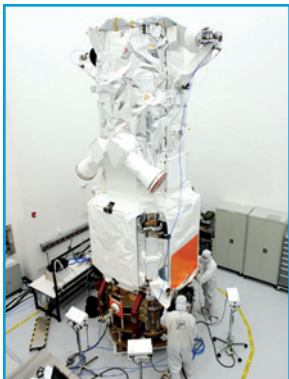
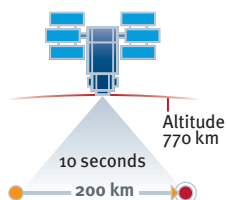


## WorldView-2

DigitalGlobe has established itself as the world's most prominent supplier of high-resolution commercial satellite imagery. DigitalGlobe's constellation of satellites is unprecedented in the commercial imaging industry, enabling commercial and government customers around the globe to access a broad selection of geospatial information products from a single source.



### WORLDVIEW-2 ALTITUDE AND SLEW TIME



WorldView-2, launched October 2009, is the first high-resolution 8-band multispectral commercial satellite. Operating at an altitude of 770 kilometers, WorldView-2 provides 46 cm\* panchromatic resolution and 1.84 meter\* multispectral resolution. WorldView-2 has an average revisit time of 1.1 days and is capable of collecting up to 975,000 square kilometers (376,000 square miles) per day\*\*, more than tripling the DigitalGlobe multispectral collection capacity for more rapid and reliable collection.

The WorldView-2 system, offering incredible accuracy, agility, capacity and spectral diversity, allows DigitalGlobe to substantially expand its imagery product offerings to both commercial and government customers.

### FEATURES

- Very high resolution
  - 46 cm\* panchromatic at nadir
  - 52 cm at 20° off-nadir
- The most spectral diversity commercially available
  - 1.84 m\* resolution at nadir
  - 4 standard colors: blue, green, red, near-IR1
  - 4 new colors: coastal, yellow, red edge, and near-IR2
- Industry-leading geolocation accuracy
- High capacity over a broad range of collection types
  - 16.4 km width imaging swath (wider than any competitor)
  - Bi-directional scanning
  - Rapid retargeting using Control Moment Gyros (>2x faster than any competitor)
  - 2199 gigabits on-board storage
  - 800 Mbps X-band data downlink
- Direct downlink to customer sites available using same high-speed 800 Mbps X-band downlink
- Frequent revisits at high resolution enabled by higher altitude
  - 1.1 days at 1 m GSD or less
  - 3.7 days at 20° off-nadir or less (52 cm GSD)

### 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)
- Provides the ability to perform precise change detection, mapping and analysis at unprecedented resolutions in 8-band multispectral imagery
- Allows the creation of accurate maps in remote areas, maximizing the utility of whatever resources are available:
  - Geolocation accuracy 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) CE90
- Collects, stores and downlinks a greater supply of frequently updated global imagery products than competitive systems
- Frequent revisits increase image collection opportunities, enhance change detection applications and enable accurate map updates



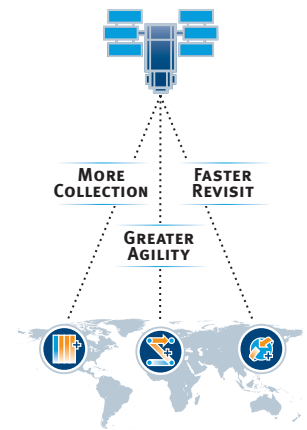


# WorldView-2

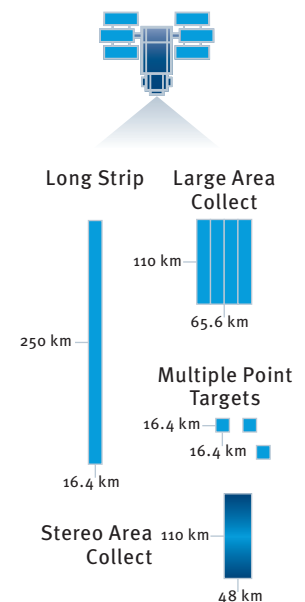
## DESIGN AND SPECIFICATIONS

<b>Launch Information</b>	Date: October 8, 2009 Launch Vehicle: Delta 7920 (9 strap-ons) Launch Site: Vandenberg Air Force Base, California
<b>Orbit</b>	Altitude: 770 kilometers Type: Sun synchronous, 10:30 am descending node Period: 100 minutes
<b>Mission Life</b>	7.25 years, including all consumables and degradables (e.g. propellant)
<b>Spacecraft Size, Mass and Power</b>	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
<b>Sensor Bands</b>	Panchromatic: 450 - 800 nm 8 Multispectral: Coastal: 400 - 450 nm      Red: 630 - 690 nm Blue: 450 - 510 nm      Red Edge: 705 - 745 nm Green: 510 - 580 nm      Near-IR1: 770 - 895 nm Yellow: 585 - 625 nm      Near-IR2: 860 - 1040 nm
<b>Sensor Resolution</b>	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
<b>Dynamic Range</b>	11-bits per pixel
<b>Swath Width</b>	16.4 kilometers at nadir
<b>Attitude Determination and Control</b>	3-axis Stabilized Actuators: Control Moment Gyros (CMGs) Sensors: Star trackers, solid state IRU, GPS
<b>Pointing Accuracy and Knowledge</b>	Accuracy: <500 meters at image start and stop Knowledge: Supports geolocation accuracy below
<b>Retargeting Agility</b>	Acceleration: 1.5 deg/s/s Rate: 3.5 deg/s Time to Slew 200 kilometers: 10 seconds
<b>Onboard Storage</b>	2199 gigabits solid state with EDAC
<b>Communications</b>	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
<b>Max Viewing Angle / Accessible Ground Swath</b>	Nominally +/-45° off-nadir = 1355 km wide swath Higher angles selectively available
<b>Per Orbit Collection</b>	524 gigabits
<b>Max Contiguous Area Collected in a Single Pass</b>	65.6 km x 110 km mono at nadir 48 x 110 km stereo at nadir
<b>Revisit Frequency</b>	1.1 days at 1 meter GSD or less 3.7 days at 20° off-nadir or less (0.52 meter GSD)
<b>Geolocation Accuracy (CE90%)</b>	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)

\* All imagery is resampled to .50 and 2.0 to comply with U.S. Regulation      \*\* Panchromatic collection



## COLLECTION SCENARIOS (AT NADIR)



## SENSOR BANDS

- Panchromatic
- Multispectral
- 4 Additional Bands

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DS-WV2 Rev 08/10