DATA SHEET

DATA PRODUCTS

DigitalGlobe™

Basic Imagery

Basic Imagery products are designed for users with advanced image processing capabilities. DigitalGlobe supplies camera model information with each Basic Imagery product, permitting users to perform sophisticated photogrammetric processing such as orthorectification and three dimensional feature extraction. Basic Imagery is the least processed image product with corrections for radiometric distortions. Adjustments for internal sensor geometry, optical, and sensor distortions have been performed on each scene ordered.

Features

- High resolution
  - 41 cm – 82 cm panchromatic, natural color, color infrared, or 4-band pan sharpened
  - 1.64 m – 3.28 m multispectral
- Large image swath collection size
  - 16.4 km – 18.0 km width at nadir
- High radiometric response
  - 11-bit digitization (up to 2,048 levels of gray scale)
  - Discrete non-overlapping bands
- Open systems
  - Camera model information supplied
  - Compatible with leading commercial software providers
  - Popular image file formats
- Spacecraft telemetry and camera model supplied with satellite imagery

Benefits

- Provides the flexibility to perform your own photogrammetric processing on raw data to produce orthorectified imagery and first generation basemaps
- Identify features, create maps, and detect changes from recent global imagery at the highest resolution possible from commercial imaging satellites
- Map large areas faster with fewer files to manage and process
- Improve feature classification and identification in dark or bright areas, such as building shadows or snow, and perform more flexible image enhancement
- Get your high-resolution satellite orthoimagery project up and running quickly and easily using your existing commercial software

Glendale, Arizona, U.S.A.

Specifications

Product options	Pixel Resolution*	Image Bands
Panchromatic	40 cm, 50 cm, 60 cm, 80 cm	Panchromatic
Multispectral (4-band)	1.6 m, 2.0 m, 2.4 m, 3.2 m	Blue, Green, Red, NIR1
Multispectral (8-band)	1.6 m, 2.0 m	Coastal, Blue, Green, Yellow, Red, Red Edge, NIR1, NIR2

Spectral characteristics (nanometers)

	Coastal	Blue	Green	Yellow	Red	Red Edge	Near-IR1	Near-IR2	Pan (B&W)
QuickBird		430 – 545	466 – 620		590 – 710		715 – 918		405 – 1053
GeoEye-1		446 –522	506– 587		655 –697		773 –929		447 – 808
WorldView-1									397 – 905
WorldView-2	396 – 458	442 – 515	506 – 586	584 – 632	624 – 694	699 – 749	765 – 901	856 – 1043	447 – 808
WorldView-3	397- 454	445- 517	507- 586	580- 629	626- 696	698- 749	765- 899	857- 1039	445- 808

Scene size**	
At nadir	Minimum size of 15.3 km x 14 km (230 km²)

Image accuracy specifications	
QuickBird	23 m CE90
WorldView-1, WorldView-2*, **WorldView-3 and GeoEye-1**	5.0 m CE90

Order parameters	
Product type	Panchromatic, Multispectral or Bundle
Image bits / pixel	8 or 16 bits
File formats	GeoTIFF 1.0, NITF 2.1, NITF 2.0

Processing

Radiometric corrections	Sensor corrections	Resampling options
• Relative radiometric response between detectors • Non-responsive detector fill • Conversion to absolute radiometry	• Internal detector geometry • Optical distortion • Scan distortion • Any line-rate variations • Registration of the multispectral bands	• 4x4 cubic convolution • Nearest neighbor • MTF kernel • Enhanced kernel****

* Pixel resolution varies across the image due to off-nadir viewing angle. Pixels closest to nadir have a better resolution than those farthest from nadir. Resolution varying from nadir up to 25° are reported here. DigitalGlobe can collect targets up to 45°, upon request.

** Scene dimensions vary due to off-nadir viewing angle. Scene sizes up to 25° are shown, but DigitalGlobe can collect targets up to 45°, upon request.

*** Up to 30° off nadir

**** Enhanced resampling kernel available for pan-only Basic products
Attained using supplied Image Support Data files and exclusive of sensor, viewing geometry, and terrain distortions.

U.S. regulation requires imagery to be resampled to a minimum of .40 m pan and 1.6m multispectral.

Deliverables

Basic Imagery can be acquired directly from the DigitalGlobe archive or you can submit a new collection request. Basic 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 your choice of standard digital media with all the Image Support Data files needed for photogrammetric processing, including attitude and ephemeris data, geometric calibration, camera model, image metadata, radiometric data, and rational functions.

Delivery methods

Media delivery: DVD

Web-based delivery: FTP

Media delivery: external HD

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