



GIS Solutions



SYNERGY
POSITIONING SYSTEMS

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Topcon GIS Solutions

The Topcon commitment to automating GIS data workflow and increasing your productivity can be seen in our latest technology suite of solutions.

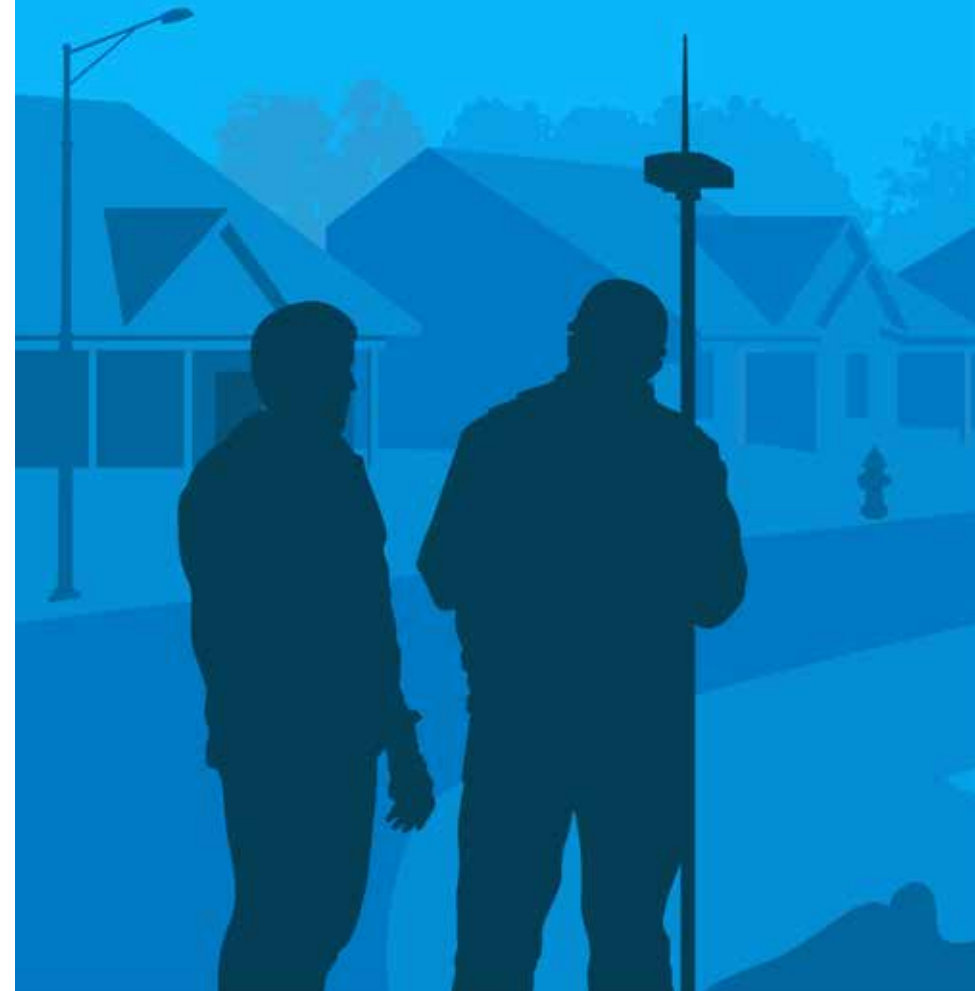
“Your Productivity, Our Technology” signifies our commitment to providing industry-leading productivity solutions. Our state-of-the-art hardware and software GNSS technology work together as a high performance, scalable solution for any GIS data collection, maintenance and field viewing project.

With enterprise software, Topcon offers field to office connectivity with cloud data exchange, providing the ultimate solution for fast and accurate GIS decision making.

**YOUR PRODUCTIVITY.
TECHNOLOGY.**

Electric Distribution

Highly accurate 3D positioning of points, lines, areas and multi-feature logging for electric utilities.



The connected strategy

Environmental and Natural Resources

Real-time data for up-to-the-minute environmental mapping: trees, trails, lakes, streams, flora and fauna, wildlife, and agriculture applications.

Utilities

Existing, planned and placed – Sync data through the cloud and keep every person up-to-date in field and office for accurate installation and maintenance.

Asset Management

Planning and managing both rural and urban assets and infrastructure using an up-to-date, accurate GIS database.



Natural Resources and Environmental

Mapping natural resources has become a critical mission for a more sustainable planet. Using GIS and GPS technology for this endeavor has allowed abundant data to be compiled and analyzed over time for better decision making now and in the future. Topcon offers various accuracy solutions for environmental and natural resource applications that incorporate easy-to-use software for a smooth workflow.

Our solutions allow field personnel to easily incorporate digital imagery for better record keeping. Connections between the field and office can be maintained for immediate data transfer of data files and imagery without traveling back to the office.





Utilities

Mapping utilities in the field often requires an increase in accuracy to sub-foot or better, especially when the utilities are located close to one another and need to be referenced and identified individually. Topcon has mapping solutions that are scalable to sub-foot and centimeter-level for the initial data collection efforts and for navigating back to a specific utility for update and maintenance.

Important in many utility applications is linework for overhead wires or pipelines. With Topcon eGIS software, it is quick and easy to collect linework and assign attributes to the line. eGIS offers complete compatibility with shapefile format so linework easily transfers to ArcGIS. A connection between the field and office can be maintained for immediate data transfer and decision making.





Electric Distribution

When mapping electric utilities, accuracy becomes critical. Centimeter-level precision is often required and Topcon has the solutions to suit. Our solutions are scalable – sub-meter accuracy can be used when high accuracy is not required, and a cellular enabled controller or GNSS receiver with optional cellular modem can be added to easily connect to a reference station network for high accuracy positioning.

MAGNET® Field GIS software, important in many utility applications, supports multi-feature logging, also known as “many-to-one”, where one location represents numerous GIS features and attributes. Just log one position and assign various feature types and attributes to store in your GIS.



Workflow

The key to a successful GIS positioning solution is the combination of products that maximize your productivity.

Selecting components that connect the office with the field streamlines workflows and eliminates unnecessary travel time.

A connection through the cloud to provide live updates and coordinated sharing of GIS data is paramount. An efficient GIS workflow is a two-way flow. Not only do field personnel benefit from staying current with GIS updates, they also need to contribute quality position and attribute information back to the office. This ensures GIS decision making is always based on the most up-to-date field data.

Collect



Topcon provides a vast experience of positioning solutions for the field. Selecting the best solution is critical to your success, whether it is an advanced HiPer SR GNSS receiver, a handheld Tesla or GRS-1 with MAGNET® Field GIS software, or an Android tablet with eGIS. All of these solutions operate through a colorful, graphical interface – and all connect back to the cloud. All work seamlessly with GIS shapefile format for easy workflow.



HiPer SR



Tesla with
MAGNET Field GIS



Tablet with eGIS for
Android Software

Sync



The primary benefits of syncing data with the cloud are to stay current and connected. Topcon field and office cloud solutions focus on keeping every person up to date in both field and office routines. The cloud is the common point of contact that keeps the project working efficiently and accurately. MAGNET Enterprise provides real-time views of field activities, secure data storage, and shared visibility to field progress. eGIS for Android uses the eWebSync utility for cloud-based data transfer.



Cloud Access - MAGNET Enterprise

Update



Software makes the connection between the field and office, using the cloud to quickly retrieve the most current field data. With your recently updated GIS layers, decision making can now be made based on the most current information.

Data can be exported in various GIS file formats. A seamless workflow between Topcon field software and GIS office software such as ArcGIS leads to streamlined and efficient operations.



ArcGIS

Hardware Solutions

Topcon GIS mapping solutions integrate various technologies for scalable accuracy and intuitive workflows.

A world leader in measurement devices for more than 85 years, Topcon's innovative products include the world's first integrated GIS data collection and land survey system and the first satellite receiver chip to pick up all signals from all available satellites now and into the foreseeable future.

Ranging from aerial mapping to land survey and every positioning solution in between, our products are built to last, engineered for precision, and designed to fully integrate into software workflows that get your work done faster.

The products shown are examples of our most popular GIS field hardware. There are different models available based upon the desired accuracy and specific requirements of the application.



All-in-One Mobile GIS Device

GRS-1

With an integrated cellular modem and Wireless LAN, The GRS-1 is the perfect solution for GIS users with high-accuracy requirements who need real-time detail in the field but not a lot of headaches.

- 3.7 in color display screen
- 2.0 megapixel camera
- Submeter, sub-decimeter, centimeter accuracy available



GIS Field Controller

TESLA

A perfect balance between screen size and handheld size. The frame is magnesium alloy, which is lightweight and strong. Your data will be protected in the most challenging environments.

- 5.7 inch color display screen
- Portrait or landscape orientation
- Fast 806MHz processor



Scalable Receiver for GIS

HiPer SR

Lightweight yet tough enough to survive a 2m drop, this high accuracy GNSS receiver has a rechargeable battery for up to 20 consecutive hours of operation. The Topcon HiPer SR operates cable-free, with no antennas, battery doors, or connectors.

- Vanguard chip with Universal Tracking
- Rugged design
- Cellular configuration (optional)



Ruggedized Field Controller

FC-500

Featuring 1GHz of processing power, a 5MP camera, 8GB of flash storage, Bluetooth® and Wi-Fi, and MIL-STD 810G durability, the FC-500 will survive the most demanding conditions.

- Internal GPS (2-5m accuracy)
- 3.5G cellular module (optional)
- Large Sunlight-readable display

Software Solutions

The most critical part of a successful GIS positioning solution is the software workflow. The hardware sensors available from Topcon will all perform precisely in the field. But what connects you to the office and to the GIS database? What makes you feel confident and delivers a good experience? The software.

Topcon software is the leader in cloud-based workflow, intuitive operation, and modular services. From operating your entire positioning enterprise, to simple, point-to-point data collection, Topcon software makes your GIS workflow easier than ever.

The products shown are an example of the most popular GIS Field software. There are different modules available based upon the specific requirements of the application.



Advanced Field Software for Mapping eGIS

If you deploy to a large field staff and simplicity is what you need, try the Topcon eGIS field software. With a customizable interface to suit the way that you and your teams work, eGIS has been developed to allow you to concentrate on collecting the data as quickly and smoothly as possible.

- Capture, edit, analyze, and display geographic information
- Compatible with ArcPad vector and raster map display
- Quality control or real-time GNSS derived positioning



Field Controller Interface Software

eGPS

eGPS acts as the interface link between the field controller and your productivity software. By seamlessly streaming NMEA positional string data from the GNSS unit to your software, you no longer have to worry about expensive development costs to adapt your software to interact with Topcon hardware.

- Configurable NMEA output stream
- High-accuracy RTK configurable
- Ability to utilize network corrections



Desktop Software for Data Viewing

eViewer

Data collected with eGIS can be reviewed with eViewer after downloading from the field.

eViewer also provides tools to customize your field software experience.

This includes:

- eGIS form creator
- Customize button bars for eGIS
- Build data collection templates



Field GIS Software

MAGNET® Field GIS

MAGNET Field GIS is a customized version of MAGNET Field for GIS data collection and viewing. With GIS Basic (DGPS and Post Processing) and GIS Advanced (RTK) modules available and easy office data exchange.

- Highly powerful and intuitive software
- Direct connectivity to your Company Account
- Microsoft Bing Map® for real-time background images



Enterprise Cloud-Based Software

MAGNET® Enterprise

MAGNET Enterprise is a web-based solution to manage your field and office data in the cloud. Track your assets and communicate with all those involved on projects.

- Cloud storage
- Real-time asset tracking
- Project planning



Rugged and Waterproof, for any GIS Project

Dual, hot-swappable batteries that keep you running all day, are accessed with a simple turn of a coin on the back of the device. Fully protected and secure, the SD card and SIM card slots are protected under the battery and inside the battery door.

A long list of functionality makes the Topcon Tesla the most flexible and scalable device ready for any accuracy or requirement on any GIS project. The Topcon Tesla can be configured with internal Bluetooth®, Wi-Fi, camera, GPS, and cellular functionality. Utilize the internal cellular modem of the Tesla controller to access real-time corrections from a local reference station network. Add an external GNSS receiver and external antenna for high accuracy results.



Topcon Tesla

The device is submersible waterproof, and drop proof. The frame of the Topcon Tesla is magnesium alloy, which is both lightweight and strong.





All-in-one, Compact, Rugged, Scalable GIS Solution

The HiPer SR brings an innovative combination of compact, lightweight design with advanced technology and performance. The integrated design includes a GNSS receiver, power supply, memory, and communications module – all in a rugged, environmentally-sealed housing.

Use the HiPer SR with Network DGPS or WAAS correction for sub-meter applications like natural resources and environmental projects. Sub-decimeter or centimeter accuracy for high precision projects like utilities or roadside inventories can be achieved by using a HiPer SR with internal cellular modem and a cellular-enabled controller.



HiPer SR

The compact, integrated receiver design includes the GNSS board, industry leading Fence Antenna®, and sealed long-life power supply.





Hand-held Device with Real-time Data Exchange

The FC-500 is a rugged device that works with all Topcon receivers in any GIS application in any weather condition. An optional 3.5G cellular modem allows field and office personnel to connect via MAGNET® Enterprise to quickly transfer data to and from the MAGNET cloud. Easily communicate with field personnel when projects need to be changed, or upload and download files for faster project completion and decision making.

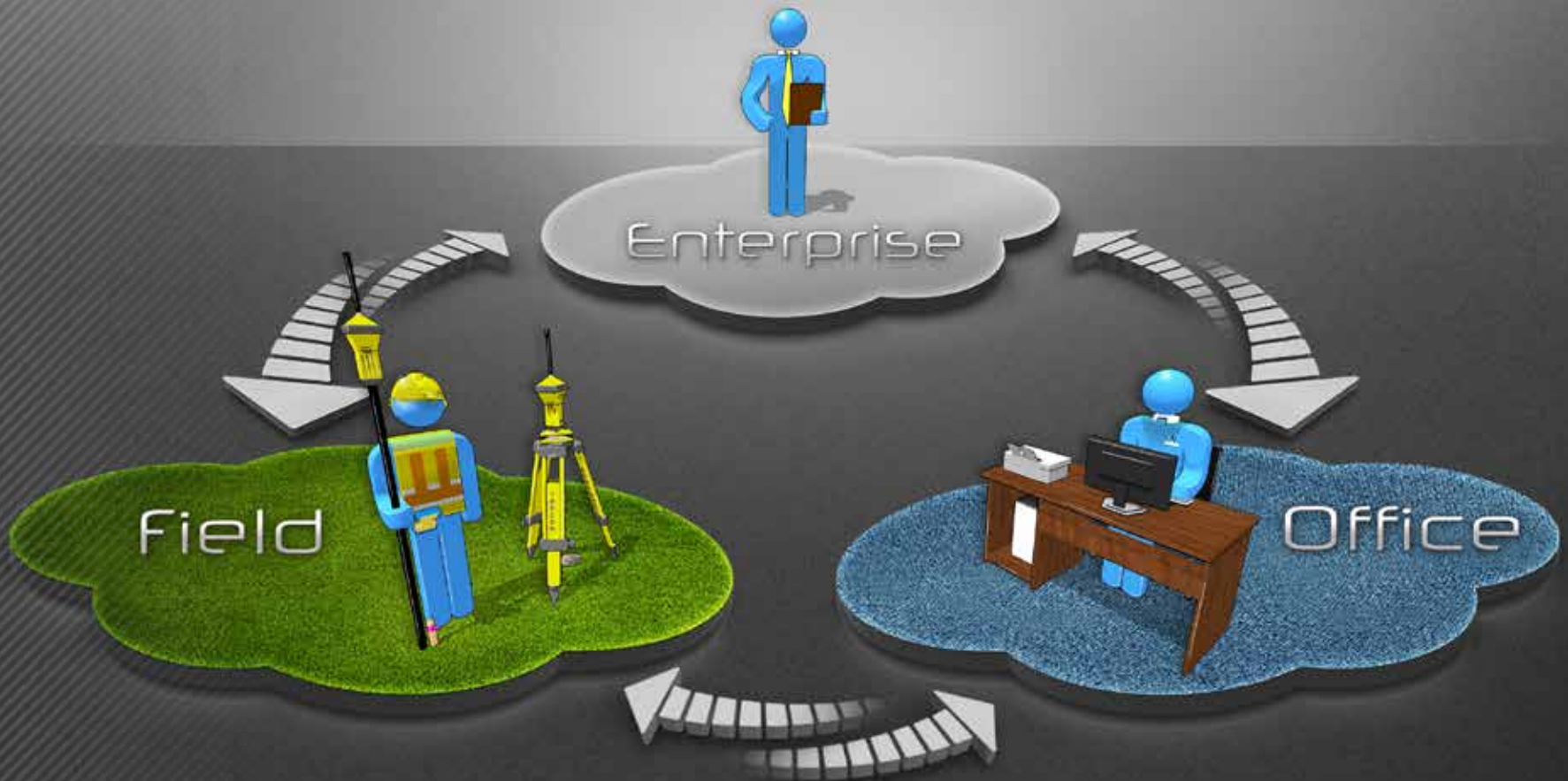
The FC-500 also includes an internal GPS receiver for 2-5m data collection or navigation or just show your position on a background in MAGNET Field GIS software.



FC-500

With its 1GHz processor and internal 5MP camera, Bluetooth® and Wi-Fi communication capabilities, the FC-500 will exceed your GIS project expectations.

MAGNET™



Suite of Software and Services

MAGNET suite of software and services is ready to increase productivity in every GIS application. MAGNET keeps the office and the field connected through a cloud service called MAGNET Enterprise. Enterprise is available to all managers and supervisors to review work progress. Log in from any Internet browser and see the field site activity in action. All field personnel and office GIS staff contribute to the data manager inside MAGNET Enterprise. Field personnel benefit from a constant connection to the office staff, and can send and receive updated GIS files and images in an instant.

With its graphical icons and intuitive workflow, MAGNET Field GIS simplifies GIS field tasks such as collection, navigation, data update, feature libraries and measurements. An RTK module is available for high-accuracy GIS applications.



MAGNET®

MAGNET® software will increase your productivity and connect you to others in the field as well as in the office.



Improve Field Productivity

With a customizable interface to suit the way that you and your teams work, eGIS has been developed to allow you to concentrate on collecting the data as quickly and smoothly as possible no programming skills or additional software needed!

eGIS runs on Windows Mobile and Android devices and interfaces directly with the internal GNSS receiver and the internal digital camera. Therefore the photos and geographical location and orientation are stored in the EXIF header information.

You can also interface to external devices such as Bluetooth® enabled external cell phones to get NTRIP corrections; the Beacon Receiver BR-1 to receive Beacon corrections or the TruPulse 360B laser range finder to make easy use of the embedded offset functions and construction tools.



eGIS

Create and use all your familiar mapping features. Points, polygons, attributes and layers are available as standard in eGIS.



Professional GIS Support

The Topcon GIS support team is well versed in GIS to assure you are successful in using Topcon GIS solutions. With your support subscription, you will receive software and firmware update notices; phone, email and web support; and friendly guidance when you need it. Contact your local dealer to order today.

TotalCare

This online resource comes with real live people ready to help. Get expert training from Topcon University's large collection of online materials, and expert help directly from Topcon Technical Support.

Access software and firmware updates, current publications, and guidance from the experts at Topcon all right from your computer or mobile device.

Please visit the TotalCare website to learn more.

topcontotalcare.com





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