



Key benefits

- 1** Remotely tracks cattle location in far-flung areas of the property
- 2** Enables the application of geo-fencing limits
- 3** Monitors animal activity levels to identify potential problems
- 4** Works indoors and outdoors and under diverse conditions
- 5** Characterized by low cost network installation and operations

Livestock tracking system

To improve herd management and production practices for ranchers and farmers

A reliable, long range solution for tracking livestock and maintaining accurate visibility into their location, health and safety.

Livestock spend long periods of time on the open range grazing and out-of-site of the livestock owner. Under these conditions, they may wander out of the perimeter of the property, be stolen or injured.

The Inmarsat-ThingPark livestock tracking solution provides ranchers with visibility into geolocation of their animals, identifies changes in their activity levels, and sends alerts when unusual activity is noted or the animal is reaching the boundaries of the safe perimeter.



Usage scenario

A vast estancia in the Patagonian Andes regularly moves their 10,000 head of cattle to the open grasslands where they can graze for days and even weeks at a time. Occasionally, an animal will wander away from the grasslands or a calf is separated from its mother when the herd migrates to a new location. In both instances, it is easy for the lost animal to wander into rugged terrain where they risk injury and theft.

An Inmarsat-ThingPark livestock tracking solution is installed at the ranch and trackers are placed on each of the animals. An application enables the rancher to monitor the location and activity level of each animal in the herd, and sends out an alert to the ranch manager and ranch-hands when an animal is at risk of being lost, is behaving erratically or is nearing the perimeter of the ranch. The livestock owner may then take the appropriate actions to retrieve the animal before an adverse event takes place.



How it works

The LoRaWAN™ Low Power Wide Area Networks (LPWAN) are designed to optimize for battery life, range, indoor-outdoor coverage, bi-directionality and cost.

Sensors and applications that are built to send small amounts of data over long distances, a few times per hour from varying environments.

Sensors in the field collect data and send short packets (chirps) of data to the gateway(s) with which it is associated and which are also located in the field.

The gateway in turn functions as a transparent bridge to forward/receive packets from the sensors to a cloud-based network server via backhaul (satellite, Ethernet, cellular, Wi-Fi).

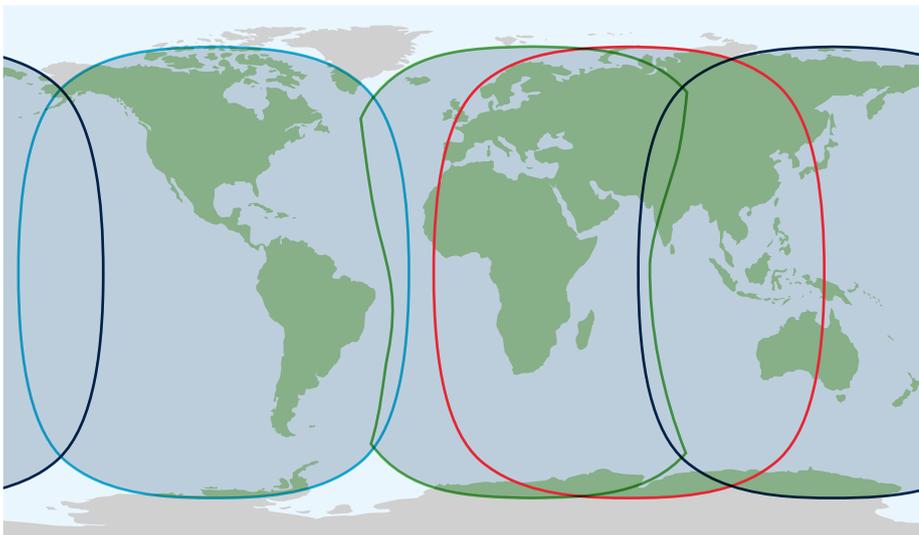
Inmarsat Satellite technologies are used to backhaul data - typically collected in remote regions where traditional terrestrial networks are lacking and/or unreliable. Additionally, as a singular operator, Inmarsat removes the burden to deal with multiple carriers across geographical dispersed regions and countries.

The Network Server manages the data intelligence and network complexity and will filter redundant received packets, perform security checks, schedule acknowledgements through the optimal gateway, and perform adaptive data rate management (ADR enables capacity scalability). If an end-node is mobile, no handover is required from gateway to gateway, a critical feature to enable asset tracking applications (a major target application for IoT).

The integrated platform provides an end-to-end solution that transmits site-specific data to applications in the cloud for analysis, delivering insights and supporting decision making, and creating value for the end-customer.



Inmarsat I-4 network coverage



- Combined I-4 and Alphasat coverage
- I-4 Americas
- Alphasat
- I-4 MEAS
- I-4 Asia-Pacific

This map depicts Inmarsat's expectations of coverage following the commercial introduction of Inmarsat's fourth L-band region. It does not represent a guarantee of service. The availability of service at the edge of coverage areas fluctuates depending on various conditions.

How to buy

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