

Land Info offers a variety of digital topographic map & nautical chart data and satellite imagery products of Bulgaria including DEMs (Digital Elevation Models), bathymetry and vector layers such as contours, hydrology & transportation/roads. All data is delivered in industry standard file formats such as GeoTiff, NITF, ER Mapper .ecw, LizardTech MrSID .sid, JPG2000 .jp2, Idrisi .rst, ERDAS .img, ESRI .shp shapefile or .mdb GeoDatabase, AutoCAD .dxf or .dwg, MicroStation .dgn, MapInfo MIF/MID/TAB, USGS ASCII .dem, ARC ASCII GRID, DTED and .bil (other formats available upon request). All data includes customer choice of projection. Contact us for educational and volume purchase discounts. Please note that due to copyright restrictions some map products are only available in their original printed format.



**Digital topographic maps available as DRGs (Digital Raster Graphics), vector layers and/or DEMs (Digital Elevation Models: 20m - 90m resolution):**

- Full coverage of Bulgaria via 361 Russian military 1:50,000 topographic maps
- Full coverage of Bulgaria via 109 Russian military 1:100,000 topographic maps
- Full coverage of Bulgaria via 36 Russian military 1:200,000 topographic maps
- 92% coverage of Bulgaria via 11 US NGA 1:250,000 JOG topographic maps
- Full coverage of Bulgaria via 1 US 1:1,000,000 ONC aeronautical topographic map

Bulgaria	
Land area .....	108,489 sq km
Water area .....	2,390 sq km
Total area .....	11,0879 sq km
Land boundaries .....	1,808 km
Coastline .....	354 km
Lowest point .....	Black Sea 0
Highest point .....	Musala 2,925 m

**Large-scale (detailed) city mapping available as DRGs (Digital Raster Graphics), vector layers and/or DEMs (Digital Elevation Models: 5m - 10m resolution):**

- Blagoevgrad, Bulgaria – 1 Russian military 1:10,000 topographic City Plan map
- Burgas, Bulgaria – 1 Russian military 1:10,000 topographic City Plan map
- Gabrovo, Bulgaria – 1 Russian military 1:10,000 topographic City Plan map
- Khaskovo, Bulgaria – 1 Russian military 1:10,000 topographic City Plan map
- Kurdzhali, Bulgaria – 1 Russian military 1:10,000 topographic City Plan map
- Lovech, Bulgaria – 1 Russian military 1:10,000 topographic City Plan map
- Nikopol, Bulgaria – 1 Russian military 1:10,000 topographic City Plan map
- Petrich, Bulgaria – 1 Russian military 1:10,000 topographic City Plan map
- Plovdiv, Bulgaria – 1 Russian military 1:10,000 topographic City Plan map
- Ruse, Bulgaria – 2 Russian military 1:10,000 topographic City Plan maps
- Shumen, Bulgaria – 1 Russian military 1:10,000 topographic City Plan map
- Silistra, Bulgaria – 1 Russian military 1:10,000 topographic City Plan map
- Sliven, Bulgaria – 1 Russian military 1:10,000 topographic City Plan map
- Sofia, Bulgaria – 4 Russian military 1:10,000 topographic City Plan maps

## Bulgaria (continued)

Stara Zagora, Bulgaria – 1 Russian military 1:10,000 topographic City Plan map  
Svilengrad, Bulgaria – 1 Russian military 1:10,000 topographic City Plan map  
Svishtov, Bulgaria – 1 Russian military 1:10,000 topographic City Plan map  
Turnovo, Bulgaria – 1 Russian military 1:10,000 topographic City Plan map  
Tutrakan, Bulgaria – 1 Russian military 1:10,000 topographic City Plan map  
Veliko Turnovo, Bulgaria – 1 Russian military 1:10,000 topographic City Plan map  
Vidin, Bulgaria – 1 Russian military 1:10,000 topographic City Plan map  
Vratsa, Bulgaria – 1 Russian military 1:10,000 topographic City Plan map  
Yambol, Bulgaria – 1 Russian military 1:10,000 topographic City Plan map  
Blagoevgrad, Bulgaria – 1 Russian military 1:10,000 topographic City Plan map

### **Off-shelf global data of Bulgaria—low-cost, rapid delivery:**

Bulgaria VMAP-0 – US NGA 1:1,000,000 vector mapping  
Bulgaria SRTM3 – Shuttle Radar Topography Mission 3 arc second (ca. 90m) resolution DEMs

Bulgaria SRTM30 – the earlier GTOPO30 30 arc second (ca. 1km) resolution worldwide DEM dataset enhanced with reduced resolution SRTM where available

Bulgaria GeoCover 1990 30m resolution 7-4-2 Landsat 5 ortho imagery

Bulgaria GeoCover 2000 15m resolution 7-4-2 Landsat 7 ortho imagery

### **Satellite imagery:**

High-resolution satellite imagery including GeoEye Ikonos 1m & GeoEye-1 50cm, Astrium Pléiades 50cm, DigitalGlobe QuickBird 60cm, WorldView-1 50cm & WorldView-2 50cm of Bulgaria

Medium-resolution satellite imagery for cost-effective large-area coverage including Astrium GEO-Information Services SPOT Image 1.5m - 20m & SPOTMaps, ALOS 2.5m - 10m, RapidEye 5m, ASTER 15m, DEIMOS 22m and Landsat 15m - 30m of Bulgaria

### **Image processing, vector feature extraction, classification and terrain modeling:**

Image processing services including orthorectification, tonal balancing, mosaic output, pan-sharpening, band manipulation, natural color simulation, 16- to 8-bit scaling/DRA (Dynamic Range Adjustment), cloud-patching, atmospheric correction, wavelet compression, GPS GCP (Ground Control Point) target location and accuracy assessment

Classification services including land-use, land-cover, vegetation and impervious surface mapping

2d vector feature extraction including roads/transportation, hydrology and building footprints

3d terrain modeling via auto-correlation and photogrammetric methods using stereo satellite imagery including high-res (Ikonos, GeoEye-1, WorldView-1 & WorldView-2--up to 1m post spacing), ALOS (10m post spacing), SPOT Image (20m post spacing), ASTER (30m post spacing) or radar (10m post spacing); Intermap DEMs (5m post spacing) from airborne radar are also offered of select locations. 3d building models with customer choice of LOD (Level of Detail) are extracted from stereo or off-nadir imagery

**Contact us** with your AOI (Area of Interest) for a scene search to determine if the imagery you need is already in archive or has to be custom-acquired.

## **Bulgaria (continued)**

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### **LAND INFO Worldwide Mapping, LLC**

Founded in 1993, LAND INFO Worldwide Mapping, LLC (Land Info) maintains one of the world's largest commercial archives of digital and paper topographic map and nautical chart data. Complemented by a variety of high-resolution and medium-resolution satellite imagery products, our total focus on data enables us to deliver high-quality solutions with rapid turn-around at competitive prices.

The markets we serve include mapping and geographic information systems (GIS), academia, national security and defense, visualization/simulation, aviation, wireless communications and other utilities, mining, oil & gas, conservation, hydrology, civil and environmental engineering, conservation, humanitarian assistance, land surveying, development, fleet management, mass media and motion pictures, among others.

Land Info is a GeoEye Authorized Reseller, DigitalGlobe Distribution Partner, Astrium GEO-Information Services SPOT Image Partner, RapidEye Direct Distributor, Authorized Intermap Data Distributor, USGS Business Partner and Esri Business Partner.