

2013

Trimble Agriculture

Trimble GPS, guidance, and precision agriculture solutions for all seasons, crops, terrains, and vehicles



PRECISION ADVANTAGE

Precision agriculture has revolutionized traditional farming practices. Farmers who integrate precision agriculture into their farms can operate more efficiently and productively during every stage of their farming applications—all while optimizing inputs, reducing costs, and improving crop performance.

Starting with GPS/GNSS-based guidance displays and steering systems, farmers can accurately guide their vehicles with precision and enjoy less operator fatigue and greater fuel savings as a result. By adding advanced capabilities such as flow and application systems that vary the rate of seed and fertilizer to efficiently use inputs, or yield monitoring that measures the exact amount of grain harvested, farmers can now record and collect geo-referenced data that can be used for field analyses. It's with this data that farmers can begin to fine-tune their farming practices year after year.

Using the data, farmers can analyze crop performance and investigate variations within their field that contributed to a higher or lower crop yield such as differences in soil types, seed variety, nutrient availability, water run-off or pooling, and other important factors. They can then adjust their farming practices for the next year to maximize productivity and profitability.

IS YOUR FARM CONNECTED?

To further enhance the efficiency of farming operations, information can now be shared across the entire farm with the Trimble® Connected Farm™ solution. Field data can be transferred wirelessly in real time between the field and the office, and also between multiple vehicles and mixed fleets in the same field. Fleet information such as cab dashboards, historical and current vehicle positions, and productivity and delay information can be viewed via the Connected Farm web-based solution. And, with the Connected Farm app, field boundaries and scouting information can be recorded using smartphones and tablets.

When data is connected between the field, fleet, and office, farm managers can quickly and easily enhance their everyday planning, decision making, and overall strategy for their entire operation. Connected Farm delivers the next generation of information management capabilities with unmatched performance and efficiency.

2013 AND BEYOND

As the leader in precision agriculture products and solutions, Trimble Agriculture is committed to providing new innovations that simplify operations and increase the profitability of farms throughout the world. No matter your field type, crop type, or vehicle, Trimble has a solution to suit your needs.

Trimble Agriculture. The line everyone follows.



Trimble GPS, guidance, and precision agriculture solutions
for all seasons, crops, terrains, and vehicles

INTRODUCTION	2
CORRECTION SERVICES	4–5
RECEIVERS AND RADIOS	6
GUIDANCE DISPLAYS	7–10
Guidance Display Options	7
FmX® Integrated Display	8
CFX-750™ Display	9
EZ-Guide® 250 System	10
STEERING SYSTEMS	11–16
Vehicle Steering Options	11
Autopilot™ System	12
EZ-Pilot™ System	13
EZ-Steer® System	14
Implement Control	15
RG-100 Row Guidance	16
FLOW & APPLICATION CONTROL	17-20
Flow & Application Control	17
Field-IQ™ System	18–19
GreenSeeker® System	19
GreenSeeker Handheld	20
WeedSeeker® System	20
YIELD MONITORING	21
WATER MANAGEMENT	22-25
FieldLevel™ II System	22
WM-Drain™ System	23
WM-Topo™ System	24
Lasers and Grade Control	25
FARM MANAGEMENT SOFTWARE	26
MOBILE COMPUTERS	27
CONNECTED FARM	28–29
FIELD ACTIVITIES	30-35
Planting/Seeding	31
Spraying	32
Strip Tilling, Side Dressing, Spreading	33
Harvest	34
Water Management	35



No matter where you're located. No matter what you farm. Trimble has a correction services solution to meet your needs. Trimble delivers precision agriculture solutions for all seasons, crops, terrains, and vehicles. Knowing that every farm's accuracy requirements are different, Trimble offers a wide range of correction options.

RTK-Based Technology

NEW! TRIMBLE xFILL™ TECHNOLOGY

- Increase your uptime by receiving supplemental xFill signals when an RTK signal is lost
- Maximize your productivity by continuing your farming operations until your RTK signal is restored
- Benefit from uninterrupted workflow with the seamless transition between RTK and xFill signals



CENTERPOINT™ RTK

Accuracy
<1" (2.5 cm)

Initialization/Convergence
< 1 min

Receive the highest accuracy correction service within 8 miles (12.87 km) of an established RTK base station or base station network. Contact your local Trimble Reseller to determine if your area has RTK base station coverage.

Add a Trimble® RTK base station as part of a network or as a single mobile base station for on-farm use.

RTX-Based Correction Services

Trimble delivers GNSS enabled, RTX-based corrections to your receiver anywhere in the world. Trimble CenterPoint™ and RangePoint™ RTX™ correction services provide:

- Unmatched reliability and uptime
- Free GLONASS unlock with active subscription
- No base station needed
- Service over a large geographic area
- GNSS compatibility using the FmX® integrated display, CFX-750™ display, and AG-372 GNSS receiver

CENTERPOINT™ RTX™

Pass-to-Pass Accuracy
<1.5" (3.8 cm)

Repeatable Accuracy
<1.5" (3.8 cm)

Initialization/Convergence
< 1 min
Standard*

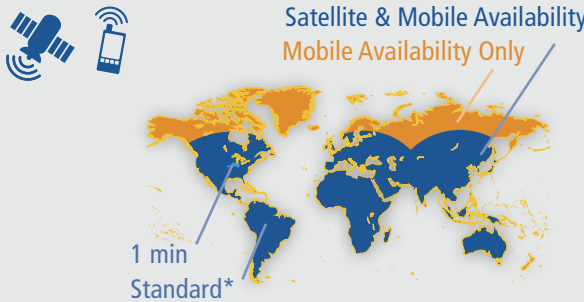
NEW! RANGEPOINT™ RTX

Pass-to-Pass Accuracy
<6" (15 cm)

Repeatable Accuracy
<20" (50 cm)

Initialization/Convergence
1–5 min

Free! One-year trial of RangePoint RTX service available for any compatible product.**

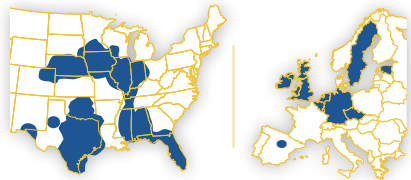


Other Correction Services

CENTERPOINT VRS™

Accuracy
<1" (2.5 cm)

Initialization/Convergence
< 1 min



OMNISTAR™ HP

Accuracy
2–4" (5–10 cm)

Initialization/Convergence
Standard*



OMNISTAR XP

Accuracy
3–4" (8–10 cm)

Initialization/Convergence
Standard*



OMNISTAR G2

Accuracy
3–4" (8–10 cm)

Initialization/Convergence
Standard*



OMNISTAR VBS

Accuracy
6–8" (15–20 cm)

Initialization /Convergence
< 1 min

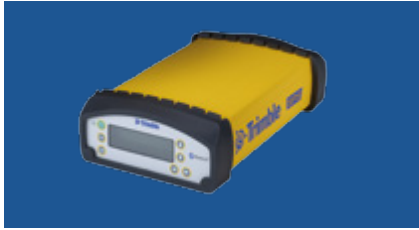


*Receiver convergence time varies based on GNSS constellation health, level of multipath, and proximity to obstructions such as large trees and buildings. In ideal conditions, receivers can converge to a 30 cm position in approximately 10 minutes, 20 cm in 15 mins, and full accuracy in less than 30 mins.

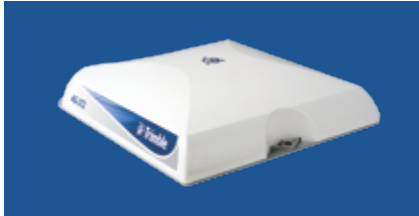
**Valid in 2013. Other restrictions may apply.

RECEIVERS

Trimble offers portable, rugged GNSS receivers that support a variety of real-time corrections for repeatable year-to-year accuracy. Use any of our receivers as a standalone GNSS receiver or integrate it into a Trimble® steering system.



AgGPS® 542 GNSS RECEIVER
An advanced, dual-frequency GNSS receiver, ideal for areas with the most demanding precision requirements.



AG-372 GNSS RECEIVER
A high-performance, dual-frequency GNSS receiver that delivers unmatched accuracy and performance for your farming operations.



AgGPS 162 GPS RECEIVER
A low-cost smart antenna, ideal for farming operations that require less demanding accuracy levels.



TRIMBLE BASE STATION
Add a Trimble base station for reliable operation as part of an RTK base station network or as a single mobile base station for on-farm use.

RADIOS

Trimble’s radios deliver highly accurate, repeatable GNSS RTK corrections for your precision agriculture applications. With their wide frequency ranges, transmit capabilities, and ruggedness, Trimble radios provide reliable performance in the most demanding conditions.



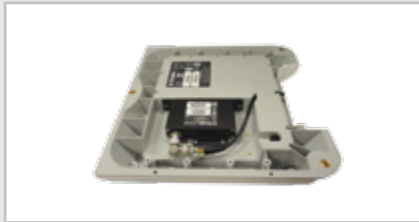
TDL 450L RADIO AND TDL 450H RADIO
High-speed wireless radios that can be used as a mobile receiver or a repeater to reach inaccessible or obstructed locations. The TDL 450H radio is high-powered.



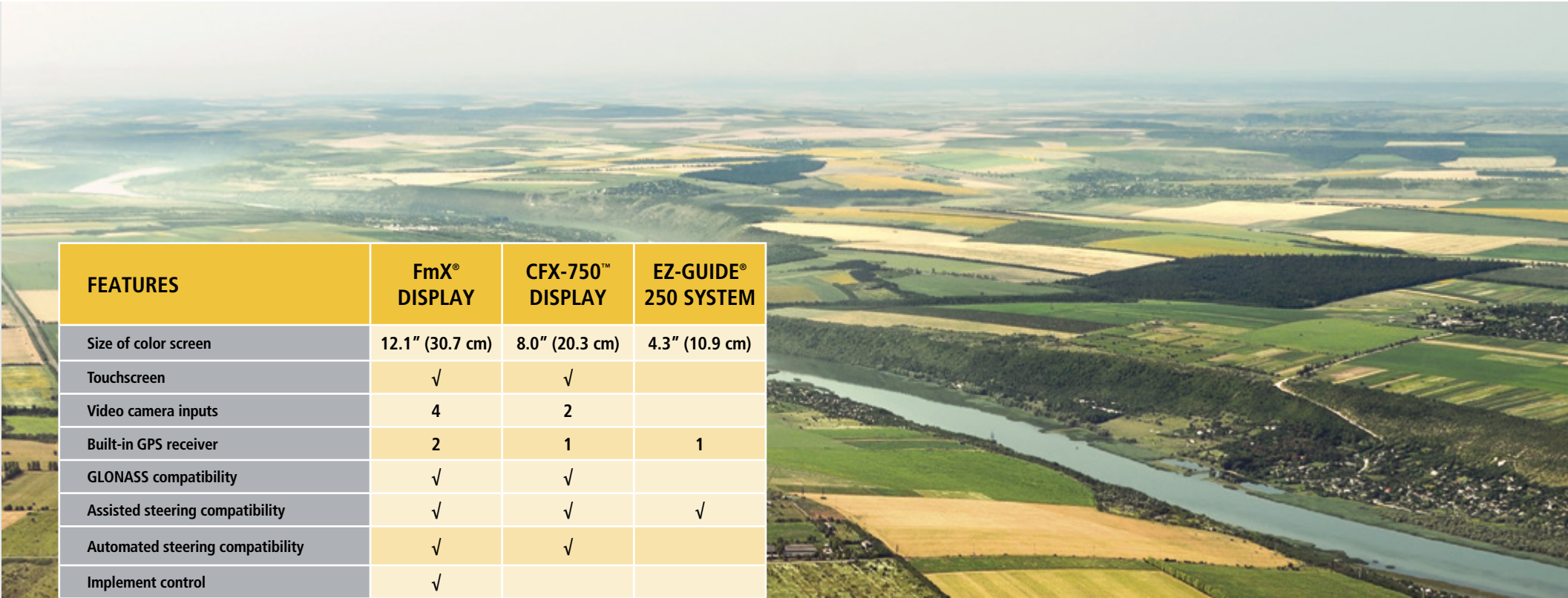
SNB900 RADIO
A multi-channel 900 MHz radio that can be used as a rover, repeater, or base station radio.



SNB900R RTK ROVER RADIO
A multi-channel 900 MHz radio that can be used as a rover radio.



AG-715 RADIO
An integrated 900 or 450 MHz RTK radio that is highly versatile and reliable in the most demanding radio frequency environments.



FEATURES	FmX® DISPLAY	CFX-750™ DISPLAY	EZ-GUIDE® 250 SYSTEM
Size of color screen	12.1" (30.7 cm)	8.0" (20.3 cm)	4.3" (10.9 cm)
Touchscreen	√	√	
Video camera inputs	4	2	
Built-in GPS receiver	2	1	1
GLONASS compatibility	√	√	
Assisted steering compatibility	√	√	√
Automated steering compatibility	√	√	
Implement control	√		
Row guidance	√		
Flow and application control	Select capabilities	Select capabilities	
On-the-go VRA with GreenSeeker® sensors	√		
Water management	√		
Yield monitoring	√	Select capabilities	
Wireless vehicle to vehicle data exchange	√		
Wireless office to field data exchange	√	√	
Office software compatibility	√	√	√
Field data recording	√	√	√

Trimble’s precision farming guidance displays help you accurately monitor and map field information in real time. Benefit from their industry-leading performance and reliability to complete field applications quickly and efficiently. With an array of functionalities and price points, you can select a display option that best fits your farming needs.



FmX INTEGRATED DISPLAY



CFX-750 DISPLAY



EZ-GUIDE 250 SYSTEM

FmX INTEGRATED DISPLAY

ADVANCED PRECISION AGRICULTURE CAPABILITIES

- Manual guidance and mapping
- Trimble® steering system compatibility
- Implement control
- Row guidance
- Spinner speed control for spreaders
- Advanced seed monitoring
- Six-product variable rate application control
- Automatic section control
- Nitrogen sensing in real time
- Land leveling and levee installation
- Drainage operations
- Yield monitoring
- Wireless vehicle to vehicle data exchange
- Wireless office to field data exchange

PRECISE FARMING—NO MATTER WHERE YOU OPERATE

The FmX® integrated display is compatible with a wide variety of correction services—ideal for any location, crop type, field shape, or soil type.



The FmX integrated display is an advanced, full-featured guidance display for all your precision farming operations. This versatile display allows you to adapt as your farming business grows. It provides leading-edge capabilities that help you enhance your productivity in any stage of the crop cycle—season to season, year after year.



The CFX-750™ display is an affordable, multi-function guidance display offering key precision agriculture functionality. This intuitive display allows you to easily perform day-to-day farming tasks, extend your operating hours, and enhance productivity on your farm.

CFX-750 DISPLAY

KEY PRECISION AGRICULTURE CAPABILITIES

- Manual guidance and mapping
- Trimble steering system compatibility
- Boom height control for sprayers
- Seed monitoring
- Two-product variable rate application control
- Automatic section control
- Basic yield monitoring
- Wireless office to field data exchange

PROVIDING THE ACCURACY YOU NEED

No matter your location, crop type, field shape, or soil type, Trimble delivers a variety of correction service options to your CFX-750 display.

CenterPoint™ RTK < 1 inch accuracy	CenterPoint™ VRS™ < 1 inch accuracy	CenterPoint™ RTX™ 1.5 inch accuracy	OmniSTAR™ HP 2-4 inch accuracy	OmniSTAR™ G2 3-4 inch accuracy	OmniSTAR™ XP 3-4 inch accuracy	RangePoint™ RTX < 6 inch accuracy	OmniSTAR™ VBS 6-8 inch accuracy	SBAS (WAAS) 6-8 inch accuracy
✓	✓	✓	✓	✓	✓	✓	✓	✓

CenterPoint™ RTK < 1 inch accuracy	CenterPoint™ VRS™ < 1 inch accuracy	CenterPoint™ RTX™ 1.5 inch accuracy	OmniSTAR™ HP 2-4 inch accuracy	OmniSTAR™ G2 3-4 inch accuracy	OmniSTAR™ XP 3-4 inch accuracy	RangePoint™ RTX < 6 inch accuracy	OmniSTAR™ VBS 6-8 inch accuracy	SBAS (WAAS) 6-8 inch accuracy
✓	✓	✓	✓	✓	✓	✓	✓	✓

ConnectedFarm™

IS YOUR FARM CONNECTED? Connected Farm™ captures productivity information which includes time spent idling, moving, and traveling. When used with the FmX display, operators will be prompted to enter delay reasons after sitting motionless for a set period of time. Productivity and delay reasons can then be viewed online so that better decisions can be made about fleet management.

ConnectedFarm™

IS YOUR FARM CONNECTED? Wirelessly transfer guidance lines, variable rate prescription maps, as-applied variety maps, and more between the office and field using the CFX-750 display. Connected Farm enhances your information management capabilities so that you can make better farm management decisions.

KEY PRECISION AGRICULTURE CAPABILITIES

- Manual guidance and mapping
- Trimble® steering system compatibility
- USB data transfer for in-office analysis

SIMPLE INSTALLATION AND EASE OF USE

With its color display, one-touch function buttons, and intuitive interface, the EZ-Guide® 250 system allows you to quickly access guidance lines and coverage maps and easily perform your day-to-day farming tasks.

BASIC SATELLITE COVERAGE AND ACCURACY LEVELS

The EZ-Guide 250 system is compatible with the GPS satellite constellation. Get submeter pass-to-pass accuracy with SBAS for farming applications that can be accomplished with lower-accuracy corrections.

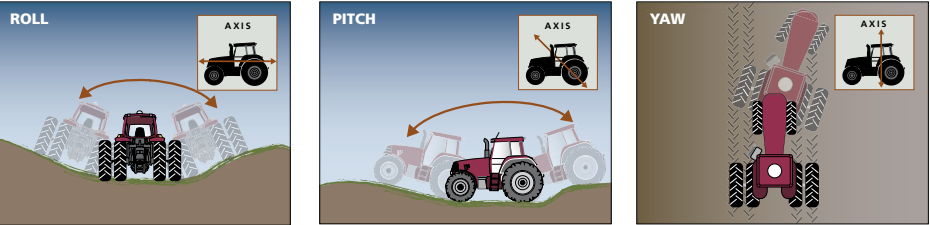
SBAS (WAAS) 6-8 inch accuracy
√

The EZ-Guide 250 system provides high-quality, entry-level guidance capabilities at an entry-level price. It is well-suited for broadacre crop applications that can be accomplished with submeter accuracy. Use it for basic guidance to make your farming operations easier in any farming season.



Displays	AUTOPILOT™ SYSTEM	EZ-PILOT™ SYSTEM	EZ-STEER® SYSTEM
FmX® integrated display	√	√	√
CFX-750™ display	√	√	√
EZ-Guide 250 system			√
Machinery/Products			
Guidance-ready vehicles	√		
TrueTracker™ implement steering system	√		
TrueGuide™ implement guidance system	√		
RG-100 row guidance	√		
Terrain Compensation	T3™	T3	T2®
Roll	√	√	√
Pitch	√	√	
Yaw	√	√	√

Trimble offers assisted and automated steering options to help keep your farming vehicles on line—so you can focus on other farming tasks. With the added benefit of terrain compensation technology, you can easily operate in difficult terrain conditions while minimizing skips, overlaps, and guess rows.



AUTOPILOT SYSTEM



EZ-PILOT SYSTEM



EZ-STEER SYSTEM

AUTOPILOT AUTOMATED STEERING SYSTEM

CLUTTER-FREE INSTALLATION

The Autopilot™ automated steering system integrates directly into your vehicle's hydraulic steering system, allowing you to obtain clear access to cab controls.

GUIDANCE READY

The Autopilot system plugs into many factory guidance-ready vehicles, minimizing the need for additional equipment.

INCREASED PRODUCTIVITY

Offering maximum precision at speeds up to 30 mph (40 kph), the Autopilot system can help you complete field operations quickly and efficiently.

RISK-FREE FARMING

The Autopilot system takes the hassle out of farming. With its hands-free steering, the Autopilot system allows you to reduce fatigue and focus on other farming tasks to improve safety on your farm.

HIGH ACCURACY ON ANY TERRAIN

Guide your vehicle with one-inch repeatability and improve your accuracy on rolling terrain, slopes, and rough ground. Advanced T3™ sensors built into the Autopilot system navigation controller keep your vehicle on line—helping minimize skips and overlaps between passes.



The Autopilot automated steering system provides integrated, high-accuracy steering in any field type—hands free. When your vehicle is off line, the Autopilot system signals it to adjust its position to follow the correct path—no matter the field pattern or terrain type. The Autopilot system automatically steers your vehicle on line for maximum precision and increased productivity when performing the most demanding row crop farming applications.

EZ-PILOT ASSISTED STEERING SYSTEM

CLEAR ACCESS TO CAB CONTROLS

The EZ-Pilot system integrates directly into the steering column for a clutter-free environment in the cab.

OPTIMAL PERFORMANCE

The EZ-Pilot system allows you to maximize your uptime by helping you complete field operations quickly, efficiently, and productively.

INTEGRATES INTO THE ENTIRE FLEET

The EZ-Pilot system's quick-responding, high-torque motor is able to effectively steer various agricultural vehicles within the fleet, no matter the make, model, or year.

SAFE FARMING OPERATIONS

With hands-free guidance, the EZ-Pilot system allows you to focus on other farming tasks—so you can operate with ease and improve safety on your farm.

INCREASED CONTROL IN ANY FIELD TYPE

Advanced T3 sensors built into the EZ-Pilot system module keep your vehicle on line. With these sensors, your steering accuracy is improved on rolling terrain, slopes, and rough ground—helping minimize skips and overlaps between passes.



The EZ-Pilot™ assisted steering system provides high-accuracy steering at an affordable price. When you are driving your vehicle, the EZ-Pilot system turns the wheel for you with a compact electric motor drive using guidance from Trimble® displays to help keep you on line and improve your efficiency. This versatile steering system is ideal for both low-accuracy broadacre farming applications as well as high-accuracy row crop applications.

EZ-STEER ASSISTED STEERING SYSTEM

EASY TRANSFERABILITY

With installation in less than 30 minutes you can quickly transfer the EZ-Steer® assisted steering system from one vehicle to the next and get moving.

EFFECTIVE FIELD OPERATIONS

The EZ-Steer system can help you complete field operations more quickly, accurately, and efficiently compared to manual steering alone.

EASE OF USE

The hands-free guidance enables you to reduce fatigue and improve safety on your farm.

QUICK DISENGAGEMENT

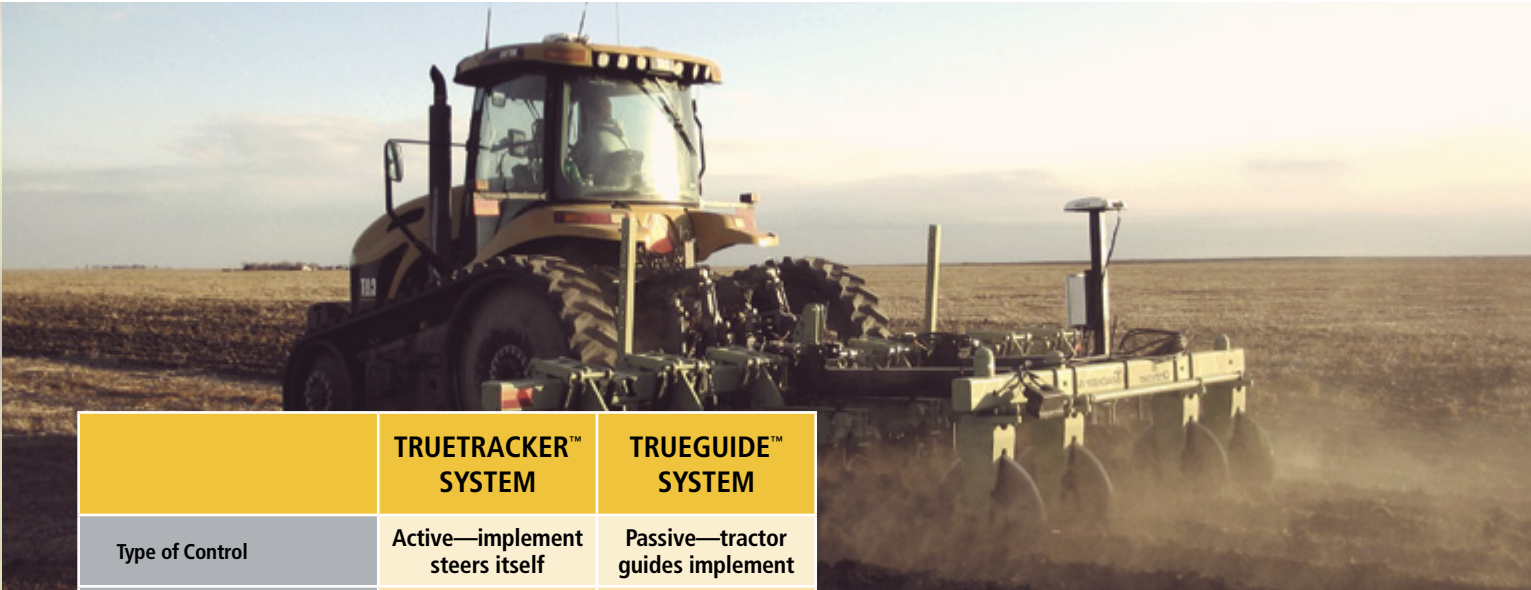
The EZ-Steer motor easily locks away from the steering wheel when not in use, allowing you to manually guide your vehicle at any time.

ENHANCED ACCURACY IN DIFFICULT TERRAIN

Improve your accuracy in rolling terrain and rough ground. T2® technology sensors built into the EZ-Steer module help keep your vehicle on line—for minimizing skips and overlaps between each pass.



The EZ-Steer assisted steering system provides simple, portable, hands-free farming for more than 1200 vehicle models—old and new. The EZ-Steer system turns the steering wheel for you by combining a friction wheel and a motor with guidance from any Trimble® display. It helps keep your vehicle on line for efficient, low-stress steering capabilities for your farming applications.



	TRUETRACKER™ SYSTEM	TRUEGUIDE™ SYSTEM
Type of Control	Active—implement steers itself	Passive—tractor guides implement
FmX® integrated display compatibility	√	√
Additional steering equipment on implement	√	
Direction of Control		
Forward	√	√
Backward	√	
Terrain Compensation		
Roll	√	√
Pitch	√	
Yaw	√	

To increase your planting accuracy, add one of Trimble’s implement control solutions. Implement control helps you guide your implement on line, so you can operate with ease—no matter the guidance path or terrain in your field. Benefit by using an implement control system to accurately guide your implement on hillsides, rolling terrain, contours, or terraces in variable soil conditions; minimize the effects of draft; increase precision with seed and fertilizer placement; and maintain consistent guess rows.

IMPLEMENT CONTROL

TRUETRACKER IMPLEMENT STEERING SYSTEM

The TrueTracker™ system is an active implement guidance system that keeps your tractor and implement on the same guidance line.

- Enables both the implement and tractor to stay on a repeatable path
- Reduces crop damage and compaction
- Provides high-accuracy control on difficult terrain with terrain compensation technology on the implement
- Best-suited for row crop and multiple-pass farming applications

TRUEGUIDE IMPLEMENT GUIDANCE SYSTEM

The TrueGuide™ system is a passive implement guidance system that monitors and corrects the position of your implement by moving the tractor.

- Low-cost solution with no need for additional hardware on the implement
- Best-suited for broadacre farming applications
- Ideal for controlling implements where multi-pass repeatability is not required



RG-100 ROW GUIDANCE

OPERATE WITH EASE

With RG-100 row guidance, you can reduce fatigue in difficult conditions such as down corn, curved rows, long passes, and other poor visibility conditions.

IMPROVED GUIDANCE

Since RG-100 row guidance uses sensors on the combine head to signal your combine to the center of the rows, you can operate effectively in fields planted using other steering systems or in areas where the planter drifted.

REDUCED EAR LOSS

RG-100 row guidance helps you stay on line to efficiently gather ears of corn—and ultimately increase your yield.

ACCURATE ROW FOLLOWING ON ANY TERRAIN

RG-100 row guidance relies on advanced T3™ terrain compensation technology on the Autopilot™ system for high-accuracy steering in rolling hills, slopes, and rough terrain.



The RG-100 row guidance system allows you to automatically adjust the combine in response to changes in the rows by using existing sensors built into the combine head. The RG-100 system uses the Autopilot automated steering system to center the combine on rows—even when they are not straight.

FLOW AND APPLICATION CONTROL

OPTIONS	FmX DISPLAY	CFX-750 DISPLAY
Number of Controlled Sections (Section Control Types)	up to 48	up to 48
Tru Count clutches	√	√
Tru Count LiquiBlock™ valves	√	√
Boom valve	√	√
Number of Control Drives (Control Drive Types)	up to 6	up to 2
Rawson	√	√
Servo	√	√
PWM	√	√
Linear actuator	√	
Electric over hydraulic	√	
Spinner speed control	√	
Number of Materials (Material Types)	up to 6	up to 2
Seed	√	√
Granular fertilizer	√	√
Liquid	√	√
Anhydrous	√	√
Seed Monitoring		
Basic population	√	√
Singulation analysis	√	√
Variable Rate Application		
GreenSeeker® system	√	
Shapefile prescription map	√	√
NEW! Boom Height Control for Sprayers		√



Trimble’s Field-IQ™ crop input control system is a section control and variable rate application control system that prevents seed and fertilizer overlap, controls the rate of material applications, monitors seed delivery or fertilizer blockage, and controls the height of spray booms. The Field-IQ system runs on both the CFX-750™ display and FmX® integrated display, providing you two powerful interface options from which to choose.

FIELD-IQ CROP INPUT CONTROL SYSTEM



The Field-IQ™ crop input control system saves money on inputs, increases yields, decreases fatigue, and saves time. Because it is a modular system, functionality can be added as your farm's needs change.

AUTOMATIC SECTION CONTROL

- Manage seed, liquid, and anhydrous using inch-level control on up to 48 individual sections
- Overlap detection shows where you've been and what you've done
- Eliminate seed overlap in your headlands and point rows with Tru Count Meter Mount™ air clutches
- Eliminate fertilizer overlap with Tru Count LiquiBlock™ valves that easily connect to clutch air lines



SEED MONITORING

- Advanced seed monitoring increases the quality of seed placement by delivering singulation details from the seeding system to the operator, allowing for on-the-go planter tuning
- Prevent costly planter problems by catching them early before they cause yield reduction
- See results of singulation analysis including information on population, singulation, skips/multiples, spacing, and quality of spacing

VARIABLE RATE APPLICATION CONTROL

- Simultaneously control the application rate of up to six different materials when using the FmX® integrated display, including seed, granular seed, granular fertilizer, liquid, and anhydrous ammonia in different combinations
- Two material rate control capability when using the CFX-750™ display
- Variable rate control of materials can be achieved with a prescription VRA map or in real time with a GreenSeeker® system for more efficient fertilizer utilization
- As-applied mapping records where you've applied inputs and automates record keeping
- Adjust your seed population, fertilizer rates, or spray application manually or using a prescription created with Farm Works Software® solutions
- Apply a high population to fertile or well-irrigated soils to maximize yield potential while reducing the rate on less fertile or poorly irrigated soils
- Automatically control spinner speed of spreader application systems to evenly distribute nutrients when using the FmX display

NEW! BOOM HEIGHT CONTROL FOR SPRAYERS

- Automatically adjust boom height with ultrasonic sensors that measure the distance between ground or crop canopy, resulting in an even application of material
- Minimize environmental impact and ensure the health of neighboring crops by eliminating off-target applications of products
- Automatic height sensing reduces operator fatigue by eliminating the need for manual boom switching



GREENSEEKER CROP SENSING SYSTEM

- The GreenSeeker crop sensing system is a variable rate application and crop vigor mapping system that offers a more efficient and precise way to manage crop inputs such as nitrogen
- The GreenSeeker system can be used to verify the amount of nitrogen the soil has made available, then determines a nitrogen prescription on-the-go for instant application
- The correct amount of fertilizer is delivered in real time, averaging an increase in profits of \$15 per acre

ConnectedFarm™

IS YOUR FARM CONNECTED? Use Connected Farm™ when planting to wirelessly transfer guidance lines and coverage maps between vehicles in the same field. Connected Farm can also be used to wirelessly transfer variable rate maps and as-applied maps between the field and office when spraying.

GREENSEEKER AND WEEDSEEKER PRODUCTS

GREENSEEKER HANDHELD CROP SENSOR

The GreenSeeker handheld crop sensor is an affordable, easy-to-use measurement device that can be used to assess the health—or vigor—of a crop.

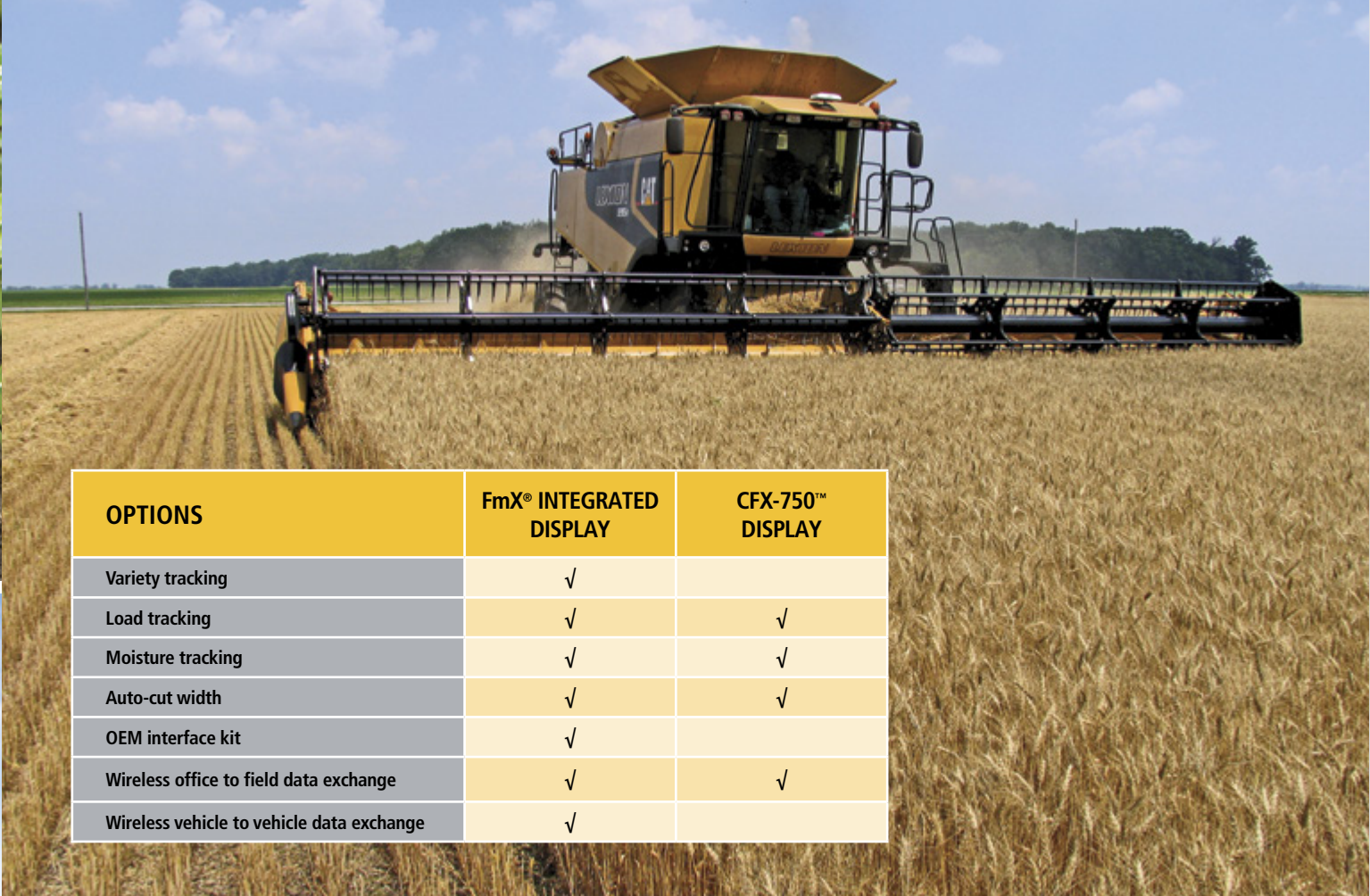
- Readings taken by the GreenSeeker handheld can be used to make non-subjective decisions regarding the amount of fertilizer to be applied to a crop, resulting in a more efficient use of fertilizer—a benefit to both a farmer’s bottom line and the environment
- Use the Connected Farm™ app on a smartphone or tablet to calculate fertilizer application rates from crop readings taken with the GreenSeeker handheld



WEEDSEEKER AUTOMATIC SPOT SPRAY SYSTEM

The WeedSeeker® system helps you cut overall weed control costs by up to 80% by saving on chemical costs, cutting down on time and labor, and reducing the environmental impact of your field activities.

- Uses advanced optics and computer circuitry to sense if a weed is present
- When a weed enters the sensor’s field of view, it signals a spray nozzle to deliver a precise amount of herbicide
- The WeedSeeker system will spray only weeds, not bare ground, and is effective wherever weeds occur intermittently



OPTIONS	FmX® INTEGRATED DISPLAY	CFX-750™ DISPLAY
Variety tracking	√	
Load tracking	√	√
Moisture tracking	√	√
Auto-cut width	√	√
OEM interface kit	√	
Wireless office to field data exchange	√	√
Wireless vehicle to vehicle data exchange	√	

With Yield Monitoring, you can accurately collect the yield and moisture data for a variety of grain crops. This information is critical for precision agriculture operations—allowing you to perform valuable analyses to enhance your decision making on your farm, season to season.

VARIETY TRACKING

Map and compare the performance of different seed varieties throughout your field.

LOAD TRACKING

Record the amount of grain harvested and loaded onto your trucks.

MOISTURE TRACKING

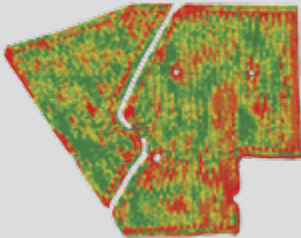
Determine if grain needs to be stored or dried based on the in-field moisture content.

AUTO-CUT WIDTH

Adjust the cut width automatically when traveling over odd-shaped fields, point rows, or other previously harvested areas to avoid inaccurate yield calculations.

YIELD MAP

Generate a yield map from the data collected during harvest to determine high- and low-performance areas.



ConnectedFarm™

IS YOUR FARM CONNECTED? Wirelessly transfer yield data from the field to the office using Connected Farm™. Immediate access to yield data allows you to evaluate the performance of your crop, identify problem areas, and plan prescriptions for seed, chemicals, and/or fertilizer. Prescription maps can be sent wirelessly from the office to the field to perform variable rate applications using Trimble’s Field-IQ™ crop input control system.



The FieldLevel™ II system utilizes lessons learned from more than 30 years of industry leadership in high-precision GNSS applications and land leveling. Combining these core competencies has resulted in a highly reliable, easy-to-use land leveling solution for farmers and contractors.

GPS and GLONASS satellite constellations are used by the FmX® integrated display to provide the highest performance RTK positioning available for use in FieldLevel II operations. The FmX display streamlines the survey, design, and grading steps required for land leveling, and can also be used for designing and installing rice levees when used in conjunction with Farm Works™ Surface software.

LAND LEVELING		
SURVEY	DESIGN	LEVEL
<ul style="list-style-type: none">Choose between the FmX display or WM-Topo™ system as your tool for surveying the fieldMap your fields with RTK measurementsCreate boundaries, interior points, and sectionsCalculate and report the true acreage of your field	<ul style="list-style-type: none">Create a best-fit surface using Autoplane technologyDefine primary and cross slopes for prescribed orientation and gradesUtilize Multiplane design software for more complex field requirements	<ul style="list-style-type: none">Drive the scraper hydraulic valves automaticallyLevel your fields using any type of tractor and scraperOperate both tandem and dual scraper systems

LEVEE DESIGN AND INSTALLATION		
SURVEY	DESIGN	INSTALL
<ul style="list-style-type: none">Capture 3D topographic data using the FieldLevel II Survey Design and Install module on the FmX display, or with the WM-Topo system	<ul style="list-style-type: none">Using Farm Works Surface software, analyze the shape of the field using 3D viewer, contours, flow arrows, and tributary informationDefine the start point, vertical intervals, and turn radius capability of the machine you're using and Surface software will determine the most optimal levee locations in the field	<ul style="list-style-type: none">Utilize a Trimble® Autopilot™, EZ-Pilot™, or EZ-Steer® steering system to guide the tractor as the levees are being installed



Trimble’s WM-Drain™ farm drainage solution connects the survey, analysis, design, installation, and mapping steps in surface and subsurface drainage projects. When combined with the FmX display and RTK-level corrections, the WM-Drain solution ensures optimal 3D drain placement, which improves crop yields by controlling ponding, optimizing root depth, maximizing planting season, and minimizing nutrient loss.

SURVEY

Collect 3D field data with ease by using the FmX integrated display or WM-Topo survey system.

ANALYZE

Analyze the 3D field data using Farm Works Surface software to make better-informed drainage decisions.

DESIGN

Design and verify a complete 3D drainage system using Surface software in the office, or design drainage lines on-the-go without having to leave your vehicle.

INSTALL

Take your designs back to the field and utilize the WM-Drain module on the FmX display and Trimble’s 3D machine control technology for precise installation of your pipe or surface ditches.

MAPPING

Map the true location of your installed drainage pipes or ditches and utilize the records for future maintenance or drainage expansion projects.



IS YOUR FARM CONNECTED? Wirelessly transfer topographic data, drainage designs, and completed drainage maps between the office and field to further improve the simplicity brought to your drainage projects with the WM-Drain solution.

WM-TOPO SURVEY SYSTEM

HIGHLY PORTABLE

The WM-Topo™ survey system can be taken into areas inaccessible to tractor or truck-mounted survey equipment. Users can collect survey data by hand when poor field conditions exist, or crops are too mature to allow vehicle access.

COMPATIBLE WITH OTHER TRIMBLE PRODUCTS

Gather topographic field data using the WM-Topo system, then transfer that data via USB stick or Connected Farm™ to Farm Works™ Surface software or the FmX® integrated display to create a 3D model of the field. Use these models to install drainage pipe with the Trimble® WM-Drain™ farm drainage solution. Topographic data can also be used on the FmX display to create a leveling design for use with Trimble's FieldLevel™ II system for water management.

USE THROUGHOUT WATER MANAGEMENT PROJECTS

Utilize the WM-Topo system to collect survey data for use in creating project plans, and to check accuracies during drainage or leveling projects.

The WM-Topo survey system is a topographic data collection device that can be taken into hard-to-reach areas such as ditches, steep terrain, muddy fields, or fields with mature crop cover. Survey data can then be transferred to Farm Works Surface software or directly to the Trimble FmX integrated display, and used to create surface models as a basis for better-informed water management decisions.



LASER TRANSMITTERS

Trimble offers an entire line of Spectra Precision® laser transmitters that can be used to manually perform a variety of water management tasks and ensure that the water on your field is distributed evenly. Laser transmitter options for various needs and budgets are available.



SPECTRA PRECISION LASER GL700 SERIES

The Spectra Precision GL700 is Trimble's most advanced laser transmitter, offering unmatched accuracy and beam stability. Use the GL700 for automatic machine control applications when a high level of accuracy—up to 1500 feet (450 meters)—and the capability to set single or dual slopes on your field are required.



SPECTRA PRECISION LASER GL600 SERIES

The Spectra Precision GL600 is a highly reliable laser transmitter series for growers requiring the ability to set single or dual slopes in their field. Packed with features, GL600 series lasers are ideal for field leveling applications using automatic machine control. Both the GL612 and GL622 can be used up to 1300 feet (400 meters).



SPECTRA PRECISION LASER AG401

The Spectra Precision AG401 is Trimble's entry-level laser transmitter. It is ideal for growers with zero-grade fields who do not need to adjust the grade. It is a self-leveling laser that can be used for automatic machine control at long ranges up to 1500 feet (450 meters).

LASERS AND GRADE CONTROL

GRADE CONTROL SYSTEMS

By adding automated grade control systems to your leveling or drainage equipment, you can improve your productivity and accuracy by up to 50%. Trimble provides a wide range of agricultural machine control systems to fit your application and budget.



AG GCS300/400 GRADE CONTROL SYSTEM

The AG GCS300 and the AG GCS400 systems are Trimble's most advanced grade control systems, offering multiple capabilities to growers and water management contractors. The systems connect directly to almost all machine types and also work with external control valves. They can be used for any application offering control, survey, and indicate modes.



AG GCS200 GRADE CONTROL SYSTEM

The AG GCS200 system is ideal for vehicles with PT valves requiring dual rigid mast control or single electric mast control. The key components of the system are the CB60 control box and the LR410 laser receiver. The system includes a digital elevation display and can be used in both survey and control modes.



AG GCS100 GRADE CONTROL SYSTEM

The AG GCS100 system is Trimble's most economical grade control system. The system is designed specifically for vehicles pulling scrapers, or drainage machines requiring connection with a PT valve. The key components of the AG GCS100 system are the CB40 control box and the LR40 laser receiver. The system delivers excellent performance in long-range applications with adverse environmental conditions and operates with a single receiver on a rigid mast.



Farm Works Information Management offers a complete range of solutions for the field and farm office—including mapping, accounting, water management, and more. Select from a variety of software that can be integrated and customized to provide a comprehensive management solution for your farm.

ConnectedFarm™

IS YOUR FARM CONNECTED? Connected Farm™ eliminates the need for USB storage devices by transferring guidance lines, drainage designs, soil sampling and scouting maps, yield maps, and variable rate prescription maps between the office and field using wireless technology. Connected Farm allows you to access your data more efficiently, resulting in better farm management decisions.

FEATURES	ACCOUNTING	MAPPING	SURFACE	MOBILE
Record accounting transactions	√			
Print reports for taxes and enterprise statements	√			
Import bank transaction data	√			
Enter field records	√	√	√	√
Create crop plans	√	√	√	
Print a wide range of field reports, including chemical, seed, and fertilizer	√	√	√	
Read and write data to precision ag hardware		√	√	
Display background imagery		√	√	
Manage guidance lines		√	√	
Import soil test results for zone or grid		√	√	
Design simple and formula-based prescription maps		√	√	
Analyze profit maps		√	√	
Average multiple years of yield data		√	√	
Display topographic data in 3D			√	
Analyze watershed zones and tributary lines			√	
Create drainage designs			√	
Lay out levee paths			√	
Map field boundaries, drainage lines, pivots, and other features with GPS				√
Utilize grids or management zones for soil sampling				√
Record scouting attributes				√
Control more than one product for variable rate application				√
Compatible with GreenSeeker sensors for logging data and real-time variable rate application				√

Trimble® mobile computers provide GPS-based solutions for your in-field needs. Our multi-function handhelds enable you to quickly and easily collect field records, map your boundaries, and more—all from the palm of your hand.



JUNO® 3 HANDHELD

Economical rugged IP54 handheld computer that includes an integrated GPS, digital camera, and optional cellular modem.



JUNO T41 HANDHELD

Rugged IP65 handheld computer that includes an integrated GPS, digital camera, and optional cellular modem for phone capabilities.

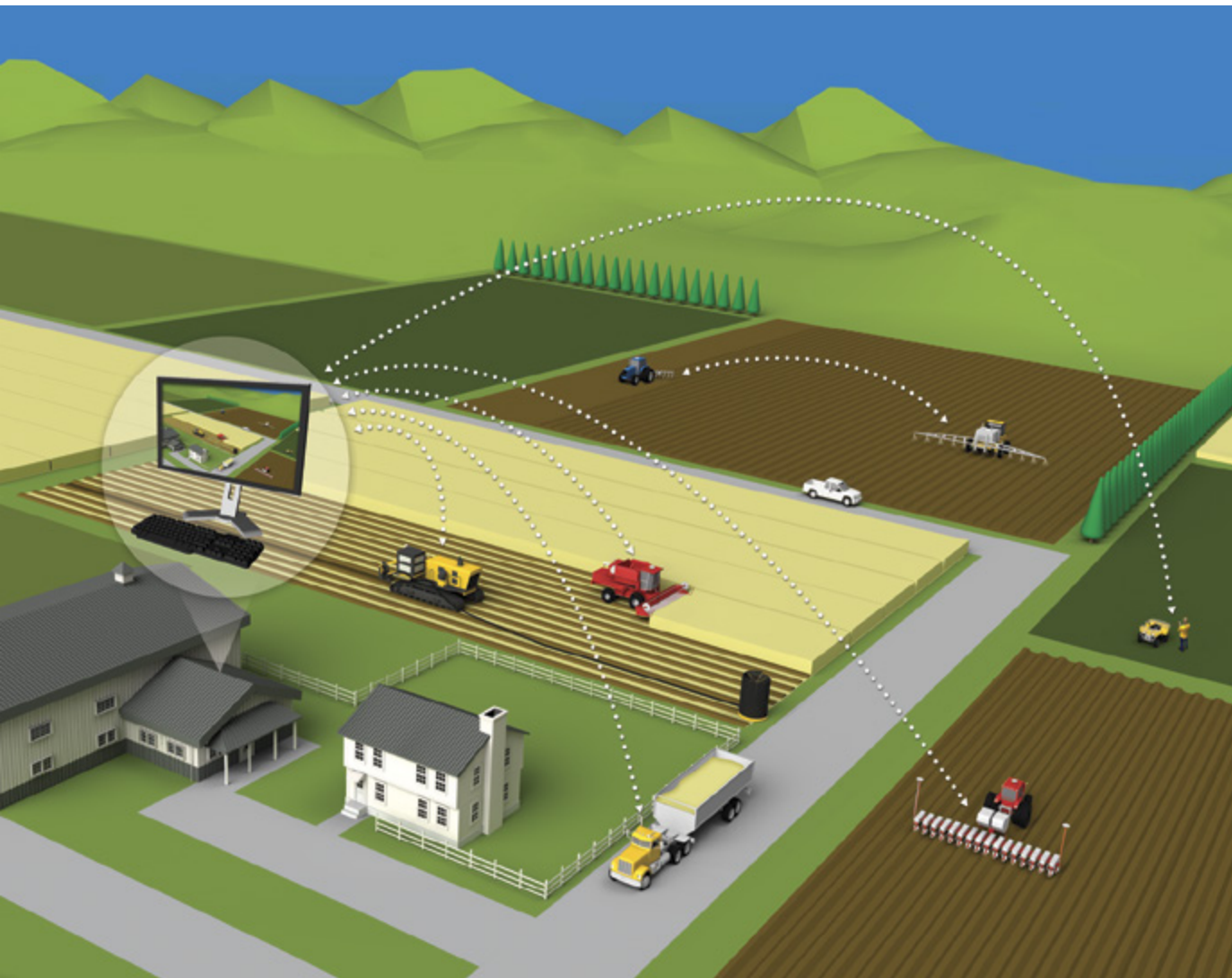


YUMA® 2 RUGGED TABLET COMPUTER

Rugged IP65 tablet computer that includes an integrated GPS receiver, digital camera, and a large 7 inch capacitive multi-touch screen.

MOBILE COMPUTER COMPARISON

OPTIONS	OPERATING SYSTEM	SCREEN SIZE	MEMORY (RAM)	DATA STORAGE	RUGGED RATING	9-PIN SERIAL PORT	INTEGRATED GPS ACCURACY	INTEGRATED CAMERA	INTEGRATED MODEM
Juno 3B Handheld	Windows® Embedded 6.5 Professional	3.5" (8.9 cm)	256 MB	2 GB	IP54	No	2–5 m	5 MP	No
Juno 3D Handheld	Windows Embedded 6.5 Professional	3.5" (8.9 cm)	256 MB	2 GB	IP54	No	2–5 m	5 MP with flash	Yes
Juno T41 C Handheld	Windows Embedded 6.5 Professional	4.3" (10.9 cm)	256 MB	8 GB	IP65	Yes with cable	2–4 m	8 MP with flash	No
Juno T41 X Handheld	Windows Embedded 6.5 Professional	4.3" (10.9 cm)	512 MB	16 GB	IP65	Yes with cable	2–4 m	8 MP with flash	Yes, has phone capabilities
Yuma 2 C Rugged Tablet	Windows 7 Professional	7" (17.8 cm)	4 GB DDR3	64 GB	IP65	Yes with cable	2–4 m	5 MP with flash	No
Yuma 2 CL Rugged Tablet	Windows 7 Professional	7" (17.8 cm)	4 GB DDR3	128 GB	IP65	Yes with cable	2–4 m	5 MP with flash	No
Yuma 2 CX Rugged Tablet	Windows 7 Professional	7" (17.8 cm)	4 GB DDR3	64 GB	IP65	Yes with cable	2–4 m	5 MP with flash	Yes
Yuma 2 CLX Rugged Tablet	Windows 7 Professional	7" (17.8 cm)	4 GB DDR3	128 GB	IP65	Yes with cable	2–4 m	5 MP with flash	Yes



SHARE INFORMATION ACROSS THE ENTIRE FARM

Connected Farm™ offers many features for fleet and field to simplify information management. The solution can be customized to your needs and can operate on many brands of equipment. Information can be gathered easily so that you can make better farm management decisions.

For the Fleet

FLEET POSITION TRACKING

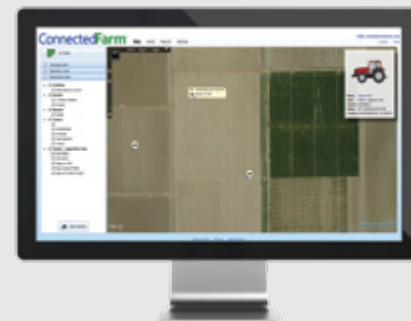
Connected Farm enables visibility into real-time fleet positions so managers can make intelligent decisions to optimize operator performance. Knowing the location of each vehicle can improve fuel usage, reduce application mistakes, and prevent theft.

GEO-FENCE AND CURFEW ALERTS

Connected Farm enhances farm security by creating virtual geo-fences and curfew alerts to help notify managers of theft or unauthorized use of vehicles.

CAB DASHBOARD AND REPORTING OF PUBLIC CAN MESSAGES

Connected Farm utilizes a virtual dashboard of cab monitors to view fuel usage, battery voltage, oil pressure, coolant temperature, and more. Dashboard information can be used to enhance fleet productivity, efficiency, and decision making.



ASSET POSITION HISTORY

Connected Farm saves a historical breadcrumb trail for each vehicle to verify previously reported locations. Quickly find out where each vehicle traveled by entering a date range.

NEW! REMOTE ASSISTANT

Connected Farm reduces employee downtime by remotely accessing the FmX® integrated display in real time to diagnose a problem. The operator never leaves the cab which leads to time savings and greater efficiency.

NEW! FLEET PRODUCTIVITY

Connected Farm captures productivity information which includes time spent idling, moving, and traveling. When used with the FmX® display, operators will be prompted to enter delay reasons when motionless for a set period of time. Productivity and delay reasons can then be viewed online so that better decisions can be made about fleet management.



For the Field

VEHICLE TO VEHICLE DATA EXCHANGE

Connected Farm eliminates the need for USB storage devices by transferring guidance lines, coverage maps, tank levels, and yield data between multiple vehicles using wireless technology.

OFFICE TO FIELD DATA EXCHANGE

Connected Farm eliminates the need for USB storage devices by transferring guidance lines, drainage designs, as-applied variety maps, yield data, and variable rate prescription maps between the office and field using wireless technology.

MAPPING AND SCOUTING

Connected Farm utilizes a free app to map field boundaries, scouting data, and other points of interest. Maps can also be viewed online.

NEW! NDVI READINGS

Connected Farm utilizes a free app for entering NDVI readings taken with the GreenSeeker handheld crop sensor to calculate fertilizer application rates. Crop readings and fertilizer rates can then be saved and viewed online in the Connected Farm.



Connected Farm App

- Map areas, flags, and field boundaries
- Enter scouting attributes for pests, weeds, or diseases and log the severity of problems and crop conditions
- Capture and geo-reference digital images of pests using the phone's built-in camera and GPS
- Calculate nitrogen rates by using crop readings from the GreenSeeker handheld crop sensor
- Compatible with most Android™ and Apple® smartphones and tablets, including iPhone® and iPad®



Scan to download the free Connected Farm app





Benefit from using Trimble® products and solutions for every step of your farming process—beginning with land preparation and through the planting, nutrient and pest management, and harvesting phases of a crop cycle. No matter the season, crop type, or terrain, we have a complete and reliable solution to meet your needs.

Our solutions integrate our proven technologies and software to help you operate efficiently, reduce input costs, improve crop performance, and ultimately increase profitability during any field activity.

PRODUCTS/SOLUTIONS	PLANTING & SEEDING	SPRAYING, SPREADING, STRIP TILLING, & SIDE DRESSING	HARVEST	WATER MANAGEMENT
FmX® integrated display	See page 17 for features	See page 17 for features	See page 21 for features	✓
CFX-750™ display	See page 17 for features	See page 17 for features	See page 21 for features	
Autopilot™ automated steering system	✓	✓	✓	✓
EZ-Pilot™ assisted steering system	✓	✓	✓	✓
TrueTracker™ system	✓	For strip till		
TrueGuide™ system	✓			
RG-100 row guidance			✓	
Field-IQ™ crop input control system	✓	✓		
GreenSeeker® crop sensing system		For spraying		
Tru Count clutches	✓			
Rawson™ drives	✓	For spreading		
Yield Monitoring			✓	
FieldLevel™ II system				For leveling or levee installation
WM-Drain™ farm drainage solution				For drainage
Farm management software	Mapping	Mapping	Mapping	Surface (includes Mapping)
Compatible with the Connected Farm™ solution	✓	✓	✓	✓



Precision agriculture technologies from Trimble streamline your planting and seeding operations and increase your profits by saving inputs and improving your productivity. The Field-IQ crop input control system is the backbone of Trimble’s planting and seeding capabilities, allowing you to perform automatic section control, variable rate application, and seed monitoring through the same FmX integrated display or CFX-750 display.

GUIDANCE DISPLAY

Depending on your farm’s needs, choose either the FmX display or CFX-750 display for your flow and application control operations (page 17).

VEHICLE STEERING

Add an Autopilot automated steering system or an EZ-Pilot assisted steering system for hands-free guidance of your vehicle (pages 12–13).

FIELD-IQ SYSTEM

When planting, use the Field-IQ system to control up to 48 individual rows, analyze your seeding performance using singulation analysis, and track your seed varieties (pages 18–19).

Use the Field-IQ system for air seeding to simultaneously control up to six materials with manual rate or prescriptions, minimize overlap, monitor up to 96 rows of blockage sensors, and control existing factory-installed drives (pages 18–19).

TRU COUNT CLUTCHES

Eliminate seed and fertilizer overlap in your headlands and point rows with Tru Count air clutches (pages 18–19).

CONNECTED FARM

Reduce overlap and speed up planting jobs by wirelessly transferring guidance lines and coverage information from one vehicle to another while operating in the same field (pages 28–29).

SPRAYING

GUIDANCE DISPLAY

Choose either the FmX® integrated display or CFX-750™ display for spraying operations, depending on your farm's needs (page 17).

VEHICLE STEERING

Add an Autopilot™ automated steering system or an EZ-Pilot™ assisted steering system for hands-free guidance of your vehicle (pages 12–13).

FIELD-IQ SYSTEM

Use the Field-IQ™ crop input control system to control up to 48 sections or nozzles and shut off sections in waterways and point rows to avoid over-spraying (pages 18–19).

NEW! Automate boom height control to provide an even application of material, and reduce operator fatigue and environmental impact (pages 18–19).

GREENSEEKER SYSTEM

Utilize the GreenSeeker® crop sensing system for more efficient nitrogen use when performing top dress nitrogen applications (page 19).

CONNECTED FARM

With Connected Farm™, send variable rate maps from the office to the vehicle for use in applying inputs, and send as-applied data from the field back to the farm office for record keeping (pages 28–29).



Trimble Agriculture continues to 'tick the boxes' that make up a complete precision agriculture solution for self-propelled sprayers. With the addition of boom height control to the Field-IQ crop input control system, Trimble now offers a spraying solution that includes guidance, vehicle steering, crop input control, automated boom height control, real-time crop sensing, and wireless data transfer between vehicles and the farm office.

STRIP TILLING, SIDE DRESSING, AND SPREADING

GUIDANCE DISPLAY

Choose either the FmX integrated display or CFX-750 display for strip tilling, side dressing, or spreading, depending on the needs of your operation (page 17).

VEHICLE STEERING

Add an Autopilot automated steering system or an EZ-Pilot assisted steering system for hands-free guidance of your vehicle (pages 12–13).

FIELD-IQ SYSTEM

Use the Field-IQ system for section control on up to 48 sections to avoid overlap in strip tilling and side dressing operations. Control six materials simultaneously when using the FmX display (two materials when using the CFX-750 display), and monitor delivery line blockage for granular strip till (pages 18–19).

The spreader functionality of the Field-IQ system manages accurate granular application by shutting off spreading when going over previously applied areas, varies rates of fertilizer or lime with prescriptions, and ensures even material application using spinner speed control capability (pages 18–19).

RAWSON DRIVES

Use a Rawson™ variable rate drive for very fast response going from stand-still to material application in granular fertilizer operations.



Integrate your precision agriculture management of nutrient applications using the Field-IQ crop input control system for strip tilling, side dressing, and spreading. The Field-IQ system has the flexibility to be connected to many existing control types and can be expanded to add functionality as your farm's needs change.

GUIDANCE DISPLAY

Use the FmX® integrated display or CFX-750™ display to monitor, map, and record field information during harvest (page 21).

VEHICLE STEERING

Choose from a variety of Trimble® steering systems based on your crop and accuracy requirements to keep your vehicle on line (pages 11–13).

RG-100 ROW GUIDANCE

Automatically adjust your combine to the center of the rows—even when they are not straight (page 16).

CAMERAS

Mount cameras onto the clean grain tank so you can easily see if your tank is full.

YIELD MONITORING

Accurately view, map, and record crop yield and moisture data in real time to instantly understand how your crop performed (page 21).

CONNECTED FARM

Share information between multiple vehicles in the field or wirelessly transfer yield data to the office using Connected Farm™. Generate a yield map within Farm Works Software® solutions to view and evaluate the performance of your crop and plan for the next year’s operations (pages 26, 28–29).



Harvest time can bring great pride as tangible results are seen from the year’s hard work. Now you can enhance your productivity with the fully-integrated harvest solution from Trimble. Leverage Trimble’s proven technologies and tools in your harvesting operations to support critical processes and decisions throughout the entire crop cycle—ultimately leading to improved yields, lower input costs, and increased profitability.

GUIDANCE DISPLAY

Use the FmX integrated display for all your water management applications (page 8).

VEHICLE STEERING

Add an Autopilot™ automated steering system or an EZ-Pilot™ assisted steering system for hands-free guidance of your vehicle (pages 12–13).

WM-TOPO SYSTEM

Use the FmX display mounted in your vehicle or the handheld WM-Topo™ survey system to perform survey work in the field (page 24).

FIELDLEVEL II SYSTEM

Perform land leveling or levee design and installation operations with the FieldLevel™ II system (page 22).

WM-DRAIN SOLUTION

The WM-Drain™ farm drainage solution allows you to streamline the field and office operations involved in a drainage project by integrating the survey, analysis, design, installation, and mapping steps of each job (page 23).

CONNECTED FARM

Transfer survey data collected in the field to the office for analysis with Farm Works™ Surface software, then transfer drainage designs back to the field for use in installing drainage pipe (pages 26, 28–29).



The term water management refers to leveling activities designed to optimize water use when it is scarce, and the implementation of drainage systems to control water when it is in excess. Trimble has more than 35 years of experience in the water management business and our systems are proven to improve yields by 25% and reduce water usage by 30%. Because Trimble knows every dollar—and every drop—counts.



NORTH & SOUTH AMERICA

Trimble Agriculture Division

10368 Westmoor Drive
Westminster, CO 80021
USA

+1-720-887-6100 Phone
+1-720-887-6101 Fax

Trimble Navigation Limited

Corporate Headquarters
935 Stewart Drive
Sunnyvale, CA 94085
USA

+1-408-481-8000 Phone
+1-408-481-7740 Fax

Trimble Water Management

5475 Kellenburger Road
Dayton, OH 45424
USA

+1-937-245-5154 Phone
+1-937-233-9441 Fax

EUROPE

Trimble Germany GmbH

Am Prime Parc 11
65479 Raunheim
GERMANY

+49-6142-2100-226 Phone
+49-6142-2100-140 Fax

ASIA-PACIFIC

Trimble Navigation Australia PTY Limited

Level 1/120 Wickham Street
Fortitude Valley, QLD 4006
AUSTRALIA

+61-7-3216-0044 Phone
+61-7-3216-0088 Fax



www.trimble.com/agriculture

© 2005-2013, Trimble Navigation Limited. All rights reserved. Trimble, the Globe & Triangle logo, AgGPS, EZ-Guide, EZ-Steer, Farm Works Software, FmX, GreenSeeker, Juno, Spectra Precision, T2, WeedSeeker, and Yuma are trademarks of Trimble Navigation Limited, registered in the United States and in other countries. Autopilot, CenterPoint, CFX-750, Connected Farm, EZ-Pilot, Farm Works, Field-IQ, FieldLevel, OmniSTAR, RangePoint, Rawson, RTX, T3, Tru Count LiquiBlock, Tru Count Meter Mount, TrueGuide, TrueTracker, VRS, WM-Drain, WM-Topo, and xFill are trademarks of Trimble Navigation Limited. Apple, iPad, and iPhone are trademarks of Apple Inc., registered in the United States and other countries. Android is a trademark of Google Inc. Microsoft, and Windows are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries. All other trademarks are the property of their respective owners. PN 022503-078H-1 (01/13)