

ReeferTrak® - Commander

Satellite-based
Refrigerated Transport
Control - total coverage



- Full Authority Control - change set points and parameters
- Satellite communications for Complete coverage throughout North & Central America, Europe, & Australia
- Always-On™ instant poll response
- Full Logistics - location, speed, direction, ETA, etc.
- Fully Web-Enabled
- Compatible with equipment from all major industry equipment suppliers
- Alarms, control, and maintenance
- ReeferTrip™ - for Safety
- **And now... Ride Quality Monitoring**

THE APPLICATION

Where is your reefer unit? Do you need truly complete coverage throughout North America (or Central and South America, Australia, Europe, or Africa)? With Full Authority Control? Do you run a mixed fleet? Need notification of temperature alarms? Want to download a temperature profile? Change the set-point or the operating parameters? Execute a full pre-trip test from your desk? Integrate complete fleet management including waybill and Rail CLM (car-location-messages) through a fully Web-Enabled platform - *that's developed and operating?* **ReeferTrak® Commander** delivers.

Right now, ReeferTrak® Commander is monitoring *and controlling* thousands of mobile, un-manned, refrigerated assets, (rail, truck, & container) around the world. **No other system can do this!** Our Web-Enabled interface includes a variety of fleet management tools. All available from any PC with no special software required.

If you manage a fleet of reefers, StarTrak has made wireless monitoring and control useful, affordable and available from your desk, over the Web. **Commander**, **Sentry**, and **Scout**. StarTrak means solutions.

FROM YOUR ASSET ...

The ReeferTrak® Commander unit is mounted on your asset - rail car, trailer, or van- and interfaces directly into the controller of the reefer unit (most Carrier and Thermo King models supported). Its small size means easy installation. Low cost means good return on investment. Low-power design and **Always-On™ satellite technology** means the system is always ready for your command, *even when the reefer unit is shut down and the trailer is unhooked*. Alarms of any kind are sent to you within seconds via email, pager or fax. **Full-Authority Command** capability allows you to check a unit, change a set point, adjust any parameter, or troubleshoot a problem. Only **ReeferTrak® Commander** gives you all this.

...TO YOUR DESK... VIA THE WEB

All StarTrak solutions are fully Web-Enabled. Any information you need is available from a PC, pager or cell phone instantly. No software to maintain. The StarTrak network can easily join reefer messages with other information such as Rail CLMs, waybills, manifests, etc. Custom reports? Interface to legacy systems? No problem. Our in-house software team can create any report you need quickly and economically.

WHO CAN BENEFIT?

ReeferTrak® Commander is designed for anyone who manages or operates mobile refrigerated assets. ReeferTrak™ is, by a wide margin, the most comprehensive refrigerated transport asset management system available.

ALWAYS-ON™ COMMUNICATIONS

Poll your asset any time. Get a response in minutes every time. No "dead spots" because our geosynchronous satellite communicator offers truly complete coverage throughout North and Central America. Terrestrial solutions are also available. StarTrak systems are currently operating in Europe, Australia, and South Africa as well.



Fully Web-Enabled user interface allows you to manage all your assets from wherever you happen to be. Allow your customers to check status if desired.

ALARM ROUTING

You specify important events (temperature, fuel, unknown shutdowns, hook & unhook, impacts, begin unloading, arrive destination, etc.). When the event occurs, an alarm message is immediately sent anywhere you specify. Email to dispatch, fax to the loading facility, page to a field technician. Links to your legacy system are supported by our in-house staff, and all data is fully Web-Enabled.

REEFERTRIP™ - FOR SAFETY

Another unique feature of ReeferTrak[®] is our patented *ReeferTrip™* technology. This solves two of the problems that plague remote refrigerated control for rail cars: First, if the customer leaves the reefer unit shut off after unloading, ReeferTrip™ allows

an operator to over-ride and restart the unit *from their desk*, via StarTrak's Web interface. No longer is it necessary to send a service technician to the rail car. Second, ReeferTrip's™ fail-safe Maintenance Mode allows the technician to fully disengage the remote system so they can work on the reefer unit in complete safety.

THE SUM OF ITS PARTS

StarTrak has been providing wireless monitoring since 1993. We manage every aspect of refrigerated trailers, and rail cars with a wireless, full-authority two-way solution that really works.

ReeferTrak[®] is the most comprehensive refrigerated transport asset management system there is, and commercial service is now available globally.



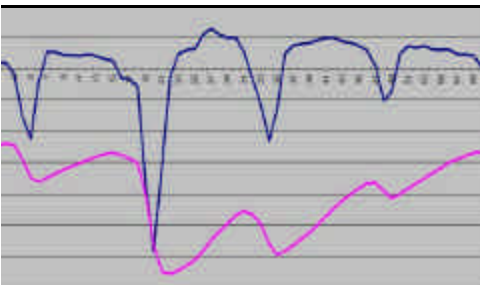
StarTrak's Low power satellite terminal provides complete coverage with NO dead spots. Solar power option is available for assets with long dwell times. Cellular communicator is also available where complete coverage is not a primary requirement.



StarTrak also offers wireless control on mechanical reefer units. (And no one else does!)

RIDE QUALITY IN REAL TIME

StarTrak has been the world leader in ride-quality monitoring for Rail and other transport applications for 10-years. Now that capability is available with ReeferTrak for a truly complete solution. Impacts, truck hunting, vibration, etc. are available in real time over the link, viewable from any browser. Alarms can be sent anywhere (email, pager, etc.)



Complete g & dV waveforms from actual impacts may be sent over the link to your web browser or email.



Detailed maps showing location can be accessed from any Web-Enabled PC.

SPECIFICATIONS

Communicator: Geosynchronous satellite (See ReeferTrak *Sentry* and *Scout* for cellular and RF communications solutions.)

Event response time: within 30 sec. typical

Poll Response time: 1 min. typical

Logistics Information: Latitude, longitude, speed, direction

Power: Less than 12 mA continuous.

Reefer Controller Interface: Direct interface to controller on reefer. Complete protocols for Thermo King (uP IV, V, VI) and Carrier (Standard and Advance Micro) controllers.

Optional Sensors: fuel, impact, load, door open, hook/unhook, etc.

Full Authority Control: Set Temp, Pre-Trip, operating parameter change, smart presets, etc.

Alarm Capability: Triggers fully settable by user over link. Over/under temp, fuel, door open, hook/unhook, low battery, plus all controller alarms (oil pressure, etc.)

Mechanical:

ReeferTrak: 4.5 X 6.25 X 3.25in. 1.2 lbs
Communicator: 4 X 6 X 2 in .5 lbs.

THE STARTRAK COMMITMENT

StarTrak has been providing wireless solutions since 1993. We've offered Internet-based data systems since 1996 across a variety of applications. We grew up in the railroad industry, so we know rugged environments. StarTrak has always been a total solutions provider.

Mobile (all with full logistics):

Railcars, Locomotives, Tank Trucks, Refrigerated Transport (truck, rail, and intermodal), Barges (including draft and load), Intermodal (chassis, gensets, tugs and containers). LoadWeigh™ delivers accurate (3%) load measurement from rail assets in seconds.

Fixed Site:

Petroleum, Tank Level, Pipeline, Flow Meters, Compressors, Generators, Light Industrial, Mod Bus.



106 The American Road
Morris Plains, NJ 07950
(973) 993-1760

www.startrak.com
sales@startrak.com