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Spire Launches Industry-Leading Technology to Enable Optical Inter-Satellite Links and Significantly Reduce Data Latency

The Company is one of the first to successfully qualify, demonstrate and operationalize optical inter-satellite link (OISL) technology on a nanosatellite

VIENNA, Va.--(BUSINESS WIRE)-- Spire Global, Inc. (NYSE: SPIR) ("Spire" or "the Company"), a global provider of space-based data, analytics and space services, successfully launched and made contact with two satellites on the SpaceX Transporter-8 mission carrying optical inter-satellite link (OISL) payloads that will significantly reduce data latency and strengthen security of communication.

The 6U satellites are equipped with optical communications terminals (OCT) to send information between them securely and almost instantaneously, reducing the latency of data acquired by Spire's nanosatellites by more than an order of magnitude. The OCT developed by Spire, which is the smallest on the market, allows for the creation of optical links between satellites that enhance link speeds, security and resiliency to interference such as signal jamming and spoofing. With the OCT, Spire's satellites will be able to communicate via optical link while up to 5,000 kilometers apart.

The launch of the satellites follows an in-orbit technology demonstration where Spire successfully demonstrated its ability to transmit and detect optical signals between two of its 3U satellites.

"We are celebrating the culmination of more than three years of work in creating one of the most complex systems from both the hardware and mission perspectives. The use of optical links instead of traditional links leads to higher resiliency to interference, higher security, and higher efficiency," said Jeroen Cappaert, Spire chief technology officer and co-founder. "We are one of the first to successfully qualify and demonstrate this technology in our satellite size and weight class – our part in a growing trend, as the space industry is moving to optical links as the backbone for sending data."

The technology development was funded partially through the European Space Agency (ESA) Advanced Research in Telecommunications Services (ARTES) Pioneer Programme and the UK Space Agency (UKSA).

"The successful launch of these two Glasgow-made satellites from Spire Global marks a milestone, not just for the company, but for how we look at intersatellite communications and make these technologies more efficient," said Craig Brown, Director of Investment at the UK Space Agency. "The UK Space Agency provided £2.9 million towards the project, which

includes five satellites across three launches, through the European Space Agency's ARTES Pioneer Programme, dedicated to supporting new commercial opportunities in the telecommunications sector. We look forward to following the next steps of Spire Global's journey and seeing the results."

In addition to reducing the time to downlink data for Spire's maritime, aviation and weather data solutions, the OISL payloads can also be leveraged by Spire Space Services customers as a fast and secure communications system.

Aboard Transporter-8, Spire also launched FOREST-2, a 6U satellite carrying a proprietary thermal-infrared optical payload and data processing unit for OroraTech. Following FOREST-1, this is the second satellite that Spire Space Services has developed and launched for OroraTech, the global industry leader in space-based thermal intelligence, to detect and monitor wildfires across the globe. FOREST-2 features higher resolution, upgraded processing and two times the swath of thermal imaging to be gathered from space than its predecessor.

About Spire Global, Inc.

Spire (NYSE: SPIR) is a global provider of space-based data, analytics and space services, offering unique datasets and powerful insights about Earth so that organizations can make decisions with confidence in a rapidly changing world. Spire builds, owns, and operates a fully deployed satellite constellation that observes the Earth in real time using radio frequency technology. The data acquired by Spire's satellites provides global weather intelligence, ship and plane movements, and spoofing and jamming detection to better predict how their patterns impact economies, global security, business operations and the environment. Spire also offers Space as a Service solutions that empower customers to leverage its established infrastructure to put their business in space. Spire has eight offices across the U.S., Canada, UK, Luxembourg and Singapore. To learn more, visit spire.com.

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