

# SPECIAL PROJECTS

*Customized Solutions for your Projects*



# Special Projects

## Tailor made solutions for your work

Stonex Special Projects are solutions designed to facilitate field work in various sectors. Our solutions can be used for the precision positioning of machines in construction sites and mines, for the installation of solar fields or guard rails, to help those who work in precision farming. We also develop solutions for the marine sector, where we make it easier to monitor offshore operations.



## What we do

Our job is to design and tailor solutions for you to fit your projects



We are a team of engineers specialized in the field of precision positioning that realizes **tailor-made solutions** to be applied in all projects that require a precise positioning of men and machines.

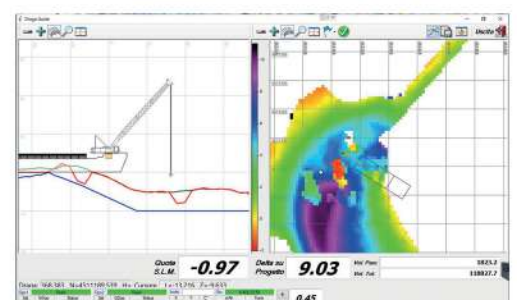
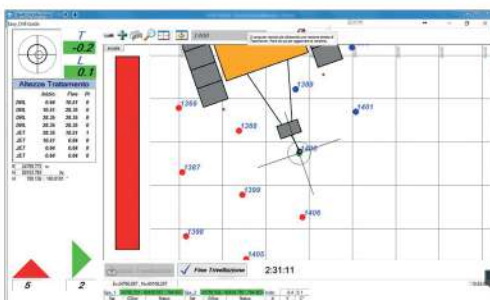
Our solutions can be applied to different sectors:

- solar fields
- mining
- precision farming
- marine operations
- road and construction
- fleet management

Our experience allows us to understand the customer's needs and **develop the most suitable solution for every occasion.**



Our solutions include both **hardware and software**, providing a system that can control the machine in an **easy and intuitive way**. The projects can be created in the office and then easily transferred to field instruments.



## HIGHLY CONFIGURABLE AND SIMPLE SOLUTIONS

Our systems are easy to use while remaining highly customizable, unlike many systems on the market for precision positioning of machines in the field. You will be fully operational in a short time, thanks to the support of our technical team and the simplicity of our software.



## SOFTWARE

Cube-sp is a software developed by Stonex for Android system that can be customized according to the project's needs.

Whether it is necessary to use it in pairs with a pile driver machine or a jet grounding machine, Stonex is able to satisfy every need. With Cube-sp you can create projects, import projects created in the office, set various types of parameters, control the movement of the machine and govern it with centimeter precision up to the desired point.



### PROJECT AND DESIGN

The Project can be generated directly in the field or it is possible to import the local coordinates from different formats (DXF, TXT). A TARGET POINT file will be produced for the GPS navigation purpose.



### AUTOMATION

Our solutions adapt to any kind of sector and allow the operator to drive any type of machine to the target point in manual, semi-automatic and full automatic mode. A slope sensor with hydraulic interface can be installed to ensure maximum grading accuracy at all times.



### VISUALIZATION AND STORAGE

Thanks to our solutions it is possible to access and store the position of the points in an easy way. Through a remote connection it is also possible to monitor the progress of the work and update the projects in real time.



### HIGH ACCURACY

High accuracy positioning of the points and machines.



### ROI

Adopting Stonex solutions means reducing production costs. Less operators and high productivity.

ADVANTAGES  
OF OUR  
SOLUTIONS





## SOLAR FARM

STONEX positioning technology provides excellent performance in the photovoltaic sector, supplying a solid solution to operators.

The main solution (GPS + tablet + software) is able to process large surveys and create projects quickly; the quality of the work is ensured by the correct interaction between the sensors and the software.

The solution offers different degrees of automation for the pile driving process, to meet the customer's needs and reducing working time.

## MINING

STONEX has developed simple and intuitive operating solutions to allow operators the correct positioning of the machines.

Traditional staking of points is an integral part of our solutions.

To facilitate the exchange of information between operators, the solutions consist of a part dedicated to the Office and a part dedicated to field work.

Office and field can communicate through a Cloud platform where they can easily share data, projects and information.



## AGRICULTURE

STONEX offers numerous precision positioning solutions to meet the needs of the agricultural world.

Our solutions for smart farming provide the ability to easily plan, schedule and manage jobs. Thanks to the high level of accuracy of our receivers, we are able to guarantee high positioning quality on various types of jobs.

The solutions consist of hardware and software and they are easily adaptable to any type of machine. The needs of each customer can be easily satisfied.

## MARINE

STONEX offers flexible, high-performance positioning systems to meet the unique needs of marine construction on both simple and complex projects.

Our solutions include both hardware and software, and can be easily integrated into third-party systems. Improve productivity and efficiency in underwater marine construction applications including dredging operations, crane operations, hydrographic and bathymetric surveys, canal / port development, reclamation, breakwaters and navigation systems.



## ROAD & CONSTRUCTION

Our solutions guide the machine on the exact position, by showing bearings and direction on the display of the tablet. The stakes that have already been processed are highlighted on the screen and a CSV report of the work is also available, allowing a straightforward and error-free workflow from the field to the office.

The on-site project creation allows to define the pickets distances using a GPS receiver Stonex and a tablet.

## FLEET MANAGEMENT

The STONEX solution for fleet management consists of a miniaturized GPS / Glonass unit, with an easy-to-install, high-performance container.

The installation of an external GPS / Glonass receiver increases its accuracy and use, furthermore the integrated three-axis accelerometer makes the solution highly performing.

Thanks to the complete configurability, the macro functions, the native interfaces (such as CAN and OBD) and the availability of an extensive and complete set of I/O and accessories, it adapts to any application and vehicle.





## 1 Tablet + Software



cube-sp

## 2 Sensors



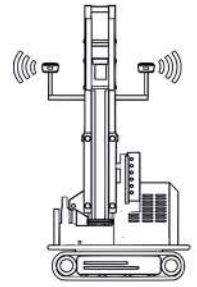
## 3 GNSS Antenna



## 4 GNSS Receiver



# SOLAR FARM



## GPS satellite technology for solar farms

Stonex Special Projects division has designed two solutions for the solar world:

### • STX-SUITE

STX-SUITE is a solution for the design of a photovoltaic system and the accurate positioning of the support poles on site. It provides for the automation of the pile driving process, reducing work times and improving the accuracy of the result.

### • STX-PUSH&PULL

This solution is designed to test the tightness of the post. It is a push and pull validation test with auto log file.



## 1 Tablet + Software



cube-sp

## 2 Sensors



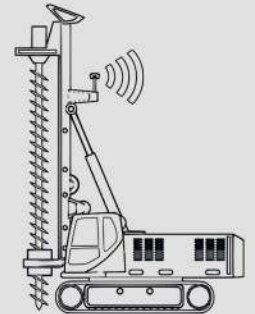
## 3 GNSS Antenna



## 4 GNSS Receiver



# MINING



## Satellite technology for high precision mining operations

Stonex Special Projects division has designed three solutions for the mining world:

### • STX-DRILL

STX-DRILL is a GPS guidance system for jet grouting capable to determine the correct planimetric position of the columns, the verticality of the drilling tower and the deviations from the designed coordinates.

### • STX-DIGWHEEL

STX-DIGWHEEL is a system for guiding and positioning digwheel machines for the construction of quarries or tunnels.

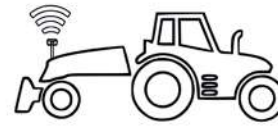
### • STX-TSDRILL

STX-TSDRILL is a system for guiding and positioning horizontal drills for the construction of quarries or tunnels with the support of a robotic total station.





# AGRICULTURE



1 Tablet + Software



2 Sensors



3 GNSS Antenna



4 GNSS Receiver



## GPS technology for Smart Farming

### • STX-MAP

Solution for the precision area's computing of a parcel, the localization of a specific area in the territory and the creation of precise maps.

### • STX-PLANT

Solution for stakeout, design and creation of plantations/vineyards, usable both manually and on machines.

### • STX-POLE

Solution for designing and driving of poles in a field/vineyard that allows to reduce time and work stress, as well as to increase the accuracy.

### • STX-LDRONE

Mission planner for ground drones with precision positioning.

### • STX-NAV

Solution for driving agri machines along a previously predefined path.

### • STX-AGRI

Smart farming solution, suitable for planning jobs and providing precise information to the operator in the field.

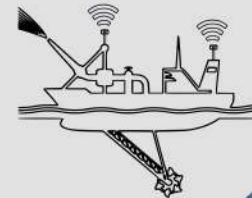
### • STX-TRACK

System for the management of the tractor fleet, the planning of the works and the connection between the office and the field.

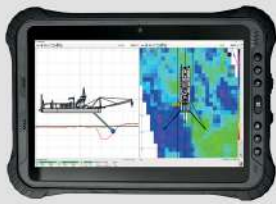
### • STX-DRAIN

Field drainage positioning and guiding solution.

# MARINE



1 Tablet + Software



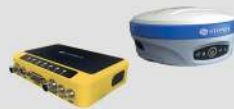
2 Sensors



3 GNSS Antenna



4 GNSS Receiver



## Flexible and High-performance Systems

Stonex Special Projects division has designed several solutions for marine sector:

### • STX-SAIL

Solution for navigation control and boat guidance in confined spaces.

### • STX-DREDGECUT & STX-DREDGECRA

Solution for positioning and controlling a dredger: by entering the information regarding the dredge, the quarry and the objective of the work, the system allows the operator to have a visual support for controlling the position and the progress of the work.

### • STX-BLOCK

Monitoring system for underwater placements of blocks according to a predefined grid.

### • STX-BARGE

An easy navigation control able to move the barge to the designed working position.



## NEMO 110 USV

Nemo 110 is an unmanned vessel system with integrated single-beam echosounder. Thanks to this versatile solution it is possible to carry out survey and measurement in areas not reachable, or difficult to reach, by crewed ships such as shallow waters and coastal areas.



# ROAD & CONSTRUCTION

1 HW + Software



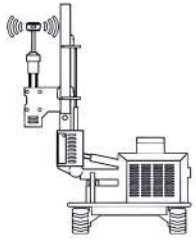
2 Sensors



3 GNSS Antenna



4 GNSS Receiver



## GPS guidance system for road safety barriers installation and construction

Stonex Special Projects division has designed some solutions for road and construction:

- **STX-POLE**  
Solution for the accurate positioning on site of support poles for guard-rail type road barriers.
- **STX-COUNTERHITS**  
Solution for the accurate positioning on site of the support poles for road barriers such as guardrail with validation system of the stability of the pole.
- **STX-PUSH&PULL**  
Solution designed to test the structural strength of a driven pile or a screwed pile.
- **STX-CON-POLE**  
Solution for checking and validating the stability of a pole in the building field.



1 Software



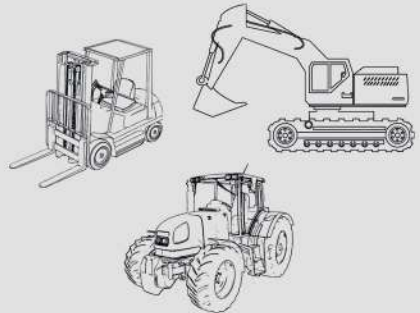
2 Sensors



3 GPS & Control unit



# FLEET MANAGEMENT



## High-performance Positioning Systems and Web based software

Stonex Special Projects division has designed a solution for GPS positioning of vehicles.

Main features:

- Vehicle and fleet location on map
- Hybrid, satellite, streetview map display
- "Mobile" access optimized for Tablet PC or smartphone
- Historical track report
- Vehicle statistics report
- Warning light or alphanumeric display for the overcoming of the machine control event



# STONEX

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Headquartered on the outskirts of Milan, Italy, STONEX is one of the world leader company on measurement and survey, with over 200 qualified distributors worldwide.

Joined together with an unbeatable professional expertise Stonex offers a wide range of top quality services, to satisfy all pre-sales and post-sales needs.

Stonex is a part of Beijing UniStrong Science & Technology Co. Ltd, global provider of GNSS, positioning and timing technology for the geospatial market.

Thanks to the integration of different positioning technologies and software the wide range of solutions allows to meet the needs of many fields of application and industries, such as:

- Building and construction
- Land survey and cadastral survey
- GIS data collection
- 3D Scanning
- Agriculture and smart farming
- Land and structure monitoring



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