# ThinKom completes first live test with Telesat LEO 1 satellite

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ThinKom Ka2417 phased-array antenna undergoes live tests on Telesat LEO satellite.

ThinKom Solutions recently announced the completion of the first live test of a commercially available phased-array antenna with Telesat's Phase 1 LEO satellite. The test was performed using a production model of ThinKom's Ka2517 aeronautical satcom antenna, designed for business aviation, commercial air transport and military airborne applications.

ThinKom's Ka2517 antenna successfully acquired, tracked and maintained seamless end-to-end connectivity with the Telesat LEO satellite. Full-duplex throughput data rates of up to 370 Mbps on the downlink and 110 Mbps on the uplink were achieved at extremely high spectral efficiencies, all while demonstrating the ultra-low latency capabilities (20 to 40 msec) of Telesat's LEO satellite.

Additionally, the Ka2517 reliably transitioned from tracking the LEO satellite to a geostationary (GEO) satellite and back to the LEO satellite, with switching times that were consistently under one second.

The on-air tests were conducted June 10-14 at Telesat's Allan Park facility in Ontario using the flight-proven ThinKom Ka2517 phased-array antenna and a Newtec MDM6000 modem. The ThinKom antenna acquired and tracked the LEO satellite at elevation angles as low as 10 degrees above the horizon.

Bill Milroy, ThinKom's Chairman and Chief Technology Officer, said in a statement: "These on-air tests confirm that our unique phased-array antenna architecture provides the beam agility, switching speeds, low look-angles and high spectral efficiencies required to communicate over a LEO satellite

network. We are now moving into the next phase of development and commercialization of an Enterprise User Terminal for Telesat's global LEO satellite system."

Milroy also pointed out that ThinKom has conducted successful on-air demos with the Ka2517 across multiple GEO satellites and medium-earth orbit (MEO) constellations from fixed platforms as well as an aircraft in flight. "These tests provide clear validation of our phased-array technology and products across the full range of GEO, MEO and LEO environments," he added.

"Telesat is pleased to be collaborating with ThinKom on antenna technologies that will enable aeronautical customers to take full advantage of Telesat LEO's capabilities, including high capacity and ultra-low latency," said Erwin Hudson, Vice President, Telesat LEO. "The aeronautical market is important for Telesat and these on-air tests highlight the advantages the Telesat LEO satellite constellation will bring to passengers and crew of major airlines worldwide. Telesat looks forward to continuing to partner with ThinKom and to building a complete antenna ecosystem to serve growing markets for mobile broadband."