CHCNAV

NX510 Steer Ready

AUTOMATED STEERING SYSTEM

PRECISION
AGRICULTURE

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HYDRAULIC COMPLIANT AUTOMATED STEERING SYSTEM

The NX510 Steer Ready System provides farmers with automatic hydraulic steering by connecting directly to the built-in interface of their steer- or auto-guidance ready agricultural vehicles. This innovative kit eliminates the need for an additional electric steering wheel or valve, simplifying installation and reducing costs. The NX510 Steer Ready offers broad compatibility, making it suitable for many makes and models of agricultural vehicles. Whether the OEM steering valve is CANBUS or PWM controlled, the system can be seamlessly integrated into existing vehicle configurations.

The NX510 Steer Ready is an investment that maximizes control and accuracy while requiring only minor modifications to the vehicle. Its highly integrated components offer quick, easy installation and portability between vehicles.

The unit supports multiple GNSS positioning modes, including autonomous, SBAS and RTK, and provides 6-axis terrain compensation for centimeter-level pass-to-pass accuracy. With a typical working speed range of 0.3 to 20 km/h and multiple guidance patterns, the system is versatile enough to be used in a variety of agricultural operations, including tillage, seeding/planting, spraying, spreading and harvesting. Features such as ISOBUS VT/UT, automatic headland turns, remote support and many others add to the performance of the NX510.

HIGHLY INTEGRATED COMPONENTS

Efficient installation and vehicle portability

The NX510 Steer Ready system integrates key components -including the GNSS board, IMU, 4G connectivity, radio and touchscreen- into 3 core modules. Its streamlined design not only simplifies and accelerates the installation process, but also enables quick transfers between vehicles. Your time and cost investments are optimized.

ADVANCED FUNCTIONALITY

Versatile connectivity for expanded capabilities

With ISOBUS VT/UT compatibility, the NX510 Steer Ready system saves space in the cab. It also supports .SHP file inputs, and provides NMEA and 5V pulse outputs for seamless integration with third-party devices.

VERSATILE GUIDANCE PATTERNS AND WIDE WORKING SPEED RANGE

Adaptable to a variety of agricultural applications

The NX510 Steer Ready system supports a variety of steering patterns, including AB line, A+ line, pivot, curve, 90° line and headland line. Its advanced control algorithm and responsive hardware allow seamless operation over a wide speed range from 0.3 to 20 km/h. This versatility makes it suitable for a wide range of agricultural operations, including tillage, seeding, spraying, spreading and harvesting.

UP TO 2.5 CM PASS-TO-PASS ACCURACY

Maintain high accuracy over varying terrain

Using multiple correction sources and full constellation support - including GPS, GLONASS, Galileo, Beidou and QZSS - the NX510 Steer Ready system provides autonomous, SBAS and RTK capabilities. Its advanced terrain compensation technology ensures consistent, high-level accuracy even in challenging environments and at high speeds.

RUGGED DESIGN AND RELIABLE PERFORMANCE

Enhanced durability in agricultural environments

The NX510 Steer Ready system is designed to withstand the rigors of agricultural use and features a rugged design with dust and water resistant components (IP65 and higher). It allows for extreme temperature, vibration and shock, making it a reliable solution in the most demanding agricultural conditions.

USER-FRIENDLY SOFTWARE INTERFACE

Fast installation and easy transferability between vehicles

The multilingual AgNav software runs on a 10.1" Android display for ease of use and accessibility. Designed for rapid onboarding, new users can be up and running in as little as 5 minutes. Its remote assistance functionality facilitates real-time connections between users and support personnel. AgNav significantly improves operational efficiency, enabling users to perform field tasks with both speed and accuracy.

HYDRAULIC COMPLIANT AUTOSTEERING SYSTEM

Display

PLC

Receiver

Rear Camera

Receiver

All-in-one smart receiver.

Display

Rugged to adapt to a harsh working environment.

PLC ECU

Control the steering valve over PWM or CANBUS.

AgNav software

The user-friendly interface makes operation faster.

SPECIFICATIONS

Positioning Accuracy	
Real time kinematics (RTK)	Horizontal: 8 mm + 1 ppm RMS Vertical: 15 mm + 1 ppm RMS Initialisation time: < 5 s Initialisation reliability: > 99.9%
Velocity accuracy	0.03 m/s RMS
Performance	
Pass-to-pass accuracy	≤ ±2.5 cm
Physical	
External power	9 V DC to 36 V DC
Environment	Operating: -20°C ~ +70°C Storage: -40°C ~ +85°C
Display	
Screen size	10.1'' touch screen
Dimension	281 mm x 181 mm x 42 mm
Android	6.01
Dust and Waterproof	IP65
Rear Camera	
Pixel	1280 x 720 pixels
Camera angle of view	120°
Receiver	
Size	220 mm x 205 mm x 60 mm
Weight	< 2 kg
Power	9 V DC to 36 V DC
Dust and waterproof	IP67
Constellations	
GPS	L1/L2/L5
BDS	B1I/B2I/B3I/B1C/B2a/B2b
Galileo	E1/E5a/E5b/E6
GLONASS	L1/L2
SBAS	L1
QZSS	L1/L2/L5/L6

Communication and Data	
WiFi/Bluetooth	Yes
Serial port	RS232 x 2
CAN ports	2
NMEA output	1/2/5/10 Hz
Correction formats	RTCM 3.0/3.1/3.2/3.3
4G Network modem	Integrated in receiver and in display
UHF module	Frequency: 410-470 MHz Protocol: TT450S/Transparent/CHC/ SATEL 3AS
Output interface	Frequency: 410-470 MHz Protocol:TT450S/Transparent/CHC/ CHCAG/SATEL 3AS

* Specifications are subject to change without notice.

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