

# Finance

In a world increasingly inter-connected, cloud-based and data-driven, LeoSat Enterprises is launching a constellation of up to 108 low-earth orbit (LEO) communications satellites providing the first commercially available, enterprise grade, extremely high-speed and secure data service worldwide.

Using optical inter-satellite links and operating in polar orbits at an altitude 5 x closer to earth than MEO and 25 x closer than GEO, LeoSat has many advantages when it comes to throughput, latency and true global coverage. As such, LeoSat offers a unique data network solution with the highest performance offered by any existing or planned system, including fiber.

## Combining the Speed of Fiber with the Ubiquity of Satellite



The LeoSat system is being developed in conjunction with Thales Alenia Space, a company with unmatched expertise in designing and manufacturing low earth orbit constellations. The high-throughput satellites (HTS) will form a mesh network interconnected through laser links, creating an optical backbone in space approximately **1.5 times faster** than terrestrial fiber backbones, thus creating a paradigm shift in the use of satellites for data connectivity – rather than a gap filler or last resort where no terrestrial alternative is available. LeoSat will offer a **highly secure** and ubiquitous service that can rival and often beat fiber in terms of latency.

## High Speed and Ultra Low Latency for The Finance Sector



In the finance industry and in particular the trading sector, banks, hedge funds, trading firms and financial services companies are always looking for the latest technologies and innovations to stay ahead of the competition. With exchange technology and big data at the forefront as key differentiators for success, companies are looking to address the challenges of latency management and network connectivity. LeoSat's system of low earth orbit communications satellites can achieve **lower latency** and **stronger end-to-end security** compared to traditional terrestrial solutions used today, in a market where speed advantages of milliseconds are worth **millions in potential profits**. For example, LeoSat can offer point-to-point latency of 100ms from New York to Tokyo.

## Delays Matter



When data is delayed... even the best algorithms in the world become useless. LeoSat takes your data network into space:

 Satellites have now become routers and are inter-connected with lasers forming an optical backbone in space

 Data travels at the speed of light directly from your terminal to your final destination - anywhere around the globe

# System Overview

## The Most Advanced Commercial Satellite System Ever Built

The LeoSat satellite constellation uniquely provides customers with **symmetric, very high-speed, low latency and highly secure communications between locations anywhere on earth, completely independent of existing terrestrial networks.**

This system which consists of up to 108 satellites orbiting at approximately 1,400 kms, is being developed together with Thales Alenia Space, the leading satellite manufacturer with unmatched expertise in developing and manufacturing constellations. Each satellite in the LeoSat constellation utilizes **optical inter-satellite links (ISLs)** to connect to the satellites around it, creating fiber-like symmetric connectivity with speeds of up to 1.6 Gbps and even 5.2 Gbps where needed. Customers use their LeoSat terminal to connect to the nearest satellite from where the data is routed onwards by On Board Processors (OBPs) through LeoSat's space-based optical backbone until the data reaches the destination satellite which connects with the customer's destination terminal. Contrary to bent-pipe HTS solutions, gateways are not a pre-requisite for LeoSat to operate its network. For customers, this unique use of technology allows for premise-to-premise connections with no terrestrial touch-point in-between and sets a new bar for high-speed networks.

### Satellites

Each satellite in the constellation supports:

- 10 Ka-band steerable antennas, each providing up to 1.6 Gbps of symmetrical data connectivity
- Two steerable high-performance antennas, each providing up to 5.2 Gbps of symmetrical data connectivity
- 4 optical inter-satellite links

### Availability

- 2019 Launch of two Early Birds offering GigaByte Store and Forward Services
- 2021 Start of launch of the constellation offering real-time, point-to-point connectivity with coverage growing from the Poles to the Equator on completion
- 2022 Full Worldwide Service Available



For more information on LeoSat Enterprises, please visit our website or follow us on social media