Customer Case · Transportation

Lat-Lon, LLC

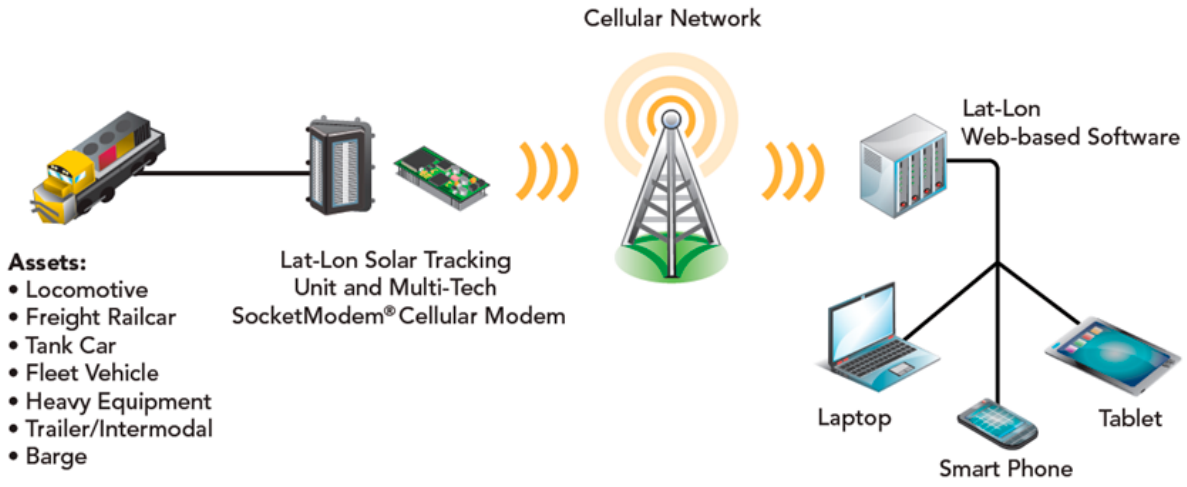
SocketModem® Embedded Cellular Modems

Solar Tracking Unit Protects Cargo, Saves Costs

Cost-effective Solution Helped Lat-Lon Get to Market Quicker and Enhance Value to Customers

Background

The rail industry is a key medium for shippers in many industries for its economical and space opportunities. However, mixed loads, with varying degrees of tolerance for environmental conditions, such as temperature, provides a challenge for the transporter to safely get each product to its destination. Shipments often require that either a person travel with the freight to monitor for damaging situations or a full inspection is needed at the destination point, which results in significant costs and delays.



Application

Since its start in 1999, Lat-Lon's product evolution has been driven by a growing need to track moving cargo. The rapid improvements and advancements made to cellular networks have spurred Lat-Lon to incorporate cellular M2M (machine-to-machine) communications into their solutions. The core product in Lat-Lon's line is a self-contained Solar Tracking Unit (STU) currently calling-in around the world from railcars, trucks, containers, and barges. The wireless STU includes GPS, Multi-Tech embedded cellular modems for CDMA or GSM communications, and a patented solar power system for full-day functionality.

The STU eliminates the need for a person to travel with the cargo or for final inspections, as it allows assets to be monitored and tracked remotely. A prime example is food shipments, which were yielding upward of 20% of goods being rejected due to refrigeration failures. The Lat-Lon solution coupled with M2M communications is able to achieve significant savings in a very short period of time.

Lat-Lon has also had a major impact in regard to the need for trains to run their engines 24/7. Ordinarily, locomotive engines need to constantly run in order to maintain temperatures in hostile, cold climates throughout the cars, which wastes fuel and increases engine wear. With the Lat-Lon Automatic Engine Start/Stop application, the trains now only run an average of four hours per day, saving thousands of dollars in fuel costs, while monitoring temperatures to ensure product integrity.

There are also many other examples that the combination of the Lat-Lon STU and M2M communications improves the safety of goods, reduces costs, and improves yields. In short, the partnership between Lat-Lon and Multi-Tech Systems offers a solution that:

- Enhances the performance of assets, such as locomotives
- Increases safety of assets
- Provides a better ability to manage assets
- Saves on fuel costs
- Is more environmentally friendly (i.e., burning less fuel)
- Allows real-time access to the health of remote assets

Partnership

Thanks to M2M communications enabled by a carrier-approved Multi-Tech Systems modem, Lat-Lon was able to quickly bring to market a solution that allows real-time access to data from remote assets. Multi-Tech System's ready-to-integrate embedded device networking solutions with Universal Socket connectivity and Universal IP® allowed Lat-Lon to add communications capability to its Solar Tracking Unit (STU) with minimal effort and without having to pursue their own carrier approvals, addressing the company's first challenge: getting to market quickly.

Another challenge was having the ability to connect to various wireless technologies. This is extremely important in the transportation industry – where there is cargo shipped around the world, spanning regions with many different carriers. In addition, the frequency to which cellular technologies advance creates cost and consistency challenges for any company looking to deploy M2M communications solutions in broad geographic regions. This was the primary hurdle Lat-Lon faced until incorporating Multi-Tech SocketModem® Cell embedded cellular modems, which provided a cost effective, stable, and straightforward solution.

The SocketModem Universal Socket and Universal IP® features allow Lat-Lon to connect to different cellular technologies without doing a redesign, greatly simplifying the process and cutting development costs associated with connecting to both GSM and CDMA technologies. Furthermore, these cellular modems are approved by carriers and certified by regulatory agencies worldwide, so Lat-Lon can integrate and deploy quickly without incurring the costs or delay associated with pursuing its own approvals. Through this progression, Lat-Lon aligned with customer specific needs to increase sensor offerings in the STU to monitor impact, temperature, pressure, hatch integrity and more.

Multi-Tech Embedded Cellular Modems

The SocketModem® Cell cellular modem is a complete, ready-to-integrate communications device that offers 2G or 3G GSM or 2G CDMA performance. These quick-to-market, globally-approved communications devices allow developers to add wireless communication to products with a minimum of development time and expense. The SocketModem Cell cellular modems are based on industry-standard open interfaces and utilize Multi-Tech's Universal Socket design.

SocketModem® Cell Embedded Cellular Modems

- Interchangeable communications devices
- Quick-to-market
- Easy migration to future networks
- Serial or USB interface
- Embedded TCP/IP stack

About Lat-Lon, LLC

Lat-Lon provides wireless GPS tracking and monitoring solutions worldwide for assets with cellular and satellite connectivity. Since 1999, Lat-Lon has established itself as an innovator in monitoring technology and product flexibility. The self-contained Solar Tracking Unit by Lat-Lon dominates product lines, complimented by powered units for locomotives, vehicles, and heavy equipment.

For more information contact Lat-Lon:
Tel: 877-300-6566
E-mail: sales@lat-lon.com
www.lat-lon.com

World Headquarters
Multi-Tech Systems, Inc.
2205 Woodale Drive
Mounds View, MN 55112
U.S.A.
Tel: (763) 785-3500
Toll-Free: (800) 328-9717
E-mail: sales@multitech.com
www.multitech.com

EMEA Headquarters
Multi-Tech Systems (EMEA)
Unit 1, Thames Court
2 Richfield Avenue
Reading, Berkshire RG1 8EQ
United Kingdom
Tel: +(44) 118 959 7774
E-mail: sales@multitech.co.uk