European Space Imaging

14EUSI-1961 Urban Atlas Data Coverage with WorldView-2 Data

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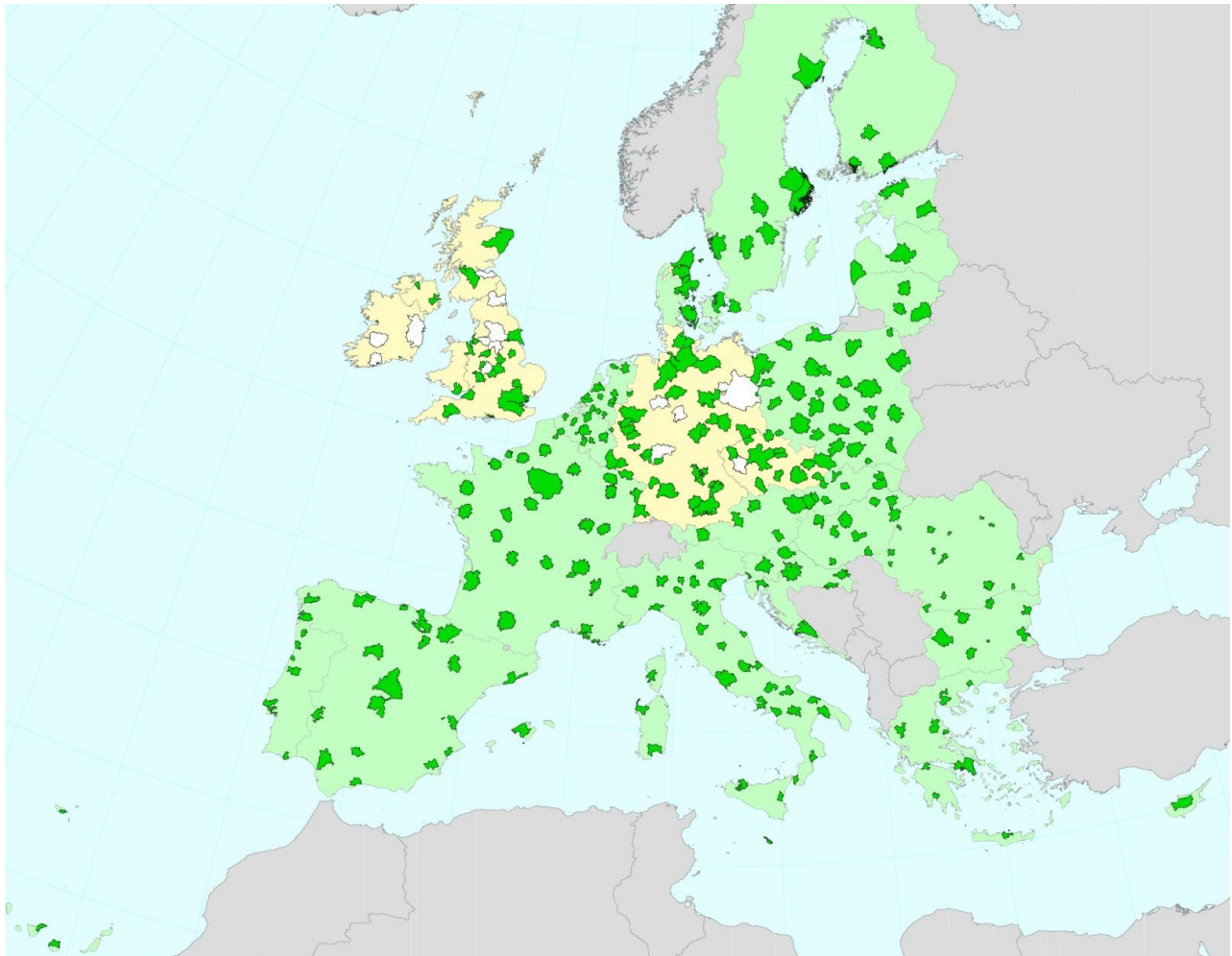
Document Signature

	Affiliation/Function	Name	Date	Signature
Approved	EUSI Order Specialist	Matthias Boes	10-Dec-2014	

1. Introduction

European Space Imaging GmbH as so called Third Party mission processed and delivered VHR satellite imagery collected by WorldView-2 during February 2011 to October 2013. All products delivered are related to complete ESA's EO missions for the coverage of the Urban Areas in Europe which has been defined as the Urban Atlas.

2. Coverage of the Large Urban Zones (LUZ)

3. Product Parameter for LUZ

Product & License

Product	40cm Ortho Ready Standard 8-Band Bundle; as per product specifications in Chapter 4
Parameter	- GEOTIFF 16 Bit - DRA = OFF - WGS 84 - UTM 4 x 4 Cubic Convolution 16k Tiling
Product Replacement	In case of any defective product delivered against the Urban Atlas European Space Imaging will replace an equivalent product if necessary until the end of Quarter 1, 2015.
License	Enterprise License for Earthnet/TPM global incl. DUE, VAE, TEP, etc. as per https://earth.esa.int/pi/esa?type=file&table=aotarget&cmd=image&alias=TPMterms.

Order Parameter

Requested Order Type	Archive
Sensor	WorldView-2
Bands	8 Bands (MS) + Pan
Resolution	40cm Pan, 1.6m MS
Area of Interest	290 of the 305 Urban Atlas Zones 2010+ 5 Urban Atlas Zones over Croatia
Size of Area of Interest	537.502 km^2
Collection Timeframe	February 2011 – October 2013

4. Product Specifications

Physical Characteristics - Standard and Ortho Ready Standard Imagery		
Minimum orderable area		25 km$_2$ (ImageLibrary); new collection subject to minimum price for tasking level selected, not less than 25 km$_2$
Product Framing		Area- based
Processing Specifications		
Absolute geolocation accuracy		Geolocation accuracy specification of 5 m CE90 (WV-1, WV-2) or 23 m CE90 (QB) at less than 30° off-nadir, excluding terrain effects.
Geometric corrections applied		Spacecraft orbit position and attitude uncertainty; Earth rotation; Earth curvature; panoramic distortion; terrain elevation (coarse)
Geolocation information applied		Ephemeris and attitude; rotation and alignment to map projection
Applied terrain information		Average base elevation or customer specified elevation (Ortho Ready Standard); coarse DEM (Standard)
Product Parameters		
Product Options		Pan, 4-band, 8-band, pan + 4-band bundle, pan + 8-band bundle Natural Color, Color Infrared, 4-band Pan-Sharpened
Number of bits per pixel in delivered product		8 or 16
Digital scaling method (applies to 8 bit only)		Linear with maximum value set to 255 (if highest DN is <= 255, no scaling is applied)
Resampling option		4x4 cubic convolution, Nearest neighbor, MTF kernel, Enhanced Kernel, Pan-sharpening
Dynamic Range Adjustment (DRA) option		Color correction and contrast enhancement (8-bit only)
Output tile size options		None; 8k x 8k pixels; 14k x14k; 16k x 16k pixels; Map-based
Output pixel spacing		Pan: 40 cm, 50 cm, 60 cm, 2 m Pan-sharpened: 40 cm, 50 cm or 60 cm Multispectral: 1.6 m, 2.0 m or 2.4 m
Output alignment		Rotated to Map North up
Cloud Cover		0-15% default, other options available upon request
Delivery Parameters		
Output product delivery media options		FTP Pull, DVD, External Hard Drive
Image data format options		NITF 2.0; NITF 2.1; GeoTIFF 1.0
Image Support Data		
ISD files supplied to customer		Delivery (top level index) README file; Layout file, shapefiles, browse image, Product README, image metadata file, RPC00B file; license text file; tile map file
Spacecraft telemetry		Refined attitude/ephemeris (used to create the product)