

# EO from Space to Surface

Introduction to Spire's RF Products

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## Spire at a Glance

Spire (NYSE: SPIR) owns and operates the largest constellation of multipurpose satellites

100+

Satellites in orbit

30+

**Ground stations** 

70+

Antenna systems

35+

Launch campaigns on 10 different launch vehicles

400+

Employees from 45+ countries

8

Offices across 3 continents

~810

Solution customers from 65 countries

550+

Years of space heritage



## A Global Organization

30+
Ground stations

70+
Antenna systems

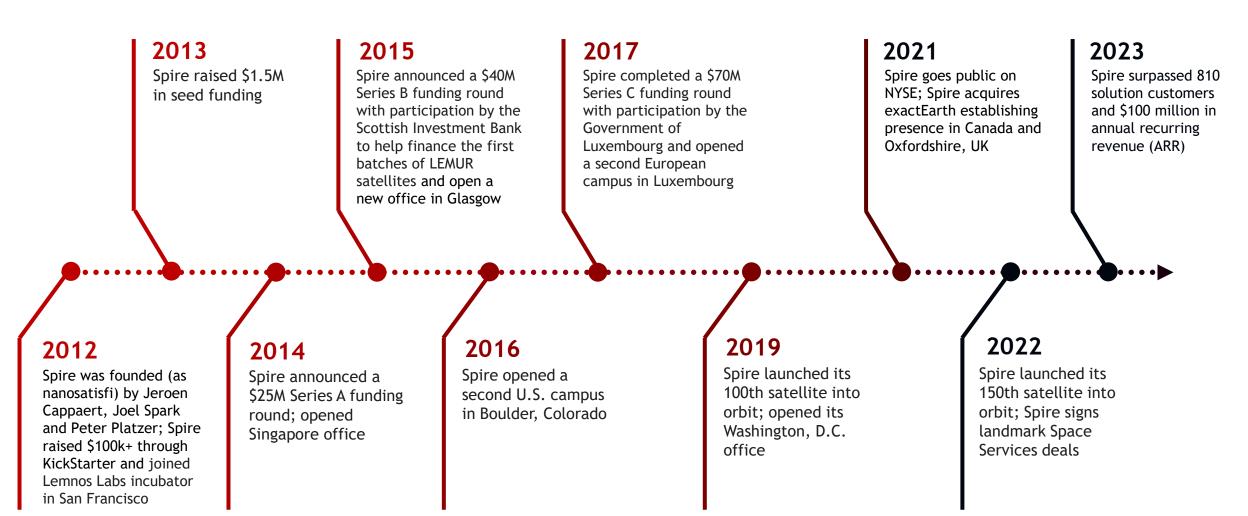
400+

Spire employees from 45+ countries





## Spire's Evolution





### Actionable Intelligence

We help customers grow their business faster, more profitably, and more sustainably

#### **Data Solutions**



#### **Maritime**

Global maritime vessel tracking data and solutions with unrivaled ocean coverage, data quality and developer friendly APIs



#### **Aviation**

Aviation insights, analytics and flight tracking data to power applications, drive decision making and improve cost efficiencies



#### Weather

Space-based, AI-powered weather and environmental data and analytics to optimize costs, increase safety and boost decarbonization



#### **Space Services**

Deploy and scale your own constellation at maximum speed with minimum risk, by leveraging Spire's proven space platform, global ground station network, end-to-end manufacturing facility, and extensive launch partnership network



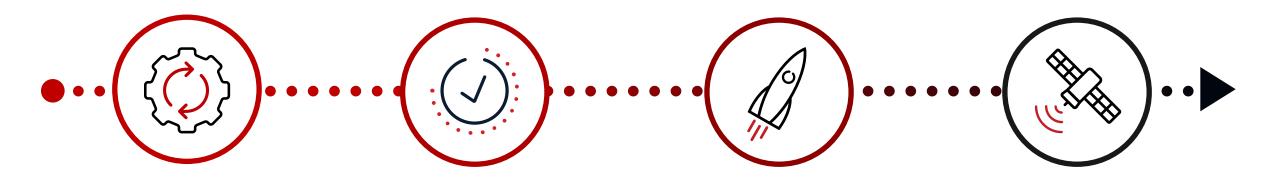
#### Radio Frequency Intelligence and Geolocation

Harness the power of RF data to detect and geolocate signals of interest, GNSS jamming, and spoofing



### From Concept to Orbit

Spire develops its own satellite and payloads—manufactured in-house and operated using its own network of global ground stations



#### Manufacturing

With a state-of-the-art manufacturing facility in Glasgow, Spire builds satellite constellations entirely in-house.

#### **Testing & Integration**

Spire has everything it needs inhouse to perform flight acceptance testing on satellites and integrate them into flight dispensers — helping to accelerate the production cycle while maintaining quality control.

#### Launch & Deployment

Thanks to a network of qualified launch partners, Spire provides rapid and reliable access to Low Earth Orbit (LEO). Spire has had 35+ launch campaigns and launched on 10 different launch vehicles.

### Global Space & Ground Infrastructure

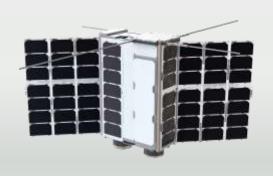
Once in orbit, Spire's ground station network and mission operation system seamlessly capture and download data from space.

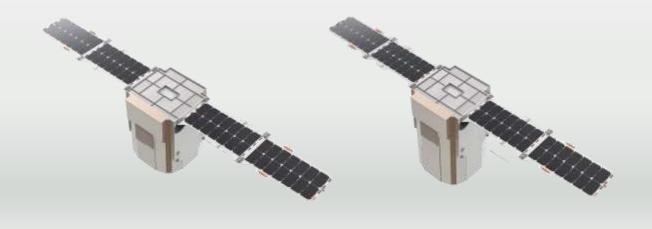


### Meet the LEMUR family

165+ satellites launched, carrying 550+ years of space heritage







#### **3U Satellite**

**1U** Payload Volume

Up to 15W Payload OAP

4GB Data download

(per sat per day)

#### **6U Satellite**

**4U** Payload Volume

Up to 20W Payload OAP

Up to 10GB Data download

(per sat per day)

#### **12U Satellite**

**8U** Payload Volume

Up to 50W Payload OAP

Up to 320GB Data download

(per sat per day)

#### 16U Satellite

**12U** Payload Volume

Up to 50W Payload OAP

Up to 320GB Data download

(per sat per day)



## Monitoring \$15 Trillion of Global Trade

We're revolutionizing how maritime data is collected, analyzed, and delivered

- Enhancing Port Operations
- Improving Fuel Efficiency
- Supply Chain Tracking
- Route Optimization



**NXS** MARINE



Lloyd's List 🗘



MAERSK

## Actionable ADS-B Data for the \$6T Aviation Industry

- Measure fuel expenditure and increase efficiency
- Monitor transport patterns
- Enhance airport operations
- Determine impact of weather on aircraft
- Air cargo & freight analytics
- Enable predictive maintenance









## Most Comprehensive Weather Data Anywhere on the Planet

Setting a New Benchmark in the Weather Industry

- Unique understanding of global weather conditions
- Help commercial customers:
  - Reduce operational risks
  - Boost efficiency
  - Increase revenue
- Data is used by public agencies providing weather predictions to protect lives and prevent the loss of property for almost a billion people and almost half of global GDP







## Making Space as Accessible as Integrating an API

Your constellation, powered by Spire

Built on our 500+ years of space heritage, we offer Space as a Service solutions that empower our customers to leverage Spire's established space, ground and web infrastructure to put their business in space.

- Software in Space Deploy your software to existing satellites, using Software Defined Radios (SDR)
- Payload in Space Host your payloads on trusted, fullyintegrated space, ground, and web platform
- Solutions in Space Partner with Spire to build a custom end-to-end solution











## Radio frequency data supports cutting-edge intelligence

Spire's satellite constellation and advanced radio frequency technology enables global governments and commercial companies to harness the power of RF data to detect and geolocate signals of interest, GNSS jamming, and spoofing

Spire's extensive frequency coverage, geolocation, and revisit capabilities provide insights to:

- Detect and geolocate GNSS jamming and spoofing
- Ensure maritime security by preventing piracy and dark shipping
- Independently verify moving targets









## Thank you!