

Nanosatellites see the light - laser communication for a new age in space

TESAT, KSAT and GomSpace have partnered up to introduce full optical communications capability for new innovative small satellite missions and space-based services.

Until now this technology has mainly been used on large and expensive satellites but is now further developed, miniaturised and ready for use on small satellites and new constellations.

The new technology will be launched in the PIXL demonstration mission later in 2019.

The benefits of optical communications in space

Optical communication technology offers a number of important benefits that will add to the value of future space-based infrastructures; this includes support for dramatically higher data rates and improved security through narrow beam-widths.

To ensure a successful and accelerated market introduction of the technology, the partners have put all their competences together to demonstrate - by end of this year - that optical downlinks are ready to be used as operational downlink technology for nanosatellites.

A valuable collaboration

TESAT, the world leader in optical satellites communications, has successfully miniaturised the technology to allow its efficient use on satellites down to 3 kg and with data rates from 100 Mbps to 10 Gbps.

KSAT, the leading ground station network provider for new space customers through its KSATLite offering, is committed to building out a compatible network of optical ground stations and scaling it with increasing customer demand.

GomSpace, the world leader in nanosatellite design and manufacturing, has – in collaboration with TESAT – validated compatibility and integration between GomSpace satellite busses and TESAT's miniaturised optical terminals.

End-to-end demonstration

The PIXL demonstration mission will be launched later in 2019 to demonstrate the full capability. TESAT with research partner DLR provides the terminal, which is integrated with a GomSpace provided satellite platform. A cost-efficient ground station solution will be operated by KSAT.

The partners are looking forward to a future where optical communication utilised both for satellite downlinks and inter-satellite links becomes standard and look forward to showing potential customers how soon that future can be a near term reality.

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About TESAT-Spacecom

Over the course of five decades, Tesat-Spacecom has developed in-depth expertise in manufacturing of payload equipment for communication satellites, and has established itself as a clear European market leader. Tesat is the first organization in the world to develop and deliver equipment for optical broadband communications in space. Tesat's laser communications terminals can transmit data and images between satellites and from satellites to earth. In addition to laser communications products, Tesat's offerings include travelling wave tube amplifiers, multiplexers, waveguide switches, and modulators, which are delivered globally to all leading satellite manufacturers. More than half of all communication satellites in orbit have Tesat equipment on board. More information can be found at www.tesat.de.

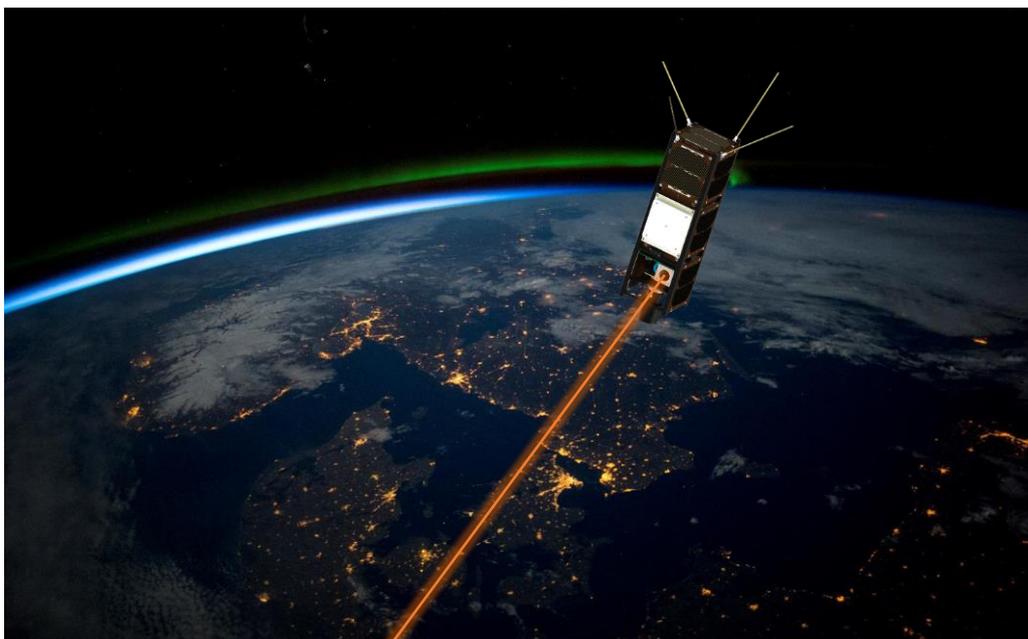
About KSAT

The leading provider of Space to ground communication services for the satellite industry, Kongsberg Satellite Services AS (KSAT) owns and operates a Global Ground Station Network consisting of over 150 interconnected antennas at 21 sites. The unique KSAT Svalbard Ground Station located on 78° North is the world's largest commercial ground station and provides all-orbit support. Presently KSAT supports more than 1000 satellite contacts per day supporting over 100 satellite missions.

KSATLite is the ground network solution optimized for smallsats and big constellations that has become the standard for missions that require global, flexible, cost-effective and reliable ground segment support as-a-service. www.ksat.no.

About GomSpace Group AB

The company's business operations are mainly conducted through the wholly-owned Danish subsidiary, GomSpace A/S, with operational office in Aalborg, Denmark. GomSpace is a space company with a mission to be engaged in the global market for space systems and services by introducing new products, i.e. components, platforms and systems based on innovation within professional nanosatellites. The company is listed on the Nasdaq First North Premier exchange under the ticker GOMX. FNCA Sweden AB, info@fnca.se, +46-8-528 00 399 is the Company's Certified Adviser. For more information, please visit our website on www.gomspace.com.



[Artistic illustration of the PIXL mission in orbit operating its laser down-link (GomSpace).]