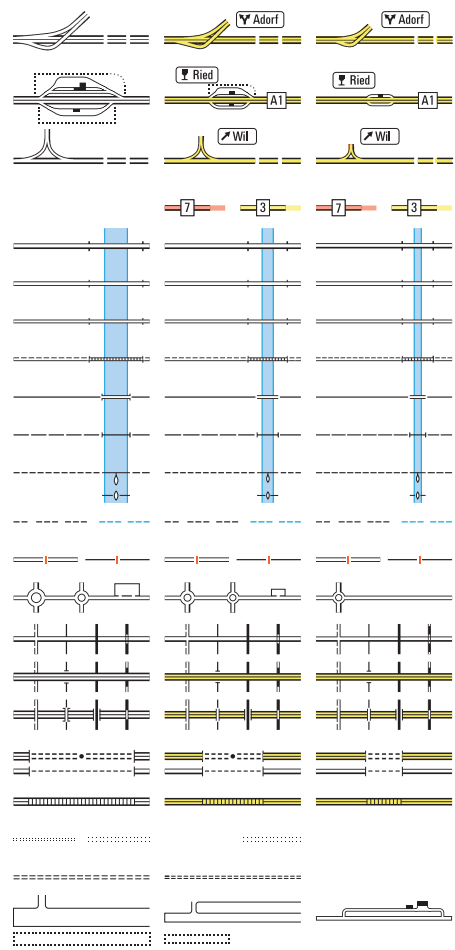
Roads, tracks



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

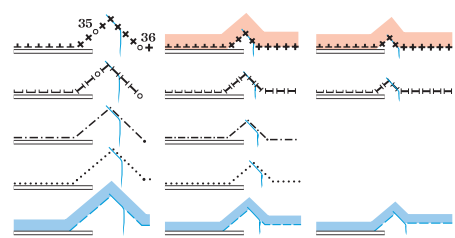
Parklane

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			
Skilift				

Topography

		1:25 000	1:50 000	1:100 000
Contour lines	earth, scree / shingle, ice / lake	10 m (Jura Mtns., Plateau) 20 m (Alps)	20 m	50 m
Index contours	earth, scree / shingle, ice / lake	100 m	200 m	200 m
Intermediate contours	earth, scree / shingle, ice / lake	5 m / 10 m	10 m	25 m
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

		1:25 000	1:50 000	1:100 000
Trigonometric points 1st to 3rd order and LV95				
Spot height				
Index contour				
Lake level	Spot height at lake bottom			

Vegetation

		1:25 000	1:50 000	1:100 000
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	419	419	419
Dam	Spot height at lake bottom max. flood level	827 869	827 869	827 869
Lake with varying water level				
Single pressure pipeline	Multiple pipeline			
Underground pipeline				
Pond	Fountain			
Well, uncovered	Well, covered		Cit.	Cit.
Water treatment plant	Public swimming pool	ARA	Bad	ARA
Reservoir	Water tower			
Power plant with switching station	High tension transmission line with pylon	EW	EW	

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)	Sagogn	Corippo
Suburb	over 2000	*Cassarate*	*Bruggen*	*Le Sentier*
Suburb	100 – 2000	*Champfèr*	*Carasso*	*Mürren*
Hamlet, group of houses	50 – 100	*Le Plan*	*Clavaniev*	*Nante*
Single house, hut		*Trifthütte SAC*	*La Râpette*	*A. Naucuola*

Examples of other topographic names

Regions, Forests	*Clos du Doubs*	*G i b e l e g g w 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*	*Verzasca*	*Ova Chamuera*
Lakes	*LAGO MAGGIORE*	*Lac de Morat*	*Lej da Segl*	
Glaciers	*Aletschgletscher*	*Vadret Pers*	*Gh. dei Cavagnoli*	*Gl. de Darbonneire*

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

AACBasel	Akad. Alpenclub Basel
AACBern	Akad. Alpenclub Bern
AACZürich	Akad. Alpenclub Zürich
ARA	Abwasserreinigungsanlage
AVS	Alpenverein Südtirol
B.	Bach oder …bach
Bhf.	Bahnhof
DAV	Deutscher Alpenverein
Ehem.	Ehemalig (-e, -er, -es)
Eidg.	Eidgenössisch (-e, -er, -es)
Err. Bl.	Erratischer Block
ETH	Eidg. Technische Hochschule
EW	Elektrizitätswerk
FH	Fachhochschule
Gde.	Gemeinde
Gl.	Gletscher
Gr.	Graben oder …graben
H.	Hütte oder …hütte
Hst.	Haltestelle
HS	Hochschule
Kap.	Kapelle
KKW	Kernkraftwerk
KW	Kraftwerk
Klr.	Kloster
OeAV	Österreichischer Alpenverein
Präh.	Prähistorisch (-e, -er, -es)
Rne.	Ruine
Röm.	Römisch
SAC	Schweizer Alpen-Club
Schl.	Schloss
Schweiz.	Schweizerisch (-e, -er, -es)
St.	Sankt
Stn.	Station
UNI	Universität
UW	Unterwerk
W.	Weiher

français

Aig., Aigs	Aiguille, -s
Anc.	Ancien (-ne, -nes, -s)
Berg.	Bergerie
Biv.	Bivouac
Bl. err.	Bloc erratique
CAAG	Club Alpin Académique Genève
Cab.	Cabane
CAF	Club Alpin Français
CAS	Club Alpin Suisse
CE	Centrale électrique
Chap.	Chapelle
Chât.	Château
Cit.	Citerne
Clin.	Clinique
CN	Centrale nucléaire
Cne	Commune
EPF	Ecole Polytechnique Féderale
Et.	Etang
Gd, Gde	Grand, Grande
Gds, Gdes	Grands, Grandes
Gl.	Glacier
H.	Halte
HES	Haute Ecole
Hôp.	Hôpital
inf.	Inférieur
Mét.	Métairie
Mgne	Montagne
Pt, Pte	Petit, Petite
Pts, Ptes	Petits, Petites
R.	Ruisseau
Ref.	Refuge
Rne	Ruine
SE	Sous-station électrique
St-	Saint
Ste-	Sainte
STEP	Station d'épuration des eaux polluées
Stn	Station
sup.	Supérieur
T.	Torrent
UE	Usine électrique
UIOM	Usine d'incinération des ordures ménagères
UNI	Université

italiano

Biv.	Bivacco
Bl. err.	Blocco erratico
Btta	Bocchetta
CAI	Club Alpino Italiano
CAS	Club Alpino Svizzero
Cap.	Capanna
Capp.	Cappella
Cast.	Castello
CE	Centrale energetica
CN	Centrale nucleare
Cna	Cascina, Cassina
Cne	Cascine, Cassine
Cne	Comune
Dog.	Dogana
F.	Fiume
Forc.	Forcola, Forcella, Forcarella, Forcellina, Forchetta
Fta	Fermata
Gh.	Ghiacciaio
IDA	Impianto di depurazione delle acque luride
inf.	Inferiore
Lto	Laghetto
L.	Lago
OE	Officina elettrica
Osp.	Ospedale
R.	Ri, Riale, Rio
Rif.	Rifugio
Rud.	Rudere
SAT	Società Alpinistica Ticinese
SE	Sottostazione elettrica
Sta	Santa
Stne	Stazione
sup.	Superiore
T.	Torrente
UTOE	Unione Ticinese Operai Escursionisti
V.	Val, Valle
Ved.	Vedretta
Vne	Vallone

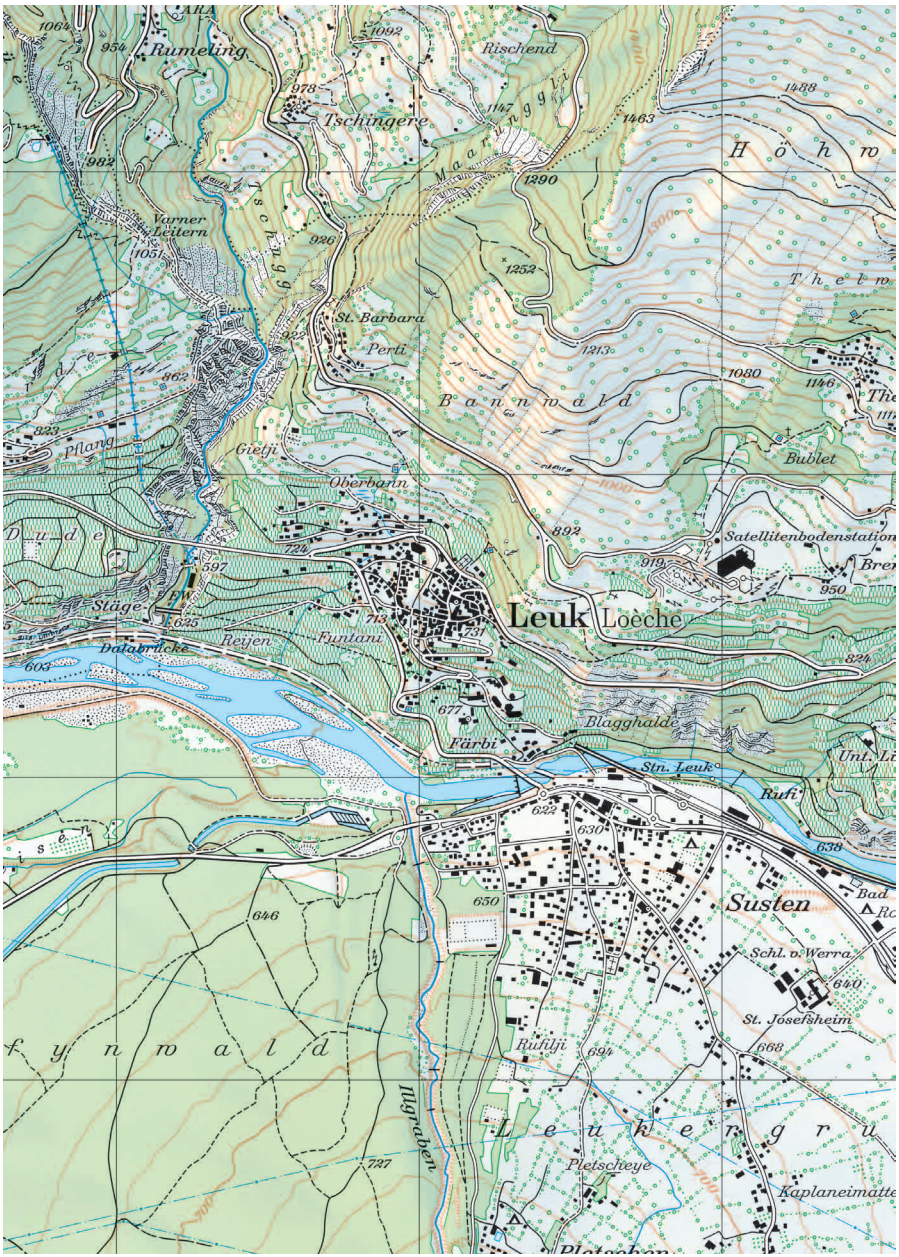
rumantsch

Bl. err.	Bloc erratic
CAS	Club Alpin Svizzer
Chapl.	Chaplutta
Cna	Chamanna, Camona
Cum.	Cumün, Cumegn
F.	Fuorcla
Farc.	Farcletta
Fda	Fermeda, Fermada
Funt.	Funtauna
Furc.	Furcletta
Gl.	Glatscher
OE	Ouvra Electrica
Osp.	Ospidel, Ospedel
Rna	Ruina
S.	Son, San, Sogn, Sontg
Sa	Sontga
Sar.	Sarinera
SE	Unterstation Electrica
Ser.	Serenera
Stn	Staziun
Vad.	Vadret
Vscha	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.

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:
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 km / x = 200 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 Swistzerland" 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 additonal information and work sheets.
The textbook *Karten lesen – Handbuch zu den Landeskarten* by Martin Gurtner (joint edition by swisstopo and the Swiss Alpine Club, 3nd edition 2010, ISBN 978-3-85902-289-8).

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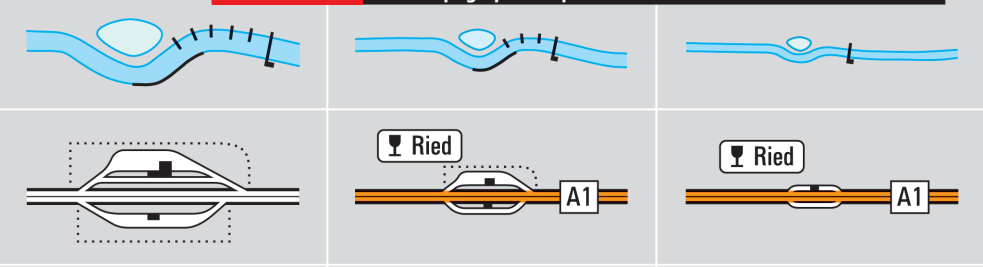
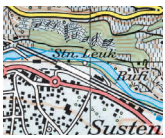


Conventional signs

and further information
to the topographic maps



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