

Application Story - Container Tracking

Container Tracking - Enhanced safety on all transportation routes

For logistical and, especially, safety reasons, logistics companies are increasingly keen to monitor container shipments along transportation routes. Particularly during the shipment of perishable, highly valuable or safety-relevant goods, the containers are equipped with suitable devices that accompany the shipment, are removed at the destination and then re-used for further shipments. This allows the route taken by the shipment to be tracked from a logistics or security centre. Status updates on the condition of the goods and warning messages if containers deviate from their "normal" transportation route can be issued and suitable measures taken to minimize or avoid damage.



Container Tracking

Benefits of Container Tracking

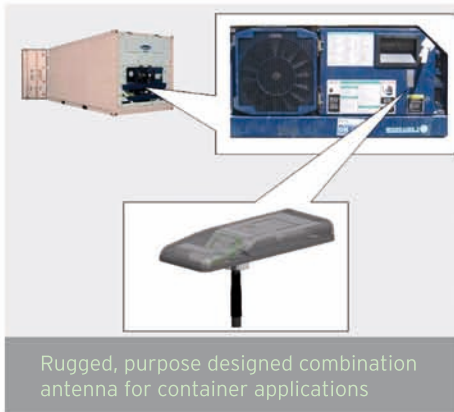
- Improved container management
- Position reports even outside non-registered zones (terminals, ships etc.)
- Overview of the location and status of loads
- Reduction of transportation risks
- Theft protection
- Monitoring of compliance with specific requirements relating to temperature, humidity etc.

How shipments are tracked

GPS positioning is possible in all four corners of the globe. All international GSM networks can be used for communications between terminals installed on or in containers and the monitoring centre. This means that containers can be tracked wherever they are in the world.

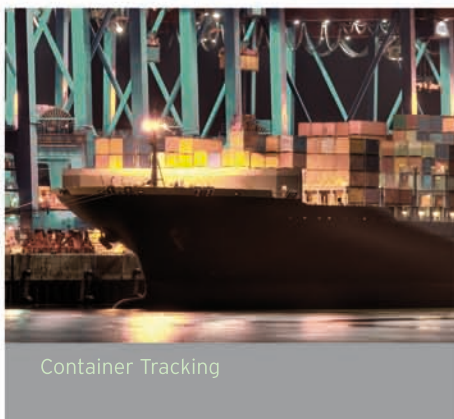
Before the shipment, the terminal is installed on or in the container and activated.

During the shipment, regular position reports are sent to the monitoring centre. In the event of unauthorised actions or if the permissible limit values are exceeded, the devices send warning messages to the monitoring centre, where suitable measures are then taken to minimize or avoid damage.



Antennas must perform

- GPS function under very limited open-sky-visibility conditions
- Cellular communication with maximum range to base station
- WLAN for on-board communication
- Housing design to minimize collision impact and foothold for climbers
- Withstanding marine conditions
- Protected cables
- Fast development
- Flexible field testing support



Antenna solution

- Low-profile tri-mode antenna for Cellular, GPS and WLAN
- Application specific antenna design to allow optimal performance in defined orientation and mounting location
- Superior antenna performance fulfilling low profile requirement
- IP67 rated, slanted, low profile housing design with rounded edges
- Complete elimination of metal components for housing and mounting nut
- Sonic welding of housing components
- Sealed cable outlet
- Membrane for pressure and humidity control
- Nylon braided RF-cables

Hirschmann solutions advantages

- Full customer support in application analysis
- Customized product development
- Outstanding RF know-how and specialist for custom developments
- Authority in designing coexisting multi-band antennas
- Very quick realization of prototypes achieving superior field test results
- Fast implementation of requested changes
- Automotive quality and low-cost design know-how
- High volume, high quality manufacturing capabilities
- Low manufacturing and tooling cost
- Local sales and application support
- Local project management