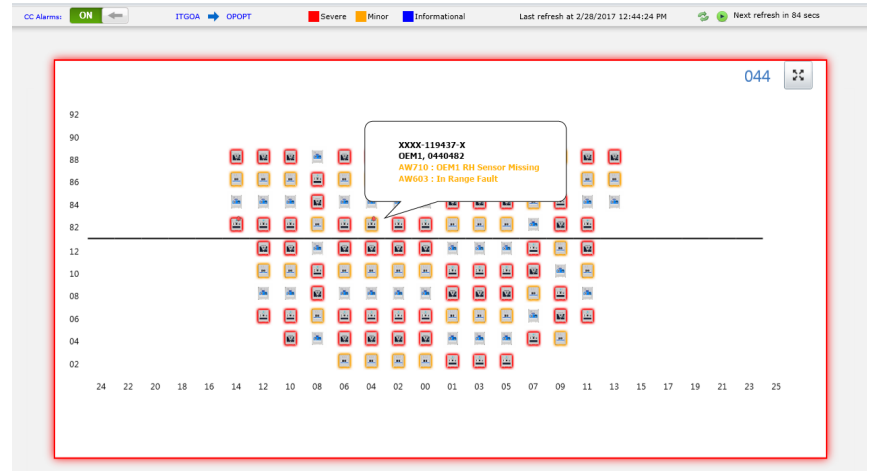


VesselConnect

Remote refrigerated container management at sea

Minimize cargo damage, reduce operating costs and enhance crew efficiency



ORBCOMM's VesselConnect enables local and remote management and control of refrigerated containers on board a sea vessel. The solution helps ensure cargo integrity and reduces operating costs by allowing crews to locally monitor temperature, humidity, location and slot position, reefer status and more. Data can be accessed from the VesselConnect application on the ship, which can also be synchronized through the cloud for remote land-based access. It virtually eliminates the need for manual checks, enhancing efficiency and minimizing risks to crew, especially in inclement weather.

Using on-board GSM infrastructure powered by Vobal Technologies, VesselConnect creates a wireless local data transport network on the ship, enabling refrigerated and other containers fitted with GPS/GSM modem devices to continue to report while the vessel is on the water.

This cost-effective, low-infrastructure system can be installed with no downtime to ensure immediate vessel redeployment. Deck crew receive real-time event-based alerts on handheld devices so they can take immediate action, while office-based crew can access the central terminal, which displays all bays and containers at a glance on an icon-based interface that can be easily and universally interpreted and understood.

Minimized cargo loss and damage

Reefer containers carrying sensitive and high-value cargo can now be tracked and managed across water with up-to-date reefer reports, critical alarms and remote reefer commands, allowing crews to ensure cargo integrity with access to timely, actionable data. The system also helps achieve regulatory compliance by providing precise temperature monitoring and record keeping needed to perform cold treatment, a process required by many food regulation agencies.

Expedited distribution

VesselConnect has a unique ability to accommodate both the shipping lines' own reefers as well as reefers from alliance or sharing partners. It offers access to container temperature and environment data, allowing customers to more efficiently allocate containers to specific markets to optimize shelf life and minimize loss due to spoilage. Pre-trip inspections can be also executed on the water, eliminating costs of manual port-based checks and further expediting the discharge of cargo to clients.

Cost-effective and low-infrastructure

Quick and easy install while in port

Real-time status reports and alerts

Easy-to-use graphical interface

Improved crew safety and efficiency



Cost-effective and easy to deploy

The complete VesselConnect system can typically be installed in about 6 hours with minimal infrastructure. It integrates easily with existing vessel LAN and satellite systems, be that FBB, VSAT or other. Maintenance and repair operations are also significantly improved. The system identifies any non-performing equipment through real-time detection, alerting shore staff so that parts will be available upon arrival.

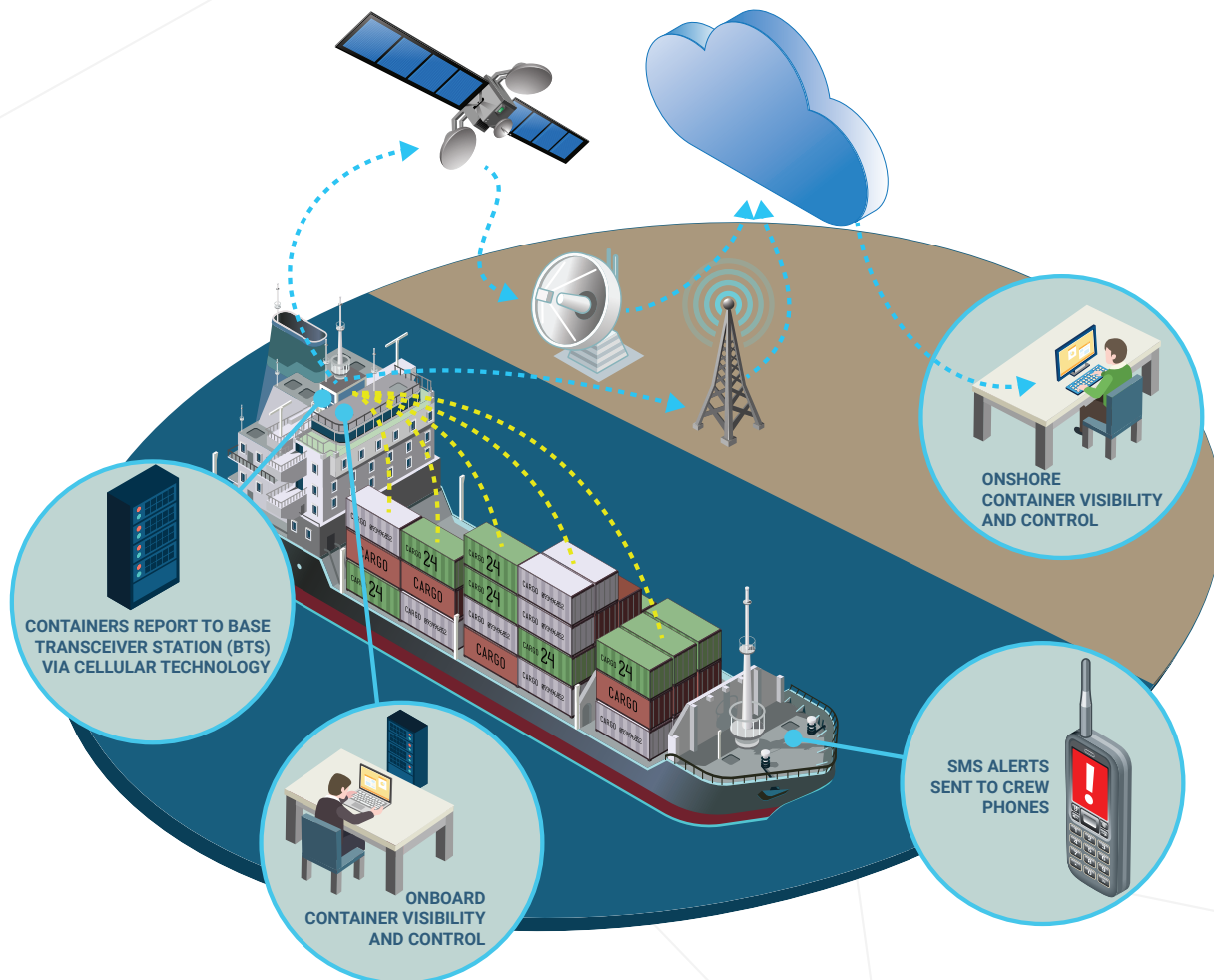
Enhanced crew safety and efficiency

VesselConnect eliminates the need to manually check the status and condition of reefer containers. If an alarm occurs, alerts will automatically be directed to the VesselConnect console and crew phones so an engineer can be dispatched to check and resolve any issues. Real-time remote management of reefer assets on a vessel enhances crew safety and efficiency by reducing crew time walking

the decks and climbing ladders, especially in perilous conditions.

Open architecture

Because of its low infrastructure and hardware requirements, VesselConnect can be easily deployed on a wide range of ships of various shapes and sizes, including conventional container vessels, barges and roll-on/roll-off (ro-ro) and ConRo ships. Not only does it optionally integrate with AIS vessel tracking data and vessel stowage plan BAPLIE, the solution can also scale to support more advanced applications, integrating data from other telemetry systems and wireless technologies. It uses standards-based cellular GSM, serving as a platform so 3rd party GSM tracking devices can also utilize the system.



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