



## W I R E L E S S   A S S E T   M O N I T O R I N G   &   C O N T R O L



### **Wireless Asset Monitoring & Control**

Intellitrans collects real-time information about individual rail cars via satellite and then simultaneously relates the status to a fleet. The results in the most comprehensive fleet management system available in the rail industry.

For complex mobile applications, we offer a complete management solution:

- System, hardware, software, IT, and manufacturing design, development and implementation are all in-house.
- Demonstrated command & control capability for management and enhancement of complex mobile assets with multiple communication platforms.
- Business oriented Information Technology platform with fully Web-enabled data base. All messages "Joined" with shipping orders, waybills, CLM's, bills of lading. Joining is necessary to achieve radical equipment utilization improvements and lading quality/delivery standards.

Complete Fleet Monitoring and Logistics: Satellite, Waybill and CLM/Train II Simultaneously! Allowing you to:

- Have WEB-Enabled, real-time information
- Know the status and location of your railcars in seconds
- Know when they are unloaded at the customer's facilities along with measured cycle times
- Match empty equipment to requested load locations
- Refine ETS's during shipment, or define your own logistical needs
- Measure your inventory within a few percent of gross laden vehicle weight
- Attain specific car conditions; temperature, pressure or door openings
- Monitor damage to shipments
- Control and monitor refrigerated cars

[www.intellitrans.com](http://www.intellitrans.com)



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### Wireless Asset Monitoring & Control *(cont..)*

#### Communications

Very low-powered satellite terminal  
 GPS offers Real-time  
 User-defined alarm management

#### Monitoring Unit

Smart Functions	Pressure
Logistics Central	CPU Fuel
Accelerometer	Refrigeration Control
Load	On-vehicle Control
Temperature	Circuitry

#### Applications

- Logistics

- Location
- Adjustable reporting times
- All types of mobile assets

- GenTrak™

- Gensets (clip-ons), which power refrigerated containers
- Fuel
- Hourmeters
- Unmanned, lost
- Adjustable Reporting Times
- Location

- Condition

- Lading (damage)
- Impact
- Combines location, car ownership,
- Track Anomalies carrier with alarm notification
- Preventative Maintenance (system wide improvements)
- Wheels, Trucks, Brakes, Bearings
- Ride Quality

- Tank

- Temperature/pressure(lading quality/safety)
- Load (operational)
- Force (safety, car maintenance)

- Loading

- Measures freight car loads precisely
- Via wireless communications
- Real time load knowledge
- Local measurements of the car
- Improved utilization and inventory management

- Refrigerated Cars

- Full authority temperature and equipment control
- Alleviates the necessity of 'real' person on car
- Fuel level
- Integrates seamlessly with Carrier and Thermo King
- Door status
- Temperature equipment monitoring

### BNSF Refrigerated Railcar Project Complete, interactive & real-time fleet management system

- Highlights

- |   |                                    |
|---|------------------------------------|
| - Fleet Reduction: 2,100 cars to 700 cars               | - Same business volume             |
| - Car Trips per year increasing from 8 to 14            | - Meets increased customer demands |
| - Major improvement in quality/predictability of lading |                                    |

- Service Aspects

- Visibility of Fleet Status to multiple parties
- Real-time communication, status & control to/from rail equipment
- Information technology solution (Intellitrans)
- 24/7 Operation
- Alarm/Alert notification (email, fax, wireless device, web)
  - *Direct via wireless from the asset (High Temperature)*
  - *Resulting from industry information (Empty Release)*
  - *Combining wireless with industry information (Improper Temperature Set Point)*

