

System Technologies

❖ **Constant Vessel supervision**

- ✓ Vessel Checks in over 2500 times per month.
- ✓ Over 100,000 sensor reading per month, depending on installed sensors and data transfer intervals.
- ✓ Early detection saves time and money.

❖ **System Scalability**

- ✓ Configurations and price points available for boats in the 36' to 90' range.
- ✓ Practically unlimited number of devices possible per boat such as computers, cameras, printers and sensors.
- ✓ Onboard private and secure WiFi network.

❖ **Key Technologies**

- ✓ Mobile network connectivity: Our server always knows when and where the vessel is connected to the Internet (Patent Pending).
- ✓ Flexible Communication Options: WiFi, Cellular Broadband, Inmarsat, Orbcop/Skymate.
- ✓ Wired and wireless sensors.
 - ◆ Contact closure sensors are wired or wireless.
 - ◆ Analog sensors such as temperature & humidity are wired only (for now).

❖ **Multi Tier Application Architecture for reliability**

- ✓ On board vessel servers collect and disseminates information and alerts from sensors, NMEA sources and network devices i.e. cameras.
- ✓ A central land based web server stores and displays all vessel information.
- ✓ A web browser is used to securely access vessel data and onboard computers from any Internet enabled PC in the world.

❖ **Remote Computer Command & Control**

- ✓ Securely connect to onboard computer from any Internet enabled PC world wide.
- ✓ Transfer planned navigation routes from your home/office PC/laptop to and from the vessel.
- ✓ Operate on-board PCs as though you are standing at the vessel helm.
- ✓ Adjust EyeOnBoard onboard system parameters.
- ✓ Update & install new software.
- ✓ Diagnose onboard problems.
- ✓ Run onboard applications.

Available System Features & Capabilities

❖ Security and Safety Monitoring

- ✓ Intrusion Sensors: Doors, Hatches, Motion, Glass breakage.
- ✓ Safety Sensors: Carbon monoxide, Smoke.
- ✓ Security Controls
 - ◆ Keyless alarm system arming and disarming.
 - ◆ Over the Internet alarm system arming and disarming.
 - ◆ Helm EyeOnBoard enunciator panel for onboard audio/visual alerts.
 - ◆ Sensor tamper monitoring.

❖ Environmental Monitoring and Recording

- ✓ AC shore power
- ✓ Bilge flooding
- ✓ Interior temperature (degrees F or Degrees C)
- ✓ Interior humidity
- ✓ Outdoor temperature

❖ Camera System

- ✓ Indoor/outdoor wired or wireless tilt/pan network cameras.
- ✓ Outdoor 360 degree tilt, pan, and zoom network camera.
- ✓ All cameras can be remotely controlled over the Internet.
- ✓ System supports 120 frames per minute video over the Internet.
- ✓ Preset positions for quick and repetitive viewing locations.

❖ Vessel Communication Options

- ✓ Dockside: 802.11B WiFi compliant with site survey and onboard private wireless network.
- ✓ Underway or at anchor: Inmarsat stationary satellite – Broadband speed world wide. KVH F55 and F77 Satellite Communication system supported.
- ✓ Underway or at anchor: Orbcomm low orbit moving satellites – Near real time response. Skymate communicator supported. (Text email only)
- ✓ Underway or at anchor: Cellular Data Broadband – AT&T, Verizon, Telus service. First true broadband mobile network at near broadband speeds.
- ✓ WiFi and Cellular data system can be installed together with a single switch activation feature. (Requires a WiFi and Cellular Data account and a router for each technology)

Available System Features & Capabilities (continued)

❖ **Management of Satellite Outbound Data communication Expenses**

- ✓ Limit the amount of data transmitted and the time interval between data transmissions.
- ✓ Manage alert reporting volumes.
- ✓ Automatic detection of the availability of broadband vs. satellite connections, automatic selection of the most cost effective service for alerts and data transmissions.

❖ **Vessel Position and Movement Reporting**

- ✓ GPS Fence monitoring – detection of unauthorized vessel movement.
- ✓ Current underway vessel location along with personal message can be e-mailed to select users at defined intervals - replaces the need for a float plan.
(cellular broadband and/or satellite communication equipment required)
- ✓ Current vessel location displayed via Google Maps.
- ✓ Vessel route traveled is displayed via Google Maps. Each waypoint is color coded to reflect the type of connectivity used.

❖ **Vessel Layout**

- ✓ Overlays onboard sensors and other monitored equipment over a vessel layout image.
- ✓ Displays all connected NMEA devices. This typically includes: wind speed, vessel location, depth sounder, air temp, and house battery status.
- ✓ Clicking on any sensor will display a new window with additional sensor information.
- ✓ Each deck shows only the sensor installed on the respective deck.
- ✓ Available on the EyeOnBoard web site and on board while docked or underway.

❖ **Monthly Monitoring Activity Report**

- ✓ Reports activity for each of the following groups: flooding, intrusion, connectivity and vessel monitoring.
- ✓ Reports last month weather summary. Information is dependent on the equipment installed on the vessel.
- ✓ Tracks software version available and what is currently installed.
- ✓ Alerts owner to any new features and/or services available from EyeOnBoard.
- ✓ A sample report is attached to the end of this document.

❖ **Communication Link Performance (Check-in Statistics)**

- ✓ Tracks the connectivity from the vessel to the EyeOnBoard server.
- ✓ Allows owner to view recent vessel check-ins, recent missed check-ins, and recent connections changes.
- ✓ Provides the owner with vessel check-in performance rating and network up time performance.

Available System Features & Capabilities (continued)

❖ **Camera Images**

- ✓ Images are updated every 10 minutes.
- ✓ Each image is date and time stamped when it was received by the EyeOnBoard server.

❖ **Camera Control**

- ✓ Each onboard camera can send live images up to 120 frames per minute, depending on available network performance.
- ✓ User defined presets provide rapid camera positioning.
- ✓ The tilt, pan, zoom cameras can be controlled by the owner in near real time via the EyeOnBoard web site or directly via the on board computer(s).
- ✓ Multiple people can view and control the camera simultaneously from different computers.
- ✓ All camera images can be viewed world wide from any Internet enabled PC world wide.

❖ **Vessel Network**

- ✓ List of all network peripherals with associated onboard URLs.
- ✓ View and position onboard cameras.
- ✓ Manage environmental monitoring sensors, network storage, and print servers.
- ✓ Manage network router and wireless communications equipment.

❖ **Operational Setup**

- ✓ The onboard cameras can be deactivated to ensure onboard privacy.
- ✓ Guest camera control can be turned off to prevent camera usage without knowledge of the owner's password.
- ✓ The security system can be armed or disarmed over the Internet using any Internet enabled PC world wide or Internet enabled cell phone.


❖ **Alarm Notification Distribution Management**

- ✓ The yacht owner defines who receives alerts based on task responsibility.
- ✓ The process has a single owner to ensure complete accountability.
- ✓ The lists can be modified and/or verified as often as necessary.
- ✓ There is no limit to the number of email contacts on the lists.

❖ **Onboard Software Features**

- ✓ Local control of onboard cameras.
- ✓ Configuration of onboard system parameters, including arm/disarm functions.
- ✓ NMEA data, sensor data, and security data transfers can be limited to prevent unnecessary traffic and the potential expense.
- ✓ Vessel Layout and Vessel Network web pages are available locally.

Sample EyeOnBoard Monthly Activity Report




EYE·ON·BOARD™
24/7 PEACE OF MIND

Persuasion

Monthly Activity Report

From: 2007-11-01 00:00:00
To: 2007-11-30 23:59:59 (PST)



Flooding Events
Engine Room Bilge: 17 event(s)
Lazaratte Bilge: 29 event(s)
Total: 46 Flooding event(s)

Intrusion Events
Salon Door: 7 event(s)
Total: 7 Intrusion event(s)

Connectivity Events
Check In Failure: 5 event(s)
Network Router: 9 event(s)
SkyMate: 11 event(s)
WiFi: 19 event(s)
Total: 44 Connectivity event(s)

Monitoring Statistics
Persuasion checked in 2546 times.
Connections over 1 month:
Broadband: 91%, SkyMate: 9%

Weather Summary
Air Temp: Average: 47.2, Min: 33, Max: 64 (F)
Wind Speed: Average: 3.7, Gust: 43.5 (Knots)
Temperature readings received: 4,484
Wind readings received: 4,405
Sensor readings received: 150,636

On Board Software
Latest: Version 5.4.3
Installed: Version 5.4.3

EyeOnBoard® Services
Did you notice the new **Vessel Movement** feature?
We now support **Cellular** connectivity to your vessel.
We now offer enhanced **Camera Security** software.
Read about our **Refer a Friend** program.

Please [email](#) us any comments you have on this activity report. Your feedback is appreciated.

Note: An "event" as shown here might be an "alert" (such as bilge wet), or a "restore" (such as bilge dry).

This activity report is a summary of vessel and environmental status information captured by the EyeOnBoard® web server from Persuasion during the reporting period. Due to outbound message volume management features ("Alert Limits") present in the on-board software, not all actual events may be captured here.