

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

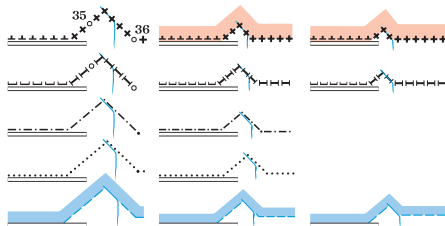
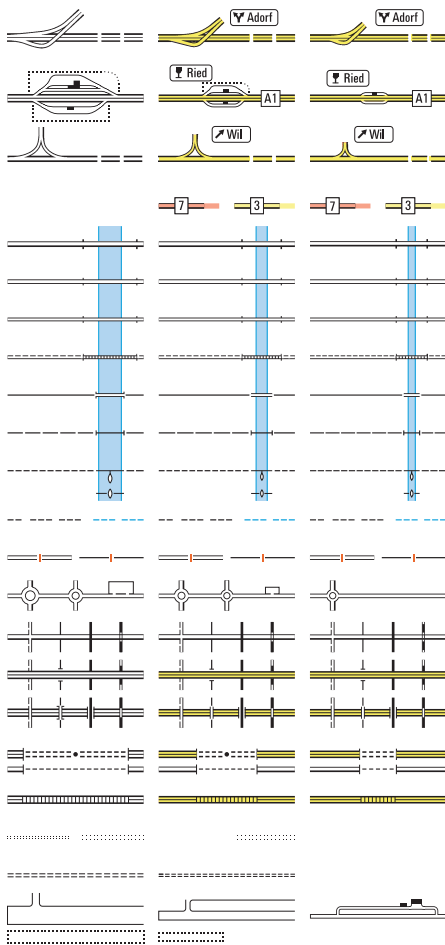
National boundary with numbered markers

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	Bridge			
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			
Skilift				

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

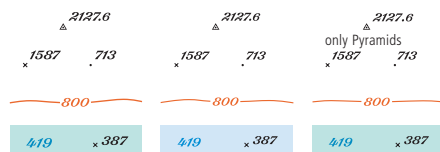
Trigonometric points 1st to 3rd order and LV95

Spot height

Index contour

Lake level

Spot height at lake bottom



Vegetation

Forest, defined outline

Scattered forest

Scrub

Orchard

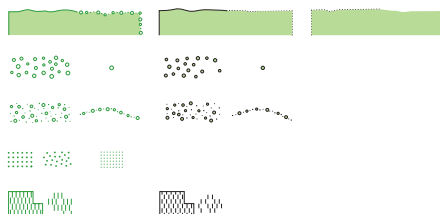
Vineyard

Forest, undefined outline

Isolated tree / Group of trees

Hedge

Tree nursery



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	BERN	GENÈVE	ZÜRICH
Town	10 000 – 50 000	LUGANO	CHUR	SION
Municipality	2000 – 10 000	Sumvitg	Biasca	Buochs
Municipality	less than 2000	Cressier (NE)	Sağogn	Corippo
Suburb	over 2000	Cassarate	Bruggen	Le Sentier
Suburb	100 – 2000	Champfèr	Carasso	Mürren
Hamlet, group of houses	50 – 100	Le Plan	Clavanio	Nante
Single house, hut		Trifhütte SAC	La Râpette	A. Naucuola

Examples of other topographic names

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

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

deutsch		CE	Centrale électrique	F.	Fiume
AACBasel	Akad. Alpenclub Basel	Chap.	Chapelle	Forc.	Forcola, Forcella, Forcarella,
AACBern	Akad. Alpenclub Bern	Chât.	Château		Forcellina, Forchetta
AACZürich	Akad. Alpenclub Zürich	Cit.	Citerne	Fta	Fermata
ARA	Abwasserreinigungsanlage	Clin.	Clinique	Gh.	Ghiacciaio
AVS	Alpenverein Südtirol	CN	Centrale nucléaire	IDA	Impianto di depurazione delle acque luride
B.	Bach oder ...bach	Cne	Commune	inf.	Inferiore
Bhf.	Bahnhof	EPF	Ecole Polytechnique Fédérale	Lto	Laghetto
DAV	Deutscher Alpenverein		Etang	L.	Lago
Ehem.	Ehemalig (-e, -er, -es)	Et.	Grand, Grande	OE	Officina elettrica
Eidg.	Eidgenössisch (-e, -er, -es)	Gd., Gde	Grands, Grandes	Osp.	Ospedale
Err.BL	Erratischer Block	Gds, Gdes	Glacier	R.	Ri, Riale, Rio
ETH	Eidg. Technische Hochschule	H.	Halte	Rif.	Rifugio
		HES	Haute Ecole	Rud.	Rudere
EW	Elektrizitätswerk	Hôp.	Hôpital	SAT	Società Alpinistica Ticinese
FH	Fachhochschule	inf.	Inférieur	SE	Sottostazione elettrica
Gde.	Gemeinde	Mét.	Métairie	Sta	Santa
Gl.	Gletscher	Mgne	Montagne	Stne	Stazione
Gr.	Graben oder ...graben	Pt, Pte	Petit, Petite	sup.	Superiore
H.	Hütte oder ...hütte	Pts, Ptes	Petits, Petites	T.	Torrente
Hst.	Haltestelle	R.	Ruisseau	UTOE	Unione Ticinese Operai Escursionisti
HS	Hochschule	Ref.	Refuge	V	Val, Valle
Kap.	Kapelle	Rne	Ruine	Ved.	Vedretta
KKW	Kernkraftwerk	SE	Sous-station électrique	Vne	Vallone
KW	Kraftwerk	St~	Saint		
Klr.	Kloster	Ste~	Sainte		
OeAV	Österreichischer Alpenverein	STEP	Station d'épuration des eaux polluées		
Präh.	Prähistorisch (-e, -er, -es)		Station		
Rne.	Ruine	Stn sup.	Supérieur		
Röm.	Römisch	T.	Torrent	Bl. err.	Bloc erratic
SAC	Schweizer Alpen-Club	UE	Usine électrique	CAS	Club Alpin Svizzer
Schl.	Schloss	Uiom	Usine d'incinération des ordures ménagères	Chapl.	Chaplutta
Schweix.	Schweizerisch (-e, -er, -es)		Université	Cna Cum.	Chamanna, Camona Cumün, Cumeegn
St.	Sankt			F.	Fuorcla
Strn.	Station	UNI		Farc.	Farclletta
UNI	Universität			Fda	Fermada, Fermada
UW	Unterwerk			Funt.	Funtauna
W.	Weier			Furc.	Furcletta
				Gl.	Gletscher
				OE	Ouvra Electrica
				Osp.	Ospidel, Ospedel
				Rna	Ruina
				S.	Son, San, Sogn, Sontg
				Sa	Sontga
				Sar.	Sarinera
				SE	Unterstation Electrica
				Ser.	Serenara
				Stn	Stazion
				Vad.	Vadret
				Vscha	Vischnanca, Vischnànca, Vschinaunча, Vschinauncha

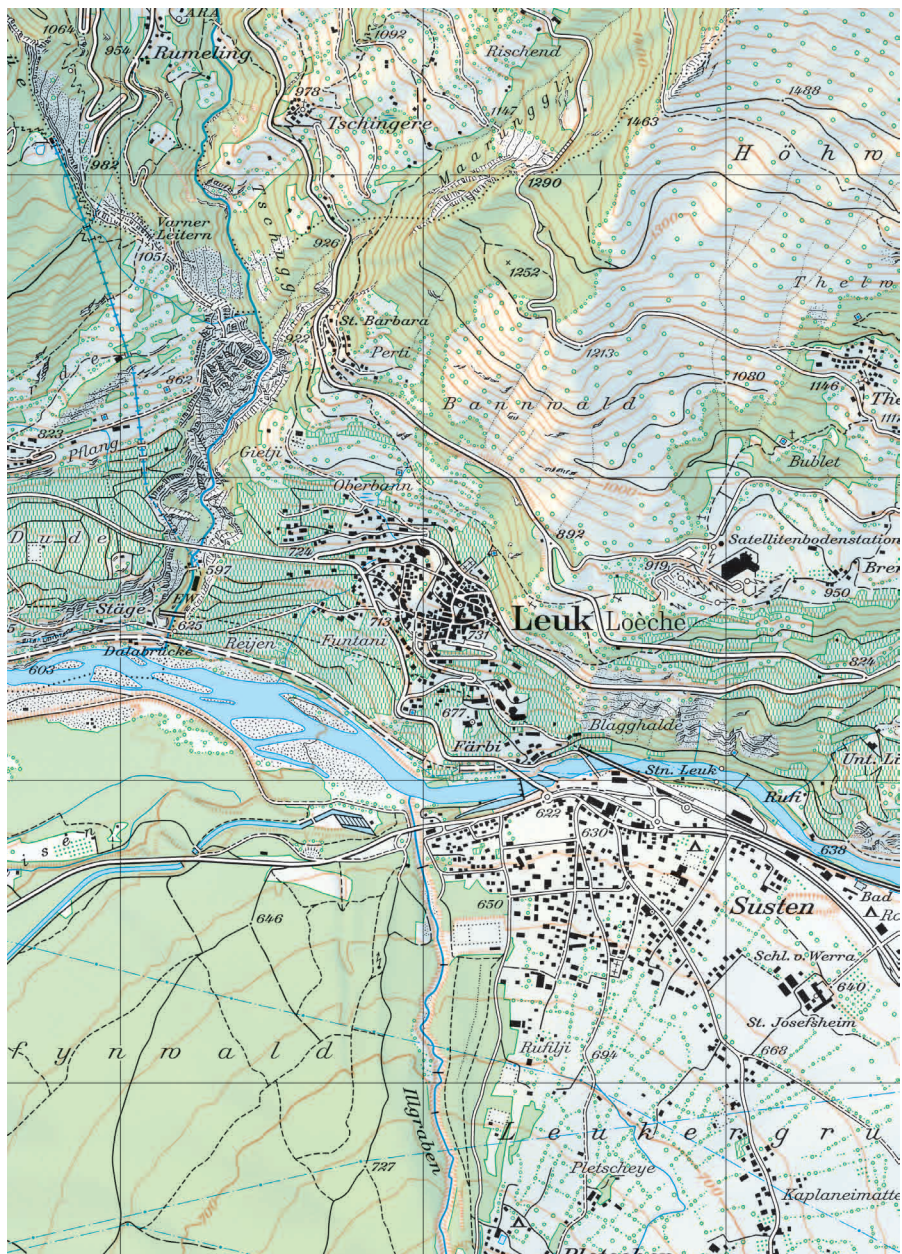
Terrestrial photograph



Digital orthophoto "SWISSIMAGE"



National map 1:25 000



National map 1:50 000



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.

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.

National map 1:100 000



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:
666 270 / 212 290

The coordinates can be easily read from the map with a special coordinate ruler (for ex. "rapex"®) 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 m , in the x-axis by -130 to -160 m and in height by 45 to 53 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° 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.laureundtom.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).

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See also 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.

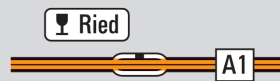
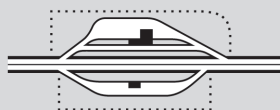
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1:25 000

1:50 000

1:100 000

Conventional signs

and further information
to the topographic maps



Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
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