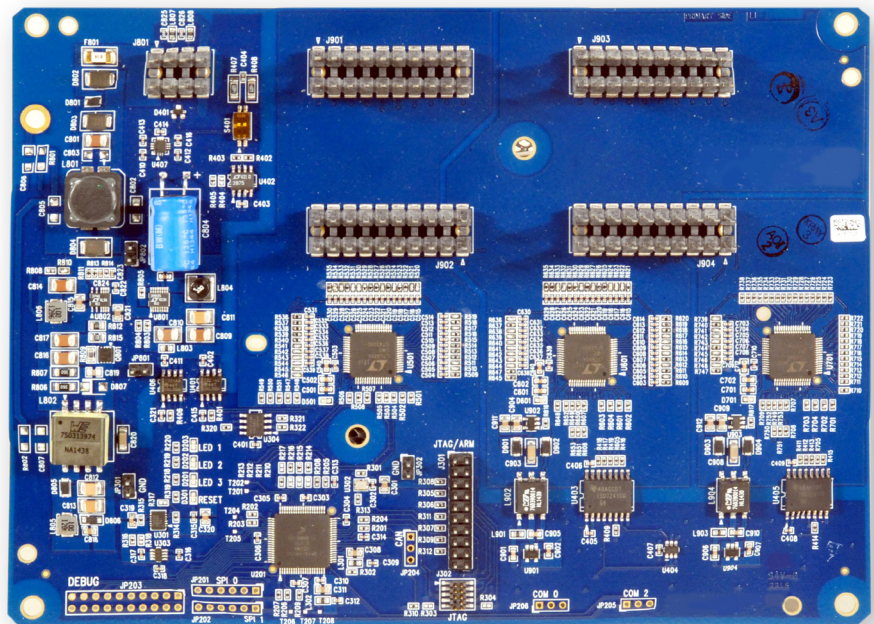
Orchid Technologies: Fuel Cell Monitor Design

The development of custom electronic products for our OEM clients is Orchid's entire business. The design of low cost, high performance fuel cell monitors with rapid design cycles, demanding technical requirements, and unforgiving schedules sets us apart. Call Orchid Technologies today!



"We turned to Orchid because we knew they'd get it right. Once again Orchid's proven its value by delivering our low cost fuel cell monitor ahead of schedule."

- Procurement Manager



**ORCHID TECHNOLOGIES
ENGINEERING & CONSULTING, INC.**

Custom Engineering From Concept to Production

147 Main Street, Maynard, MA 01754 www.orchid-tech.com 978-461-2000 fax: 978-461-2003

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