DATA SHEET

EUROPEAN SPACE IMAGING®

WorldView-3

Featuring precision geo-location and simultaneous very high resolution super-spectural imagery, the WorldView-3 satellite is the industry's elite when it comes to satellites. Operating at an expected altitude of 617 km, WorldView-3 provides 31 cm panchromatic resolution, 1.24 m multispectral resolution, 3.7 m short-wave infrared resolution, and 30 m CAVIS resolution. WorldView-3 has an average revisit time of <1 day and is capable of collecting up to 680,000 km^2 per day.

Utilzing the WorldView-3 satellite, European Space Imaging is capable of delivering very high resolution imagery options. We can currently offer our customers new and enhanced applications includding mapping, land classifications, soil/vegetative analysis and more. 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^2.

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.

MEMBER OF WORLDVIEW GLOBAL ALLIANCE™

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Design and Specifications

Orbit	Altitude: 617km Type: SunSync, 10:30 am descending Node Period: 97 minutes
Life	Spec mission life: 7.25 years Estimated service life: 10- 12 years
Spacecraft size, mass and power	Size: 5.7 m H x 2.5 m W, 7.1 m across deployed solar arrays Mass: 2800 kg Power: 3.1 kW solar array, 100 Ahr battery
Sensor bands	Panochromatic: 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 **8 SWIR Bands** SWIR-1: 1195 - 1225 nm; SWIR-5: 2145 - 2185 nm SWIR-2: 1550 - 1590 nm; SWIR-6: 2185 - 2225 nm SWIR-3: 1640 - 1680 nm; SWIR-7: 2235 - 2285 nm SWIR-4: 1710 - 1750 nm; SWIR-8: 2295 - 2365 nm **12 CAVIS Bands** Desert Clouds: 405 - 420 nm; Water-3: 930 - 965 nm Aerosol-1: 459 - 509 nm; NDVI-SWIR: 1220 - 1252 nm Green: 525 - 585 nm; Cirrus: 1365 - 1405 nm Aerosol-2: 635 - 685 nm; Show: 1620- 1680 nm Water-1: 845 - 885 nm; Aerosol-3: 2105 - 2245 nm Water-2: 897 - 927 nm; Aerosol-3: 2105 - 2245 nm
Sensor resolution	Panochromatic Nadir: 0.31 m 20˚ Off-Nadir: 0.34 m Multispectural Nadir: 1.24 m 20˚ Off-Nadir: 1.38 m SWIR Nadir: 3.70 m 20˚ Off-Nadir: 4.10 m CAVIS Nadir: 30.00 m
Dynamic range	11-bits per pixel Pan and MS; 14-bits per pixel SWIR
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
Pointing accuracy and knowledge	Accuracy: <500 m at image start / stop Knowledge: Supports geolocation accuracy below
Retargeting agility	Time to slew 200 km: 12 sec
Onboard storage	2199 Gb solid state with EDAC
Communications	Image and ancilliary data: 800 and 1200 Mbps X-band Housekeeping: 4, 16, 32 or 64 kbps real time, 524 kbps stored, X-band Command: 2 or 64 kbps S-band
Max contiguous area collected in a single pass	Mono: 66.5 km x 112 km (5 strips) Stereo: 26.6 km x 112km (2 pairs)
Revisit frequency	1 m GSD: <1.0 day 4.5 days at 20˚ off-nadir or less
Geolocation accuracy	Predicted <3.5 m CE90 without ground control
Capacity	680,000km2 per day

Sensor Bands

- Panchromatic
- Multispectural
- 4 additional multispectral bands
- 8 SWIR bands
- 12 CAVIS bands

Features

- Very high-resolution*
  - Panchromatic 31 cm
  - Visible and near-infrared 1.24 m
  - Short-wave infrared 3.7 m
  - CAVIS 30 m

  *Will be resampled for commercial distribution
- The most spectral diversity commercially available
  - Panchromatic band
  - 4 standard VNIR colors: blue, green, red, near-IR1
  - 4 added VNIR colors: coastal, yellow, red edge and near-IR2
  - 8 SWIR bands: Penetrates haze, fog, smog, dust, and smoke
  - 12 CAVIS bands: Maps clouds, ice and snow corrects for aerosol and water vapor
- Industry-leading geolocation accuracy
- High capacity in various collection modes
- Bi-directional scanning
- Rapid retargeting using Control Moment Gyros (>2x faster than any competitor)
- Direct Access tasking from and image transmission to customer sites
- Daily revisits

Benefits

- Large area mono and stereoscopic collection eliminates temporal variations
- New and enhanced applications
  - Mapping
  - Land classifications
  - Disaster preparedness / response
  - Soil / Vegetative Analysis
  - Geology: Oil and Gas, Mining
  - Environmental Monitoring
  - Bathymetry / Coastal applications
  - Identification of man-made materials
- Superior haze penetration