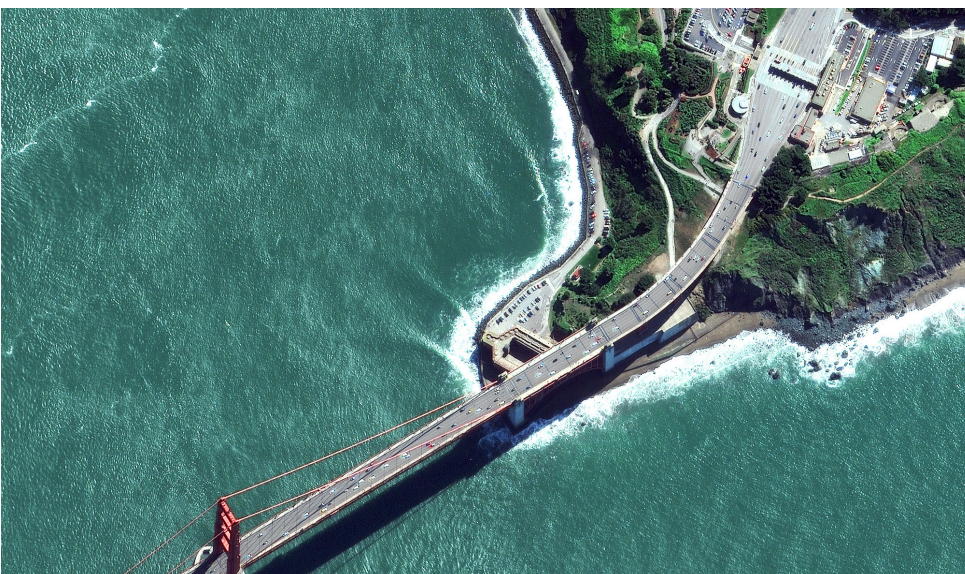




## WorldView-2

Launched in October 2009, WorldView-2 is the first very high resolution 8-band multispectral commercial satellite. Operating at an altitude of 770 km, WorldView-2 incorporates industry-leading geolocation accuracy and is able to geolocate to less than 5 m to create maps in remote areas, thereby maximizing the utility of available resources. 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.

Utilizing the WorldView-2 satellite, European Space Imaging is capable of delivering very high resolution imagery options. We can currently offer our customers the following options: 31 cm panchromatic resolution, 1.85 m multispectral resolution, bi-directional scanning and rapid retargeting using Control Moment Gyros - more than two times faster than any competitor. In addition, our customers have access to direct access tasking to ensure you get the right image every time and an archive library that spans more than 4,000,000,000 km<sup>2</sup>.



### Company Information

European Space Imaging is a leading supplier of global very high-resolution (VHR) satellite imagery and derived services to customers in Europe, North Africa and CIS countries.

Operating a multi-mission capable ground station enables optimized image collection results taking into account real-time weather information and giving customers the highest degree of flexibility.

With a reputation for expert and personalized customer service it has been providing tailored VHR imagery solutions to meet the diverse project requirements of its customers since 2002.

## WorldView-2 Design and Specifications

|  |  |
|--|--|
| Orbit  | Altitude: 770km<br>Type: SunSync, 10:30 am descending node<br>Period: 100 minutes  |
| Life   | Estimated service life: 10- 12 years, including all consumables and degradables  |
| Spacecraft size, mass and power                | Size: 5.7 m H x 2.5 m W, 7.1 m across deployed solar arrays<br>Mass: 2615 kg<br>Power: 3.2 kW solar array, 100 Ahr battery   |
| Sensor bands                                   | Panochromatic: 450- 800 nm<br><b>8 Multispectral</b><br>Coastal: 400 - 450 nm Red: 630- 690 nm<br>Blue: 450 - 510 nm Red Edge: 705- 745 nm<br>Green: 510 - 580 nm Near-IR1: 770 - 895 nm<br>Yellow: 585 - 625 nm Near IR2: 860 - 1040 nm |
| Sensor resolution                              | <b>Panochromatic</b><br>0.46 m ground sample distance at nadir<br>0.52 m ground sample distance at 20° off-nadir<br><b>Multispectral</b><br>1.85 m ground sample distance at nadir<br>2.07 m ground sample distance at 20° off-nadir:    |
| Dynamic range                                  | 11-bits per pixel  |
| Swath width                                    | At nadir: 16.4 km  |
| Attitude determination and control             | Type: 3-axis stabilized<br>Actuators: Control moment gyros (CMGs)<br>Sensors: Star trackers, solid state IRU, GPS  |
| Pointing accuracy and knowledge                | Accuracy: <500 m at image start / stop<br>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 ancilliary data: 800 Mbps X-band<br>Housekeeping: 4, 16 or 32 kbps real time, 524 kbps stored, X-band<br>Command: 2 or 64 kbps S-band  |
| Max contiguous area collected in a single pass | Mono: 138 km x 112 km (8 strips)<br>Stereo: 63 km x 112km (4 pairs)  |
| Revisit frequency                              | 1 m GSD or less at 1.1 days<br>3.7 days at 20° off-nadir or less (0.52m GSD)   |
| Geolocation accuracy                           | Demonstrated <3.5 m CE90 without ground control  |
| Capacity                                       | 1 million km <sup>2</sup> per day  |

## Features

- The most spectral diversity commercially available:
  - four standard colors: blue, green, red and near-IR1
  - four 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 competitor 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

## Sensor Bands

- Panchromatic
- Multispectral
- Additional bands

