ABOUT THE COMPANY

EUROPE HQ
Headquartered on the outskirts of Milan, Italy, STONEX is one of the world leader company on measurement and survey, with over 80 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.

AMERICA HQ
The STONEX Headquarters in America is located in the United States, in the city of Concord, New Hampshire. Opened in 2019, this office aims to strengthen the presence of STONEX in North America.

With USA Headquarters as a base, STONEX has the opportunity to be closer to the needs of its customers through greater territorial coverage and strengthening of global business.

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
OUR PRODUCTS

- GNSS SURVEYING
- OPTICAL SURVEYING
- 3D SCANNING
- SOFTWARE
- SPECIAL PROJECTS

Each geospatial requirement can be solved with a Stonex solution.
CONTENTS

GNSS SURVEYING

SURVEY GNSS
S700A GNSS Receiver.................................................................10
S8500A GNSS Receiver...............................................................12
S900 ‘New’ GNSS Receiver........................................................14
S900A ‘New’ GNSS Receiver.......................................................16
S980 GNSS Receiver..................................................................18
S920A GNSS Receiver.................................................................20
GNSS RECEIVERS: Product Comparison......................................22

CORS & GNSS Antennas
SC1200 & SC600.........................................................................26
GNSS Antennas & GNSS Software Network.................................27

GIS, Mobile-GNSS & Controllers
S7G & S40 GNSS Receivers..........................................................30
S500 GNSS Receiver................................................................32
Rugged Tablets.........................................................................34
TABLETS & CONTROLLERS: Product Comparison......................36

SOFTWARE

Cube Suite
Cube-a Software....................................................................40
Cube-manager Software............................................................42

OPTICAL SURVEYING

Total Stations
R1 Plus Total Station...............................................................46
R15 Total Station.......................................................................48
R25/R25LR Total Station.........................................................50
R35/R35LR Total Station..........................................................52
R80 Motorized Total Station - Cube h²......................................54
R80 Motorized Total Station - OnePole Solution.........................56
TOTAL STATIONS: Product Comparison....................................58

3D SCANNING

Laser Scanners
X800 Laser Scanner..................................................................62
Stonex Reconstructor Software...............................................63
F6 Handheld Scanner................................................................64

SPECIAL PROJECTS

Special Projects Solutions
Construction & Machine Control............................................68
Precision Farming & Agriculture..............................................72
Marine....................................................................................74
SURVEY GNSS

Powerful solutions for all Surveying jobs

Stonex offers a broad range of GPS and GNSS receivers to meet your needs. Stonex receivers combine the world’s most advanced technology with practical, integrated designs to simplify your daily work. Designed for the requirements of Professional Surveyors, GNSS Stonex portfolio includes a full range of options, allowing the users to choose the best solution for each one’s needs.
S700A Modular GNSS system

Stonex S700A is a compact, high-performance GNSS receiver features a multi-constellation 700 channels GNSS board. The customers have the ability to purchase an entry level version, with just L1 GNSS and all the time, it is possible to upgrade the receiver to the full version via activation code.

S700A supports GPS, GLONASS, BEIDOU, GALILEO, QZSS and IRNSS. S700A full version supports also L-band correction. The unique internal antenna combines GNSS, Bluetooth and WiFi integrated modules to optimize space and increase performance. This technology provides stronger and cleaner signal monitoring, which means unprecedented results. Designed for all day use in surveying applications, S700A includes several features: Linux Operating System, WEB UI interface, 4G Modem, high battery capacity, Type-C connector and IP67 certification.

Stonex S700A GNSS receiver full version, thanks to aRTK function and Atlas® correction service is an ideal solution for any surveying field work and in particular difficult areas, Atlas® delivers worldwide centimeter level correction data through L-band satellite communication.

MULTI CONSTELLATION
Stonex S700A with its 700 channels, provides an excellent on-board real-time navigation solution with high accuracy. All GNSS signals (GPS, GLONASS, BEIDOU, GALILEO, QZSS and IRNSS) are included. The entry level version has only L1 and full version has L1, L2 and L3 frequencies.

WEB UI CONTROL
To initialize, manage, monitor the settings of the receiver and to download data using laptops or PCs, smartphones or tablets with WiFi capability.

NEW BATTERY AND TYPE-C
Stonex S700A is delivered with a large capacity lithium battery that gives you up to 9 hour working. It is also equipped with Type-C connector.

4G MODEM
S700A has an internal 4G modem that operates with all world signals.

TWO VERSIONS
The ability to purchase an entry level version and then upgrade the receiver to the full version provides flexibility to all professionals in the field.

S700A Full Version
Atlas® Correction Service & aRTK

S700A full version is a Stonex GNSS Receiver capable to automatically select the best combination of GNSS signals with the possibility to receive Atlas® RTK L-band. ATLAS is an exclusive PPP technology that provides real-time, centimeter-level positions. PPP (Precise Point Positioning) is a positioning technique that removes or models GNSS system errors to provide a high level of position accuracy from a single receiver. A PPP solution depends on GNSS satellite clock and orbit corrections, generated from a network of global reference stations. Once the corrections are calculated, they are delivered to the end user via satellite through L-band signal.

Atlas® is a subscription for S700A aimed to achieve 3 different levels of accuracy depending on the precision type that you need:
- **BASIC**: 30cm 95% (30cm RMS)
- **L1/L2**: 18cm 95% (18cm RMS)
- **L1/L2/L5**: 12cm 95% (12cm RMS)

Atlas® provides a precise centimeter-level positioning around the world, perfect when working in difficult areas. aRTK is an innovative feature available in Stonex S700A GNSS Receiver that continues generating precise positions up to 20 minutes in case the receiver loses the land based RTK correction source.
S850A With Atlas and E-Bubble

Equipped with an advanced 700 channels GNSS board and capable of supporting multiple satellite constellations, including GPS, GLONASS, BDS/BeiDou, GALILEO, QZSS, and RNSS. Stonex S850A GNSS receiver is an ideal solution for any surveying field work. S850A has also L-Band correction.

The advanced receiver design gives to the S850A an excellent signal tracking ability and interference resistant capacity. Advantages of portability and speed of operation makes S850A GNSS receiver particularly suitable for fieldwork in areas of complex terrain.

Stonex S850A is equipped with all the necessary connections, has integrated Bluetooth and internal Wi-Fi functionality, has a built-in dual frequency UHF radio, 410-470 MHz and 902.4-928 MHz and the worldwide compatible 4G GSM modem.

Stonex S850A integrates also the E-Bubble functionality that allows the measurement of difficult points with the pole not leveled.

MULTI CONSTELLATION
Stonex S850A with its 700 channels, provides an excellent on board real time navigation solution with high accuracy. All GNSS signals (GPS, GLONASS, BDS/BeiDou, GALILEO, QZSS and RNSS) are included, no additional cost.

E-BUBBLE
S850A thanks to the E-Bubble can display directly on the software if the pole is vertical and the point will be recorded automatically when the pole is leveled. It is possible to measure points with an inclination of the pole up to 30°.

HIGH BATTERY CAPACITY AND TYPE-C
Stonex S850A is delivered with a large capacity lithium battery and Type-C connector to recharge it easily.

RADIO AND GSM
S850A has integrated UHF double frequency radio, 410-470MHz and 902.4-928MHz. Through the 4G GSM modem a fast internet connection is guaranteed.

RUGGED RTK
With IP67 Certification Stonex S850A will ensure operations in various kinds of extremely tough environments.

S850A E-Bubble functionality
Stonex S850A integrates an E-Bubble that allows the measurement of difficult points with the pole not leveled. You can calculate the correct coordinate of a point by measuring from 3 different positions. It is possible to measure points with an inclination of the pole up to 30°, even in harsh environments and in the presence of magnetic fields.

In addition, you can view the instrument bubble directly within the survey software without worrying about checking the bubble of the pole. This makes the acquisition of points extremely fast.

Atlas® Correction Service & aRTK
Stonex S850A is a new Stonex GNSS Receiver capable to automatically select the best combination of GNSS signals with the possibility to receive Atlas® aRTK by L-Band. ATLAS is an exclusive PPP technology that provides real-time, centimeter-level positions. PPP (Precise Point Positioning) is a positioning technique that removes or models GNSS system errors to provide a high level of position accuracy from a single receiver.

A PPP solution depends on GNSS satellite clock and orbit corrections, generated from a network of global reference stations. Once the corrections are calculated, they are delivered to the end user via satellite through L-Band signal.

Atlas® is a subscription for S850A aimed to achieve 3 different levels of accuracy depending on precision type that you need. Atlas® provides a precise centimeter-level positioning around the world, perfect when working in difficult areas.

Main features
- No RTK base station or RTK network required
- Correction data is continuously transmitted by satellite L-Band, delivering global coverage
- Bridging RTK outages for uninterrupted accurate positioning
- Autonomous remote position within centimeter accuracy
- Maintain position accuracy during RTK data stream losses
- Keep position accuracy as long as needed
**S900 NEW**

**Powerful Precision Performance**

S900 is the result of the continuous evolution of the Stonex GNSS integrated receivers. Featuring a high accuracy multi-constellation antenna, a powerful UHF dual frequency transmitter and a GSM 4G modem, for a fully integrated multi-communication choice, all combined with a light and modern design.

Stonex S900 Integrated GNSS receiver tracks all the present constellations and satellite signals. GPS, GLONASS, BEIDOU, GALILEO, QZSS, IRNSS and through the upgradeable firmware offers the opportunity to be day by day updated with the latest available features.

On S900 it is possible to insert 2 smart hot swapable batteries at the same time, ensuring a maximum of 12 hours of operation without stopping. To initialize, manage, monitor the settings of the receiver and to download data is available a user friendly Web UI.

S900 is also equipped with E-Bubble functionality and the optional IMU technology. Fast initialization, up to 60º inclination.

---

**MULTI CONSTELLATION**

S900 with its 555 channels, provides an excellent on board real time navigation solution with high accuracy. All GNSS signals (GPS, GLONASS, BEIDOU, GALILEO, QZSS and IRNSS) are included, no additional cost.

**DOUBLE FREQUENCY RADIO**

S900 has an integrated UHF dual frequency radio, 410-470MHz and 1024-1288MHz. The needs of each country are supported.

**E-BUBBLE + IMU**

S900 thanks to the E-Bubble can display directly on the software if the pole is vertical and the point will be recorded automatically when the pole is leveled. This IMU technology is also available as optional, only a fast initialization is required.

**INTELLIGENT BATTERIES**

The dual slot for two smart hot swappable batteries gives you up to 12 hours of battery life. The power level can be checked and seen on the controller or directly on a LCD bar on the battery.

**4G MODEM**

S900 has an internal 4G modem that operates with all world signals, a fast internet connection is guaranteed.

---

**S900 NEW**

**E-Bubble functionality**

Stonex S900 integrates an E-Bubble that allows the measurement of difficult points with the pole not levelled. It is possible to measure points with an inclination of the pole over 30º, even in harsh environments and in the presence of magnetic fields.

In addition, you can view the instrument bubble directly within the survey software without worrying about checking the bubble of the pole. This makes the acquisition of points extremely fast. Thanks to measurement routine integrated into the field software, the management of tilt function is simple and intuitive.

**IMU Technology**

S900 GNSS receivers have an optional feature the new IMU System that allows tilted measurement (Tilt). Thanks to the new IMU technology, the edges of the buildings, the difficult and inaccessible points are no longer a problem.

**What is an Inertial Measurement Unit (IMU)?**

An Inertial Measurement Unit (IMU) is a self-contained system that measures linear and angular motion usually with a triad of gyroscopes and accelerometers.

**What do Inertial Sensors Measure?**

- Gyroscope measures angular velocity
- Accelerometer measures linear acceleration
- Magnetometer measures magnetic field strength

**What are the performances of the S900 with IMU?**

- Fast initialization
- Up to 60º inclination
- 2 cm accuracy 30º
- 3 cm accuracy 60º
- Fast and precise survey
- No problem with electromagnetic disturbances

Stonex S900 with IMU System makes reliable every measurement, for both surveys and the stake-out jobs, and makes extremely fast the acquisition of points: up to 40% of the field work time can be saved.
S900A New Powerful precision with Atlas®

Stonex S900A is equipped with a high performance GNSS board with 800 channels and capable of supporting multiple satellite constellations: GPS, GLONASS, BDS, GALILEO, QZSS and IRNSS, including L-Band correction.

Through the 4G GMM modem a fast Internet connection is guaranteed for the reception of correction data and the management of the maps in the background. In the amazingly compact structure of the receiver the Bluetooth and Wi-Fi modules allow always reliable data flow to the controller, and the integrated TX/RX UHF radio with selectable frequencies, make S900A the perfect system for a GNSS Base + Rover.

Stonex S900A is also equipped with the optional IMU technology, Fast Initialization, up to 60° inclination.

MULTI CONSTELLATION
Stonex S900A with its 800 channels, provides an excellent on board real time navigation solution with high accuracy. All GNSS signals (GPS, GLONASS, BDS, GALILEO, QZSS and IRNSS) are included, no additional cost.

4G MODEM
S900A has an internal 4G modem that operates with all world signals, a fast Internet connection is guaranteed.

E-BUBBLE + IMU
S900A thanks to the E-bubble can display directly on the software if the pole is vertical and the point will be recorded automatically when the pole is levelled. The IMU technology is also available as optional, only a fast initialization is requested.

INTELLIGENT BATTERIES
The dual slot for two smart hot swappable batteries gives you up to 12 hours of battery life. The power level can be checked and seen on the controller or directly on a led bar on the battery.

DOUBLE FREQUENCY RADIO
S900A has integrated UHF double frequency radio. 410-470MHz and 992.4-998MHz. The needs of each country are supported.

S900A New Atlas® Correction Service & aRTK

S900A is a Stonex GNSS Receiver capable to automatically select the best combination of GNSS signals with the possibility to receive Atlas® RTK L-band. ATLAS is an exclusive PPP technology that provides real-time, centimeter-level positions. PPP (Precise Point Positioning) is a positioning technique that removes or models GNSS system errors to provide a high level of position accuracy from a single receiver. A PPP solution depends on GNSS satellite clock and orbit corrections, generated from a network of global reference stations. Once the corrections are calculated, they are delivered to the end user via satellite through L-Band signal.

Atlas® is a subscription for S900A aimed to achieve 3 different levels of accuracy depending on precision type that you need:
- BASIC: 50cm 95% (10cm RMS)
- H30, 30cm 95% (15cm RMS)
- H30, 8cm 95% (4cm RMS)

Atlas® provides a precise centimeter-level positioning around the world, perfect when working in difficult areas.

aRTK is an innovative feature available in Stonex S900A GNSS Receiver that continue generating precise positions up to 20 minutes in case the receiver loses the land based RTK correction source.

IMU Technology
S900A GNSS receivers have as optional feature the new IMU System that allows tilted measurement (TILT). Thanks to the new IMU technology, the edges of the buildings, the difficult and inaccessible points are no longer a problem.

What are the performances of the S900A with IMU?
- Fast Initialization
- Up to 60° inclination
- 2 cm accuracy 30°
- 5 cm accuracy 60°
- Fast and precise survey
- No problem with electromagnetic disturbances

Stonex S900A with IMU System makes reliable every measurement, for both surveys and the stakes-out jobs, and makes extremely fast the acquisition of points up to 40% of the field work time can be saved!
The perfect base GNSS receiver

Stonex S980 integrated GNSS receiver tracks all the present constellations and satellite signals: GPS, GLONASS, BDS, GALILEO, QZSS and IRNSS.

Through the 4G GSM modem a fast internet connection is guaranteed and the Bluetooth and WiFi modules allow always reliable data flow to the controller. These features combined with the integrated 5Watt radio make S980 the perfect base station receiver.

The color touch display and the possibility of connecting an external antenna make S980 an extremely effective receiver for every type of job.

S980 is also equipped with E-Bubble functionality and the optional IMU technology; fast initialization, up to 60° inclination. S980 -TPPS port can be used in applications that require precise synchronization time to ensure that multiple instruments work together or that use the same parameters for system integration based on precise times.

**MULTI CONSTELLATION**

Stonex S980 with its 555 channels, provides an excellent on-board real time navigation solution with high accuracy. All GNSS signals (GPS, GLONASS, BDS, GALILEO, QZSS and IRNSS) are included, no additional cost.

**5W RADIO**

S980 has integrated 5W UHF radio with 410-470MHz frequency. Our receiver is equipped with an external radio antenna to work better.

**E-BUBBLE + IMU**

S980 thanks to the E Bubble can display directly on the software if the pole is vertical and the point will be recorded automatically when the pole is leveled. The IMU technology is also available as optional, only a fast initialization is required.

**COLOR TOUCH DISPLAY**

S980 comes with a convenient color touch display for an easy management of the most important functions.

**EXTERNAL GNSS ANTENNA**

S980, through the appropriate connector, can be connected to an external GNSS antenna therefore it is transformed from an RTK receiver to CORS.

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**E-Bubble functionality & IMU technology**

Stonex S980 integrates an E-Bubble that allows the measurement of difficult points with the pole not leveled. It is possible to measure points with an inclination of the pole over 30°, even in harsh environments and in the presence of magnetic fields.

In addition, you can view the instrument bubble directly within the survey software without worrying about checking the bubble of the pole. This makes the acquisition of points extremely fast. Thanks to measurement routine integrated into the field software, the management of tilt function is simple and intuitive.

S980 GNSS receivers have as an optional feature the new IMU System that allows tilted measurement (TILT). Thanks to the new IMU technology, the edges of the buildings, the difficult and inaccessible points are no longer a problem.

**What are the performances of the S980 with IMU?**

- Fast initialization
- Up to 40° inclination
- 2 cm accuracy 30°
- 5 cm accuracy 60°
- Fast and precise survey
- No problem with electromagnetic disturbances

Stonex S980 with IMU System makes reliable every measurement, for both survey and the stake-out jobs, and makes extremely fast the acquisition of points up to 40% of the field work time can be saved!
S990A High Performance with Atlas® and IMU

Stonex S990A is a 100 Channels GNSS receiver characterized by a new feature that enhance the performances of field surveys. The new IMU System allows tilted measurement (TIL), quick initialization, fast and precise survey.

S990A Receiver is equipped with all important connectivity capabilities: Bluetooth, Wi-Fi, UHF radio and 4G modem. The internal battery of 10,200mAh allows to work for 10 hours and can be recharged via a Type-C connector. The color touch display and the Web UI are an easy and fast way to have the complete control of the receiver.

Thanks to aRTK function and Atlas® correction service, Stonex S990A is also able to work in particularly difficult areas. Atlas® delivers world wide centimeter-level correction data through L-band satellite communication and Internet.1

1PPS can be applied to scenarios that require precise synchronization time to ensure that multiple facilities work together or that use the same parameters for system integration based on precise time.

MULTI CONSTELLATION
Stonex S990A with its 800 channels, provides an excellent on-board real time navigation solution with high accuracy. All GNSS signals (GPS, GLONASS, BEIDOU, GALILEO, QZSS and IMU) are included, no additional cost.

IMU TECHNOLOGY
On S990A is available the IMU technology, fast initialization, up to 60° inclination.

DOUBLE FREQUENCY RADIO
S990A has integrated UHF double frequency radio, 410-470MHz and 902.4-928MHz. The needs of each country are supported.

4G MODEM
S990A has an internal 4G modem that operates with all world signals, a fast internet connection is guaranteed.

COLOR TOUCH DISPLAY
S990A comes with a convenient color touch display for an easy management of the most important functions.

S990A IMU Technology

S990A GNSS receiver has the new IMU System that allows tilted measurement (TIL). Thanks to the new IMU technology, the edges of the buildings, the difficult and inaccessible points are no longer a problem.

What is an Inertial Measurement Unit (IMU)?
An Inertial Measurement Unit (IMU) is a self-contained system that measures linear and angular motion usually with a triad of gyroscopes and accelerometers.

What is the performance of the S990A with IMU?
- No problem with electromagnetic disturbances
- Fast Initialization
- Up to 60° inclination
- 2 cm accuracy 30°
- 5 cm accuracy 60°
- Fast and precise survey

Stonex S990A with IMU System makes reliable every measurement, for both surveys and the stake-out jobs, and makes extremely fast the acquisition of points; up to 40% of the field work time can be saved!

Atlas® Correction Service & aRTK

S990A is a Stonex GNSS Receiver capable to automatically select the best combination of GNSS signals with the possibility to receive AtoS® RTK L-band. ATLAS is an exclusive PPP technology that provides real-time, centimeter-level positioning. PPP (Precise Point Positioning) is a positioning technique that removes or models GNSS system errors to provide a high level of position accuracy from a single receiver.

AtoS® is a subscription for S990A aimed to achieve 3 different levels of accuracy depending on precision type that you need:
- IASCR, 30cm 95% (30cm RMS)
- IH0, 30cm 95% (15cm RMS)
- IH1, 8cm 95% (4cm RMS)

AtoS® provides a precise centimeter-level positioning around the world, perfect when working in difficult areas. aRTK is an innovative feature available in Stonex S990A GNSS Receiver that continue generating precise positions up to 20 minutes in case the receiver loses the land based RTK correction source.
# GNSS RECEIVERS

## Product Comparison

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</table>
CORS & GNSS Antennas

High quality and performance

GNSS Reference Receivers

STONEX technology for GNSS reference stations and networks continues to evolve, meeting rapidly changing GNSS technology demands. STONEX C.O.R.S. stations (Continuously Operating Reference Station) are flexible and adaptable reference server that offer multiple solutions for multiple needs. STONEX C.O.R.S. stations meet the highest demands for reliability and work in the toughest environments. Professionals put them to work on any type of GNSS applications, from campaign and permanent single base stations to RTK networks, from structural monitoring to offshore positioning, or from atmospheric research to seismic studies.
GNSS Reference Station

CORS stations can be used either for the start of a new infrastructure network or for an integration into existing networks. It is possible to use CORS stations as a Rover for special applications (agriculture, machine control, bathymetry, structure monitoring, etc.), and with several software solutions according to the customer’s request.

SC2200

SC600

GNSS Antennas
High Precision Antennas for all survey works

Stonex family of GNSS antennas is designed to enhance and support the performance of Stonex precise positioning receivers. The antennas receive GNSS multi-constellation signals. Each antenna is built to withstand various application and surveying needs; the Stonex antennas can be used in land survey, marine survey, channel survey, seismic monitoring, bridge survey, container operation, and agriculture applications.

They have high gain and wide beam width to ensure the signal receiving performance of satellite at low elevation angle. The phase center of these antennas remains constant as the azimuth and elevation angle of the satellites change. Signal reception is unaffected by the rotation of the antenna or satellite elevation, so placement and installation of the antenna can be completed with ease.

GNSS Software Network

The Stonex CORS stations are GNSS multi-frequency receiver designed to be used either as stand-alone reference stations or as part of a GNSS stations’ infrastructure. Stonex CORS stations are typically used as NTRIP server and is the ultimate equipment for all those jobs that are based on GNSS correction data acquisition, processing, distribution and management; moreover, the stations support also the recording of raw data with a high frequency of acquisition.

Cube-net is the most intelligent solution to manage and control Networks of GNSS Reference Stations. Data from reference stations can be collected to calculate a solution to rover’s users for obtaining precise position. Performances are analyzed through a real-time central of the whole Network. Operator can receive all necessary corrections data to determine the absolute position of a rover at any location and he can manage subscriptions automatically from web user interface.
GIS, Mobile GNSS & Controllers

Solutions for accurate geographic data field collection

GIS solutions combine positioning, communications and software to equip the mobile workforce. GIS products greatly improve productivity in hundreds of industries by geo-enabling fieldworkforces with precision, rugged, and easy-to-use products.

STONEX provides a wide variety of applications to the GIS industry. All applications involve the use of innovative STONEX mobile solutions to allow organizations to integrate their field personnel into a bidirectional data flow. Powerful tools for display, query and selection ensure that field personnel receives the maximum advantage for both the data they already hold and the data they are collecting.
S7G GNSS Handheld Receiver

GIS & SURVEY in one solution

Stonex S7G GNSS receiver combine the modern positioning technology and versatility of a powerful handheld, perfect for collecting geographic data and operate fast and accurate measurements. S7G handheld is compact, ergonomic and small size and weight: 234 x 99 mm and 895g.

S7G is powered by a Cortex A8 ARM 1 GHz processor and Windows Mobile 6.5 Professional operating system.

To increase performance and to load the job data, a slot for external memory (internal 32 GB is included).

S7G integrates a GSM/GPRS modem that provides fast and efficient Internet connection directly on the field, and WiFi and Bluetooth technology, that allow the user to receive/transfer data quickly and conveniently on long distances.

Thanks to the 3G internal modem there is also the possibility to improve the accuracy of data, connecting to real time differential correction network provider.

Internal GNSS antenna for centimetric accuracy in RTK environment, a real topographic Rover, all in one handheld receiver.

S40 Advanced Controller

Stonex S40 can be used in any situation wherever the field staff goes. Complete product certifications and the advanced manufacturing process, ensure that the device is high efficient steady and durable. It can bring an unprecedented experience even for GIS users. S40 has onboard the Android system for greater flexibility in regard applications that can be used and possibly develop specifically. Collect data with the required accuracy, thanks to the real time differential corrections (RTK/3AS).

S40 is a very flexible instrument, can be used as a controller to manage all GNSS Stonex. It is a data logger connected to 1s and can be used stand alone as a GNSS receiver for GIS applications where a precision better than 50cm is required.
S500 Small and lightweight GNSS Receiver

Compared to traditional GIS products, the S500 is an intelligent, high precision data acquisition receiver that can be used without the need to hold it in your hand and therefore offers greater freedom of movement and flexibility.

Thanks to the internal web interface, the receiver can be configured and prepared to receive RTK differential corrections and ready to be connected to any software for Survey or GIS.

The S500 offers high precision positioning and is equipped with a high speed 4G module. The positioning is so fast and reliable that it can also be used by vehicles moving at high speed. S500 works with all 4 satellite systems (GPS, Glonass, BeiDou, Galileo), support access to external differential RTK signal to get centimeter level positioning results.

Rubber protective cover, increase the protection of the device, non-slip and no damage, the whole device protective class reaches IP67, and it resists 1.2m hard ground drop.

S500 GNSS Receiver
From GIS to Topography

S500 is a versatile and flexible instrument, capable to offer high accuracies for the demanding users, switching from GIS to topographic Survey, Precision Farming, Mapping, GIS data collection, environmental agencies, forestry are just a short list of the fields where Stonex S500 will give a decisive impulse to the productivity and to the quality of the positioning data, with the ability to use the already existent devices, as Smartphones and Tablet with Android, iOS and Windows OS.
Android

UT30 & UT10
Rugged Tablet

UT30 and UT10 are reliable and high performance Rugged Controllers. These Android mobile devices are ideal for managing the survey in the field. Resistant to water, dust and shocks (IP67), they are suitable for operating even in the most difficult environmental conditions. UT30 and UT10 are equipped with Wi-Fi, Bluetooth, NFC, GSM modem and GNSS receiver technologies.

Windows

UT52, UT50 & UT20
Rugged Tablet

UT52, UT50 and UT20 are reliable and high performance Rugged Tablets. Windows 10 mobile devices are ideal for managing software applications for field survey and data collection. Resistant to water, dust and shocks (IP67/IP68) they are suitable for operating even in the most difficult environmental conditions.

UT52, UT50 and UT20 are equipped with Wi-Fi, Bluetooth, GSM modem and GNSS receiver technologies.
# TABLETS & CONTROLLERS

## Product Comparison

<table>
<thead>
<tr>
<th></th>
<th>UT52</th>
<th>UT50</th>
<th>UT20</th>
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Cube Suite

STONEX complete Field & Office Software solution

Cube Suite is the complete software solution designed and developed by STONEX for on field and in office use. Work on field with the software for GNSS RTK, GIS and Total Station surveying. Continue working in office with the software for data transfer, graphical visualization and analytical data processing.
Cube-a is the Stonex surveying and mapping software designed and developed for 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 adds its interface as from the current system language setting.

Cube-a is available in three versions: Cube-a for GNSS, Cube-a for GNSS+GIS and Cube-a for mechanical and robotic Total Stations.

**Cube-a**

**Stonex field software**

Stonex field solutions for GNSS RTK, GIS 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. It allows to work in Rover, Base and Static mode. It also provides the opportunity to survey points in Stop&Go, ensuring efficiency, high precision and flexibility in the field.

**SKY PLOT**

Various screens provide useful information on the status of GPS. We also developed the possibility in the Sky Plot to read the presence of Atlas. The innovation to show Atlas correction is in order to help and facilitate the work of surveyors so that, when this correction is needed, they can know if the satellite is seen and in what position.

**SURVEY**

Simple and intuitive survey interface with numerous indicators that immediately help the surveyor to understand what kind of work and in what conditions is taking place.

From the solution indicators to the quality indicators, from the information on the batteries to the information on the points, we have developed this control panel from which you can easily change settings, see the collected points, add graphic elements and drawings or proceed surveying.

**PHOTO & SKETCH**

To improve and complete the survey and stakeout functions, you can also use the Photo & Sketch. This function can be used while surveying or even on the points already collected. The points can be enriched with notes, arrows, texts, photos and simple drawings. The command was developed in order to create a work environment that can be customized to the maximum, in fact the elements that can be inserted can be rotated, moved or deleted.

**STAKEOUT**

A compact and complete interface of all the functions that can facilitate the work in the field. We have enriched this function with references for fast, accurate and simple movement indicators, in order to speed up the processing and make it pleasant. Thanks to this interface, you can read all the information necessary for the stakeout: select points or add them and quickly change all settings. All this is possible without ever leaving the main screen. 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 improve the visibility of the map.

**TOTAL STATION**

We have developed the possibility for Cube-a to work on mixed surveys, thanks to the implementation of the support for Total Stations. The Total Stations are supported via Bluetooth. Moreover, having developed the possibility of free stationing, Stakeout and Cloud integration, this feature makes the program a reference point for professionals who want a complete and innovative program.
Cube-manager has been developed to work on desktop computers running Microsoft Windows and it implements the tools to download, to manage and to process the data acquired with one of the mobile solutions.

Using this software, you can integrate mixed GNSS RTK and Total Station data, process raw GNSS data in different ways, import and export the data from and to the most popular known formats.

This software will help operators providing the best functions for data transferring, graphical visualization and analytical data processing.

The software is composed of various optional modules and a free version.

Cube-manager Modules

Cube-manager-p
The P is the Cube-manager’s optional module dedicated to the post-processing. It offers the possibility to perform correction calculations with maximum accuracy. In addition to the basic features of the software, this module provides functions for the calculation of Stop&Go post-processing, Static post-processing for single and multiple bases, kinematic post-processing, and least-squares Network Adjustments. Cube-manager-p is constantly updated to improve its performance.

Cube-manager-t
The T is the Cube-manager’s optional module that enriches and completes the topographic functions of the software. This module provides sophisticated functions of reto-translation and coordinate conversions. It enhances the management of 1S surveys by integrating the traverse calculations and the 2D network calculation. It allows the georeferencing of raster images. The aim of our developers, when implementing these functions, is always simplicity and intuitive use. In addition to that, users can always make use of technical support.

Cube-manager-m
The M is the Cube-manager’s optional module dedicated to modeling. This is the module designed for professionals who will work on constraint triangulations, volume calculations, contour lines, height profiles etc. In this case, the users will have all the CAD commands, CoGo commands and functions on the graphic entities provided in the basic software core but will also be able to perform even more specific functions such as those mentioned above.
Total Stations
High Technology and Quality

STONEX Total Stations are simple and durable, designed and built to meet all Customers’ needs, allowing easiness of use to everyone in full autonomy. Fast, intuitive, reliable and precise, STONEX Total Stations are optical precision tools designed to support high-quality professional for all types of topographic job ensuring high performance for Surveying and Engineering.

R80 Motorized Total Station

R1 Plus

R15

R25

R35
R1Plus
The companion of every professional surveyor

Stonex R1 Plus Total Station, precise distance and angles measurements, concentrated in 5 Kg of pure technology.

The perfect tool whenever the topographic works requires a light and fast machine, all day working thanks to 26 hours of continuous operating time.

The onboard field programs, included as standard, make R1 Plus suitable for any construction site, cadastral, mapping and staking out, works.

No limitation for distance measurements, up to 5,000 m with a single prism - 600 m reflectorless (KGC 90%) - and 2” as angular accuracy, always guarantee reliable points calculation.

R1 Plus has been designed to hold out against rain and dust: the IP66 certification allows to go ahead with the survey even during hard rain. The body design is distinguished by its robust mechanical structure, and the high performance telescope, featuring 30X magnification and illuminated reticle, provide the best sighting quality in any lighting condition.

LONG DISTANCE MEASUREMENTS
Thanks to the high efficiency EDM, R1 Plus guarantees long distance measurements: 600 m in reflectorless mode and up to 5,000 m using a single prism, with millimeter accuracy.

FAST, ACCURATE, RELIABLE
Measuring distances in one second, with 2 mm accuracy, makes any job extremely cost effective and reliable. The wide range of application software allows to complete the Surveyor’s tasks directly in the field.

3 DAYS OF FIELD WORK
The low power consumption circuit design and to the two high capacity batteries allow to continuously work for 26 hours and to measure over 1,000 distances. The SD card up to 16 Gb can store an huge amount of data.

HIGH PROTECTION GRADE
IP66 dustproof/waterproof rating ensures R1 Plus’s high reliability in all weather conditions and allows to continue working even under very humid conditions and where sand and dust are present.

R1 PLUS
The most complete field software suite at your service

When the work is not limited to points collection R1 Plus becomes your portable equipment for COGO calculations and setting out of points, lines, roads. It’s easy to calculate an area, the height of remote points, such as power lines and bridges, the accuracy of a traverse. More than 15 programs are available.

[Images of various measurement and calculation processes]
R15  The best companion of every surveyor

Stonex R15 Total Station, precise distance and angles measurements, concentrated in 5 Kg of pure technology. The perfect tool whenever the topographic works require a tight and fast machine, all day working thanks to 24 hours of continuous operating time.

The onboard field program, included as standard, make R15 suitable for any construction site, cadastral, mapping and staking out works. The wireless Bluetooth connection allows to connect R15 with handheld computers giving the possibility to use a custom field software on line with the instrument.

No limitation for distance measurements, up to 5000 m with a single prism; 2000 m reflectorless and 5’ as angular accuracy, always guarantee reliable points calculation.

R15 has been designed to hold out against rain and dust: the IP55 certification allows to go ahead with the survey even during bad rain. The body design is distinguished by its robust mechanical structure, and the high performance telescope, featuring 30X magnification and illuminated reticle, provide the best sighting quality in any lighting condition.

R15  The most complete field software suite at your service

When the work is not limited to points collection, R15 becomes your portable equipment for COGO calculations and setting out of points, lines, roads. It’s easy to calculate an area, the height of remote points, such as power lines and bridges, the accuracy of a traverse. More than 15 programs are available.

LONG DISTANCE MEASUREMENTS

Thanks to the high efficiency EDM, R15 guarantees long distance measurements: 1000 m in reflectorless mode and up to 5000 m using a single prism, with millimeter accuracy.

FAST, ACCURATE, RELIABLE

Measuring distances in one second, with 2 mm accuracy, makes any job extremely cost effective and reliable. The wide range of application software allows to complete the Surveyor’s tasks directly in the field.

3 DAYS OF FIELD WORK

The low power consumption circuit design and to the two high capacity batteries allow to continuously work for 24 hours and to measure over than 120,000 points. The SD card up to 16 Gb can store a huge amount of data.

HIGH PROTECTION GRADE

IP55 dustproof/waterproof rating ensures R15’s High reliability in all weather conditions and allows to continue working even under very humid conditions and where sand and dust are present.
R25/R25LR High precision Total Station

High accuracy and long reflectorless range are the perfect combination that makes Stonex R25/R25LR the best friend of every professional surveyor.

Casestudy, mapping, staking out, and up to high precision monitoring works: within the range of R25/R25LR series, you will find the solution that fits your needs.

R25/R25LR comes standard with integrated onboard field software, a complete suite of applications, and an external controller can be linked to Stonex R25/R25LR through the Bluetooth wireless connection: no limitation will stop your working process.

Stonex R25/R25LR features endless friction drives for continuous horizontal and vertical rotations: no more straps and clamps with limited movements but a more comfortable use of the station. The trigger key on the side of the instrument allows you to start the measurement very easily.

LIMITLESS DISTANCE MEASUREMENTS
By using digital phase laser ranging technology, R25/R25LR guarantees high accuracy long range measurements: 4000/8000 m in reflectorless mode and up to 5000 m using a single prism, with millimeter accuracy.

FAST, ACCURATE, RELIABLE
Measuring distances in one second, with 2 mm accuracy, makes any job extremely cost effective and reliable. The wide range of application software allows to complete the Surveyor's tasks directly in the field.

ONE DAY OF CONTINUOUS FIELD WORK
Thanks to the low power consumption circuit design and to the two high capacity batteries R25/R25LR gives the opportunity to continuously work for around 13 hours. No concern for data storage: the improved 4 GB internal memory and the SD card up to 16 GB store a huge amount of data.

TEMPERATURE PRESSURE SENSORS
Temperature and pressure changes have a negative impact on the accuracy of distance measurements: the smart R25/R25LR monitors the changes and automatically adjusts the distance calculations.

R25/R25LR The total station with endless drives

Whether the work is a basic survey or a long road staking out under full sun, R25/R25LR will always help you with a friendly user interface and its intuitive field software. The navigation menu drives the Surveyor into simple operations, and the results are displayed in a clear way.

ENDLESS FRICTION DRIVES & TRIGGER KEY
These features make R25/R25LR one of the most manageable Total Stations of the market: target collimation is fast and accurate using both the hands and the measure starts using the trigger key located on the same side of the instrument.

AUTOMATIC 2 AXIS COMPENSATION
The electronic dual axis compensator featuring a wide range automatically levels R25/R25LR when it is not perfectly horizontal. The status of the compensator is shown on the graphic display allowing an accurate leveling of the instrument.

WIDE RANGE OF COMMUNICATION OPTIONS
Standard R2525 interfaces: mini USB, SD card up to 16 GB, guarantee a seamless In/Out data flow to any external device. The wireless Bluetooth connection allows to connect R25/R25LR with handheld computers giving the possibility to use a custom field software online with the instrument.
R35/R35LR Fully customizable Total Station

Stoneex R35/R35LR series is the most customizable Total Station on the market. Depending on the user needs, R35/R35LR comes with endless friction drives for continuous horizontal and vertical rotations, 2" accuracy and 600/1000 m reflectorless range.

This advanced Total Station is fully customizable; each user can choose the software that best suits own needs. Several onboard software to be chosen, such as MicroSurvey FieldGenius, Carlson Survey CE, AIMS Mobile and many Custom field applications.

In addition the 1140x840p touch screen display on both sides gives the Surveyor a clear, colourful and fully graphical environment, and the user friendly onboard software supports this user with guided through functions for data collection, topographic surveys, staking out.

The high-precision class 3 EDM, featuring millimeter accuracy even on long range distances, and the absolute encoders performing high precision angles measurements, provide reliable points calculation in every condition.

UP TO 600/1000 m REFLECTORLESS
By using digital phase laser ranging technology, R35/R35LR guarantees high accuracy long range measurements: up to 600/1000 m in reflectorless mode and up to 5000 m using a single prism, with millimeter accuracy.

TEMPERATURE PRESSURE SENSORS
Temperature and pressure changes have a negative impact on the accuracy of distance measurements. The smart R35/R35LR monitors the changes and automatically adjusts the distance calculations.

CHOOSE YOUR FAVORITE ONBOARD SOFTWARE
By choosing R35/R35LR you are not forced to use the manufacturer software! A wide range of well-known field software are compatible, and the user can even create his own application onboard.

FAST, ACCURATE, RELIABLE
Measuring distances and angles in one second, with 2 mm accuracy, makes any job extremely cost effective and reliable. The big touch screen graphic display facilitates the daily work in the field.

R35/R35LR New with endless friction drives and trigger key

R35/R35LR model has been updated with endless friction drives (no more clamps and limited HORIZ & VERT rotations) and with a trigger key for more accurate measurements. R35/R35LR clear 30K telescope, with illumination adjustable reticle, provides superior sighting quality in any light condition, while the coaxial laser pointer gives a safe pointing to any point.

TRIGGER KEY & ENDLESS FRICTION
These features make R35/R35LR one of the most manageable Total Stations on the market: target collimations are fast and accurate using both the hands and the measure starts using the trigger key located on the same side of the instrument.

WIDE RANGE OF COMMUNICATION OPTIONS
Standard RS232 Interface, USB, mini USB, guarantee a seamless input data flow to any external device. The wireless Bluetooth connection allows to connect R35/R35LR with handheld computers giving the possibility to use custom field software on-line with the instrument.

2 SIDES TOUCH SCREEN DISPLAY
The clear TFT 320x240px 2 sides touch screen display gives the Surveyor a clear, colourful and fully graphical environment, and the user friendly onboard software supports this Surveyor with guided through functions for data collection, topographic surveys, staking.
R80 The best solution for monitoring

Stonex R80 is a Motorized Total Station for classic jobs for survey and stakeout and perfect for high precision surveying areas such as rail traffic monitoring, control of structures, bridges, dams and landslide areas.

R80 adopts up to date automatic prism recognition and positioning technology and has a high accuracy of 0.3" ± 1". R80 has a distance measurement accuracy of 1 mm ± 1 ppm (Prism) and a 1,000 m long range reflectorless distance measurement.

This advanced Total Station runs Windows CE 7.0 operating system and each user can choose the software that best suits own needs. It supports also SDK and external control protocol for software developing.

R80 is the perfect solution for monitoring because through the remote control software is possible turning the instrument on and off and have a tool of survey management of difficult and complex areas.

Cube-h²4
Windows Software

Cube-h²4 has been designed to perform operations to check movements of points in natural places or artificial structures, considered to be at risk of stability. In general, the materialization of the points is made with prisms used for topography, in order to determine the real distances from a station point. It is however possible to use points marked on a reflecting surface.

Cube-h²4 allows to:

- Set up surveys and calculation procedures, in order to compare the coordinates of the points subject to control in subsequent interventions.
- Check either in real time or in scheduled time the displacements of the points.

Main features:

- Cube h²4 is a vertical solution for monitoring with motorized T5
- T5 communication management
- Project management
- Continuous or periodic acquisition
- Graphical reports of the results
- Alerts and alarms generated in a range of critical values defined by user
- Sending log files and alerts or alarms to office by FTP or email.
R80 The best integrated solution for your survey

Stonex R80 is a Motorized Total Station for classic jobs of survey and stakeout.

R80 adapts up to date automatic prism recognition and positioning technology and has an high accuracy of 0.5”-1”.

R80 has a distance measurement accuracy of 1 mm + 1 ppm (Prism) and a 1,000 m long range reflectorless distance measurement.

This advanced Total Station runs Windows CE 7.0 operating system and users can choose the software that best meets their needs. It supports also SDK and external control protocol for software developing.

R80 OnePole Solution can be managed by switching from a TS to GPS method in a single solution thanks to Cube-a Software which is able to control every part of the survey.

OnePole Solution
TS+GPS with Cube-a Software

OnePole Solution combines the millimeter positioning accuracy of a prism measurement with the advantages of measuring points not visible from the TS through the GPS Receiver.

A total station needs local control points on which it can be set. These points must be visible from the station and therefore the line of sight has to be free of obstacles.

An RTK GPS receiver can determine its position in seconds with centimeter level accuracy using data from satellites. The ability to combine and use both systems simultaneously greatly improves surveying efficiency.

Advantages of the system:

• The OnePole Solution allows you to work simultaneously with TS and GPS
• TS and GPS (and diameters) can be simultaneously connected to the controller using Bluetooth
• Change the measurement mode from TS to GPS by one simple tap on the always accessible switch button
• Reduce prism search times through auto aiming to the current GPS position
• Easily setup your TS position by Station / On Point and Free Station/Resection programs
• View on Google Maps your TS and GPS surveys
### TOTAL STATIONS

Product Comparison

<table>
<thead>
<tr>
<th></th>
<th>R1 Plus</th>
<th>R15</th>
<th>R25/R25LR</th>
<th>R35/R35LR</th>
<th>R80</th>
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<tbody>
<tr>
<td><strong>Angle Accuracy</strong></td>
<td>2&quot;</td>
<td>2&quot;</td>
<td>2&quot;</td>
<td>2&quot;</td>
<td>0.5&quot;-1&quot;</td>
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<td><strong>Prism measurement</strong></td>
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<td><strong>Prism accuracy</strong></td>
<td>2mm+2ppm</td>
<td>2mm+2ppm</td>
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<td>2mm+2ppm</td>
<td>1mm+1ppm</td>
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<td><strong>Reflectorless measurement</strong></td>
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<td>600m/1.000m</td>
<td>600m/1.000m</td>
<td>1.000m</td>
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<tr>
<td><strong>Reflectorless accuracy</strong></td>
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<td>2 Color touch</td>
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<td>Proprietary</td>
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<td>4Gb</td>
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<td><strong>Guide light</strong></td>
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<td>Endless drives</td>
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<td>12 hours</td>
<td>9 hours</td>
<td>6 hours</td>
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<td>-20° +50°</td>
<td>-20° +50°</td>
<td>-20° +50°</td>
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</tbody>
</table>
LASER SCANNERS

3D scanning everywhere

STONEX Laser Scanners are the best solution for any application, balancing economic efficiency and highly accurate outputs. The sealed external case of all our scanners allows you to operate in dusty and humid environments, where others fail.
**X300** Simple, tough, accurate

The right tool for your daily work

STONEX X300 is a 3D Scanner designed to deliver effective results every day, on any project.

It’s ease of use, reliability, flexibility and reasonable price make it your perfect work companion.

X300 has a dedicated line of accessories:
- Monitoring Kit [internal Power Supply with Ethernet cable control]
- Camera Kit [install a DSLR camera to apply high resolution images]
- X300 FrameWork [focused the field of view and scan ceilings and tunnels]
- Gps Kit [Connect a GNSS receiver to the X300]

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**RUGGED DESIGN**
The fully sealed case protects your investment, making it possible to get the job done where others fail, regardless of dust, humidity, heat or bumps.

**EASE OF USE**
Push one button and control X300 with your smartphone or tablet. Laser scanning has never been easier.

**RETURN ON INVESTMENT**
X300 balances the performance you really need in a wide range of applications with a reasonable price.

**EXPANDABLE**
A complete set of accessories provide flexibility in any environment.

**MADE IN ITALY**
A clean effective design for your daily work.

---

**STONEX RECONSTRUCTOR**

Powerful and usable 3D Software

STONEX RECONSTRUCTOR SOFTWARE will guide you through a complete and clear workflow with expandable modules suited to your needs.

**MAIN FEATURES**
- Line up
- Cloud Tools
- Mesh & Shapes
- Inspection Tool
- Planarity/Verticality
- Color Tool
- Orthophoto
- CAD Output
- Measurement

**INTEGRATIONS WITH OTHER SOFTWARE**
- 3DF Zephyr

Complete solution for 3D photogrammetry reconstruction data.

**MODULES**

**CONSTRUCTION MODULE**
Advanced features for BIM, Architecture and Construction.

**SURVEY MODULE**
All the Cloud management tools in one application.

**MINING MODULE**
All you need for quarries, cut & fill volumes, excavations, DTM.

**COLOR & MAPPING MODULE**
Use your own high resolution camera to color the scans.

---

**Open File Manager**

If you are using CAD, crime scene, car crash analysis or other 3rd party software, you can now load the point cloud data collected with X300 directly into your workflow.
F6/F6SR 3D handheld scanner

Volumetric Scanners for Field Use

STONEX F6 and F6SR are the market leader 3D handheld scanner for fast scanning.

With STONEX F6 you can scan big objects and large areas from short to far ranges.

The F6 Short Range (SR) instead is designed especially for accurate and fast scanning of highly detailed small objects, positioned in close proximity.

Based on a patent algorithm of innovative encoding, F6 and F6SR provide superb quality of data making them the ultimate devices for scanning complex scenes within seconds.

A five MegaPixel add-on color camera enhances the ability of scanners to capture the highest color quality and the most realistic textured meshes, compared to any other handheld 3D scanner on the market today.

F6 Handheld Scanner

3D Volumetric Scanner for Field Use

STONEX F6 is a market-leading 3D portable scanner for fast scanning of medium to large objects.

The fields of application of F6 are many: archaeology, architecture, cultural heritage, facilities management and forensic investigations.

STONEX F6 is managed by Echo, an easy-to-use integrated software with advanced features such as:

- Scanning mode with real-time feedback
- Powerful 3D data editing tools
- Advanced texture meshing
- Composition of models from different scans
- Multiple interfaces: tablet / laptop / VR

Advantages of F6 and F6SR

- IR light allows you to work in any lighting condition, from complete darkness to daylight
- Accurate and fast
- Ergonomic handle
- No scene preparation; the geometry is deciphered by the encoding
- 2-level operating modes: static and dynamic
- Accessibility to hidden places
- Hot shoe connection:
  - Wireless synchronization of multiple F6 scanners for the acquisition of objects in dynamic movement
  - Flash or continuous light
- Easy to use: professionals will be able to manage the system with ease after a brief training
- Unique and lightweight design

Requirements for Computer / Tablet**:

- Win 8.1, Pro and later versions
- 17 quad processor
- 1.6 GB memory
- 256 GB storage memory
- Not included

F6SR Short Range Handheld Scanner

A 3D volumetric handheld scanner for highly detailed scans of minimal size objects

F6 Short Range (SR) has been designed specifically for the accurate and rapid scanning of small, very detailed objects, positioned a short distance away. F6SR is the perfect scanner for scanning objects with archaeologival value and rich in details.
Special Projects

GPS solutions for high precision works

The new construction world demands technologies that are able to monitor and assure the correct workflow, requested by the project specifications. STONEX Special Project team, has a deep knowledge in developing tailored solutions, in order to improve the jobsite productivity keeping in first place the operators’ safety. With Special Project Solutions the job site will be lived like a new comfort zone from all the actors: from the operators to the supervisors.

The application fields where the new guidance solutions are developed are: Marine Guidance Systems, Precision Farming, Mining and Foundation, Solar Farm.
STX-SUITE

STX-SUITE is a handy and prompt system for the design of ground photovoltaic plants and the on-field positioning of the pile driver machines.

STX-SUITE allows the planning of the best piling pattern directly on the field (survey with GPS + tablet + integrated software), as well as the loading of existing CAD project (.dwg, .dxf).

Continental accuracy positioning is provided by two Stonex GPS receivers (up to 20km), installed on a metal frame integrated in the pile driver machine structure.

PROJECT AND DESIGN
The SOLAR PLANT Project can be generated, importing the local coordinates from different formats (DXF, TXT). A TARGET POINT file will be produced for the GPS navigation purpose.

SURVEY STAKE-OUT
STX-SUITE is a quick and smart stakeout GPS solution made for any kind of operator. A clear guidance layout aids the operator to find the post position with continuous accuracy.

MACHINE GUIDANCE
STX-SUITE fits on any kind of piling machines, drives the operator on the target point (post coordinates) in manual and automatic mode.

AUTO LEVELLING
A slope sensor with an hydraulic interface can be installed on any machine in order to assure always the best levelling accuracy of the nail along two axis.

ROI
Adopting STX-SUITE solution means reducing production costs, less operators with high productivity.

STX-SUITE
GPS satellite technology for piling of metal structures in ground photovoltaic plants

Two steps make up the Stonex solution for guiding and GPS positioning of photovoltaic plants:

- Survey and Design:
  Preparing the project in the office and importing the files on the tablet (.dwg or .dbf format). Alternatively, it’s also possible to create the project directly on the field, by surveying the orientation points with GPS and tablet.

- Guide and Positioning:
  Guide the pile driver machine and align it to the row-blueprint by simply following the tablet indication.

STX-SUITE software is specifically designed for this kind of applications and allows elaborating the survey data (stored with GPS), and create the site project in a very quick and effective way. The double GNSS receivers system installed on the pile driver machine allows defining the right-left orientation and the guiding direction of the machine with respect to the reference pile. STX SUITE guides the machine on the exact position, by showing bearings and direction on the tablet. A bi-axial inclinometer can help defining the vertical position of the stake during the driving process. Users have to simply align the machine along the direction of the row and adjust the reference mark (on the position of the virtual pile). When the machine position falls within the predefined tolerance, the guiding elements will turn green.
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-DRILL guides the operator straight to the designed coordinates thanks to the easy and intuitive user interface. It it only required to drive the machine and match the head and tail edges of the pole against the crosshairs displayed on the screen.

Once the placement is finished, the system provides the exact excavation depth to be reached.

PROJECT AND DESIGN

The project can be generated, importing the local coordinates from different formats (DXF, TXT). A TARGET POINT file will be produced for the GPS navigation purpose. The Project coordinates include the depth and the mill information.

MONITORING ACTIVITY

Thanks to a remote connection it is possible to monitor the progress of the work and update the projects in real time.

MACHINE GUIDANCE

Manual positioning of the probe on the position is no longer required, the operator is guided directly to the designated drilling spot in a precise, easy and fault-free way. Each function can be controlled through a display installed on the rig.

VISUALIZATION AND STORAGE

Thanks to STX-DRILL it is possible to assess and store the position of the drilling point, to verify the vertical/ slanted position of the probe, the exact beginning, final position of the treatment, the points made and those still to be treated.

ROI

Adopting STX-DRILL solution means reducing production costs, Less operators with high productivity.

STX-DRILL

Satellite technology for high precision Jet Grouting works

The STONEX SATELLITE GPS positioning solution for the Jet-Grouting is divided into two operational steps: Office Job & Field Job.

The project data processed in the office can be shared in real time with all operators on the jobsite using a Google Cloud Storage, a storage service based on the Cloud that allows you to store and access data easily on Google’s infrastructure. The data received from the GPS antennas are transmitted through Wi-Fi to mobile devices (smartphones, PDAs or tablet). The hole coordinates are recorded and can be displayed on the map in text and graphics format. Import Format: DXF or TXT.

Advantages

- Abandonment of the manual method to place the probe on the picket;
- It guides the operator directly to the project drilling point with centimetric accuracy, in a simple and fast way;
- Control of all functions through a display mounted on the drill;
- Checking of the verticality probe;
- Exact depth of drilling start and end;
- Reduction of manual errors in the positioning procedure;
- Record and store all data during the work in special Reports file shared on Cloud.
SPECIAL PROJECTS
Precision Farming & Agriculture

STX-PLANT

STX-PLANT is a GPS driving system for planting machines of any kind.

Thanks to a dedicated software and a machine remote control, it allows to deliver centimeter accuracy when putting the plant (vine shoot, olive, hazel) in the right place at a given distance along the row.

The STX-PLANT Software allows to survey and design the project layout right on the job site. The program allows to define the shape of the row: linear, fan and curved shapes.

Planting can be done in the two directions of travel and it is not required to drive at constant speed, since the STONEX GPS data rate can check the plant positioning in real-time.

STX-PLANT GPS technology for planting machines drive and control

STX-PLANT can also adapt to different kind of planting jobs. Thanks to the flexibility and ease of installation (WIRELESS) it can be installed onto drilling machines for planting hazel, olive and almond trees.

The field operator only has to follow the driving reference line on the display and perform the hole once the auger reaches the plant position (yellow area on the display).

System components

STX-PLANT solution is made by:

- N.1 Stonex GPS receiver with differential correction capability (Nitrip or UHF Base station);
- N.1 Tablet Rugged (OS Windows);
- N.1 Control unit for the automation of the hydraulic controls of the planting machine;
- Hydraulic engine and rotary encoder for the control of the clamp;
- Software for design, stake out and job report.

PROJECT AND DESIGN ON THE FIELD
Design the planting layout directly on the field thanks to the integrated design software.

SURVEY STAKE-OUT
Adapt the planting layout to the elevation profile of the field. Smart stake-out with auto-lock.

MACHINE GUIDANCE
Easy guide of the tractor over the designated points following the direction provided by the display.

HIGH ACCURACY
High accuracy positioning of the plant shoot.

ROI
Adapting STX-PLANT solution means reducing production costs. It is easier operators with high productivity. Our solution is effectively and profitably used in viticulture, fruit growing, olive growing and in nurseries.
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, crane operations, piling and hydrographic survey.

STX-MARINE provides accurate 3D visualization to assist the operator with underwater construction tasks.

Our systems are suited for dredging operations, canal/portal development, land reclamation and breakwater/revetment works.

### Real Time Visualization
Real-time visualization of the bucket/dredge head related to the design in plant, profile (2D) or 3D improves productivity and reduces rework and over-dredge.

### Large Grid Models
Large grid models make it easier to visualize differences between current and project status. Rugged large display for ease of use and personalization.

### Real Time Updates
Improve accuracy and speed with bathymetry data providing real-time updates on materials unloading or extraction. Reworkings to be carried out is drastically reduced.

### Highly Configurable
Highly configurable to suit endless machine/vessel configurations. Wide room for different applications including basic excavation, dredging, piling and revetment works.

### Easy Work
Easy-to-create volume calculations and reports reduce the need for operators to request office processing. Multiple view and configuration tailored to suit your requirements.

### STX-MARINE
Flexible, High-performance Positioning Systems

STX-MARINE sensors support a range of marine construction workflows including:

#### Dredging
- Cutter Suction Dredger
- Bucket Dredger
- Backhoe/Excavator Dredger
- Grab/Clamshell Dredger

#### Placement
- Rock Dumping and Placement
- Caisson Placement
- Block Placement using Wire crane or Excavator
- Vertical and Raked pile placement

#### Benefits
- 3D full color process map
- Icon driven menu
- Zoom to improve visibility of work area
- Monitor bucket position in real time on target indicator
- Stakeout function provides guidance