

WorldView-1

WorldView-1, launched September 2007, is the first of our next-generation satellites—the most agile satellites ever flown commercially. The high-capacity, panchromatic imaging system features half-meter resolution imagery. Operating at an altitude of 496 km, WorldView-1 has an average revisit time of 1.7 days and is capable of collecting over one million km² per day of half-meter imagery. The satellite is also equipped with state-of-the-art geolocation accuracy capabilities and exhibits stunning agility with rapid targeting and efficient in-track stereo collection.

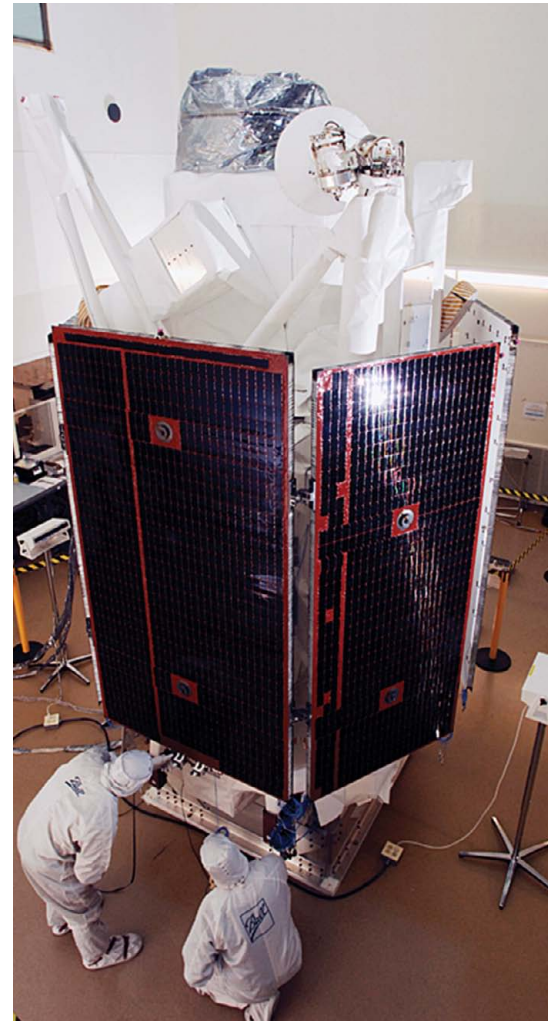
Features

- Very high resolution
- Industry-leading geolocation accuracy
 - Ultra-stable platform, high-precision attitude sensors and GPS
- Highest capacity over a broad range of collection types (wider than any competitor)
- Bi-directional scanning
- Rapid retargeting using Control Moment Gyros (>2x faster than any competitor)
- Direct downlink to customer sites available
- World-class telescope
 - High contrast (MTF) and signal to noise ratio
 - Selectable Time Delay Integration (TDI) levels
- Frequent revisits at high resolution

Benefits

- Provides highly detailed imagery for precise map creation, change detection, and in-depth image analysis

(Note: imagery must be re-sampled to 50 cm for non-US Government customers)
- Geolocate features to within 5 m to create maps in remote areas, maximizing the utility of available resources.
- Collects, stores, and downlinks a greater supply of frequently updated global imagery products than competitive systems
- Stereoscopic collection on a single pass, ensures image continuity and consistency of quality
- Extends the range of suitable imaging collection targets and enhances image interpretability
- Enhanced change detection applications and accurate map updates



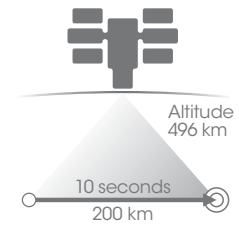
WorldView-1 clean room pre-launch preparations. The second of DigitalGlobe's state-of-the-art high-resolution commercial imagery satellites.

WorldView-1

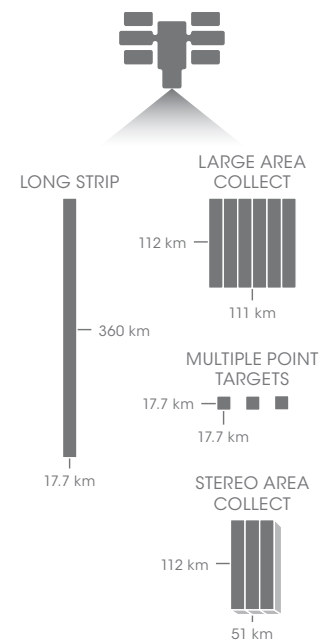
Design and Specifications

Launch Information	Date: September 18, 2007 Launch Vehicle: Delta 7920 (9 strap-ons) Launch Site: Vandenberg Air Force Base, California
Orbit	Altitude: 496 km Type: Sun synchronous, 10:30 am descending node Period: 95 min.
Mission Life	7.25 years, including all consumables and degradables (e.g. propellant)
Spacecraft Size, Mass and Power	3.6 m (12 ft) tall x 2.5 m (8 ft) across 7.1 m (23 ft) across the deployed solar arrays 2500 kg (5500 lbs) 3.2 kW solar array, 100 Ahr battery
Sensor Bands	Panchromatic: 400 - 900 nm
Sensor Resolution	50 cm Ground Sample Distance (GSD) at nadir 55 cm GSD at 20° off-nadir
Dynamic Range	11-bits per pixel
Time Delay Integration (TDI)	6 selectable levels from 8 to 64
Swath Width	17.7 km at nadir
Attitude Determination and Control	3-axis stabilized Actuators: Control Moment Gyros (CMGs) Sensors: Star trackers, solid state IRU, GPS
Pointing Accuracy and Knowledge	Accuracy: <500 m at image start and stop Knowledge: Supports geolocation accuracy below
Retargeting Agility	Acceleration: 2.29 deg/s/s Rate: 4.45 deg/s Time to Slew 200 km: 10 sec
Onboard Storage	2199 Gb solid state with EDAC
Communications	Image and Ancillary Data: 800 Mbps X-band Housekeeping: 4, 16 or 32 kbps real-time, 524 kbps stored, X-band Command: 2 or 64 kbps S-band
Max Viewing Angle / Accessible Ground Swath	Nominally +/- 45° off-nadir = 1,035 km wide swath Higher angles selectively available
Max Contiguous Area Collected in a Single Pass (30° off-nadir angle)	Mono: 111 x 112 km (6 strips) Stereo: 51 x 112 km (3 pairs)
Revisit Frequency (at 40°N Latitude)	1.7 days at 1 m GSD or less 5.4 days at 20° off-nadir or less (0.55 m GSD)
Geolocation Accuracy (CE90)	Specification of 5.0 m CE90 at less than 30° off-nadir, with actual accuracy in the range of 4.0 - 5.5 m CE90 at nadir, excluding terrain and off-nadir effects With Registration to GCPs in Image: 2.0 m (6.6 ft)

Altitude and Slew Time



Collection Scenarios (30° off-nadir angle)



Sensor Bands

