Chetco Digital Instruments

HelmSmart.net

Cloud base Vessel Monitoring

HelmSmart.net is a web site offering Cloud-based data access for SeaSmart NMEA 2000 network adapters. HelmSmart.net provides a collection of dynamic web pages that link with PushSmart Cloud Database and messaging services to present virtual dashboards. Vessel data can be viewed in a variety of formats including Map overlays, charts, spreadsheets, instrumentation, and alarm/status messages. High speed cloud servers provide 24/7 search engine access and global distribution for stored data as well as real-time messaging and live monitoring anywhere with internet access.

The core of the HelmSmart architecture is the cloud-based PushSmart Database engine which receives live feeds from SeaSmart adapters, decodes all the parameters into discrete values, and stores them in a redundant data warehouse. Simultaneously, processed data is sent back out using cloud messaging services to millions of client connections. As a result, a single SeaSmart network adapter can broadcast to thousands of data consumers without requiring any additional on-board equipment. Clients can log into the HelmSmart Web site to view live vessel instrumentation while also performing high-speed searches on any vessel network parameter over specified historical intervals. This allows operators to see what a vessel is currently doing while comparing to stored information. For example, current oil pressure readings can be compared against a previous trip for a given engine RPM to determine if a filter needs service.

HelmSmart is designed to simplify access to vessel network data by creating a common format for all sensors like fluid tanks, batteries, bilge levels, engines, weather, compass, sonar and more. Existing networks are supported including Ethernet, CAN Bus (J19), WiFi, NMEA 2000 and NMEA 0183. SeaSmart Gateways provide the physical interface from vessel to cloud while HelmSmart provides the client visual interface. HelmSmart is compatible with other vendor protocols and equipment including Garmin, Navico (Lowrance/Simrad), Raymarine, Hummingbird, Maretorn, and Actisense. Once data reaches the HelmSmart cloud, it dose not matter where it came from.

HelmSmart leverages the power of existing internet technology and services to provide broad data access. Using proven database infrastructures, live NMEA 2000 data is parsed and stored into Search Engines that allows for high-speed access anytime, anywhere. Converting NMEA 2000 data directly into existing internet protocols provides

a cross-platform data store independent of vendor sources, making it much easier for application developers. HelmSmart can be quickly integrated into new applications with its published URL API. With thousands of programmers working with internet languages, and devices, a global community is already familiar with HelmSmart's protocols to accelerate future application development.

All that is required to start using the HelmSmart service is a SeaSmart Gateway and internet connection. SeaSmart adapters can access the internet directly via WiFi hotspots, Cellular networks, cable modems, and Ethernet. If no connection is available, SeaSmart will record data to local SD memory which can be later uploaded to the HelmSmart servers using built-in browser interface. The SD memory cards can hold over a years worth of data and can be removed for manual upload. Data can be also uploaded directly from any PC/Laptop with an internet connection and network gateway such as a NMEA 2000 to USB adapter from Chetco Digital or Active Research. SeaGauge products are also available to convert up 16 sensor outputs directly to PushSmart Protocol and send directly to HelmSmart servers without requiring a full on-board network.

HelmSmart.net utilizes widely available browser platforms such as tablets, laptops, net books, and smartphones and supports operating systems including Windows, iOS, Android, Linux, and more. No apps are required for the purely browser based solution assuring true cross-platform compatibility.

HelmSmart can be integrated with Cloud based apps like Google Docs and GeckoBoard to expand its reach. HelmSmart charts can be linked in from other sites to show vessel data trends and remote monitoring. A full API is available to access the PushSmart Data Base directly so that a service such as Google Spreadsheets can show engine temp or Google Maps for ship's position.

More HelmSmart information and tutorials can be found at www.HelmSmart.com and the full user site at www.HelmSmart.net. A guest login is available to view and tryout the many analysis and display tools. Registered users can pair their SeaSmart devices to a data plan and access vessel information over any internet connection and browser device.