File support

Unicontrol supports importing many file types. This document gives an overview of those files and what features are supported.

Supported surface/background files

Unicontrol supports 2 file types when it comes to surfaces and background. Those are:

- LandXML
- DXF
- KOF

These two file formats are "open", widely used, standardized, and accepted by the community.

LandXML

Unicontrol support the full LandXML 1.2 format, including stationing and generated surfaces between connected lines.

DXF

There is full support for points, lines (segments and splines) and surfaces, including text and coloring.

Unicontrol does not currently support

- Turning layers on/off.
- Special fonts

KOF

There is support for lines and points. Format is mainly used in Norway.

Supported local site calibration formats

Unicontrol supports the following file formats for local site calibration.

We only support left-handed systems.

Several of the local site calibration files are reverse engineered and thoroughly tested. If you experience any issues with these files, we would like to hear from you.

| File type	Vendor	Horizontal or vertical	Description
.loc	Carlson	Both	Carlson .xml format containing information about control points
.lok	Leica Geosystems	Horizontal, vertical if .grd is supplied	Leica format for machine control, describing projection and 7 parameter Helmert. The .lok file can contain internal reference to .grd file which must be uploaded together with .lok file. Format does not work yet with references to .ccg files
.lsf	Unicontrol	Both	Internal Unicontrol format for local site calibration. Describes projection and 7 parameter Helmert.

.wkt	Proj4	Horizontal	File containing .wkt definition of coordinate system. Wkt strings are downloadable from epsg.io.
.grd	Leica Geosystems	Vertical	Vertical grid shift file from Leica
.gtx	NOOA	Vertical	Vertical grid shift file from https://vdatum.noaa.gov/welcome.html
.pcs	Geomax	Both	Format from GeoMax rover export
.gc3	Topcon	Both	Topcon local site calibration format.
.cal	Trimble	Both	Trimble local site calibration format. Format is still not fully implemented but works in most instances.
.bin	Unicontrol	Vertical	Unicontrol binary geoid format
.ccg	Leica Geosystems	None	Horizontal grid shift file, that can go together with an .lok file

To use an existing local site calibration, you can import it in the following ways depending on the project type:

Unicontrol Cloud project

Start by creating a cloud project. When you get to the second step where you need to configure the project localization, use the "Upload Localization Files" button, and choose the file you want to use for localization.
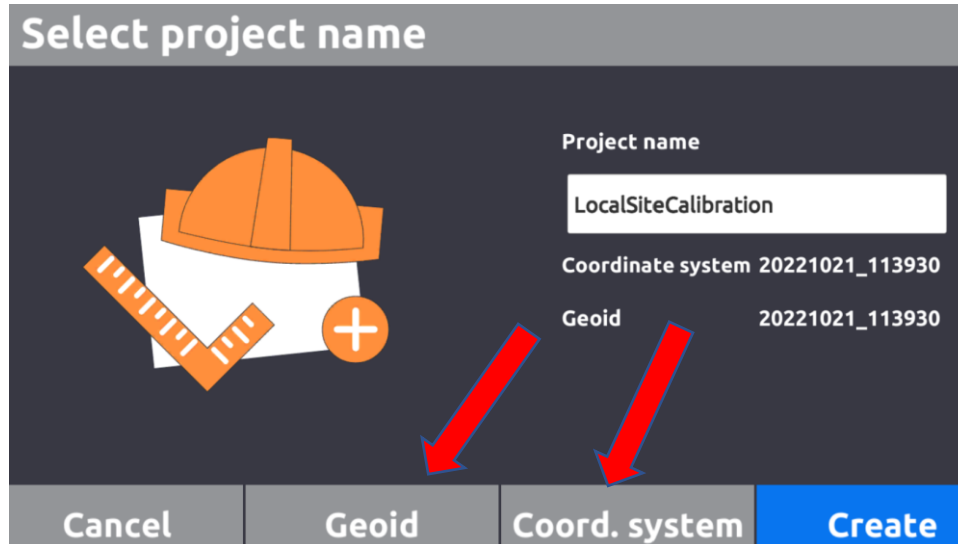
After uploading the file, you will be able to choose it in the Settings menu either as a Coordinate system or Geoid. After you select them, press "Confirm Project Settings". You have now created a cloud project with a local site calibration.
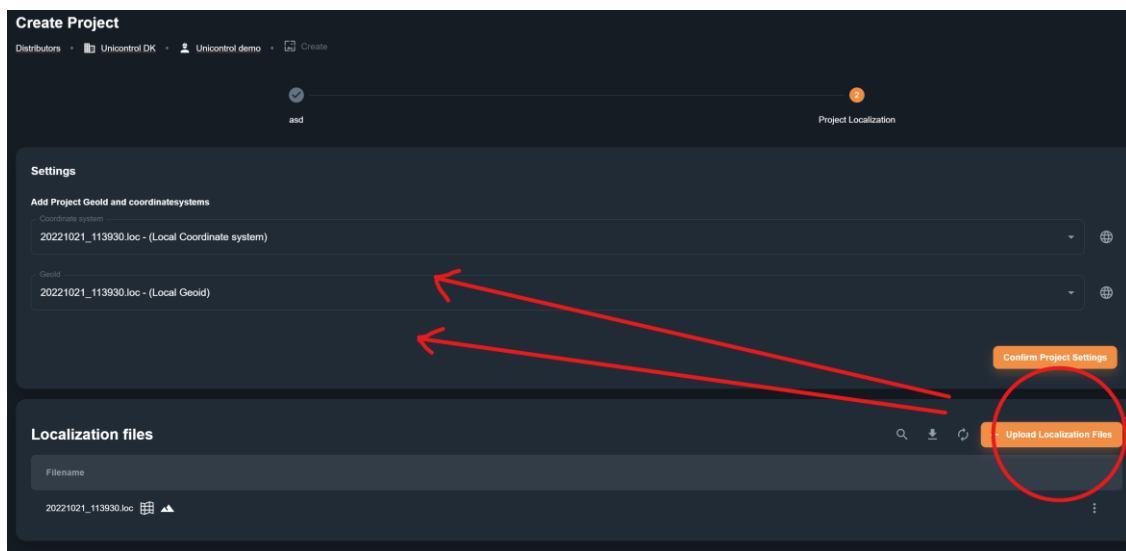
Local project

Transfer the local site calibration file to the tablet through your preferred way. Once the file is on the tablet, move it to the "Unicontrol > CoordinateSystems" folder on the tablet.

When creating a new project on the tablet, you will be able to select the local site calibration file under Coord. System and Geoid. After selecting them, press Create. You have now created a local project with a local site calibration.