

CONNECTING THE WORLD'S ASSETS

ORBCOMM[™]

GLOBAL SATELLITE AIS SERVICE

VESSEL VISIBILITY BEYOND COASTAL REGIONS

With an unmatched satellite constellation and ground station infrastructure, ORBCOMM provides the most robust satellite AIS vessel tracking service available today, helping to overcome the limitations of terrestrial-based systems by tracking these vessels well into open oceans. By partnering with some of the most trusted maritime information providers in the world, ORBCOMM offers the most complete situational picture of global vessel activity available to hundreds of customers around the globe.

See beyond the coast

Over the past decade, global maritime and port authorities have been using terrestrial AIS to track vessels travelling in and out of their coastal waters and ports. These AIS systems provide limited range and are unable to provide open ocean coverage. ORBCOMM completes the global AIS picture with the industry leading satellite-based AIS data service, which monitors vessels well beyond coastal regions in near-real-time.

What Is AIS?

Automatic Identification System (AIS) is a shipboard broadcast system that transmits a vessel's identification, position and other critical data that can be used to assist in navigation, improve maritime safety and track vessels for fleet management or maritime law enforcement.

Next Generation OG2 Satellites

ORBCOMM was the first commercial satellite network owner to provide AIS data service, with a multi-satellite first generation launch in 2008.

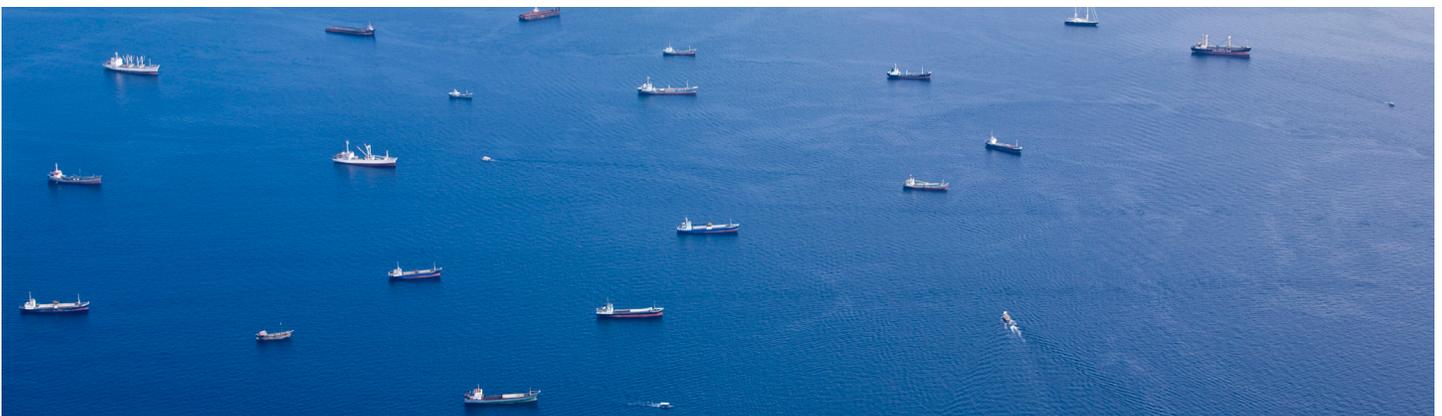
With the launch of 11 more powerful AIS-enabled satellites, ORBCOMM now operates the largest space-based AIS network, with 18 AIS-enabled satellites. Combined with our existing network of 16 ground earth stations around

the world, average AIS data latency as short as one minute can be achieved, which enables near real-time monitoring of vessels and increased analytics capabilities. The high number of satellite passes (up to 135) and coverage overhead up to 90% of the time translates into data refresh rates measured in minutes. ORBCOMM currently processes over 18 million AIS messages from approximately 150,000 unique vessels daily.

Search and Rescue

Improve response time for rescue operations

In search and rescue incidents when loss of life or the watercraft is imminent, timing is everything. The faster information can be communicated to first responders such as coast guards and other authorities, the faster help can be sent on the way.



“Using the ORBCOMM AIS data, we have consistent (historical) measurements so that we can provide a uniform data layer to researchers who want to study fisheries.”

Paul Woods, Chief Technical Officer, SkyTruth

The most effective solution for improving maritime safety and the precision and efficiency of international search and rescue operations is ORBCOMM's satellite AIS data service.

For vessels in distress, ORBCOMM's AIS service can identify exactly where a vessel is located anywhere in the world even if it continues to drift from the distress location. Access to accurate, reliable and timely data about the position and status of a vessel and its crew can greatly improve response time by focusing search and rescue resources to a specific area and enhancing overall rescue coordination.

Most importantly, satellite AIS data can help minimize damage to and loss of the vessel, potentially saving lives. This valuable service is also helpful in tracking the status of the rescue team and reducing risk to the rescuers, especially in treacherous weather or water conditions.

Maritime authorities around the world have used ORBCOMM's AIS service in search and rescue operations to identify and request nearby vessels to help vessels in distress. They can attest to the benefits of ORBCOMM's AIS service in providing visibility of vessel activity and making more rescues possible, thereby saving lives.

- **Improve maritime safety**
- **Locate vessels in distress anywhere in the world**
- **Minimize damage to and loss of vessels**
- **Ensure rapid response time for rescue operations**
- **Reduce risk to rescue team**
- **Enhance overall rescue coordination**

Surveillance and Security

Improve safety and security at sea

AIS service is thought to be the most significant development in maritime navigation safety and security since the introduction of radar. The benefits of AIS in helping maritime authorities enhance maritime domain awareness and surveillance through detection, identification and analysis have been revolutionary.

By utilizing ORBCOMM's AIS service, security and intelligence departments around the world can know where nearly every vessel is located, where it's going and when it will get there. These agencies can use this valuable data to quickly react to anomalies at sea such as suspicious movements, route deviation and other unusual behavior.

Merging ORBCOMM's satellite AIS data with technologies such as electro optical imaging and Synthetic Aperture Radar (SAR) enables the rapid and reliable identification of AIS-emitting vessels and highlights non-AIS emitting vessels. This data has proven to be beneficial for government authorities responsible for security, fisheries, exclusive economic zones, and environmental monitoring in improving security and safety efforts.

Up to 8 minute refresh rate

Down to 1 minute latency

18,000,000 messages per day

150,000 unique vessels

From more efficient management of port traffic to the support of national surveillance initiatives to collision avoidance, ORBCOMM's satellite AIS service is helping to keep global waterways safe and secure.

- **Enhance maritime domain awareness**
- **Support national security programs worldwide**
- **Help with collision avoidance**
- **Improve efficiency of managing port traffic**
- **Enable quick response to anomalies**

Fisheries and Environmental Monitoring

Preserve the environment and facilitate commerce at sea

Providing access to timely, accurate vessel data is instrumental in supporting fisheries management, environmental protection and operational compliance programs in global waterways. From the prevention of marine pollution incidents to the enforcement of fishery regulations to vessel traffic management, the maritime industry has a significant need for a complete situational picture of vessel activity worldwide. ORBCOMM's AIS data service is a cost-effective and reliable resource for vessel owners, operators, port authorities and government agencies to help prevent environmental disasters, enforce fishery regulations and ensure the safety of mariners.



ORBCOMM's AIS service can be used to manage fishing quotas and harvesting limits by alerting authorities of vessels entering closed or protected environmental zones. The result is a reduction in illegal fishing and the preservation of depleting ocean resources. ORBCOMM AIS is also able to track historical traffic patterns and identify violators within these protected areas.

Environmental organizations leverage ORBCOMM's AIS data to determine if a vessel has been in an area where oil, hazardous waste or ballast has been deliberately discharged or leaked to determine who is responsible for polluting the water. ORBCOMM AIS can also provide valuable data to maritime authorities regarding the activity of vessels around and within such environmental or navigation hazards,

enhancing maritime safety and enabling those authorities to take immediate action.

In support of fisheries control and environmental protection, ORBCOMM is working with relevant authorities around the world to detect and identify illegal, unreported and unregulated fishing activities.

- **Help better manage and control fisheries**
- **Preserve and protect the marine environment**
- **Prevent marine pollution incidents**
- **Optimize regulatory compliance in global waterways**
- **Facilitate commerce**
- **Improve vessel traffic management**

ORBCOMM's AIS data service provides the most complete situational picture of global vessel activity available. To learn more about ORBCOMM AIS, visit www.orbcomm.com.

ORBCOMM[™]

ORBCOMM Inc. is a leading global provider of Machine-to-Machine (M2M) communication solutions and the only commercial satellite network dedicated to M2M. ORBCOMM's unique combination of global satellite, cellular and dual-mode network connectivity, hardware, web reporting applications and software is the M2M industry's most complete service offering. Our solutions are designed to remotely track, monitor, and control fixed and mobile assets in core vertical markets including transportation & distribution, heavy equipment, industrial fixed assets, oil & gas, maritime and government.