X-PAD FUSION GEOMAX

Works when you do



X-PAD Office Fusion

The Geospatial Data Office Software

PART OF HEXAGON

geomax-positioning.com

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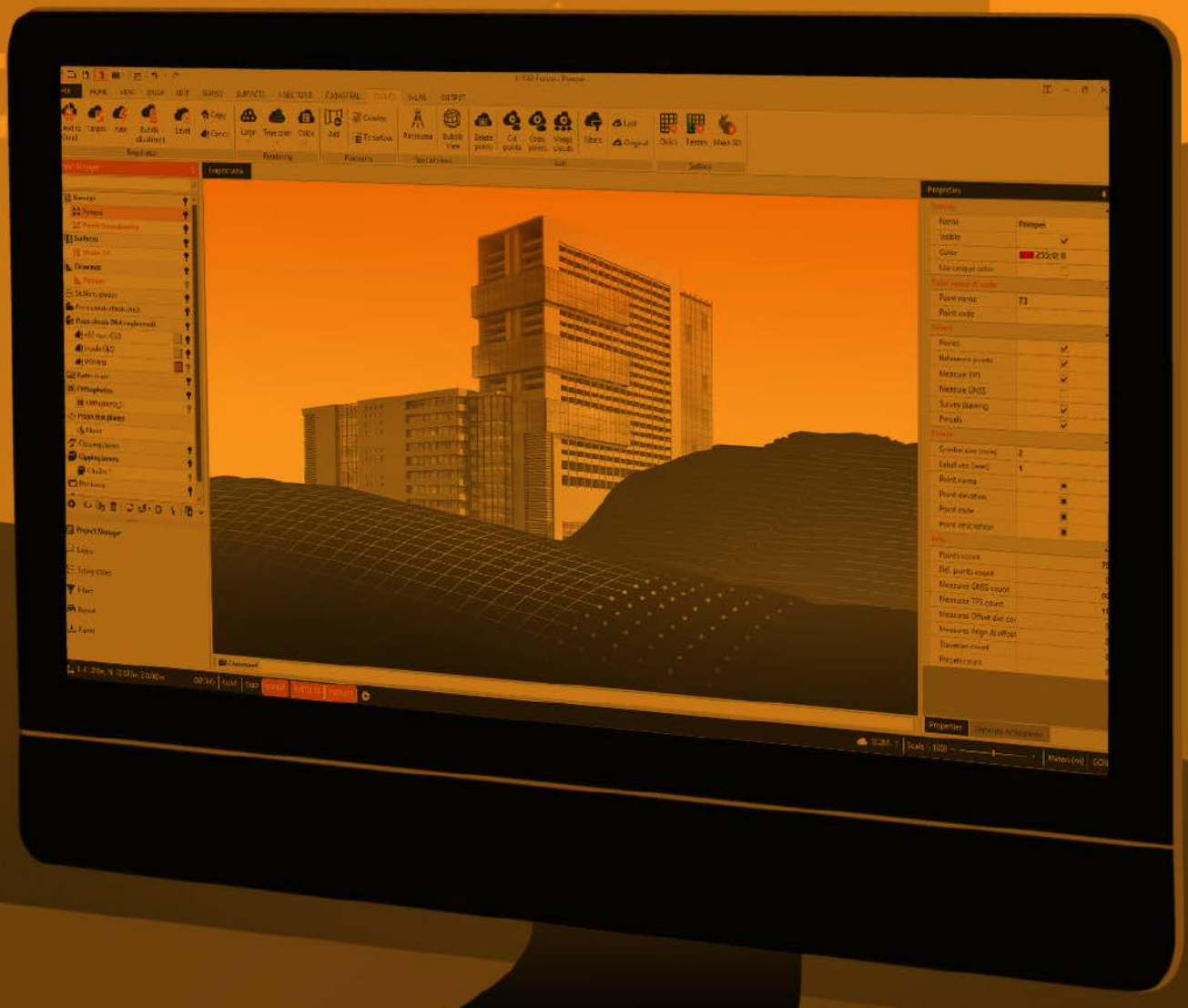
"A new concept of software for processing all types of geospatial data with real integration of different information: experience easy import of data, calculations, adjustments, scan registration and management of the clouds, points, measures, surfaces and images, topographical utilities and drawing functions. All in one application."





All-in-one solution

One software for all workflows

From import to final drawings, X-PAD Office Fusion offers you the best tools without having to pass data from one program to another. You can load data from total station, GPS, digital level and laser scanners and calculate, view and manage in one software. You can connect TPS survey, GPS survey, levels, laser scanner sessions and see everything together.

Data organisation

With X-PAD Office Fusion you can handle different types of data: measures, points, drawings, surfaces, cross-sections and point clouds. With the project manager you can organise the data within the same job file. Multiple survey sessions and different groups of drawings can be managed and data made visible or invisible at any time.

Data visibility

A modern working environment, designed to manage geospatial data, and a powerful CAD 3D are the basic framework on which topographic and laser scanner modules have been developed. Data can be viewed and managed on table grids with countless powerful functions for searching, filtering and editing.

Topographic CAD

The X-PAD Office Fusion CAD combines both, a CAD designed to operate according to the standards defined by AutoCAD but also made for topographic use. When you have to indicate a coordinate, you can type the name of the corresponding point; or you can select topographic objects (points and lines) according to the survey code.

X-PAD Office Fusion



Software Modules

X-TOPO

Everything under control

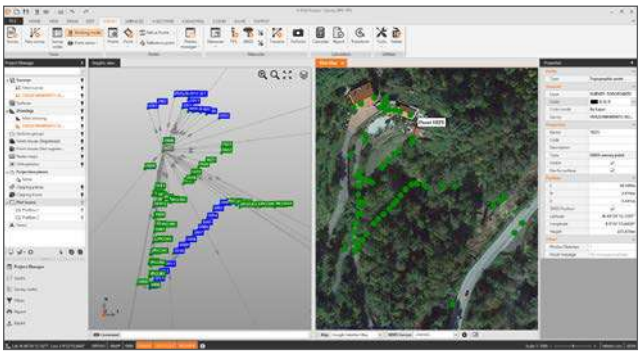
With X-PAD Office Fusion you can import the measures from your instruments and always have the control of all the information to verify at any time the quality of your work. You can edit and correct any mistakes made in the field and then recalculate the coordinates. If you have collected photos and audio recordings in the field, you can access to this information and use it in the creation of the final drawings.

Points, the result of your work

With X-PAD Office Fusion you can customise the representation of the point in all aspects to create the best drawing possible. If the point coordinates are recalculated, or you have changed the coordinate system, the drawing continues to maintain the link with the points.

Calculations

X-PAD Office Fusion calculates and solves all kinds of surveys, GNSS, total station, digital level and mixed with the least squares algorithms for precise calculation. You have the ability to define cartographic systems, apply geoid corrections and reduce the distance to your reference level.



Georeference raster maps

Raster maps can be imported and translated, rotated and scaled to fit the right position. Specific tools allow to reduce the input time of the control points and the localised transformation supports to act locally to each part of the maps and adjust local errors. The result is a map that matches exactly the reference points.

Work with any data type in one platform

X-SCAN

Import, Register, Done

Powerful registration functions allow you to quickly and easily match your clouds also by using topographic points. During the registration you are constantly accompanied by visual information and controls that helps to avoid mistakes.

Registration and bundle adjustment

Robust algorithms allow to process point clouds and return the best results considering all the scans as a whole. Several options allow to improve the results according to the specific type of work and target recognition offers alternative way to have faster and better results. The automatic registration module is an irreplaceable tool that generates the final results with one single click.

Images inside a bubble

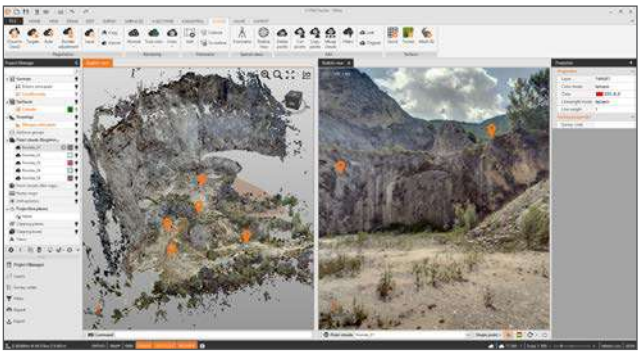
The pictures are always the best way to understand reality. The bubble view of X-PAD Office Fusion allows you to indicate the points for drawing directly on the images and the software will choose the right coordinates.

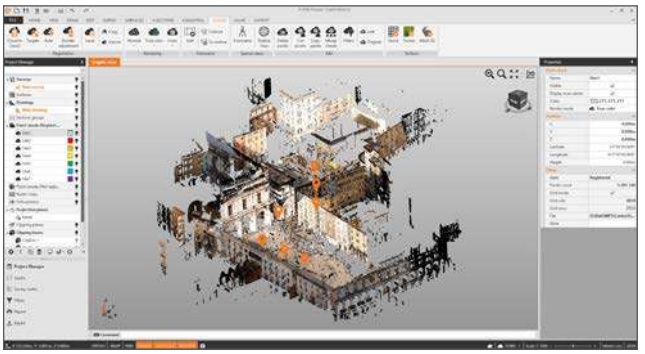
Measurements turned into 3D digital model

Surfaces and mesh 3D can be extracted from the point clouds and take the color of the points or texturised with the scanner's photos or texturised from a panoramic photo previously imported and linked to the scan.

Orthophotos and cross-sections

The typical results required from a set of scans are the orthophotos and cross-sections. X-PAD Office Fusion allow to generate them with very few and intuitive steps.





Millions of points... handling made easy

Powerful selection tools allow you to capture the closest, the lowest, highest, or the average point of the surroundings of selection. With Smart Magnifier you have the direct view of points in the identified area and you can choose your point with absolute precision without constantly change the point of view.



X-PAD Office Fusion	X-TOPO	PicPoint	X-SCAN	Auto Alignment
General				
Jobs and Data management (drawings, surveys, surfaces, cross-sections, points cloud)	•		•	
2D/3D advanced viewer	•		•	
Layers management	•		•	
Drawing commands, drawing aids and editing commands	•		•	
Maps view (Google, Bing, WMS and others)	•		•	
Plot boxes, direct plotting and custom reports	•		•	
Info commands (id, distance, area, angle)	•		•	
Orthophotos	•		•	
Cut planes, clip boxes, projection planes	•		•	
Topography				
Management of topographic points, TPS and GNSS measures	•			
Management of Survey codes	•			
Cartographic coordinate systems, GNSS localization system, Geoids	•			
Calculation of coordinates from measures	•			
Traverse and network adjustment	•			
Topographic utilities	•			
Digital level data management and calculation	•			
Point's photo manager	•			
Georeference raster maps with several methods and tools	•			
Manage PicPoint sessions		•		
Surface and terrain modelling				
Terrain 3D surfaces from points and points cloud with break and boundary lines	•			
Contour lines	•			
Volume calculation (fixed elevation, plane, second surface)	•			
Autobalance cut & fill, calculation of elevation difference model	•			
Cross-sections from points and surfaces	•			
Points Cloud				
Render mode (single color, intensity, true colors, range, elevation, point size)			•	
Bubble view			•	
Panoramic view			•	
Manual registration with known points (targets)			•	
ICP registration and Bundle adjustment registration			•	
Automatic target recognition			•	
Fully automatic registration				•
Point selection tools (Nearest, Lowest, Highest, Average) and Smart Magnifier			•	
Automatic plane detection and projection on plane intersection			•	
Filters to reduce and clean points cloud, merge of point clouds			•	
Editing tools			•	
Cross-sections from point clouds			•	
Surfaces and Mesh 3D from points clouds			•	
Import / Export				
X-PAD Survey, X-PAD Construction and X-PAD 3D	•			
TPS direct transfer (download and upload)	•			
TPS/GPS data format and Customizable ASCII import	•			
Autodesk DXF/DWG	•			
LandXML, Esri Shape, Google Earth KML, WebGL	•			
Raster maps (jpg, png, tiff, ECW, bmp)	•			
Raster from Maps and surfaces from Google Earth	•			
Laser scanner points cloud data formats (Zoom300, E57, LAS, ASCII, PTS, PTX)			•	

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