



National Aeronautics and
Space Administration

NASA earth

Commercial SmallSat Data Acquisition (CSDA) Program Webinar Series – Vendor Focus – Spire

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CSDA Program Mission

Identify, evaluate, and acquire commercial satellite data that support NASA's Earth science research & application goals.

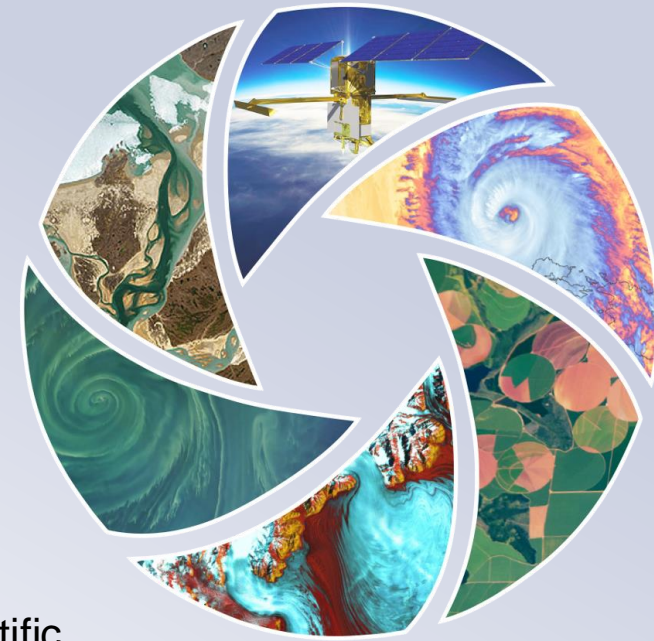
CSDA Program Goals

- Establish a continuous and repeatable process to on-ramp new commercial data vendors.
- Enable sustained use of purchased data for broader use and dissemination by NASA scientific community.
- Ensure long-term data preservation, access and distribution of purchased data and long-term access for scientific reproducibility.
- Coordinate with other US Government agencies and international partners on the evaluation and scientific use of commercial data.
- Compliance with 2003 US Commercial Remote Sensing Policy

NASA's CSDA program introduction webinar held on August 28. Recording: <https://go.nasa.gov/40O7igo>

[Commercial Smallsat Data Acquisition \(CSDA\) Program | Earthdata \(nasa.gov\)](https://earthdata.nasa.gov/about/csda/commercial-datasets)

<https://earthdata.nasa.gov/about/csda/commercial-datasets>



IDIQ On-ramp 1 Award

- Contract Type: Multiple Award, Indefinite Delivery Indefinite Quantity (IDIQ), Fixed-Price Contract
- CSDA Program Indefinite Delivery Indefinite Quantity (IDIQ) On-Ramp 1 - Request for Proposals (RFP), closed March 25, 2024
- Under IDIQ, NASA only buys what it needs through competitive task orders; fair and consistent process.
- On **Sept 6, 2024**, NASA awarded **8** new vendors under the IDIQ contract on-ramp 1:
 - BlackSky Geospatial Solutions, Inc. in Herndon, Virginia (Multispectral)
 - ICEYE US Inc. in Irvine, California (SAR)
 - MDA Geospatial Service Inc. in Richmond, British Columbia, Canada (SAR)
 - Pixxel Space Technologies, Inc in El Segundo, California (Hyperspectral)
 - Planet Labs Federal, Inc. in Arlington, Virginia (optical, Multispectral (RGB, NIR) | Surface Reflectance (SR) and Top of Atmosphere (TOA) Radiance; Basic and orthorectified)
 - Satellogic Federal, LLC in Davidson, North Carolina (Multispectral)
 - Teledyne Brown Engineering, Inc. in Huntsville, Alabama (Hyperspectral)
 - The Tomorrow Companies Inc. in Boston (Precipitation Radar)
- The period of performance is through Nov 15, 2028.
- This awards builds up on the previously awarded 7 vendors: Airbus, Capella Space, GHGSat, Maxar, PlanetIQ, Spire and Umbra.

Spire Contract and Data Access

- CSDA started evaluating and acquiring Spire data to the pilot in 2019. Spire previously was awarded a BPA contract, is now part of the IDIQ contract awarded in October 2023.
- Existing data and EULA.
 - Low-level 50 Hz data (opnGns format) • Excess phase (atmPhs) • Atmospheric profile (atmPrf and bfrPrf) • Slant TEC (podTec) • Ionospheric density profile (ionPrf) • Raw GNSS pseudorange and phase measurements (podObs) • Precise orbit determination (leoOrb) • Scintillation indices (scnLv1)
- As part of the initial IDIQ, Spire was awarded a task order to provide continuous Radio Occultation data to the program through June 2025.
- Data that was downloaded is available now through the CSDA SmallSat Data Explorer (SDX) interface
- If you qualify for data access under our EULA, you can get authorization through the CSDA website: <https://csdap.earthdata.nasa.gov/signup>

SmallSat Data Explorer (SDX):

Web interface for central search, discovery, and distribution of CSDA data

<https://csdap.earthdata.nasa.gov>

The image displays two screenshots of the SmallSat Data Explorer (SDX) web interface. The left screenshot shows a 'Spatial Heatmap' and a 'Temporal Distribution' bar chart. The right screenshot shows a satellite imagery view with a 'Results' table and a 'Faceted Search Options' sidebar.

Results Table (Left Screenshot):

Item (grouped by)	Title	Type	File Size	Area Size	Actions
PSScene3Band-20160625_143239_0c6f	6 assets	5 distinct types	41.0 MB total	42 km ² total	
PSScene3Band-20160628_220745_0c68	6 assets	5 distinct types	113.1 MB total	200 km ² total	
PSScene3Band-20160628_220747_0c68	6 assets	5 distinct types	116.5 MB total	200 km ² total	
PSScene3Band-20160628_220747_0c68	16 assets	5 distinct types	235.4 MB total	131 km ² total	

Results Table (Right Screenshot):

Item (grouped by)	Title	Type	File Size	Area Size	Actions
SkySatScene-20180606_160258_sec141_0002	4 assets	4 distinct types	4.4 MB total	3 km ²	
thumbnail		rls	3 kb	3 km ²	
govr_metasdata	application/json	702 Bytes	3 km ²		
basic_17a_panchromatic_1b	image/tiff	4.4 MB	3 km ²		

CSDA Smallsat Data Explorer (SDX) with thumbnails from Planet Labs, Inc. displayed

CSDA Data Holdings

Access through CSDA Website:

<https://www.earthdata.nasa.gov/esds/csda/commercial-datasets>

Vendor	Data Available	Date Range	Who is authorized to use the data	Scientific use only	Where to get archived data	EULA
Planet	PlanetScope	6/29/2014-Present	U.S. Federal civil agencies (including NSF) and their funded researchers	Yes	Planet Explorer	Planet Expanded EULA
	RapidEye	2/1/2009-12/31/2019				
	SkySat	3/10/2015-12/12/2019			SDX	
Maxar (formerly DigitalGlobe)	WorldView 1	09/18/2007-Present	NASA (funded) researchers	Yes	CSDA data team	Commercial Data/Imagery EULAs Fact Sheet
	WorldView 2	10/8/2009-Present				
	WorldView 3	8/13/2014-Present				
	GeoEye-1	9/6/2008-Present				NextView License
	QuickBird	10/18/2001-1/27/2015				
	IKONOS	10/24/1999-3/31/2015				
	WorldView 4	12/1/2016- 1/7/2019		Maxar EULA		
BlackSky	Spaceview-24	11/29/2018- 07/31/2023	U.S. Government (funded) researchers	Yes	SDX	USG EULA
GHGSat	Methane Abundance and Emission Rates	06/01/2016- 04/31/2024	U.S. Government (funded) researchers	Yes	SDX	USG EULA
Teledyne Brown Engineering, Inc.	DESI	11/21/2018- 05/31/2024	U.S. Government (funded) researchers	Yes	For available archived data contact: support-csda@earthdata.nasa.gov	DESI EULA
Polar Geospatial Center	EarthDEM		U.S. Government (funded) researchers	N/A For further information contact pgc-support@umn.edu	SDX	Commercial Data/Imagery EULAs Fact Sheet

Vendor	Data Available	Date Range	Who is authorized to use the data	Scientific use only	Where to get archived data	EULA
Airbus DS Geo Inc	TerraSAR-X	11/19/2007-11/25/2022	U.S. Government (funded) researchers	Yes	SDX	Airbus U.S. USG EULA.
	TanDEM-X	2/3/2011-11/4/2022				
	PAZ	9/20/2018-10/2/2022				
Spire	GNSS Radio Occultation	9/24/2018 - 12/9/2018; 12/14/2018 - 3/8/2019; 11/1/2019-Present	U.S. Government (funded) researchers	Yes	SDX	Spire USG EULA
	GNSS Grazing Angle Reflectometry	1/9/2019-4/18/2019; 11/1/2019-Present				
	GNSS Grazing Angle Reflectometry Sea Ice	3/1/2020-Present				
	GNSS Grazing Angle Reflectometry Altimetry	6/16/2020-Present				
	GNSS-R Level-1 Bistatic RCS	5/1/2021-Present				
	Ionospheric Profiles	11/1/2019-Present				
	Magnetometer	11/1/2019-Present				
	Raw Radio Occultation	6/17/2020-9/8/2020				
	Satellite Precise Orbital Determination (POD) and Satellite Attitude	9/24/2018-4/18/2019; 11/1/2019 -Present				
	Scintillation	11/1/2019-Present				
	Total Electron Content	11/1/2019-Present				
	Ocean Winds and MSS	5/1/2021-Present				
					Request authorization By request (PDF)	

Spire



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Thank you

From our team, to yours.

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