

## Roads, tracks

1:25 000

1:50 000

1:100 000

Highway (divided lanes)  
Junction

Highway under construction



Rest area  
Parking



2nd cl. highway (undivided lanes)  
Exit / Access

under construction



Trunk road

Main connecting road



1st cl. road (at least 6 m wide)

conspicuous bridge



2nd cl. road (at least 4 m wide)

conspicuous bridge



Suburban road (at least 4 m wide)

conspicuous bridge



3rd cl. road (at least 2.8 m wide)

covered bridge



4th cl., narrow road (at least 1.8 m)

Bridge



5th cl., path, trail, bicycle path

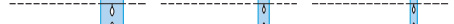
Footbridge, catwalk



6th cl., footpath

Passenger ferry attached

Passenger ferry free

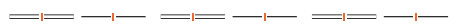


Traces, mountain passage

Traces on glacier



Barrier, traffic ban



Conspicuous roundabout

Parking lot



Level crossings



Underpasses

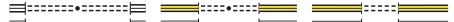


Overpasses



Tunnels

Ventilation shaft



Gallerie

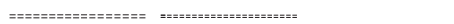


Parklane

Tank road



Traces of historic road



Airport, hard surface runway

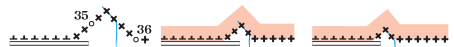


Airfield, grass strip



## Boundaries

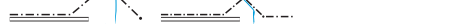
National boundary with numbered markers



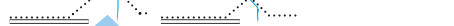
Cantonal boundary with markers



District boundary with markers



Municipal boundary with markers



Boundary for National Park or protected area



## Railways

		1: 25 000	1: 50 000	1: 100 000
Railway station, tracks	Platform roof			
Stop with separate track				
Stop without separate track				
Normal gauge railway: multiple tracks	Bridge			
Normal gauge railway: single track	Bridge			
Narrow gauge railway: multiple tracks	Bridge			
Narrow gauge, rack, cable railway: single track	Bridge			
Freight or nostalgic railway Railway out of service	Bridge			
Intercommunal tramway with stop	Bridge			
Industrial track	Bridge			
Tunnels				
Galleries				
Aerial cable way, chairlift with intermediate station	Pylon			
Goods lift	Pylon			
Skillift				

## Topography

		10 m (Jura Mtns., Plateau) 20 m (Alps)	20 m	50 m
Contour lines	earth, scree / shingle, ice / lake			
Index contours	earth, scree / shingle, ice / lake			
Intermediate contours	earth, scree / shingle, ice / lake			
Small depression	Doline			
Escarpment, earth	Escarpment, stone			
Cutting	Embankment			
Earth slip	Gravel pit			
Clay pit	Quarry			
Rock	Scree			
Glacier	Moraine			
	Rock with 100 m contour lines			

## Individual symbols

		1: 25 000	1: 50 000	1: 100 000
House	Ruin			
Remote inn	Tower			
Greenhouse	Storage tank			
Allotment (garden)	Monument			
Church	Chapel			
Cemetery	Shrine, cross			
Cooling tower	Wind power station			
Chimney-stack	Castle			
Lookout tower	Radio transmitter			
Large antenna	Small antenna			
Camp site	Summer toboggan-run			
Sports ground	Stadium			
Rifle range				
Race course (horses)				
Border of an area	Golf course			
Ski jump	Dry wall			
Wall	Avalanche barricade			
Cave, grotto	Erratic bloc			

## Trigonometric points, spot heights

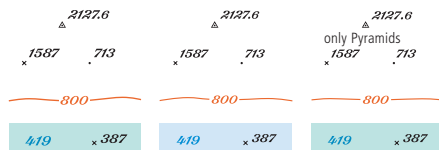
Trigonometric points 1st to 3rd order and LV95

Spot height

Index contour

Lake level

Spot height at lake bottom



## Vegetation

Forest, defined outline

Forest, undefined outline

Scattered forest

Isolated tree / Group of trees

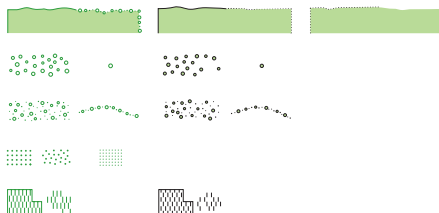
Scrub

Hedge

Orchard

Tree nursery

Vineyard



# Hydrography

1: 25 000

1: 50 000

1: 100 000

Spring	Stream			
Waterfall				
Dry gully	Stream weirs			
River, backwater	River weirs			
Marsh	Peat cutting			
Lake, shoreline	Undefined shoreline			
Port / quay	Car ferry			
Landing pier	Lake level			
Dam	Spot height at lake bottom max. flood level			
Lake with varying water level				
Single pressure pipeline	Multiple pipeline			
Underground pipeline				
Pond	Fountain			
Well, uncovered	Well, covered			
Water treatment plant	Public swimming pool			
Reservoir	Water tower			
Power plant with switching station	High tension transmission line with pylon			

## The Swiss National Maps

are the official topographic maps of Switzerland published at the scales 1: 25 000, 1: 50 000, 1: 100 000, 1: 200 000, 1: 500 000 and 1: 1 million. Each of the different map scales covers the entire area of Switzerland.

There are composite sheets available at the scales 1: 25 000, 1: 50 000 and 1: 100 000 of regions that are of particular interest to tourism or that form a geographic entity.

All maps can be obtained folded or unfolded.

## Conventional signs

The symbols of the topographic maps at the scales 1: 25 000, 1: 50 000 and 1: 100 000 are explained in this brochure. The symbols appearing on maps at other scales are explained on those maps.

Other symbols may appear on older maps, however, these discrepancies will be eliminated in the course of the regular revision and update cycle.

For maps at the scale 1: 25 000 bordering with France and Germany, the symbols and conventional signs are those used by the respective countries.

## Map lettering

The type style depends on the represented feature. Names of municipalities are set upright, names of suburbs or hamlets in italics. Names of valleys and mountains are set in medium, regional names in light weight type. The importance of an object is

indicated by the size and type of lettering. For towns and cities, the size depends on the number of inhabitants.

Settlement	Population	1:25 000	1:50 000	1:100 000
Town	over 50 000	<b>BERN</b>	<b>GENÈVE</b>	<b>ZÜRICH</b>
Town	10 000–50 000	<b>LUGANO</b>	<b>CHUR</b>	<b>SION</b>
Municipality	2000–10 000	<b>Sumvitg</b>	<b>Biasca</b>	<b>Buochs</b>
Municipality	less than 2000	<b>Cressier (NE)</b>	<b>Sağoğn</b>	<b>Corippo</b>
Suburb	over 2000	<i>Cassarate</i>	<i>Bruggen</i>	<i>Le Sentier</i>
Suburb	100–2000	<i>Champfèr</i>	<i>Carasso</i>	<i>Mürren</i>
Hamlet, group of houses	50–100	<i>Le Plan</i>	<i>Clavaniev</i>	<i>Nante</i>
Single house, hut		<i>Trifhütte SAC</i>	<i>La Rápette</i>	<i>A. Naucuola</i>

### Examples of other topographic names

Regions, Forests	<i>Clos du Doubs</i>	<i>G i b e l e g g m a l d</i>		
Valleys	<i>Surselva</i>	<i>Val Malvaglia</i>	<i>Chummertälli</i>	
Mountains	<b>Jungfrau</b>	<i>Rosablanche</i>	<i>Poncione di Braga</i>	
Passes	<i>Passo del San Gottardo</i>	<i>Col de la Croix</i>	<i>Fuorcla Surlej</i>	
Rivers	<i>LE RHÔNE</i>	<i>Limmat</i>	<i>Verxasca</i>	<i>Ooa Chamuera</i>
Lakes	<b>LAGO MAGGIORE</b>	<i>Lac de Morat</i>	<i>Lej da Segl</i>	
Glaciers	<i>Aletschgletscher</i>	<i>Vadret Pers</i>	<i>Gh. dei Cavagnoli</i>	<i>Gl. de Darbonneire</i>

## Abbreviations

The individual symbols are designed to indicate the represented feature clearly.

In addition, some important features are labelled, often with an abbreviation due to lack of space.

deutsch					
<i>AACBasel</i>	Akad. Alpenclub Basel	<i>CE</i>	Centrale électrique	<i>F.</i>	Fiume
<i>AACBern</i>	Akad. Alpenclub Bern	<i>Chap.</i>	Chapelle	<i>Forec.</i>	Forcola, Forcella, Forcarella, Forcellina, Forchetta
<i>AACZürich</i>	Akad. Alpenclub Zürich	<i>Chât.</i>	Château	<i>Fta</i>	Fermata
<i>ARA</i>	Abwasserreinigungsanlage	<i>Cit.</i>	Citerne	<i>Gh.</i>	Ghiacciaio
<i>AVS</i>	Alpenverein Südtirol	<i>Clin.</i>	Clinique	<i>IDA</i>	Impianto di depurazione delle acque luride
<i>B.</i>	Bach oder ...bach	<i>CN</i>	Centrale nucléaire	<i>inf.</i>	Inferiore
<i>Bhf.</i>	Bahnhof	<i>Cne</i>	Commune	<i>Lto</i>	Laghetto
<i>DAV</i>	Deutscher Alpenverein	<i>EPF</i>	Ecole Polytechnique	<i>Lago</i>	Lago
<i>Ehem.</i>	Ehemalig (-e, -er, -es)		Fédérale	<i>OE</i>	Officina elettrica
<i>Eidg.</i>	Eidgenössisch (-e, -er, -es)	<i>Et.</i>	Etang	<i>Osp.</i>	Ospedale
<i>Err. Bl.</i>	Erratischer Block	<i>Gd, Gde</i>	Grand, Grande	<i>R.</i>	Ri, Riale, Rio
<i>ETH</i>	Eidg. Technische Hochschule	<i>Gds, Gdes</i>	Grands, Grandes	<i>Rif.</i>	Rifugio
		<i>Gl.</i>	Glacier	<i>Rud.</i>	Rudere
<i>EW</i>	Elektrizitätswerk	<i>H.</i>	Halte	<i>Rud.</i>	Società Alpinistica Ticinese
<i>FH</i>	Fachhochschule	<i>HES</i>	Haute Ecole	<i>SE</i>	Sottostazione elettrica
<i>Gde.</i>	Gemeinde	<i>Höp.</i>	Hôpital	<i>SAT</i>	Santa
<i>GL.</i>	Gletscher	<i>inf.</i>	Inférieur	<i>Stn</i>	Stazione
<i>Gr.</i>	Graben oder ...graben	<i>Mét.</i>	Métairie	<i>sup.</i>	Superiore
<i>H.</i>	Hütte oder ...hütte	<i>Mgne</i>	Montagne	<i>T.</i>	Torrente
<i>Hst.</i>	Haltestelle	<i>Pt, Pte</i>	Petit, Petite	<i>UTOE</i>	Unione Ticinese Operai Escursionisti
<i>HS</i>	Hochschule	<i>Pts, Ptes</i>	Petits, Petites	<i>V.</i>	Val, Valle
<i>Kap.</i>	Kapelle	<i>R.</i>	Ruisseau	<i>Ved.</i>	Vedretta
<i>KKW</i>	Kernkraftwerk	<i>Ref.</i>	Refuge	<i>Vne</i>	Vallone
<i>KW</i>	Kraftwerk	<i>Rne</i>	Ruine		
<i>Klr.</i>	Kloster	<i>SE</i>	Sous-station électrique		
<i>OeAV</i>	Österreichischer Alpenverein	<i>St-</i>	Saint		
		<i>Ste-</i>	Sainte		
<i>Präh.</i>	Prähistorisch (-e, -er, -es)	<i>STEP</i>	Station d'épuration des eaux polluées		
<i>Rne.</i>	Ruine		Station		
<i>Röm.</i>	Römisch	<i>Stn</i>	Station		
<i>SAC</i>	Schweizer Alpen-Club	<i>sup.</i>	Supérieur		
<i>Schl.</i>	Schloss	<i>T.</i>	Torrent		
<i>Schweix.</i>	Schweizerisch (-e, -er, -es)	<i>UE</i>	Usine électrique		
<i>St.</i>	Sankt	<i>UIOM</i>	Usine d'incinération des ordures ménagères		
<i>Stn.</i>	Station		<i>UNI</i>		
<i>UNI</i>	Universität		Université		
<i>UW</i>	Unterwerk				
<i>W.</i>	Weiber				
français		italiano		rumantsch	
<i>Aig., Aigs</i>	Aiguille, -s	<i>Bio.</i>	Bivacco	<i>BL. err.</i>	Blot erratic
<i>Anc.</i>	Ancien (-ne, -nes, -s)	<i>Bl. err.</i>	Blocko erratico	<i>CAS</i>	Club Alpin Svizzer
<i>Berg.</i>	Bergerie	<i>Btta</i>	Bocchetta	<i>Chapl.</i>	Chaplutta
<i>Biv.</i>	Bivouac	<i>CAI</i>	Club Alpino Italiano	<i>Cna</i>	Chamanna, Camona
<i>Bl. err.</i>	Bloc erratique	<i>CAS</i>	Club Alpino Svizzero	<i>Cum.</i>	Cumün, Cumeegn
<i>CAAG</i>	Club Alpin Académique	<i>Cap.</i>	Capanna	<i>F.</i>	Furclra
	Genève	<i>Capp.</i>	Cappella	<i>Farc.</i>	Farclletta
<i>Cab.</i>	Cabane	<i>Cast.</i>	Castello	<i>Fda</i>	Fermeda, Fermada
<i>CAF</i>	Club Alpin Français	<i>CE</i>	Centrale energetica	<i>Funt.</i>	Funtauna
<i>CAS</i>	Club Alpin Suisse	<i>CN</i>	Centrale nucleare	<i>Furc.</i>	Furclletta
		<i>Cna</i>	Cascina, Cassina	<i>GL.</i>	Gletscher
		<i>Cne</i>	Cascine, Cassine	<i>OE</i>	Ouvra Electrica
		<i>Cne</i>	Comune	<i>Osp.</i>	Ospidel, Ospedel
		<i>Dog.</i>	Dogana	<i>Rna</i>	Ruina
				<i>S.</i>	Son, San, Sogn, Sontg
				<i>Sa</i>	Sontga
				<i>Sar.</i>	Sarinera
				<i>SE</i>	Unterstation Electrica
				<i>Ser.</i>	Serenera
				<i>Stn</i>	Staziun
				<i>Vad.</i>	Vadret
				<i>Vscha</i>	Vischnanca, Vischnànca, Vschinaunca, Vischinauncha

## Terrestrial photograph

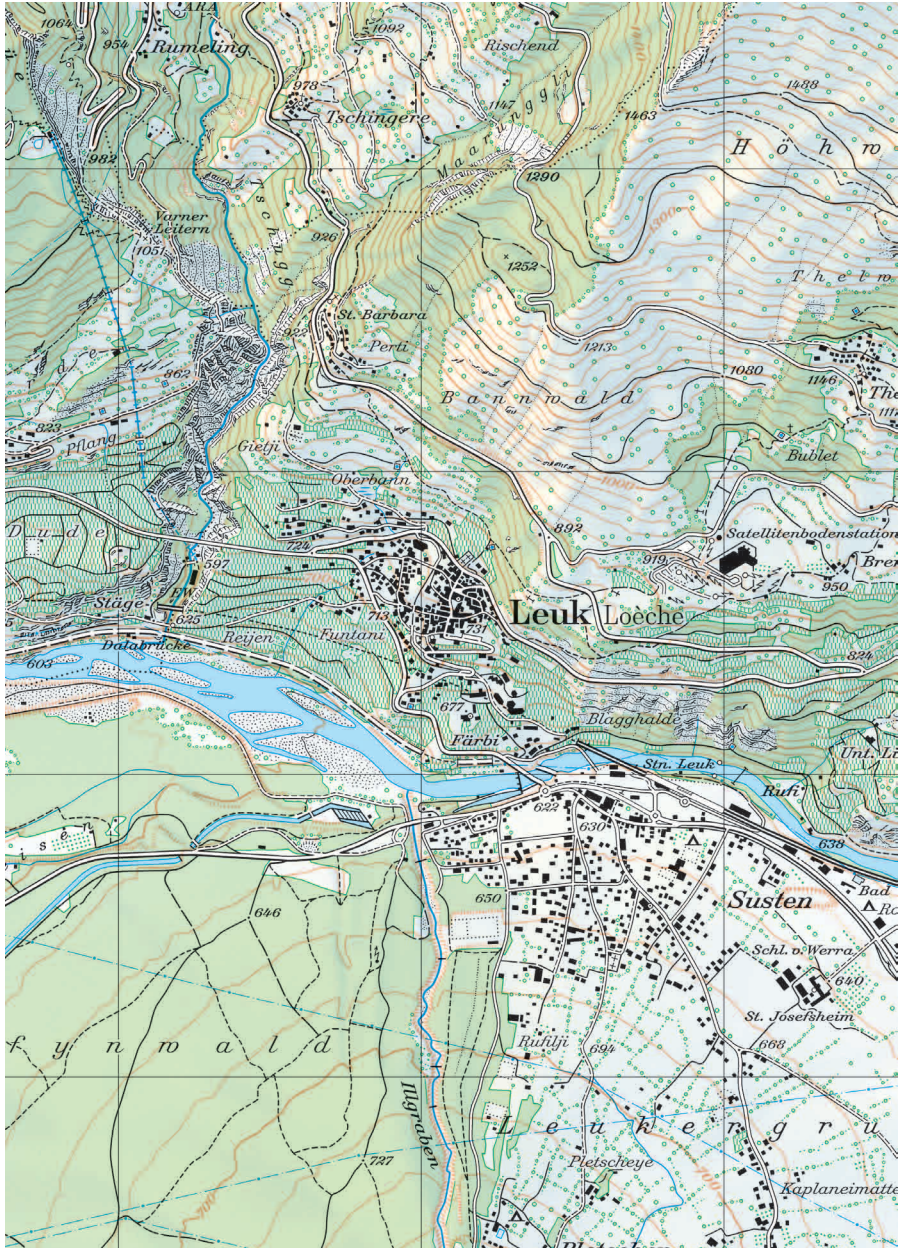


**Digital orthophoto "SWISSIMAGE"**





National map 1:25 000



## National map 1:50 000



## National map 1:100 000



### Map revision

In a very meticulous and time-consuming process the Swiss National Maps are revised and updated in a 6-year cycle. The date appearing on the title of the map indicates the year of publication, whereas the status of the map content is shown on the inside of the map.

Since the landscape is constantly subject to transformations and modifications, there may be differences between the map and reality.

We are happy to accept any reports of errors or ambiguous information on [www.swisstopo.ch/revision](http://www.swisstopo.ch/revision).

### Generalization

The natural and man-made features of the earth's surface are represented at a very small scale on maps. The smaller the scale, the less room there is to represent reality. It is therefore necessary to revise and generalize the map content by emphasizing important features, simplifying complicated situations, and omitting less important ones.

### Scale

The map scale indicates the linear reduction ratio of the map content.

1:25 000	4 cm on the map represent 1 km on the earth's surface
1:50 000	2 cm on the map represent 1 km on the earth's surface
1:100 000	1 cm on the map represents 1 km on the earth's surface

A graphic scale is shown in the bottom margin of the map.

### National coordinates

A Cartesian kilometric grid is printed on the topographic maps 1:25 000 and 1:50 000, and a 10 km grid is on the map 1:100 000.

The fundamental point of the projection has the values  $y = 600$  km (east) and  $x = 200$  km (north) assigned to it. Any point in Switzerland can therefore be defined with meter-accuracy by two sixdigit numbers, whereby the larger value is named first.

Example: Lion Monument in Lucerne:  
666270/212290

The coordinates can be easily read from the map with a special coordinate ruler (for ex. "rapex"<sup>®</sup>) or with a normal mm ruler. Estimations to the nearest 100 m are often sufficient for ordinary map use.

## Geodetic datum

The reference system for surveying and cartography in Switzerland is defined by the geodetic datum "CH1903" based on Bessel's ellipsoid from 1841 at the fundamental point in Bern (old observatory).

The Swiss map projection is a conformal, oblique cylinder projection with its point of origin ( $y = 600 \text{ km}$  /  $x = 200 \text{ km}$ ) at the fundamental point in Bern.

The point of origin for height measurements is the "Repère Pierre du Niton" with a height of 373.600 m above the mean sea level in Marseilles.

For navigation (GPS) applications, the global geodetic datum "WGS84" is used. It differs from "CH1903" in the y-axis by  $-50$  to  $-110 \text{ m}$ , in the x-axis by  $-130$  to  $-160 \text{ m}$  and in height by  $45$  to  $53 \text{ m}$ , depending on the location in Switzerland. The transformation programs for coordinates ("CH1903" / "WGS84") are available at swisstopo.

## Convergence of meridians and declination

The variable value of the angle of westerly or easterly deviation of the magnetic needle (convergence of meridians plus magnetic declination) corresponds to the south-north line (grid north) of the coordinate grid. The value refers to the center of the map sheet and for the given year, decreasing annually by a specific value.

The locally variable value of the angle between the geographic and the grid north (convergence of meridians) can reach up to  $2^\circ$  in Switzerland. In most cases the declination is currently negligible when using a compass. In zones of interference, however, larger deviations may occur. The relative information can be found in the bottom right-hand margin.

## Thematic maps

In cooperation with other organizations, the Federal Office of Topography publishes various thematic maps based on the official topographic maps. Examples: Road Map, Hiking Maps, Ski Tour Maps, Map of Castles, Map of Protected Cultural Assets, Aeronautical Chart ICAO, Glider Chart, Chart of Air Navigation Obstacles etc.

## Aerial photographs

Each year aerial photographs are taken of one sixth of Switzerland. These black-and-white photos as well as the "SWISSIMAGE" color photos (since 1998) are also available to the public. There are about 350,000 aerial photographs (dating back to the 1920s) and satellite images catalogued in our archives. Detailed information is available at the photo library of swisstopo.

## Multimedia products

The national maps are also available for PC and Mac as "Swiss Map online" and for smartphones as "Swiss Map mobile".

The "Atlas of Switzerland" allows to visualize and analyze statistical data and to calculate panoramic 3D views from every spot of Switzerland.

## Map-reading aids

Note: the following two articles are available only in German and French.

A didactical media package *Vom Umgang mit Karten und Geodaten – Laure und Tom auf den Spuren des Röstigrabens* (swisstopo, 2006).

Booklets to be used in class and booklets with the answers, media kit (free if rented), special website [www.laurendtom.ch](http://www.laurendtom.ch) with additional information and work sheets.

The textbook *Karten lesen – Handbuch zu den Landeskarten* by Martin Gurtner (joint edition by swisstopo and the Swiss Alpine Club, 3rd edition 2010, ISBN 978-3-85902-289-8).

## Copyright

The Swiss National Maps are protected by the Federal Geoinformation Act (SR 510.62) and the associated ordinances. A licence is required for the use of official survey and geological data.

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- Use by teachers as educational material in classrooms
- Reproduction in businesses, public administration bodies and similar organisations, for internal information or documentation

See also [www.swisstopo.ch/copyright](http://www.swisstopo.ch/copyright)

## Map sales

swisstopo maps are sold by bookstores, stationery stores and kiosks or can be ordered on our website. For digital products, aerial photos, maps for schools and youth organizations as well as any questions, please contact us directly.

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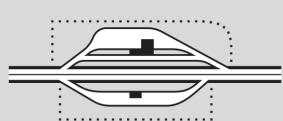
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for published products: [mapsales@swisstopo.ch](mailto:mapsales@swisstopo.ch)  
for general information: [info@swisstopo.ch](mailto:info@swisstopo.ch)



1:25 000

1:50 000

1:100 000



## Conventional signs

and further information  
to the topographic maps



Schweizerische Eidgenossenschaft  
Confédération suisse  
Confederazione Svizzera  
Confederaziun svizra

Federal Office of Topography swisstopo  
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