



WorldView-4

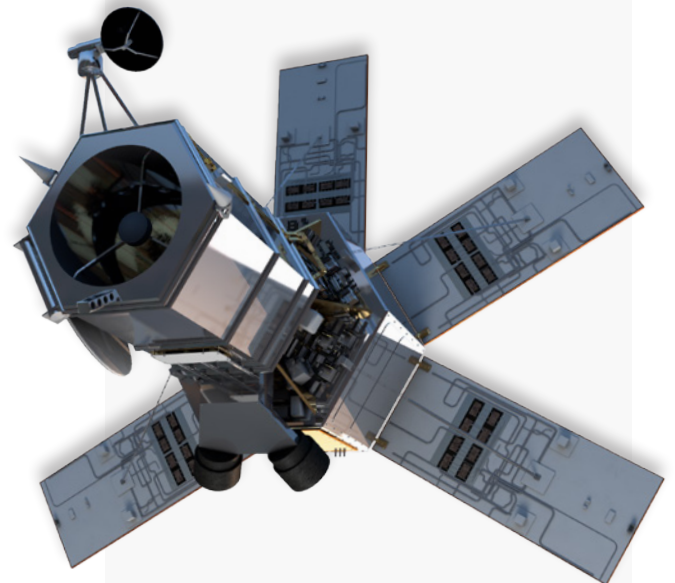
Introducing WorldView-4, a multispectral, high-resolution commercial satellite. Operating at an expected altitude of 617 km in coordination with WorldView-3, WorldView-4 provides 31 cm panchromatic resolution, and 1.24 m multi-spectral resolution. With WorldView-4 joining WorldView-3 in the DigitalGlobe constellation, our total constellation has the capability to image a location an average of 4.5 times/day at 1m GSD or less

Features

- » Very high-resolution
 - Panchromatic 31 cm
 - Visible & near-infrared 1.24 m
- » Industry-leading geolocation accuracy
- » High capacity in various collection modes
- » Bi-directional scanning
- » Rapid retargeting using Control Moment Gyros (>2x faster than any competitor) resulting in superior area and point target collection capability
- » Direct Access tasking from and image transmission to customer sites
- » Daily revisits

Benefits

- » Simultaneous, high resolution, multi-spectral imagery
- » Large area single-pass (synoptic) collection eliminates temporal variations
- » Precision geo-location possible without ground control points
- » Global capacity of 680,000 km² per day

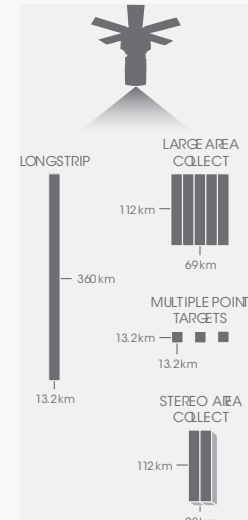


WorldView-4 artist rendering



Design and specifications

Orbit	Altitude: 617 km Type: SunSync, 10:30 am descending Node Period: 97 min.
Life	Estimated Service Life: 10 to 12 years
Spacecraft Size and Aperture	Size: 5.3 m (17.7 ft) tall x 2.5 m (8 ft) across 7.9 m (26 ft) across deployed solar arrays Aperture: 1.1m
Sensor Bands	Panchromatic: 450 - 800 nm 4 Multispectral: Red: 655 - 690 nm Green: 510 - 580 nm Blue: 450 - 510 nm Near-IR: 780 - 920 nm
Sensor Resolution (GSD, Ground Sample Distance, geometric mean)	Panchromatic Nadir: 0.31 m 20° Off-Nadir: 0.34 m 56° Off-Nadir: 1.00 m 65° (earth limb): 3.51 m Multispectral Nadir: 1.24 m 20° Off-Nadir: 1.38 m 56° Off-Nadir: 4.00 m 65° (earth limb): 14.00 m
Dynamic Range	11-bits per pixel
Swath Width	At nadir: 13.1 km
Attitude Determination and Control	Type: 3-axis Stabilized Actuators: Control Moment Gyros (CMGs) Sensors: Star trackers, precision IRU, GPS
Retargeting Agility	Time to Slew 200 km: 10.6 sec
Onboard Storage	3200 Gb solid state with EDAC
Communications	Image & Ancillary Data: 800 Mbps X-band Housekeeping: 120 kbps real time, X-band Command: 64 kbps S-band
Max Contiguous Area Collected in a Single Pass (30° off-nadir angle)	Mono: 66.5 km x 112 km (5 strips) Stereo: 26.6 km x 112 km (2 pairs)
Revisit Frequency (at 40°N Latitude)	1 m GSD: < 1.0 day Total constellation >4.5 accesses/day
Geolocation Accuracy (CE90)	Predicted <4 m CE90 without ground control
Capacity	680,000 km ² per day

Collection scenarios



Sensor bands

-  Panchromatic
-  Multispectral