

Inland Transit Monitoring

AVANTE CONTAINER TRANSPORT SECURITY SYSTEM AND SERVICES

AVANTE provides web-based 24/7 end-to-end tracking services of cargo using its RFID ZONER™-RELAYER™ container security devices, carrier-based and yard based fixed site communication links, and association of personnel badges to provide cargo container visibility and security management:

- Leasing a set of SMART-TRAKKER™ consists of one set of RFID ZONER™-RELAYER™ container security devices (two ZONER™-CTID tags and one RELAYER™-CTOR), three personnel ZONER™-SSID badges, and one carrier-based communicator of RELAYER™-CTCR (equipped with GPS, GPRS and SATCOM).
- Optional fixed site installation of networks of nodal and real-time locating system of RELAYER™-RTLS readers along the supply chain.
- Flexible service charges based on scheduled regular reporting and real-time exception reporting. This cost effective supply chain security system and visibility solution does not require capital investment. Return of investment (ROI) in using this patented transport security system is immediate and can be tailored to your specific requirements.

A state highway inspector conducts a safety inspection using wireless hand-held technology to record and receive data. These inspections also facilitate freight mobility.

Source: FHWA

Inland transit is highly susceptible to tampering. A secure solution should include real-time visibility of the container integrity while on land or at sea.

The ability of RELAYER readers to monitor RSSI from ZONER tags for any door openings and to alert the the driver and/or staff of such events provides unparalleled security and visibility of containers during transit. The same system is also applicable for standard trucking containers. With the optical AVANTE GPS-cellular-satellite communication module to interface with a separate "master" RELAYER reader, real-time positioning, routing and reporting of tampering and exception events can be directly reported to central data center and management.

AVANTE CONTAINER REAL-TIME LOCATING and MONITORING (RTLM) SYSTEM

AVANTE Container RTLM SMART-TRAKKER™ System is composed of the following patent-pending modules and units:

- A set of RFID ZONER™ tags transmits messages from inside the container. The receipt of the communication messages (differing signal strengths) outside the container positively identify tampering or access into the container after it has

been sealed. The differential signal levels are more sensitive than on/off signals thus they minimize potential false alarms. Patent-pending built-in redundancy also helps to prevent false positives and the chance for insider tampering.

- An RF RELAYER™ network of RELAYER™ monitors is used to relay messages from the RELAYER™ reader attached on the outside of the container that communicates with ZONER™ tags inside the container during both normal status and exception reporting. Reports of normal conditions and general status are made periodically. Exceptional items and tampering triggers immediate reports to the proper authorities in real-time.
- A monitoring and communication computer is housed in a sealed hardened box to prevent tampering. This sealed, monitoring “GREEN BOX” and communication center is installed by a third party to provide true independent reporting and monitoring services.

The “GREEN BOX” includes the following sub-systems:

- A redundant processor and non-volatile memories.
- A GPS location reporting system. A satellite or other suitable communication means.
- An optional, multi-channel video, digital recording device.
- Video feeds to destination authorities and independent monitoring agencies are made when available.