

This document contains detailed information about format support provided in Geomatica for satellite optical, radar and aerial sensors.

Supported Satellite Optical Sensors

✓ Valid and tested in Satellite Ortho Suite

- Not implemented

N/A Not applicable due to band combination, processing level, vendor packaging, etc.

'Direct open' refers to the ability to directly open the distributed data in Geomatica Focus for viewing.

Sensor	Direct Open	Ortho	Pansharp	DEM Extraction	ATCOR	Notes
ALOS AVNIR-2	-	✓	N/A	N/A	✓	Level 1A, 1Ba, 1B2R
ALOS Prism	-	✓	N/A	✓	-	Level 1A, 1B1, 1B2R (Use level 1A or 1B1 for greatest accuracy)
ASTER	-	✓	N/A	✓	✓	Level 1A and 1B HDF format <i>(Note: use level 1A for greatest accuracy)</i>
AVHRR	✓	✓	N/A	N/A	N/A	Level 1B 8-bit/10-bit/16-bit HRPT/LAC/GAC
Cartosat-1	✓	✓	N/A	✓	-	L1 (radiometrically corrected)
CBERS-1	✓	✓	-	N/A	-	Level 1A TIFF file format
CBERS-2B	✓	✓	✓	N/A	-	
CBERS-4	✓	✓	-	N/A	✓	Level L2 - PanMUX, MUXCam, IRS and WFI cameras all supported
DEIMOS-1	✓	✓	N/A	N/A	✓	DIMAP Level 1R, 1T
DEIMOS-2	✓	✓	N/A	✓	✓	DIMAP Level 1B
DMC (Disaster Monitoring Constellation)	-	✓	N/A	N/A	✓	L0R, L1R TIFF format Supported sensors include Alsat-1, Beijing-1, Bilsat-1, Nigeriasat-1, UK-DMC1, and UK-DMC2
Dubaisat-2	✓	✓	-	N/A	-	HiRAIS sensor
EROS A/B	-	✓	N/A	✓	N/A	Level 1, 1A standard
FASat Charlie	✓	✓	-	N/A	✓	Level 1A format
Formosat	✓	✓	N/A	N/A	✓	Level 1, 1A standard
Gaofen-1	✓	✓	✓	N/A	✓	Level 1, 1A standard



Sensor	Direct Open	Ortho	Pansharp	DEM Extraction	ATCOR	Notes
Gaofen-2	✓	✓	✓	N/A	✓	Level 1, 1A standard
GeoEye-1	✓	✓	✓	✓	✓	Standard GC Level 1, or Standard 2A/LV2A
Gokturk-2	✓	✓	-	-	-	Level 0, 1, and 2 data
GOSAT	✓	✓	N/A	N/A	N/A	Level 1B and 1B+
HJ	✓	✓	N/A	N/A	-	Level 1 and Level 2
IKONOS	✓	✓	✓	✓	✓	GEO product in GEOTiff, NITF format with or without RPCs
IRS	-	✓	✓	✓	✓	EOSAT Orbit or Map oriented products Super Structure Level 0/1
Jilin-1	✓	✓	-	-	-	Level 1 with RPC
Kazeosat-1	✓	✓	✓	✓	-	Level 1A, Level 2 with RPC
Kazeosat-2	✓	✓	✓	-	✓	Level 1G
KOMPSAT-2	✓	✓	N/A	✓	✓	Level 1R and 1G, including PSH data Level 1R gives highest accuracy
KOMPSAT-3	✓	✓	✓	✓	✓	Level 1R and 1G, including PSH data Level 1R gives highest accuracy
KOMPSAT-3A	✓	✓	✓	-	✓	Level 1R and 1G Level 1R gives highest accuracy
LANDSAT 1-3 MSS	✓	✓	N/A	N/A	N/A	LMTX Data with .txt and .tif files
LANDSAT 4-5 MSS	✓	✓	N/A	N/A	✓	LMTX Data with .txt and .tif files
LANDSAT 5 TM	✓	✓	N/A	N/A	✓	LMTX Data with .txt and .tif files
LANDSAT 7 ETM+Data	✓	✓	✓	N/A	✓	LMTX data with .txt and .tif files L1G data, FST data
LANDSAT 8	✓	✓	✓	N/A	✓	LMTX Data with .txt and .tif files
MERIS (ENVISAT)	✓	✓	N/A	N/A	-	1B format
MODIS	-	✓	N/A	N/A	-	Level 1A or 1B HDF format





Sensor	Direct Open	Ortho	Pansharp	DEM Extraction	ATCOR	Notes
OrbView-3	-	✓	-	N/A	✓	OrbView Basic product
PlanetScope	✓	-	-	-	✓	Level 3A / 3B Ortho products
Pleiades	✓	✓	✓	✓	✓	Primary, Projected and Standard Ortho products
QuickBird	✓	✓	✓	✓	✓	Basic 1B format in TIFF and NITF Ortho-ready standard in TIFF and NITF
RapidEye	✓	✓	N/A	N/A	✓	Level 1B (Basic) Level 2A (Geocorrected) Level 3A/3B (Ortho)
RASAT	✓	✓	-	N/A	-	L1 format
Resourcesat-2	✓	✓	-	-	✓	AWIFS, LISS-3, and LISS-4
Sentinel-2	✓	N/A	-	-	✓	Level 1C and Level 2A Ortho products
ShiJian 9A	✓	✓	-	N/A	-	Level 1A TIFF
SPOT 1-4	-	✓	✓	✓	✓	LGSWOG Canadian format L1 SPOTIMAGE Level 0, 1A, 1B
SPOT-5	✓	✓	✓	✓	✓	Level 1A and 1B DIMAP and CAP formats
SPOT-6	✓	✓	✓	✓	✓	Level 1A DIMAP
SPOT-7	✓	✓	✓	✓	✓	Level 1A DIMAP
TeLEOS-1	✓	✓	N/A	N/A	N/A	Level 1 and 2
Thaichote (THEOS)	✓	✓	✓	-	✓	Level 1 / 1A
TH-01	✓	✓	✓	✓	-	Level 1A, 1B, 2, 3A, 3B
TripleSat	✓	✓	✓	-	✓	Level 1B
WorldView-1	✓	✓	N/A	✓	-	Level 1B and Ortho-ready standard
WorldView-2	✓	✓	✓	✓	✓	Level 1B and Ortho-ready standard
WorldView-3	✓	✓	✓	✓	✓	Level 1B standard GeoTIFF Panchromatic, multi-spectral and SWIR bands
Yaogan-14	✓	✓	-	-	-	Level 1 Standard GeoTIFF



Sensor	Direct Open	Ortho	Pansharp	DEM Extraction	ATCOR	Notes
Yaogan-2	✓	✓	-	-	-	Level 1 Standard GeoTIFF
Yaogan-8	✓	✓	-	-	-	Level 1 Standard GeoTIFF
ZY1-02C	✓	✓	-	N/A	-	TIFF or RPC format
ZY-3	✓	✓	-	✓	✓	TIFF or RPC format
ZY3-2	✓	✓	-	✓	✓	TIFF or RPC format

Supported Radar Sensors

✓ Valid and tested in Radar Ortho Suite

- Not implemented

N/A Not applicable due to band combination, processing level, vendor packaging, etc.

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Sensor	Direct Open	Model	Ortho	DEM Extraction (stereo)	SPTA	InSAR	Notes
AIRSAR	✓	N/A	N/A	N/A	✓	-	NASA DC-8 Multi-look complex (MLC), standard Quad Polarization
ALOS-1 PALSAR	✓	Toutin & Radar specific	✓	N/A	✓	-	JAXA-CEOS Levels 1.1, 1.5 ERSDAC-VEXCEL Level 1.1 ERSDAC Levels 1.5, 4.1, 4.2
ALOS-2 PALSAR (Compact)	✓	Toutin & Radar specific	✓	N/A	✓	Partial	Levels 1.1, 1.5, 2.1 and 3.1 (with the exception of ScanSAR level 1.1)
ASAR (ENVISAT)	✓	Toutin & Radar specific	✓	✓	✓	-	ASAR Image Mode (IM) ASAR Alternating Polarization Mode (AP) ASAR Global Monitoring Mode (GM)
COSMO SkyMed	✓	Toutin & Radar specific	✓	N/A	✓	Partial	Level 1A (SCS) Level 1B (DGM) Level 1C/1D (Geocoded)
CV-580	✓	N/A	N/A	N/A	✓	-	Convair 580 C&X-band SLC-Q (Single-look complex, standard quad-pol) MLC-Q (multi-look complex standard symmetrized quad-pol)



Sensor	Direct Open	Model	Ortho	DEM Extraction (stereo)	SPTA	InSAR	Notes
ERS	✓	Toutin	✓	N/A	N/A	-	Georeferenced level (for images produced in Canada) PRI level (produced by ESA)
Kompsat-5	✓	Toutin & Radar specific	✓	✓	✓	Partial	Satrec Initiative Image Services (SIIS) L1A Single-look complex L1B detected multi-looked L1C Geocoded L1D Terrain corrected <i>HDF5 and GeoTIFF formats</i>
RADARSAT-1	-	Toutin & Radar specific	✓	✓	N/A	-	SGC (SAR Georeferenced Coarse Resolution) SGF (SAR Georeferenced Fine Resolution) SGX (SAR Georeferenced Extra Fine Resolution) SLC (Single Look Complex) SCN (ScanSAR Narrow Beam Product) SCW (ScanSAR Wide Beam Product)
RADARSAT-2	✓	Toutin & Radar specific	✓	✓	✓	FULL	SLC (Single Look Complex) SGF (SAR Georeferenced Fine, ScanSAR Narrow Beam, and ScanSAR Wide Beam) SGX (SAR Georeferenced Extra Fine) SGC (SAR Georeferenced Coarse) SSG (SAR Systematic Geocorrected) SPG (SAR Precision Geocorrected)



Sensor	Direct Open	Model	Ortho	DEM Extraction (stereo)	SPTA	InSAR	Notes
RISAT-1 (Compact)	✓	Toutin & Radar specific	✓	✓	✓	-	ISRO High resolution Spotlight (HRS) Fine resolution stripmap (FRS-1) Fine resolution alternate stripmap (FRS-2) Medium resolution ScanSAR (MRS) Coarse resolution ScanSAR (CRS)
Sentinel-1	✓	Toutin	✓	-	-	-	ESA Level 1 GRD (ground-range detected) Stripmap (SM) Interferometric wide swath (IW) Extra-wide swath (EW)
SIR-C	✓	N/A	N/A	N/A	✓	-	NASA Space Shuttle Endeavour, C-band SLC-Q (Single-look complex, standard quad-pol) SLC-D (Single-look complex, standard dual-pol) MLC-Q (multi-look complex standard symmetrized quad-pol) MLC-D (multi-look complex standard symmetrized dual-pol)
TanDEM-X / TerraSAR-X	✓	Toutin & Radar specific	✓	N/A	✓	TS-X Full, TD-X Partial	German Aerospace Center (ASTRIUM) Level 1B, Multi Look Ground Range Detected (MGD) Level 1b, Single Look Slant Range Complex (SSC)
TanDEM-X / TerraSAR-X	-	N/A	N/A	N/A	N/A	TS-X Full, TD-X Partial	InfoTerra GmbH, Germany Level 1b, Geocoded Ellipsoid Corrected (GEC) Level 1b, Enhanced Ellipsoid Corrected (EEC)



Sensor	Direct Open	Model	Ortho	DEM Extraction (stereo)	SPTA	InSAR	Notes
UAVSAR	✓	N/A	N/A	N/A	N/A	-	NASA MLC Calibrated multi-look cross products SLC Calibrated single-look complex products DAT Compressed Stokes Matrix product GRD Calibrated complex cross products projected to the ground in simple geographic coordinates HGT DEM product

Supported Aerial Sensors

Geomatica supports the following aerial image formats in Air Photo Ortho Suite (Standard and Digital/Video) and ADS Ortho Suite (ADS):

Standard airphoto

These are images scanned from film or prints. These images often measure 9 inches by 9 inches in size and usually contain calibration (fiducial) marks. Normally, a camera calibration report is supplied with the images. The camera calibration report provides data about the camera; such as the focal length, fiducial coordinates and radial distortion parameters.

Digital/Video

These are images generated from CCD arrays (Charged Coupled Devices) in digital cameras. A camera calibration report may not be supplied with the images. Most companies that provide calibration services for standard aerial cameras can provide camera calibration services for digital and video cameras. The minimum required parameters are focal length (determined when the lens is set) and chip size (which can be obtained from the camera manufacturer). Oblique imagery is not supported.

Leica Airborne Digital Sensor (ADS)

The Leica airborne digital sensor (ADS) is a line-scanning sensor that collects images in long strips up to 24,000 pixels wide. This camera can simultaneously collect panchromatic, color, infrared and stereo imagery. All multispectral bands are collected simultaneously providing five-band, co-registered imagery at a common, high resolution.

- ✓ Valid and tested in Air Photo Ortho Suite (or ADS Ortho Suite for Leica ADS)
- Not implemented
- N/A Not applicable due to band combination, processing level, vendor packaging, etc.



GEOMATICA

Sensor	Ortho	DEM Extraction	Notes
Applanix DSS	✓	✓	
Leica ADS	✓	-	Level 0, 1, and 2 ADS 40/80 Level 1 and 2 ADS 100
Microsoft UltraCam	✓	✓	
Z/I Imaging DMC	✓	✓	
Other aerial sensors	✓	✓	Other digital frame sensors with appropriate metadata are supported.

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