

ASTA-ex MOUNTED

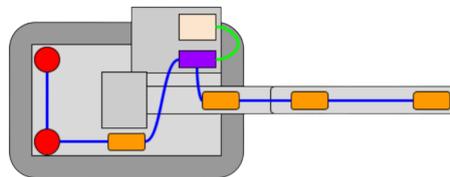
MARKING AND GUIDANCE FOR ALL CARRIERS IN FOREST & FIELD

Key Features

- ▶ For optimizing land use in forest and field. ASTA-ex guides carrier operators, and helps plant seedlings in straight rows.
- ▶ Excavator position in-field is shown in real-time on the monitor. Even without an internet connection. ASTA-ex guides the operator to the closest point on the grid.
- ▶ User defined row and column spacings. Variable number of rows per marking/planting pass, up to six may be set at a time.
- ▶ Data persistence. The system saves the position of markings / planted seedlings. Other key data points includes the traversed route - can be used in planning scenarios.
- ▶ Centimeter accuracy on-line RTK and GPS for off-line modes
- ▶ Asset management and tracking capabilities; with project and sub-contractor management
- ▶ Desktop or on-site grid creation for marking, planting, and more

Carrier Crane-mounted Guidance and Marking

ASTA-ex will help you locate the nearest geopoint on a predefined grid with centimeter-level accuracy for planting, pole planting, pitting, mounding, drilling, and other applications that benefit from establishing a defined spacement.



How does it work?

The system uses sensors to recognize the positioning of the excavator. The operator has then the possibility to mark different positioning points, usually by using buttons.

These Points will give the information of for example which tree was planted where, and a lot of other information can be saved on one point.

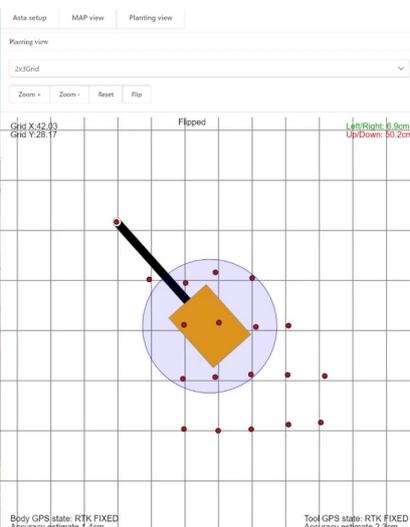
If there is internet (3G/4G) network, the system stays in contact with the ASTA cloud, and all saved information will be accessible at www.astaportal.com. In the portal you can also live follow the work progress.

ASTA-ex Works in Online and Offline Modes

ASTA-ex works in online and offline modes. In offline or GPS-mode, the unit achieves meter accuracy suitable for most data collection tasks in data-entry and growth monitoring applications. In online mode, the ASTA-ex uses the cellular network for multi-band RTK to deliver centimeter-level accuracy in seconds.

If there is no internet connection available, the system corrects the RTK data via the radio modem. So the positioning information is not lost. This is possible due to the RM-400 Radio modem, which allows the receiving of the RTK signal. However, the use of this modem may need the acceptance of the government.

Already allowed in: AE, AT, AU, BE, BG, BR, CA, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, HR, IE, IS, IT, JP, KR, LT, LU, LV, MT, NL, NO, PL, PT, RU, RO, SE, SI, SK, TR, US.



About Risutec

Forestry companies and operators are increasingly realizing the benefits of integrated forestry operations with the help of Risutec. We provide proven forestry machinery for maximizing yields profitably - serving the largest forestry companies and most innovative contractors globally.

ASTA-ex Mounted

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DEFINITIONS

CEP = Circular Error Probability, CEP is defined as the radius of a circle centered on the true value that contains 50% of the actual GPS measurements. So a receiver with 1 meter CEP accuracy will be within one meter of the true measurement 50% of the time.

GNSS Acquisition speed:

- Cold start : 25s
- Hot start: 2s

Horizontal position accuracy:

- No RTK fix: 1.0m CEP

With RTK fix: 0.01m + 1ppm CEP (With a baseline of 1km from RTK base station)

Supported GNSS constellations:

- GPS, GLONASS, Galileo and BeiDou + SBAS and QZSS satellites can be received concurrently.

Supported GPS bands:

- GPS
 - L1C/A (1575.42 MHz)
 - L2C (1227.60 MHz)
- GLONASS
 - L10F (1602 MHz + k*562.5kHz, k = -7, ..., 5, 6)
 - L20F (1246 MHz + k*437.5kHz, k = -7, ..., 5, 6)
- Galileo
 - E1-B/C (1575.42 MHz)
 - E5b (1207.140 MHz)
- BeiDou
 - B1I (1561.098 MHz)
 - B2I (1207.140 MHz)

SATELLITE BASED AUGMENTATION SYSTEM (SBAS)

High precision receiver supports SBAS (including WAAS in the US, EGNOS in Europe, MSAS in Japan and GAGAN in India) to deliver improved location accuracy within the regions covered.

QUASI-ZENITH SATELLITE SYSTEM (QZSS)

Quasi-zenith satellite system (QZSS) is a regional navigation satellite system that transmits additional L1 C/A and L2C signals for the Pacific region covering Japan and Australia. The ZED-F9P high precision receiver is able to receive and track these signals concurrently with GPS L1 C/A and L2C signals, resulting in better availability especially under challenging signal conditions, e.g. in urban canyons.

Receivers are also able to receive the QZSS L1S signal in order to use the SLAS (Sub-meterLevel Augmentation Service) which is an augmentation technology that provides correction data for pseudoranges. Ground monitoring stations positioned in Japan calculate independent corrections for each visible satellite and broadcast this data to the user via QZSS satellites.

LINK-LANE

The LINK-lane is the nervous system of the ASTA-ex. The LINK makes it possible to add and connect all ASTA-EX products, as they are identified automatically by the system. Note that the order of the parts do not make any difference. The lane can have a maximum length of 100 meters.

SR-1 SYSTEM ROUTER

The router is the "command centre" of the system. Every part of the system is connected to the router. 20-28V USB for connection with a computer.

AS-180 ANGLE SENSOR

These sensors provide high accuracy positioning. It is used for the location of the boom. Based on the same theory as the tubular spirit level, and requires one sensor on each part of the boom.

DATA PRIVACY AND GDPR

All gathered information from the worksite/project is saved in its own database. Only the company and the users of the company who created the project do have access to this particular database.



Data Collection, Marking, Guidance and More

Take the next step.

How much is poor planting quality, sub-optimal measurement, and guidance solutions, as well as access to cost-efficient GPS and RTK solutions and services costing you each season? Get Risutec ASTA-ex for smart forestry, orchards, and viticulture to start improving your yields!

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