

EGNOS Space Segment Update

Important notice for EGNOS users

From 21st March 2017 onwards, the EGNOS satellite mask (broadcast in message Type 1) includes the final EGNOS space segment configuration in both operational GEO satellites (**PRN 123 and PRN 120**).

One of the GEO satellites in use until that day (**PRN 136**) has become part of the EGNOS TEST Platform broadcasting the TEST SIS.

Be sure that your receiver is correctly configured to receive the operational GEOs information!

EGNOS SPACE SEGMENT (GEO PRNs) CHANGED ON 21/03/2017

OPERATIONAL



PRN 120



PRN 123

TEST



PRN 136

Do you want to know what Ag Leader, Topcon and CLAAS are saying about EGNOS?



Ag Leader



Topcon



CLAAS



egnos-helpdesk@essp-sas.eu

Phone H24/7D +34 911 236 555



We certify you're there.

www.essp-sas.eu



EGNOS, it's there. Use it.

EGNOS IN PRECISION AGRICULTURE



Precise navigation,
powered by Europe



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We certify you're there.

EGNOS: What is provided?

- **EGNOS** (European Geostationary Navigation Overlay Service) is the European SBAS (Satellite Based Augmentation System) augmenting GPS positioning accuracy.
- EGNOS Open Service is **available since 2009**.
- It is a **FREE** service.
- The service is provided by **GEO satellites** (offering GPS-like structure and frequency signal).
- EGNOS provides corrections and integrity information to GPS signals over a broad area centred over **Europe**.



Credits: egnos-user-support.essp-sas.eu

EGNOS offers an **affordable solution for precision agriculture**, enabling farmers to optimise yields, increase productivity, reduce driver fatigue and even enabling labours in reduced visibility conditions; all of this with competitive investment.

EGNOS supports machinery guidance solutions with **10-25 centimetres pass-to-pass accuracy**, which is suitable for basic-value crop cultivation (e.g. cereals). It also enables **more efficient management** of such farming activities as spreading, spraying and harvesting.

As a result, the optimised use of seeds, fertilizers and herbicides, as well as a reduction of fuel and driver fatigue, leads to increased **productivity**.

In other words, EGNOS provides **advantages to both farmers** (higher profits margins) and **society** (increased food supply and more environmentally friendly agriculture).

EGNOS Helpdesk

This helpdesk is intended to provide the EGNOS user with a **direct point of contact to ask for any question** related with the EGNOS system, its performances and applications. **We will answer 24/7** your questions

- over the **phone** +34 911 236 555,
- via **email** (egnos-helpdesk@essp-sas.eu)
- or filling in the **question form** here: <https://egnos-user-support.essp-sas.eu/>

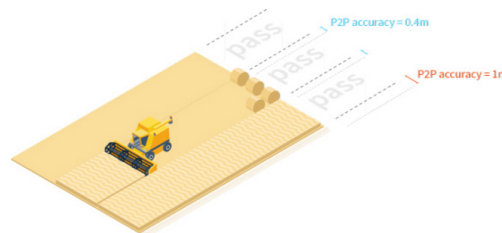
EGNOS services: Pass-to-Pass accuracy

Pass-to-pass accuracy is the reference way of measuring the accuracy for agriculture.

Calculations are **based on ISO 12188-1** "Tractors and machinery for agriculture and forestry – Test procedures for positioning and guidance systems in agriculture – Part 1: Dynamic testing of satellite-based positioning devices".

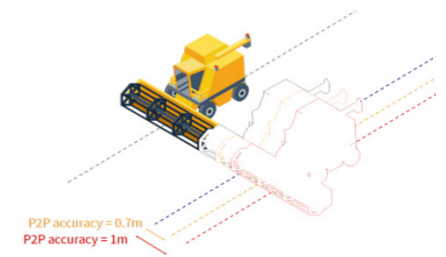
Pass-to-Pass accuracy is the term used by farmers to describe their user needs in relation with accuracy; and the term used by GNSS manufacturers to describe the accuracy the equipment can provide.

Pass-to-pass accuracy is defined as the **accuracy which can be achieved over a 15 minute window** (being 15 minutes the approximate time to make a pass in a typical field). The



ISO 12188-1 standard describes in detail how to compute this quantity.

Figure below, explains graphically the concept: Once you have done a pass in the field with the tractor, and you return and place it in the same position according to your GNSS equipment, you are not exactly in the same place, there is a bias. This bias is the so called "pass-to-pass" accuracy. Pass-to-Pass accuracy provided by EGNOS in all EGNOS Service Area, can be check in the **EGNOS User Support website**.



https://egnos-user-support.essp-sas.eu/new_egnos_ops/pass_to_pass

WHAT is a GPS/SBAS receiver?

A GPS/SBAS receiver is a GPS receiver enhanced with special software enabling the receiver to lock onto the EGNOS satellites and **apply the EGNOS corrections to the GPS signal**.

Almost all **commercial GPS receivers for agriculture** include **EGNOS capability**.

GPS/SBAS receivers are normally installed on top of the machinery roof and a display is installed in the cabin.

