swissEO S2-SR – Additional Content Information v2.00

Sheet1

Detailed product information: swissEO S2-SR	
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Aerosol optical thickness (AOT)

Aerosol optical thickness (AOT) - 60m										
Name	Description	Min	Max	Resolution	Units	Wavelength	Scale	Offset	NoDataValue	Datatype
AOT	Aerosol optical thickness			60 meters	unitless		0.001	0	0	uint16

Coastal aerosol (band 1) - 60m

Coastal aerosol (band 1) - 60m										
Name	Description	Min	Max	Resolution	Units	Wavelength	Scale	Offset	NoDataValue	Datatype
B01	Coastal aerosol (band 1)			60 meters	W·sr-1·m-2·µm-1	442.7 nm (S2A) / 442.2 nm (S2B) / 444.2 nm (S2C)	0.0001	-0.1	0	uint16

Blue (band 2) - 10m (2)

Blue (band 2) - 10m										
Name	Description	Min	Max	Resolution	Units	Wavelength	Scale	Offset	NoDataValue	Datatype
B2	Blau			10 meters	W·sr-1·m-2·µm-1	492.7 nm (S2A) / 492.3 nm (S2B) / 489.0 nm (S2C)	0.0001	-0.1	0	uint16

Green (band 3) - 10m

Green (band 3) - 10m										
Name	Description	Min	Max	Resolution	Units	Wavelength	Scale	Offset	NoDataValue	Datatype
B3	Grün			10 meters	W·sr-1·m-2·µm-1	559.8 nm (S2A) / 558.9 nm (S2B) / 560.6 nm (S2C)	0.0001	-0.1	0	uint16

Red (band 4) - 10m

Red (band 4) - 10m										
Name	Description	Min	Max	Resolution	Units	Wavelength	Scale	Offset	NoDataValue	Datatype
B4	Rot			10 meters	W·sr-1·m-2·µm-1	664.6 nm (S2A) / 664.9 nm (S2B) / 666.5 nm (S2C)	0.0001	-0.1	0	uint16

Red edge 1 (band 5) - 20m

Red edge 1 (band 5) - 20m										
Name	Description	Min	Max	Resolution	Units	Wavelength	Scale	Offset	NoDataValue	Datatype
B5	Red Edge 1			20 meters	W·sr-1·m-2·µm-1	704.1 nm (S2A) / 703.8 nm (S2B) / 707.1 nm (S2C)	0.0001	-0.1	0	uint16

Red edge 2 (band 6) - 20m

Red edge 2 (band 6) - 20m										
Name	Description	Min	Max	Resolution	Units	Wavelength	Scale	Offset	NoDataValue	Datatype
B6	Red edge 2			20 meters	W·sr-1·m-2·µm-1	740.5 nm (S2A) / 739.1 nm (S2B) / 741.1 nm (S2C)	0.0001	-0.1	0	uint16

Red edge 3 (band 7) - 20m

Red edge 3 (band 7) - 20m										
Name	Description	Min	Max	Resolution	Units	Wavelength	Scale	Offset	NoDataValue	Datatype
B7	Red edge 3			20 meters	W·sr-1·m-2·µm-1	782.8 nm (S2A) / 779.7 nm (S2B) / 784.7 nm (S2C)	0.0001	-0.1	0	uint16

NIR 1 (band 8) - 10m

NIR 1 (band 8) - 10m										
Name	Description	Min	Max	Resolution	Units	Wavelength	Scale	Offset	NoDataValue	Datatype
B8	NIR			10 meters	W·sr-1·m-2·µm-1	832.8 nm (S2A) / 832.9 nm (S2B) / 834.6 nm (S2C)	0.0001	-0.1	0	uint16

NIR 3 (band 9) - 60m

NIR 3 (band 9) - 60m										
Name	Description	Min	Max	Resolution	Units	Wavelength	Scale	Offset	NoDataValue	Datatype
B9	NIR 3			60 meters	W·sr-1·m-2·µm-1	945.1 nm (S2A) / 943.2 nm (S2B) / 947.2 nm (S2C)	0.0001	-0.1	0	uint16

SWIR 1 (band 11) - 20m

SWIR 1 (band 11) - 20m										
Name	Description	Min	Max	Resolution	Units	Wavelength	Scale	Offset	NoDataValue	Datatype
B11	SWIR 1			20 meters	W·sr-1·m-2·µm-1	1613.7 nm (S2A) / 1610.4 nm (S2B) / 1612.0 nm (S2C)	0.0001	-0.1	0	uint16

SWIR 2 (band 12) - 20m

SWIR 2 (band 12) - 20m										
Name	Description	Min	Max	Resolution	Units	Wavelength	Scale	Offset	NoDataValue	Datatype
B12	SWIR 2			20 meters	W·sr-1·m-2·µm-1	2202.4 nm (S2A) / 2185.7 nm (S2B) / 2191.3 nm (S2C)	0.0001	-0.1	0	uint16

NIR 2 (band 8A) - 20m

NIR 2 (band 8A) - 20m										
Name	Description	Min	Max	Resolution	Units	Wavelength	Scale	Offset	NoDataValue	Datatype
B8A	NIR 2			10 meters	W·sr-1·m-2·µm-1	864.7 nm (S2A) / 864.0 nm (S2B) / 865.6 nm (S2C)	0.0001	-0.1	0	uint16

Cloud mask - 10m

Cloud mask - 10m										
Name	Description	Min	Max	Resolution	Units	Wavelength	Scale	Offset	NoDataValue	Datatype
cloudmask	Cloudmask according to https://github.com/DPIRD-DMA/OmniCloudMask	0	3	10 meters	0: Clear 1: Thick Cloud 2: Thin Cloud 3: Cloud Shadow		1	0	0	uint8

MEATADATEN_S2_SR_PROPERTIES

MEATADATEN_S2_SR_PROPERTIES	
SOURCE	Info regarding Copernicus raw data
scene_count	Number of granules to generate mosaic
gsd	Ground sampling distance in metres (native resolution)
created	Timestamp when the STAC item was first created in the catalogue
updated	Timestamp of the last update to the STAC item
datetime	Sensing datetime (UTC) of the acquisition
platform	Satellite platform identifier
grid:code	MGRS tile code of the granule
published	Timestamp when the item was published to the catalogue
statistics.water	Fraction of pixels classified as water (%)
statistics.nodata	Fraction of pixels with no valid data (%)
statistics.dark_area	Fraction of pixels classified as dark area (%)
statistics.vegetation	Fraction of pixels classified as vegetation (%)
statistics.thin_cirrus	Fraction of pixels classified as thin cirrus cloud (%)
statistics.cloud_shadow	Fraction of pixels classified as cloud shadow (%)
statistics.unclassified	Fraction of pixels that could not be classified (%)
statistics.not_vegetated	Fraction of pixels classified as bare soil / non-vegetated (%)
statistics.high_proba_clouds	Fraction of pixels classified as high-probability cloud (%)
statistics.medium_proba_clouds	Fraction of pixels classified as medium-probability cloud (%)
statistics.saturated_defective	Fraction of pixels flagged as saturated or defective (%)
instruments	List of instruments used for acquisition
end_datetime	End of the sensing time interval (UTC)
product:type	ESA product type identifier
view:azimuth	Satellite viewing azimuth angle at scene centre (degrees)
constellation	Satellite constellation name
eo:snow_cover	Estimated snow cover fraction (%)
eo:cloud_cover	Total estimated cloud cover fraction (%)
start_datetime	Start of the sensing time interval (UTC)
sat:orbit_state	Orbit direction at time of acquisition
eopf:datatake_id	ESA internal datatake identifier
processing:level	Processing level of the product
view:sun_azimuth	Solar azimuth angle at sensing time (degrees)
eopf:datastrip_id	ESA internal datastrip identifier
processing:version	Version of the processing baseline applied
product:timeliness	ISO 8601 duration representing the timeliness target
sat:absolute_orbit	Absolute orbit number at time of acquisition
sat:relative_orbit	Relative orbit number (repeat cycle reference)
view:sun_elevation	Solar elevation angle above horizon at sensing time (degrees)
processing:datetime	Timestamp when the processing was executed (UTC)
processing:facility	Organisation responsible for processing
eopf:instrument_mode	Instrument observation mode
eopf:origin_datetime	Timestamp of the original data origin event (UTC)

MEATADATEN_S2_SR_PROPERTIES	
view:incidence_angle	Satellite incidence angle at scene centre (degrees)
product:timeliness_category	Timeliness category classification
sat:platform_international_designator	COSPAR international designator of the satellite
PROPERTIES	Info regarding swisstopo processing
OMNICLOUD_METHOD	Inference device used by OmniCloudMask for cloud segmentation: GPU or CPU
CLOUDPERCENTAGE	Estimated cloud cover of the processed mosaic, derived via OmniCloudMask (%)
GCP_COUNT	Number of Ground Control Points used for co-registration via AROSICS
COREG_MEAN_SHIFT_PX_X	Mean co-registration shift in X direction (pixels)
COREG_MEAN_SHIFT_PX_Y	Mean co-registration shift in Y direction (pixels)
ORBIT_NR	Sentinel-2 relative orbit number of the processed acquisition
PROCESSING_DATE_UTC	Timestamp of the processing run (UTC)
PROCESSING_HOSTNAME	Hostname of the machine on which processing was executed
GDAL_VERSION	GDAL library version used during processing
AROSICS_VERSION	Version of the AROSICS co-registration library used
OMNICLOUDMASK_VERSION	Version of the OmniCloudMask library used for cloud detection
SWISSTOPO_PROCESSOR_VERSION	Git commit reference of the swisstopo topo-satromo-v2 processor used
SWISSTOPO_RELEASE_VERSION	Tagged release version of the swisstopo processor

Scene classification map (SCL)

Scene classification map (SCL) - 20m										
Name	Description	Min	Max	Resolution	Units	Wavelength	Scale	Offset	NoDataValue	Datatype
SCL	Scene classification data, based on Sen2Cor processor, codelist: 0 - No data 1 - Saturated / Defective 2 - Dark Area Pixels 3 - Cloud Shadows 4 - Vegetation 5 - Bare Soils 6 - Water 7 - Clouds low probability / Unclassified 8 - Clouds medium probability 9 - Clouds high probability 10 - Cirrus 11 - Snow / Ice	0	11	20 meters	DN		1	0	0	uint8

True color image - 10m

True color image - 10m										
Name	Description	Min	Max	Resolution	Units	Wavelength	Scale	Offset	NoDataValue	Datatype
TCI	RGB True Color Image based on B4, B3 & B2	0	255	10 meters	DN		1	0	0	uint8

Terrain mask - 10m

Terrain mask - 10m										
Name	Description	Min	Max	Resolution	Units	Wavelength	Scale	Offset	NoDataValue	Datatype
terrainmask	Solar incidence angle of light (0-180°) calculated from azimuth and zenith of the sun. Additional masking (200) for all shadowed pixels based on swissSURFACE3D for the recording time. 0 - 180: solar incidence angle in degrees (illuminated pixels) 200: shadow (cast shadow or self-shadow)	0	200	10 meters			1	0	255	uint8