



BIM Solutions



SYNERGY 
POSITIONING SYSTEMS

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Topcon Enterprise Solutions

The global construction, geospatial, and agricultural industries are rapidly changing thanks to quantum leaps in communication and measuring technologies that literally transform our perspectives of time and space. These advancements are reshaping the way things are designed, built, grown, and managed.

Topcon works to stay a step ahead of customer's needs by creating solutions that embrace and extend these advancements into the way they work, everywhere they work. Our integration of high-accuracy positioning, high-speed imaging, cloud-based information management, and down-to-earth simplicity creates higher productivity and better results with lower environmental impact.

**YOUR PRODUCTIVITY.
TECHNOLOGY.**

Engineering

Real-time data for up-to-the-minute design, management, and inspection.



The connected strategy

Site Management

Unified control of equipment, scheduling, grade management and more.

Utilities and Infrastructure

Existing, planned and placed — always connected to the design model.

Building

Layout, structure, MEP, finish and all details in between — controlled from one source.



BIM Solutions

For years, contractors have been responsible for taking the designs of architects and engineers and making them a reality on a job site.

Creating a finished product from paper plans has incorporated a wide variety of job site methods and tools – from measuring tapes, levels, lasers, advanced surveying total stations and even GPS receivers. No matter what tools have been used, construction layout is always a critical point to any project.

Architectural designs are becoming increasingly complex and demand more accuracy in construction layout. With the ever increasing capabilities and benefits of technology, and the increased need for information management, construction layout has changed from simply marking a point to recording the as-built position of the actual installation. Ultimately that point, and all project information, is collected and maintained for the life of the structure. Whether constructing a new building, road, or pipeline, BIM has changed the practice of construction layout.

As a leader in the precision measurement and positioning industry for more than 85 years, Topcon is leading the way with innovative, productive BIM solutions. Whether your jobs are underground utilities, buildings, infrastructure, foundations and footings, landscaping, electrical, mechanical, or simply digging a swimming pool, Topcon has advanced 3D layout and BIM solutions for you.



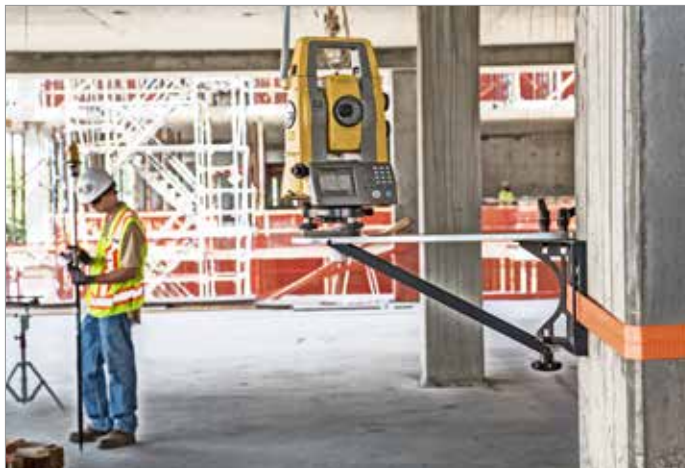




Interior Building Infrastructure

Construction coordination is essential for any building project. Knowing what was done before and working from the same design plan is critical to maintain schedule and avoid costly collisions. With Topcon's BIM solutions you stay connected to the same design.

Topcon's BIM solutions help perform fast layout of design points and quick quality control documentation. A project's success is based on productivity, accuracy, and coordination. Contribute precise as-built data back to the BIM model as your work is done.





Foundations and Footings

Nothing goes right if the foundation's not right. And nothing gets built until the entire foundational structures are in place. A Topcon BIM solution makes this process easier, more accurate, and much faster. In addition, performing QA/QC of concrete pour deflections and structure placement is made easier and more accurate with the Topcon BIM solutions.

Our layout and as-built systems, such as the Layout Navigator are ideal for laying out forms, placing footings and recording as-builts. These one-person systems make even the most complex designs a simple matter of connecting points. Stay ahead of schedule from the very beginning with Topcon BIM solutions.





Utilities and General Layout

Topcon BIM solutions save time in general building construction, lot prep, and utility location work. They even crossover into machine control solutions for excavating and grading. Use the Topcon BIM solutions to quickly and accurately stake foundation holes, utility trench locations, and general pad layout.

Waiting for a stakeout crew to do the foundation or utility layout for a new project can waste significant time, not to mention any needed re-staking after the project starts. Take control and do it yourself with one of the Topcon BIM solutions for construction layout.

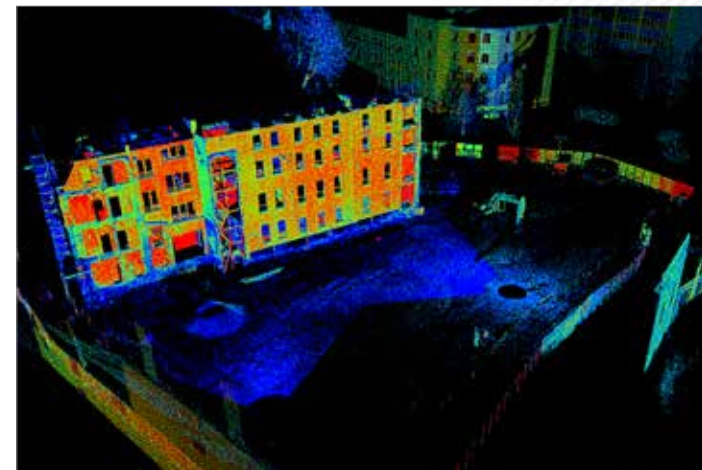




Scanning, As-built, Renovation

Laser scanning is an ideal BIM solution. It is the fastest way to measure existing conditions and capture millions of points in just minutes. Use these point clouds to model the existing site, or quickly propose new construction features.

The extensive data, which also includes high-resolution imagery, is of timeless value in managing the life of the building and historical preservation records. For new construction, scanning collects the entire scene quickly and accurately. Scanning is ideal for enclosed systems mapping and all as-built requirements.



Workflow

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

Selecting products that connect the office with the field will provide you with the competitive advantage needed. Both Topcon and Autodesk are focusing on products that connect through the cloud to provide live updates and coordinated sharing of BIM models. The BIM workflow is a two-way flow. Not only do all field crews need to stay current with design plans, they also need to contribute quality assurance and control information back to the office to detect any potential conflicts or adjustments to the scheduled build.

Office



There is a wide array of office products available to put together the best BIM workflow. Some firms are using advanced models with Revit® and Navisworks®. Others are working with AutoCAD MEP® or straight AutoCAD DWG files. All of these BIM models benefit from Autodesk Point Layout®. Site work from Topcon's MAGNET™ Office Site contributes important surface models and schedules to handle mass haul of excavations. The common feature to all of these office solutions is the ability to connect to the cloud for file sharing and communication.



BIM Design Software
Revit, Navisworks, AutoCAD, MAGNET Office Site

Cloud



The primary benefits to using the cloud are staying current and connected. The cloud solutions such as MAGNET Enterprise, AutoCAD 360®, and BIM 360® all 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. MAGNET Enterprise provides real-time views of field activities, secure data storage, and shared visibility to layout progress. MAGNET Enterprise cloud surfs with AutoCAD 360 in a seamless way of sharing AutoCAD files.



Cloud Access
MAGNET Enterprise, AutoCAD 360, BIM360

Field



The field is where the work gets done, where the conflicts appear and where the money can be made. Topcon's experience in providing positioning equipment for the field is vast. Selecting the best field product is critical to your success, whether it is an advanced imaging robotic system, a laser scanner, or a simplified 3D layout tool. All of these solutions operate through a colorful, touch screen tablet or handheld controller – and all connect back to the cloud. BIM layout and as-built measurement task are mastered with one of Topcon's BIM solutions.



LN-100
3D Layout Navigator



DS
Direct Aiming Station



IS-310
Imaging Station

Hardware Solutions

Topcon BIM solutions draw from an array of high-precision sensors and control devices.

A world leader in optical and measurement instrumentation for more than 85 years, Topcon's innovative products include the world's first imaging and remotely operated total stations, now joined by the world's first 3D layout tool specifically designed for construction layout.

Ranging from advanced laser scanners and robotic total stations to rugged field tablets with integrated imaging and GPS, Topcon products are built to last, built to be precise, and designed to fully integrate into software workflows that get your work done faster.

The products shown are examples of our most popular BIM hardware. There are different models available based upon the desired accuracy and specific requirements of the application. Please contact a Topcon distributor or visit our website to learn more.



Laser Scanner

GLS-2000

Best in class in all categories, the GLS-2000 laser scanner has the speed, accuracy and performance needed to satisfy virtually any as-built requirement.

- Long-range precise scan
- On-board operation
- Overhead scanning



Imaging Robotic Station

IS Series

A fully robotic instrument, with two integrated cameras and scanning functionality, the Imaging Station is ideal for documenting the project site. Features live video relay on a remote controller.

- Dual cameras
- Long-range robotic measurements
- Laser pointer



Robotic Station

DS Series

The DS is ready for work right out of the box, and easily configurable to meet most unexpected demands. Operates easily with on-board software, or a remote controller.

- Auto-tracking prism
- LongLink™ communication
- Rugged, waterproof design



3D Layout Navigator

LN-100

The Layout Navigator is the new, ideal solution for all construction layout. Compact, rugged and easy-to-setup, with one-man operation, layout has never been so simple.

- Easy operation
- Self-leveling
- One-man operation



Tablet Field computer

Topcon Tesla

Designed for rugged job sites. The Tesla field controller with MAGNET Field software connects to the cloud to keep you and your work always up-to-date, always on schedule.

- Waterproof
- Daylight readable screen
- Integrated imaging



Android Mobile App

BIM Mobile

The BIM Mobile App is a great entry-level solution that is easy-to-use and ideal for many standard layout needs.

- Easy-to-use
- Simple operation
- Entry-level solution

Software Solutions

The ideal BIM solution is only as powerful as the software that controls it.

The most critical part of a successful 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 updated BIM model? What really drives your productivity? The software.

Topcon software is the leader in cloud-based workflow, intuitive operation, and modular services. From operating your entire positioning enterprise, to simple, graphical layout — Topcon software products make your BIM workflow easier than ever.

The products shown are an example of the most popular BIM software. There are different modules available based upon the specific requirements of the application. Please contact a Topcon distributor or visit our website to learn more.



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



MAGNET Office

MAGNET Office is a stand-alone processing and modeling solution for construction, BIM, surveying and grading applications.

- Process and adjustment
- Design review
- Cloud connected



MAGNET Construct

MAGNET Construct enables you to measure with confidence and perform construction stakeout. MAGNET Construct enables you to measure and layout points and lines with confidence.

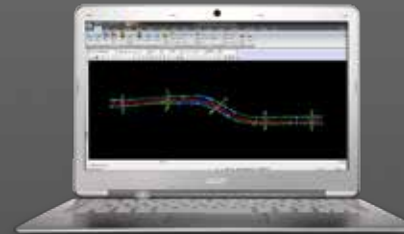
- Android Platform
- Simple, fast interface
- Cloud connected



MAGNET Field Layout

MAGNET Field Layout is a specialty module that increases building layout productivity. With in-the-field plans and dimensional entry, you can go from plan to building layout faster than ever.

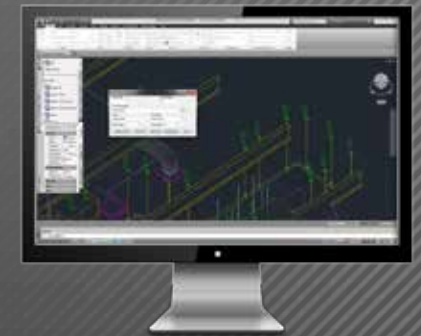
- Ideal for LN-100
- Total station and GPS ready
- Cloud connected



MAGNET Office Site

MAGNET Office Site is a powerful site design module. Combined with construction hardware, including 3D machine control, it is guaranteed to increase productivity.

- Complete site design package
- Connect to Sitelink3D
- Cloud connected



Autodesk® Point Layout

Autodesk Point Layout software enables construction professionals to use BIM coordinate information in the field.

- Points from models
- Connects to Revit, Navisworks and AutoCAD
- Improves office and field efficiency



3D Layout Tool Designed for Construction Layout

The LN-100 is a revolutionary new 3D layout tool with a design based on simplicity. Designed specifically for construction layout, LN-100 eliminates the fear of complex setup and operation of traditional surveying or construction instruments. This latest Topcon innovation provides high accuracy 3D positioning for all your construction layout needs, all in a rugged, easy-to-use design.

Topcon has blended the technology used for self-leveling lasers and robotic total stations into a new tool designed specifically for construction layout. With the press of just one button, the LN-100 automatically levels itself and is ready for operation. Simply use the wireless controller for simple point layout or CAD drawing layout. Never before has construction layout been so powerfully simple – only with the Topcon LN-100.

LN-100

The LN-100 is a compact, self-leveling, easy-to-setup 3D layout tool.

Use the LN-100 instead of transits, tapes or other layout tools. Compact, rugged and very light weight, the LN-100 is ideal for construction layout and as-builts.





Dual Camera, Imaging System for Layout and As-built

The IS-310 is ideal for both construction layout and documenting existing conditions of the project site. BIM processes demand that all information be added to the model. Consider adding geo-referenced images of the project to the model. The ability to collect existing conditions as a photo field book adds to the office understanding of the site conditions. In addition, dispute resolution is much simpler when you have a photo record of layout and as-built conditions. The IS-310 is perfect for the modern construction job site.

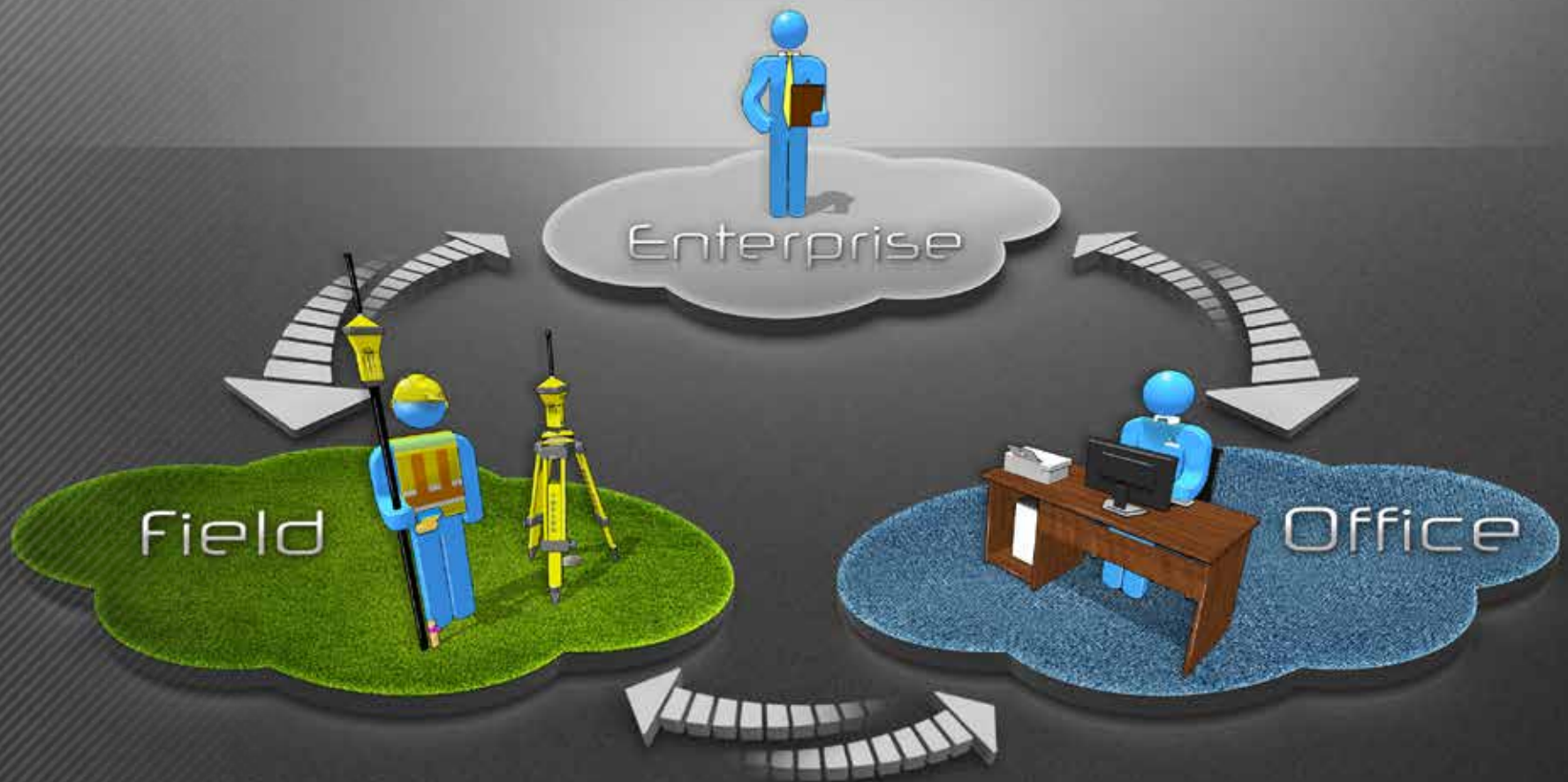
IS-310

The IS-310 Imaging Layout System uses cameras to “see” the construction site.

Operators use a tablet PC with live video display to layout points and collect as-built QA/QC features. Using a large tablet PC is easier than looking through the eyepiece and aiming.



MAGNET™



Suite of Software and Services

The MAGNET suite of software and services is ready to increase productivity in every construction layout and BIM solution. 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 and evaluate changes in the schedule. Login from any internet browser and see the project site in action. All field crews and office CAD staff contribute to the data manager inside MAGNET Enterprise. In addition, the Enterprise cloud service connects directly to Autodesk's AutoCAD 360 cloud service for file review and sharing. Project files are shared immediately in the cloud.

The field crew benefits from constant connection to the office staff. If a design change is made, the office staff simply posts a new file and sends a chat message to those working on the project. Never layout old positions when you stay connected to the latest design. And when a conflict is detected in the field, that crew person can send updated field data back to the office for further evaluation.

MAGNET

The MAGNET suite of software and services cover the office, the field, and the connection through the cloud. These complimentary products cover the entire BIM workflow and can be licensed in annual, monthly or permanent activation licenses.



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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