

Android  
Field Software



Cube-a is Stonex's solution for professional surveying and GIS which has been designed and developed for the Android platform.

Thanks to the flexibility of the Android environment, we have been able to create a simple and intuitive user interface that makes surveyors ready for any work, saving time and increasing productivity.

Full support for touch gestures and the possibility to install it on Smartphones and Tablets are the keys to the success of Cube-a. It also includes support for many languages and adjusts its interface as from the current system language setting.

Cube-a is a modular application which can be customized as needed: GNSS, Robotic and Classic Total Stations, GIS and 3D Modelling modules can be enabled to fulfill any customer need.

## Cube-a | Stonex field software

Stonex field solutions for GNSS RTK and Total Station surveys will make operators' work quick and easy, ensuring high productivity in all jobs requiring precision and efficiency.

### GNSS

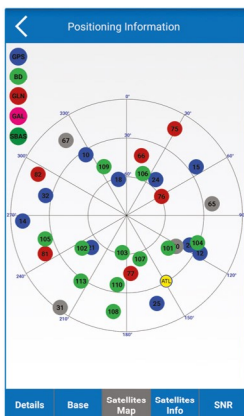
Cube-a is compatible with all Stonex GNSS Receivers. Supports Rover, Rover Stop&Go, Base and Static modes. Various screens provide useful information on the status of the GNSS receiver including the position and the signal quality of the Atlas satellite.

### SURVEY

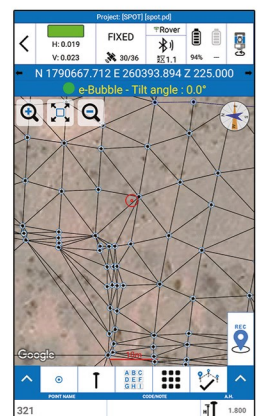
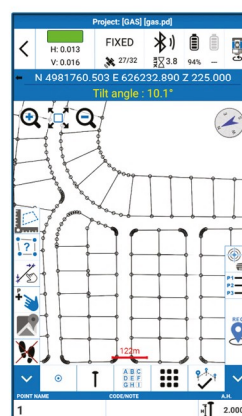
A simple and intuitive survey interface with numerous indicators immediately helps the surveyor to understand what kind of work and in what conditions is taking place. Indicators show various information like solution status, position precision, battery levels, RTK correction delays and more. Intuitive screens allows for an easy change of settings, a view of the collected points, adding new CAD elements and drawings or proceed surveying.

### PHOTO & SKETCH

To improve and complete the survey, you can also use the Photo & Sketch. This function can be used while surveying or even on the already acquired points: take photos and add notes, add and position some indicating arrows or simple hand drawn sketches.



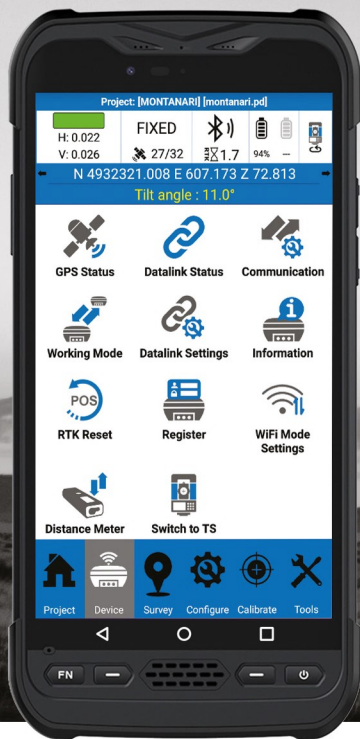
Point Name or Code	Code
5366	
Latitude	045°29'00.880466"
Longitude	009°21'57.779660"
Northing	5036737.220
Easting	528606.617
Altitude	155.927
Quality	155.927
5365	
Latitude	045°29'00.858874"
Longitude	009°21'57.434290"
Northing	5036736.519
Easting	528599.123
Altitude	155.733
Quality	155.733
5364	
Latitude	045°29'00.864256"
Longitude	009°21'57.088878"
Northing	5036736.651
Easting	528591.624
Altitude	155.704
Quality	155.704



### INTEGRATED CAD

Cube-a includes a smart and easy to use CAD feature. The CAD has been designed to work with touch displays and it allows to easily draw points and other CAD entities by mean of a smart pointer which can be moved using one finger and which always transmits to the user a strong confidence of the result achieved. The help of object-snaps like point, mid-point, end-point, intersection and others makes it possible to integrate the survey with new elements directly in the field.





## STAKEOUT

A compact interface groups all the stakeout launching commands in one screen for an easier work in the field. Stakeout screens are enriched with both graphical and analytical indicators which guide the surveyor in order to reach the

Thanks to this interface, you can read all the information necessary to complete the stakeout work, to select points or to add them and quickly change all settings. Even in case of small monitors, the information and commands are always smartly arranged and readable, the buttons are clickable without difficulty and some of them can be reduced to leave more space for the map.



## TOTAL STATION

Cube-a has been designed to fully support mixed surveys. A Cube-a survey supports GPS points and classical polar stations and measures at the same time. Polar stations can be set to occupy previously collected GPS points or on unknown positions calculated using the Free Stationing program. Likewise, the GPS reference system can be adjusted to match an existing polar survey in local coordinates. Cube-a supports all Stonex Total Stations via Bluetooth.

## GIS

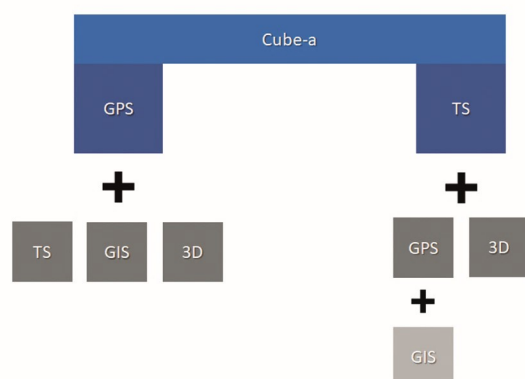
GIS functionalities are well integrated in the workflow of standard GPS surveying. Thanks to the Cube-a's ability to collect, not only single points but also to automatically draw vectors passing through the collected points, GIS surveying becomes fast and easy. The request to fill in the GIS data is automatic and automatically follows the point or vector acquisition. Data forms can be freely defined using the integrated Feature Set designer or automatically created by Cube-a starting from a sample DBF file. Import and export of standard shapefiles ensures the compatibility and interoperability of Cube-a with virtually any other GIS software.

## 3D & ROADS

The 3D module adds a complete set of commands for performing real-time surface modeling. Base points and constraints are selected by layer. Optional constraints include a perimeter, break-lines and holes (closed non-triangulated areas). The surface display mode is selectable from wireframe, filled triangles with edges, shaded triangles with edges or external perimeter with triangulated points. Volume calculations can be easily defined between a model and a horizontal or inclined reference plane. Results, as well as surface data, can be exported to various file formats. Included in this module is the Roads function, which allows the stakeout of the centerlines/base road alignments, and cross sections. The staking modes available are: by continuous interpolation along the alignment and by station points, elevation can be derived from the elevation profile, the nearest cross section, or by interpolation using previous and next cross sections. The graph proposes two types of views: centerline/alignment and cross section.

# Cube-a FEATURES

	GPS	GIS <sup>1</sup>	TS	3D <sup>2</sup>		GPS	GIS <sup>1</sup>	TS	3D <sup>2</sup>
<b>PROJECT MANAGEMENT</b>					<b>SURVEY MANAGEMENT</b>				
Job management	✓		✓		Localization by one point and by multiple points	✓		✓	
Survey Point Library	✓		✓		Transformation from GPS to grid and vice versa	✓			
System settings (units, precision, parameters, etc.)	✓		✓		Cartographic predefined reference systems	✓		✓	
Import/export ASCII and DXF	✓		✓		National grids and geoids	✓			
Import/export ESRI shapefiles (with attributes)		✓			Integrated CAD with o-snaps	✓		✓	
Export Google Earth KML/Send to Google Earth	✓				Layers management	✓		✓	
Import Raster Image	✓		✓		Custom Point Symbols and Symbol Library	✓		✓	
Share files by cloud services, e-mail, Bluetooth, Wi-Fi	✓		✓		Entity acquisition management	✓		✓	
Customizable ref. systems also by remote RTCM messages	✓				Point Survey	✓		✓	
Features codes (multiple feature tables)	✓		✓		Hidden points calculation	✓		✓	
Fast Coding Panel	✓		✓		Automatic point collection	✓		✓	
Define GIS features		✓			Control RAW data recording for Static and Kinematic post-processing	✓			
Define GIS attributes		✓			Point stakeout	✓		✓	
All brand bluetooth disto support	✓		✓		Line stakeout	✓		✓	
<b>GNSS MANAGEMENT</b>					Height Stakeout (TIN or inclined plane)	✓		✓	
Support for Stonex receivers	✓				Stakeout reports	✓		✓	
Generic NMEA (support for third party receivers) - Rover only	✓				Mixed Surveys <sup>3</sup>	✓		✓	
Receiver status (quality, position, sky view, satellites list, base info)	✓				Measures (area, 3D distance, etc)	✓		✓	
Full support for features like E-Bubble, Tilt, Atlas, SureFix	✓				Display functions (zoom, pan, etc.)	✓		✓	
Network connections management	✓				Surveying tools (quality, battery and solution indicators)	✓			
Support of RTCM 2.x, RTCM 3.x, CMR, CMR+	✓				Visualization of the drawing on Google Maps/BingMaps/OSM	✓		✓	
Automatic GNSS model & features detection	✓				Adjust background map transparency	✓		✓	
Automatic antenna offset management	✓				Map rotation in the direction of walking (using tablet e-compass)	✓		✓	
Bluetooth and Wi-Fi GNSS connection	✓				Tilt/IMU Sensor Calibration	✓			
<b>TS MANAGEMENT</b>					Info commands (id, distance, area, angle, distance to object)	✓		✓	
TS Bluetooth			✓		Corner Point	✓			
TS Long Range Bluetooth			✓		Collect a point by 3 inclination positions	✓		✓	
Search and prism tracking (Robotic only)			✓		Record Settings	✓			
Compensator interface			✓		COGO (perimeter, area, calculator, etc)	✓		✓	
Station on point			✓		Freehand sketch + picture of collected points	✓		✓	
Free station / Least squares resection			✓		Pregeo (Italian Cadastral data)	✓		✓	
TS orientation st.dev. and check orientation			✓		Dynamic 3D models (automatic TIN)				✓
Topographic basic calculation			✓		Constraints (perimeters, break-lines, holes)				✓
Rotate to GPS position <sup>3</sup>			✓		Calculation of Volumes (various methods)				✓
Rotate to given point			✓		Road stakeout				✓
Export TS raw data			✓		Raster georeferencing	✓		✓	
Export mixed GPS+TS raw data	✓		✓		Adjust raster images opacity	✓		✓	
					Connect to Utility Locators		✓		
					LandXML export				✓
					LandXML import				✓
					<b>GENERAL</b>				
					Automatic SW updates <sup>4</sup>	✓		✓	
					Direct technical support	✓		✓	
					Unique license for tablet/handheld software version	✓		✓	
					Multi-language (includes support for many languages and adjusts its interface as from the current system language setting)	✓		✓	



Illustrations, descriptions and technical specifications are not binding and may change

STONEX AUTHORIZED DEALER

- 1 GIS available only if GPS module enabled.
- 2 3D available only if GPS and/or TS module enabled
- 3 Available only if GPS and TS modules enabled
- 4 Internet connection required. Additional charges could apply.

**STONEX®**  
Part of **UniStrong**

Viale dell'Industria 53 - 20037 Paderno Dugnano (MI) - Italy  
Phone +39 02 78619201  
www.stonex.it | info@stonex.it