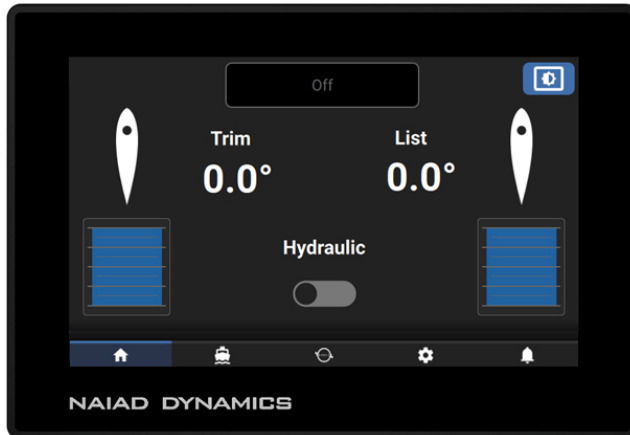


DCS Motion Control System

Distributed Control System



Naiad Dynamics, the World Leaders in Ship Motion Control Solutions[®], offers the latest breakthrough in motion control technology. The DCS distributed digital control system represents the culmination of decades of stabilization experience combined with cutting-edge technological innovation.

DCS Features

- ✓ Modular, distributed, node-based control system with full color capacitive touchscreen control panel(s).
- ✓ All nodes and touchscreens are connected to a single CANbus network.
- ✓ Full support for AtSpeed[®] & AtRest[®] roll stabilizer systems as well as Total Ride Control[®] (multi-axis) systems.
- ✓ The DCS system is configurable for all motion control effectors – alone or in any combination.
- ✓ Highly configurable control structure for optimal system tuning. Each system is tailored to specific user requirements.
- ✓ Improved effector positioning.
- ✓ The system is hardened against electromagnetic interference.
- ✓ All system components have been designed to Marine Equipment Directive WheelMark EMC standards (IEC 60945, certification pending).
- ✓ The control node contains a quad core processor-based industrial high-speed computer capable of the calculations necessary for high-performance motion control.
- ✓ The extremely flexible software can be applied to virtually all ship motion control applications.

	VALUE	RMS
List	0.0°	0.0°
Roll Rate	0.0°/s	0.0°/s
Trim	0.0°	0.0°
Pitch Rate	0.0°/s	0.0°/s
Heading	0.0°	
Yaw Rate	0.1°/s	0.0°/s
Vertical Acceleration	1.0 g	
Lat. Acceleration	-0.0 g	
Long. Acceleration	-0.0 g	

Robust Control Node

The compact and robust *Control Node* is specifically designed for the harsh marine environment. Control Nodes command fins, tabs, foils, interceptors, power packs and an array of other devices.

Software/firmware updates, configuration settings and performance data downloads can be done easily with a USB drive.

The Control Node supports over 100 system alarm parameters. A touch screen control panel on the enclosure is optional.



Adaptive Technology

All NAIAD® control systems feature fully proportional closed loop performance, resulting in continuously modulated fin position management and smooth, exact operation. The innovative DCS continuously samples and *self-adjusts* the gain (sensitivity) settings of each of its signals to precisely match varying sea conditions and vessel headings. The system's ability to automatically adapt to its operating environment results in *continuously optimized* effector commands and astonishingly superior motion reduction performance. **AtSpeed Adaptive**, and the latest **AtRest Adaptive** feature comes standard with the DCS.

Motions Node

Our Motions Node has been developed using the very latest MEMS (micro-electro-mechanical systems) sensors to produce a 6-axis digital/analog motion sensor to detect roll, pitch, yaw, heave, surge and sway with a degree of accuracy far exceeding our previous motion sensing devices. In fact, the capabilities of the ND Motions Node rival the most well-known and expensive MRU's in the world. This cutting-edge technology also produces a cleaner and more reliable signal than ever before, resulting in smoother and more precise positioning of our roll control fins as well as ND's entire range of Total Ride Control® effectors. Each Motions Node is thoroughly calibrated and tested across a range of temperatures to reliably perform in harsh marine environments.



Unrivalled Versatility: Stabilization AtRest®, Total Ride Control®

Naiad's innovative and versatile control system can be configured for underway **AtSpeed® Roll Stabilization** or **AtRest (Stabilization at Anchor)** using fins or, when equipped with appropriate control surfaces, for pitch + roll stabilization, **Total Ride Control®**. The DCS can also be easily **retrofitted** to extract the highest possible performance from pre-existing stabilizer equipment. Contact us today to learn why the DCS is clearly the best choice in advanced stabilization controls.

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