DATA SHEET

DATA PRODUCTS

DigitalGlobe™

Shortwave-infrared imagery

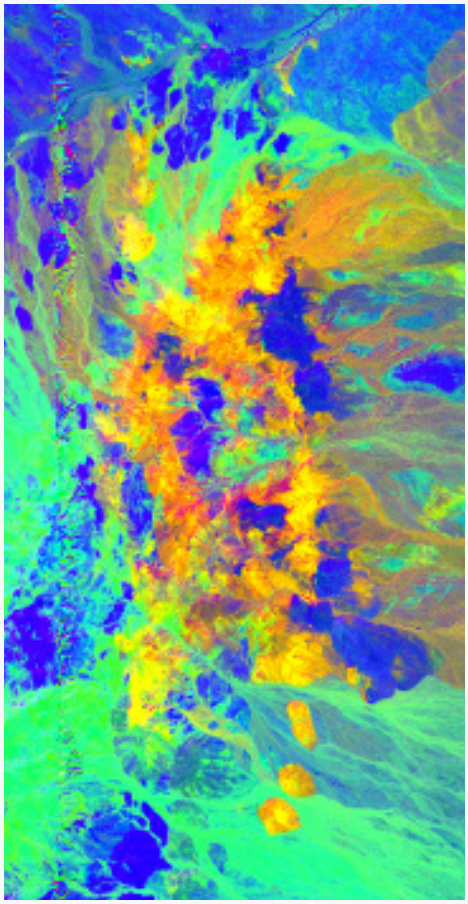
In addition to offering the highest resolution satellite imagery available today, WorldView-3 is the first commercial satellite to have eight high-resolution bands that capture information in the shortwave infrared (SWIR) regions of the electromagnetic spectrum. WorldView-3 expands deeper into the infrared spectrum than any other commercial imaging satellite, and provides rich data for precisely identifying and characterizing man-made and natural material, penetrating smoke, and mapping minerals. The eight SWIR bands capture unique information for agriculture, forestry, mining/geology, and other applications.

Features

- High resolution
  - 7.5 m
  - 3.7 m (USG only)
- Spectral diversity
  - 8 Bands of SWIR information
  - 1195–2365 nm
- High radiometric response
  - 14-bit digitization (up to 16,384 levels of gray scale)
  - Discrete non-overlapping bands
- Open systems
  - Imaging geometry supplied
  - Compatible with leading commercial software providers
  - Popular image file formats
- Imaging geometry, geometric calibration, radiometric calibration, and other metadata supplied with satellite imagery

Benefits

- Identify features and perform analyses that are not possible with visible and near-infrared alone
- Bands optimized for the detection of features of greatest interest
- Ideal for penetrating smoke, mapping minerals, and identifying man-made features



False color composite of SWIR mineral indices

Specifications

Product options		
	Pixel Resolution	**Image Bands**
SWIR	7.5 m / 3.7 m (USG only)	SWIR 1, SWIR 2, SWIR 3, SWIR 4, SWIR 5, SWIR 6 SWIR 7, SWIR 8

Spectral characteristics	
SWIR 1	1195–1225 nm
SWIR 2	1550–1590 nm
SWIR 3	1640–1680 nm
SWIR 4	1710–1750 nm
SWIR 5	2145–2185 nm
SWIR 6	2185–2225 nm
SWIR 7	2235–2285 nm
SWIR 8	2295–2365 nm

*Spectral response curves available upon request

Scene size	
At nadir	10.6 km cross-track

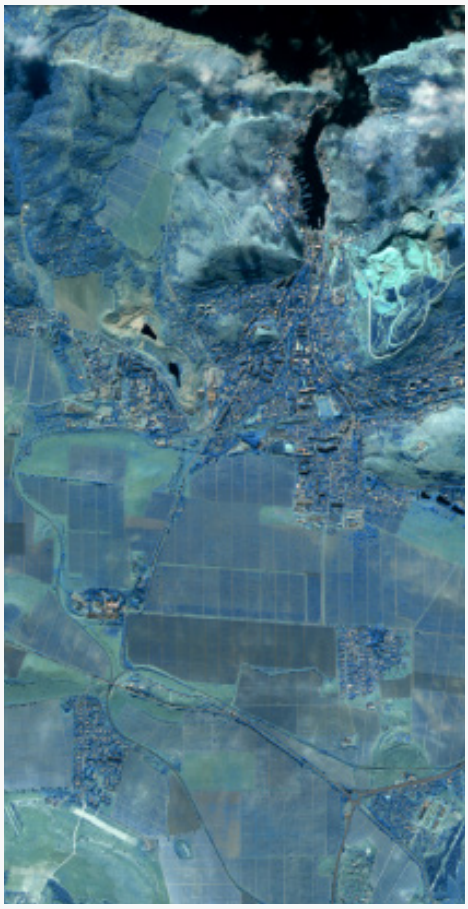
Image accuracy specifications	
WorldView-3 SWIR	7.5 m CE90

Order parameters	
Product level	1B (USG only), 2A, OR2A, L3
Image bits/pixel	8 or 16 bits (16-bit data is strongly recommended)
File format	GeoTIFF, NITF (USG only)

Processing		
Radiometric corrections	**Sensor Corrections**	**Resampling Options**
• Relative radiometric response between detectors • Non-response detector fill • Conversion to absolute radiometry	• Internal detector geometry • Optical distortion • Scan distortion • Any line-rate variations	• 2x2 bilinear • Nearest neighbor (recommended) • Cubic convolution

Deliverables

Acquire SWIR imagery directly from the DigitalGlobe archive or through a new collection request. SWIR imagery is ordered by the scene, with a minimum purchase of a single scene up to a maximum of 10,000 sq km per order. Products are delivered on a choice of standard digital media with all the Image Support Data files needed for processing, including imaging geometry, geometric calibration, radiometric calibration, and other metadata.



www.digitalglobe.com

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