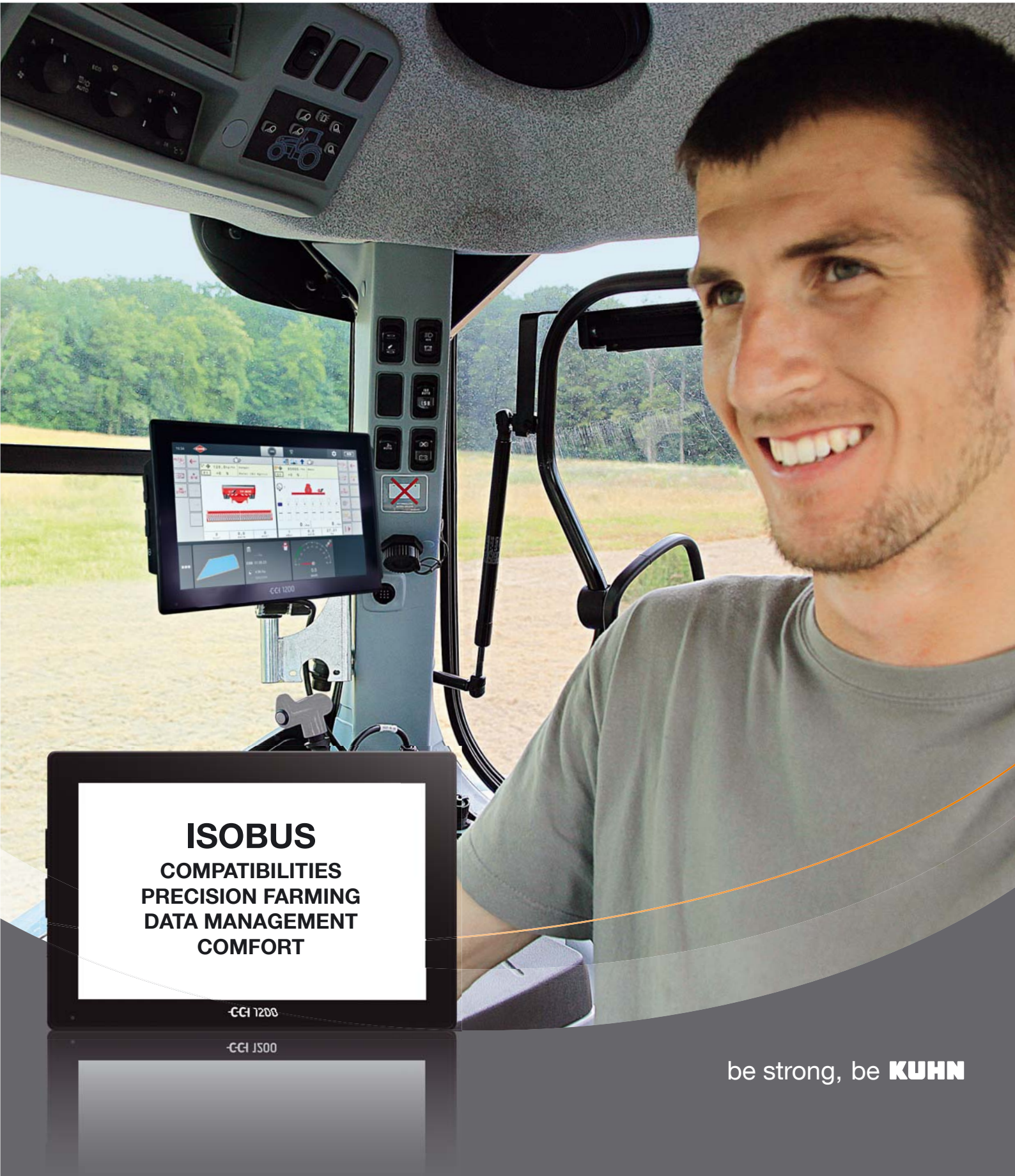
KUHN Electronics
INNOVATIVE FARMING

INNOVATIVE SOLUTIONS FOR CONNECTED FARMERS

www.kuhn.com



be strong, be KUHN

MY ISOBUS TERMINAL CONTROLS ALL MY ISOBUS MACHINES!

The ISOBUS communication standard between all system components (tractor, implement, universal terminal) is today one of the main focus points in the development of electronic systems in arable farming. In 2009 the Competence Center ISOBUS (CCI) was founded by KUHN together with five competitors to develop ISOBUS solutions together. The fundamental standardization work realized within organizations such as the CCI enables KUHN to provide today a complete solution for its ISOBUS implements.

A COMPLETE CCI PACKAGE

The co-operation has led to the introduction of universal terminals (VT 50, CCI 200, CCI 50, CCI 1200), which can pilot all ISOBUS-equipped machines. Moreover, interfaces for data exchange and auxiliary control connection as well as the CCI.Apps have been jointly developed.
These software applications can be uploaded on the CCI terminals to extend and customize its functions. Among them you can find apps to manage section or row shut-off (CCI.Command), document your job (CCI.Control), apply variable rates (CCI.Control, CCI.Convert) and several more.

KUHN'S ISOBUS MACHINE RANGE IS CONSTANTLY GROWING

Following KUHN implements are currently fitted as standard with integrated ISOBUS job computers (ECU): **VENTA** conventional seed drills, **TF** front hopper, **ESPRO** universal seed drills, most **MAXIMA** and **PLANTER** precision planters, **AXIS** and **AXENT** fertilizer spreaders, mounted and trailed sprayers (**DELTIS, ALTIS, LEXIS, METRIS, OCEANIS**), **GA** four-rotor rakes, **LSB** high-density balers.

ONE TERMINAL FOR ALL ISOBUS MACHINES

Each ISOBUS machine from KUHN can be run either with one of the KUHN CCI terminals or any ISOBUS terminal from other providers, such as John Deere®, CNH/Trimble®, Müller Elektronik®, Fendt®, Massey Ferguson® or Topcon®. AEF ISOBUS functionalities serve as basis to ensure trouble-free communication within the ISOBUS system between all components, including also your own universal terminal or KUHN implement.

ISOBUS compatibilities are available on the AEF ISOBUS Database: **www.aef-isobus-database.org/.**

AEF FUNCTIONALITIES MAKE THE ISOBUS MORE EASILY ACCESSIBLE

UT – Universal Terminal: The capability of operating an implement with any terminal and of using one terminal for operating different implements.

AUX – Auxiliary Control: Additional control elements, such as a joystick, that facilitate the operation of an equipment.

TECU – Tractor ECU: The tractor ECU is the tractor´s “job calculator”. It provides information, such as speed or PTO speed on the ISOBUS for use by the implement.

TC-BAS – Task Controller/Basic: The implement provides relevant work values that are documented. For the data exchange between home PC and terminal the ISO-XML data format is used.

TC-GEO – Task Controller/GEO-based: Additional capability of acquiring location based data or planning of location-based jobs, as for example by means of variable rate application maps.

TC-SC – Task Controller/Section Control: Automatic switching of sections, as with a sprayer or seeder, based on GPS position and desired degree of overlap.

NEW CCI 1200: LIKE A TABLET COMPUTER.

The brand-new CCI 1200 universal terminal certified AEF sets new standards in terms of performance, visibility and flexible use. With these points in mind the development has resulted in a large 30.5cm / 12.1” touchscreen terminal in tablet design that facilitates simultaneous display of various information essential for the driver. In addition, the standard AUX-N function enables to connect a joystick control. Very comfortable, the anti-glare screen provides an excellent visibility even in sunny conditions.

TWO UNIVERSAL TERMINALS (UT) IN ONE

The size and design of the terminal enables comfortable, simultaneous display of two ISOBUS machines at the same time. In this way you can easily adjust and control a machine combination, for example a front seed or fertilizer hopper and a rear seed drill or fertilizer spreader.

SIMULTANEOUS CAMERA DISPLAY AND CONTROL

Through a video input, the camera live view can be displayed simultaneously. It is easy to keep a good overview over the live work performance as well as most important work data.

FLEXIBLE TERMINAL LAYOUT

The standard machine display is flexible on the new CCI 1200 ISOBUS terminal. Therefore the terminal can be positioned both horizontally and vertically, depending on the place available in the cab.

MAXIVIEW

The user´s eyes don´t have to make such an effort anymore! The size of the standard display can be increased to the entire terminal height due to the MaxiView feature. A quick key in the upper status bar, allows to easily switch between different screens.

SIMPLE AND FAST NAVIGATION

MultiTouch is the keyword, when it comes to the navigation between different apps. Different intuitive presses, swipes, drag-and-drop as well as pinch-and-stretch finger moves enable the user to navigate easily and fast between different menus, screens and applications.

MANY CCI APPS

INCLUDED AS STANDARD

CCI.TECU

to provide the basic tractor information

BIOMASS SENSOR

to enable work with a biomass sensor and therefore variable rate application

CCI.CONTROL

for saving all carried out tasks as well as for the work with application maps

CCI.HELP SYSTEM

is an innovative support system to get information about apps and functionalities. Settings are explained with pictures and videos.

NEW CCI 50: COMPACT AND COMPLETE.

This new universal terminal (UT) certified AEF is compact and versatile with its 5.6”/ 14.2cm colour touchscreen and 12 softkeys. It provides all ISOBUS functionalities and connections enabling you to put precision farming into practice and document all your jobs. For example, it allows connecting a joystick control thanks to the standard function AUX-N.

THE FOLLOWING APPLICATIONS

ARE AVAILABLE AS STANDARD

CCI.TECU
to process tractor information

CCI.CONVERT
to connect a biomass sensor

CCI.CAM
to connect a camera

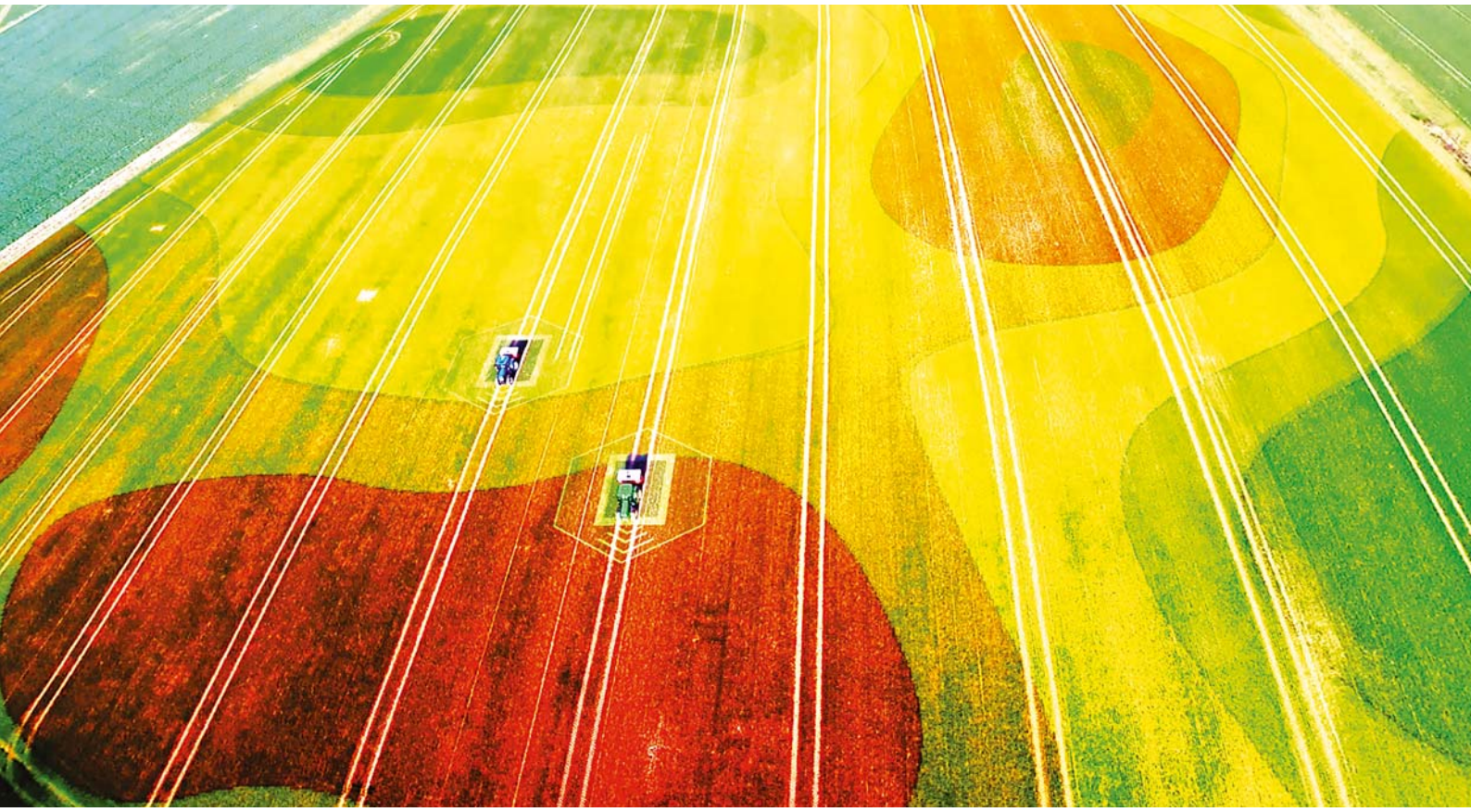
AS OPTION, IT CAN ALSO RUN:

CCI.COMMAND SECTION CONTROL
to control section or row shut-off via GPS

CCI.COMMAND PARALLEL TRACKING
to ensure a precise operation without overlaps

CCI.CONTROL
to control documentation and variable rate application per GPS


Brightness sensor
Scroll and selection wheel
ISOBUS button
12 back-lit buttons
USB port
Video Input
Screen switch button
Connection of GPS antenna or biomass sensor
ISB
KUHN
ESC
F7
F8
F9
F10
F11
F12
F1
F2
F3
F4
F5
F6
08:47
0.3 m
1.36 ha / 4.81 ha
ACK
50



CAPITALIZE FULLY ON YOUR SOIL´S POTENTIAL. VARY YOUR APPLICATION RATE.

Precision farming basically means managing your crop based on measuring and responding to variations of the soil and crop within the plot. Applying exactly the right rate of seed, fertilizer or pesticides at the right place contributes significantly to improved machine output and work quality due to more uniform crop development as well as to reduce costs thanks to an improved use of inputs.

CCI.CONTROL: YOUR PRECISION FARMING ASSISTANT!

CCI.Control is your task controller. This CCI application directly saves all tasks you have performed with your ISOBUS implement. By uploading your application maps in Shape (SHP) or ISO-XML data format to your ISOBUS terminal, it additionally becomes your precision farming assistant. Following the differences in soil and crop, the terminal controls variable application rates (VRA) within the plot.
Very useful: All collected data can be exported to your home PC after work.

IMPORT EXISTING MAPS ON THE KUHN CCI TERMINAL

Application maps to perform variable rate application are offered by several providers. KUHN CCI terminals are compatible with maps of the most common specialists, so that you don´t have to worry about compatibilities.

This new application is available as option on the CCI 1200 terminal. It enables to apply two different application rates, meaning to control the left and right metering unit of a fertilizer spreader separately. All precision goals can be thus achieved!

LESS OVERLAPS. MORE SAVINGS.

GPS Control includes all KUHN Section Control systems for automatic opening/closing of sections and rows via GPS. In this way, you can precisely manage your headlands and wedge-shaped fields, avoiding overlapping as well as voids. At the end this enables you to save on inputs while optimizing your yields. Today, fertilizer spreaders, sprayers, seed drills and precision planters are adapted for Section Control via GPS.

CCI.COMMAND: MAINTAIN THE SAME PRECISION LEVEL THE ENTIRE DAY

It´s not easy to stay focused and keep the same precision level up the whole day. CCI.Command provides the right support to avoid double applications or voids. This application shows the right tracks to follow via GPS (module Parallel Tracking) in order to really use the entire working width of the machine. The “Section Control” module on the other hand automatically shuts sections or rows of many implements. Overlaps and overdosages are thus greatly reduced. On the CCI 1200, the user can switch up to 254 sections via GPS!

CCI.CONVERT: IF YOU WANT TO WORK WITH A NITROGEN SENSOR

CCI.Convert is the second application enabling variable rate application with your terminal, this time connected to a biomass sensor. These optical sensors are mounted on the tractor and modulate the application rate “live” depending on the current nutritional status of the crop. It is possible to connect either Yara N-sensor®, Fritzmeier Isaria® or the Trimble Greenseeker® to your QUANTRON or CCI terminals.

SPECIAL SOLUTION FOR KUHN SPRAYERS

The new generation VISIOREB terminal with color touchscreen for KUHN sprayers meets all needs in terms of ergonomics and intuitive use. Section or nozzle shut-off via GPS as well as variable rate application on guidance are integrated as standard, likewise for precision application and ease of use.

VARIABLE RATE APPLICATION AND SECTION CONTROL POSSIBLE WITH YOUR QUANTRON OR REB 3

If you have a KUHN QUANTRON A/E-2 or REB 3 control box, it is still possible to apply variable rates and control sections. You only have to connect the terminal via a serial cable or interface to a GPS terminal supporting application maps and Section Control. Compatible with numerous GPS solutions: John Deere®, Trimble®, CNH®, Isagri®, Sat Plan®, Müller Elektronik®, Topcon® (validated by the compatibility list).

WHAT "FARMING 4.0" MEANS

Everybody is talking about the next step: 4.0. It may be clear that is has something to do with the ongoing digitization invading all parts of our lives, with agriculture making no exception to the rule.

It´s about self-guided manufacturing processes, machines communicating with machines, automated guided vehicles, production processes that are connected closely with information and communication technology.

Automation of processes is today´s large trend in agriculture, linked to intelligent data management systems, which optimize the control of machines, the use of inputs, logistics, work information, quality control and traceability.

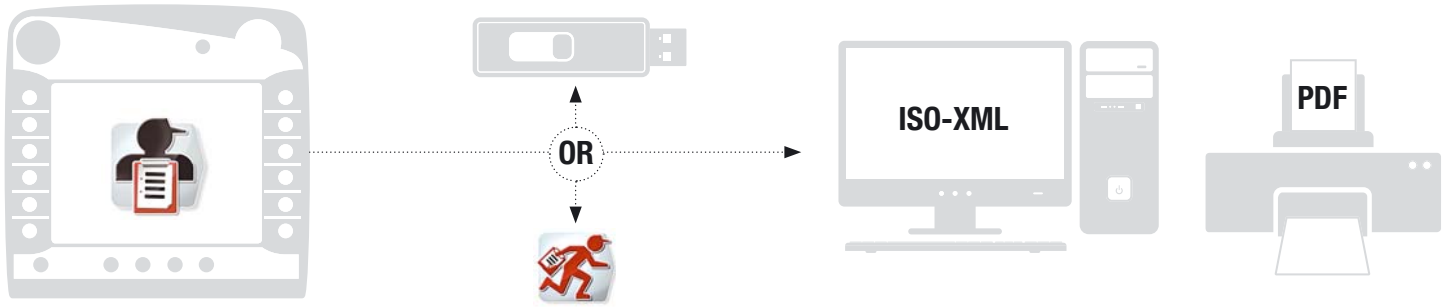
The goal of collecting and analyzing extensive farm data is to get assistance in taking the right decision in complex situations, as it is the case on most farms with many influencing factors. Potential advantages are:

- Work documentation and management become easier.
- Yields may be improved.
- Production means can be saved (by site-specific application of seed, fertilizer and pesticides according to measured requirements or application maps).
- You can fully utilize the entire potential of your machine and exploit its maximum capacity (working width for example).
- The animal´s performance and wellbeing can be improved.

Digital technology can only unfold its complete benefits, when each data, which is created, is also connected via interfaces. This comprehensive networking of data from the field, the stable, external sources and their optimized assessment is the big challenge for agriculture for the upcoming years.

MAKE THE FIELD TO YOUR NEW OFFICE

At KUHN, we accept the challenges Farming 4.0 entails. We aim to provide strong and adapted solutions to facilitate decision making. Different convenient ways of data transfer are the first important step to making the field to your office.



FEED TRACKING WITH KUHN MIXERS

Different KUHN FEED TRACKING services enable you to exchange information on cattle rations between your home PC and the programmable weighing device, available on all KUHN mixers.

Benefitting from FEED TRACKING Silver for example, the data transfer works via USB key in both directions: from the KDW361 terminal to your computer and back. Thus, you can tailor the total mixed rations for your cattle at home before transferring the loading programme on your mixer.

CCI.CONTROL MOBILE: THE MOBILE DATA MANAGEMENT APP

CCI.Control Mobile allows to exchange machine data of all your ISOBUS machines online and transfer them directly to a tablet computer in the tractor cabin or your home computer for documentation.

The data is exchanged in the independent ISO-XML format. Its direct use with a tablet is possible due to a CCI i10 adaptor, working via Wifi. The app processes and visualizes data of all ISOBUS machines: tractors, self-propelled units and implements.

Another asset: The app is also able to directly locate the current machine position on a map.

KUHN ELECTRONICS COMFORT

INTUITIVE ELECTRONIC SOLUTIONS ALWAYS WITHIN REACH

Easy and comfortable use of all controls is essential during work, as you also want to operate your machine safely and adjust it correctly in stressful situations and bumpy fields.

THE COMFORT JOYSTICK WTK

You can tailor the multi-functional WTK joystick to your personal needs by assigning a function for each button in the way it suits you most. The joystick is available as option for the ESPRO universal seed drills, the MAXIMA 2 precision planters, AXIS fertilizer spreaders and GA four-rotor rakes.

THE INNOVATIVE CCI A3

This new joystick is ISOBUS compatible with all machines certified with the function AUX-N. The interface is very intuitive with the touchscreen. Several removable frames have been designed to take full advantage of many features. An installation in landscape layout is possible and vibration feedback provided.

YOUR ASSISTANT FOR KUHN SPRAYERS

KUHN has developed the ISOBUS control box ISOCLICK for its sprayer range. It allows monitoring all main functions of the machine during work. Even at high speed, it makes it easy for you to shut off sections manually or manage the hydraulic machine functions.

KUHN APPS

SMALL PROGRAMS WITH GREAT IMPACT!

SEED DRILL CALIBRATION ASSISTANT

Optimize your seeding by determining the most appropriate seed drill settings.

KUHN SPREADSET

Helps you to find the right adjustment of your fertilizer spreader for each fertilizer type.

KUHN PRECISEED

Guides you in the correct adjustments of your KUHN MAXIMA 2 or PLANTER 3.

NOZZLE CONFIGURATOR

Select the right nozzle for your sprayer and spraying requirements.

www.kuhn.com

KUHN S.A. 4 Impasse des Fabriques - BP 50060 - F-67706 Saverne CEDEX-France

Also find KUHN on

IMPRIM'VERT® To protect the environment, this leaflet is printed on chlorine-free paper. / Printed in France - 920 578 GB - 10.17 - Copyright 2017 KUHN