



FieldBee
precision for every farmer

Product catalogue 2024



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Intro to FieldBee

FieldBee is an agricultural automation company founded in 2014. With roots in Ukraine, production and R&D site in Poland, HQs in the Netherlands and a strong presence in Germany, Austria, Switzerland and the UK, we boast an extensive understanding of the modern-day farmers' needs across Europe and the globe.

Our goal is to enable small farmers everywhere to enjoy a more productive, sustainable and easy way to farm with the help of machine automation and tractor navigation systems.

FieldBee tractor guidance systems are affordable, modular and updatable to make sustainable farming accessible worldwide.

We manufacture high-quality, reliable **precision guidance and autosteering systems** that will serve you for years to come, raising your yields and lowering your costs.



PowerGuide

The best solution for an easy start with precision farming.

Consists of:

- **All-in-one controller** — the newest FieldBee GNSS receiver and controller, that provides 20 cm accuracy without correction signal, and 2,5 cm accuracy with RTK. It also includes a tilt compensation sensor and controller for automatic steering.
- **FieldBee Navigation App** — one of the best tractor navigation applications with different navigation patterns, record-keeping functionality, field management and many more features.



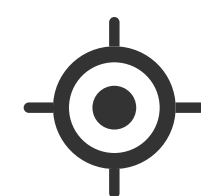
Easy to install



Upgradable to
autosteer



Easy to transfer
between tractors



±2,5 cm
accuracy



System components

A. All-in-one controller

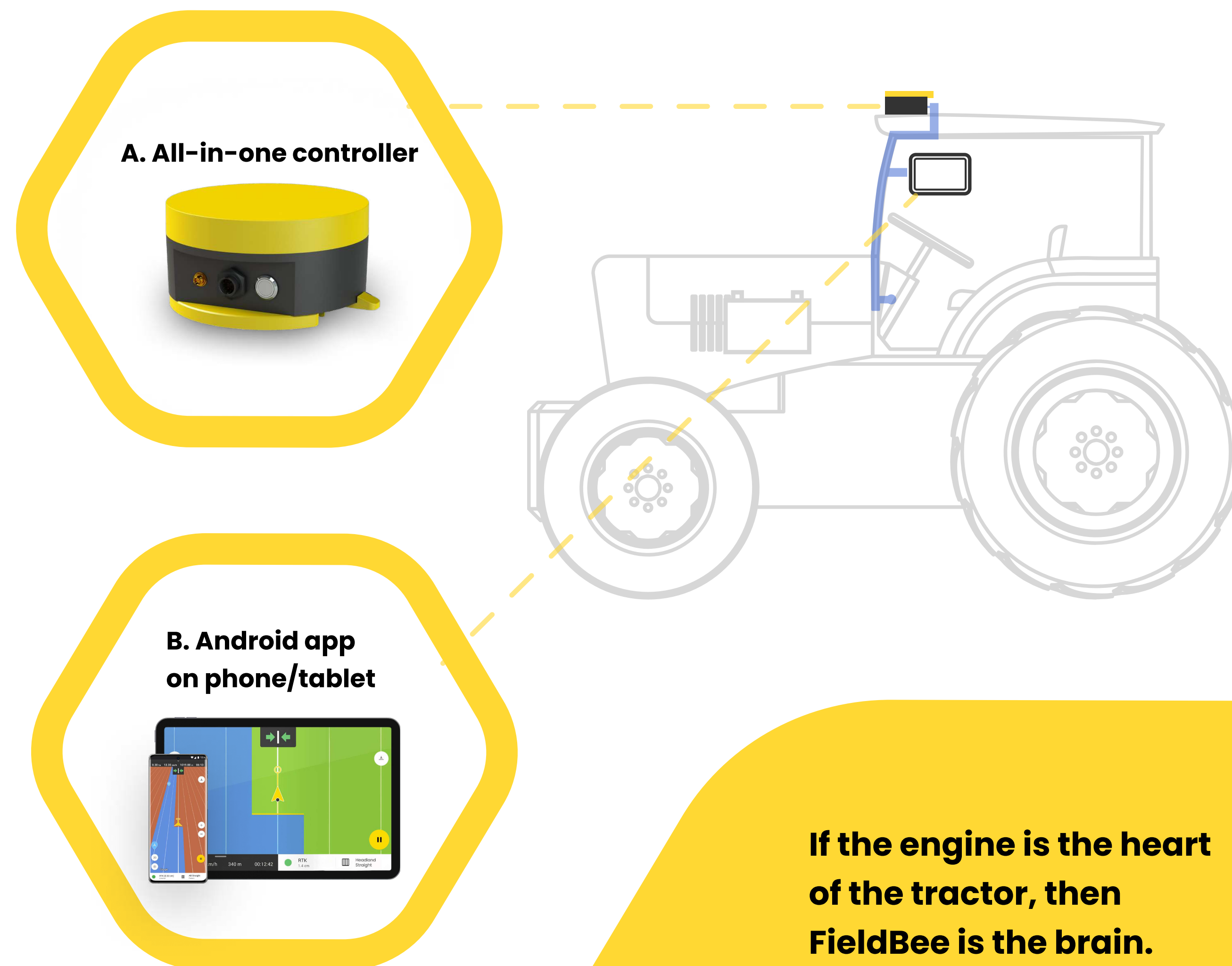
- Electronic controller that provides high precision and automatic steering capability when upgraded with the PowerWheel
- Receives guidance information from the Android app and sends steering commands to the vehicle

B. Android app on phone/tablet

Drive in straight, curve, headland and saved patterns with high precision:

- Map your fields and obstacles
- Automatically capture field records while driving
- Get reports about fieldwork in Excel and PDF formats
- Hold multiple vehicles and implement profiles for easy hardware transfer between vehicles without recalibration

More information about the app available later in the catalogue.



**If the engine is the heart
of the tractor, then
FieldBee is the brain.**

Specifications

System Features

- Dual-band GNSS receiver, operating with multiple satellite constellations and most NTRIP RTK correction networks.
- Works with almost any Android smartphone or tablet and synchronises information with the FieldBee web app on the farmer's computer.
- Can be easily transferred between tractors.
- Built-in terrain compensation.
- Multiple navigation patterns in the app.
- Automatic record-keeping from field operations.
- Upgradable to PowerSteer™ to achieve autosteering.

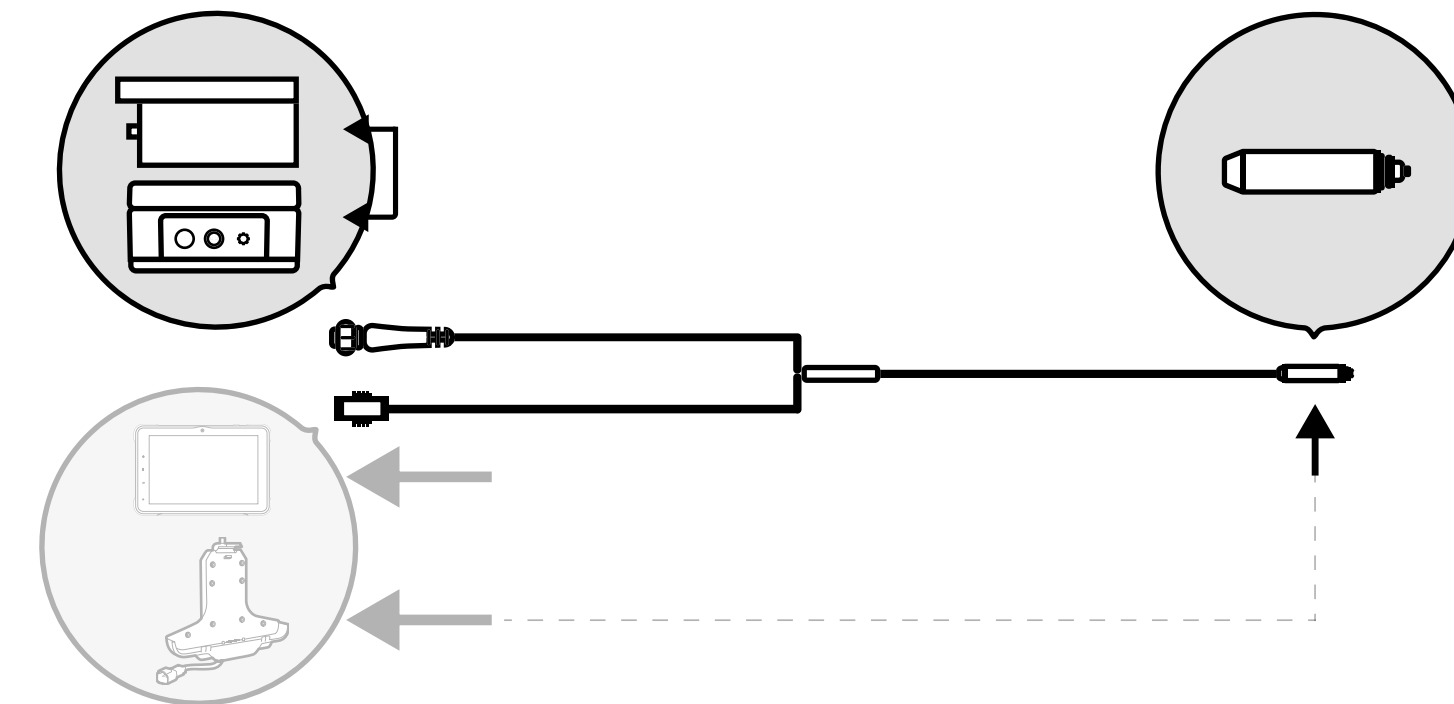
Accuracy

- ± 2.5 cm accuracy when receiving RTK correction signal.*
- Minimum speed of 1 km/h with the normal kit.
- Compatible with the FieldBee Navigation App on Android devices.

*Accuracy depends on the surface, operation speed and the condition of the tractor's steering system.

Power

- Supply Voltage 7-32V DC (Cigarette Lighter Plug 3m) Consumption 1A



Environmental & Compliance

- Controller-receiver: IP-67, operating temperature $-20^{\circ}\text{C} \sim 85^{\circ}\text{C}$, RoHS, CE, ISO 15003

GNSS Receiver

- Dual-band (L1 + L2) GPS, GLONASS, Galileo, BeiDou, QZSS
- RTK 0.01 m + 1 ppm CEP
- Tilt compensation in range $\pm 15^{\circ}$ deg, accuracy 1 deg
- RTK with fast convergence times and reliable performance
- Wireless interfaces LoRa 868 MHz /WiFi

Dimensions

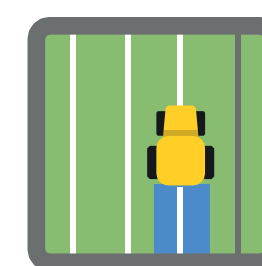
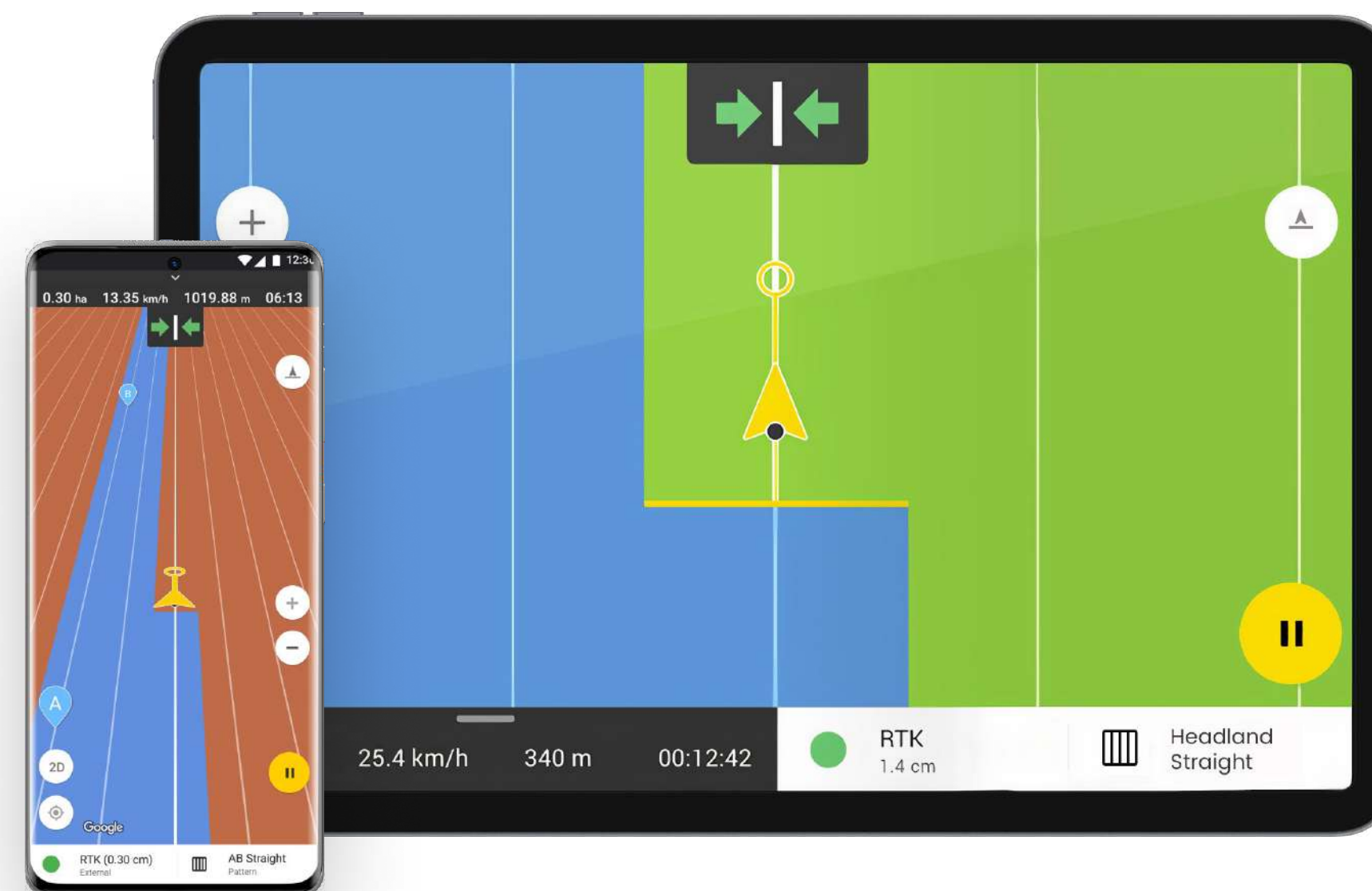
- Steering controller-receiver $\varnothing 150\text{mm} \times 75\text{mm}$

Premium Navigation App

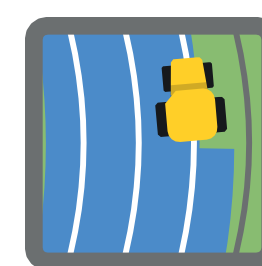
- Parallel guidance in multiple patterns;
- Path numbering;
- Return to the same lines with the "Saved track" functionality;
- Draw & measure your fields in 3 ways;
- Work at night and in low visibility;
- Exclude areas and avoid obstacles;
- Plan and track tasks, save records and export reports to Excel;
- Make notes with geolocation;
- Save crop history for different fields;
- Connects with external receivers;
- Import field boundaries and A/B lines;
- One account for several products and workers;
- New patterns coming soon: U-turn, Tram line, AB from side of field, Skip path, Building headland to field.

Field Reports

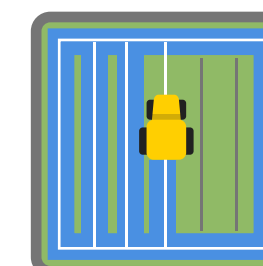
- Input data regarding the field work manually or automatically.
- Automatic tracking can include operation type, area covered, distance driven, machine information and more.



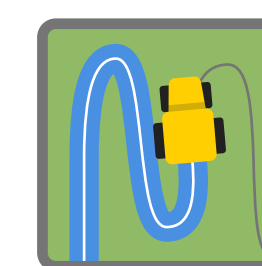
AB straight



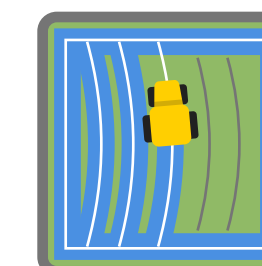
AB curve



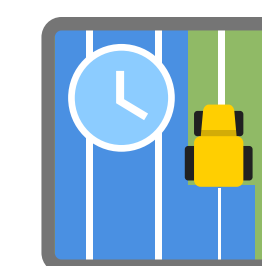
Headland
straight



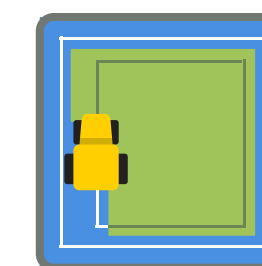
Saved track



Headland
curve



Multiple
Headland



Field
Headland

PowerSteer™

An ultimate hands-free precision solution.

Consists of:

- **All-in-one controller** — newest FieldBee GNSS receiver and controller, that provides 20 cm accuracy without correction signal, and 2,5 cm accuracy with RTK. It also includes a tilt compensation sensor and controller for automatic steering.
- **FieldBee Navigation App** — one of the best tractor navigation applications with different navigation patterns, record-keeping functionality, field management, and many more features.
- **PowerWheel** — a replacement for the standard steering wheel with a motor that fits almost all tractor models, easy to install and transfer between vehicles.



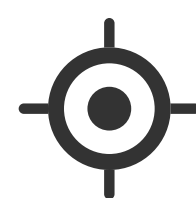
Easy to install



Upgradable
with add-ons



Affordable price



±2,5 cm
accuracy



System components

The PowerSteer™ is FieldBee's most affordable autosteering kit to date, featuring the newest IoT architecture and component design, and delivered in a simplified kit that is very easy to install and use.

Combining the receiver and controller into one and reducing the number of harnesses and moving parts creates a robust and quiet system that's a joy to use.

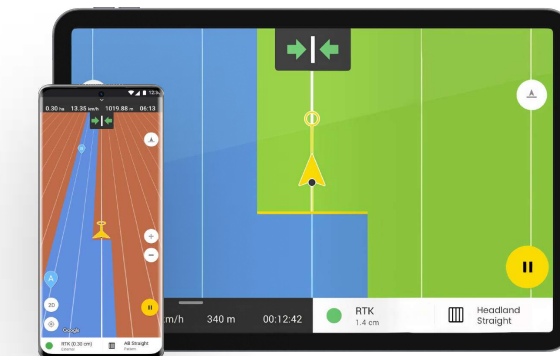
System Features

- $\pm 2,5$ cm accuracy when receiving the RTK correction signal. Dual-channel GNSS receiver, operating with multiple satellite constellations and most NTRIP RTK correction networks.
- Allows working with almost any Android smartphone or tablet and synchronises information with the FieldBee web app on the farmer's computer.
- Can be easily transferred between tractors without the need to re-calibrate each time.
- Has built-in terrain compensation of up to 15 degrees.

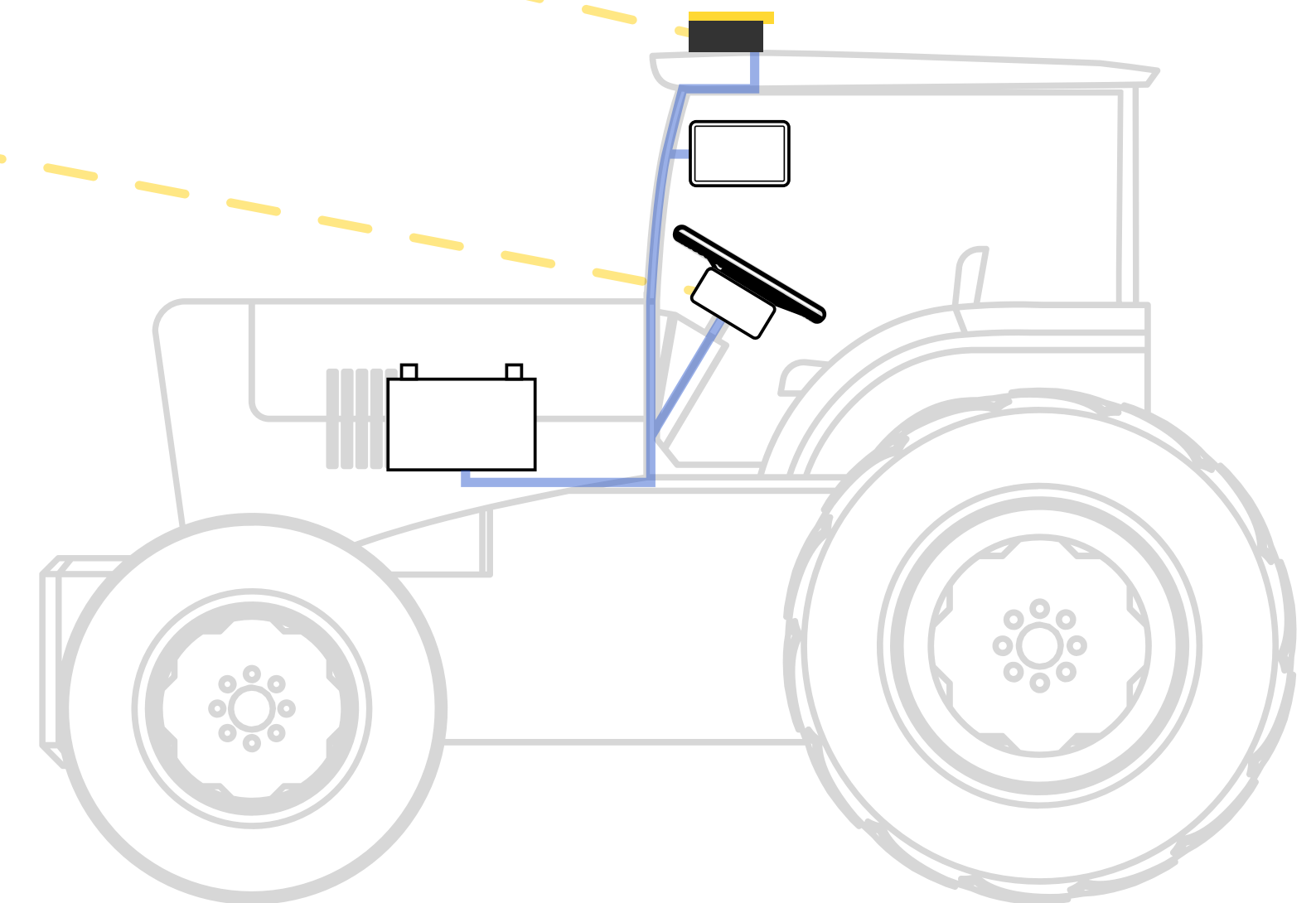
A. All-in-one controller



B. Android app on phone/tablet



C. PowerWheel



System Features

- Easy installation and calibration.
- Optimised route mapping.
- Minimised overlaps and gaps on field operations with accuracy up to 2.5 cm.
- Works with almost any Android smartphone or tablet and synchronises information with the FieldBee web app on the farmer's computer.
- Can be easily transferred between tractors.
- Built-in terrain compensation.
- Multiple navigation patterns in the Navigation app.
- Automatic record-keeping from field operations.
- Works well in conditions of poor visibility, eg. at night.
- Optional: Ultra low-speed operation – less than 1 km/h (0.3-1 km/h). Dual kit required.

Accuracy

- $\pm 2,5\text{cm}$ accuracy with RTK correction signal*
- Operation speed range 1 – 20 km/h.
- Minimum speed 1 km/h, or 0.3-1 km/h with the optional dual controller solution.
- Nominal torque power 7 Nm Peak (16 Nm).
- Compatible with the FieldBee Navigation App on Android devices.

*Accuracy depends on the surface, operation speed and the condition of the tractor's steering system.

Power

- Supply Voltage 7-32V. DC Consumption 10-15A. Rated torque power 7-16 N.m.
Rated speed 80-100 rpm

Environmental & Compliance

- PowerSteer™ – IP-55, operating temperature $-25^{\circ}\text{C} \sim 55^{\circ}\text{C}$
- Controller – IP-67, operating temperature $-20^{\circ}\text{C} \sim 85^{\circ}\text{C}$ RoHS, CE, ISO 15003
- Tablet – IP-65, when used with supplied dock

Tractor Compatibility

- Fits front-wheel steer tractors only
- Can be used in open-cabin tractors



Specifications

Wheel Specification

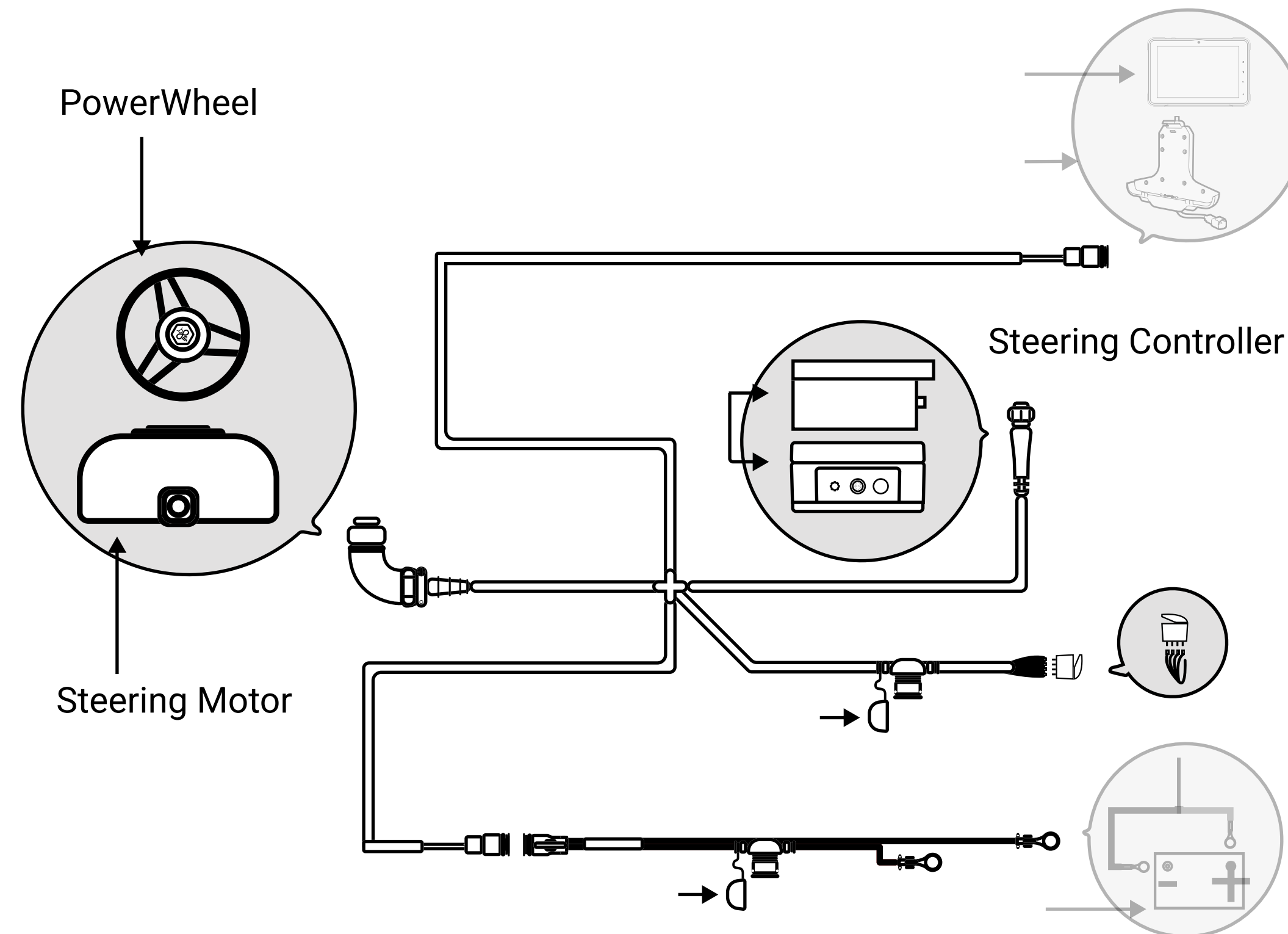
- Control signal: RS232, CAN2.0
- Working mode: speed mode, position mode
- Operating temperature: -25 ~ 55°C (based on environment temperature)

Dimensions

- Steering controller-receiver ø150 mm x 75 mm
- Steering wheel motor ø171 mm x 65 mm
- Steering wheel ø400 mm x 50 mm

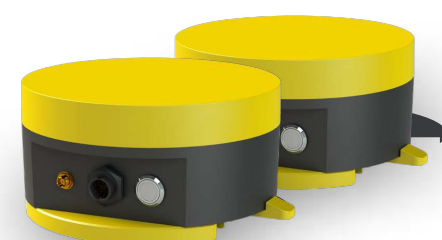
GNSS Receiver

- Dual-band (L1 + L2) GPS, GLONASS, Galileo, BeiDou, QZSS
- RTK 0.01 m + 1 ppm CEP
- Tilt compensation in range +/-15 deg, accuracy 1 deg
- Multi-band RTK with fast convergence times and reliable performance
- Wireless interfaces LoRa 868 MHz /WiFi



Communication

- CAN WiFi Protocols RS232 1xISO11898-1 compatible port (internal communication) RestFul, Socket NMEA 0183, CANopen Additional RS232 port with NMEA output for connecting to 3rd Party devices



Dual Kit

For ultra low-speed operations
and roof installation



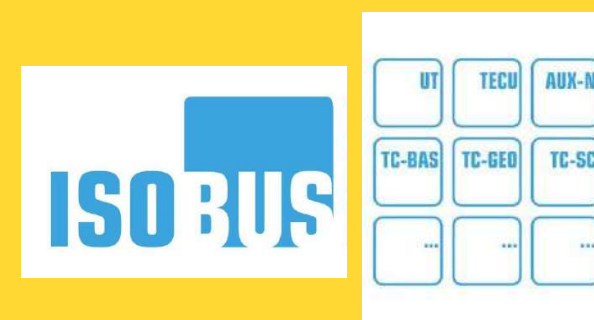
Tablet Kit

A robust rugged tablet for in-cabin
use with simplified connection



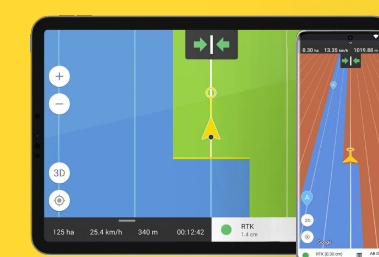
RTK Base Station

Own RTK-signal helps to get up to 2.5 cm
accuracy



ISOBUS

Available in 2025



Premium Navigation App


For more navigation patterns and
advanced features



Customer Support


FieldBee provides various support and training options for farmers, dealers and partners. Printable e-manuals, online sessions and webinars are readily available, making FieldBee products easy to work with.

Comprehensive remote diagnostics and product support at various levels allow us to offer fast problem-solving. We pride ourselves on our eagerness and competence to make your experience with FieldBee as seamless and pleasant as possible.

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