X-PAD Ultimate

Service Pack #1 2021

Spring 2021

GEOMAX

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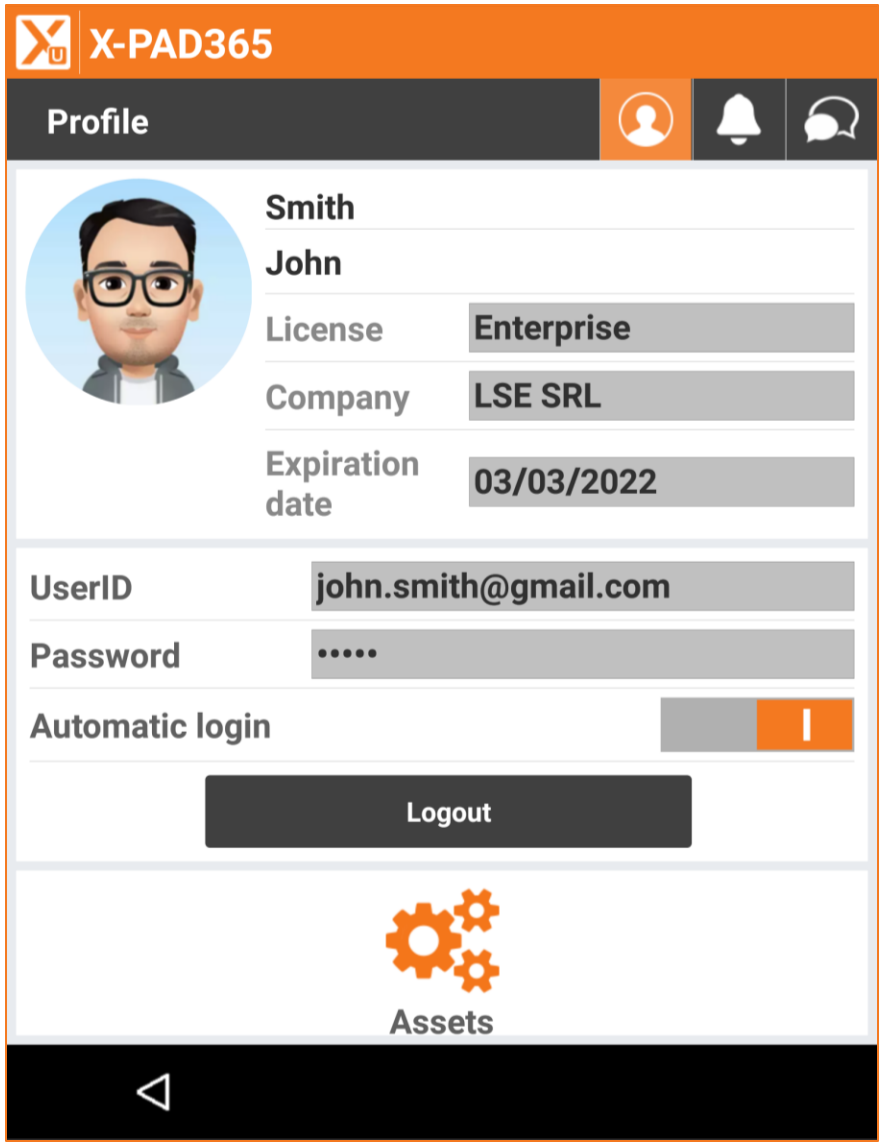
X-PAD 365

Login to X-PAD 365

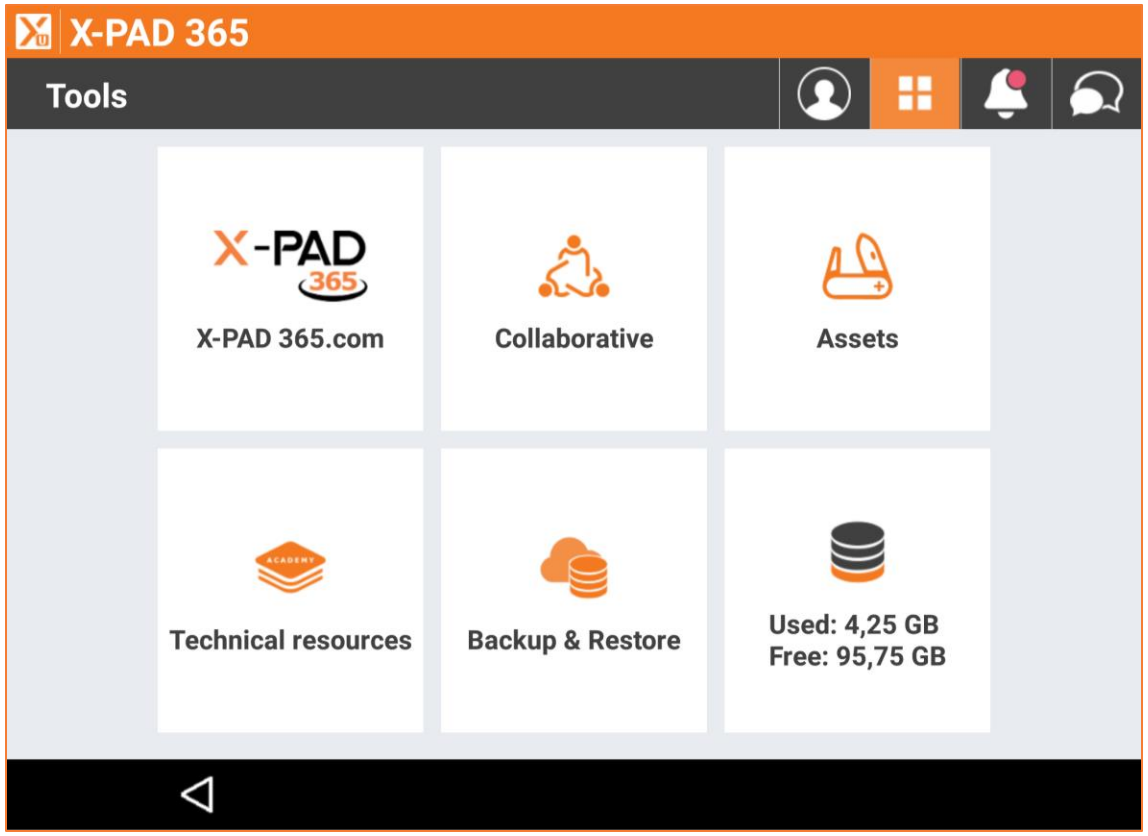
Within X-PAD Ultimate it is possible to enter the login details of the X-PAD 365 account and always be automatically connected to receive messages in chat and notifications, but also to have access to the storage area.



Tools

Several tools are immediately available when the user is connected to X-PAD 365.

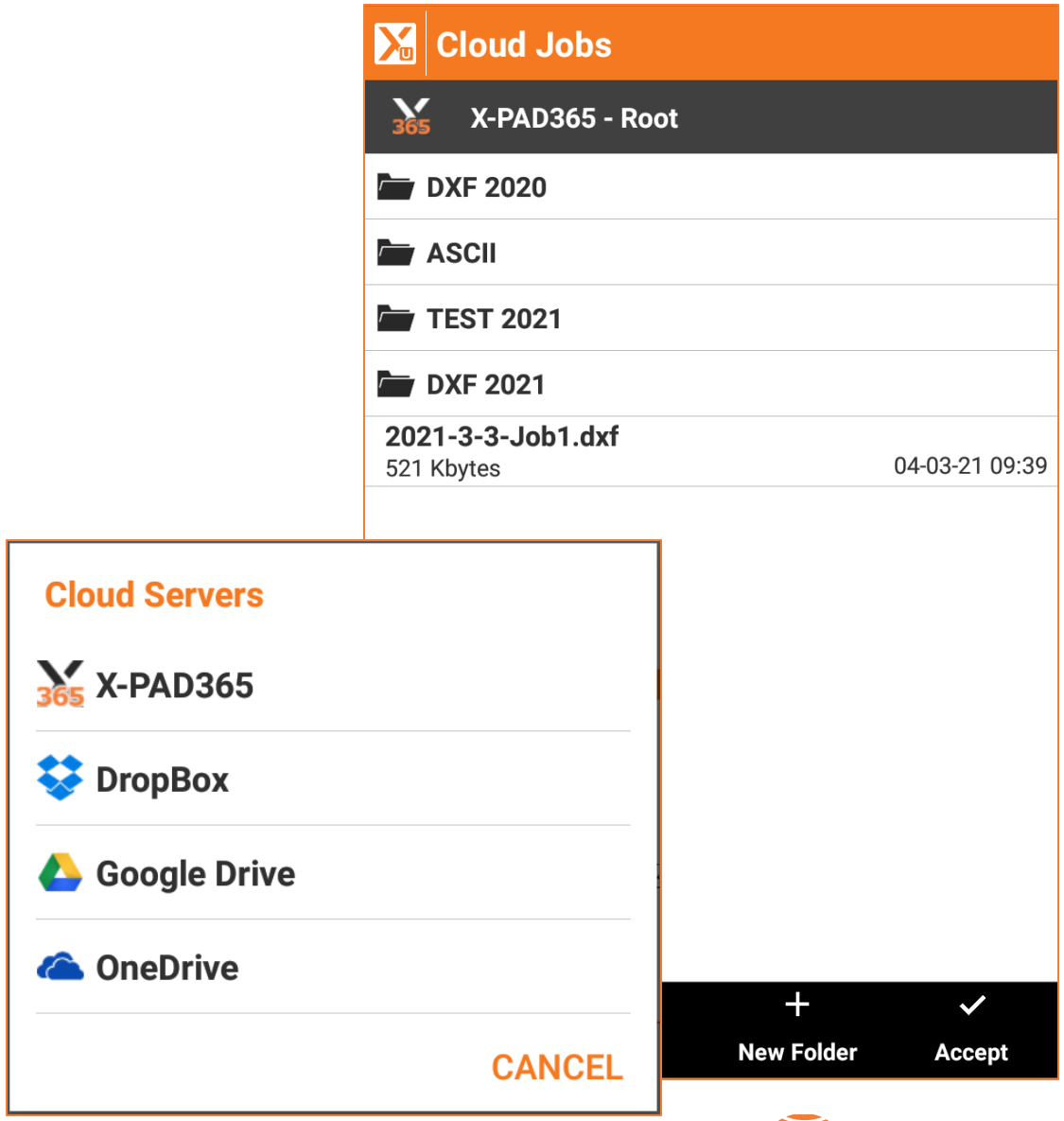
- Access to X-PAD 365 web portal
- Run a collaborative survey/stakeout session
- Access to the Asset Manager
- Access to the Technical resources
- Manage backup and restore
- Information about the storage area



Access to storage area

The File Manager of X-PAD 365 is directly accessible from X-PAD Ultimate for all import and export operations. The X-PAD 365 Professional or Enterprise account allows to manage and organise the storage area.

Notifications are sent when the remaining free space is running low.

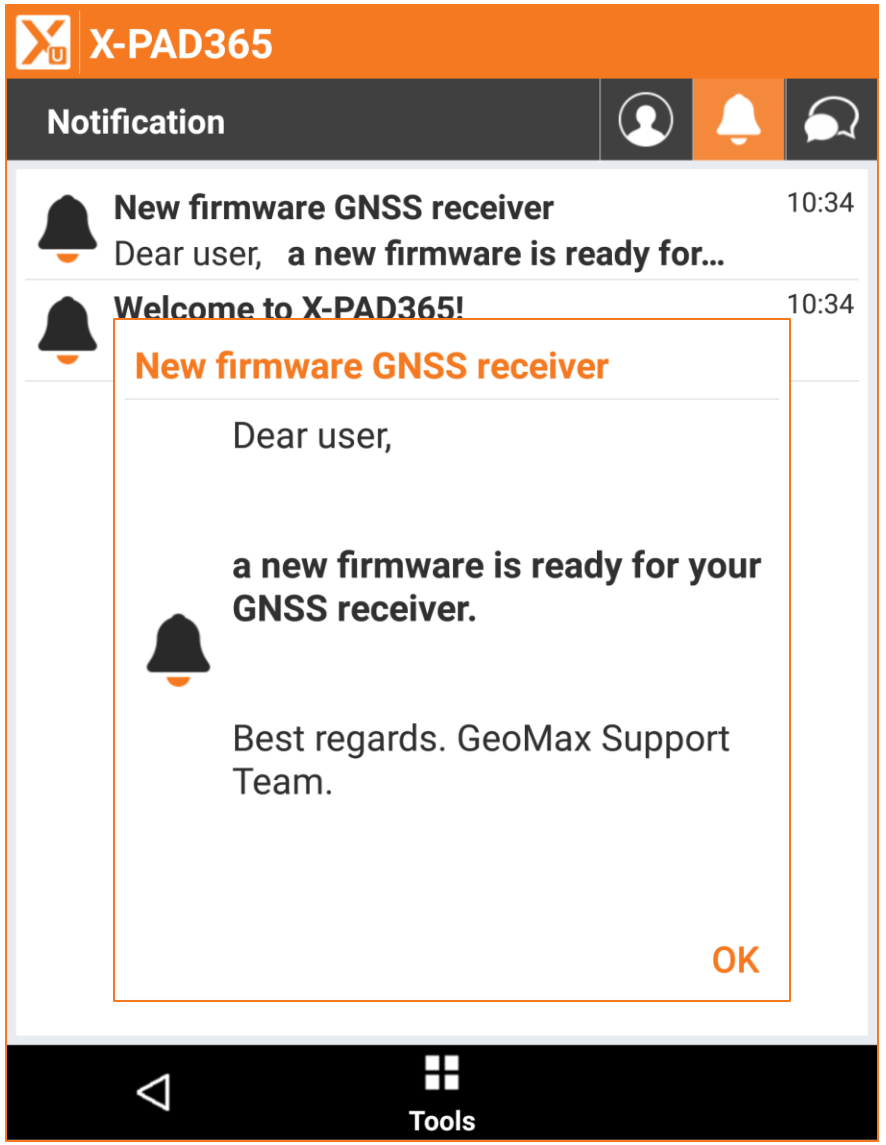


Notifications

Notifications are received in X-PAD Ultimate and the user can have immediate access to the content.

Licence-related information (expiration, low disk space, revision required for the hardware, etc.) are sent out through automatic notifications by X-PAD 365.

Our distribution partners will also profit from manual notifications that can be sent to defined users with important information related to the hardware or the software.

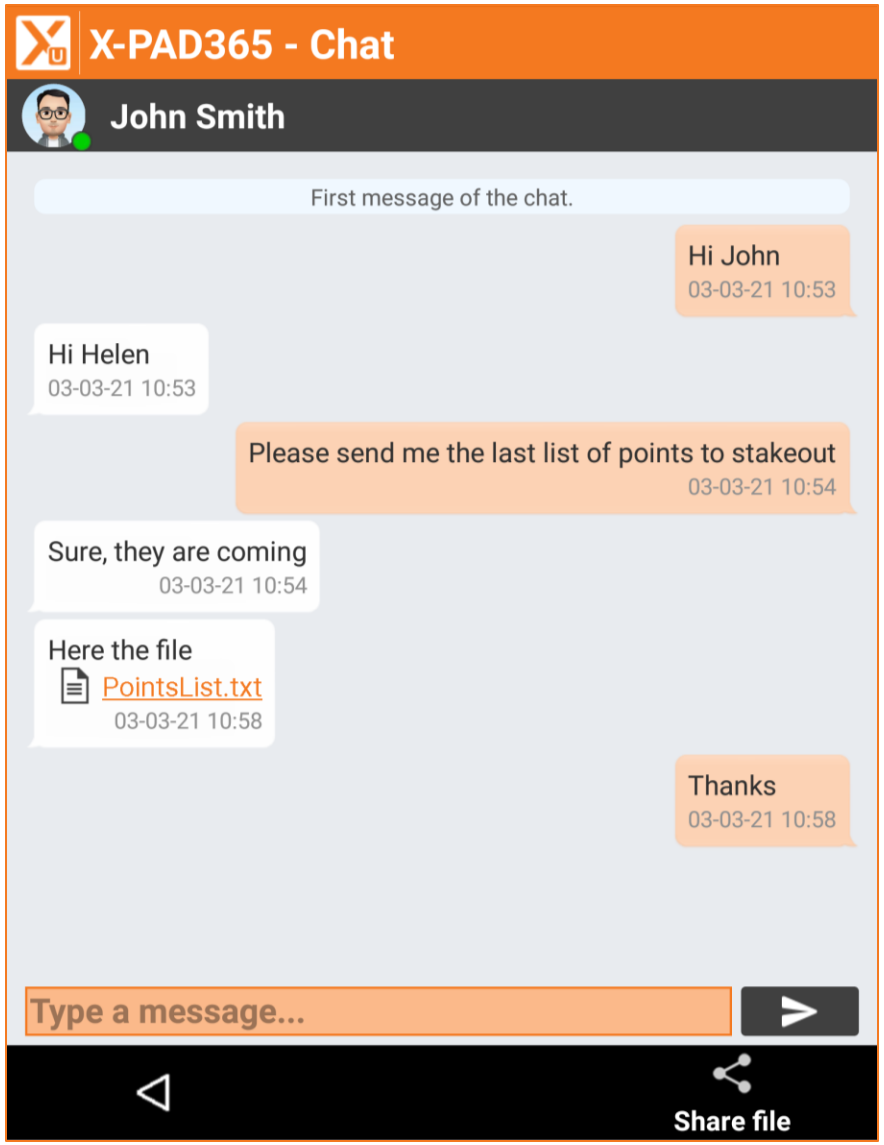


X-CHAT

X-CHAT offers a communication channel between X-PAD 365 users and is fully integrated in X-PAD Ultimate and in X-PAD Fusion.

Through X-CHAT it is possible to exchange messages and files among single users and groups of users.

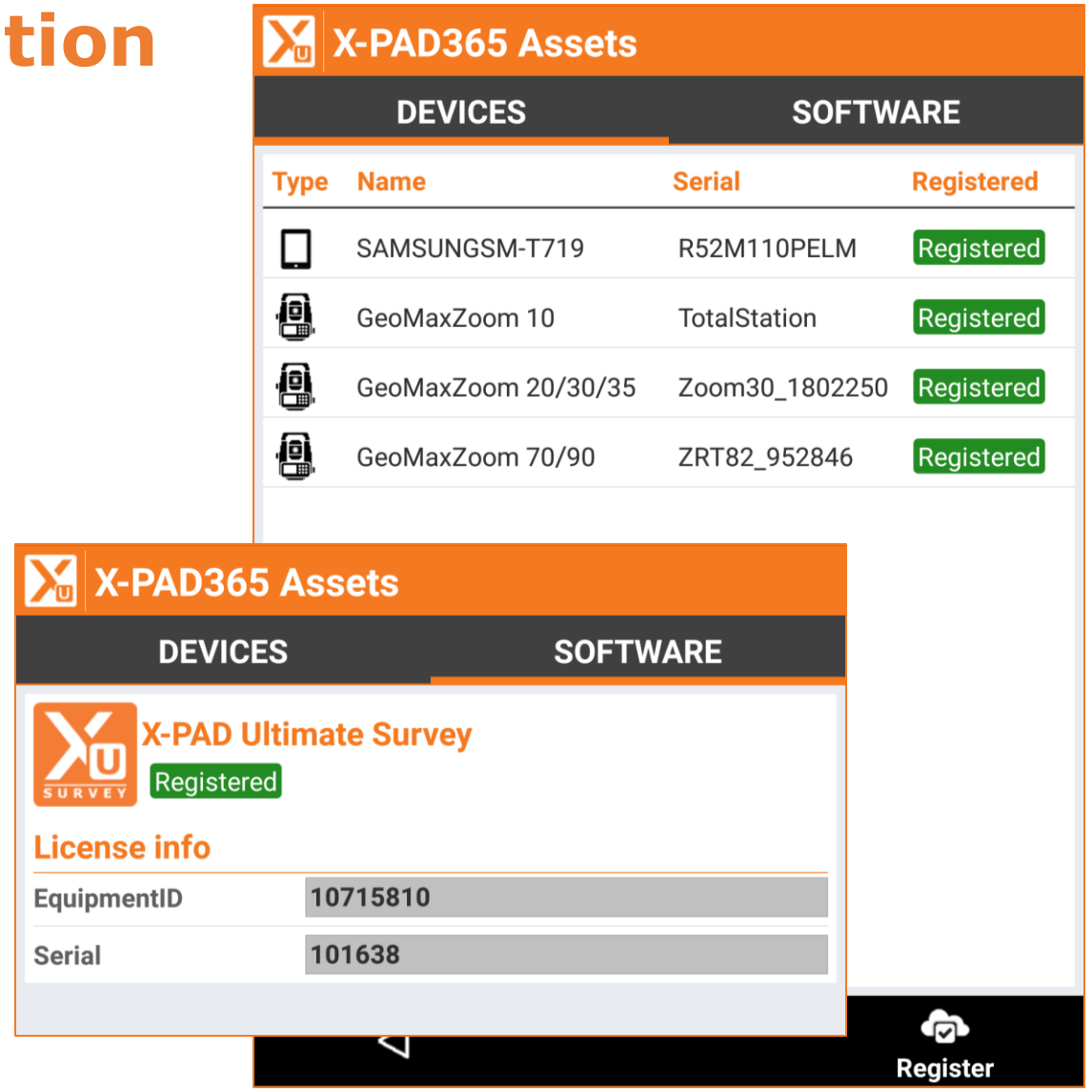
It replaces the X-LIVE solution.



Software & Devices registration

The X-PAD Ultimate license and all the hardware devices connected can be registered in X-PAD 365. Having the software and the hardware registered in X-PAD 365 means that all information are stored and maintained in one place.

The user will receive notifications about the license expirations and specific information related to the hardware registered and have access to these information at any time.

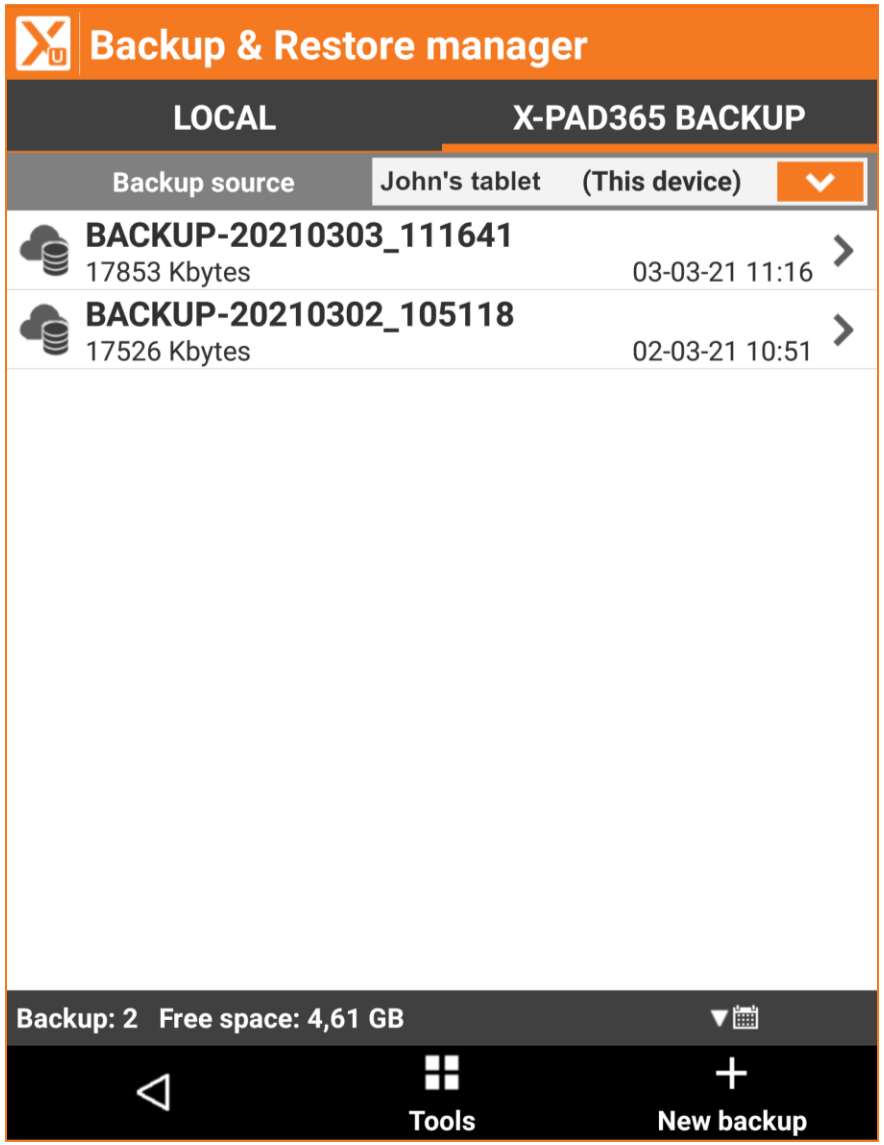


Manual backup & restore

Tablets and controllers are exposed to some risks especially when they are used in construction sites. They can be irreparably damaged or stolen. In both cases, data are lost with all the consequences.

The backup and restore function allows you to make a copy of the settings and job data in X-PAD 365 so that you can restore them if necessary.

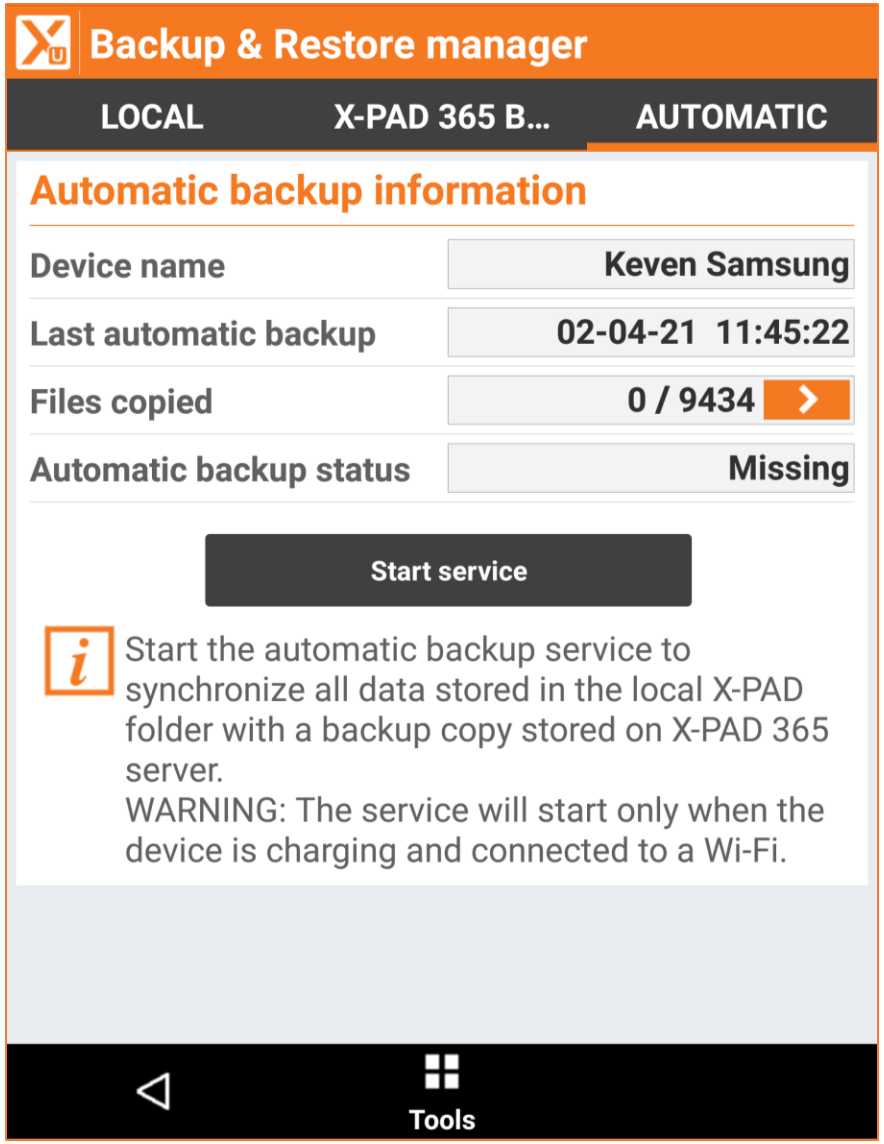
This option can also be used to quickly transfer data and settings from an old controller to a new one.



Automatic backup

Automatic backup is an additional tool that allow to save the most updated data in X-PAD 365 and be able to restore when needed.

Automatic backup checks for files and data that are changed since the previous backup and upload these changes to the X-PAD365.



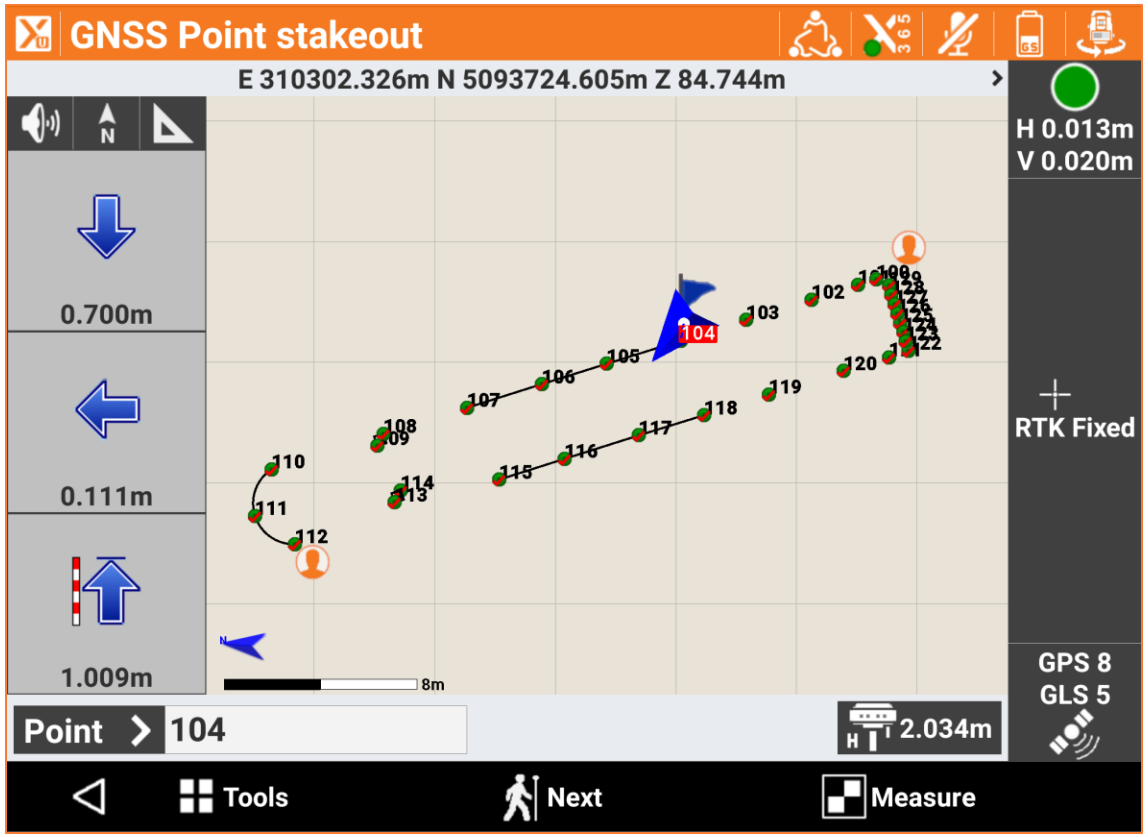
Collaborative Survey

With Collaborative survey supported by X-PAD 365, X-PAD Ultimate becomes a collaborative tool in which multiple users can cooperate together to complete a survey or stakeout activity.

A collaborative survey session can start by one user that invites other users to cooperate on the same job file. Stored points and drawings are shared in real-time with all the members of the session. Each one has the possibility to see what the others are doing.

Collaborative Stakeout

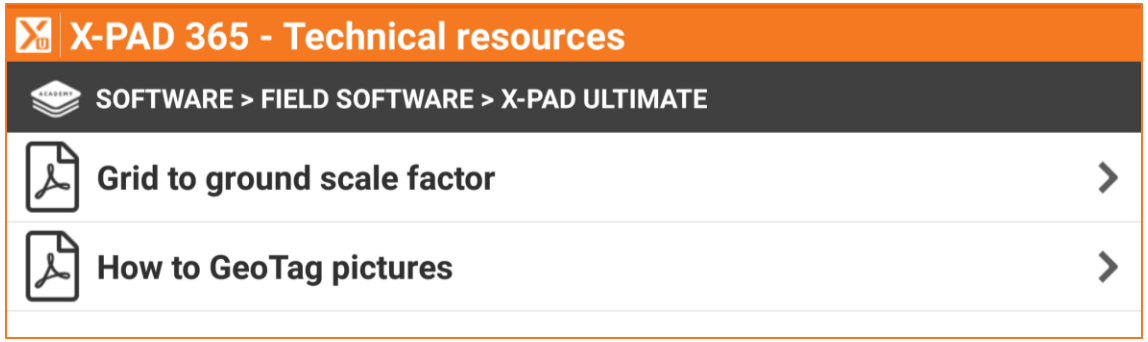
For large stakeout activities, Collaborative stakeout can be used: the same job can be shared and when a point is successfully staked out then its status changes for everyone connected. Progresses are clearly visible in real-time.



Technical and educational resources available in the field

GeoMax Academy has prepared a lot of different type of technical and educational resources related to X-PAD Ultimate. There are videos and documents that explain in detail how to work with the software.

X-PAD 365 users can access these resources not only via the web platform, but also directly in the field from X-PAD Ultimate.



ACADEMY

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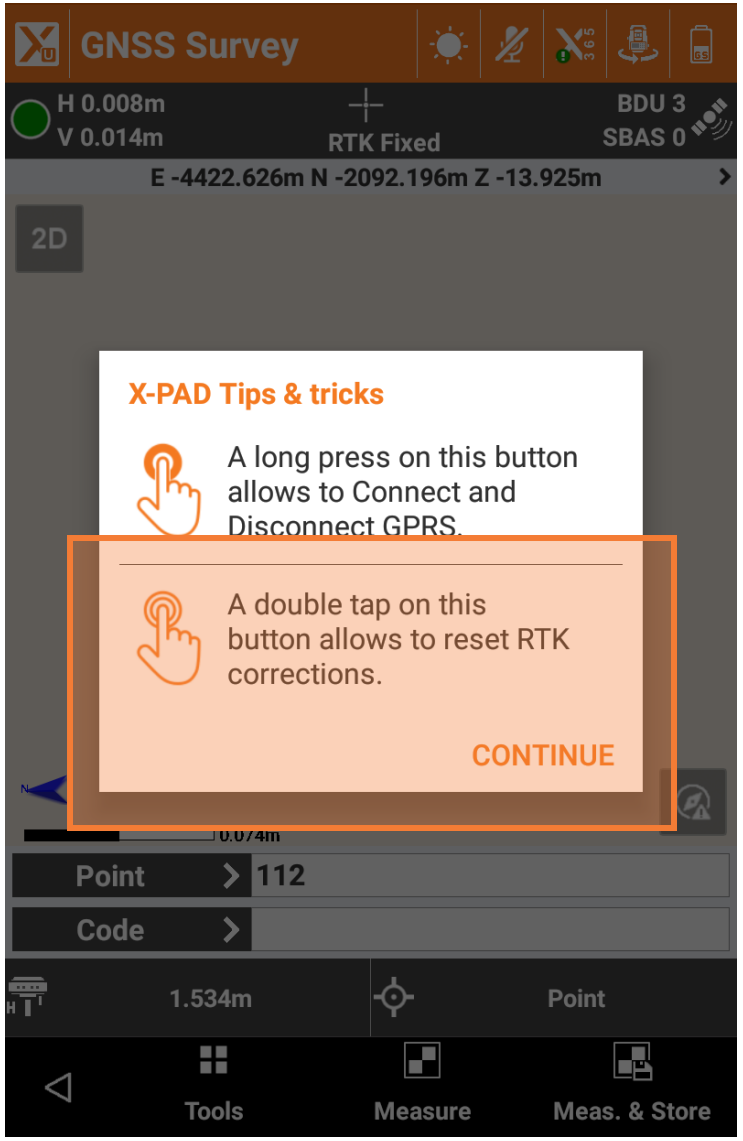
GNSS

GNSS – Reset RTK shortcut

A new shortcut has been introduced for the usage of X-PAD Ultimate with GNSS receivers. After the long press to connect and disconnect the GPRS connection, the new double tap shortcut allows to reset the RTK corrections on the receiver.

With the reset of the RTK correction we force the receiver to re-initialize the position.



GNSS simulator (for support team & dealers)

The behaviour of the GNSS simulator included in X-PAD Ultimate can now be controlled by the user. A long press on the graphic view allows to define the new simulated position.

With this improvement it becomes more easy to show all the features of X-PAD Ultimate directly from your tablet without using an actual GNSS receiver or without the limitation of the previous simulator.

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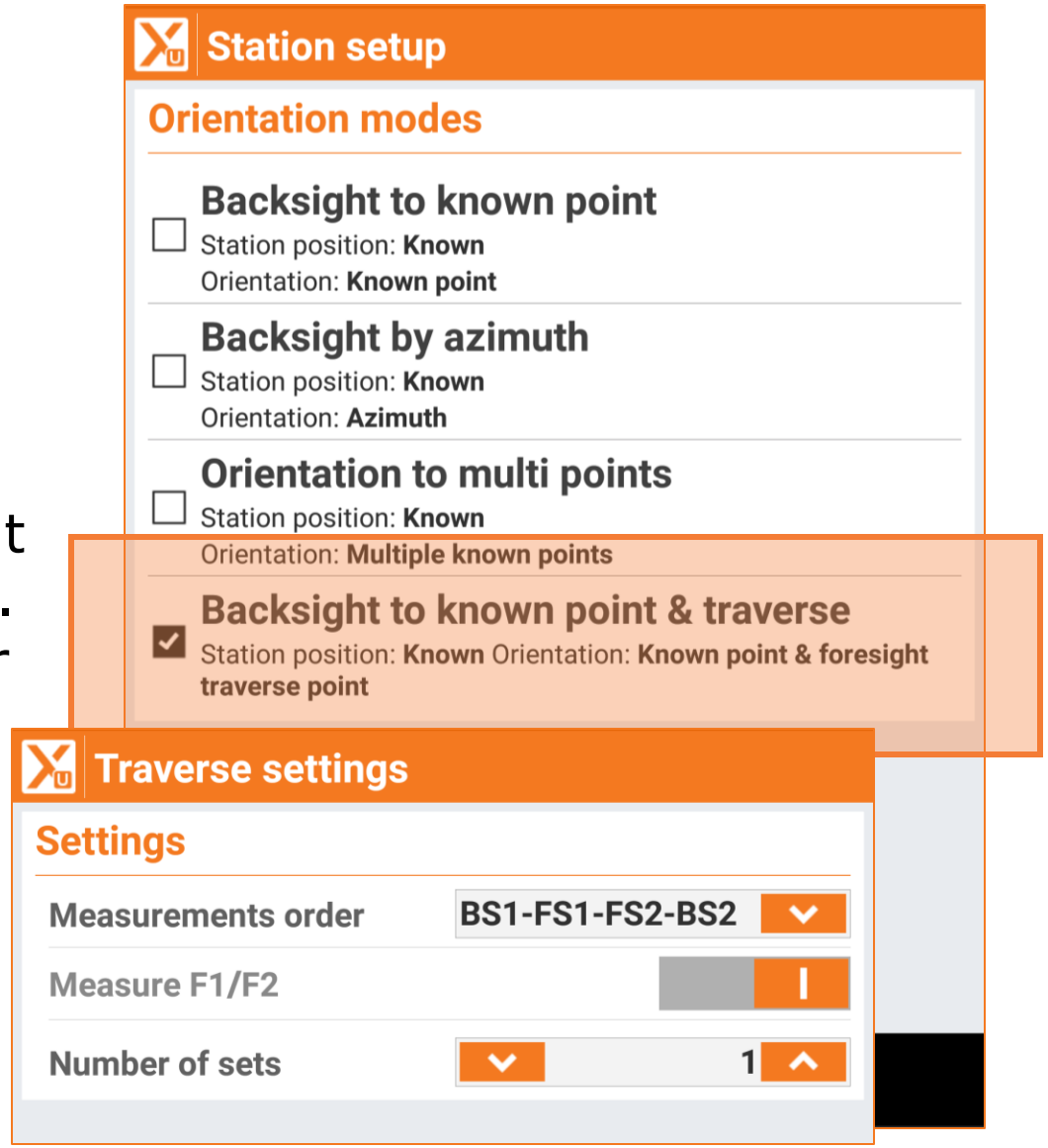
TPS

Backsight & Traverse foresight

A new option in Station setup allows traverse measurements to be performed accurately and fully guided.

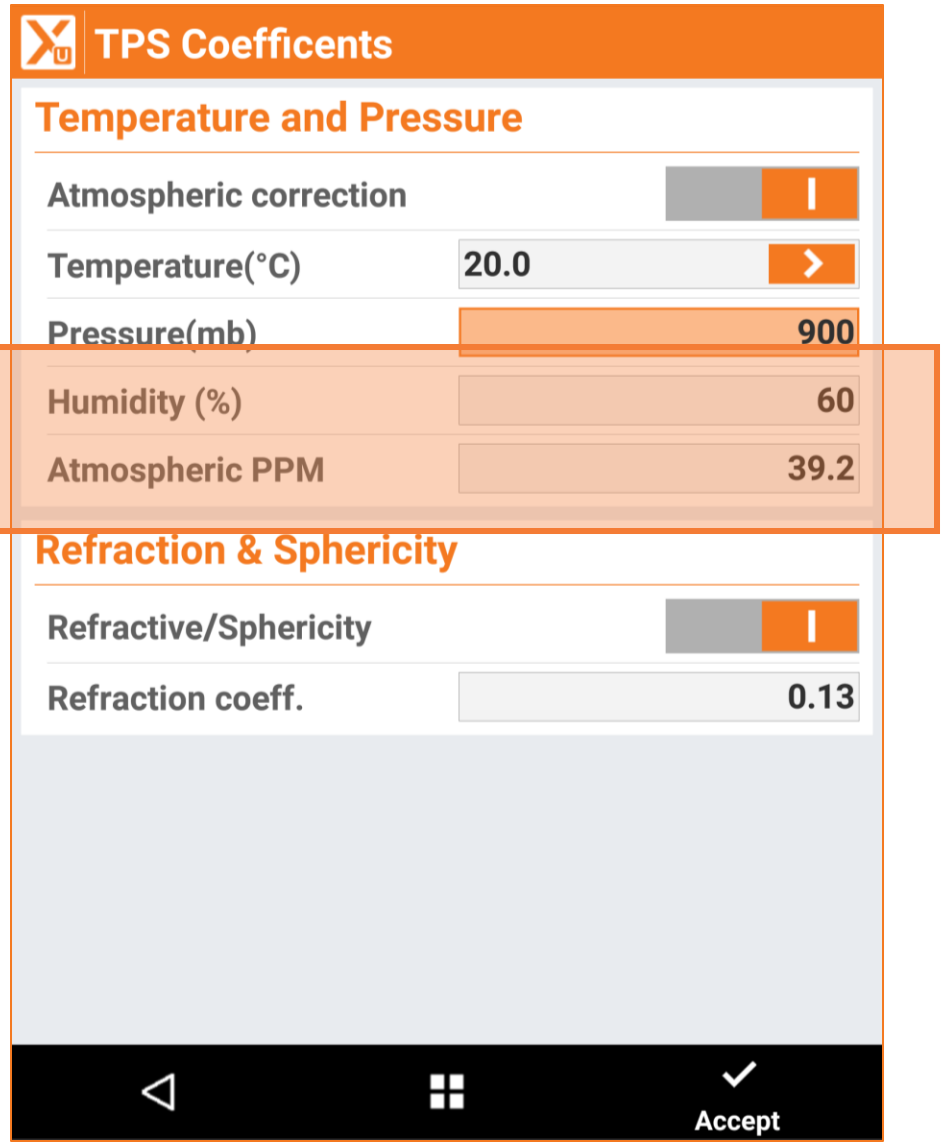
The software guides the user to measure the backsight point, the next foresight traverse point in direct and reverse face and checks the errors. When stationing is completed, it guides the user to move to the next traverse point and continue the process with the backsight of the previous traverse point.



TPS – Atmospheric PPM & Humidity

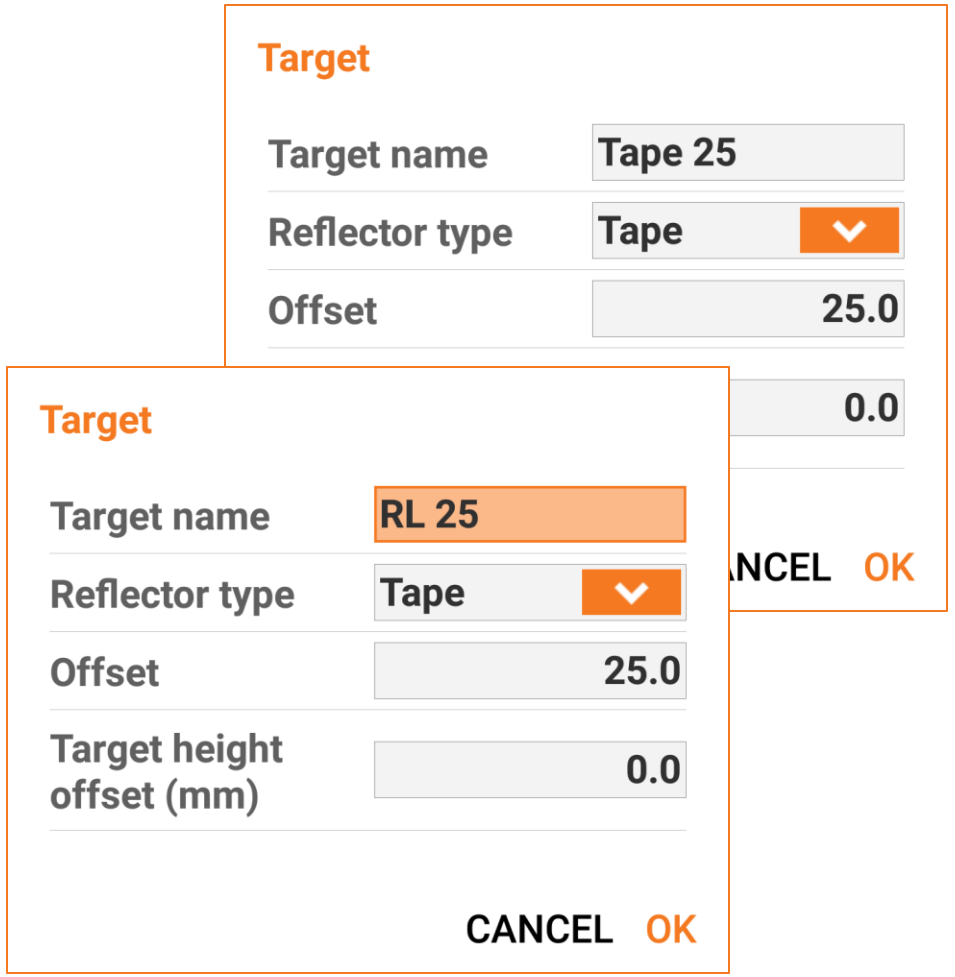
Atmospheric coeffients for TPS has been extended with the Humidity percentage.

The calculated PPM considering all the parameters (temperature, pressure and humidity) is also displayed.



TPS – Tape & Reflectorless with constant

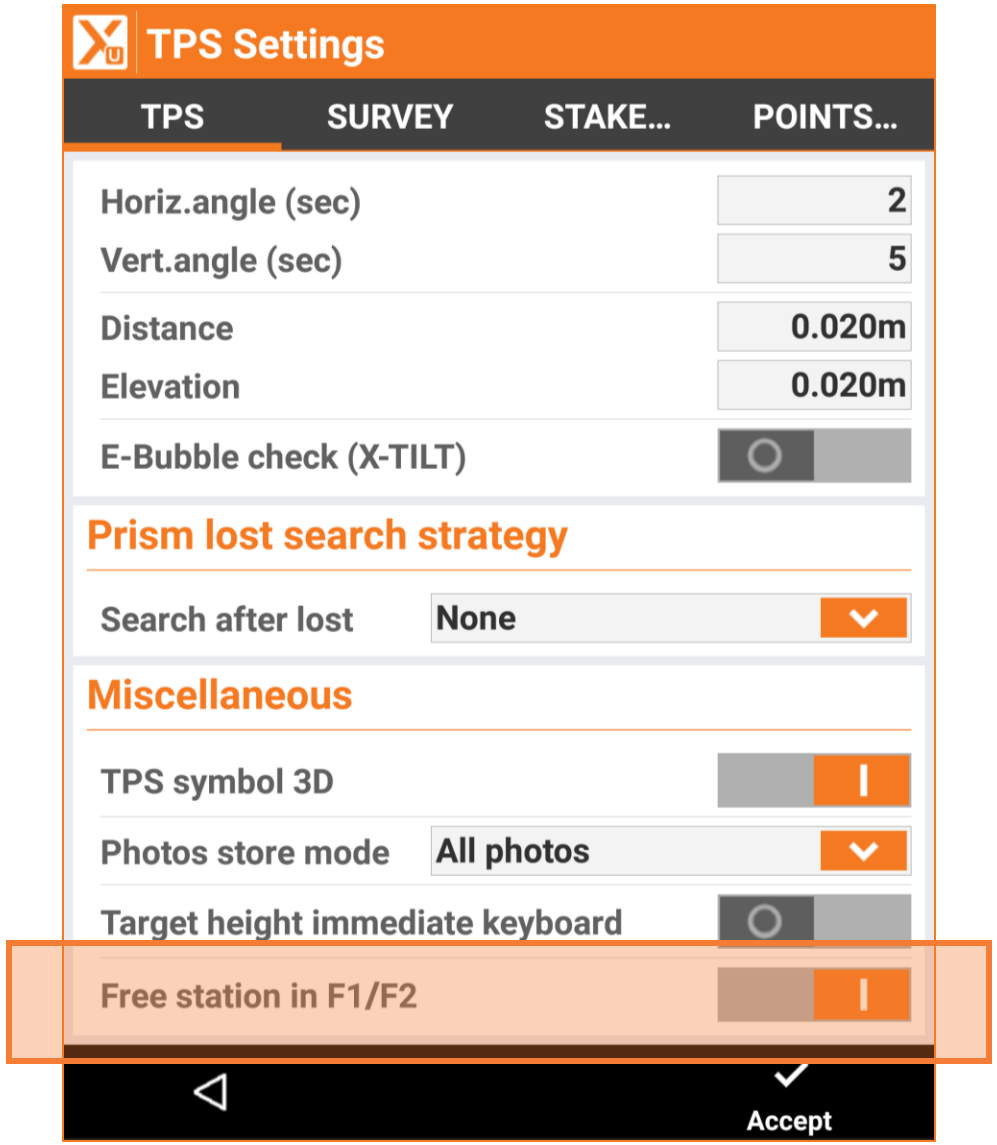
For the targets that are not prisms (tape and reflectorless), it is now possible to specify a sort of «target constant» in case there is a fixed offset that has to be considered in the measurements.



TPS – Free station F1/F2

Free station calculation is a very important method to calculate the station position and orientation. This process has to be done with extreme accuracy. For this reason, a new option has been created.

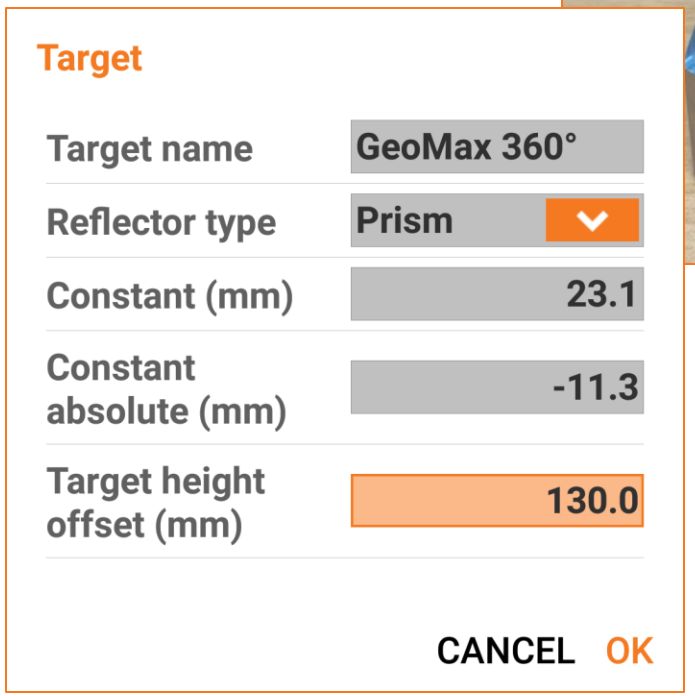
The new option forces to measure the reference point in direct and reverse face in order to assure maximum accuracy.



TPS – Target with additional vertical offset

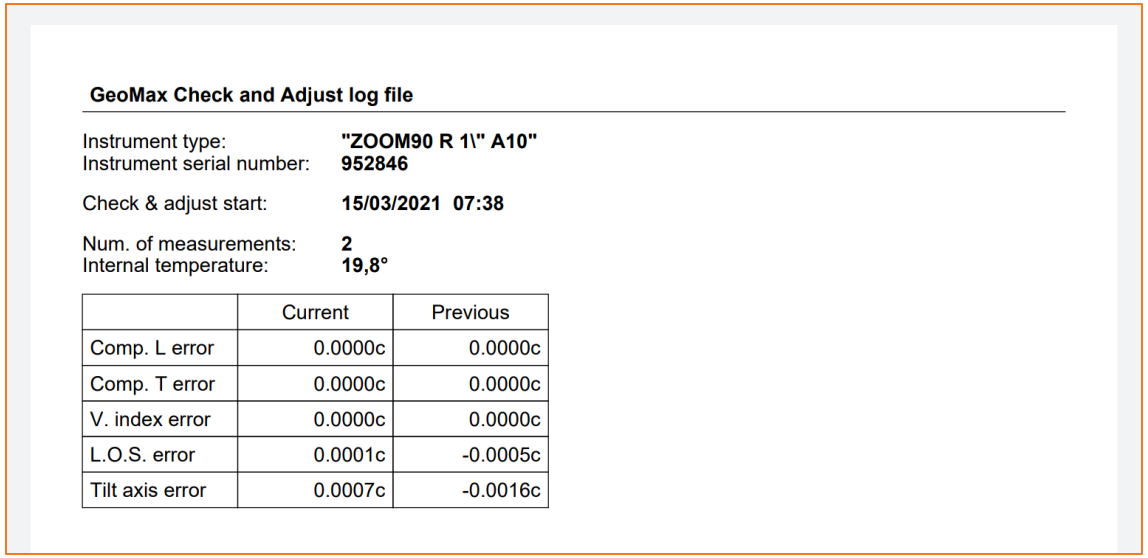
This option allows to use the GNSS pole and adapt it to be used with the prism. With a simple adapter as the one in the image, the same pole can be used both for GNSS and TPS measurements.

In the X-PAD Ultimate target manager it is possible to specify an additional height offset for each target to ensure that the final height of the prism is correct.



Zoom70/90 – Calibration report

Zoom70/90 total stations include a calibration procedure that can be executed on-board with the GeoMax Toolkit application. With X-PAD Ultimate it is possible to generate a report of this calibration. The new calibration values are reported but also the values of the previous calibration for a direct comparison.



GeoMax Check and Adjust log file

Instrument type: **"ZOOM90 R 1\" A10"**
Instrument serial number: **952846**

Check & adjust start: **15/03/2021 07:38**

Num. of measurements: **2**
Internal temperature: **19,8°**

	Current	Previous
Comp. L error	0.0000c	0.0000c
Comp. T error	0.0000c	0.0000c
V. index error	0.0000c	0.0000c
L.O.S. error	0.0001c	-0.0005c
Tilt axis error	0.0007c	-0.0016c

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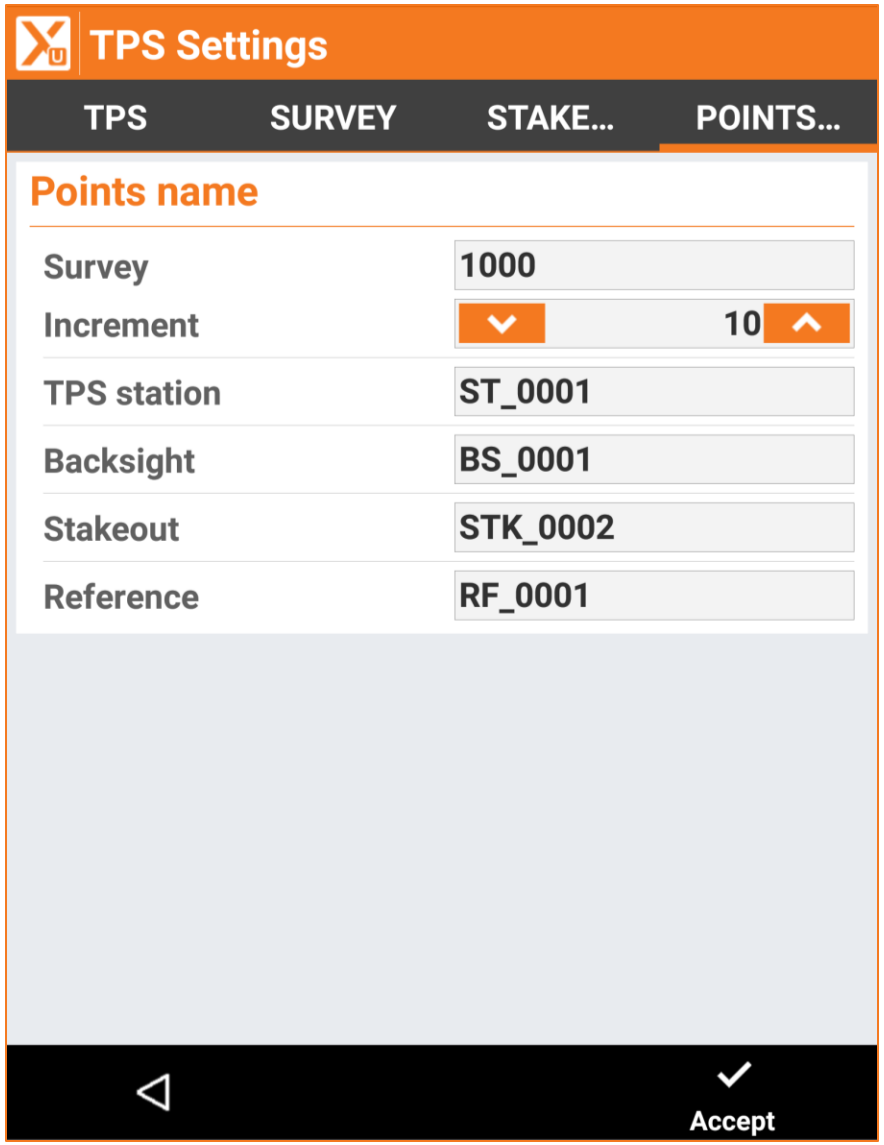
SURVEY

Next point name – Customisable increment

In X-PAD it is possible to define the name of the point for the different situations - survey point, station, stakeout, etc. However, the rule for the name of the next point was simply to increment the previous name.

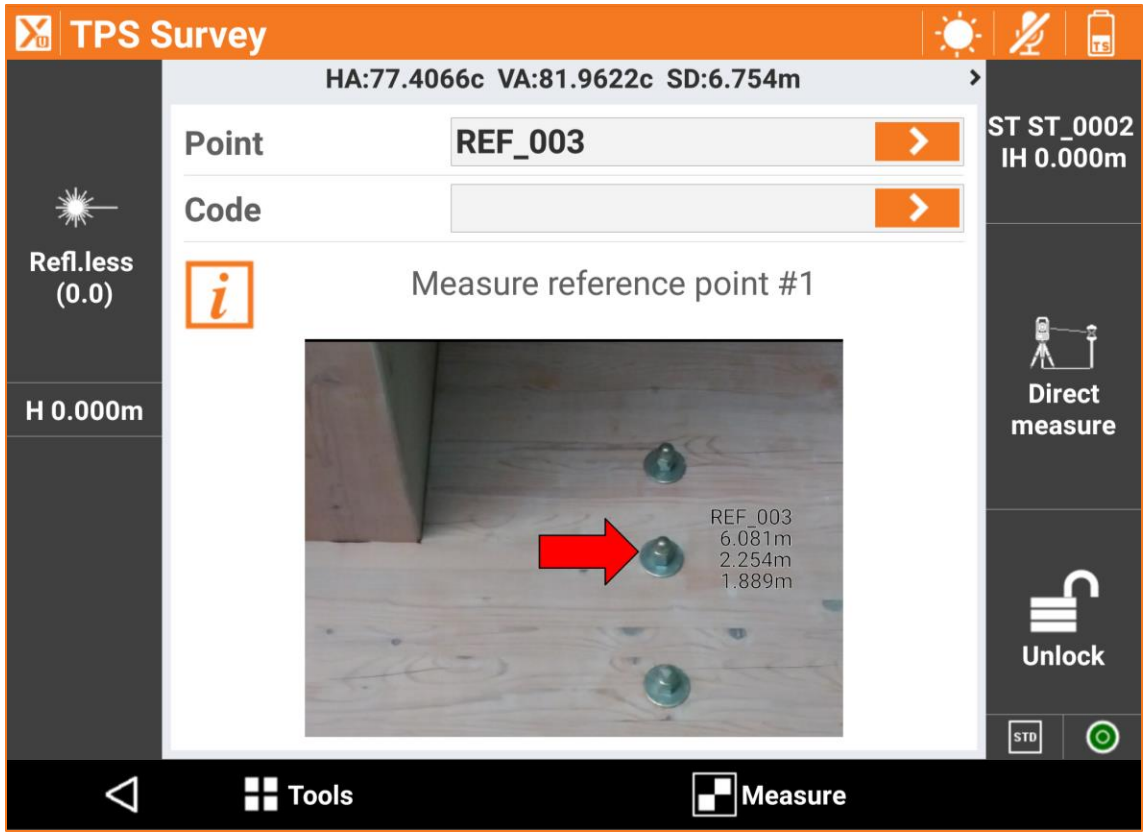
This new option, allows to set the rule for the name of the next point. It is possible to specify an increment other than 1, even a negative o



Measure reference point – Photo

In TPS orientation and in GNSS localisation it is required to measure one or more reference points.

If these reference points have been stored with a photo, the photo is displayed in X-PAD Ultimate as an aid to identify the point that has to be measured and ensure that you are at the right point.



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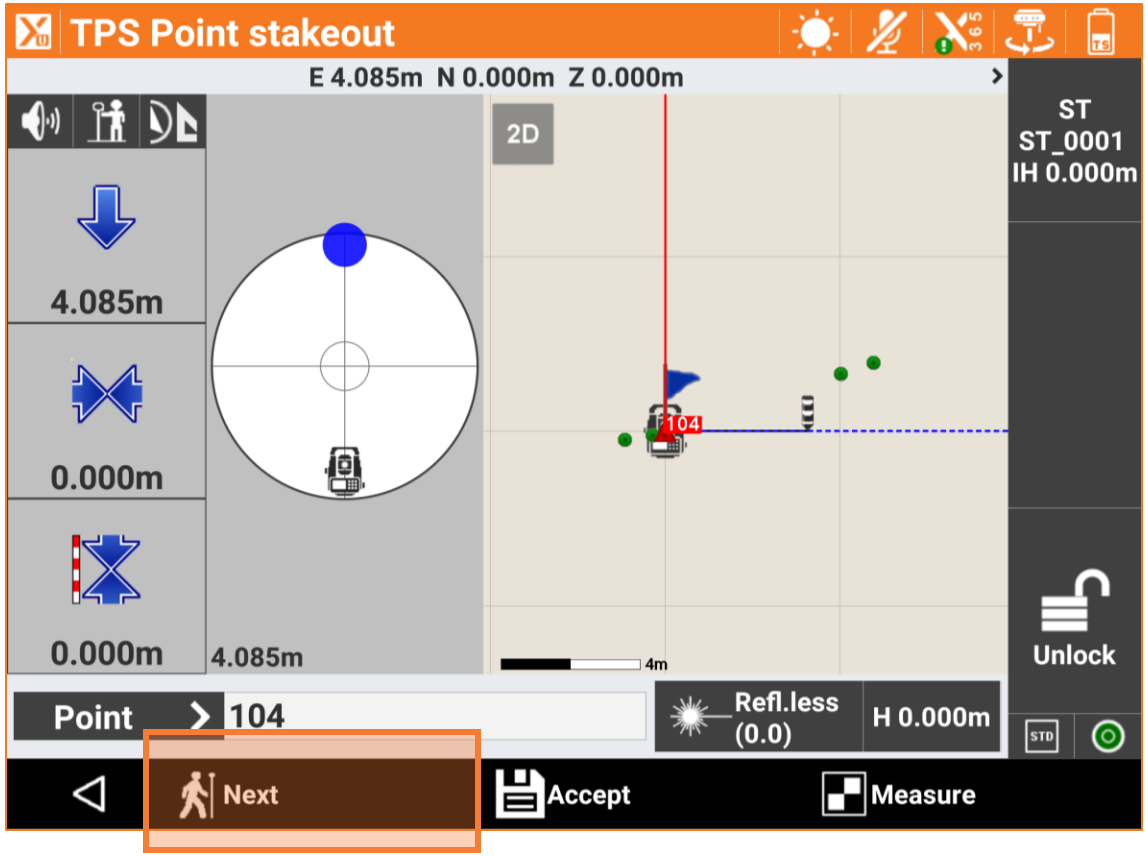
STAKEOUT

Stakeout points – Next always available

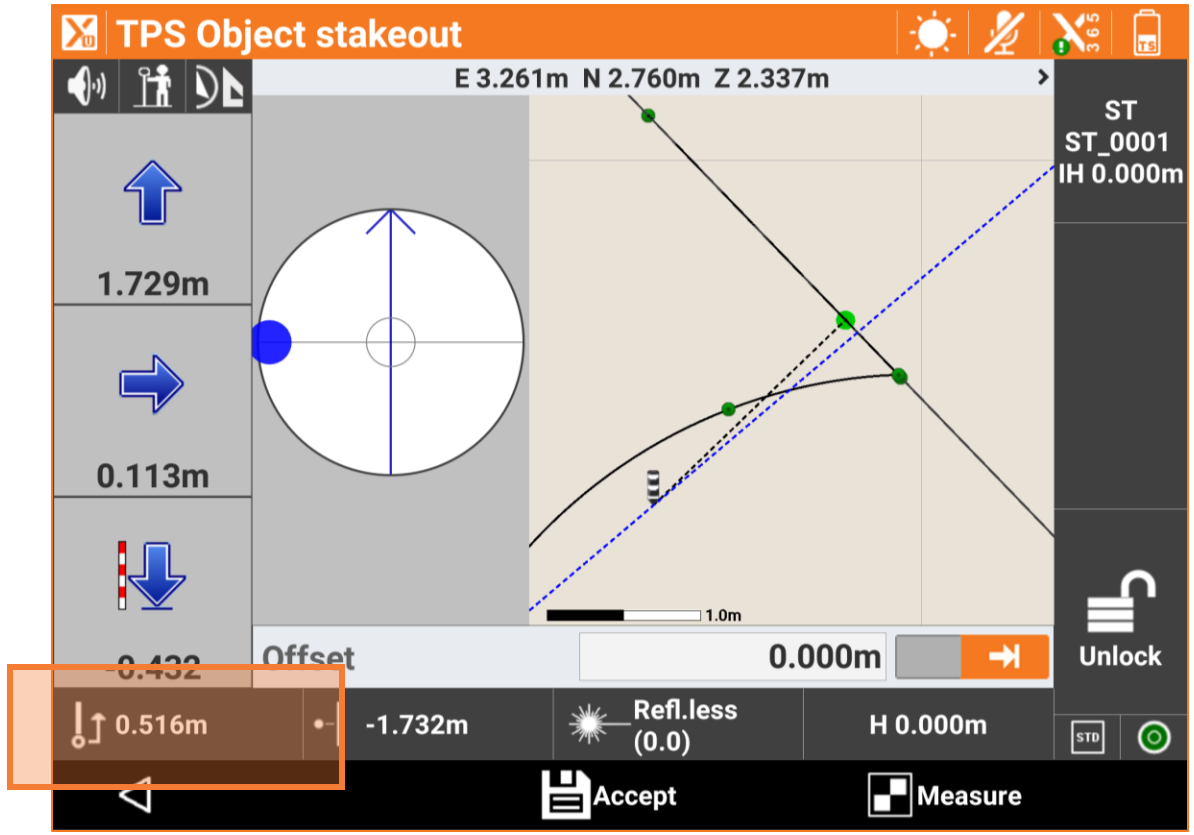
During stakeout operations speed can be an essential factor, especially when the number of the points to stakeout is very high. In this situation, a reduced number of clicks saves seconds and, at the end of the day, minutes, if not hours.

For this reason, we have reduced the number of clicks required to jump to the next measuring point.



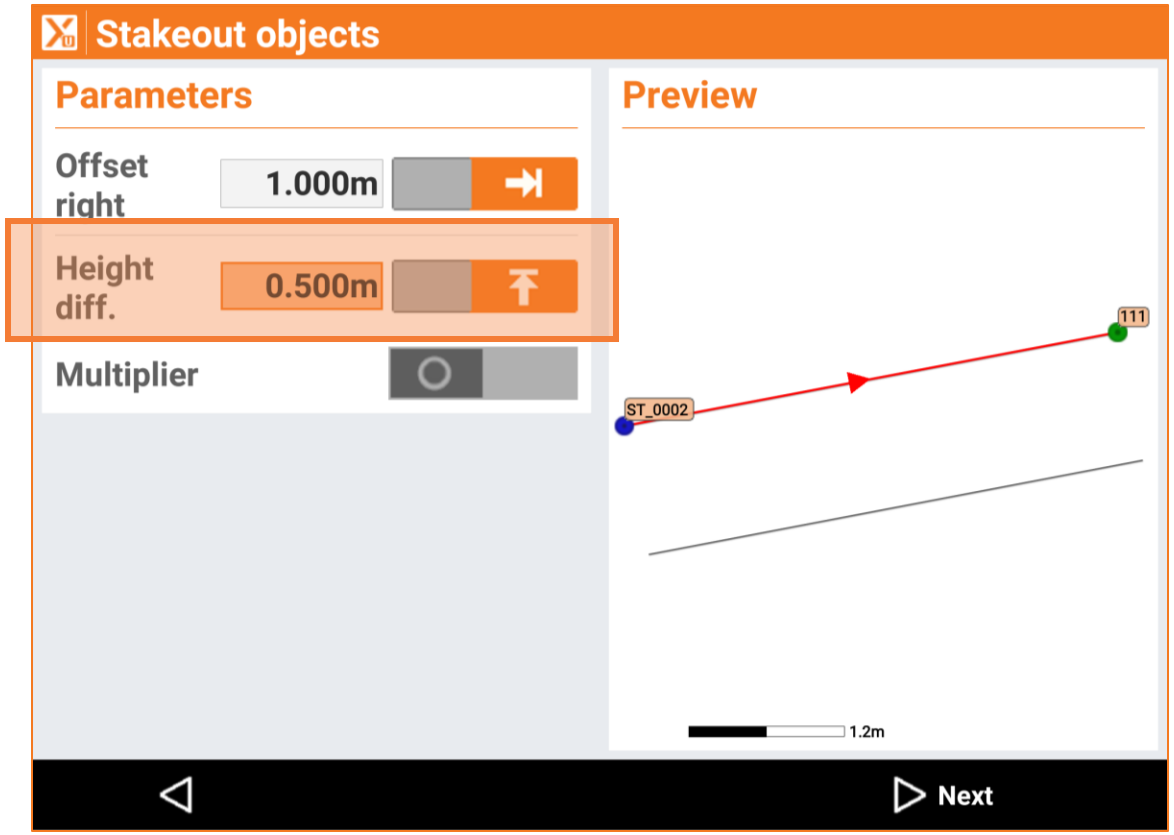
Stakeout object – Invert direction

Stakeout object command allows to find positions along a reference object and returns several information as elevation difference and distance from the beginning of the element. Now it is also possible, by clicking on the corresponding panel, to have the distance from the end of the element.



Stakeout object – Offset elevation

The Stakeout object command has been extended by the possibility to specify not only a horizontal but also a vertical offset. This makes it really easy to start from a reference object and apply a 3D offset.



Stakeout – Store current layout

X-PAD Ultimate can be displayed on all types of screens, whether small, large, horizontal or vertical. Each customer has his or her individual preferences when it comes to visualising the data, especially with the stakeout screens, where several options are available.

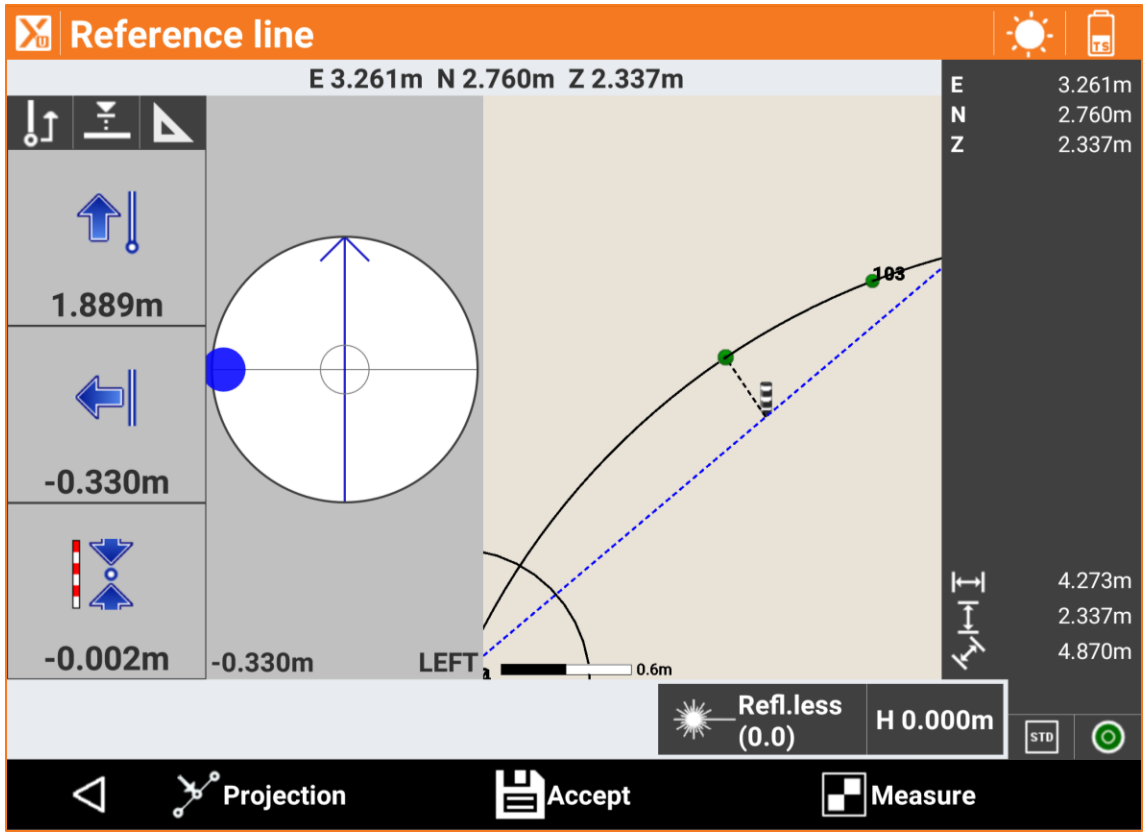
For this reason, X-PAD Ultimate now **stores the preferred layout in the stakeout screen** and uses the same in all jobs (until it is changed again by the user).

COGO

Reference line with TPS – Project point

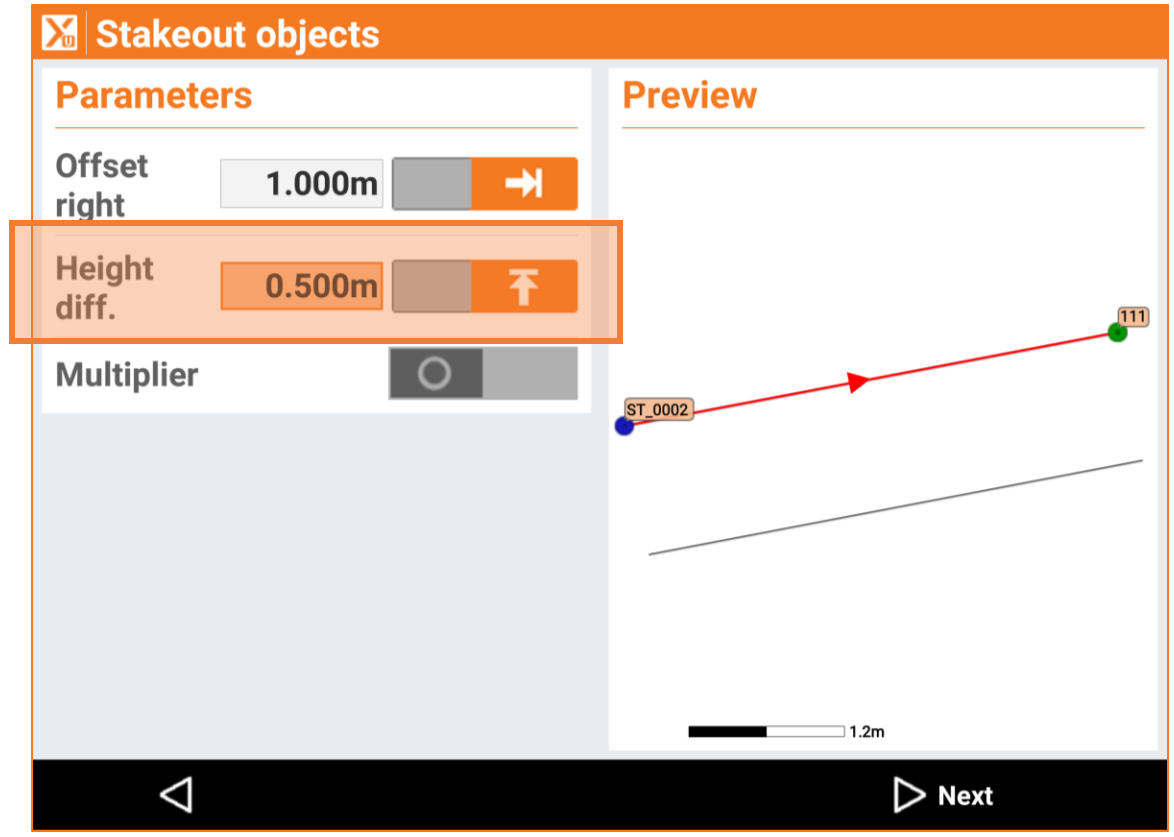
Reference line is one of the most used commands in X-PAD Ultimate and has now been extended with a new option that allows to project your position on the reference element.

This new option is available with the TPS and the reflectorless measurement mode. The TPS rotates to the projected position and points to it with the laser pointer.



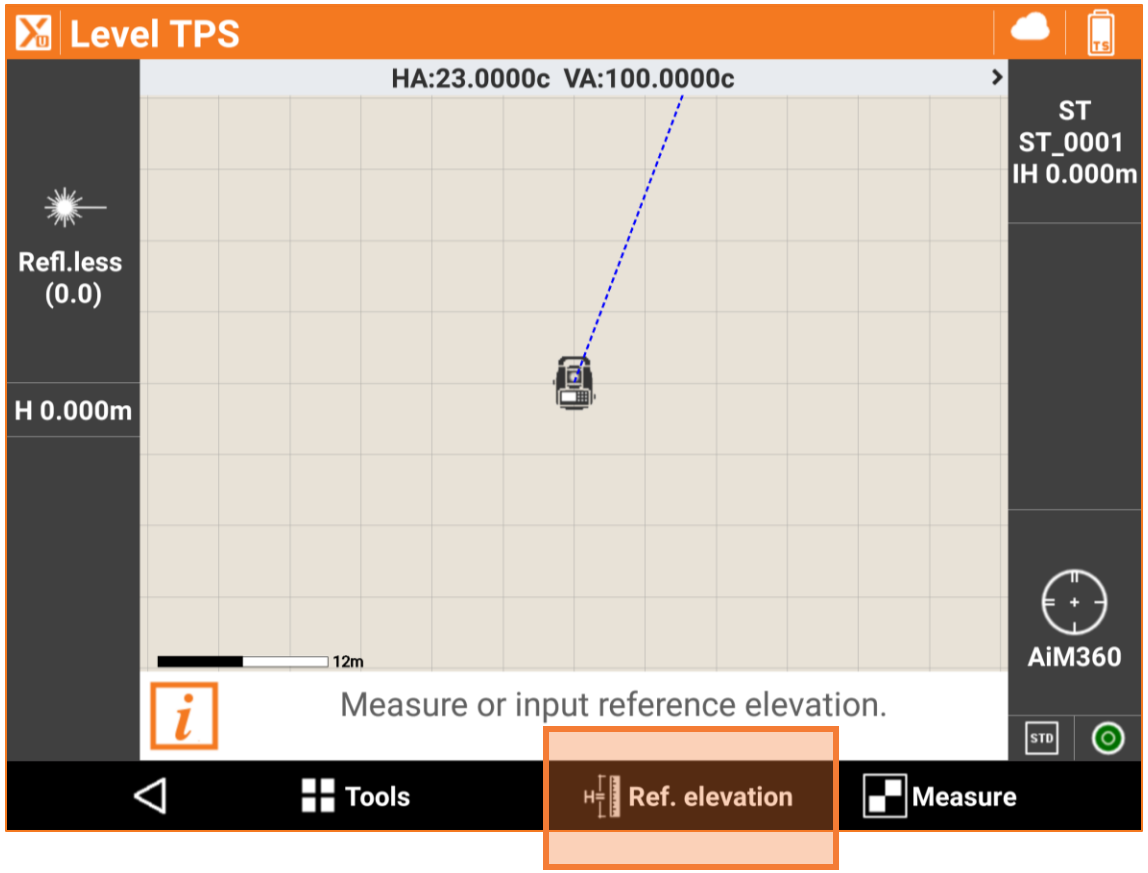
Reference line – Offset elevation

The Reference line command has been extended with the option to specify not only a horizontal but also a vertical offset. Thanks to this feature, customers can easily start from a reference object and apply a 3D offset.



MEP – Level point

Level point is a command that allows to transfer an elevation from one surface to another surface. The reference elevation can be measured but also be entered manually.

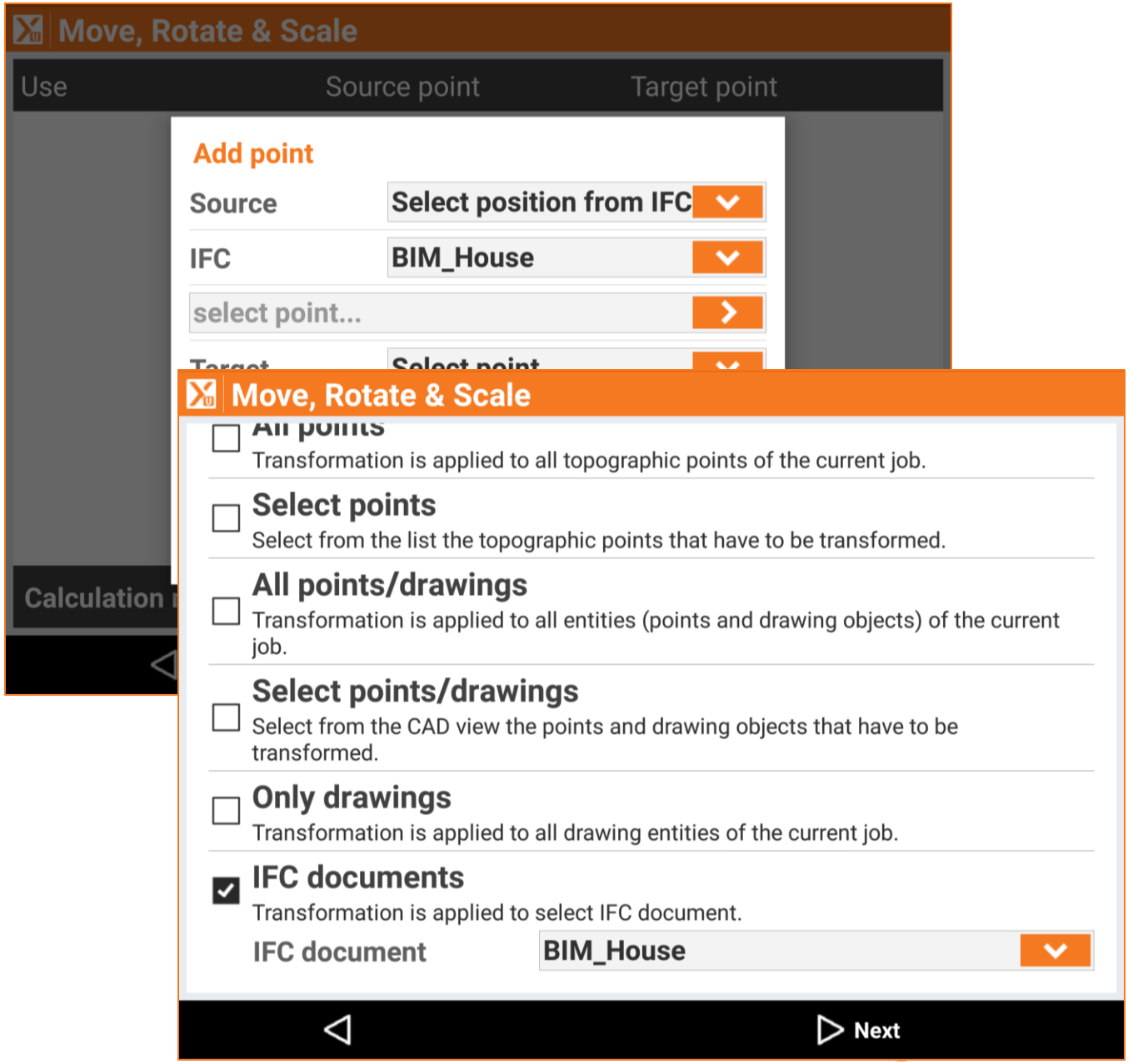


IFC – Change position

The command Move, Rotate and Scale has been extended to support IFC files.

When it is necessary to change the position of an IFC model, X-PAD allows to define the start and target position by automatically hiding and showing the corresponding elements in the CAD view.

This way, an IFC model can be moved to the right position, even if its coordinates are local coordinates.

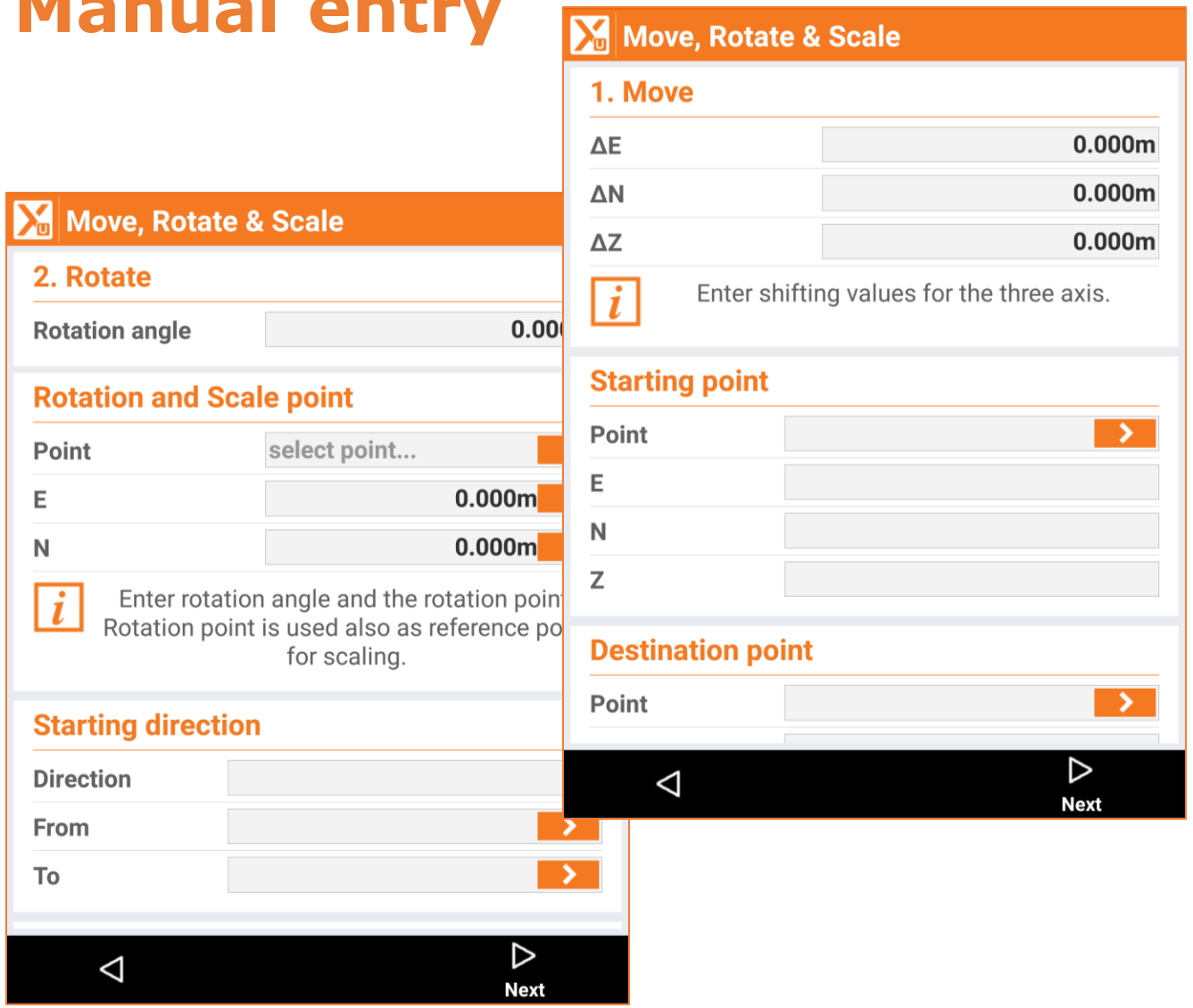


Move, Rotate & Scale – Manual entry

With this command it is possible to manually enter the shifting values and the rotation angles.

The shifting values can now be calculated as the difference from existing topographic points or the difference from entered coordinates.

The rotation angle can be calculated as a difference of azimuths. Azimuths can be calculated as direction from existing topographic points.

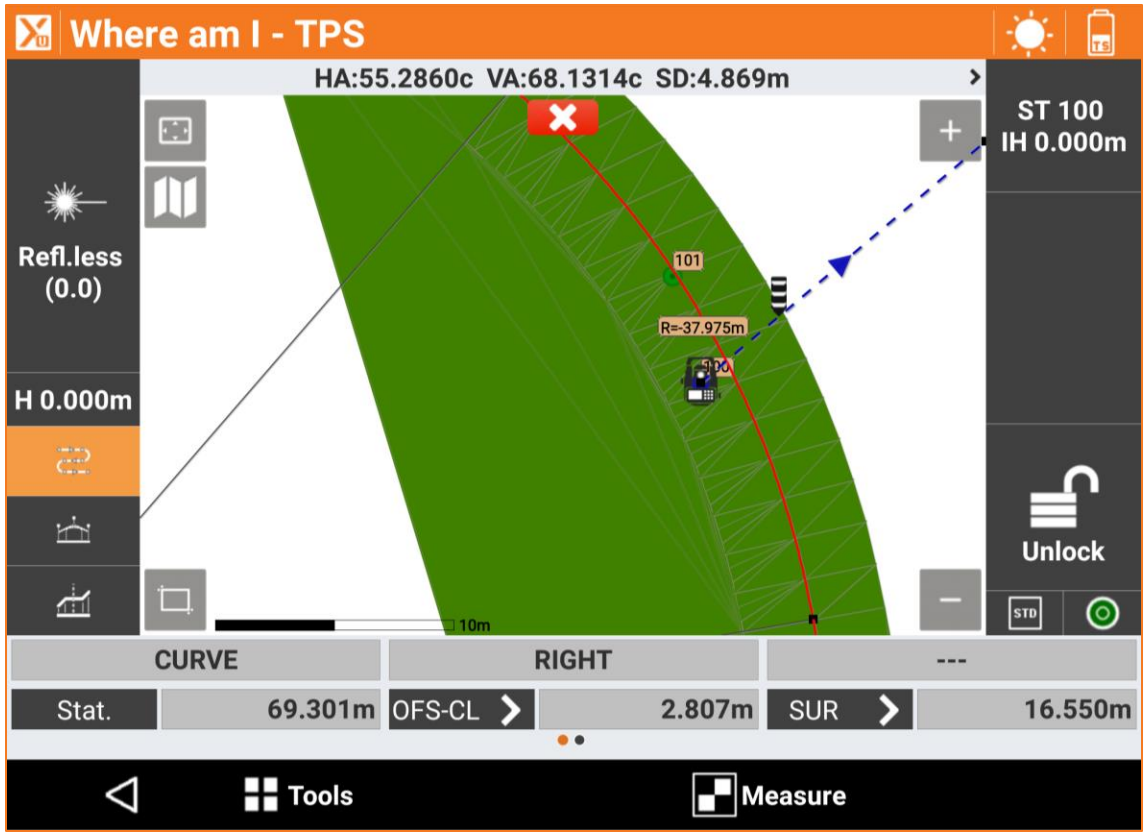


ROADS

Where am I – Elevation from surface

Where am I is a very versatile command that is used in many situations with road data. In some cases, the design elevations come from a 3D surface and not from the road design.

This new option in the Where am I command allows to select a 3D surface and use it as reference for the elevations.

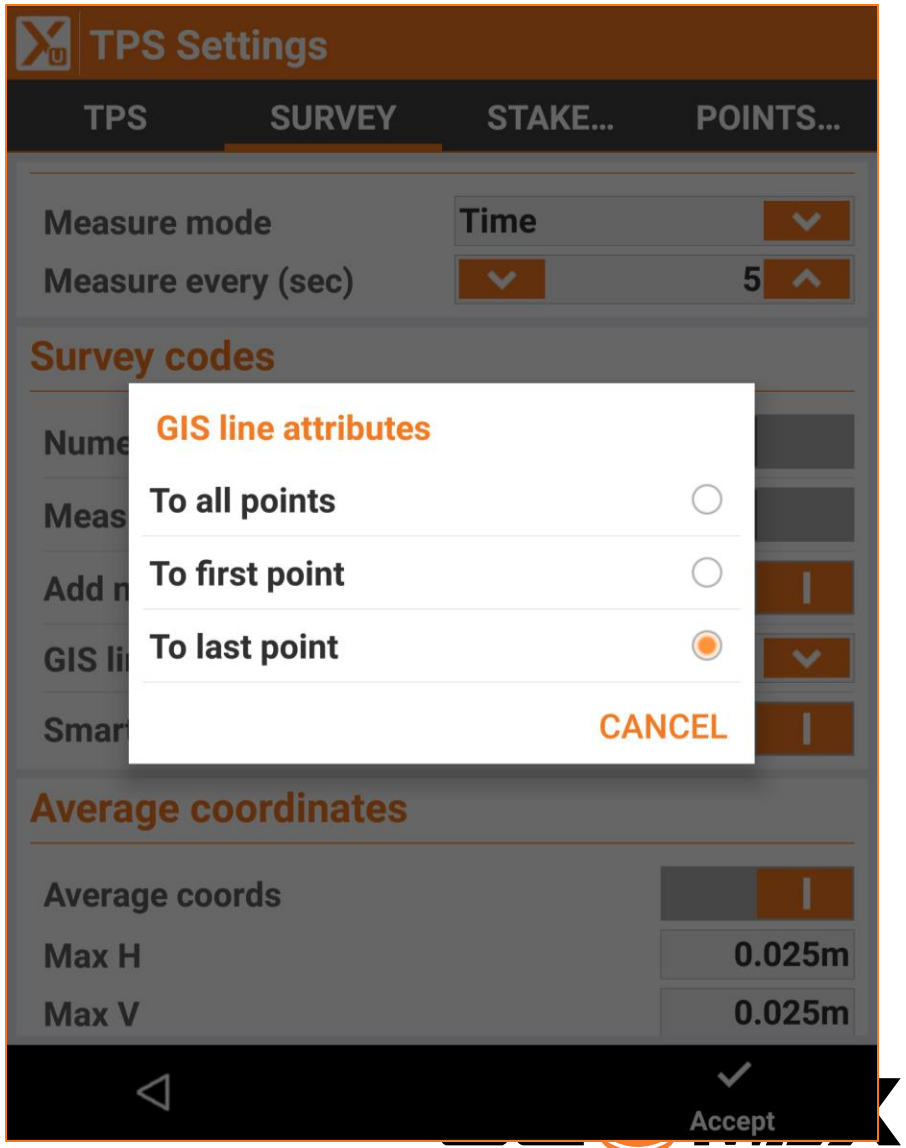


GIS

Attributes on last point of the line

When a line is measured with a survey code, to which GIS features and attributes are linked, the attributes can be requested at the first point of the line or at the last point of the line.

In most cases, the last point of the line is the best solution because more information about the line are available at its end instead at its beginning.



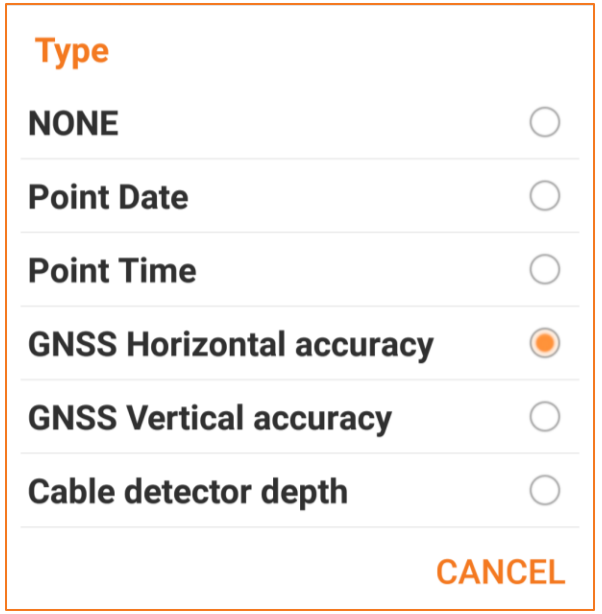
New predefined attributes

The user can create all types of attributes. Some predefined attributes are available now. The value of these attributes is extracted from the measurement. The new predefined attributes are:

- Registration date
- Registration time
- GNSS accuracy
- Depth (for locators)

Other attributes can be easily included in the future if necessary.

Date and time types have been also included in the list of supported types for the attributes.



GEOMAX

IMPORT & EXPORT

Import Google KML/KMZ

The list of the supported formats has been extended with the possibility to import data from Google Earth KML/KMZ files.

Export ESRI Shape file – Photo name as attribute

Topographic points with photo are now exported in ESRI Shape format with the photo name as an additional attribute. The photo files are also included in the final export file.

In this way, the photos can be easily managed within the GIS tool where Shape files are imported.

Export surfaces in LandXML format

Surfaces initially created with Surface & Volume module of X-PAD Ultimate can now be exported in LandXML format to be used with other applications.

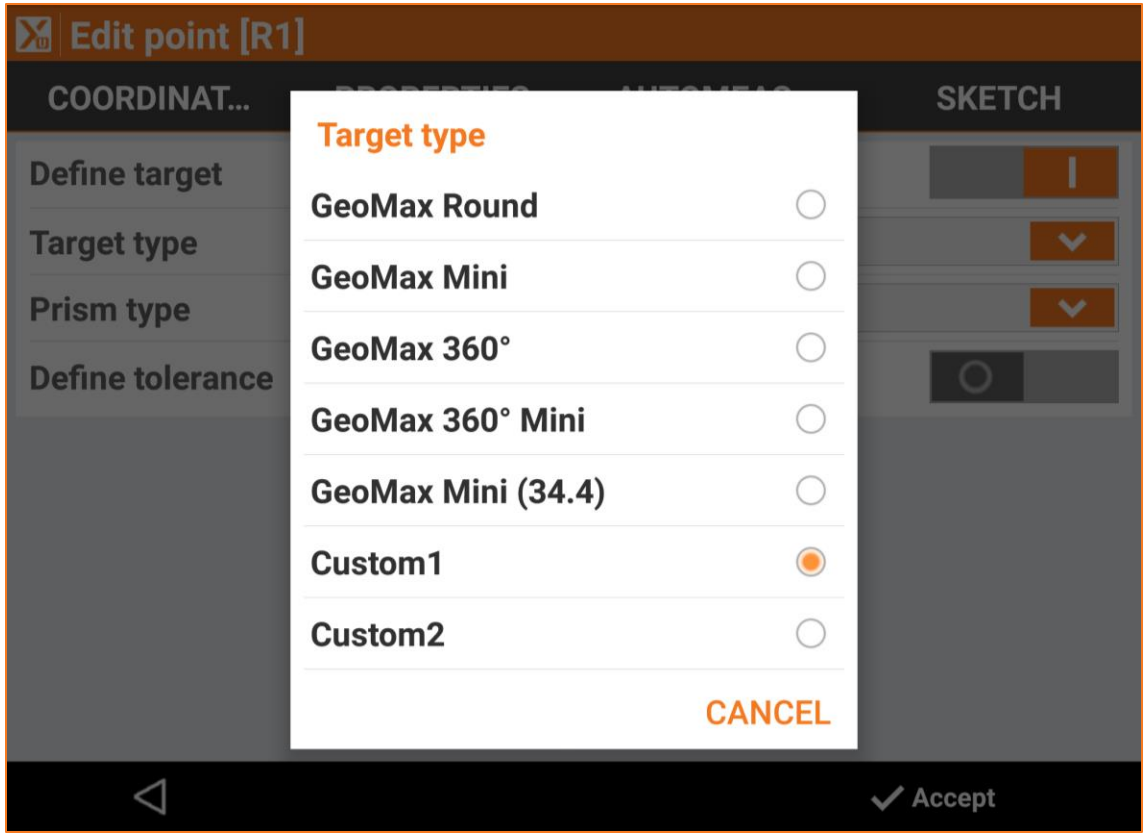
This new features further extends the versatility and flexibility of X-PAD Ultimate.

AUTO MEASURING

Support of custom prisms

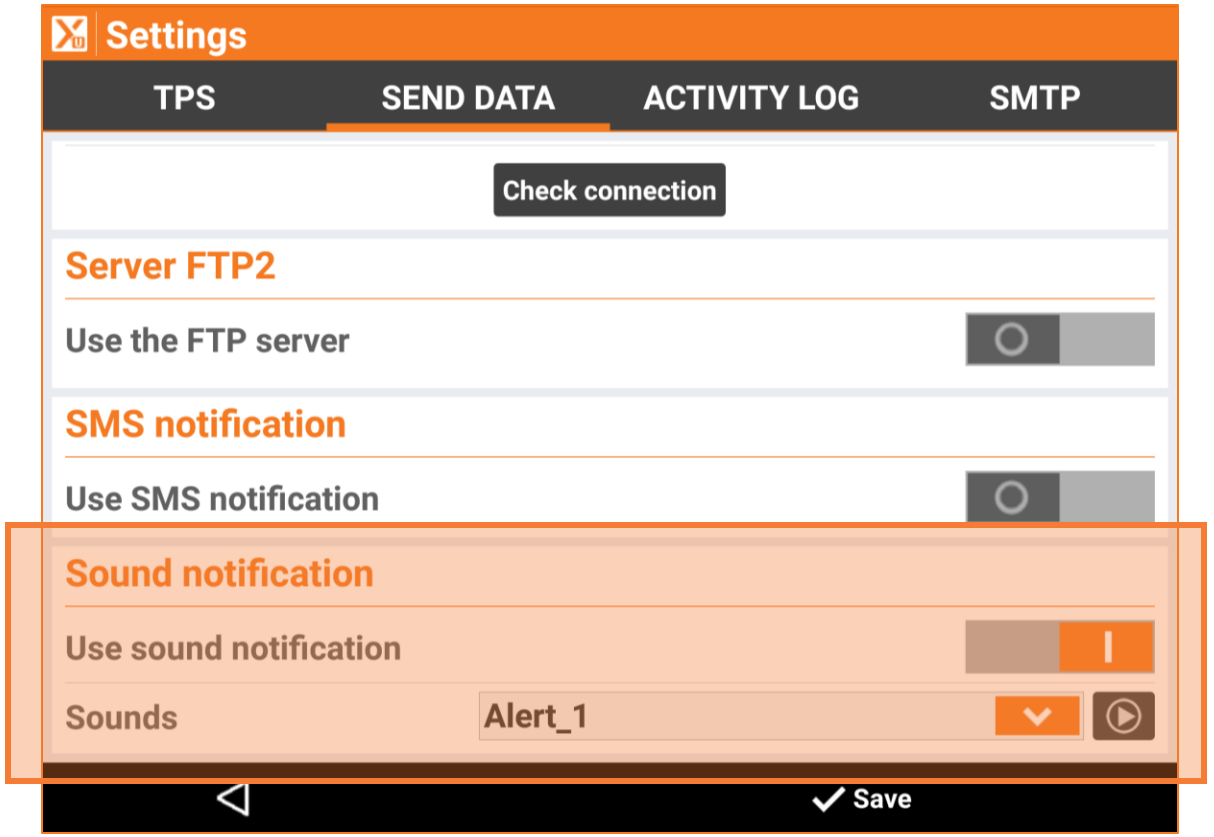
The previous Service Pack introduced the possibility to use an unlimited number of custom prisms and targets.

The Automeasuring module includes now the possibility to use these custom prisms and targets.



Sound notification

A new option is available in Automeasuring module: a notification sound that is emitted by the controller when a measurement is out of the tolerance.

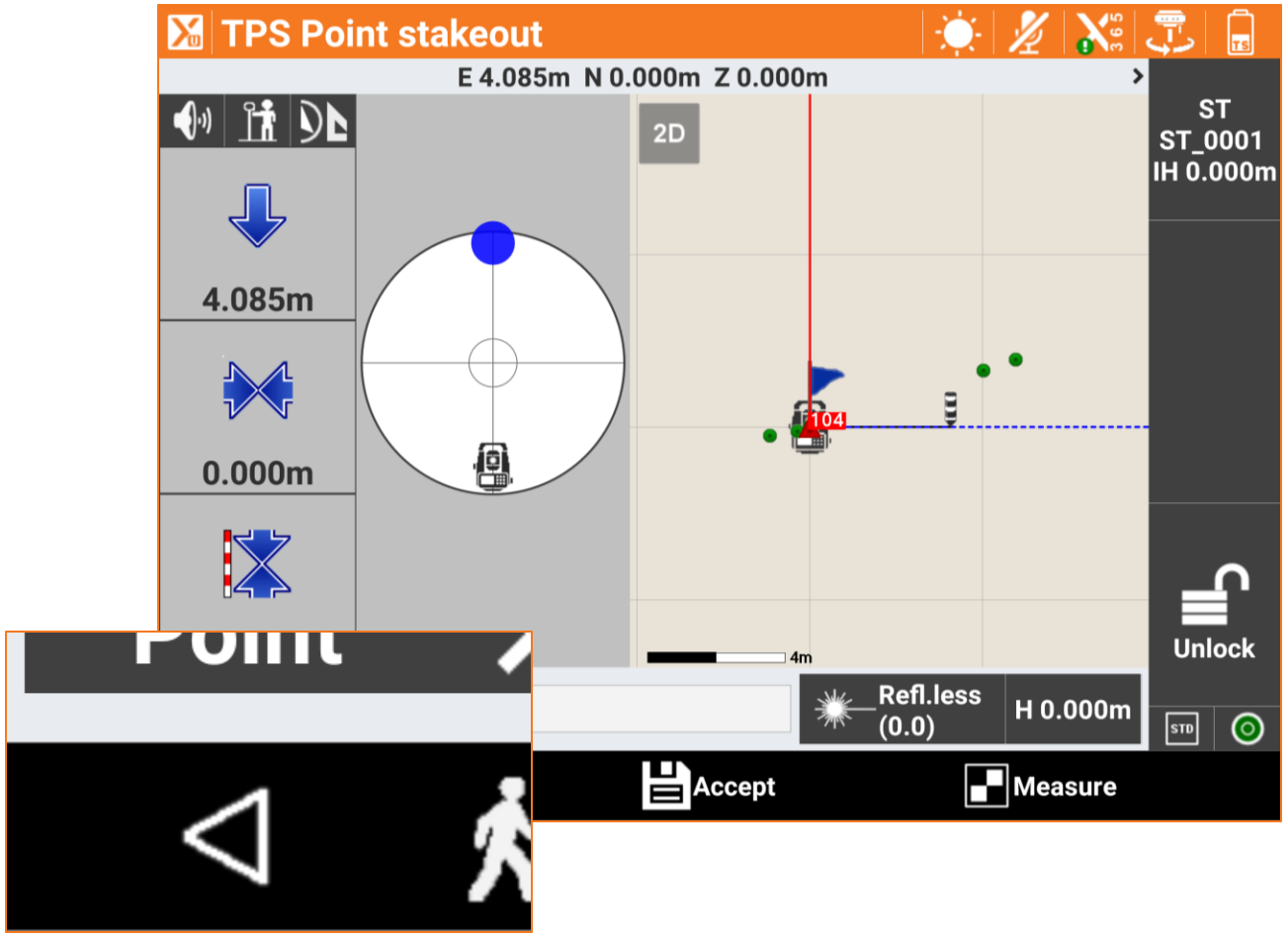


OTHER FEATURES

Return to main menu

Some commands in X-PAD Ultimate are made by several steps. Return to the main menu requires to click on the bottom left button many times.

A new feature has been implemented in many commands that allows to return directly to the main menu by a long press on the left button of the toolbar, saving clicks and time.

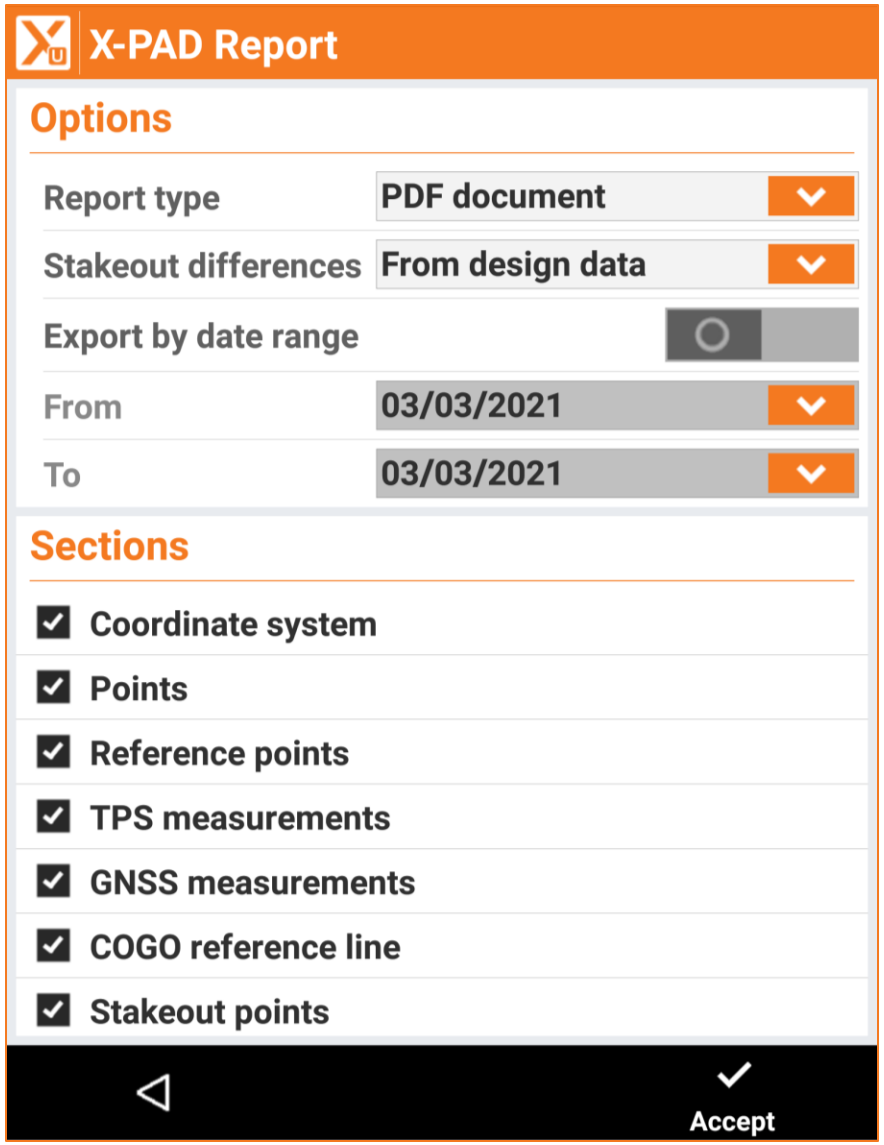


New job data report

Before this new release, X-PAD Ultimate had several different types of reports spread in different part of the software.

All these reports have been redesigned and unified in one single report which contains:

- Coordinate system
- TPS coefficients and parameters
- TPS orientation (backsight, free station, …)
- TPS calculation
- GNSS calculation
- Reference line
- Stakeout (single point, object, distance & offset, surface, road, sideslope)



License & Android10

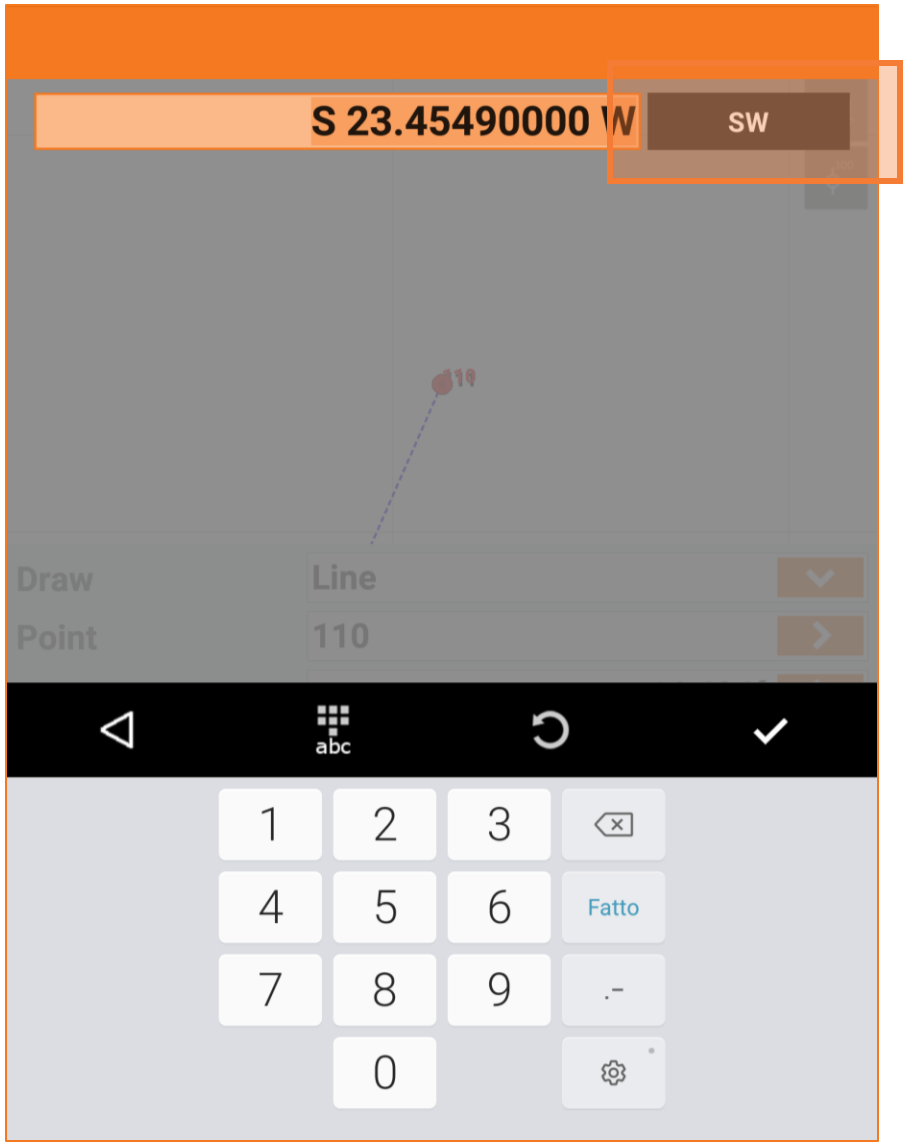
Starting from Android10, some restrictions have been introduced in the operating system that affected the internal licensing system of X-PAD Ultimate and forced to re-initialize the license.

With a new concept of licensing system introduced in this service pack, we want to solve these issues.

Bearings – New entry data methods

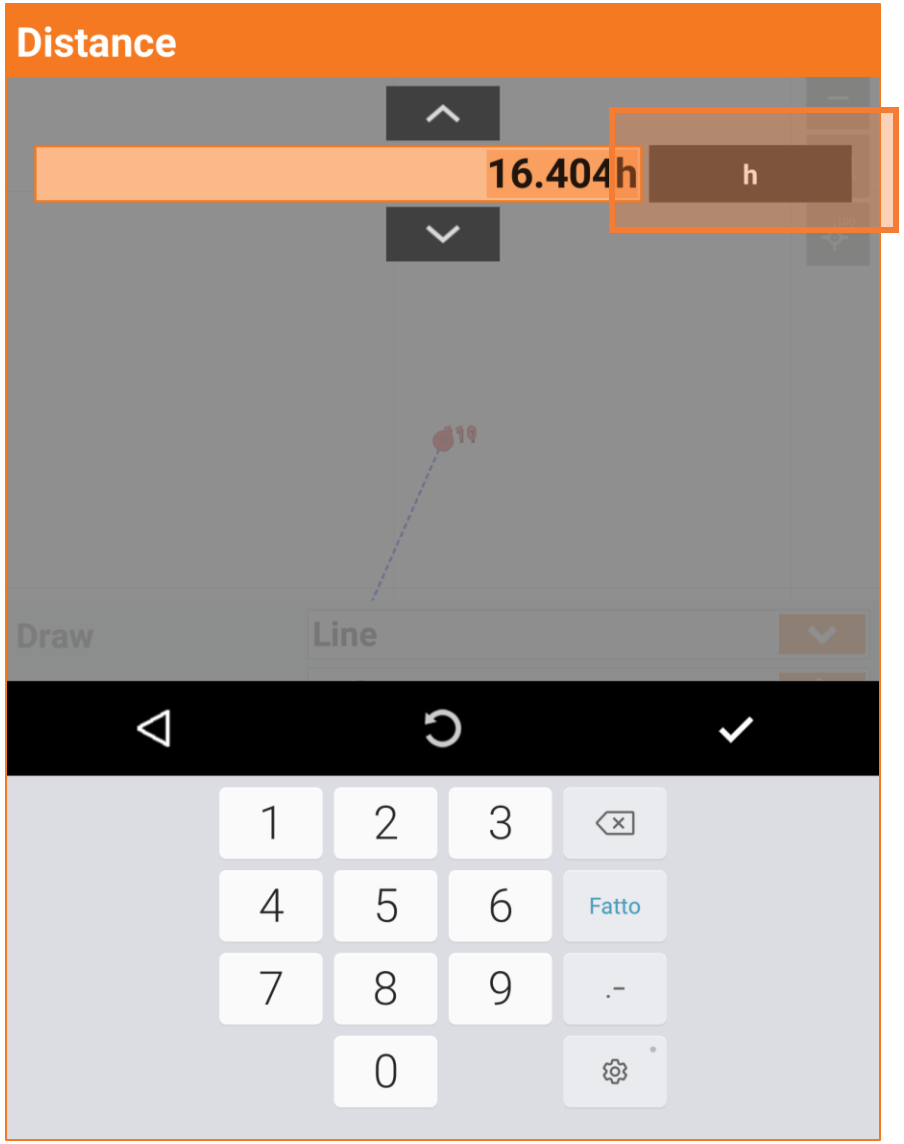
Two new options are available to simplify the entering of Bearings.

- Quadrant number: the first number of the bearing value is the quadrant number. So 323.4549 means S23°45’49”W.
- Quadrant button: a new button is available in the virtual keyboard to select the quadrant. The user has just to enter the value and select the quadrant.



Distance – Chain

US surveyors sometime require to enter distances value in “chain” (1 chain = 66 feet). This unit is now supported when the software requires to enter a distance value.

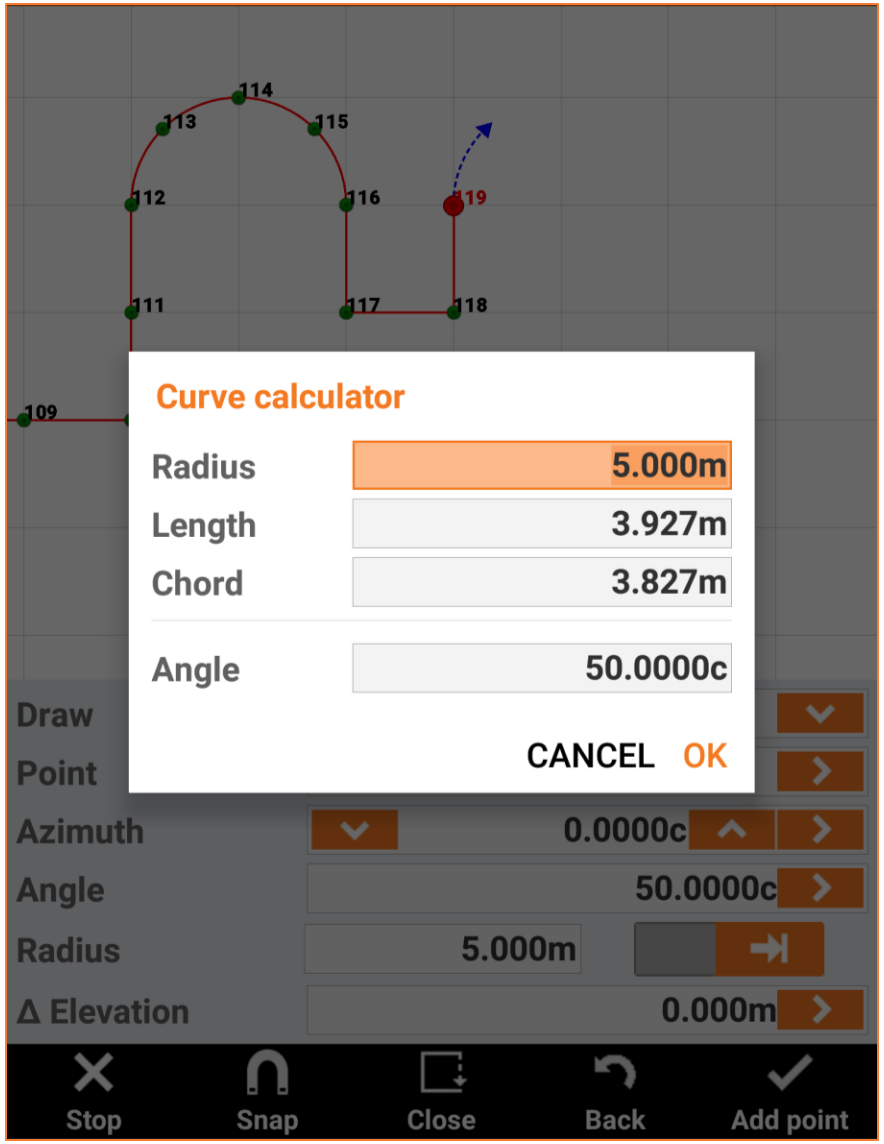


Layout and curve calculator

The Layout command is a very intuitive tool that allows to create points, lines and arcs easily by entering directions and distances.

Curves now can be entered by specifying not only Radius and Angle but also Length an/or Chord.

A Curve calculator tool is available to calculate all the curve data.



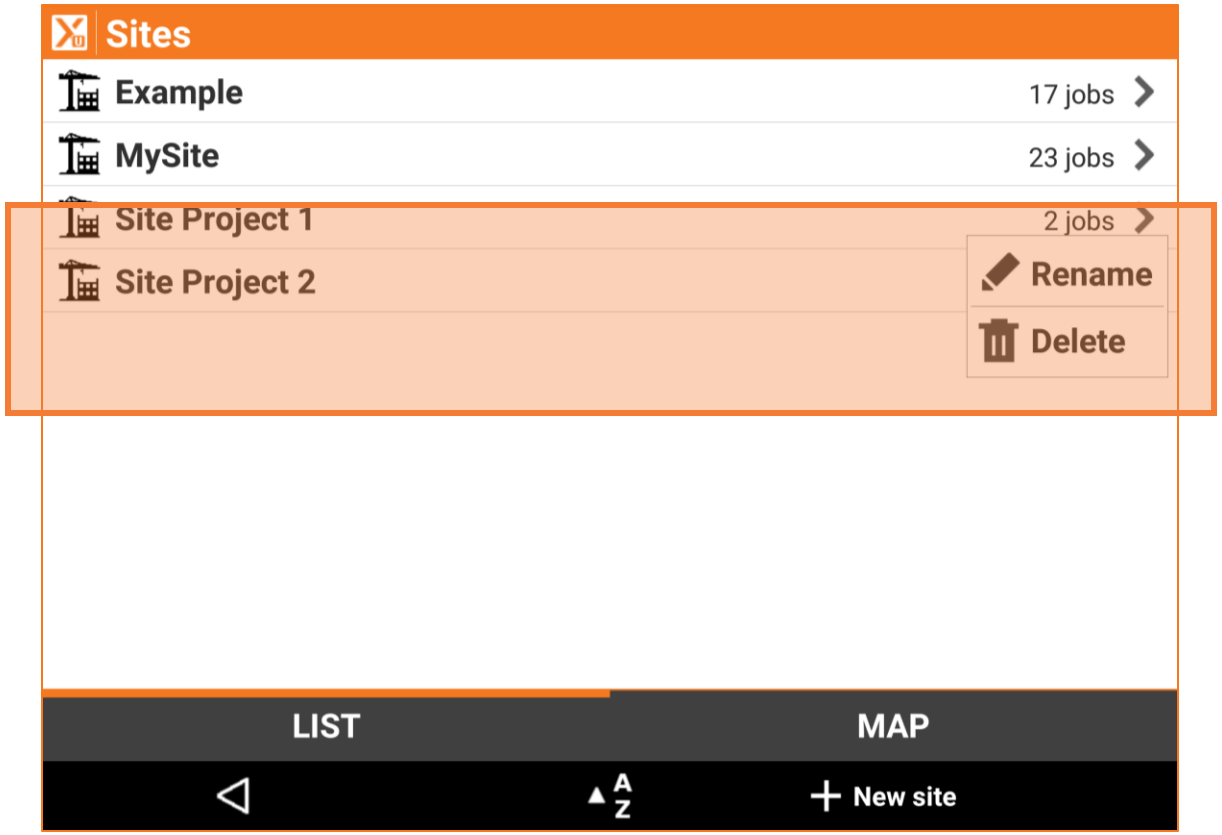
Allegro 3 – Customisable buttons

X-PAD Ultimate has been adapted to support at best the Juniper Allegro3 Android controller.

Many of the physical keys can be used to control the software. The six functions keys can be also customised as shortcut to activate some commands and options.

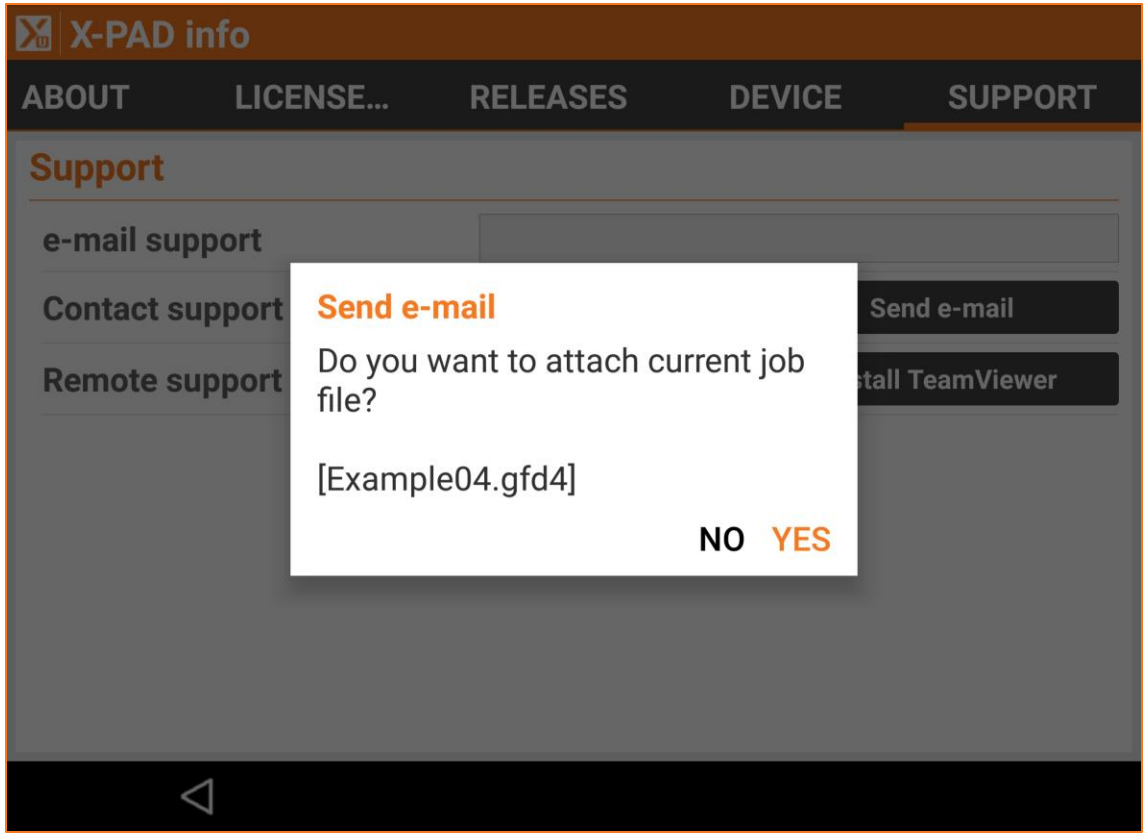
Sites – Delete & rename from local menu

Delete and rename a job site is simplified thanks to the menu available in the list of the sites.



Support page – Attach job to e-mail

Customers can send a support e-mail to a technical reference person from X-PAD Ultimate. The e-mail can include the current job file with the new release.



Points on map

Topographic points on map viewer are now displayed with the corresponding name. This helps to identify the points in the view.