

Stereo Imagery

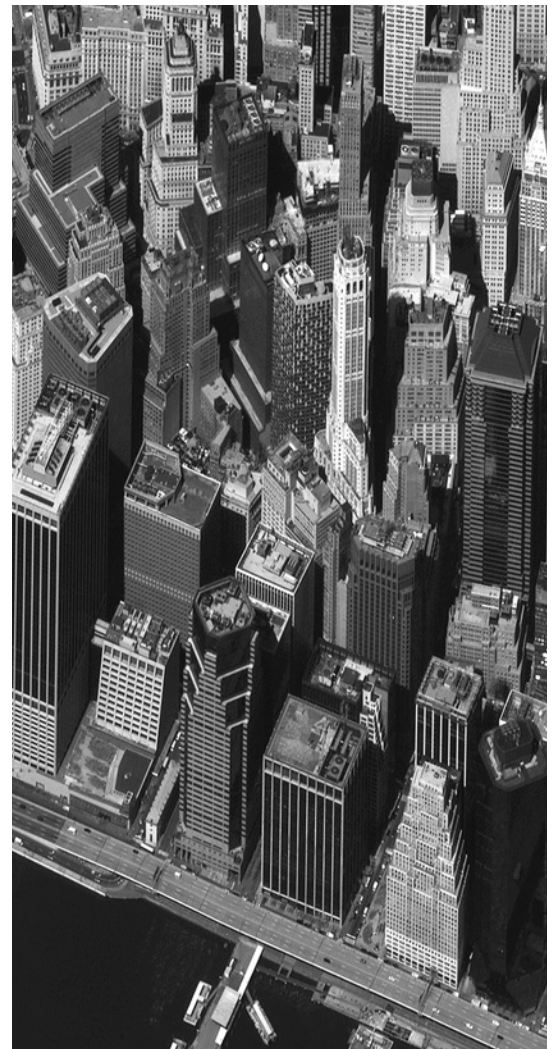
Stereo Imagery products are designed for users with advanced image processing capabilities and photogrammetric tools. This product is ideal for Digital Elevation Model (DEM) generation, 3D visualization, and feature extraction applications. Stereo images are collected in-track, meaning on the same orbit, and are acquired at angles optimal for stereo viewing and manipulation. Stereo Imagery products come in two varieties: Basic Stereo and Ortho Ready Stereo.

Features

- High three-dimensional accuracy Stereo accuracy
 - 5.0 m CE90 at <math><30^\circ</math> off nadir
 - 5.0 m LE90 at <math><30^\circ</math> off nadir
- High resolution
 - 50 cm panchromatic
 - 2 m multispectral
- Large image swath collection size
 - 16.4 km – 17.6 km width at nadir
- High radiometric response
 - 11-bit digitization (up to 2,048 levels of gray scale)
- Superior image classification and analysis
 - 11-bit digitization (up to 2,048 levels of gray scale)
 - Discrete non-overlapping spectral bands
- Open systems
 - Integrated camera model in most leading commercial photogrammetry software packages
 - Popular image file formats

Benefits

- More accurate mapping and terrain modeling results
- Provides high density terrain posting to produce highly detailed surface data
- Flexible product composition
 - Basic Stereo Imagery unit size is at least 16.4 km wide by 14 km long
 - Ortho Ready Stereo Imagery area-framed based on AOI
 - 100 km² minimum (Ortho Ready)
 - Tiling available (Ortho Ready)
- Ease-of use in commercial photogrammetry tools resulting in faster processing



New York City, New York, U.S.A.
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Specifications

Deliverables

Stereo Imagery can be acquired directly from the DigitalGlobe archive or you can submit a new collection request. Ortho Ready Stereo is delivered based on the AOI and can be tiled. Products are delivered by FTP or on DVD with all the Image Support Data files needed for photogrammetric processing, including a stereo file that identifies the images in the pair and collection angles, attitude and ephemeris data, geometric calibration, camera model, image metadata, radiometric data, and rational functions.

Delivery Methods



Media Delivery: DVD



Web-Based Delivery: FTP

Order Parameters		
	Basic Stereo	Ortho Ready Stereo
Product Type	Panchromatic, Multispectral 4-band, or Bundle (pan + 4-band multispectral)	Panchromatic, Multispectral 4-band, 8-band, 4-band/8-band Bundle (Pan + MS), Natural Color, 4-band Pan-sharpened
Image Bits / Pixel	8 or 16 bits	
File Formats	GeoTIFF 1.0, NITF 2.1, NITF 2.0	
Resampling Options	<ul style="list-style-type: none"> • 4x4 cubic convolution • Nearest neighbor • MTF kernel • Enhanced Kernel* • Pan-sharpened Kernel** 	
Minimum AOI Size	210 km ²	100 km ²
Product Framing	Full-width framed (products delivered in units that are the swath width of sensor, 14 km long) or AOI divided into equal parts (some limitations due to file size)	Area-framed
Tiling	None	Pixel Based: 8k, 14k, 16k Map Based

Image Accuracy Specifications**	
Horizontal	5.0 m CE90
Vertical	5.0 m LE90

Processing		
	Basic Stereo	Ortho Ready Stereo
Radiometric Corrections	Relative radiometric response between detectors, non-responsive detector fill, conversion to absolute radiometry	
Sensor Corrections	Internal detector geometry, optical distortion, scan distortion, any line-rate variations	
Geometric Corrections	None	Projected to a plane using a map projection and datum, projected to a constant base elevation (calculated on the average terrain elevation based on order area of interest)

* Enhanced resampling kernel available for pan and pan-sharpened Stereo products.
Pan-sharpened kernel available for pan-sharpened Stereo products only.

** Up to 30° off nadir

U.S. Regulation requires imagery to be resampled to a minimum of .50 m pan and 2.0 m multispectral.