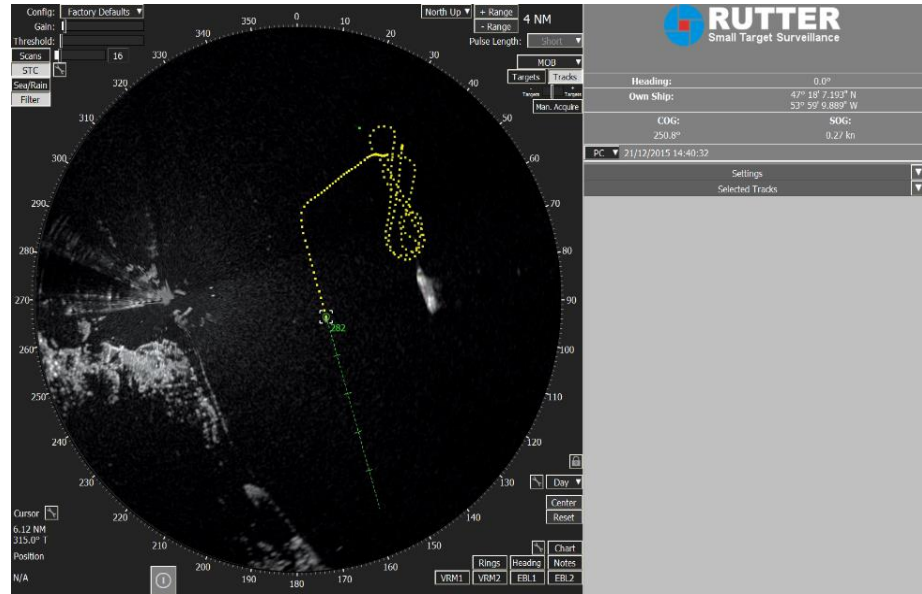




# *sigma* S6 Small Target Surveillance

Rutter's *sigma* S6 Small Target Surveillance (STS) System provides enhanced radar imagery, target detection and tracking in the marine environment. A versatile tool, detecting and tracking a wide range of target profiles from persons in water and small maneuvering craft to large vessels, the system is a practical solution for specialty radar applications such as search and rescue, improved vessel traffic monitoring, asset protection and surveillance applications including antipiracy and coastal water protection. The *sigma* S6 Small Target Surveillance System has proven itself on offshore platforms, support vessels, patrol vessels, seismic operations and in a range of coastal surveillance and monitoring applications.



*sigma* S6 Small Target Surveillance – Small Target Tracking

In the seismic survey industry, the *sigma* S6 Small Target Surveillance System enhances operational productivity by improving the detection and tracking of small and nearly hidden targets, such as wooden buoys, fishing gear and floating debris that can foul seismic streamers and acoustic sensors in tow.

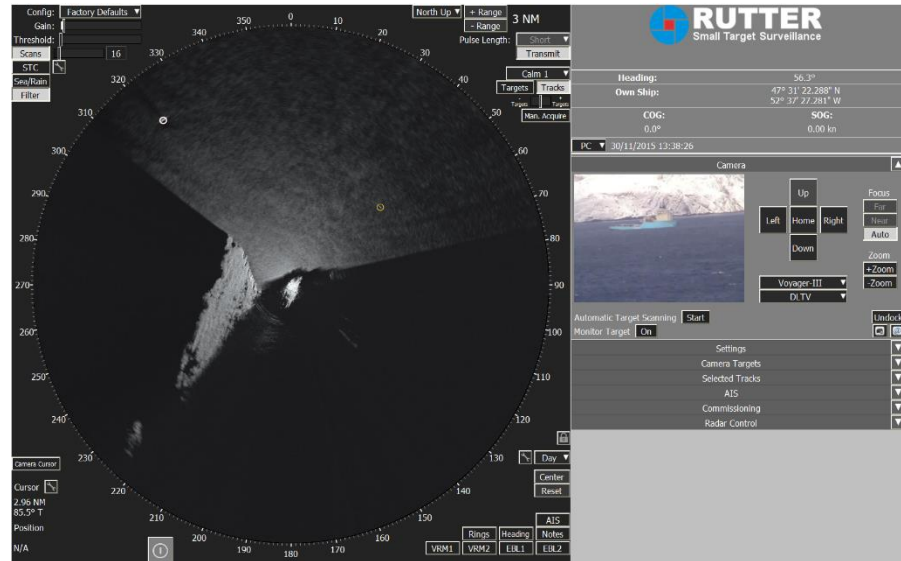
For pleasure craft ranging from day boats to Expedition Mega Yachts the *sigma* S6 Small Target Surveillance System improves the detection of floating objects that cause costly damage to hulls, rudders and props.

The *sigma* S6 Small Target Surveillance System can be installed with a dedicated Rutter 100S6 radar, but also passively interfaces with, and significantly enhances commercially available marine radars. The system is fully motion compensated and operates equally well from both fixed locations and vessels underway. It includes Rutter's integrated target tracker, SeaTrack, specifically tuned for optimal tracking of different target types simultaneously, while supporting up to 500 simultaneous targets. Ideal for detecting and tracking small targets, SeaTrack allows for optimal detection and tracking compared to common Automatic Radar Plotting Aid (ARPA) radar trackers, taking advantage of the *sigma* S6's superior imaging and signal processing. The system features Automatic Coastline Masks, which incorporates a world coastline map, eliminating false positive targets when operating near land.

The *sigma* S6 Small Target Surveillance System features full integration with select FLIR® IR cameras. Features include the ability to support multiple cameras, intelligent selection of a best camera for

# *sigma* S6 Small Target Surveillance

specific targets, and automatic slewing to targets approaching the radar location or entering protected areas. These features support quick decision making in addressing potential threats and possible interruptions to operations. For other systems, the *sigma* S6 Small Target Surveillance System supports NMEA Tracked Target Message (TTM) output to provide standardized targeting information to those cameras.



*sigma* S6 Small Target Surveillance – FLIR camera integration

The *sigma* S6 Small Target Surveillance System offers a variety of outputs to both record and stream radar imaging and targets to external systems. A built-in Screen Recorder allows recording of the radar display which is useful for documenting an incident, scientific research or ice breaking operations. Recordings are supported as a series of JPEG or PNG images, or as an AVI video. In addition, the *sigma* S6 Small Target Surveillance system includes *sigma* S6 Connect, a web enabled interface, allowing external systems to interface with the *sigma* system to view radar imaging (GeoTIFF, PNG, JPEG) and targets (GML, KML, DXF, ESRI). This allows easy integration into systems such as Google Earth Pro, GIS, and command & control systems.



# *sigma* S6 Small Target Surveillance

---

## *sigma* S6 Small Target Surveillance

- Marine certified (IEC 60945)
  - Rack Mountable/Desktop Radar Data Processor
  - 24" marine certified Rack Mountable/Desktop monitor (alternate sizes available)
  - Keyboard/Trackball Unit (Desktop style or Console Mount)
- Windows 7 operating system
- SeaTrack tracker, optimized for detection and tracking of different target types
- Fully motion compensated scan-to-scan integration of up to 128 radar sweeps, allowing the *sigma* S6 Small Target Surveillance System to identify and detect both fast maneuvering and small slowly moving targets
- Advanced sea, rain, interference & clutter suppression
- AIS Class-A and Class-B target overlay
- Built-in interfaces for FLIR® camera systems and TTM output to other camera systems for enhanced target verification and identification
- Automatic Screen Recording in selectable time intervals for evidence documentation
- Remote client capability
- Computer-Based Training package
- *sigma* S6 Connect
- Coastline Masks