

As required by 15 CFR Part 960, the NOAA Commercial Remote Sensing Regulatory Affairs (CRSRA) office categorizes licenses for private space-based remote sensing systems based upon the availability of unenhanced data similar to those produced by the system(s).

- Tier 1 licenses are granted to systems capable of only producing unenhanced data substantially the same as unenhanced data available from sources not regulated by NOAA, such as foreign sources.
- Tier 2 licenses are granted to remote sensing systems generating unenhanced data comparable to those data available only from other NOAA-regulated systems.
- Tier 3 licenses are reserved for systems with novel or unique capabilities for which no comparable data are available.

Currently CRSRA has:

- 53 Tier 1 licenses,
- 3 Tier 2 licenses, and
- 16 Tier 3 licenses.

When comparing data factors include but are not limited to: spatial resolution, spectral bandwidth, number of imaging bands, temporal resolution, persistence of imaging, local time of imaging, geographic or other restrictions imposed by foreign governments, and all applicable technical system factors listed in Appendix A of the license. The list and table below outline the benchmark foreign systems and their known capabilities that are currently being used to differentiate Tier 1 licenses from Tier 2 licenses for several common sensor types; imaging modalities not listed below are evaluated on a case-by-case basis. These parameters are derived exclusively from open-source research.

- Panchromatic imagery with a spatial resolution of 0.5 meters and average revisit rate of 4 hours is available.
- Panchromatic and multispectral imagery with a spatial resolution of 0.6 meters and average revisit rate of 12–24 hours is available.
- Visible and near infrared imagery with a spatial resolution of 0.6 meters and average revisit rate of 12–24 hours is available.
- Hyperspectral imagery with a spatial resolution of 8 meters and average revisit rate of greater than 6 hours is available.
- Synthetic aperture radar imagery with a ground plane resolution of 1 meter and average revisit rate of 6 hours is available.

Satellite Constellation	Country	Spatial Resolution (unenhanced, meters)	Available Data Persistence #Satellites / Revisit (hours)
PANCHROMATIC			
SuperView	China	0.5	4 / 48 hours
Jilin-1	China	0.75	14 / 4–6 hours [1]
Gaofen-2	China	0.8	1 / >24 hours
TripleSat/DMC3	China	0.7	3 / 24 hours
Magpie/Lingque	China	4	1 / – [2]
Pléiades	France	0.5	2 / 24 hours
KOMPSAT-3/3A	South Korea	0.55–0.7	2 / 33.6 hours
EROS-B	Israel	0.75	1 / 5–6 days
PANCHROMATIC and MULTISPECTRAL			
Vivid-i X2	UK	0.6	1 / >12 hours [3]
Jilin-1	China	2.88	14 / 4–6 hours [1]
Zhuhai OVS-2	China	0.9	2 / 24 hours [4]
CE-SAT-I / Canon	Japan	1	1 / >24 hours
Cartosat-3	India	1	1 / >24 Hours
Aleph-1 / Satellogic	Argentina	1	8 / 4 hours
VISIBLE and NEAR-INFRARED (VNIR) MULTISPECTRAL			
Vivid-i X2	UK	0.6	1 / >12 hours
Jilin-1	China	0.92	14 / 4–6 hours [1]
Zhuhai-1 OVS-2	China	0.9	2 / 24 hours
Superview	China	2	4 / 48 hours
CE-SAT-I / Canon	Japan	1	1 / >24 hours [6]
Cartosat-3	India	1	1 / >24 hours
Aleph-1 / Satellogic	Argentina	1	8 / 4 hours [7]
KOMPSAT-3/3A	South Korea	2	2 / 33.6 hours
HYPERSPECTRAL			
Zhuhai-1 OHS-2	China	10	4 / 12+ hours
SYNTHETIC APERTURE RADAR			
ICEYE	Finland	1	3 / 13–36 hours [5]
TerraSAR/TanDEM	Germany	1	3 / 96 hours (includes PAZ)
COSMO SkyMED	Italy	1	4 / 6 hours
Synspective	Japan	1–3	0 / - [8]

- [1] Updated as launches occur. Jilin constellation stated plans: 16 satellites by 2020(4-hour revisit) and, ultimately, 60 satellites (30 minute revisit).
- [2] Updated as launches occur. Magpie constellation stated plans: 132 satellites by about 2025 (1-hour revisit) and a final constellation of 378 (10 minute revisit) by around 2030.
- [3] Updated as launches occur. Vivid-I constellation stated plans: 15 satellites (6–12 hour revisit).
- [4] Updated as launches occur. Zhuhai constellation stated plans: 12 satellites (4-hour revisit).
- [5] Updated as launches occur. ICEYE plans a constellation of 18 satellites (2–4-hour revisit).
- [6] Updated as launches occur. Canon plans a constellation of 100 satellites (1–2-hour revisit).
- [7] Updated as launches occur. Satellogic plans a constellation of 60 satellites (1-hour revisit).
- [8] Updated as launches occur. Synspecive plans a constellation of 25 satellites (3–6-hour revisit).

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