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 which is about 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.

**Unmatched Reliability and Security for Enterprise Communications**

For the Enterprise Communications sector with the need to move large, sensitive amounts of data around the world, reliability and security are key components of a critical data network. LeoSat’s advanced and unique system architecture is able to highly encrypt and logically separate and route the data as it flows through the system allowing the company to deliver the highest performing, most secure, furthest reaching network in the world. With LeoSat, data travels in its native form, but is encrypted and secure from end-to-end across an optical satellite network, with no terrestrial touch points. Enterprise communications can now rely on LeoSat for domestic and international data transport, communications backhaul or hosted solutions that are not only completely secure but delivered faster than on any other satellite or terrestrial network.

**Capabilities Beyond Satellite...Beyond Fiber:**

- **Security** – Physically separated network ensures security on the lowest physical level. High-level encryption add to physical separation
- **Ubiquity** – Any customer – anywhere. Service without compromise to the harshest environments and the most remote areas
- **Redundancy** – Multiple satellites at any given time. Redundancy unique to high-speed data networking
- **Symmetry** – No variation in forward and return speeds. Today’s connections require symmetry – we deliver
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

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