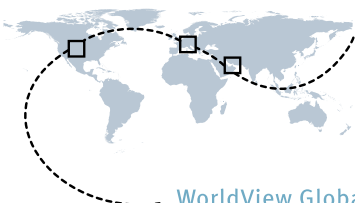


Bathymetry

Successfully launched on October 8, 2009, WorldView-2 is the first high resolution satellite to provide half-meter panchromatic resolution and two meter multispectral resolution across 8 spectral bands. With unprecedented agility and a collection capacity of 975,000 km² per day, WorldView-2 doubles the Alliance's collection capacity and provides worldwide intra-day revisit capabilities.



WorldView-2 is the first high-resolution multispectral satellite to provide a Coastal Blue detector (400-450nm) enabling it to see further into the water and support bathymetric studies around the globe. With unsurpassed accuracy, agility and collection capacity expected, WorldView-2 is delivering comprehensive new solutions for the marine community.

Remote sensing of the shallow ocean floor will now become much clearer, thanks to the addition of the Coastal Blue band. Analysts will be able to discriminate features more accurately and increase the scope of remote sensing applications. And, thanks to WorldView-2's ability to collect large volumes of stereo imagery, new photogrammetric techniques for calculating ocean depth are finally possible. Current, accurate depth measurements will provide increased navigational security, and support detailed mapping and modeling applications.

APPLICATIONS

Updating navigational hazards

Current and accurate nautical charts are critical to the safety of marine navigation. With global coverage and continuous collections, the opportunity to create and update charts rapidly is a dramatic improvement over current capabilities.

Coastal modeling

Predicting the effects of storm surge and tsunamis requires a detailed understanding of the near-shore environment. With photogrammetric techniques, the entire coastline can be mapped simultaneously above and below the water, providing unprecedented continuity and critical insights.

Marine habitat monitoring

Government agencies monitor coastal areas to document changes to protected habitats. The ability to map large under water areas, and classify marine habitats with great detail will enable more efficient responses and a better understanding of the environment.

BENEFITS

- Provide navigational charts for remote places that do not have accurate surveys
- Frequently update dynamic areas, such as river deltas and barrier islands
- Locate debris deposited by storms, to efficiently direct cleanup operations
- Map properties and infrastructure that are at risk due to coastal inundation
- Model the effects of storm surge to create better emergency response plans
- Rapidly conduct change analyses, in order to test and refine existing models
- Rapidly identify changes that can indicate the early effects of pollution
- Develop reef recovery models through repeated bathymetric studies after catastrophic events
- Monitor the coastal impact from projects like offshore wind farms and oil platforms

We expect to see WorldView-2 derived bathymetric measurements to propagate quickly around the globe, improving the safety of marine navigation, and providing much needed insight into the ever-changing marine environment.

WorldView Global Alliance™ delivers geospatial content the way you want it, when you want it.

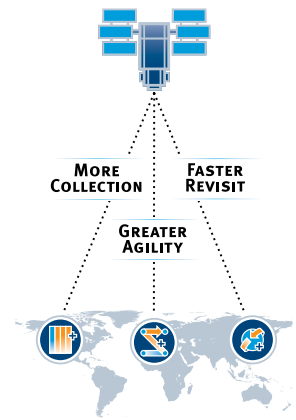
We provide clearer, more accurate visual perspectives for spatial applications and decisions.



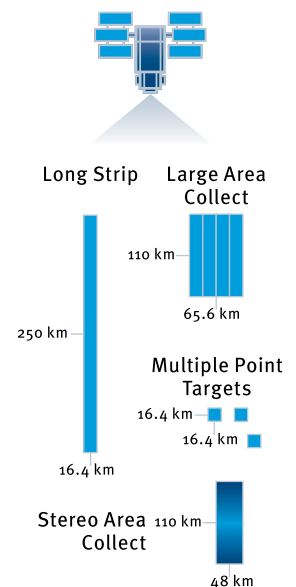


DESIGN AND SPECIFICATIONS

Launch Information	Date: October 8, 2009 Launch Vehicle: Delta 7920 (9 strap-ons) Launch Site: Vandenberg Air Force Base
Orbit	Altitude: 770 kilometers Type: Sun synchronous, 10:30 am descending node Period: 100 minutes
Mission Life	7.25 years, including all consumables and degradables (e.g. propellant)
Spacecraft Size, Mass and Power	4.3 meters (14 feet) tall x 2.5 meters (8 feet) across 7.1 meters (23 feet) across the deployed solar arrays 2800 kilograms (6200 pounds) 3.2 kW solar array, 100 Ahr battery
Sensor Bands	Panchromatic + 8 Multispectral: 4 standard colors: red, blue, green, near-IR 4 new colors: red edge, coastal, yellow and near-IR2
Sensor Resolution	Panchromatic: 0.46 meters GSD at nadir, 0.52 meters GSD at 20° off-nadir Multispectral: 1.84 meters GSD at nadir, 2.08 meters GSD at 20° off-nadir
Dynamic Range	11-bits per pixel
Swath Width	16.4 kilometers 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 meters at image start and stop Knowledge: Supports geolocation accuracy below
Retargeting Agility	Acceleration: 1.5 deg/s/s Rate: 3.5 deg/s Time to Slew 300 kilometers: 9 seconds
Onboard Storage	2199 gigabits 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 = 1355 km wide swath Higher angles selectively available
Per Orbit Collection	524 gigabits
Max Contiguous Area Collected in a Single Pass	96 x 110 km mono 48 x 110 km stereo
Revisit Frequency	1.1 days at 1 meter GSD or less 3.7 days at 20° off-nadir or less (0.52 meter GSD)
Geolocation Accuracy (CE90%)	Specification of 6.5m CE90, with predicted performance in the range of 4.6 to 10.7 meters (15 to 35 feet) CE90, excluding terrain and off-nadir effects With registration to GCPs in image: 2.0 meters (6.6 feet)



COLLECTION SCENARIOS



SENSOR BANDS

- Panchromatic
- Multispectral
- 4 Additional Bands

To learn more about the Alliance and its members, or to contact us visit: www.worldviewglobalalliance.com

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