

Hexagon is a global leader in sensor, software and autonomous solutions. We are putting data to work to boost efficiency, productivity, and quality across industrial, manufacturing, infrastructure, safety, and mobility applications.

Hexagon's Agriculture division provides technologies that convert data into intelligent information that enables smart planning, efficient execution, precise machine controls and automated workflows that optimise operations and increase profits.

Our technologies are shaping urban and production ecosystems to become increasingly connected and autonomous — ensuring a scalable, sustainable future.

Hexagon (Nasdaq Stockholm: HEXA B) has approximately 21,000 employees in 50 countries and net sales of approximately 3.8bn Euro.

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Hexagon is the ideal partner in your Digital Transformation journey

Learn more about our solutions for manufacturers of machines, tractors and agricultural implements.





“ At Hexagon, we develop embedded technologies for tractor and implement manufacturers, with the goal of transforming them into true technological tools for agricultural efficiency. After all, this is our mission as a company, to prepare the agricultural industry for greater productivity.”

Bernardo de Castro,
President of Hexagon's Agriculture division



HxGN AgrOn Fertilisation Control

Intelligently regulates and automates the application of limestone and fertilisers, avoiding waste and failure. In addition to showing coverage of the application area in real time, during operation.

- Possibility of installation on tracked implements and with linear actuator
- It has simple calibration and operation
- High precision controller
- Display of application tracks during operation
- Detailed operation information records
- Monitors and controls the application of up to 3 solid inputs
- Imports maps defined in the office
- Control of the rotation of the plates (discs) of fertilizers that apply the product to haul
- Section shutdown on hydraulic motors
- Can be integrated with the Ti5, Ti7 or Ti10 display



HxGN AgrOn Planting Control

It makes it possible to open and close the planter clutches automatically, or to turn off hydraulic motors that drive the lines, without the need for mechanical stops or adaptations on the machine.

- High precision controller
- Controls up to 5 simultaneous inputs, one of which is seed or tarpaulin, 3 of fertilizer and 1 liquid
- It has simple calibration and operation
- Planting at fixed and variable seed rate
- Monitors and controls each section of seed or fertilizer
- Can be integrated with the Ti5, Ti7 or Ti10 display

Reasons to choose Hexagon as your partner in your Digital Transformation:



Global Presence

We are an established leader in information technology solutions.

We are a “one-stop shop”

The synergy between our divisions allows us to offer unique and complete solutions.



We are consolidated

A dependable option for an organisation seeking safe and long term partnership.

Expertise

We prepare your technical team through continuous training programs and advanced assistance centres so that you can provide excellent support to your customers.



Innovation

High and continuous investment in Research & Development, guaranteeing products with the latest technology and in line with the latest market demands.

Flexible Solutions

We offer customised products that allow integration with existing technologies and components. Our displays are fully compatible with several ECUs and displays from other brands can be integrated with our ECUs, according to the needs of each partner.



Embedded electronics

HxGN AgrOn Ti5, AgrOn Ti7 and AgrOn Ti10 Displays

Offering Machine Control Solutions to Precision Agriculture and Forestry operation. The solution is compatible with several market machines, intuitive, robust and help operators automate tasks – generating better efficiency and quality.

Learn more about each of the available display models:

Characteristics	Ti5 	Ti7 	Ti10 
Screen size	5" LCD	7" LCD	10.1" LCD
Processor	Single core 800 MHz 1x ARM Cortex-A9	Single core 800 MHz 1x ARM Cortex-A9	Quad Core 1.2 GHz 4x ARM Cortex-A35
Storage capacity	RAM: 1 GB DDR3 FLASH: 4 GB eMMC	RAM: 1 GB DDR3 FLASH: 4 GB eMMC	RAM: 2 GB DDR3 FLASH: 32 GB eMMC
Screen configuration	16M colours, 600 cd/m2 brightness and 600:1 contrast	265K colours, 1000 cd/m2 brightness and 400:1 contrast	16M colours, 1000 cd/m2 brightness, 800:1 contrast
Resolution	800x480	800x480	1280x800 (HD)
Display size	162 mm (W) x 125 mm (H) x 45 mm (L)	208 mm (W) x 159 mm (H) x 57 mm (L)	177 mm (W) x 250 mm (H) x 47 mm (L)
Sturdy aluminium case	Yes	Yes	Yes
High contrast and configurable lighting for different visibility conditions	Yes	Yes	Yes
Brightness sensor for adjustment of screen brightness	Manual	Manual	Automatic
Camera	No	No	5MP Front Camera*
Audio system with built-in speaker and microphone	No	No	2W speaker Front microphone for audible alerts
Multi-language support	Yes	Yes	Yes
Wi-Fi 2.4GHz*	No	Optional	Yes
Record of detailed information of operations and export/transmission of files	Yes	Yes	Yes
Digital Radio 900MHz or 433Mhz*	No	Optional	Optional
4G+ cell phone with 28 band support (700MHz)*	No	Optional	Optional
Bluetooth	No	Optional	Bluetooth 4.2
User Entry	Touch screen and Power button	Touch screen and Power button	Touch screen and Power button
Battery	-	-	Li-Ion 4.900 mAh*
ISOBUS	No	Yes	Yes
Quantity of products per equipment**	Up to 3	No limit	No limit



HxGN AgrOn ISOBUS Display

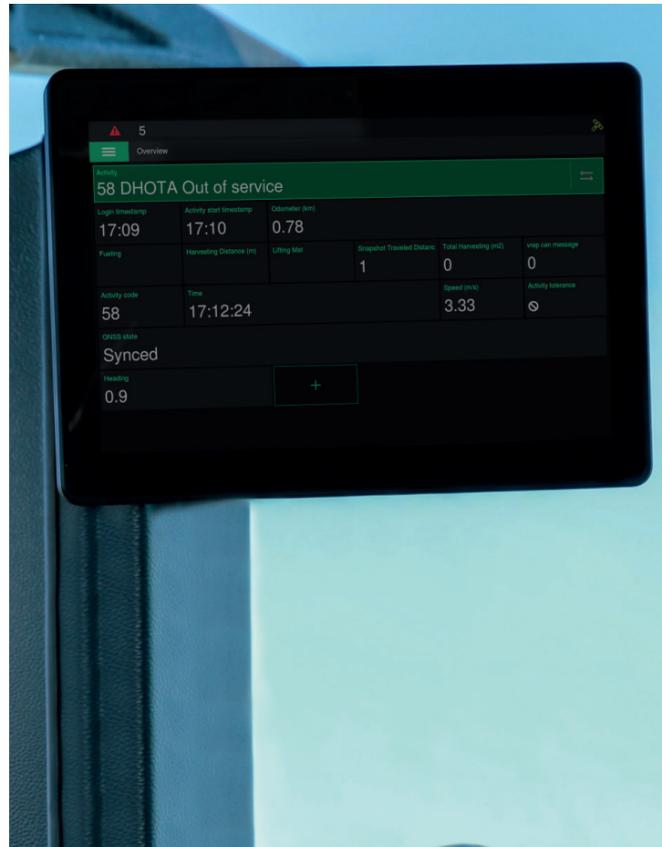
Promotes a standard communication between embedded electronic systems through a digital bus, allowing data communication between sensors, actuators, and controllers.

- Includes the Universal Terminal (UT) and the Task Controller (TC)
- Has TC-BAS, TC-SC and TC-GEO capabilities
- Plug-and-play installation on steer ready machines
- Possibility of section shutdown and control at fixed and variable rate
- Activity logging and telemetry
- Works on agricultural and forestry machinery
- Integrated with Ti7 or Ti10 display

HxGN AgrOn Machine Monitoring

Information management of machines and fleets that are in the field.

- Reading the RPM and/or similar machine parameters
- Monitoring of production times, automatic classification through rules associated with positioning, sensors and tolerance time
- Monitoring unproductive times, with simple and flexible interface for pointing out reasons for suspended operation
- Displays the operating speed information on the onboard controller
- Integration with pre-existing machine sensors or installation of own sensors
- Allows configuring alarms, such as sensor measurements, inconsistent operator appointment with combination of sensor states, reason for not appointed time
- Possibility to work together with AgrOn Control Room
- Can be integrated with the Ti5, Ti7 or Ti10 display



Characteristics	Ti5	Ti7	Ti10
External map reading in shape (.shp) format, prepared in the office	Yes	Yes	Yes
Protection Index	IP65	IP64	IP66, IP67
Power supply	12Vdc	12Vdc	12Vdc
Operating temperature	-20°C to 60°C	-20°C to 60°C	-20°C to 70°C
Storage temperature	-30°C to 80°C	-30°C to 80°C	-30°C to 80°C
Interfaces	USB (x1), CAN (x1) and RS-232 (x1)	USB (x1), CAN (x2) and RS-232 (x2)	USB (x2), CAN (x3) and RS-232 (x2)
Certifications	CE, RCM, RoHS, WEEE	ANATEL, CE, RED, RCM, RoHS, WEEE	ANATEL, CE, RED, RCM, RoHS, WEEE

*check the communication available for each model

**Ti5 compatible with AgrOn Electric Auto Steering, AgrOn Guidance and a product to choose from

Farming Accuracy

- GNSS L1 10Hz - GPS with EGNOS/WAAS 15-20cm (pass to pass, 15min)
- GNSS L1 20Hz - GPS with EGNOS/WAAS 15-20cm (pass to pass, 15min)*
- GNSS L1 10Hz - GPS/Glonass 28cm (pass to pass, 15min)
- GNSS L1/L2 20Hz - GPS/Glonass 15cm (pass to pass, 15min)
- GNSS L1/L2/Lband 20Hz - GPS/Glonass/TerraStar 2,5cm (absolute)
- GNSS L1/L2 20Hz - GPS/Glonass/RTK 2 cm (absolute)

* Exclusive frequency for the Ti10 display

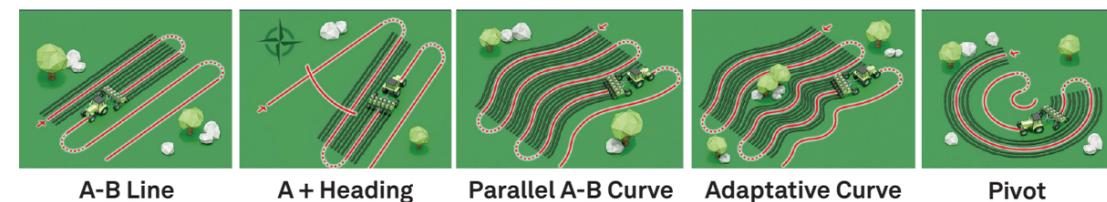


HxGN AgrOn Sprayer Control

It performs the automatic control of the spraying sections, minimising overlap in the application of inputs and avoiding excess and failures in the application of the areas.

- Enables manual and automatic control of sections, minimising overlap in the application of input
- Enables manual control of sections
- It allows installation with several valve assemblies in different types of sprayers
- Monitors and controls the application of up to 2 liquid inputs in up to 16 sections
- Can be integrated with the Ti5, Ti7 or Ti10 display

Operation mode



HxGN AgrOn Core Box

Hexagon's response to a fragmented industrial technology scenario that is rampant and has compatibility problems. AgrOn Core Box integrates tractors, implements and agricultural and forestry machines in a single user interface.

- Connectivity via Wi-Fi, mobile data and/or long-range radio
- High processing capacity with implementation of own APIs and complex algorithms such as driving
- Future routes that include integration through standard protocols such as ISOBUS
- Sensors that include positioning technologies, with integrated GNSS, IMU and several inputs to manage the main functions (control of valves, engines, etc.)
- An agnostic display design that works perfectly with third-party displays and monitors
- Ability for tractor manufacturers to increase demand for automated drive delivery in factory equipped units

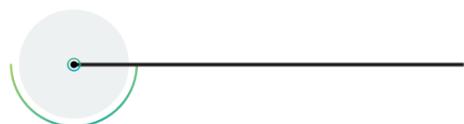


Machine Control

HxGN AgrOn Guidance

Helps machine orientation through arrows and virtual direction lines for the operator to reference – aiming to maintain planned alignment and obtain greater speed, practicality and quality.

- Accuracy in all operating modes - straight, curved and pivot
- Multiple guidance options
- Enables control of the applied area by loading maps into the system
- Allows marking objects on the map for better orientation when visibility is impaired
- Can be integrated with the Ti5, Ti7 or Ti10 display



HxGN AgrOn Auto Steering

Support system for tractor, machinery and agricultural equipment with automated navigation.

- Electric or hydraulic drive, also compatible with predisposed machines *
- Tilt correction system and sudden manoeuvres
- Possibility of working on straight lines, curves and pivots
- Adaptability to most tractors on the market
- It delivers high performance guaranteeing better adjustment time to the route
- Possibility of loading maps with lines designed in the office
- Can be integrated with the Ti5, Ti7 or Ti10 display



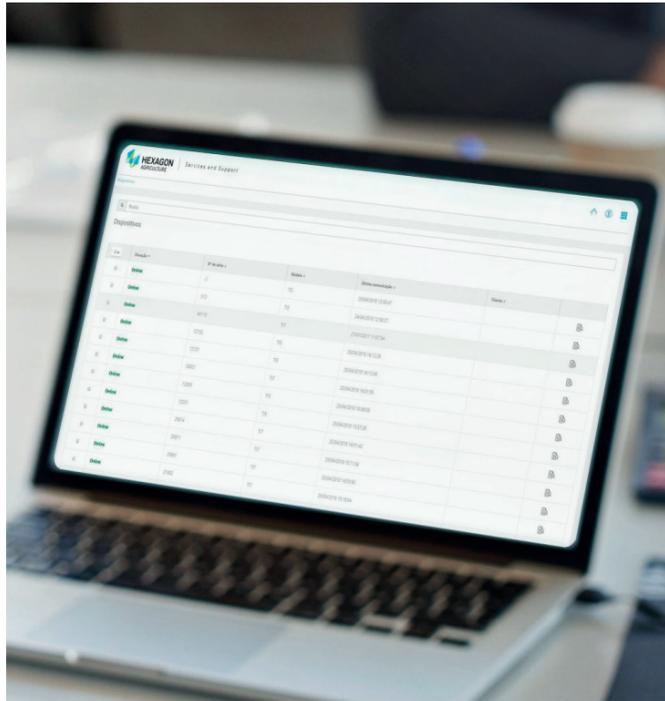
* Check working accuracy available for each model.

Remote Machine Support

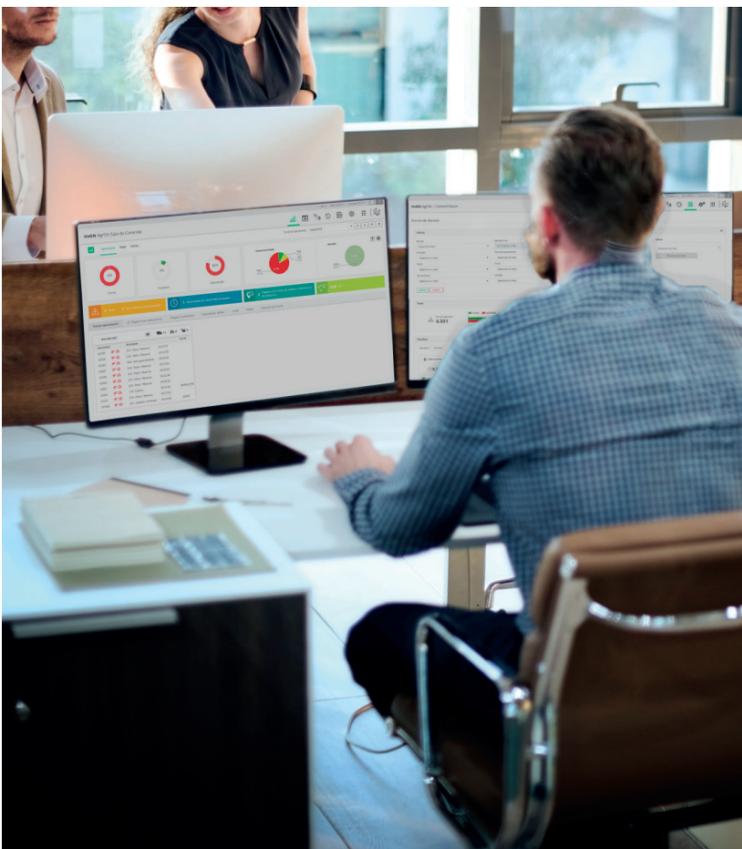
HxGN AgrOn Remote Access

System for exclusive remote technical assistance service for displays and onboard controller. A customisable solution with the partner's brand, ideal for having a direct relationship with the customer.

- Allows you to remotely monitor the machine
- Ensures a real-time service, effectively and with lower costs
- Grants control of the display for quick technical assistance
- Accepts different Internet connections: cable, Wi-Fi, 4G, 3G and also, 2G



Monitoring



HxGN AgrOn Control Room

Summarises real-time fleet & operations data, helps with decision making and sends commands.

- Viewing maps and reports on georeferenced maps
- Configuration of alerts of irregularities and divergences
- Integration with existing and third-party hardware and software
- Traceability of hours worked, productive times
- Can be integrated with the Ti5, Ti7 or Ti10 display

HxGN AgrOn ECU

Electronic unit for controlling engines, cylinders and valves, which interfaces with sensors and actuators in agricultural and forestry implements. Each application may require different ECU models and, eventually, the combination of more than one.

Technical specifications of each model:

Fertilisation, planting and auto steering:

- Position and speed control of a 14A three-phase brushless motor
- Brush position and motor speed control
- Control of up to 3 proportional valves per solenoid
- Integrated 6-axis Inertial Measurement Unit (IMU)
- Used in AgrOn Fertilisation Control, AgrOn Planting Control and AgrOn Auto Steering (Electric and Hydraulic) products
- CAN Bus Communication

Planting and machine monitoring:

- 18 Digital Inputs
- Brush position and motor speed control
- Control of up to 3 proportional valves per solenoid
- Integrated 6-axis Inertial Measurement Unit (IMU)
- Used in AgrOn Planting Monitor and AgrOn Machine Monitoring products
- CAN Bus Communication

Spraying:

- Control of a solenoid valve
- Control of up to 16 electric valves (on/off)
- Used in the AgrOn Spray Control product
- CAN Bus Communication



HxGN AgrOn Track Controller

Electromechanical steering system (AgrOn Auto Steering electric) that provides a retrofit solution for most models of tractors, sprayers and harvesters available on the market. With its ergonomic design, it allows a quick installation and easy transfer between several vehicles, as well as switching on and off in a simple and fast way, allowing the transfer between several brands and types of vehicles.

- Easy installation
- High speed response
- No hydraulic installation required
- Possibility to operate together with ECU

Technical Specifications:

- Brushless DC motor with integrated planetary gearbox
- Adapter specifically designed for steering column
- Handheld sensor on the steering wheel, when integrated into the ECU
- Remote hitch switch
- Integrated power switch
- Power: 12V - 10A max peak
- Maximum speed: 110 RPM
- Torque rated at 110 RPM: 5.65 Nm
- Maximum Torque: 15.43 Nm
- Weight: 2.65Kg
- Operating temperature: -20 ° C to 60 ° C
- Storage temperature: -40 ° C to 85 ° C
- Certifications: CE, RCM and FCC PART 15
- Vibration certification compatible with MIL-STD-810G, Method 514.6, Category 24 7.69 Grms and IEC 60068-2-6: Sinusoidal (5g, 10-200Hz)
- Mechanical shock certification compatible with MIL-STD-810G, Method 516.6. Procedure 1 SAWTOOTH - 40G, 1ms



Use this product with Ti7 or Ti10 display from Hexagon or with third party models.

