



# TRAINING FOR FJD AUTOSTEERING KIT

WORLD'S LEADING ROBOTICS COMPANY



 FJDynamics

**WHO WE ARE?**



# OUR MISSION

## CREATE FOR A BETTER WORLD

FJDynamics is a robotics company committed to creating a world where human beings are free from heavy labor. Automation, digitalization, and green energy are our ways to do that.

Our technology has been applied in agriculture, construction, geospatial, landscaping, and more. We have R&D and operation centers in Singapore, the U.S., Sweden, mainland China, and Hong Kong. With the global reach of our business, we are excited to work with our partners and customers to build a better future.

# OUR CORE COMPETENCE



**SPATIO-TEMPORAL INFORMATION TECHNOLOGY**

**POWER ELECTRONICS AND MOTOR DRIVE TECHNOLOGY**

**SUPPLY CHAIN INTEGRATION CAPABILITY**



# OUR TEAM

(Estimates as of January 31, 2022 | values rounded)

# 10

GLOBAL OFFICES

# 1800+

ASSOCIATES WORLDWIDE

# 70%

R&D TEAM MEMBERS

# 400+

NATIONAL INVENTION PATENTS



# MILESTONE



**2017**

Dec Establishment of FJDynamics

**2018**

Jun Set up global offices in Sweden, mainland China and Hong Kong

**2019**

Aug Joined Microsoft IoT Ecosystem

Oct Exhibition at HANNOVER MESSE

Nov Launched FJD Autosteering Kit for agricultural machinery

**2020**

Jun Joined Starbucks project "AI for Earth" IoT for Starbucks Pu'er coffee bean planting area

Jul Launched Autosteering Tractor

Sep Global product launch event

Nov Set up offices in Bulgaria, Turkey and Brazil

Dec Global sales of over 10,000 Autosteering Kit

# MILESTONE



**2021**

- Feb Set up offices in Singapore, United States, and Netherlands
- Mar Launched 3D Excavator Guidance System
- May Launched FJD Lawnmower
- Jun Microsoft's most valuable partner
- Nov Completed series B financing of over USD 100 Million
- Dec Launched Multi-View Aerial Camera

**2022**

- Jan Launched 3D Pile Driver Guidance System
- May Launched FJD Trion S1 3D Lidar Scanner
- Aug Launched FJD 3D Land Leveling System
- Launched FJD Connect Farm Management Platform
- Launched FJD Remote Assistance Platform

# BRAND INFLUENCE

## MEDIA



**yahoo! finance**  
**Yahoo! Finance**  
 57M visitors/month [1]

**Seeking Alpha**  
**Seeking Alpha**  
 10M visitors/month [1]

**BENZINGA**  
**Benzinga**  
 7M visitors/month [1]

**ep europa press**  
**Europa Press**  
 5M visitors/month [1]

**FinanzNachrichten.de**  
**FinanzNachric...**  
 1M visitors/month [1]

**finanzen.net**  
**Finanzen.net**  
 7M visitors/month [1]

**PRESSEPORTAL**  
**Presseportal.de**  
 4M visitors/month [1]

**asiaone**  
**AsiaOne.com**  
 1M visitors/day [3]

**MarketWatch**  
**MarketWatch**  
 36M visitors/month [1]

**MARKETS INSIDER**  
**Markets Insider**  
 10M visitors/month [1]

**AP**  
**AP NEWS [The ...**  
 35M visitors/month [1]

**CISION PR Newswire**  
**PR Newswire**  
 8M visitors/month [1]

**adnkronos**  
**ADN Kronos**  
 6M visitors/month [1]

**MORNINGSTAR**  
**Morningstar**  
 3M visitors/month [1]

**WFMZ-TV IND-6...**  
**WFMZ-TV IND-6...**  
 1M visitors/month [1]

**FUTURE FARMING** Buyers guides Tech in focus Crop solutions Smart farming  
 Gateway to the world of smart farming

**FJDynamics auto-steering kit: Your experienced assistant in precision farming**

FJDynamics Global Robotix Company

Farmers today face a huge challenge – feeding a growing global population with less available land. That’s why there’s a growing demand for greater efficiency and accuracy of operations. The FJDynamics auto-steering kit, the “new brain” of our robots, offers smart and efficient

**FJDynamics Enters the US Market with its Next-Gen Agricultural Robots**

FJDynamics launched its autonomous agricultural robot series, bringing best-in-class agricultural solutions to the industry. They include Auto steering Kit, Autonomous Tractor, Smart Sprayer, and Smart High-speed Rice Transplanter. The FJD product series aims to offer an affordable whole process solution and build the needs of smart agriculture.

**AP** U.S. News World News Politics Sports Entertainment Business Technology Health Science Oddities Lifestyle

**REFINED CONSTRUCTION FIRST!**  
 3D Excavator Guidance System

**FJDynamics Releases the Next-Generation Smart Lawnmower**

SHENZHEN, China, March 16, 2022 (PRNewswire) – FJDynamics, the global robotics company, released its solution for refined construction – 3D Excavator Guidance System. It is another breakthrough after it released the auto-steering system for agriculture machines.

The 3D Excavator Guidance System increases the accuracy of construction. Based on GNSS sensors and multi-type sensor modules which lead to high-precision construction, and give operators of all skill levels the ability to be more productively than ever before.

Accuracy Means Efficiency

Accurate positioning in real time is now available for excavators with the 3D Guidance System. Assisted by sensor modules, operators can now get real-time feedback of the movable arms and bucket rod.

**YouTube** Search

**Agro TV Turkey**  
 67.2K subscribers

**FJDynamics Releases the Next-Generation Smart Lawnmower**

NEWS PROVIDED BY FJDynamics  
 May 28, 2021, 10:08 ET

**FJDynamics**

**Kit de Dirección Automática FJDynamics**  
 Agricultura de Precisión Fungible

Los agricultores enfrentan hoy en día a un gran reto: alimentar a una población mundial que crece muy rápidamente. Por ello, hay una creciente demanda de mayor eficiencia y precisión en las operaciones. En este sentido, FJDynamics ha desarrollado el “Nuevo cerebro” de los vehículos agrícolas: el Kit de Dirección Automática. Este sistema de posicionamiento en tiempo real, basado en sensores GNSS y módulos de sensores de múltiples tipos, permite una construcción de alta precisión y da a los operadores de todos los niveles la capacidad de ser más productivos que nunca antes.

La precisión significa eficiencia. La precisión en tiempo real está disponible para excavadoras con el Kit de Dirección Automática. Asistido por módulos de sensores, los operadores ahora pueden obtener retroalimentación en tiempo real de los brazos móviles y la pala, y se asegura de que sea el sistema de 3D.

(Estimate as of February 28, 2022 | values rounded)



# BRAND INFLUENCE



## WITNESS

(Estimates as of February 28, 2022 | values rounded)



**us USA**  
**Our Wyoming Life**  
229k followers  
**40k views**



*"I can see where farmers can really utilize this equipment."*



**PL Poland**  
**Jockerfarm**  
441k followers  
**537k views**



*"You will save on seeds and you will have sown properly."*



**TR Turkey**  
**Berkay Karadeniz**  
160k followers  
**171k views**



*"A nice system and it's comfortable using it."*



**MX Mexico**  
**Ingeniero Orozco**  
58k followers  
**72k views**



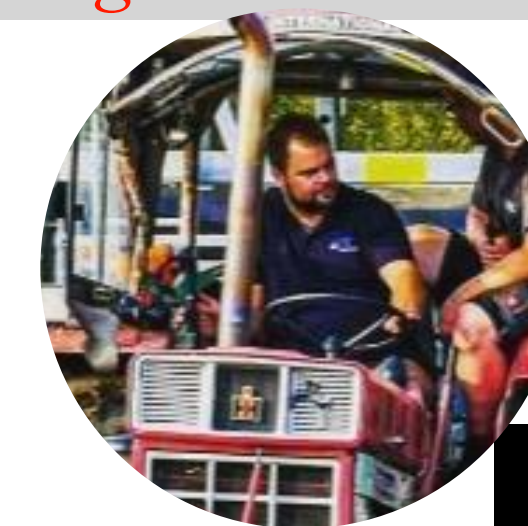
*"Necessary for the field in Mexico, the most updated, without signal problems and economical."*



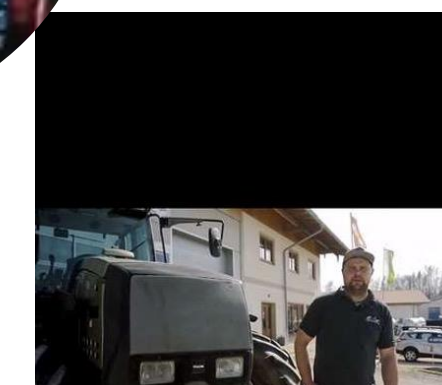
**IT Italy**  
**The Italian Farmer**  
54.6k followers  
**55k views**



*"This Autosteering Kit is exceptional value for money!"*



**DE Germany**  
**Turbo\_Tepl**  
37k followers  
**23k views**



*"Alles in einem bin ich sehr zufrieden mit dem System, und kann es jetzt schon gutem Gewissens weiter Empfehlen."*

# AGRICULTURE INDUSTRY PROFILE



## PAIN POINTS

- Imbalance in Labor Force and High Labor Cost
- Risks of Manual Driving
- Low Efficiency and Inconsistent Quality



# FJD PRECISION AGRICULTURE SOLUTION



## FJD PRECISION AGRICULTURE SOLUTION



# FJD PRECISION AGRICULTURE



## BENEFITS

**Boost Productivity:** With 2.5cm accuracy and speeds up to 18km/h, the Auto Steer System can help you complete field operations quickly and efficiently.

**Payback Within the First Year<sup>1</sup>:** Payback can be within the first year for big-time growers (200ha and beyond).

**Reduce Input Cost:** Using auto steer rather than driving manually reduces skips and overlaps, helping farmers reduce input costs by around 15%<sup>2</sup>.

1. Payback time may vary per conditions.

2. The percentage may vary due to the price of input, farm acreage, and more.



 FJDynamics

# FJD AT1 AUTOSTEERING KIT INTRODUCTION



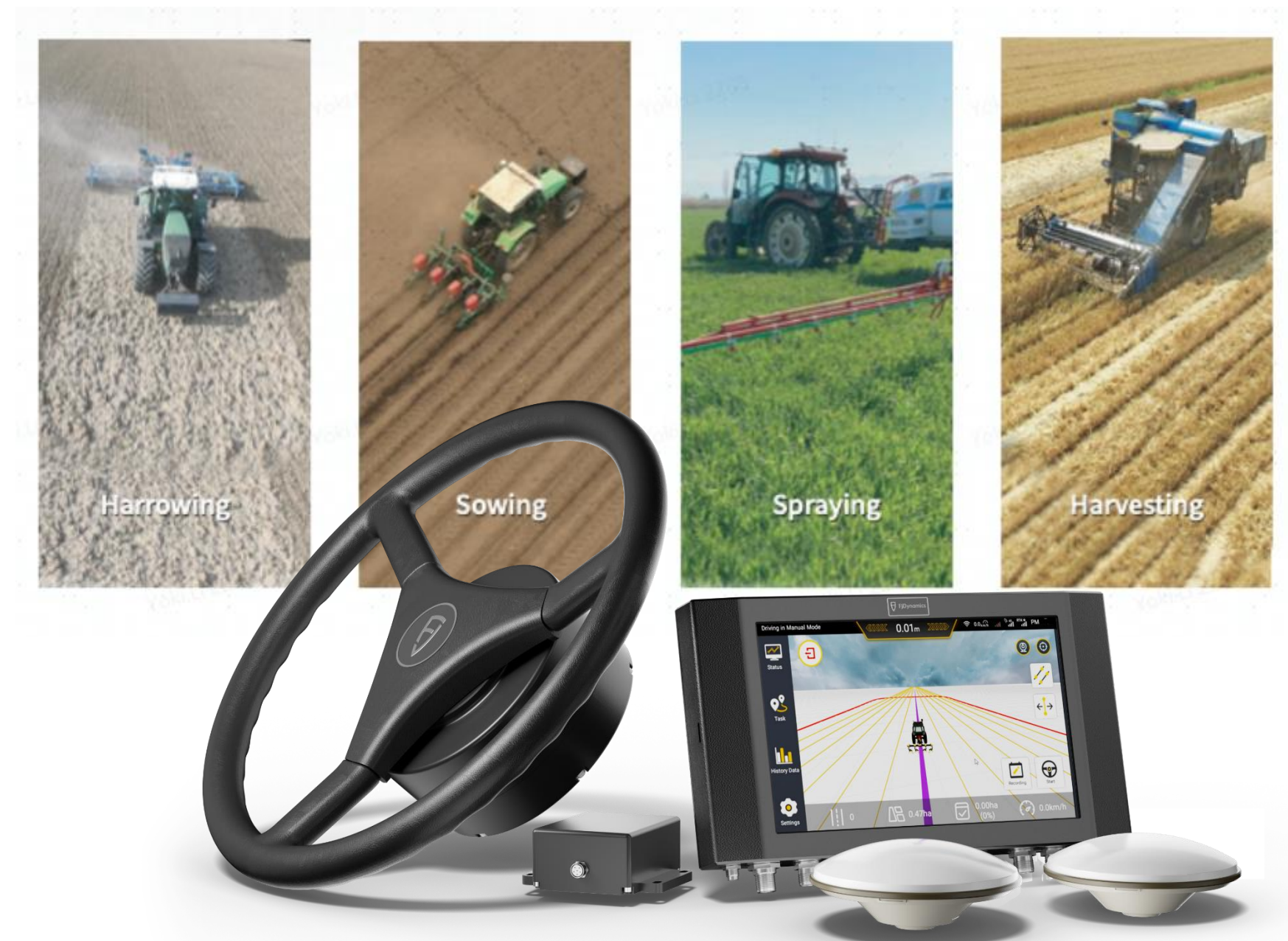
FJD AUTOSTEERING KIT

# AUTO STEERING KIT

A HIGH-ACCURACY GPS AUTO-GUIDANCE AND STEERING SYSTEM

HANDS-FREE & MORE PRODUCTIVE

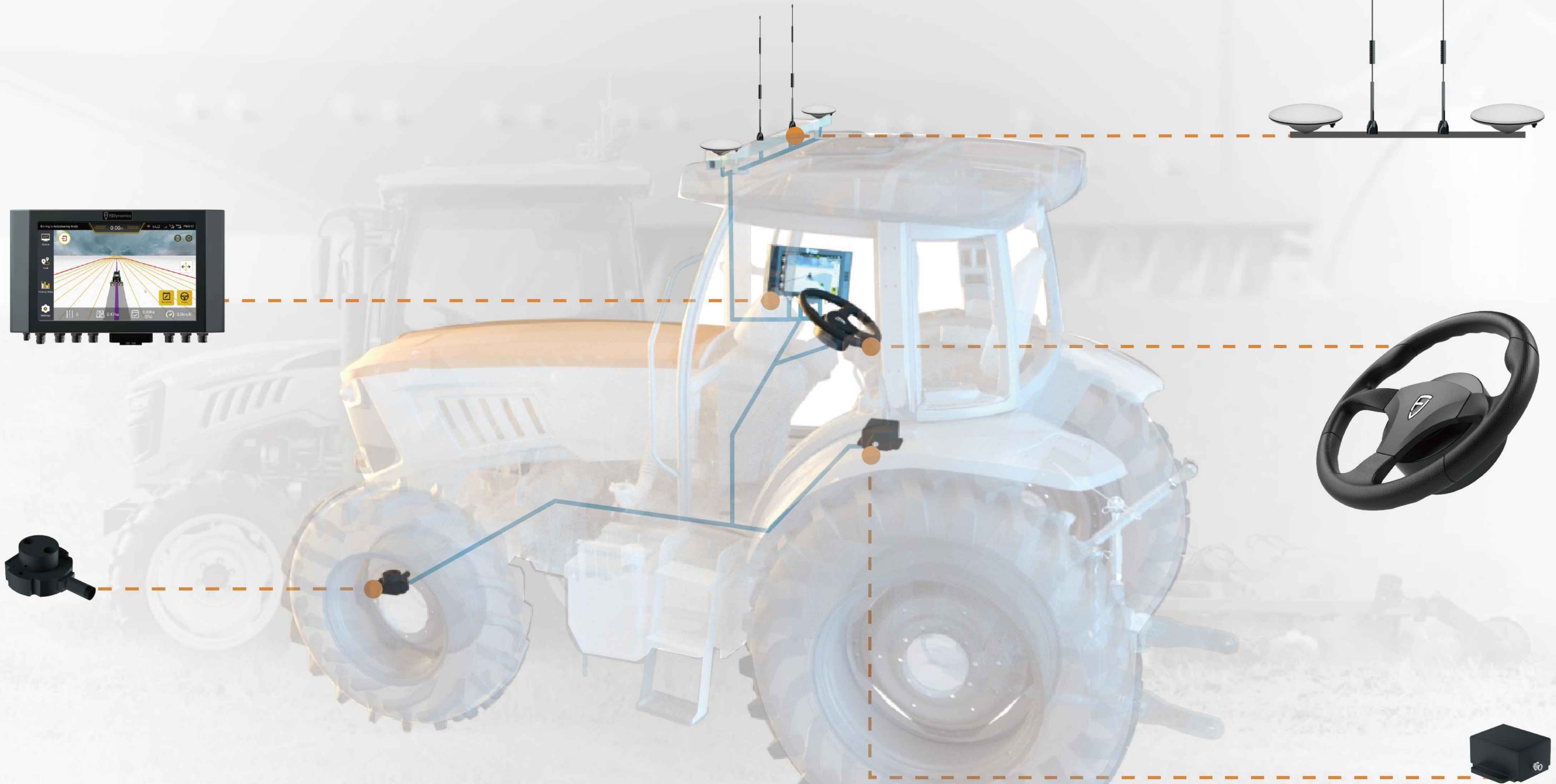
With GNSS and RTK, the autosteer delivers 2.5cm pass-to-pass accuracy on any terrain. With Farm Management, U-turn auto-driving and advanced guidance line, it adapts to various application scenarios in precision agriculture as a comprehensive solution. Benefiting from this product, you can see increased yields, better working efficiency, increased productivity, and reduced cost.



WORKS WITH A WIDE RANGE OF  
TRACTOR MODELS AND OPERATIONS

# AUTO STEERING KIT

## CORE CONTENTS



# U-TURN AUTO DRIVING



- Automatic path planning that suits your field.
- Autosteer and autoturn within the boundary without manual intervention.
- Automatic headland closing.
- Start path planning and autosteer anywhere in the field.
- Automatically avoid the area that has been worked when planning a path.



Paid to unlock this function





# AUX-TURN

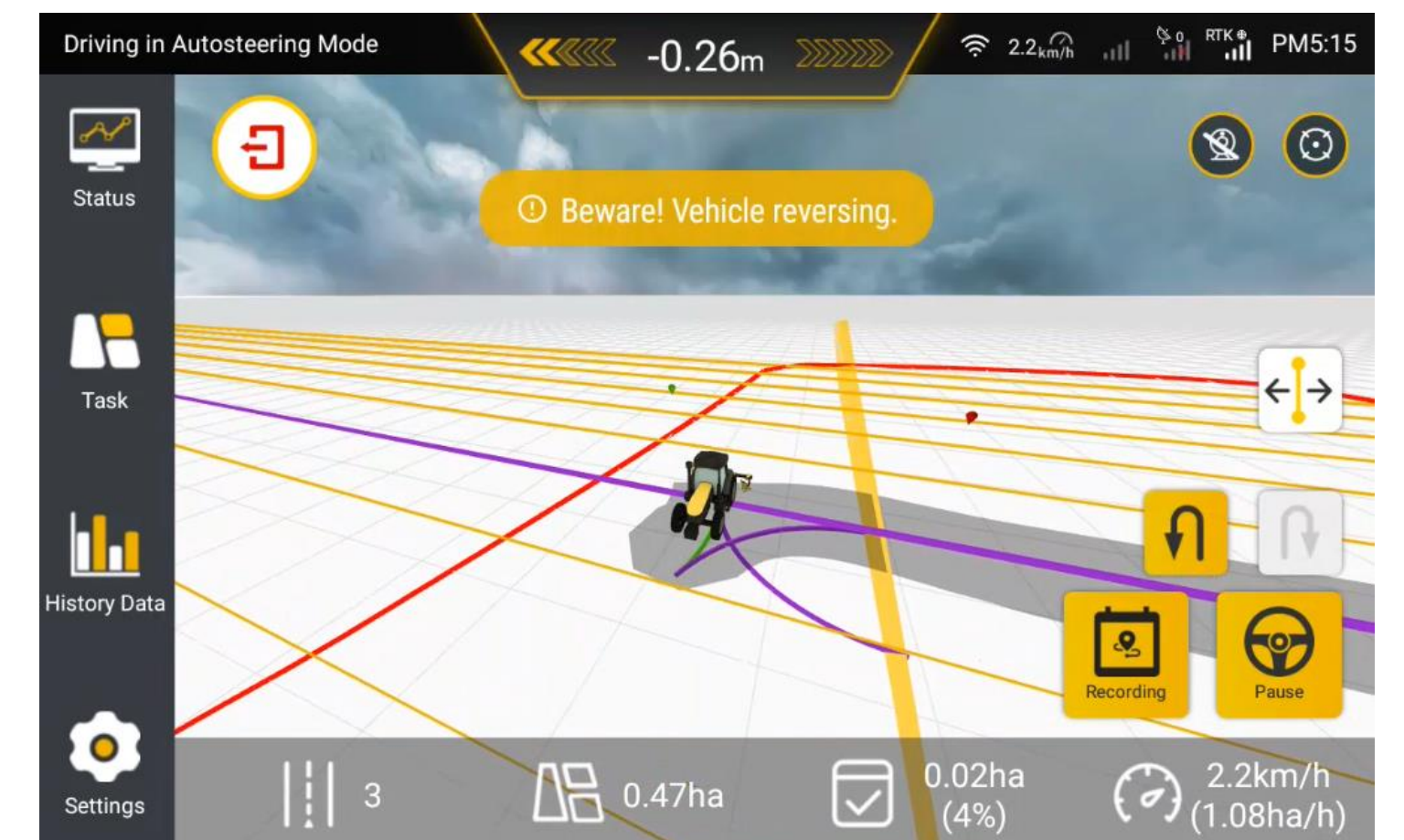
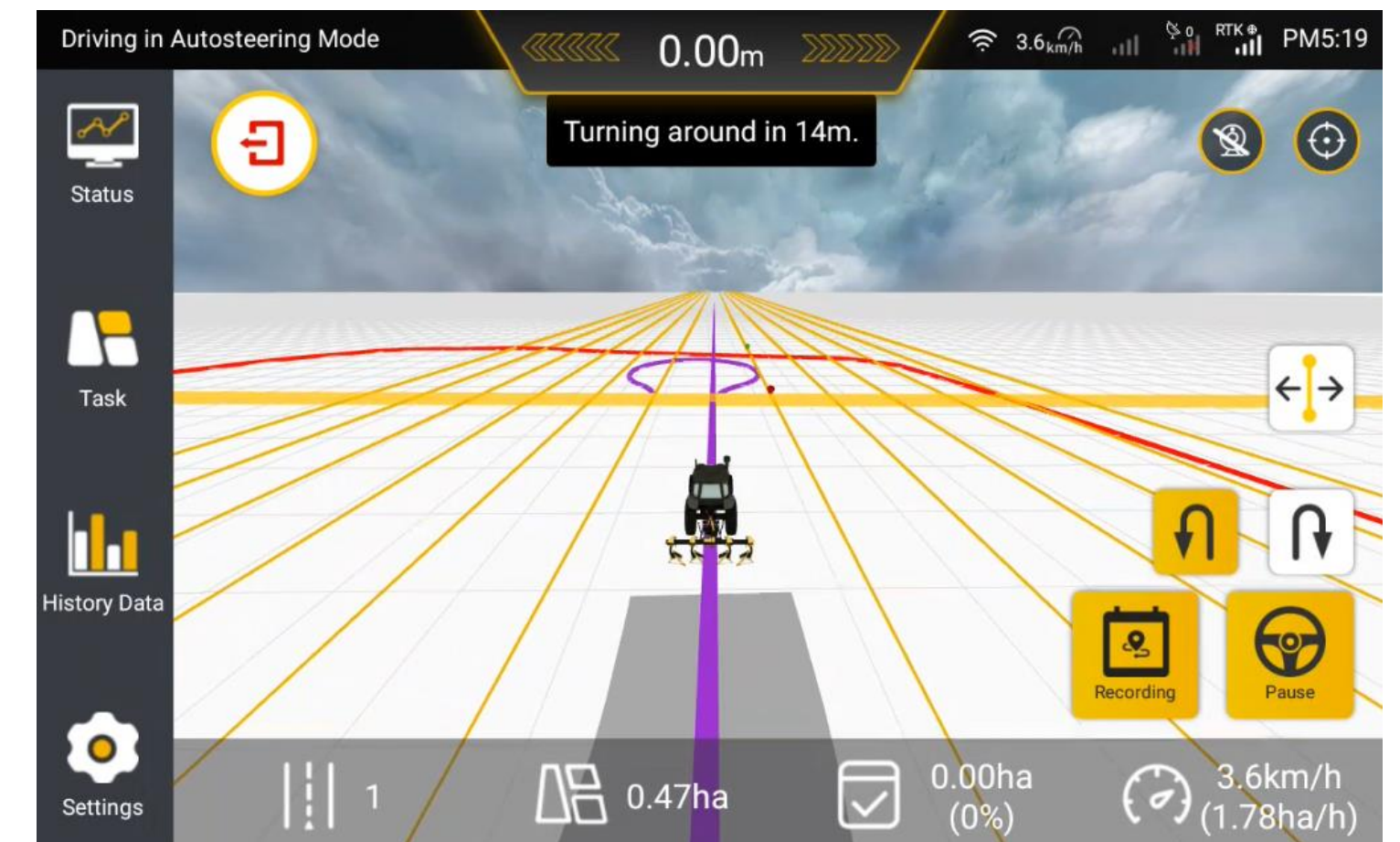
## Ω OR FISHTAIL SHAPES

One press away from auto turn at the headland with Ω or fishtail shapes for you to choose from.

Works with fields of all shapes.

3 Steps to Start AUX-Turn:

1. Mark the field boundaries
2. Turn on AUX-Turn
3. Confirm the direction: left or right.



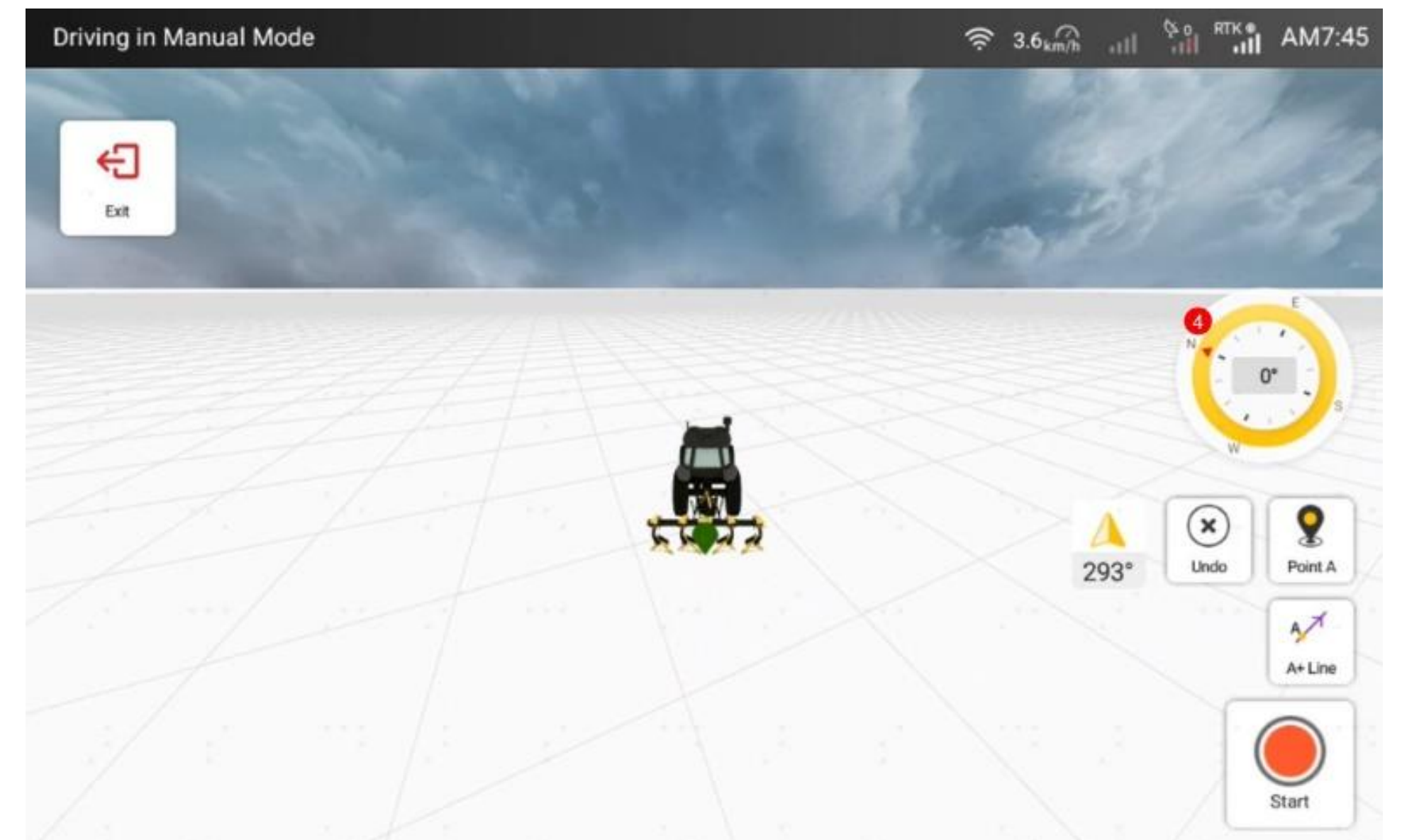
\*Paid to unlock this function



# A+ GUIDANCE LINE

Create an AB line in a more efficient manner in both fast mode and advanced mode.

- Instead of driving your tractor from point A to Point B to create an AB line, you can now create a straight guidance line with Point A (where your tractor is) and an angle.



# PIVOT



Point A and B to create guidance line for center-pivot irrigation field.

- Just follow the wheel marks of the irrigator to points A and B to confirm the guidance line that best suits the field to make full use of irrigation water.
- No need to set the center of the circle or point 3 points, more user-friendly and accurate.





# ISOBUS

## UNIVERSAL TERMINAL

The UT is a plug-and-play user interface for any ISOBUS-compatible implement, visualizing data from the implement and allowing the user to check and control the implement from FJD's control terminal.



**\*VT is free to unlock for FJD users.  
We have already released it for test.**

# ISOBUS

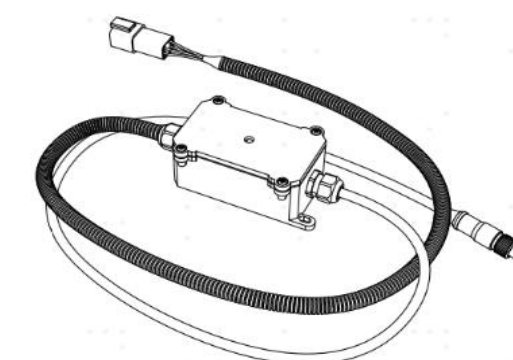
## UT COMPATIBLE LIST



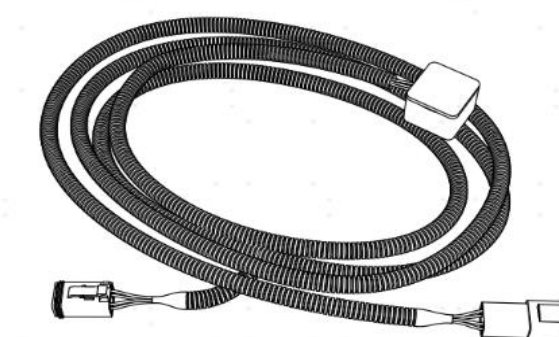
| Brand/ Series               | Type       |
|-----------------------------|------------|
| Horsch Pronto 3dc           | Seed Drill |
| Kverneland exacta geospread | Spreader   |
| Kverneland exacta-CL EW     | Spreader   |
| kverneland                  | Sprayer    |
| CASE                        | Planter    |
| Lemken Solitair 9D          | Seed Drill |
| Krone BIGPACK 1270VC        | Baler      |
| Monosem B2                  | Seed Drill |

Hardware you'd need for ISOBUS:

- FJD ISOBUS cable kit
- FJD Autosteering Kit



CAN Box



TBC Box



ISOBUS Box

The list of compatible implements, as of Feb., 2023, will be continuously updated.

# ISOBUS

## TC-SC

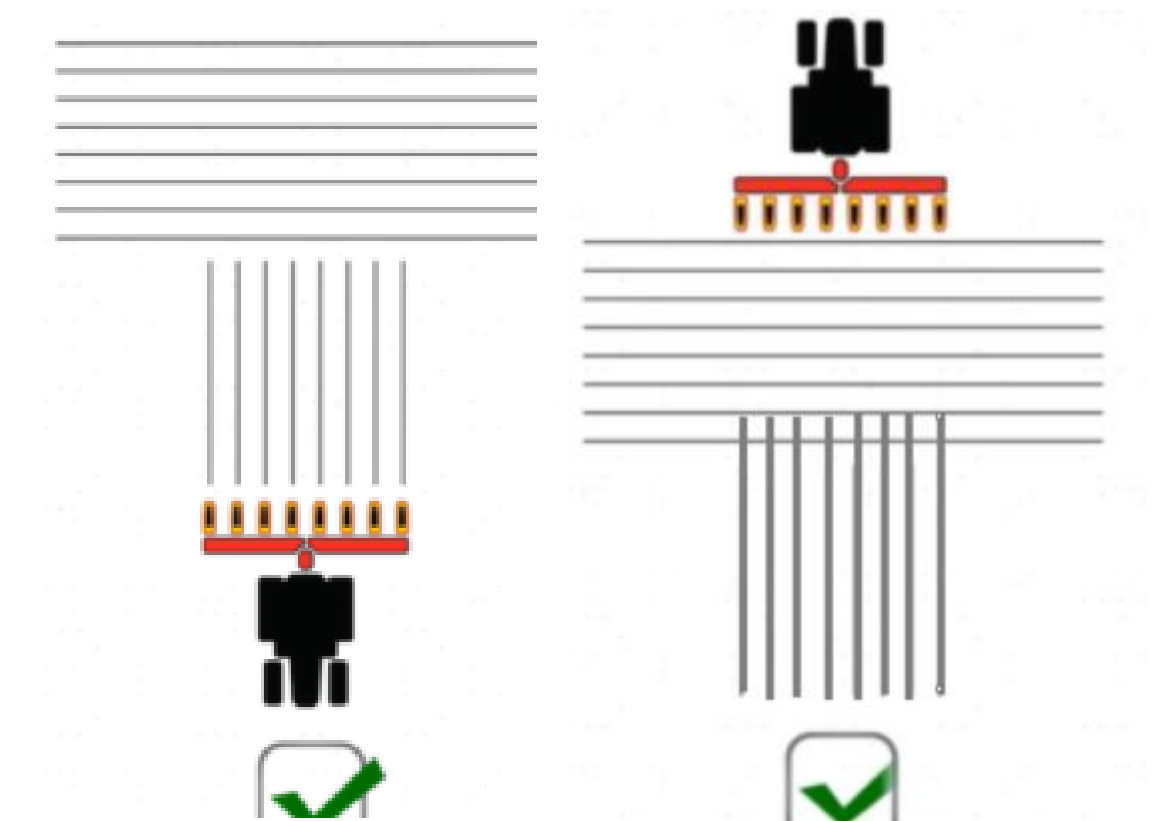


**Section Control:** Automatically turns implement sections on and off based on geographic and required overlap ratio.

- Automatically switch on and off sections on the implement based on the real-time forward direction of implement and the operation record to reduce product overlaps and skips in the field.



Demo page of TC-SC



Scenario illustration

\*paid to unlock this function  
Will be available in Q2 2023

# IMPLEMENT CONTROL

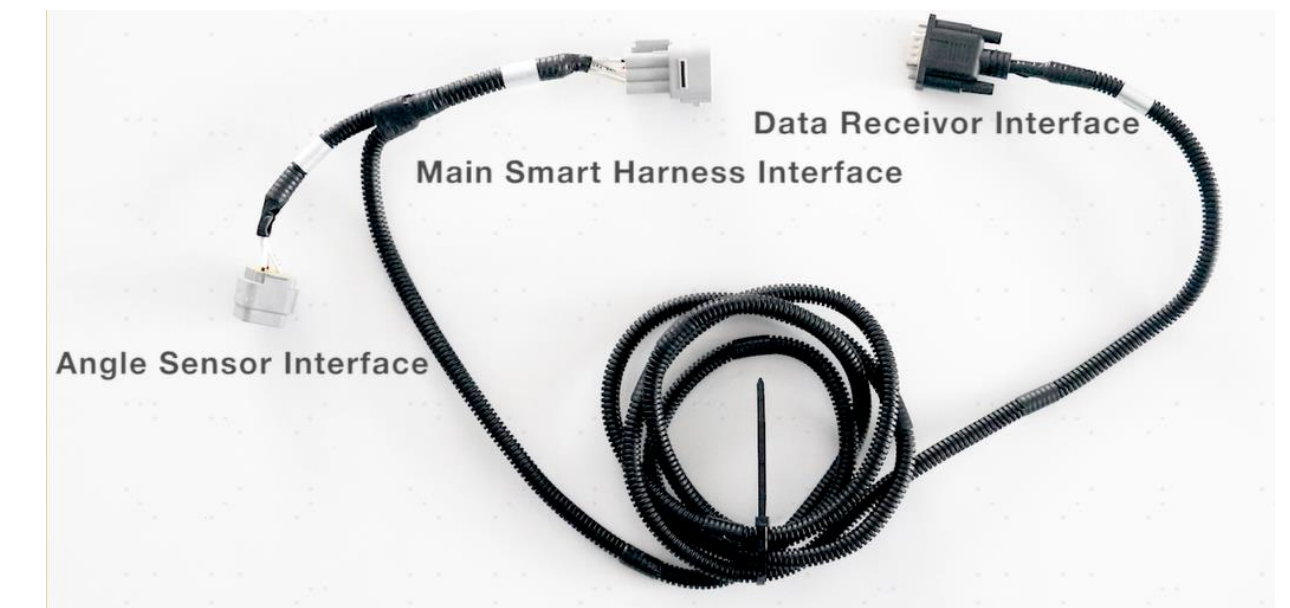
## NMEA & RADAR SPEED OUTPUT



**NMEA:** Provides accurate position and speed, supported by NMEA0183 protocol, from FJD's control terminal to the implement via a wiring harness (optional).

- The implement gains the tractor's speed, then automatically controls the operation speed, high speed, the fast sowing/fertilizing speed.
- The implement gains the tractor's real-time position so it knows which parts have been worked on and opens/shuts the section accordingly.
- **Formats supported:** GGA, VTG, HDT, ZDA, RMC and GST.

**Radar speed output:** Give access to allow the implement to get the speed of the tractor, then automatically control the operation speed, high speed, the fast sowing/fertilizing speed.



**\*For NMEA: Only works with NMEA-compatible implements.**



**\*For radar speed output:  
Only works with radar speed output-compatible implements.**



# FARM MANAGEMENT

## INTERACTION BETWEEN FJD CONNECT AND AUTO STEER

**Field Mapping:** Drive your tractor along edges or map them out on FJD connect with clicks of your mouse.

**Task Management:** Record and manage your field/farm activities.

You can also create tasks, fields and guidance lines on **FJD Connect** and assign them to the autosteer. Task memory guides you to the spot where you left so you can pick up from there.

**Working Performance:** Operation performance can be traced on the platform anytime for future reference.



\*FJD Connect is available for any users for free for a year if he/she buys and starts using it in 2023.



# BASIC FUNCTIONS

## GUIDANCE LINE



**Guidance Line Mode:** You can create straight, curved, and concentric circles via A+ and pivot modes.

**Guidance Line Translation:** Translate the guidance line by a fixed distance or to the current position (only for AB straight-lines); For pivot, you could scale the guidance line by a fixed distance or to the current position.

**Guidance Line Sync:** Share guidance lines with multiple machines working in the same field.

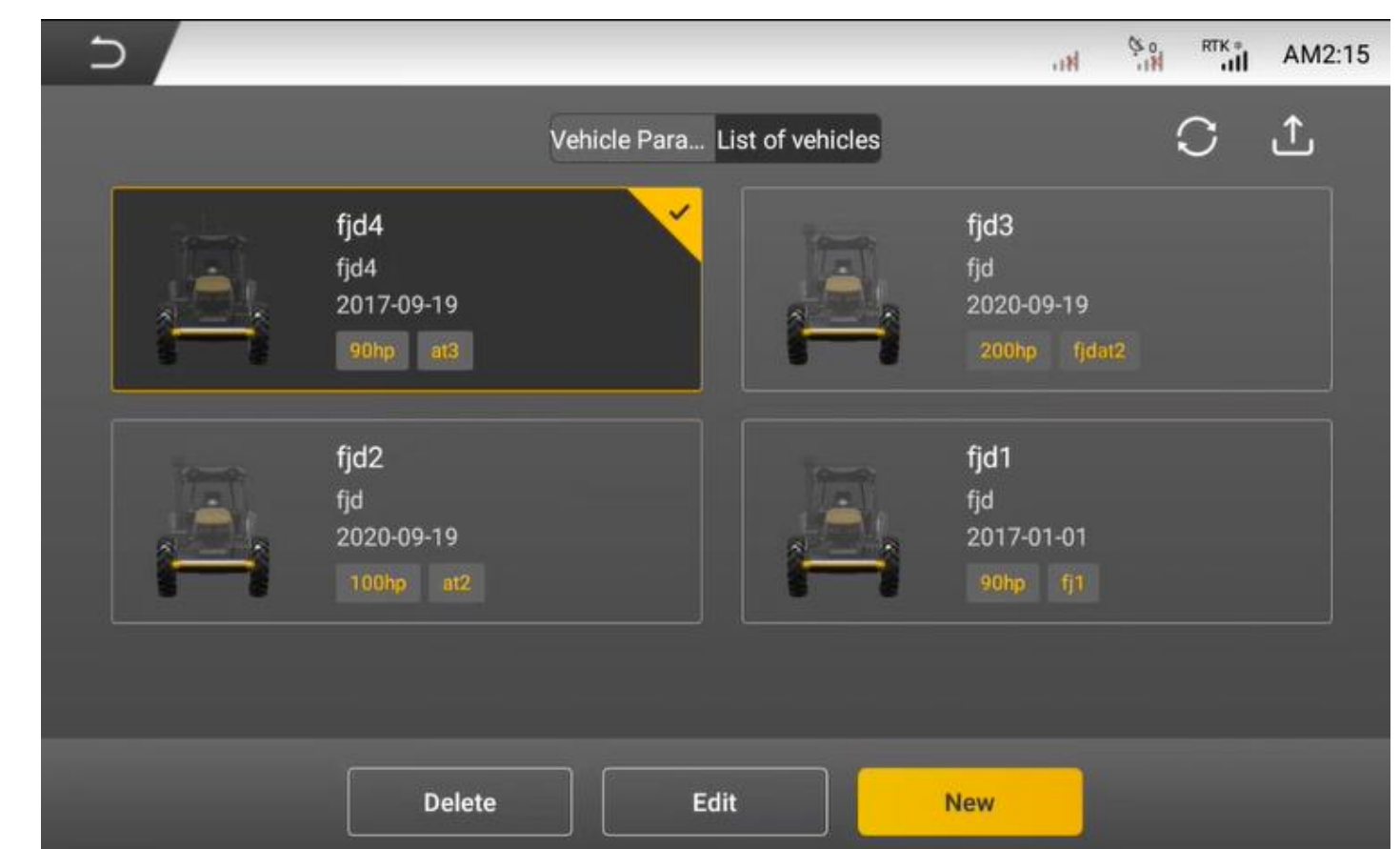
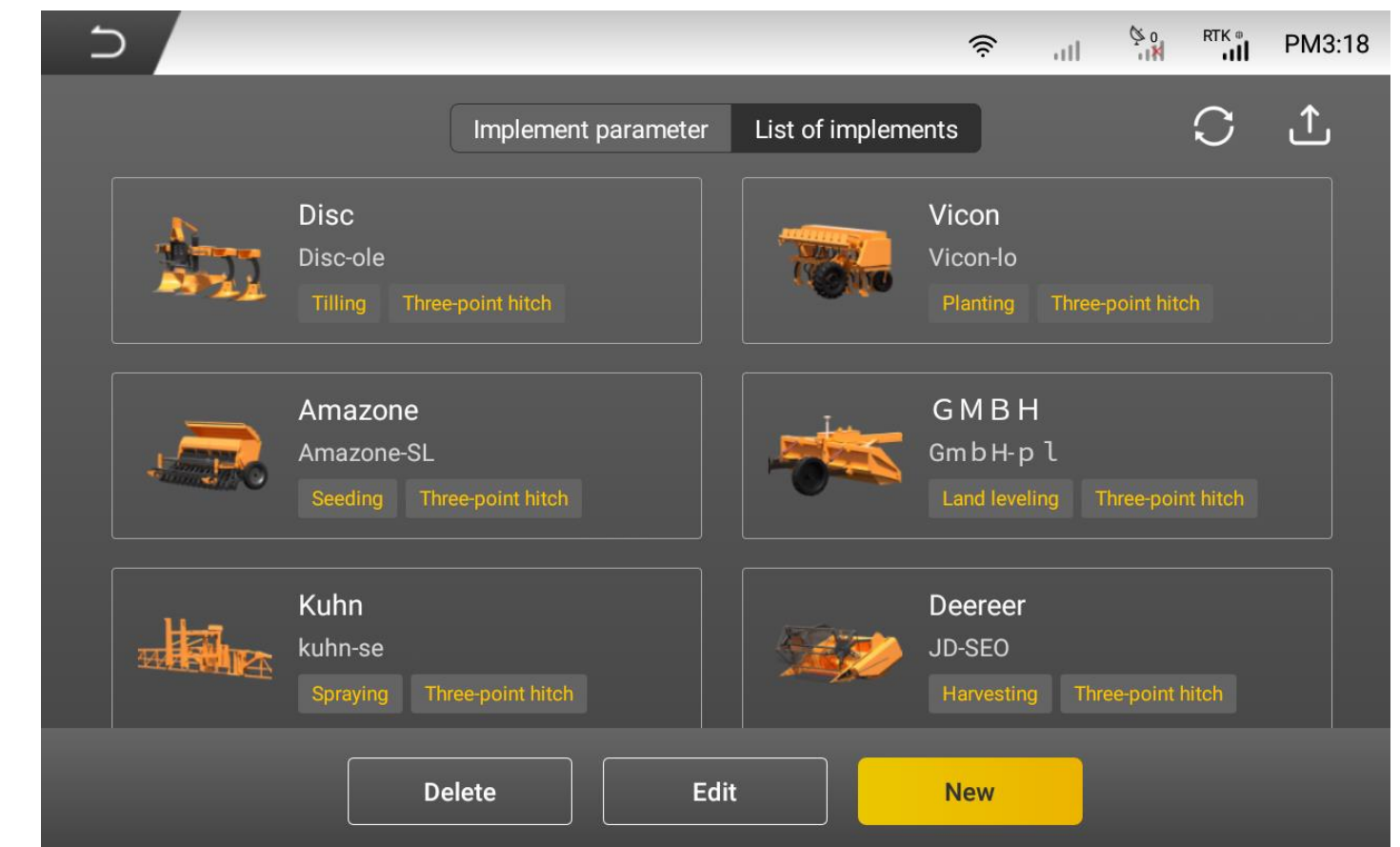
**Vehicle Trim:** Adjust the vehicle to the left or right of the guidance line without shifting the guidance line.

# AGRICULTURAL MACHINERY LIBRARY



## VEHICLE AND IMPLEMENT

- Implement and vehicle management (You can add 10 implements for free)
- Easy switch between operations with two clicks and you have all the data ready.
- Clear parameters for high precision navigation
- U-turn path planning at its highest efficiency
- \*All data synched and stored in your personal account. (\*Internet connection required.)



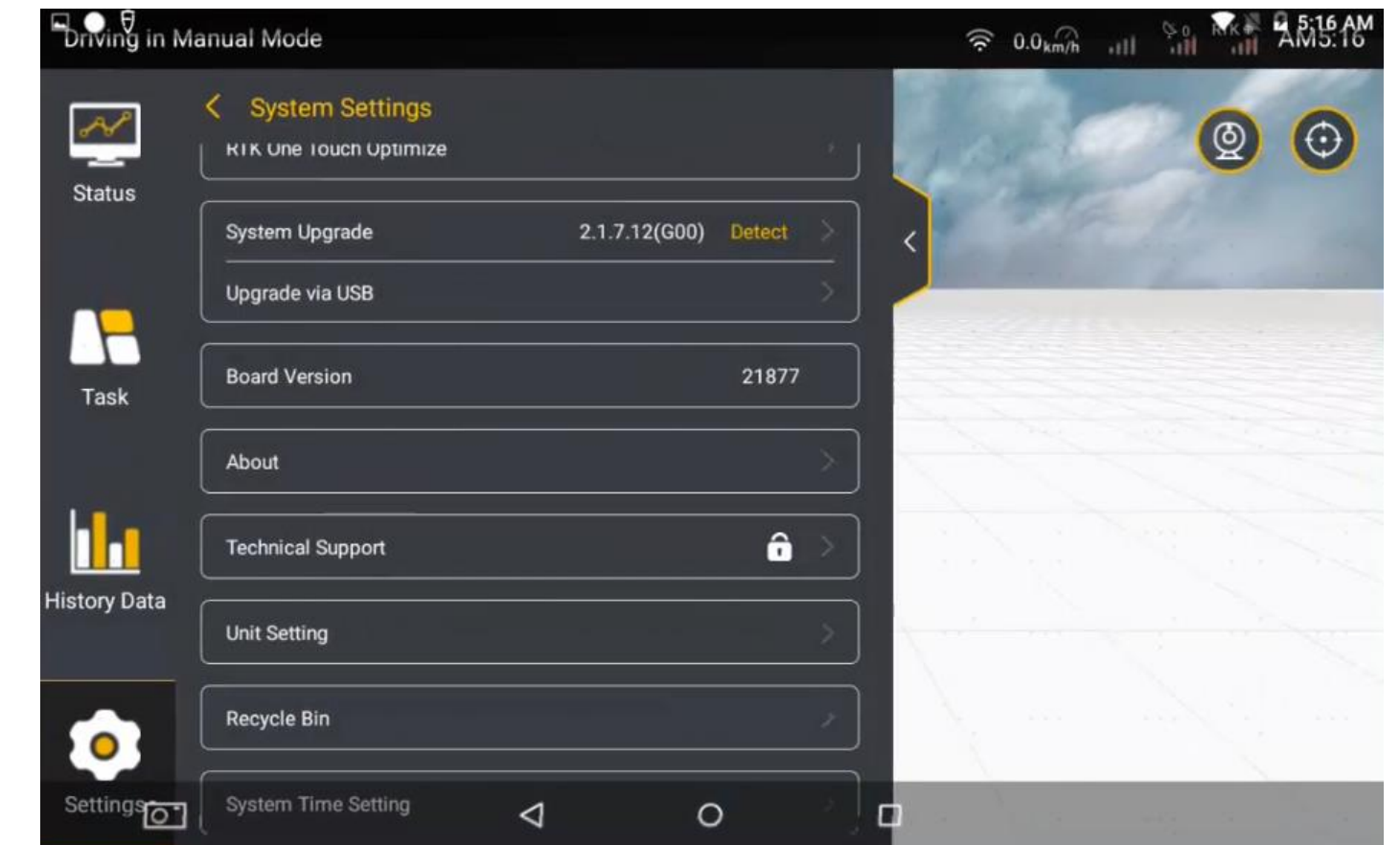
# UPGRADE METHODS

## OTA & USB FLASH DRIVE

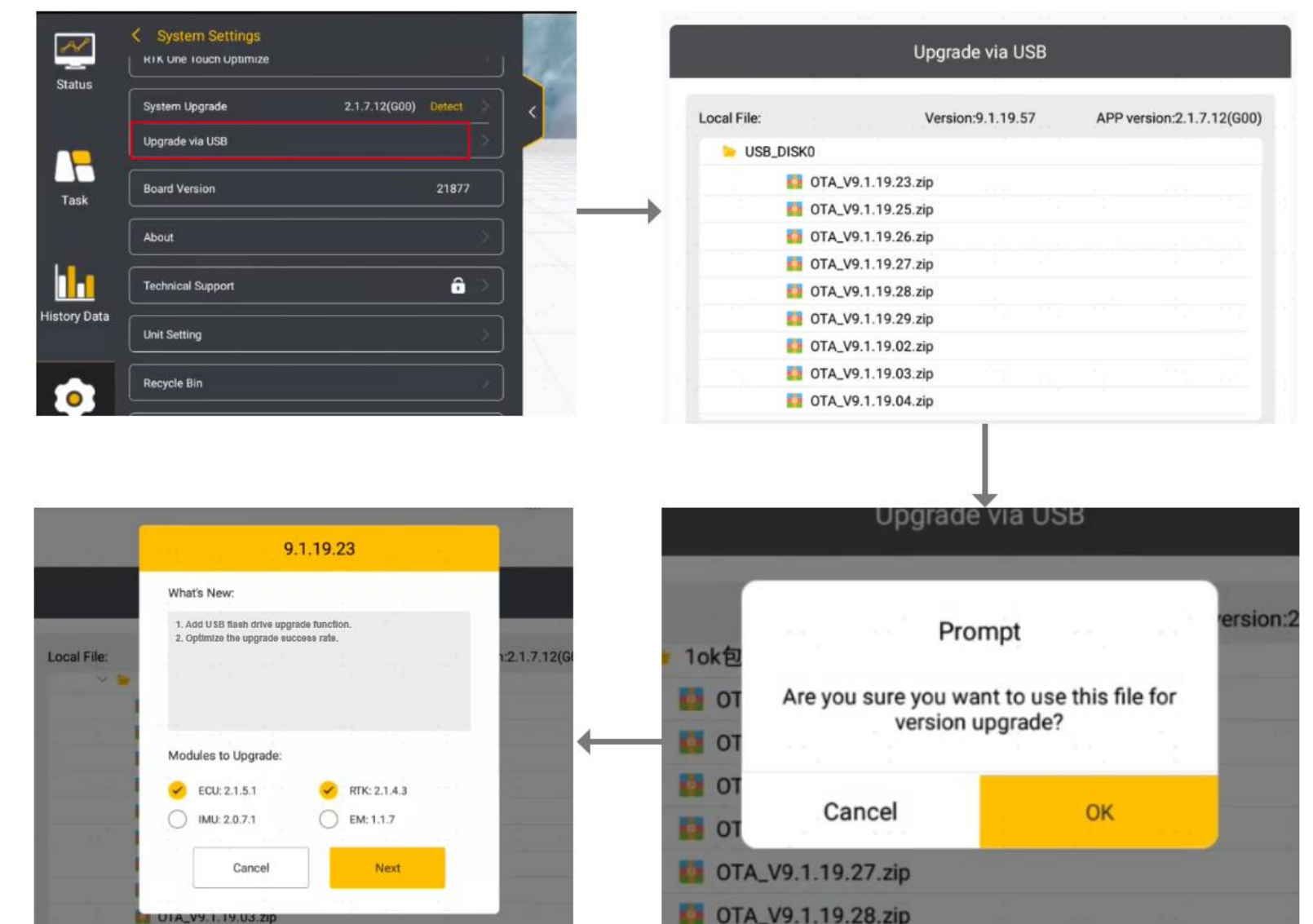


Upgrade via network: Tap the Upgrade button in the Settings to boost your system to its latest;

Upgrade via USB C flash drive: Download the upgrade package to a USB C flash drive and use it to upgrade the system when you're nowhere near internet access.



**\*Upgrade via network**



**\*Upgrade via USB**



# SAFE DRIVING

## MANUAL INTERVENTION & ALERT

In case of emergency, you can deactivate the auto steer mode in 2 ways:

- Hold the steering wheel for 1.5s, then turn the steering wheel against its current turning direction.
- Directly turn the steering wheel (\* turn in the opposite to the direction of the auto steering).

**Alerts:** A warning will be prompted when you approach the headland/travels too fast/needs to turn.

# DATA TRANSFER

## GIS INFORMATION



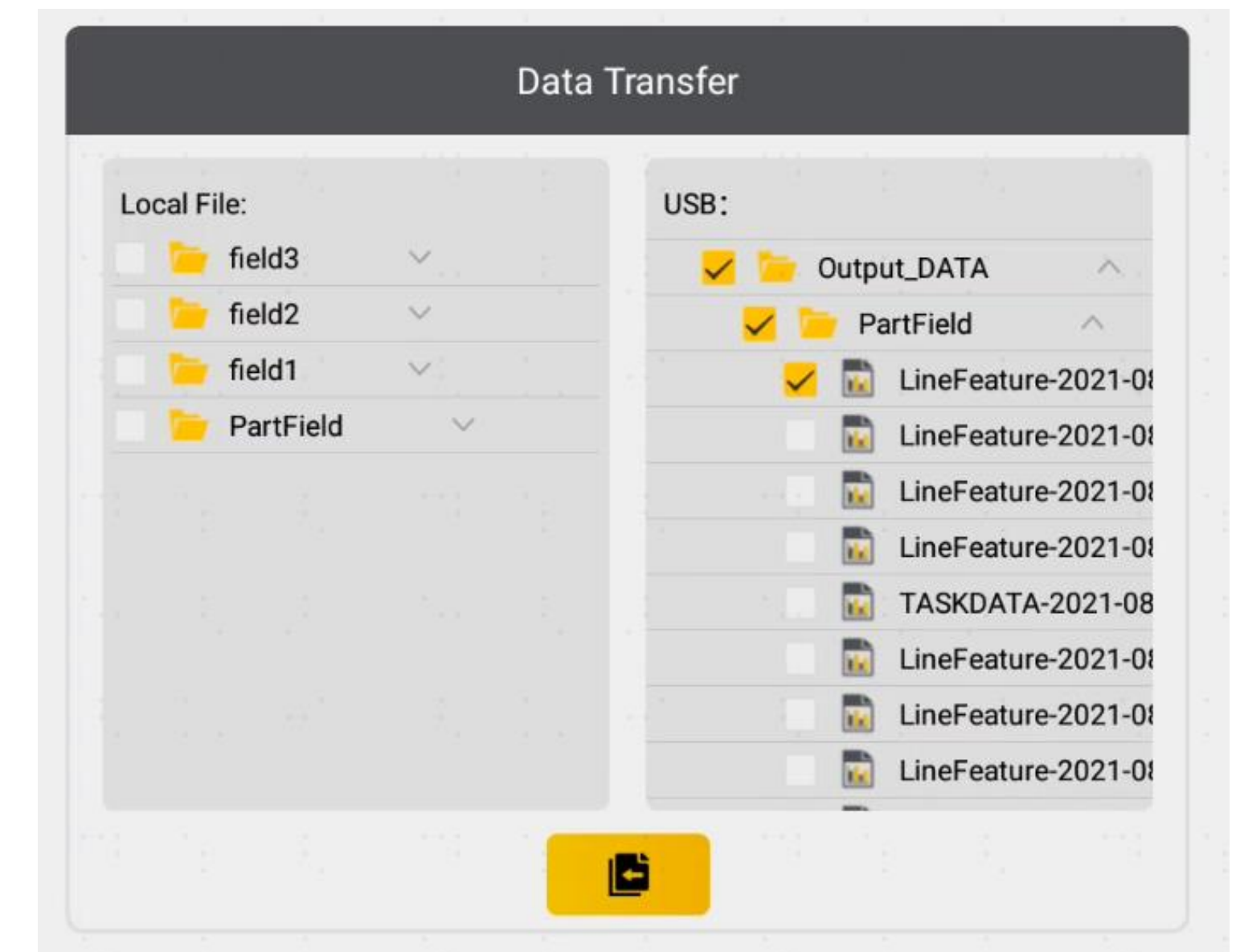
### Transfer field, boundary and guidance line data:

- Record operations' detailed info and transfer it between machines.

- Import boundaries and guidance lines that you generate

with a third-party tool to our system via a USB C flash

drive or online.



.SHP (SHX/DBF/SHP) and .ISOXML supported

# SPECIAL OPERATING SCENARIOS

## LOW-SPEED & TERRAIN COMPENSATION



**Low-speed:** High-precision operation at a minimum speed of 0.018Km/h. Ideal for planting potatoes, sugarcane, and vegetables.



\*Requires a hall angle sensor.  
(Sold separately)

**Terrain Compensation:** Works on pitches of up to  $35^\circ$  and a roll as sloped as  $30^\circ$ . Accuracy guaranteed even when the tractor has to drive on slopes.



\*Please exercise extra caution when driving a small tractor on slopes.

# OPTIONAL ACCESSORIES



WIFI CAMERA



FJD SATELLITE NAVIGATION  
BASE STATION



WIRE KEYPAD



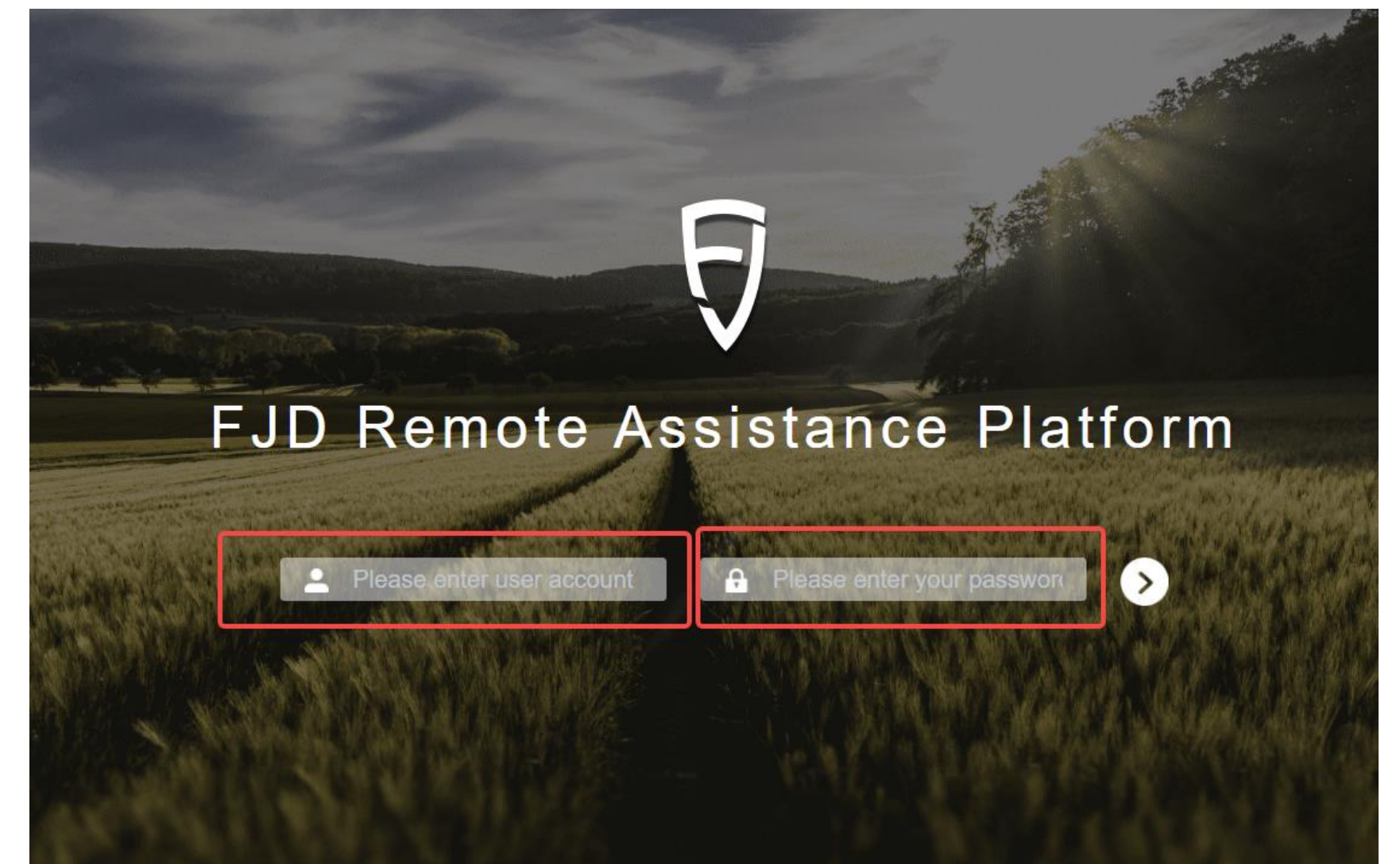
FJD EASY CONTROL

WIRELESS KEYPAD



# FJD REMOTE ASSISTANCE PLATFORM

Remote Support: Improves uptime through real-time technical support.



**\*Free to open for FJD Resellers**





FJDynamics

CREATE FOR A BETTER WORLD