# X-PAD ULTIMATE

# X-PAD Ultimate

## The Ultimate solution in the field

X-PAD Ultimate is a tailored, flexible, modular, ideal, customized software for high end topographic tasks, such as measure, stake-out, cadastral, BIM check, and control, roading, mapping, bathymetry and GIS. Running on Android, it brings the best technologies to measuring.

X-PAD Ultimate ensures productivity in the field and provides perfect integration between measuring tools. Running on Android, it brings the best technologies to topographic surveying: full 3D viewer, integration of your data with the maps, camera for augmented reality, direct data exchange with cloud platforms, use of sensors, voice commands and much more.

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# "The ultimate solution for all those who want the best in the field without compromise."

## Increase productivity

X-PAD Ultimate is the most advanced field software solution for all users that are looking for a tool that grants productivity, ease of use, scalability and full control of data.

Running on any Android device, X-PAD Ultimate brings the best technology directly to the field and in your hand: a full 3D viewer and CAD system to view and edit the drawings. integration of your data with all map types, and support of the camera for augmented reality. Cloud enabled for a direct connection between field and office, the use of all sensors for a better experience in the field, voice commands to control your equipment without the use of your hands, are the some of the key features that will allow you to work with high productivity.
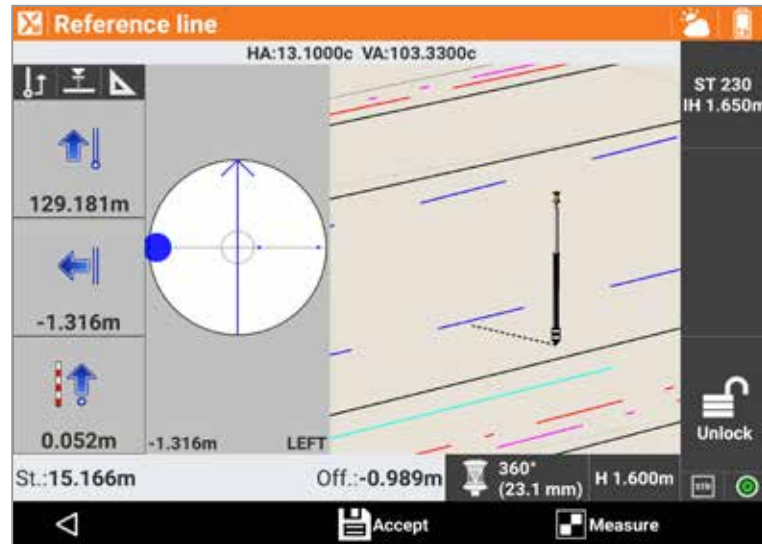
X-PAD Ultimate allows you to have the perfect integration between the different measuring tools: TPS and GNSS allowing them to work together to offer the maximum flexibility in the field; other sensors as laser distance – meters, echosounders and locators are fully integrated in the measurement workflow as well.

X-PAD Ultimate is specifically tailored for users and has the right modules and language for surveyors and construction experts, as it is split in two modules: Survey and Build.
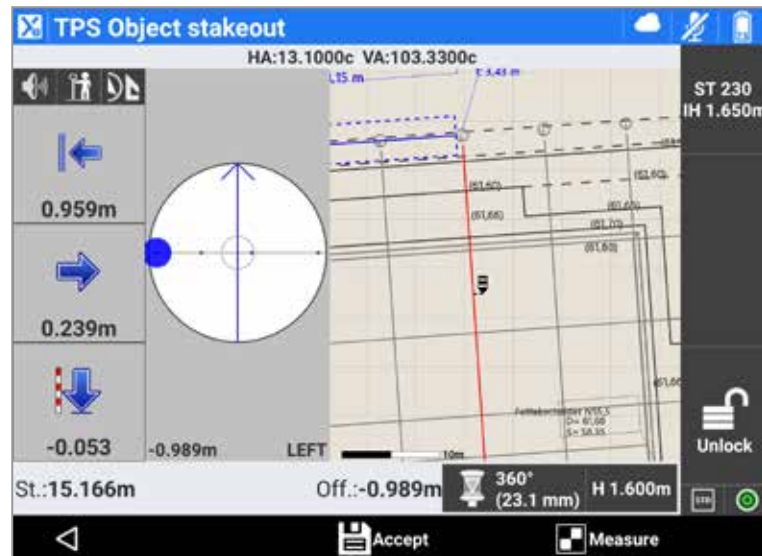
# X-PAD Ultimate

# Innovative Field Solution for Surveyors

## Survey



X-PAD Ultimate Survey is the best solution for all your design survey, property survey, and layout needs. It combines data collection from all GeoMax sensors, including total stations, GNSS, locators and levels. Providing you a set of complete features, flexibility, data integration, scalability and the latest technology in the field. With a set of different modules, X-PAD Ultimate Survey covers all the needs in the field using TPS and GNSS measure tools.



X-PAD Ultimate Build is the ideal solution for all your construction measuring and layout needs - executing all construction activities in an efficient and productive way. It combines data collection from the total station or the GNSS, allowing you to perform the measurement, stakeout and as-built with simple and functional procedures. Continuous improvements and developments are made working closely with users in the field.

Specific functions, derived from the experience in the field alongside construction professionals, make X-PAD Build an indispensable tool in all construction activities. The different mode of the TPS as a reference axis, intersection of two axes and batter boards, make it possible to proceed with tracking operations even in difficult conditions and with few reference points.

### X-TILT

With X-TILT, inaccessible point measurements (e.g. covered manholes or wall corners) are no challenge anymore. X-TILT allows to calculate a point position automatically by inclining a GNSS or a TPS pole in two directions.

### E-BUBBLE

You can also permanently monitor your tilt status thanks to the electronic bubble directly on the main screen. Positions measured with GNSS are only stored if the pole is held vertically.



### TOPOGRAPHIC 3D CAD

X-PAD Ultimate includes a real topographic 3D CAD, not just a simple graphic viewer, with specific functions to draw, edit, measure and calculate the position of new elements that can be then used in stakeout operations.

### MAPS, WMS AND OFF-LINE

X-PAD Ultimate allows you to use different types of standard maps, as well as Web Map Services (WMS); offline mode is supported.

### DATA COLLECTIONS - NOT ONLY COORDINATES

Measuring the position of the points is the main purpose of topographic equipment, but with X-PAD Ultimate you can go further because you can integrate the position, photos and notes.



Quick Codes allow you to create your own custom panels with the most codes and measure the position of the point automatically - all you have to do is choose the code.

### SMARTDRAWING: MEASURE AND DRAWING TOGETHER

The innovative automatic design system with survey codes allows you to see the survey drawing come together point after point without requiring lengthy and complex coding.

### STAKEOUT WITH YOUR EYES CLOSED

With X-PAD Ultimate, stakeout has never been easier or faster. Voice guidance allows you to arrive at the point without even looking at the display while the large compass simplifies visual navigation. Every drawing element, including the points, lines, arcs and every position within the graphical view can be staked out.

# Unbeatable field solution

## AUGMENTED REALITY - TURN ON REALITY!

Point the camera to the site and immediately see where the points and elements are for stakeout.

X-PAD Ultimate will guide you in the vicinity of the point and determine the exact location, but you can use augmented reality to see your design elements overlayed with the real world.

## VOICE COMMANDS

X-PAD Ultimate can be controlled by voice commands; you don't need to touch the screen to measure points, change the survey code, change target type, and for many other operations.

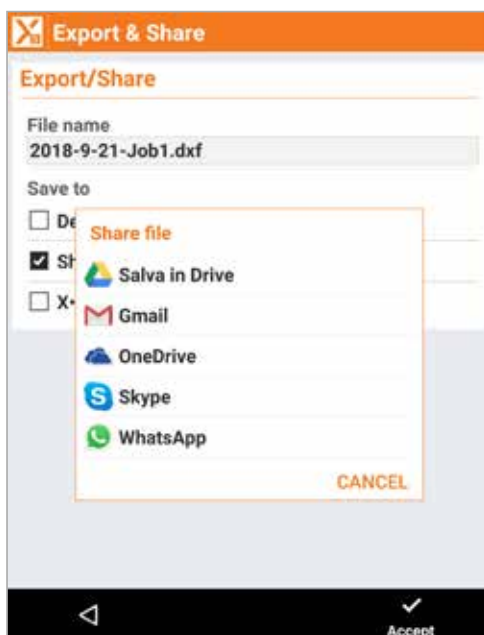## GIS: RECORD ALL THE INFORMATION YOU WANT

The integrated GIS feature allows to create your GIS features and to define the corresponding attributes that can be filled when the point is stored.

## BIM: MODEL REALITY

With BIM, IFC files can be loaded, displayed in the main CAD view and also in survey, stakeout and COGO commands. Elements can be selected, hidden or isolated. From BIM models, it is possible to extract points, lines, surfaces and cross-sections for stakeout and checking operations.

## CLOUD AND SHARING - FIELD AND OFFICE, ALWAYS CONNECTED

With X-PAD Ultimate you can open and import any file, even if it is in the cloud. You can save your data on the most popular cloud platforms, like Google Drive, Microsoft OneDrive and Dropbox, and access from the field or office. You can also share information and coordinates of the measured points quickly via a message or email with a photo attached to those in the office waiting for the coordinates of a point.

# Uncomparable adaptability

## ROBOTIC TOTAL STATION - WORK AUTONOMOUSLY

X-PAD's robotic features allow you to have full control of the robotic total station remotely. From a single screen you can access all the control functions of the total station. It is possible to choose among different search strategies for prism acquisiton. Prism lock status is always available on one screen and with one tap it is possible to start the search process, even using the GPS position of the controller.

## TERRAIN SURFACES AND VOLUMES

With the Volumes features, X-PAD Ultimate can calculate terrain models from the points with the options to define breaklines and boundaries. From the models, you can go to the volume calculation to determine the cubic yards of material from an excavation or a pit. You can also import models from DXF or LandXML files. Using the stake out commands and a surface, you can check grade to design elevations in the field.

## ROADING - THE WHOLE PROJECT IN THE CONTROLLER

The Roading feature allows you to load, manage and perform alignment stakeouts of projects such as roads, highways and canals. The management is fully visual, so you can always know what you are doing. At any moment you can see plans, vertical profiles and cross sections.

You can stake all elements of the project (edges, sideslopes, walls, ditches, etc) at any station and with any offset, using the cross sections, the edge polylines or by defining one or more sections template.

## AUTOMEASURING

The Automeasuring module is a simple, flexible, safe and economical solution for your automated measurement needs. Just connect your total station with an Android device, and get real time data and alerts.

## X-POLE: ONE POLE, TWO SYSTEMS

The X-Pole solution allows you to work simultaneously with TPS and GNSS using the best features of each system and with maximum flexibility. A simple tap is all you need to change the measurement mode and switch from GNSS to TPS mode and vice versa. The GNSS receiver mounted atop the prism, gives the total station a precise position, speeding up the prism acquisition after loss.

# X-PAD Ultimate modules

Available in two versions, each dedicated to surveying and construction professionals. A specific working environment and a set of dedicated features, differentiate the two versions: Survey and Build.

| | Survey | Build |
|---|---|---|
| **GNSS** Main module that includes all the functionality for survey, stakeout and control with GNSS receiver. | X | X |
| **TPS** Main module that includes all the functionality for survey, stakeout and control with mechanical total station. | X | X |
| **Robotic** Extends the TPS main module with features that allow full control of motorized and robotic total stations. | X | X |
| **X-Pole** Allows to work simultaneously with TPS and GNSS using the best features of each system and with maximum flexibility. | X | X |
| **BIM** Allows to import BIM models, display, navigate and extract information (points, lines, surfaces) for checking and stakeout operations. | X | X |
| **Volumes & Surfaces** Create and import 3D surfaces to be used for all stakeout operations; it includes functions for the calculation of the volumes according to different methods. | X | X |
| **MEP** Set of commands designed to perform plumbing, transfer height, create parallel line, move on surface, scan line. | X | X |
| **Roading** Import of road design data from different formats and stakeout of any element of the alignment in various ways. | X | |
| **GIS** Define GIS features and attributes to be assigned to measured points. It includes import and export functions of GIS data. | X | |
| **Automeasuring TPS** Allows automatic measurements (for single sessions or at time intervals) of points; includes report generation and automatic sending of the results. | X | |
| **Build Extension** Extends Survey version with all the features that are an exclusive of Build version. | X | |
| **PicPoint** Captures and photo processes for the measurement of points directly on the photos themselves. | X | |
| **Bathymetry** Manage bathymetric surveys by acquiring depth data from echo sounder and GNSS positions. It includes a route control. | X | |
| **Locators** Connect to utility locators and record depths at corresponding GNSS positions. | X | |

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