**WorldView-2**

WorldView-2, launched October 2009, is the first high-resolution 8-band multispectral commercial satellite. Operating at an altitude of 770 km, WorldView-2 provides 46 cm panchromatic resolution and 1.85 m multispectral resolution. WorldView-2 has an average revisit time of 1.1 days and is capable of collecting up to 1 million sq km of 8-band imagery per day, greatly enhancing DigitalGlobe’s multispectral collection capacity for more rapid and reliable collection. WorldView-2 substantially expands imagery product offerings to all DigitalGlobe customers.

### Features

- Very high resolution
- The most spectral diversity commercially available
  - 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
- Bi-directional scanning
- Rapid retargeting using Control Moment Gyros (>2x faster than any competitor)
- Direct downlink to customer sites available
- Frequent revisits at high resolution

### Benefits

- Provides highly detailed imagery for precise map creation, change detection, and in-depth image analysis
- Geolocate features to less than 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
- Provides the ability to perform precise change detection, mapping and analysis at unprecedented resolutions in 8-band multispectral imagery

New WorldView-2 clean room pre-launch preparations. The third of DigitalGlobe’s state-of-the-art high-resolution commercial imagery satellites.
Design specifications

Launch Information
- Date: October 8, 2009
- Launch Vehicle: Delta 7920 (9 strap-ons)
- Launch Site: Vandenberg Air Force Base, California

Orbit
- Altitude: 770 km
- Type: Sun synchronous, 10:30 am descending node
- Period: 100 min.

Mission Life
- 10-12 years, including all consumables and degradables (e.g. propellant)

Spacecraft Size, Mass and Power
- 5.7 m (18.7 ft) tall x 2.5 m (8 ft) across
- 7.1 m (23 ft) across the deployed solar arrays
- 2615 kg (5765 lbs)
- 3.2 kW solar array, 100 Ahr battery

Sensor Bands
- Panchromatic: 450 - 800 nm
- 8 Multispectral:
  - Coastal: 400 - 450 nm
  - Blue: 450 - 510 nm
  - Green: 510 - 580 nm
  - Red: 630 - 690 nm
  - Red Edge: 705 - 745 nm
  - Near-IR1: 770 - 895 nm
  - Near-IR2: 860 - 1040 nm
- 4 additional bands

Sensor Resolution
- Panchromatic: 0.46 m GSD at nadir, 0.52 m GSD at 20° off-nadir
- Multispectral: 1.85 m GSD at nadir, 2.07 m GSD at 20° off-nadir

Dynamic Range
- 11-bits per pixel

Swath Width
- 16.4 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
- 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 Contiguous Area Collected in a Single Pass (30° off-nadir angle)
- Mono: 138 x 112 km (8 strips)
- Stereo: 63 x 112 km (4 pairs)

Revisit Frequency (at 40°N Latitude)
- 1.1 days at 1 m GSD or less
- 3.7 days at 20° off-nadir or less (0.52 m GSD)

Geolocation Accuracy (CE90)
- Demonstrated <3.5 m CE90 without ground control

Capacity
- 1 million km² per day

All imagery complies with U.S. regulation.