Automotive Steering Wheel Angle Sensor CAN-Bus Communications

Design Note #39



Microprocessor based sensors provide real-time information in commercial automotive applications.



"Orchid performed the rapid development of hardware and software for this timecritical project. Six weeks to working prototypes during the Christmas and New Year holidays. Simply outstanding!"

- Project Marketing / Sales

CAN-Bus Steering Angle Sensor

This microprocessor based steering angle sensor provides real-time steering angle data over the CAN-Bus. Automotive electronics present demanding requirements to the electronic product designer. High volume, low cost and highly rugged, feature packed designs are necessary to win. This automotive steering angle sensor can sense high-resolution angle displacement of 1400 degrees of rotation and beyond.

Precision Analog Electronics

Orchid Technologies combines cost sensitive engineering with precision analog electronics to craft high-performing, stable, sensing electronics. Ease of calibration together with reduced cost electronics requires skill and ingenuity. Orchid provided a number of electronic hardware assembly options, allowing our client the opportunity to tune sensor performance for reduced-cost applications or high-precision applications.

Freescale HC08 Microcontroller

Orchid selected a Freescale HC08 class microcontroller as the brain of this steering angle sensor. The Freescale HC08's feature-rich complement of flash program store, static RAM, Eeprom, CAN-Bus controller, timers, analog-to-digital conversion circuitry, and robust processor reliability controls make the HC08 a perfect fit in the automotive electronics marketplace. Codewarrior software development adds a world class programming environment to the development process. Well-tuned software libraries provide advanced features such as 64-bit floating point functions and trigonometric functions. Real-time calculation of double precision floating point trigonometric functions was rapidly accomplished by the Freescale HC08 microcontroller.

Win with Orchid Technologies

The development of custom electronics technology solutions for our OEM clients is Orchid's entire business. High-performance automotive electronic designs with rapid design cycles, demanding technical requirements, and unforgiving schedules set us apart. Call Orchid Technologies today. We'll put a custom microcontroller based sensor product design in your hands tomorrow!





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Custom Engineering From Concept to Production

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