Hi-Target

FARMSTAR-F3

Auto-Steering System

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With over 25 years of expertise in GNSS technology and a commitment to autonomous driving advancements, Hi-Target has made substantial advancements in its precision agriculture systems over the past decade.

The FARMSTAR-F3 auto-steering system represents Hi-Target's latest breakthrough, offering an impressive pass-to-pass accuracy of ±2.5 cm. This advanced technology optimizes crop spacing, enhancing the plants' ability to absorb nutrients and sunlight, thereby maximizing yield potential. The system is equipped with ISOBUS compatibility, allowing for seamless integration with modern agricultural machinery. This integration streamlines operations, reduces setup time, and minimizes operator errors, ensuring reliable and consistent performance throughout the entire farming season.

0.1-25 km/h
Without angle sensor

Hi-RTP PPP

ISOBUS

±2.5cm
Pass-to-pass
accuracy

Slope
compensation

Multiple
guidance line

OTA
OTA update

Automatic
U-turn across rows

Key Features

Simplified Hardware Design & User-Friendly Software

- All-in-one unit integrating navigation, precision board, and radio capabilities.
- User-friendly interface enhances productivity and operational ease.
- Intuitive software for global users over 30 countries, simplifying vehicle setup and monitoring.

Advanced Algorithms

- Achieves speeds between 0.1-25 km/h without front angle sensor.
- High-performance algorithms ensure reliability and efficiency.
- Utilizes linear motor control to reduce damage and enable quick line acquisition.

Cloud-Based Farm Management

- Facilitates online and offline data sharing for improved farm management.
- Enhances productivity and resource utilization with real-time connectivity.
- Provides insights on farms, plots, boundaries, and tasks.

Smart HiFarm Software

HiFarm combines auto-drive, farm management, logs, camera views, and remote control in an intuitive design for streamlined farming efficiency.

Filed & Workline Share

Easily share farm infomation and workline data between tractors on the same field to reduce manual input errors and ensure accurate operations.

Fast Workline Nudge

Allow quick path adjustments and maintain operational efficiency by reducing time lost to stopping and reprogramming.

Automatic U-turn

Allow to do skip rows U-turns to accommodate the normal operation of tractors with different turning radius.

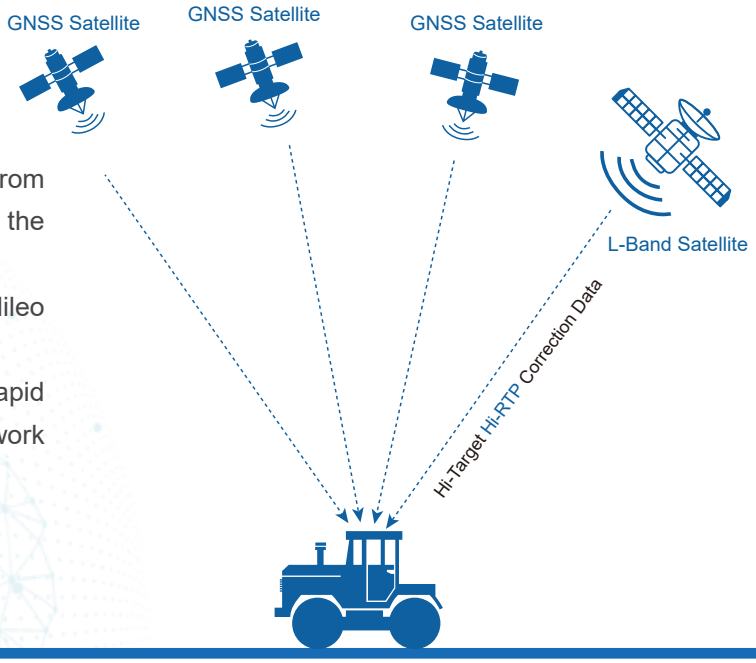
Slope Compensation

Processed slope data in real-time to remain accurate on hilly or sloped terrain, reducing the risk of overlapping or missing field sections.

Additional Functions

Pro-grade functions for seamless scalability

— *Hi-RTP PPP Service*



- Hi-Target Hi-RTP receives L-Band differential signals from satellites directly, providing wide signal coverage across the Asia-Pacific region and nearly all of Europe.
- Free PPP-B2b from Beidou and PPP-HAS from Galileo E6.
- Low convergence time of Hi-RTP PPP services enble rapid access to high accuracy even in areas without network connectivity.

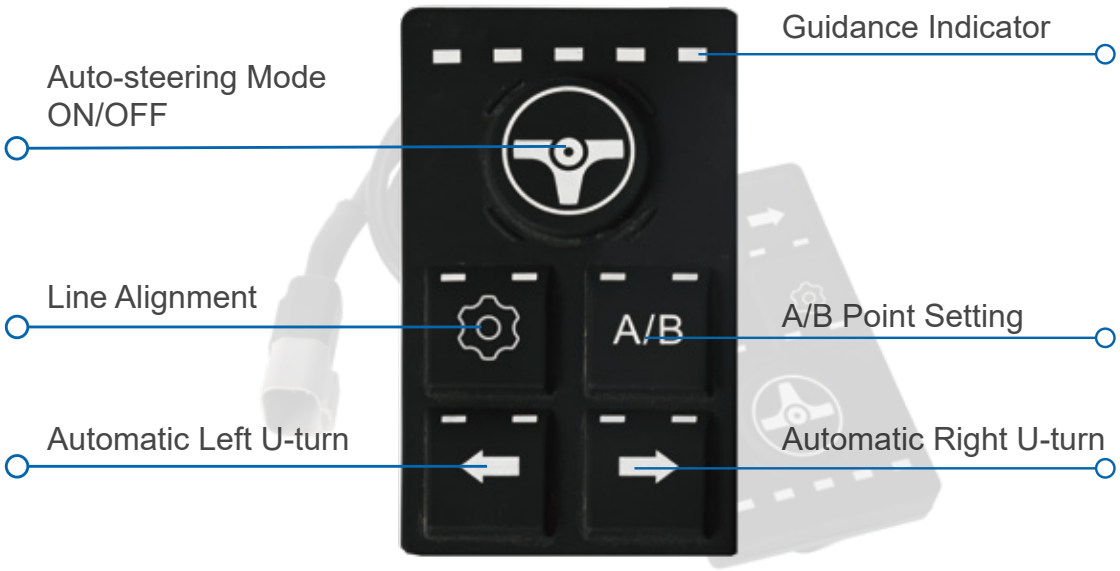
— *ISOBUS Compatibility*

- Seamlessly adapts to various ISOBUS agricultural implements, significantly boosting economic efficiency throughout the entire agricultural process.

Optional Choice

Personalize with optional upgrades

Button Panel



Optimized Screen Sizes for Every Task

Choose between a 10.1-inch portable design for cab flexibility or a 12-inch expansive display for enhanced map visibility and touch accuracy during complex operations.

10.1-inch

Compact & Portable | Sunlight-Readable

12-inch

Enhanced Map Visibility | High-Sensitivity Touchscreen

Applications

Specifications

System

GNSS Accuracy Index

RTK Accuracy	Horizontal: 8 mm + 1 ppm RMS Vertical: 15 mm + 1 ppm RMS
Max Location Data Update	20 Hz
Code Differential GNSS Positioning	Horizontal: 0.25 m + 1 ppm RMS Vertical: +0.5 m+1 ppm RMS | SBAS: 0.5 m (H), 0.85 m (V)
Velocity Accuracy	Horizontal: 0.007 m/s RMS Vertical: 0.020 m/s RMS

Performance

Pass-To-Pass Accuracy	±2.5 cm

Communication Interface

CAN Ports	2
WiFi	IEEE 802.11 b/g/n
Network Communication	4G network: TDD-LTE, FDD-LTE, WCDMA, TD-SCDMA, EDGE, GPRS, GSM
Data I/O Protocol	J1939
Radio Module	Receive only Band: 410 MHz - 470 MHz

Power Indicator

Power input	9~30V DC
Reverse Power Protection	Support
Over Voltage Protection	Support

Motor

Torque	7 N.m
Wheel Diameter	420 mm
Motor Height	76 mm

Receiver

GNSS Signal

Channels	1408
Satellite Bands	BDS: B1I, B2I, B3I GPS: L1C/A, L2P(Y), L2C, L5 Galileo: E1, E5a, E5b, E6 GLONASS: L1, L2 QZSS: L1C/A, L2C, L5 SBAS: L1C/A L-Band

External Interface

Radio	TNC*1 ①
GNSS	TNC*1 ②
Connector	12-pin

Environment Parameter

Operating Temperature	-20°C to +70°C
Storage Temperature	-40°C to +85°C
Humidity	93% RH (Non-condensing)
Water and Dust Resistance	IP67

Physical

Size	170 mm × 170 mm × 60.5 mm
Weight	1280 g

Tablet

Display	10.1-inch touch screen
Dimensions (W × H × D)	281 mm x 181 mm x 42 mm
RAM	2 GB
ROM	16 GB
Water and Dust Resistance	IP65
System	Android 11.0
CPU	Quad-Core, 1.2 GHz

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