



# CUSTOM SOLUTIONS

*Solar | Agriculture | Construction | Marine | Mining*

# Special Projects

## Tailor made solutions for your work

Our solutions are designed to facilitate field work in various sectors. They 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



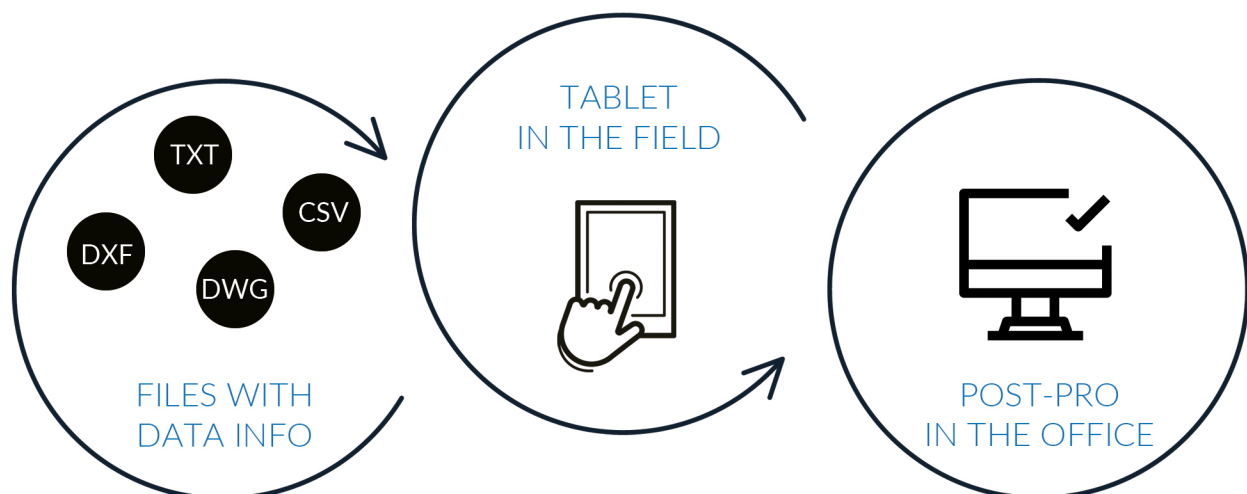
We are a team of engineers specialized in the field of precision positioning that realizes **tailor-made solutions** to be applied in all projects that require a precise positioning of men and machines.

Our solutions can be applied to different sectors:

- solar fields
- mining
- precision farming
- marine operations
- machine control

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

STX-MC is a package of software developed by Stonex for Android systems that can be customized according to the project's needs.

Whether it is necessary to use it in pairs with a excavator, dozer, grader, pile driver or a jet grounding machine, Stonex is able to satisfy every need. With STX-MC 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.



## MACHINE CONTROL | STX-DIG

Stonex machine control solutions can be installed in most earthmoving machines quickly and easily. The simple design of the solution allows you to be up and running in no time. Thanks to the Android software developed by Stonex, all the components can easily communicate with each other. As an option there is the possibility of having a bluetooth connection between the various components of the system. The software allows you to manage all phases of excavation and machine movement.

## MACHINE CONTROL | STX-GRADE

Stonex system for levelling control the operator to control the machine blade, ensuring that the blade is always kept in the correct position.

The system is equipped with an inclination sensor to measure the status of the blade and one or two laser receivers as needed. The system helps the operator during the digging phase, avoiding excessive digging.



## 1 Tablet + Software



## 2 Sensors



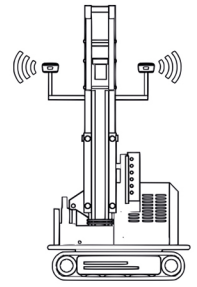
## 3 GNSS Antenna



## 4 GNSS Receiver



# SOLAR FARM



## GPS satellite technology for solar farms

Stonex has designed two solutions for the solar world:

- The first 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.
- The second solution is designed to test the tightness of the stakes. It is a push and pull validation test.



## 1 Tablet + Software



## 2 Sensors



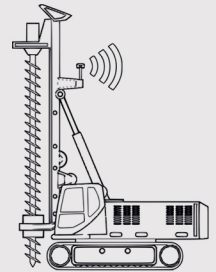
## 3 GNSS Antenna



## 4 GNSS Receiver



# MINING



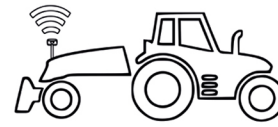
## Satellite technology for high precision mining operations

Stonex has designed three solutions for the mining world:

- 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.
- A system for guiding and positioning digwheel machines for the construction of quarries or tunnels.
- A system for guiding and positioning 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

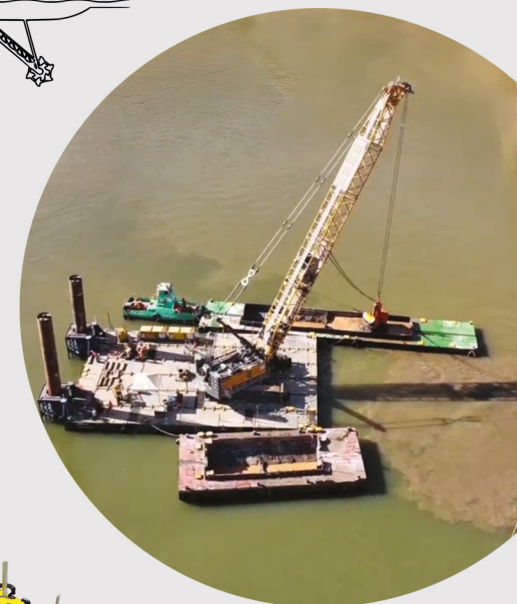
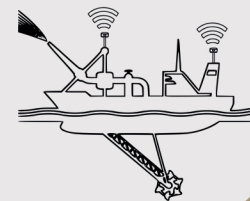


## GPS technology for Smart Farming

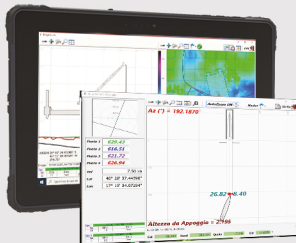
Stonex has designed several solutions for smart farming:

- A solution for the precision calculation of the area of a parcel, the localization of a specific area of the territory and the creation of precise maps.
- A solution for stakeout, design and creation of plantations/vineyards, usable both manually and on machines.
- A solution for the design and driving of poles in a field /vineyard that allows to reduce time and work stress, as well as to increase the accuracy.
- A mission planner for ground drones with precision positioning.
- A smart farming solution, suitable for planning jobs and providing precise information to the operator in the field.
- A system for the management of the tractor fleet, the planning of the works and the connection between the office and the field.
- A solution for driving agri machines along a previously predefined path.
- A field drainage positioning and guiding solution.

# MARINE



## 1 Tablet + Software



## 2 Sensors



## 3 GNSS Antenna



## 4 GNSS Receiver



## Flexible and High-performance Systems

Stonex offers flexible and high-performance positioning systems to meet the unique needs of marine world 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 applications thanks to our systems.

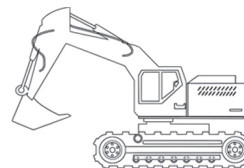
Our solutions are suitable for dredging operations, canal/port development, reclamation, breakwaters, navigation systems and hydrographic surveys.



## 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.

# MACHINE CONTROL SOLUTIONS



## STX-DIG



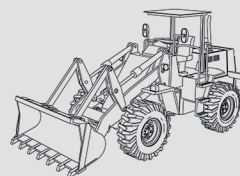
## Machine Control Solution for Excavators

The control of an excavator is a very delicate operation in all phases of work.

In order to operate quickly and effectively, it is necessary to monitor all the movements of the machine in a precise manner.

The system developed by Stonex is equipped with high-precision motion sensors that provide real-time information on the status of the machine.

The information is sent to the Android tablet installed in the cabin (also via bluetooth as optional). The tablet is equipped with Stonex software developed specifically for the world of machine control.



## STX-GRADE



## Machine Control Solution for grading operations

The Stonex system for leveling control is equipped with an inclination sensor to measure the status of the blade and one or two laser receivers as needed.

The Android tablet mounted in the cabin, via the dedicated app, shows the inclination and elevation in real time and automatically sends the corrections to the machine system.

The system is available in different configuration, with laser or GNSS receivers.

# 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.

Stonex products combine the most advanced technologies with a practical design to simplify your daily work. Everyone's needs are met thanks to a team that is able to handle any pre- and post-sales request.

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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