

## Waterside Sentinel System

Advanced Integrated Radar and Video Solutions for  
Shoreside Surveillance and Waterside Security

Ports and Harbors

Airport

Power Plants

LNG/Petroleum Storage and Transport

Offshore Platforms



**monitor**

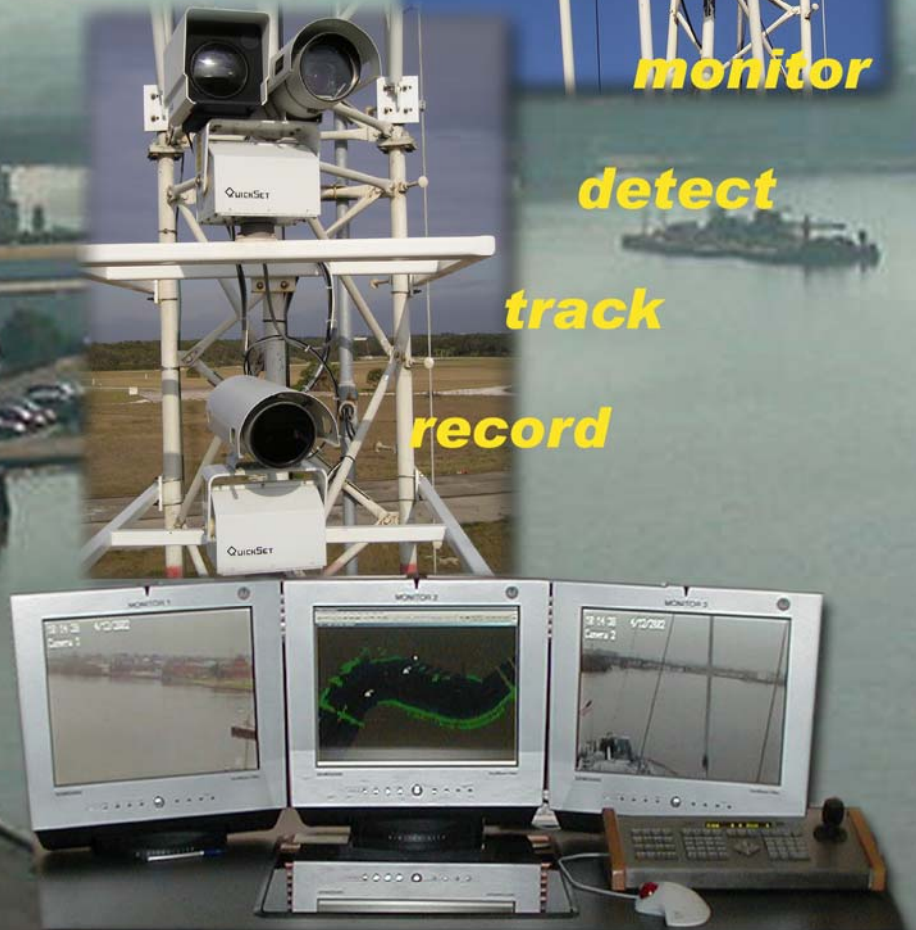
**detect**

**track**

**record**

NavSim Services, Inc. offers a variety of standalone and integrated systems for land and waterside applications.

NavSim's Waterside Sentinel System features camera and radar based intrusion detection and object tracking. It can be tailored for port security, shoreline intrusion detection, airports, and power plant facilities as well as shipboard and oil platform use. The Waterside Sentinel System operates 24/7 under all weather conditions.



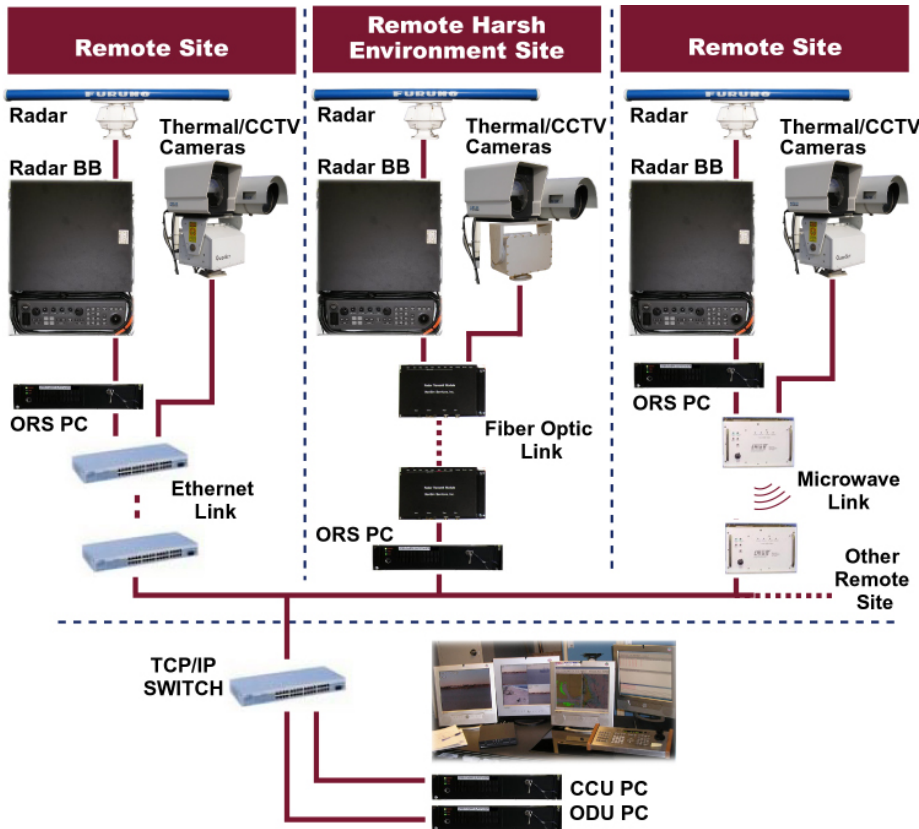
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# Waterside Sentinel System



## Features

- **Monitoring and identification of ships and other waterborne targets**
- **Generation of alarms and notification messages in accordance with operator selected criteria**
- **Automatic visual target tracking and camera assignment**
- **Manual camera control capability**
- **Radar data overlay on Electronic Chart Display (DNC, NOAA, and S-57 chart compatible)**
- **CCTV and Thermal Imaging System integration with radar/AIS tracking**
- **Continuous recording of radar display data and camera video for future playback and analysis**
- **Flexible zone definitions**
- **Seamless radar video presentation on electronic chart displays in multiple radar system configurations**
- **Multiple operator station capability (up to 24)**
- **Fully customizable, user-friendly operator GUI interface with Target Tracking and Alarm tables**
- **VTS capability**
- **Complete suite of sensors:**
  - **Radars**
  - **CCTV Cameras**
  - **Long and Short Range Thermal Image Cameras**
  - **Universal AIS Base Stations**
  - **Sonar**

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## Components

### Operator Display Unit (ODU)

- Transas VTS based software (multiple radar processing capability)
- MS Windows XP based PC

### Camera Control Unit (CCU)

- Camera Control and Recording software
- MS Windows XP based PC

### Radar Subsystems

#### Components

- Shipboard radars or high resolution land based radars
- Radar data display
- Open Radar Supervisor (ORS)
  - Radar Processing Board (RPB)
  - Radar Tracking & Transmission software
  - MS Windows XP based PC

#### Features

- Radar Processor capable of multi-radar data integration and radar UAIS data integration
- Max processing range of 32 nautical miles
- 500 max targets per radar site

### Camera Subsystems

#### CCTV Cameras

- Day and Low Light Cameras with 25x zoom lens
- Corrosion Proof Marine Grade Sealed and Pressurized Housings
- Explosion Proof Housings

#### Thermal Image Sensors

- Short Range and Long Range Thermal Image Cameras available
- Short Range Imager with autofocus, 4:1 digital electronic zoom, and 14 bit dynamic range
- Long Range Imager with 2x/4x digital zoom, dual field of view optics, and greater than 9 km tracking capability
- Corrosion Proof Environmental Housings
- Explosion Proof Housings

#### Camera Pan/Tilt Units

- Range: Pan 370°; Tilt: ± 90°
- Repeatability .25°
- Corrosion Proof Marine models are IP-66 compliant
- Explosion Proof Housings

#### Remote Micro Wave and Fiber Optic Transmission Links

- Corrosion Proof Environmental Housings
- Explosion Proof Housings