



Autumn harvest of chili in Anjihai township, Xinjiang | September 15, 2021 | SV-1

SUPERVIEW-1 SATELLITE

4 Satellites, 50 cm Resolution, 4 MS bands, Stereo Imaging, Agility

SV-1 (short for SuperView-1) constellation is composed of four identical satellites. The foursome team provide global coverage of Earth surface with their very-high-resolution, panchromatic and multispectral cameras. SV-1 is the first commercial Chinese optical satellite constellation with 0.5 m resolution. The two pairs of SV-1 were successively launched on December 28, 2016 and January 9, 2018. The quadruplets work along the same orbital plane and revisit at any place on our planet on a daily base. SV-1 sensor consists of 5 spectral bands with each of the four satellite being totally identical to another. The raw resolution of satellite data is 0.5 m for panchromatic band and 2 m for blue, green, red and near-infrared (multispectral) bands. The image swath width is 13.1 km at nadir pass. 2 million square kilometer's imagery can be collected on each day.

Technical Specifications

Number of Satellites	4 identical satellites: SV-1A, SV-1B, SV-1C and SV-1D
Mission life	8 years
Weight	560 kg
Launch time	SV-1A&B: Dec. 28, 2016; SV-1C&D: Jan. 9, 2018
Orbit	Sun-synchronous, 10:30 am descending node, 530 km altitude, 97.489° inclination angle
Sensor bands	Panchromatic, blue, green, red and near-infrared
Resolution (at nadir)	Panchromatic: 0.5m, multi-spectral: 2m
Locational accuracy	9.5m CE90 (w/o GCPs)
Dynamic range at imaging	11 bits
Swath width	12.1 km
Revisit capacity	Daily
Imaging modes	Multi-target collection, multi-angle collection for one target, multi-strip collection and stereo collection in one single pass
Imaging capacity	2 million km ² daily