



Emissions monitoring and control is essential to reducing greenhouse gasses and particulates in our atmosphere. Custom designed electronics from Orchid helps everyday.



*“Electronics is new to us. Orchid listened, and was patient, and listened some more. They translated our words into working electronics and delivered first prototypes for test in less than five months.”*

*- EO Systems Development  
Houston, Texas*



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

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## Custom Embedded Industrial Controller

Design of this custom embedded industrial controller required a lot of listening and patience, says our client. This low-volume, controller is implemented in a two-board set. One board is a general purpose HCS12-based computer. The other board is an application-specific passive IO Board. Together these two boards provide input and output functions which can be efficiently setup for specific installation in a particular plant.

## Replace Costly PLC's

Programmable logic controllers are an expensive general purpose way to implement industrial controls – but when volume grows into the tens and/or hundreds of units, a custom solution makes much more sense. Custom embedded industrial controllers from Orchid can reduce the physical size and power requirements of your control electronics while also reducing unit cost, simplify wiring interconnectivity, and improving reliability.

## Microcontroller Performance

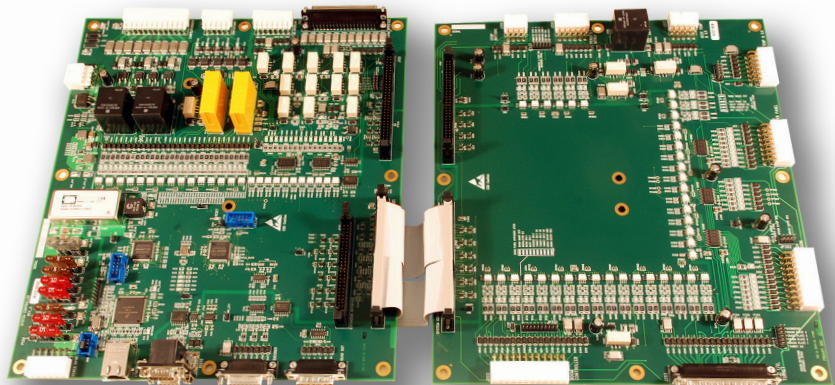
Many classes of low cost processors are available today. A Freescale HCS12 was selected for this design. It supports all control functions and implements an HTML web application for remote control, setup and data monitoring functions. Custom interlock circuitry insures operational safety.

## Environmentally Tough

This custom industrial controller operates over extended conditions from -40 C to +85 degrees C; without fans. Designed for compliance with UL60950, EN60950, CSA C22.2 safety and EN61000 immunity requirements. Design Failure Mode Effects Analysis (DFMEA) techniques were used to insure fault-free operation by design.

## Orchid Technologies: Customized Controllers

The development of custom electronic products for our OEM clients is Orchid's entire business. The design of highly customized controllers with rapid design cycles, demanding technical requirements, and unforgiving schedules sets us apart. Call Orchid Technologies today!



**Custom Engineering From Concept to Production**

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