Tipard 1800

Autonomous multi-carrier vehicle for the automation

of entire process chains in arable and special crop

cultivation



Summary

With the Tipard 1800, digitalization and automation in agriculture reaches the next level. Tipard 1800 is an autonomous multi-carrier platform for the automation of entire process chains from sowing and fertilizing to weed and pest control and harvesting in arable and special crop cultivation and fruit growing. The focus is on performance, impact and multifunctional use. Seven modular construction spaces can be equipped with different combustion engines, auxiliary fuel tanks and battery packs. This enables the machine to be used for 24 hours and more. The multi-carrier platform with five mounting compartments for conventional and new types of attachments offers maximum flexibility in use. These can be flexibly mounted on the carrier platform using innovative interface technology. Due to the maximum weight of 2.6 tons and the compact machine dimensions, the Tipard 1800 can be transported with a standard construction machinery trailer with a gross vehicle weight of 3.5 tons and a corresponding towing vehicle with a BE driving license.

Description

Hydraulic three-point linkages enable fast and powerful lifting of attachments up to 800 kg. In longitudinal travel, track widths of 160 cm to 270 cm are possible with the telescopic axles that can be extended in both directions. In addition, the main frame can be moved asymmetrically in one direction. Successful use in room cultures where novel automation work is carried out on one side with gripping systems is thus possible. This asymmetrical frame arrangement also becomes an advantage for implements with a working width of three metres in transverse travel. Ideally, the implements can be driven in the centre of the two axles in the direction of travel. Thanks to the integrated camera-based row recognition system, the Tipard 1800 guides the implements directly in the row. This is also crucial for the use of special chipping equipment. The multi-carrier platform has a mobile data connection and standardized network systems such as CAN or Ethernet. Data exchange between the implement, intelligent implements and farm management systems takes place via standardized protocols such as ISOBUS and CANopen or customized communication. In terms of positioning, the Tipard works with a dual RTK-GNSS receiver. In addition, a camera can detect rows of plants. The Tipard 1800 is controlled manually by remote control. Mission planning is carried out from a farm management system or with any GIS system. The main file formats supported are Shape or geoJSON.

Technical data:

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Name/Type	Tipard 1800
Dimensions	width: 1.75m to 1.70m; max. length: 4.25m; height: 1.85m
Weight	Total vehicle weight approx. 2,600 kg, unladen weight approx. 1,800 kg, payload approx. 800 kg
Axle track	1.5 to 2.7 m in longitudinal travel (hydraulic telescopic axles) 3.5 m in transverse travel (other tracks possible on customer request)
Clearance	0.8 to 1.3 m (custom clearances upon request)
Speed	drive mode 1: < 2km/h drive mode 2: < 6km/h
Drive type	Permanent all-wheel drive (electric)
Operating time	Diesel-electric 24 hours Electric 12 hours (depending on attachment, working application and speed)
Energy supply	Diesel generator / battery
Operating temperature	0 to 50°C
Storage temperature	-10 to 60°C
Steering	4-wheel independent steering (360°)
Self-localization	Dual RTK GNSS receiver, IMU, camera-based positioning
Chassis	Hydraulically self-levelling chassis (actively adjustable)
System voltage	48 V / 24 V
Interfaces for third-party systems	Ethernet / CAN / ISOBUS / CANopen
User interface	Touch display on machine, web interface via mobile device
Brakes	Driving brake: electric; parking brake: spring-loaded brake
Safety features	4x emergency stop, 2x Lidar, Geofencing
Transport options	harness anchor points for trailer transport
Price/Delivery options	
From prize	139.500,00 EUR
Delivery time	6 months
Included components	remote control unit, basic battery pack

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