

Ball Aerospace Tests Electronically-Steered Antenna with Telesat's LEO Phase 1 Satellite, Streams Video

The first low latency broadband demonstration using a fully electronically-steered flat panel antenna over Telesat's Phase 1 low earth orbit (LEO) satellite

BOULDER, Colo., Jan. 25, 2019 /PRNewswire/ -- Ball Aerospace has successfully completed the first communication demonstration between Telesat's LEO Phase 1 satellite and Ball's fully electronically-steered flat panel antenna at Telesat's Allan Park ground station in Ontario, Canada. Ball and Telesat are collaborating on the development of satellite communications (SATCOM) terminals based on Ball's advanced antenna technology.

As part of the demonstration, Ball's electronically-steered antenna tracked and communicated with the Telesat LEO Phase 1 satellite and captured real-time video data, which showcased the low latency characteristics of the Telesat LEO system. Electronically-steered flat panel antennas enable non-stationary satellite tracking and support quick and seamless switching between satellites, which is necessary for large LEO constellations. In addition, electronically-steered antennas have enhanced reliability due to no moving parts, are easy to install and may be manufactured in volume at low cost.

"For decades, Ball Aerospace has been developing and building electronically-steered flat panel antennas for military and government customers," said Rob Freedman, vice president and general manager, Tactical Solutions, Ball Aerospace. "We're thrilled to work with Telesat to demonstrate this technology for their LEO satellite constellation and other commercial applications."

Telesat's LEO Phase 1 satellite was launched in January 2018 and provides an in-orbit platform for development of Telesat's high performance global constellation of low earth orbit satellites that will offer low latency high throughput data services that are truly competitive with terrestrial networks. End-user terminals capable of tracking LEO satellites, handing off between beams and between satellites, and operating maintenance-free in remote locations will further enhance the Telesat LEO value proposition.

"By successfully tracking our LEO Phase 1 satellite through multiple passes, Ball has demonstrated that their electronically-steered antenna technology is fully compatible with our system architecture," said Michel Forest, director of Engineering, Telesat. "Ball is an industry leader in advanced antenna technology and has proven expertise in the development of user terminal solutions that will allow us to meet our objective of providing fiber-like broadband and world-wide connectivity."

Ball Aerospace has five decades of heritage delivering electronically-steered flat panel, or phased array, antenna solutions, with two decades of experience delivering planar phased array terminals. Ball is developing architectures that can scale to high-volume, low-cost production using standard commercial processes and an established supply chain. Ball's mature, low-cost antenna technology will enable lower lifecycle costs for the emerging LEO SATCOM market and other commercial applications such as aircraft in-flight connectivity and 5G data services.

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