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Licensee Exempt from CUI Handling and Dissemination Restrictions

NOAA License to Operate a Private Remote Sensing Space System



The National Oceanic and Atmospheric Administration (NOAA), an agency of the U.S. Department of Commerce, hereby grants this Tier 1 license authorizing SilverSat Limited to operate SilverSat, a private remote-sensing space system comprised of 1 satellite with the following capabilities and described completely in Part D of this license:

Multispectral (MSI) (367-980 nm) at 451 m Ground Sample Distance (GSD)

Please submit any communications, including all communications required by the regulations at 15 CFR Part 960 and this license to:

Commercial Remote Sensing Regulatory Affairs (CRSRA)
1401 Constitution Avenue, NW, Room 31027
Washington, DC 20230
Email: crsra@noaa.gov

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Part A: Determination and License Grant

The National Oceanic and Atmospheric Administration, an agency of the U.S. Department of Commerce, acting pursuant to authority delegated by the Secretary of Commerce (the Secretary), determines that SilverSat Limited, as described in Part C of this license, will comply with the requirements of the Land Remote Sensing Policy Act of 1992, as amended, codified at 51 U.S.C. 60101 et seq., (hereinafter “Act”), the regulations promulgated thereunder, 15 CFR Part 960 (“the regulations”); and the conditions in this license.

Accordingly, NOAA hereby grants SilverSat Limited (hereinafter “Licensee”), as described in Part C of this license, this license to operate SilverSat (hereinafter “the System”), as described in Part D of this license, subject to the terms and conditions of this license. This license is valid until its term ends in accordance with the regulations. The Licensee must request and receive approval for a license modification before taking any action that would contradict a material fact listed in Part C or D of this license.

NOAA makes this determination, and grants this license, under the authority delegated to him by the Secretary of Commerce. The Secretary's authority is found in the Act and the regulations. This license does not authorize the System's use of spectrum for radio communications or the conduct of any non-remote sensing operations that are proposed to be undertaken by the Licensee. This license is not alienable and creates no property right in the Licensee.

IN WITNESS THEREOF, I hereby grant this License:

Sarah C. Brothers Ph. D.
Director, Commercial Remote
Sensing Regulatory Affairs

Date

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Part B: Tier 1 License Conditions

The Licensee must, at all times:

1. Comply with the Act, the Regulations, this license, applicable domestic legal obligations, and the international obligations of the United States.
2. Operate the system in such manner as to preserve the national security of the United States and to observe international obligations and policies, as articulated in conditions included in this license.
3. Upon request, offer to the government of any country (including the United States) unenhanced data collected by the system concerning the territory under the jurisdiction of such government without delay and on reasonable terms and conditions, unless doing so would be prohibited by law or license conditions.
4. Upon termination of operations under the license, make disposition of any satellites in space in a manner satisfactory to the President.
5. Notify the Secretary in writing of each of the following events, no later than seven days after the event:
 - i. The launch and deployment of each system component, to include confirmation that the component matches the orbital parameters and data collection characteristics of the system, as described in Part D of the license;
 - ii. Each disposal of an on-orbit component of the system;
 - iii. The detection of an anomaly; and
 - iv. The licensee's financial insolvency or dissolution;
6. Request and receive approval for a license modification before taking any action that would change a material fact in the license.
7. Certify that all material facts in the license remain accurate pursuant to the procedures in § 960.14 no later than October 15th of each year.
8. Cooperate with compliance, monitoring, and enforcement authorities described in the Act and this part, and permit the Secretary to access, at all reasonable times and with no shorter notice than 48 hours, any component of the system for the purpose of ensuring compliance with the Act, this part, and the license.
9. Refrain from disseminating unenhanced data, or processed data or products derived from the licensee's system, of the State of Israel at a resolution finer than the resolution most recently specified by the Secretary in the Federal Register as being available from commercial sources.
 - i. The most recent resolution specified by the Secretary is 0.4 m GSD, please see FR Doc.2020-15770, publish date: July 21, 2020.

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Part C: Description of Licensee

Every term below constitutes a material fact. You must request and receive approval of a license modification before taking any action that would contradict a material fact.

1. General Licensee Information:

a. Name of Licensee:

SilverSat Limited

b. Location and address of Licensee:

1905 Hanover St.

Silver Spring, MD 20910

c. Licensee contact information:

SilverSat Limited, c/o David Copeland

2017 Luzerne Ave

Silver Spring, MD 20910

301-706-3561, dave@silversat.org

d. Contact information for a specific individual to serve as the point of contact with Commerce:

David Copeland

2017 Luzerne Ave

Silver Spring, MD 20910

301-706-3561, dave@silversat.org

e. Place of incorporation and, if incorporated outside the United States, confirmation that the Licensee acknowledged as part of the application that the Licensee will operate its system within the United States and is therefore subject to the Secretary's jurisdiction under 15 CFR Part 960:

SilverSat Limited is a 501c-3 non-profit registered in Maryland

2. Identity of any subsidiaries and affiliates playing a role in the operation of the System, including a brief description of that role:

N/A

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Part D: Description of System

Name of System: SilverSat

1. Brief mission description:

Our mission concept employs a 1U CubeSat that takes photos of Earth, and when in contact with a ground station, directly logs into Twitter to post photos and mission data as Tweets.

The primary mission of SilverSat is education. SilverSat provides educational opportunities for our student members and materials to support K-12 STEM programs worldwide. Our mission goals and objectives include promoting awareness of space exploration through educational outreach and serving as a technology demonstration. SilverSat will “Tweet from space” and transmit data (photos and telemetry), through the ground station’s connection to the Internet. By using a popular social media platform, our project helps to promote awareness of and interest in Aeronautics, Space, and Science among tweens and teens.

SilverSat members will post information about the CubeSat project and details about mission development and write code to allow CubeSat to take and post photos from space. SilverSat will not be performing any imaging of man-made objects from space.

2. Remote Sensing Instrument(s) parameters (for each sensor):

Sensor type	Imaging/frame rate (FPS)	Spatial resolution (m)	Spectral range (nm)	Collection volume (km ² /unit of time)
MSI	0.02	451	367-980	2,325 km ² /hr

a. Ability of the remote sensing instrument to slew, point, or digitally look off-axis from the x, y, and z axes of travel:
N/A, SilverSat uses passive magnetic stabilization

3. If any entity or individual other than the Licensee will own, control, or manage any *remote sensing instrument* in the System:

Name	Address	Number	Relationship
N/A	N/A	N/A	N/A

4. Spacecraft Upon Which the Remote Sensing Instrument(s) is (are) carried

a. Description:

SilverSat spacecraft specifications:

Size – 1U CubeSat.

Mass – 905g CBE.

Battery – 10 W-hr Li-Ion

Attitude – Passive Magnetic Stabilization

Communications – 438 MHz (nominal), 9600 bps

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- b. Estimated launch date(s) in calendar quarter:
Q2-Q3 2025
- c. Number of spacecraft (system total and maximum in-orbit at one time):
1
- d. For each spacecraft, provide the following (or if an entire constellation will have substantially the same orbital characteristics, provide these values for the entire constellation and note whether or not all spacecraft will be evenly spaced):

Spacecraft or Constellation Characteristics			
Altitude (km)	Inclination (°)	Orbital Period (min)	Longitude (°)
350-425	51.6	93	191.5311
Eccentricity	Argument of perigee (°)	Propulsion	
0.0001459	12.9145	No	

- e. Ability of the spacecraft to slew, point, or digitally look off-axis from the x, y, and z axes of travel:
N/A – Spacecraft uses passive magnetic stabilization with the camera boresight aligned along the Earth’s magnetic field.

- 5. If any entity or individual other than the Licensee will own, control, or manage any *spacecraft* in the System

Name	Address	Number	Relationship	Citizenship Status
N/A	N/A	N/A	N/A	N/A

- 6. Ground Components: See Ground Station Appendix

- 7. If any entity or individual other than the Licensee will own, control, or manage any *mission control center(s)* with the ability to operate the System

Name	Address	Number	Relationship
N/A	N/A	N/A	N/A

- 8. Information Applicable to Multi-Spectral Imaging (MSI) and/or Hyper-Spectral Imaging (HSI).

Number of spectral bands	Individual spectral bandwidths
3	R-560-980, G-450-980, B-367-980

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Ground Station Appendix

NOAA must approve any Ground Station prior to the commencement of operations.

Type	Location	Coordinates
MCC	SilverSat 2017 Luzerne Ave. Silver Spring, MD 21910	
Domestic		
RGT	Goddard Amateur Radio Club WA3NAN, 6509 Beaver Dam Rd. Beltsville, MD 20769	

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Administrative Record Appendix

<u>Date</u>	<u>Description of Administrative Action Taken</u>
1. 9/23/24	Issuance of License

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