

### Variotronic VarioGuide • VarioDoc • ISOBUS • Varioterminal



**Fendt Variotronic** 

# The leading edge through integration.

"Intelligently integrated" is Fendt's motto for enhancing vehicles with cutting-edge electronics targeted at professional farmers and contractors. Integration creates a decisive lead and not only offers efficiency enhancing functions, but also connects them intelligently with each other. Across the entire Fendt fleet.





# The strategy: Fuse Technologies™

AGCO's all-encompassing new electronics strategy FUSE provides growers and contractors seamless integration and connectivity across all their farm assets. Under the name Fuse Technologies, AGCO and Fendt provide solutions for precision farming that reduce operating costs and make machine operations even more efficient and profitable.

AGCOMMAND

the later



## Fendt connects.

Connecting agricultural equipment is the main topic for further increasing the profitability of agriculture. Highly efficient machine operations, as well as the analysis of important data for greater transparency and planning security, form the basis for this. Fendt offers intelligent solutions and interfaces to connect farmers, service partners and machines together in an effective partnership.



### Variotronic. Ground-breaking. Future-oriented.

### A holistic approach.

### Well thought-out to the last detail.

A holistic approach, in combination with its consistent implementation across all key machines, is what defines the Fendt operating concept as a whole. Well though-out to the last detail, but always with an eye on the whole – discover ingenious functionality with the Fendt Variotronic.

### Comfort is profitable

Comfort and profitability are perfectly combined in the Fendt Variotronic. Automated functions and custom settings make work easier for operators and increase the efficiency of operations by enabling precise work over a long period of time.





**Fendt Spotlights. Notable. Better.** Look for the Fendt Spotlights – the notable and better solutions – and discover what makes a Fendt a Fendt.



With this, Fendt pursues the Fendt Efficient Technology philosophy and continues to further develop the efficiency level. Because our drive is your success.

### More comfort



- The overall design of the controls on the right armrest includes the Varioterminal, multi-function joystick, crossgate lever and the membrane keypad
- The Variotronic armrest moves along with the seat, operators place their arm comfortably on the armrest
- The Varioterminal is adjustable for best ergonomics
- Individual driving strategies make every operation
  easier

### More performance



- VarioGuide automated steering for up to 10 percent more area coverage
- Headland management for faster turning manoeuvres
- Integrated automated functions for performance enhancing technologies such as the automatic maximum output control
- Enhanced controls for improved operator performance and better quality of work

### More profitability



- Significant savings in crop inputs through VarioGuide and SectionControl
- TMS and automatic maximum output control ensure the most fuel-efficient driving possible
- Fuel consumption indicator promotes economical driving

### Equipped for the future



- Integrated Variotronic system provides interfaces for future innovations
- Software updates during servicing, the Fendt machine stays state-of-the-art

### Better overview



- Clear display of all functions in the Fendt Varioterminal
- Documentation and telemetry for a perfect overview of your Fendt machine operations

#### More knowledge



• Intelligent functions in AgCommand<sup>™</sup> for analysing and optimising your Fendt machine operations

### **Fendt Variotronic**

# Functions for more efficiency

The Fendt Variotronic includes and integrates the keys functions for higher efficiency. Unique: All functions can be adjusted easily and conveniently with the Varioterminal. The main applications are:

- Vehicle controls
- (tractor, combine, forage harvester)
- Variotronic implement control ISOBUS (tractor)
- VarioGuide automated steering
- VarioDoc documentation
- Camera function (tractor, combine)
- Help function





# A step ahead

With the VarioGuide automated steering system developed by Fendt, you can work up to ten percent more area, depending on the working width. This makes the system a profitable investment. VarioGuide is integrated in all key machines with unified functionality: you find the same operating philosophy in tractors, combines and forage harvesters. 14

### Always on the right track

### VarioGuide – even more profitable

VarioGuide enables the highest possible utilisation of the machine, since you can even work at night or when visibility is poor, due to dust or fog, and still achieve an optimum result. At the same time, area coverage is significantly increased, since the number of skips and overlaps is reduced. The highly efficient use of crop inputs with VarioGuide provides savings of up to three to ten percent, depending on the working procedure.

### Enhanced driving comfort

With VarioGuide you not only work more economically, but also benefit from significantly improved operator comfort. The tractor automatically drives in the right track, so operators can fully focus their attention on the actual work with the implement. The Variotronic<sup>TI</sup> automatic headland management can also automatically trigger the headland sequences at the right position.



### VarioGuide in Fendt Katana



The main page for the automated steering in the forage harvester clearly displays the settings for the particular field, header and the automatic or manual wayline offset.



### VarioGuide in Fendt combine



The automated steering in the combines follows the same operating philosophy as in the forage harvester and tractors. Therefore every Fendt driver will be able to find their way around immediately.

### Always the same operating philosophy

No matter which Fendt machine you are working with, you will always find the same operating philosophy in the Varioterminal. The functionality, however, is adapted and expanded for the specific requirements of the forage harvesters, combines and tractors.

### Drive once, use forever

Transferring your VarioGuide field settings to other tractors is child's play. The Varioterminal saves your field and implement settings, such as waylines, obstacles, field boundaries, worked area or markers. This data can easily be saved to a USB stick and transferred to the Varioterminal of other tractors. The data can be saved on the PC and checked with a map view.



### VarioGuide in Fendt tractor



VarioGuide in tractors offers additional functions at the headlands. In combination with Variotronic<sup>11</sup> automatic, automated sequences from the headland management can be activated.

### VarioGuide light



VarioGuide light is the low-cost automated steering system with an accuracy of +/-20 cm. It is operated in the same way as the other systems using the Varioterminal 7".

Precise and reliable Fendt VarioGuide automatic steering helps to:

- makes work easier for operators
- utilise the full working width
- drive consistently pass after pass, even in poor visibility conditions
- reduce overlapping
- extend operating time
- increase efficiency of all working procedures

### **Reliable precision**

### **Always connected**

In addition to the US GPS satellites, VarioGuide, which is operated with the Varioterminal, is capable of using the Russian GLONASS satellite system and is also ready for use with the planned European Galileo system. The parallel use of several systems guarantees that the automatic steering system is highly reliable.

### Three times more economical

Fendt offers the automated steering system in three accuracy classes. Depending on the requirements of your operations, you can choose a system with a pass-to-pass accuracy of up to +/- 2 cm.





- It is ideal for work such as stubble management, compost spreading, rolling, mowing or applying slurry
- Accuracy class: +/- 20 cm
- Correction signals: EGNOS (free of charge), OmniSTAR VBS (subscription required)

VarioGuide Standard allows you to choose between the free EGNOS correction signal and the fee-based OmniSTAR VBS subscription service, which provides outstanding reliability. Satellite-assisted operation allows you to benefit from both correction signals with full flexibility – no matter where you are working.

#### VarioGuide Precision



- Suitable for almost all agricultural applications, as well as cereal sowing (except for row crops)
- Accuracy class: +/- 5 cm
- Correction signal: OmniSTAR HP (subscription required)

A key advantage of VarioGuide Precision is that it expands the application range to include operations with cereal seeds. Just like VarioGuide Standard, the signal offers full flexibility for operations in changing work locations.

### VarioGuide RTK



- Offers the highest accuracy ideal for specialty crops, strip till
- Accuracy class: +/- 2 cm
- Correction signals: RTK via mobile network (Ntrip), mobile RTK station (transmission radius 3 – 5 km) and fixed RTK station.

With VarioGuide RTK, you get the greatest possible accuracy and constant precision all day and night. The mobile RTK station provides correction signals without requiring a subscription and covers a range of up to five kilometres. Several vehicles can use the signals of just one RTK base station.

### Compatible with the following RTK correction service providers (selection)

Germany FarmRTK AGCelNet AGRAVIS NET SMART NET Landtechnik Rheinland RTK RTK CLUE France Precisio Teria England Essentials Net Italy TOPNET The Netherlands Move RTK Belgium Felpos Switzerland GVS Net

Austria	
AGCelNet	
Hungary	
AGCelNet	
FÖMI	
Finland	
TrimNet VRS	

### Compatible with many correction signals

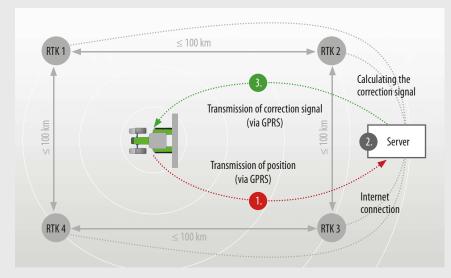
Fendt also takes the open path for correction signals here. You can choose from many different types of signals. VarioGuide works with satellite-based signals, such as EGNOS or OmniSTAR, as well as ground-based RTK signals via radio or mobile network (Ntrip). VarioGuide supports open formats such as RTCM.

### **RTK Station**



A mobile RTK station, located at the edge of the field, provides the highest accuracy. You also save the additional licensing costs.

### RTK via mobile radio (Ntrip)



The use of the RTK solution via mobile network has become prevalent. Here several RTK stations are connected with each other over the internet. The available data is bundled on one server. When a tractor sends its approximate position to this server (1), it calculates the optimal correction factor for the ideal position of the tractor (2). This correction signal is then sent back to the tractor (3), so that this optimal accuracy is attained. RTK networks are available in almost all countries and cover entire regions with RTK correction data.

- Reliable satellite connection through the use of GPS and GLONASS
- Three accuracy classes adapted to the prevailing requirements
- Compatible with many correction signals (satellite, radio, mobile communications network)

18

### Accuracy to +/- 20 cm

### VarioGuide light - the simple guidance system

VarioGuide light is the economical solution for dairy farms, mixed farms or market fruit farms, which are looking for a cost-effective guidance system for tillage or grassland operations. Integrated in the Varioterminal 7", it offers an accuracy of +/- 20 cm. Please note that VarioGuide light cannot be upgraded to higher accuracies.

### Available correction signals

VarioGuide light attains an accuracy class higher than the free EGNOS correction signal or American WAAS system. If these correction signals are not available, VarioGuide light runs in Autonomous mode. Here the deviation of the position of the tractor is calculated with a software filter, where the signals from the GPS- and GLONASS-systems are compared and adjusted to each other.



### VarioGuide light main page

**Equipment and functions** 



The distance between the waylines and the wayline offset are shown on the main VarioGuide light page. The most important tractor settings are shown in an information bar on the bottom of the screen.

### VarioGuide light main page



The map view in VarioGuide light is straightforward. The most important information is always in view.

	VarioGuide light	VarioGuide Standard	VarioGuide Precision	VarioGuide RTK
Version	Power/Profi	ProfiPlus	ProfiPlus	ProfiPlus
Terminal	Varioterminal 7"	Varioterminal 10.4" / 10.4-B	Varioterminal 10.4" / 10.4-B	Varioterminal 10.4" / 10.4-B
VarioActive superimposed steering system	No	yes	yes	yes
Accuracy	Submeter (autonomous, EGNOS, WAAS)	Submeter (autonomous, EGNOS, WAAS, OmniSTAR VBS)	Decimeter (OmniSTAR HP)	Centimeter (base station RTK network - Ntrip)
Upgrade possible	No	yes	yes	yes
Sample	A-B, A+angle, contour, circle	A-B, A+angle, contour, circle	A-B, A+angle, contour, circle	A-B, A+angle, contour, circle
Map view	2D, zoom	2D and 3D, zoom	2D and 3D, zoom	2D and 3D, zoom
Adjustment steering response	No	yes	yes	yes
Field settings	1 field, markers, no boundaries, obstacles	Many fields, markers, boundaries, obstacles	Many fields, markers, boundaries, obstacles	Many fields, markers, boundaries, obstacles
Variotronic <sup>™</sup> automatic headland management	No	Option	Option	Option
SectionControl	No	Option	Option	Option

VarioGuide light is available for the 2014 models of the 800 and 900 Vario series in the Power and Profi versions. For the 500 and 700 Vario, VarioGuide light is available in the Profi version. VarioGuide light is ideally suited for:

- Tillage
- Fertiliser application (without tracks)
- Pesticide application (without tracks )
- Grassland operations (mowing and swathing)
- Application of slurry and compost



**Documentation and telemetry** 

# Documented, analysed, informed

Effective fleet and job management is the basis for maximum operating transparency and optimised machine operations. The legal and social requirements for recording data are also growing ever more. With VarioDoc, VarioDoc Pro and AgCommand, all relevant data can be logged with a minimum of effort and time, processed in real-time, documented in the field record and analysed.





22

### The professional documentation system

### Modern job management

VarioDoc is the solution for efficient job management and convenient data recording for farming businesses and contractors. Using the Varioterminal, all relevant information can already be entered in the field, so that follow-up work in the office is reduced to a minimum.

### Automatically recorded

Data from the tractor, such as fuel consumption or working time, and the ISOBUS implement are recorded automatically with VarioDoc, for example, the application quantity. On the combines and the forage harvester, the machine information, such as the harvested area, fuel consumption and operating time, are logged. And it works the other way around, too – new jobs can be created using the PC and then transferred to the terminal to be processed there.



New jobs can be created on the PC and then transferred to the vehicle. After the work is completed, it is entered in the field record. This is done wirelessly, so there is no need to read out data, such as field name and current crop, inputs used and quantity, operator, etc., onto a storage medium. VarioDoc Pro continually records position and machine data and data transfer is possible via mobile network. This is an important advantage, particularly for contractors or large farms, because the tractor does not need to be in the vicinity of the farmyard at the time of data transmission.

### Secure data exchange

Just one single synchronisation procedure is all that is required to update data on both the PC and terminal. Then you have all the current master data, such as pesticide or fertiliser use, available on board the tractor and you can react to changing conditions swiftly. The jobs remain in the terminal until data exchange via Bluetooth or mobile network has completely finished. The data is synchronised automatically as soon as the tractor is within range.

### Compatible with many field databases

The open ISOxml standard enables data exchange with the field record software from BASF, Helm, agrocom, Farm Works and Land-Data Eurosoft. Thus Fendt is the first manufacturer to offer a documentation system that is compatible with various field record systems.



VarioDoc Pro delivers accurate position data for your field record. Machine data, such as engine speed, fuel consumption or PTO speed, can be recorded at each position. Depending on the version you have, you can visualise the work that has been performed on your PC graphically, for example, with the aid of maps, which show the relative fuel consumption or the pulling power required. This is a significant advantage over non-integrated retrofit systems.

Field records		
Manufacturer	Compatible products	
BASF	BASF field record	
Helm	MultiPlant • MYFARM24.DE • MYFARM24.LOGISS	
LAND-DATA EUROSOFT	AO Agrar-Office field database • AO Agrar-Office Lohnunternehmer • AO Agrar-Office AutoDok	
AGROCOM	AGROCOM-NET • AGROCOM-LU	
Farm Works	Farm Works Software	

Fendt VarioDoc is compatible with a number of field databases. The field database from Farm Works is widespread internationally.

#### Main page VarioDoc



Different kinds of information are displayed on the main VarioDoc page. These include the name of the job, field name and area, crop, company and customer as well as the operating materials used. Using the virtual keyboard in the right-hand bar, recording can be started, for example.

#### VarioDoc Pro in automatic mode



Modern field database software allows VarioDoc to start logging the relevant data automatically. Afterwards, the software assigns the data to the different fields based on the logged position data. Maximum convenience, because you get the data without any effort.

### The professional fleet management

### The fleet under control

Fendt offers intelligent solutions for your fleet management. So that you are always informed about where your machines are located and where they were in operation. In this way you can always follow and optimise your operations.

### AgCommand telemetry pre-fitting

VarioDoc Pro includes preparation for the AgCommand telemetry system for Fendt tractors. The X-Series and P-Series combines are even preequipped for AgCommand as standard. The intelligent fleet management system can therefore be installed and put into operation at any time.



### **Connected by Fuse Technologies**

AgCommand is the across-brand telemetry solution in the AGCO Corporation. It allows you to have your entire AGCO fleet under control at all times with just one system. This is part of the Fuse strategy pursued by AGCO and Fendt, with which AGCO aims to promote comprehensive, networked electronics solutions for the future.

### Open systems for the entire fleet

AgCommand is available in two configurations. The AGCO machines are available with AgCommand Advanced, which records relevant data for agricultural applications. All machines from brands outside of the AGCO Corporation can be retrofitted with AgCommand Standard, which continuously records GNSS position data and the machine data.

The AgCommand function

AgCommand provides a constant connection to your machines and operators. The ingenious functional principle makes it possible:

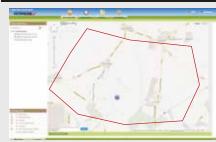
1) The machine is located via GNSS position.

2) The machine's data is constantly being logged in the background.

3) The data is transmitted to the AgCommand Server in regular time intervals via the mobile internet connection.

4) The data can then be displayed on a PC, iPhone or iPad anywhere there is an internet connection.

#### AgCommand at a glance



The location where the machine is currently working can be shown on the map. With the GeoFencing function, a boundary can be drawn, within which the machine is permitted to move. If the machine leaves this area, you are immediately notified per email or SMS.



You can clearly see where the machine was. Its position is logged every 10 seconds via GNSS. Different parameters are also recorded, such as fuel consumption or speed.



The analysis capability of AgCommand enables operations to be optimised effectively. For example, the operating time can be automatically calculated in the in-depth performance analysis.

# Because one terminal is enough

Tractors and implements are developing into a unit, where the tractor is the processing unit for all procedures. The Variotronic implement control ISOBUS is perfectly integrated in the operating concept of the Fendt Vario and you do not need an additional terminal. Section-Control enables automatic section control via the GNSS position.



### The implement completely under control

### Perfect for all operations

For the Fendt Variotronic, the ISOBUS interface is the decisive link to the implements. The settings for all implements that are compatible with ISO 11783 can be made using the Variotronic implement control ISOBUS in the Fendt Varioterminal. Furthermore, Variotronic offers various options to adapt the controls to the particular operation, for example, to control functions with the multifunction joystick or to call up previously programmed settings.

## Variotronic implement control ISOBUS in the Varioterminal

With Variotronic implement control ISOBUS, the implement's operating mask is transferred to the Fendt Varioterminal, where it is clearly displayed. On the big Varioterminal, operators can choose between several different views: either half-screen portrait, half-screen landscape or even full-screen with both menu bars on the right or separately on both sides.



### Most important functions on the joystick

The driving lever handover proves to be especially practical and convenient. If the ISOBUS supports it, frequently used functions can be assigned to the buttons on the tractor's multifunction joystick, where they are readily to hand. Up to ten functions can be assigned simply by clicking in the Varioterminal. The clear display gives an overview of the current assignment at a glance.

### Variotronic implement control ISOBUS



The Variotronic implement control ISOBUS is perfectly integrated in the Varioterminal 7" (not in 500 Vario and 700 Vario Power versions) and Varioterminal 10.4"/10-B. The implement is controlled with the terminal and joystick, an additional terminal is not required. In full screen view, the Varioterminal becomes a fully fledged ISOBUS terminal.

### Joystick button assignment



The functions for the implement control and headland management can be assigned to the multifunction lever as needed. Operators can find the perfect operating ergonomics for the operation at hand. In combination with the VarioGuide automated steering system, Variotronic<sup>11</sup> automatic enables automatic activation of sequences at the headland.

# Variotronic implement control ISOBUS:

- No additional terminals required
- Control via terminal and joystick
- Customisable joystick buttons
- Combination of ISOBUS operation and Variotronic<sup>TI</sup> is possible
- Half and full-screen view of
  Variotronic implement control ISOBUS

### More precise than ever before

### Precision during application

The implement control features automatic SectionControl. When working with sprayers, fertiliser spreaders, precision air seeders, seed drills and planting machines, SectionControl provides further savings potential for inputs. This has a positive effect on your cost calculation and also for the environment.

### Functionality in the terminal

SectionControl switches sections on and off at the headlands or edge of the field, to prevent undesired overlapping. The system is optimally integrated in the Variotronic operating interface.



The controls for SectionControl integrated in the Varioterminal are simple and easy to understand. They are straightforward and clear.

### SectionControl





The new SectionControl feature enables fully automatic section control via GNSS for all implements that support section control via ISOBUS. This results in precise work results and saves seeds, fertiliser or pesticides by preventing double applications or treatments of areas outside of the field. And it makes work easier for operators, day and night.

### Assistant SectionControl



Selection on and off

In practice – for example, during initial start-up – the delay for the on and off times must be adjusted. Up until now a roughly estimated correction value was entered, which had to be refined during the subsequent passes through stepwise approximation.



**Pop-up for selecting "too early" or "too late"** A menu in the Fendt Assistant guides the user in making the right setting based on the work results. There are two assistants: one for the switch on time and one for the switch off time.



Setting the switch off time The operator only has to determine the length of the gap or the area which has been overworked and enters it. Using the driving speed, the right delay values are determined and automatically entered in the menu.

### Assistant on board

Besides the name and geometry of the implement, the delay parameters for switching the sections on and off are also transferred to the tractor when an ISOBUS implement that supports SectionControl is coupled.

These standard values, which have been assigned by the implement manufacturer, must be adapted during operation. Fendt has developed an assistant to guide operators through the process of making the right setting for these correction values, based on the work results.

### AEF

AGCO/Fendt is a founding member of the AEF (Agricultural Industry Electronics Foundation). The initiative is an independent international industry organisation. As a user platform, it provides resources and experience for the expanded use of electronics in farming. The focus is currently on important topics concerning the ISOBUS. You will find further information at: www.aef-online.org

### Variotronic implement control ISOBUS

TU	UT = Universal Terminal. The Variotronic implement control ISOBUS is integrated in the terminal.
AUX-N	AUX-N= Auxiliary Control enables implement control via the joystick
TC-BAS	TC-BAS = Task Controller Basic corresponds to the Fendt VarioDoc documentation system
TC-GEO	TC-GEO = Task Controller Geo corresponds to Fendt VarioDoc Pro with logging of GNSS information
TC-SC	TC-SC = Task Controller SectionControl, section control via GNSS position

The entire agricultural equipment industry is involved in the introduction of a uniform standard, such as the ISOBUS. Standardised symbols show you which ISOBUS functions are available in the terminal or on the implement.



The AEF has developed a conformity test for ISOBUS implements. This test checks the AEF functionalities that go beyond the ISOBUS standard and shows the scope of the functions the ISOBUS components offer. Only implements that have passed the test are certified and carry the AEF label.

Fendt vehicles with AEF conformity test: 500 Vario, 700 Vario, 800 Vario and 900 Vario.

### **Section Control**

- Section control for ISOBUS implements
- Prevents overlapping in the field and at the edge of the field
- Facilitates work at night and in poor visibility conditions
- Assistance systems for optimal delay parameters when switching the implement on and off
- Easy operation is integrated in the Varioterminal
- Perfect work results

# **Everything in place**

The operating elements on the right-hand armrest - comprising the Varioterminal, multifunction joystick, crossgate lever and membrane keypad – have a well-balanced overall design and form an ergonomic command centre where everything is under control.



	<b>B</b> J	<b>\$</b>	
Γ	13,1	0,7	l/h
Ø	14,8	0,9	l/h
Σ1	224,5	13,5	1
Σ2	457,8	30,2	1









### Faster at the headland

### Variotronic<sup>™</sup> headland management

The Variotronic<sup>TI</sup> headland management is fully integrated in the Varioterminal and is shown clearly laid out in the display. Operators can activate automated operating sequences at the headlands with just a touch of a button. The new fully automatic Variotronic<sup>TI</sup> automatic combined with VarioGuide offers greater convenience: the sequences are automatically started at a headland line via GNSS. They can be edited and adjusted individually to optimise the progression of the steps. You save valuable time throughout the entire day.

### 25 implement memories

All settings in the Varioterminal can be saved under a unique name and called up at a later time. For example, if you have set the engine or cruise control speeds, or configured the hydraulics and linkage, these settings can be easily reloaded and adjusted, if necessary. Of course, operators can also save their own custom settings.



With Variotronic<sup>11</sup> headland management, operators can create operating sequences for turns, while driving or standing still, and save them. Settings for the engine and transmission control, the hydraulic valves and the front and rear linkage, the front and rear PTO as well as the automated steering system along with their individual functions are made via the headland management system and can be called up easily.

### Edit offline



To optimise the progression of the steps, these can be created at a standstill, so there is no rush. If necessary, operators can adjust and optimise the operating sequence while working.

### Customisable joystick buttons



It is practical that four sequences of the headland management can be activated with the joystick – two when driving into the track and two when driving out.



The easiest, but very helpful automated function, is automated control for the front and rear linkage and the PTO automatic mode using the multi-function joystick. These can be activated with the Go and End keys without having to program the headland management beforehand.

### Variotronic<sup>11</sup> automatic



With Variotronic<sup>11</sup> automatic headland management, the sequences are automatically triggered at the headland. In the terminal, you can set which sequences will be used when going into and coming out of the turn. An intuitive graphic aids you in the process.

### Variotronic<sup>™</sup> headland management

- Fast and automated turning manoeuvres
- Automatic mode for automatic activation of sequences
- Perfect setting options, even at a standstill, with Edit offline
- Control with multi-function joystick is possible
- Practical memory for saving settings of up to 25 implements

36

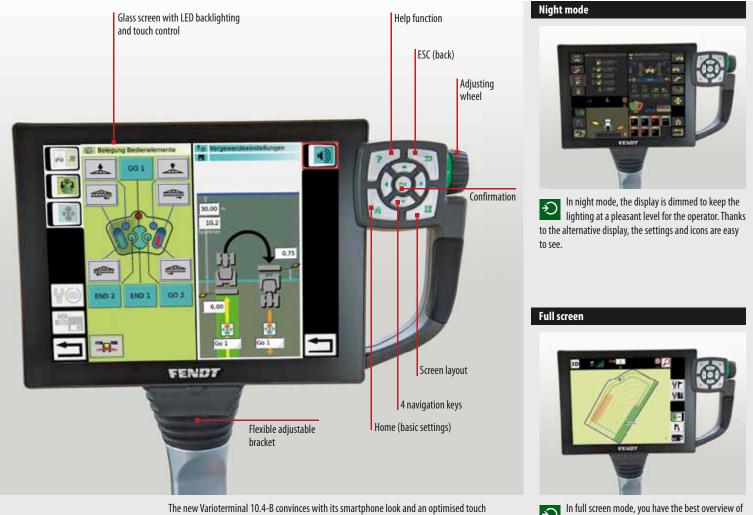
### One terminal for all cases

### The Varioterminal - because demands grow

It is hard to imagine modern agricultural machinery without operating terminals. In 1998, Fendt already set new standards in the agricultural equipment industry with the first generation of the Varioterminal in the 700 Vario. Now the demands on the terminal functions have become significantly higher. But at the same time, it must remain easy to use. Fendt's answer is Variotronic.

### Finally, all functions in one terminal

The Fendt Variotronic is an electronic control system that unites all functions in one terminal: tractor and implement controls, camera functions as well as the documentation and automatic steering system are now completely integrated in the Varioterminal and can be operated using the same operating logic. That saves you the cost for additional terminals.



surface. The high-resolution scratch-resistant screen and all function indicators automatically adapt to ambient light conditions.

Especially practical: the position and tilt of the Varioterminal can be adjusted as desired. A ball-head joint in the bracket permits the terminal to be pivoted in all directions. The operator always has an optimal view to the terminal.

Ð your operations. The map, Variotronic implement control ISOBUS and camera functions can be displayed in full screen.

### The "4-in-1 Varioterminal"

You can choose between the 7" Varioterminal or the 10.4"/10.4-B Varioterminal to match your needs. The 7" Varioterminal is equivalent to half of the display of the large terminal.

### VarioGrip tyre pressure regulation system



Operation of the tyre pressure regulation system is integrated in the overall vehicle concept. Using the Varioterminal, the tyre pressure of the tractor can be controlled with just a push of a button.

### CargoProfi front loader



The intelligent CargoProfi front loader is controlled with the crossgate lever on the right and the reversing lever on the steering wheel. The limits for the working range of the arm and attachment can also be set in the terminal.



**Help function** 

Should you be unfamiliar with a function in the terminal, you have help directly on board. With the help function in the Varioterminal, you can always find the answer to your questions.

### Camera



The use of cameras on your machines significantly increases comfort and safety. You can see more of what is happening around you, especially in large agricultural machinery. The large 10.4" or 10.4-B Varioterminal provides up to two camera connections.



You can set one or both of the cameras to automatically switch to full screen view when reversing.



The camera image can also be displayed as a quarter screen. You then have all the relevant information in view, depending on your operations.

### Fendt FutureFarm

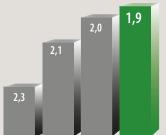
# GuideConnect

Fendt is heading towards the future with new visions in connectivity and electronics. Guide Connect, awarded a gold medal at the Agritechnica 2011, is an example for the giant steps being taken in the development of this area. Fendt GuideConnect connects two tractors via GNSS signal and radio, so that both can be controlled by just one driver. These are groundbreaking innovations that will define the future of farming.

FEN



FENDT



John Deere Case IH New Holland

### top agrar Test 1/2011 "Control Concepts"

Result: 1.9 (best overall score)

Excerpt: "Fendt has succeeded in clearly arranging a large number of functions on the armrest. The monitor with its menu navigation sets new standards."

### profi tractor test 828 Vario 04/2011:

"There is probably no other headland management system at this time that can match this system."

### top agrar Test 02/2011 "Headland Management" Excerpts:

"Many functions and options"

"Clear menu navigation, four sequences can be saved per implement"

### profi-Test VarioGuide 04/2011:

"The controls and the menu navigation are logical and the icons are clear [...] As our measurements show, Fendt has done an excellent job of realising the VarioGuide automatic steering system in A-B mode [...] We really like that the controls for the steering system are now integrated in the clearly readable Varioterminal."

### VarioGuide receives a score of 1.55 in the top agrar tractor test "GPS steering" 03/2011:

"The system is straightforward, very well integrated and works well". (VarioGuide tested in 828 Vario)

Fendt Varioterminal	7"	10.4" / 10.4-B	
Terminal functions			
Tractor controls			
Variotronic implement control ISOBUS			
Rotary control and keys			
Languages	26	26	
Touch control			
Integrated help function			
Bluetooth			
VarioDoc (documentation)			
VarioDoc Pro (documentation)			
VarioGuide (auto-steering)			
VarioGuide light (auto-steering)			
SectionControl			
2 camera inputs			
Internal memory	1 GB	4 GB	
Info screen			
Display area in cm <sup>2</sup>	138	334	
Resolution	480 x 800	800 x 600	
Number of colours	262,000	16,777,216	

Fendt VarioDoc	VarioDoc	VarioDoc Pro
General		
Bluetooth data transfer	•	•
Mobile network data transfer		
New and completed job and master data		•
Semi-automatic documentation		
Triggered either manually or through	•	•
e.g. front/rear linkage, control units, PTO actuation, external pulse generator	-	-
Fully automatic documentation		
(if supported by FMIS software)		•
GPS position data (every 5 m, e.g. fuel		-
consumption, engine speed, ground speed		•
BASF	•	•*
Helm	•	•
AGROCOM	•	
Land-Data Eurosoft	•	
Farm Works		
AgCommand		•
Job data		
Working width (mm)		
Worked area (ha)		
Distance in working position (km)	•	•
Distance not in working position (km)		ě
Time in working position (hrs)	•	
Time not in working position (hrs)		
Fuel consumption (I)		•
GNSS data points position data		
Position		
Date, time		
Fuel consumption/time (I/h)		
Fuel consumption/area (I/ha)		
Engine speed (1/min)		
PTO speed rear (1/min)		
PTO speed front (1/min)		
Linkage position rear (%)		
Linkage position front (%)		
Pulling power requirement (N)		
Speed with slip (km/h)		
Real speed (km/h)		
Outside temperature (°C)		
Work hours (h)		
ISOBUS implement data		

\* currently no GIS module

Fendt VarioGuide	light	Standard	Precision	RTK
functions				
Pass-to-pass accuracy (dynamic) <sup>1)</sup>	+/- 20 cm	+/- 20 cm	+/– 5 cm	+/- 2 cm
Repeatability (static) <sup>1)</sup>	+/- 80 cm	+/- 80 cm	+/- 10 cm	+/- 2 cm
Guidance line mode "A-B line"				
Guidance line mode "A+ angle line"				
Guidance line mode "Curve"				
Guidance line mode "Circle"				
Integration in Variotronic <sup>11</sup> headland management				
Variotronic <sup>™</sup> automatic				
Wayline memory				•
Field memory				
Worked swaths are marked				•
Record obstacle				
Free designation of obstacles				
Recording of obstacle area				
2D view				•
3D view				
Manual wayline offset	•	•	•	•
Automatic wayline offset				•
Adjustable approach		•	•	•
Adjustable steering response				
Implement settings				•
Integrated in tractor terminal				•
GPS compatible	•	•	•	•
GLONASS compatible				•
GALILEO ready	•	•	•	•
EGNOS (free)				•
WAAS (free)	•	•	•	•
Autonomous (without correction signal)				•
OmniSTAR VBS (paid subscription)			•	•
OmniSTAR HP (paid subscription)			•	
Mobile RTK station <sup>2)</sup>				
RTK network <sup>3)</sup> (paid)				
NMEA data output		•		•
Tilt angle compensation				
Minimum speed in km/h	0.1	0.1	0.1	0.1
Maximum speed in km/h	25	25	25	25

### Variotronic<sup>™</sup> headland management

Functions that can be integrated in the operating sequence	
Rear linkage	Lift, lower, slip control on, STOP, rapid lowering
Front linkage	Lift, lower, control, STOP, rapid lowering, DA on
Rear PTO	ON, OFF
Front PTO	ON, OFF
Spool valves	Lift, lower, stop, float
4WD	Automatic, 100%, OFF
Differential locks	Automatic, 100%, OFF
Suspension	ON, OFF
Vario transmission	Cruise control ON, cruise control OFF
Electronic engine control	Recall engine speed MIN, recall engine speed MAX, end function
TMS	TMS ON, TMS OFF
Pedal mode	Pedal mode ON, pedal mode OFF

### Headland management triggers Distance travelled Elapsed time Lift height of front linkage Lift height of rear linkage Pressed button on the joystick

Notes on accuracy specifications: The static accuracy indicates how accurate the measured position of a stationary tractor is over a longer period of time (usually 24 hours). The dynamic accuracy specifies the repeatable pass-to-pass accuracy that is attainable to 95 percent within a 15-minute time frame. The specified values correspond to the maximum attainable system accuracy under optimum conditions on the receiver. The accuracy that can actually be attained in practice depends on various factors. AGCO is not responsible for its availability or for reduced accuracy caused by operational degradation, ionospheric or tropospheric conditions or satellite geometry. AGCO is not liable for the performance data of the positioning systems (e.g. GPS, Gonass, Gailleo) or the secondary systems (e.g. EGNOS, WAAS, OmniSTAR, etc.).
 Not available in all countries. Please contact your dealer for further information.
 country-specific, without SIM card, without licence subscription

41

### Leaders drive Fendt.

42

You must experience for yourself the ingenuity of the Fendt Vario down to the very last detail. Test a Fendt, convince yourself and make the right investment.



### Invest in profitability

Overall profitability distinguishes the entire product line of the premium brand Fendt. The efficiency of the products guarantees the best cost-effectiveness per hectare. In combination with the extremely high retention of value of a Fendt, you also get an unbeatable resale value at the end of your tractor's service life. As a trendsetter, Fendt continually sets important new standards and installs technology that continues to be in demand in the future. Add to that the high quality, which stands for operational reliability and a long life. The total is a retention of value that only Fendt can offer you.



### **Certified quality**

We achieve a constant, excellent premium quality through firstclass workmanship and use high-grade materials for all components. In the development phase, the tractors undergo comprehensive testing, with up to 10,000 engine hours under the toughest conditions, to thoroughly test the durability of components. In series production, Fendt relies on comprehensive testing processes to ensure that each individual tractor leaves the factory with the highest quality.



### We offer more – join us!

Fendt not only offers high-quality products with cutting-edge technology, but also assists you in getting the most out of your Vario. With the help of our Fendt driver training Fendt Expert, you can further optimise profitability and learn to make all the settings and adjustments so that you can drive at an absolute optimum in different operations.



### More freedom for investments

Tailor-made financing from AGCO FINANCE and the customised service package: A custom financing package with attractive conditions and flexible terms offers you an ideal opportunity to match your investment to the needs of your farm or business. With a Fendt Service Package, you also have servicing and repair costs under control. When purchasing your tractor, you can already plan the prescribed service work based on attractive fixed prices – with the Service or comprehensive ProService package.



### Efficiency – for our customers' success

Efficiency is the recipe for successful financial management in agriculture. We make no compromises when it comes to efficiency, because our objective is to be the leader for cost-effectiveness per hectare and kilometre. Then the best technology is just enough, technology like that which we build into the tractor: for example, the highly efficient Vario drive train and the cutting edge engine technology with double-charging in combination with TMS.



## **Leaders drive Fendt**





Sales agent:



Fendt is a worldwide brand of AGCO.

All data regarding delivery, appearance, performance, dimensions and weight, fuel consumption and running costs of the vehicles correspond with the latest information available at the time of going to press. Changes may be made before the time of purchase. Your Fendt dealer will be pleased to supply you with up-to-date information.

AGCO GmbH – Fendt Marketing 87616 Marktoberdorf, Germany