

University of Central Florida Testimonial

The University of Central Florida's Autonomous Underwater Vehicle team uses a Sparion SP3003D Digital Compass on its newest competition vehicle. The vehicle is small, compact, and lightweight, so it is challenging to pack as much sophisticated instrumentation as possible into the physical design. After exploring many other digital compasses, the team decided that the Sparion SP3003D was perfectly suited to our needs. The SP3003D is more than a digital compass; it is a whole suite of sensors packed into a small, rugged module. Having inertial, environmental, analog, and digital I/O capabilities crammed into one package eliminates messy wiring, bulky connectors, and waterproofing headaches that are common when piecing together a navigation system on a component-by-component basis. The integrated SP3003D system does not force us to sacrifice quality either; the SP3003D has more than enough speed and precision for our purposes. In fact, with all its on-board sensors, the SP3003D quickly became our main navigational instrument!


We are constantly experimenting with new designs, so we love how the compass automatically compensates and recalibrates itself when new magnetic fields are introduced (from other electronic devices). We were impressed by the fact that the SP3003D features two different mounting configurations; the compass even works upside down! The analog channels allow us to read other sensors by way of the compass, saving even more wiring, waterproofing, and headaches. The same is true for the on-board temperature sensor.

We communicate to the compass via Serial Peripheral Interface (SPI). Writing to and reading from the SP3003D is easy thanks to Sparion's simple command-driven communication protocol. The commands are concise so that space and speed are at an optimum, yet robust enough to know what is being communicated, making error-checking easy and accurate. SP3003D even comes with its own set of error codes to let you know if a transmission problem occurs!

Environmental factors were another concern to our equipment. Thankfully, the SP3003D digital compass can stand up to the weather. Intense sunlight, considerable temperature fluctuations, frequent water spills, vibrations, and pressure changes were non-issues for this rugged compass. The potted module handled all our environmental considerations.

Sparion has really thought this design through, making it easy on the customer to implement and obtain accurate results fast. If you are looking for a small, lightweight, rugged, low power, stable, high-end digital compass, put the SP3003D at the top of your list.

Sincerely,



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