TOPCON

3D CONSTRUCTION
SOLUTIONS

3D Construction Solutions

Keep your projects on time and under budget. We have the leading-edge hardware, software, and mobile solutions you need to increase efficiency, improve productivity, and better manage resources.

Our extensive industry knowledge and expertise help you get the job done right and stay on top. Get accurate, flexible 3D construction solutions that:

- Reduce time in the field and improve material management
- Allow machines to remain productive anywhere on the job site
- Provide instant data transfer to or from active job sites

Get it right the first time, handle more jobs, and increase profit. Experience true “one and done” efficiency for excavation and grading with twice the speed of other 3D machines, and four times the speed of traditional equipment.

The Intersection of Infrastructure and Technology

Many companies are at the crossroads of growing infrastructure demands and having the technology to meet them. It’s a growth opportunity for any company willing to adopt the new technologies needed to stay competitive.

Integrate the right digital solutions for you and your company. Together, we can efficiently build the infrastructure needs of today and tomorrow.

Streamline Phases and Processes

Control each phase of your operation with technology and solutions that scale to handle the size and scope of any project, and easily manage tasks including:

- Scheduling and planning
- Clearing and grubbing
- Roughing in subgrade
- Utilities installation
- Finish subgrade
- Place base material
- Finish base material
- Trimming
- Paving
- Compaction
- Job site management
- Machine management
- Operator management

Excavation

Move the correct amount of material to precisely designated areas, and increase safety on site – graphical mass haul planning software manages materials from the beginning, saving time and increasing profit margins.

When paired with automated haul truck systems that control loads and dumps, you achieve a “virtual eye” of visibility at every project.

Hit the right depth every time, even when digging “in the blind” on deep trenching or underwater jobs. Our 3D excavator control systems feature clear audible alarms, LED light bars, and display real-time elevation and slope information.

Rough Grading

Control your machines and material from start to finish with end-to-end solutions that increase your speed, productivity, and efficiency. We help you accomplish rough grading projects like excavating trenches, dozing landfills, or hauling materials off site with more ease and greater profitability.

By combining equipment hardware with web-based technology, our 3D solutions give you better blade control and collect data as you cut to grade. Confidently measure the exact position, cross slope, and heading of your cutting edge on any surface, including steep slopes and complex surfaces.

With our 3D software solutions you're able to remotely view and manage your grading projects from anywhere. Whether your grading jobs are happening down the street or halfway around the world, you're always in control.

Fine Grading

Install our solutions to move more material in fewer passes at higher speeds, and confidently grade to even the most complex designs. Our automatic grade control systems cut to final grade quickly and accurately. We help you position base material and place final aggregate with reliable, intuitive operations that keep job site tolerances in mind.

For example, our 3D-MC solutions double the performance of any operator on any terrain compared to existing 3D systems, so you'll save time and fuel at every pass.

The combination of our inertial sensor technology with our GNSS receivers and antennas maximizes positional accuracy and allows you to perform at high speeds.


CONRCO
7341
GOMACO
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AUTO-FLOAT

Finishing

Stay in total control on each phase of your project. Our products are interchangeable and offer unique control and communication methods for various types of machines. From milling to asphalt and concrete paving to final compaction passes, we've got you covered. Building on our previous solutions gives you premier grade automation for asphalt and concrete pavers along with milling machines.

No more cranking—it's automatic, for enhanced rideability, increased production rates and compatibility. Our 3D milling solutions deliver precise 3D profiling from a 3D design model to establish milling depth.

We also offer "intelligent compaction" ready systems. Take the guesswork out of what the correct temperature is or how many times to roll the asphalt or soil. The system comes with a temperature sensor and stiffness sensor (accelerometer) that deliver results instantly on the screen, saving time and money for asphalt projects. With a proven combination of a temperature sensor, stiffness sensor, and secure connection to Sitelink3D™, the system meets all DOT and Federal Highway standards for intelligent compaction.

GX-55/GX-75

Tactile Control Box

High-quality machine control graphical displays in two size formats to let you select the one that best fits your needs. The GX-55 conserves space in smaller machine cabs, while the larger GX-75 provides more viewable screen area. They can both handle rugged field conditions while instantly displaying the real-time location of the machine, bucket, etc. and project design information.

- Sunlight-viewable, color, touchscreen LCDs
- GX-55 in 6.5 inch format
- GX-75 in larger 10 inch format
- Integrated grade indicator LEDs
- Weather protected USB port for easy data transfer

MC-R3/MC-G3

GPS Receiver/Valve Controller

At the heart of our 3D-MC systems, the MC-R3/MC-G3 offers an integrated GNSS receiver, multiple radio options and internal cellular modem, while delivering control to the system's valve drivers, all in a sturdy housing.

- Safe, in-cab mount
- Multiple radio and data communication options
- Upgradeable to dynamic budget and project needs

MC-i4

GNSS Receiver

The MC-i4 is fully equipped with all the sophisticated methods of radio communication including our superior LongLink™ (Bluetooth®) and cellular for precise indicate positioning. Additional functionality allows direct CAN communication between CAT M graders and CAT dozers for automated control.

- Direct communication for Local Positioning System (LPS) using LongLink radio
- Reliable cellular connection for Sitelink3D™ communications and RTK corrections
- Vanguard Technology™ for maximum satellite coverage and tracking

MC-X1/GR-i3/TS-i3 (500)

Future-proof Machine Control

The compact and ruggedized MC-X1 machine controller supports current 2D/3D indicate systems. Combined with the versatile new multi-constellation GR-i3 GNSS receivers and fast 500 kbps TS-i3 (500) single/dual slope sensors; this system is ready now and provides a future-proof platform for all pending enhancements/upgrades.

- Reduced form-factor MC-X1 controller is easily mounted in a congested service bay
- Versatile GR-i3 GNSS receivers are integrated into the Z-Stack system for easy inclusion of prism tracking and removable for other uses
- TS-i3 (500) single/dual slope sensors are fast and allow the system to be easily upgraded

3D-MC^2 /TS-i3

Inertial Measuring Unit/Tilt Sensor

Double your grading speed with near finished grade precision no matter how complex the design, with unmatched accuracy and speed.
Stay on grade and eliminate string lines by adding the compact TS-i3.

- Unparalleled productivity
- Repeatable accuracy and smoothness
- Increase speeds up to 200%

SL-100

Ruggedized Cellular Modem

A compact, ruggedized cellular radio modem that may be added on to any Topcon 3D machine control enabled construction machine. It connects to the Topcon Sitelink3D™ web-portal platform, providing job site/machine/office connectivity. Sitelink3D™ supports file transfer, real-time machine location and activity monitoring, remote support, and more.

- GPRS, Edge and 3G cellular networks
- New system and retrofit options
- Compact, ruggedized design

Pocket 3D

Verify Grades, Stake Placements and Locate Utilities

Get the power of location based site management for foreman and grade checkers. Easily verify grades, reset stakes, and locate utilities on site.

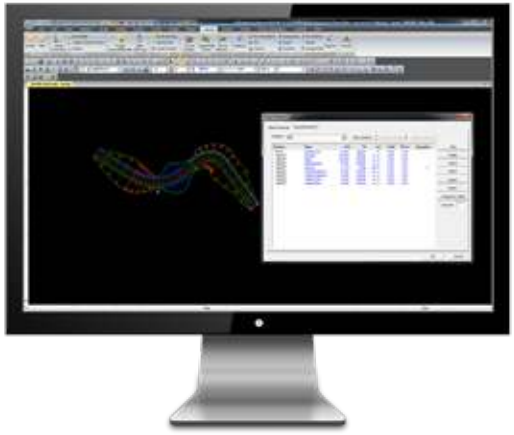
- Check grade, verify cut and fill
- Calculate volume quantities and as-builts
- Secure connection to Sitelink3D™ for instant data transfer

MAGNET® Construction

Design and Estimating Software

Perform takeoff calculations and build a complete road design from one software module. All your cuts and fills are shown in 3D. Easily generate volume, price, and material reports, and export design files to machines in the field.

- Import and export multiple file formats
- Automated pad design with automatic site balance
- Direct connection to Sitelink3D™ service



3D-MC

Machine Control Software

As the centralized core software to all our machine control systems, 3D-MC gives you ultimate versatility for any job site. Move one control box to just about any piece of equipment with the ability to perform multiple applications.

- Works with dozers, motor graders, excavators, scrapers, trenchers, milling, paving machines, and compactors
- Intuitive graphical user interface
- Ability to connect to Sitelink3D™ service

Sitelink3D™

Job Site Management

From site to office, Sitelink3D™ gives you the connectivity and control to keep your jobs moving and on target. From your desk, you have remote access and support to every machine, file transfers to one or many, messaging, and advanced volume reporting.

- Constant connection to all active job sites
- Visibility and tracking
- Remote access and support

Sitelink3D™ Enterprise

Plan, Schedule and Report

Do more with your data and create customized reports from your desk. Sitelink3D™ gives you the ability to better manage your material in real time. Plan, schedule, define machine tasks, and run customized reports to satisfy DOT requirements.

- Productivity reports
- Job site planning
- Track progress, run volume/haul reports

MAGNET® Project

Manage Earth Works

Provides quicker, more realistic, and accurate planning and analysis by building up from the map. Mass Haul gives you tools to efficiently manage the moving and placement of bulk earthwork materials in real space over time. Visualize complex project tasks for a clear vision of success

- Mass haul management
- Gantt chart schedules
- Resource planning

3D-MC^{MAX}

Integrated 3D Dozer System

A revolutionary dozing system, 3D-MC^{MAX} delivers the highest productivity dozer solution for any rough or fine grading application. 3D-MC^{MAX} uses our industry leading MC^{2}+ IMU sensors on the body and blade as well as an optional third IMU on the C-frame – all to keep the blade cutting edge on grade for any application. This system was built to keep you productive on any job site providing maximum speed, control, and performance.

The 3D-MC^{MAX} system can be used for fine grading applications similar to a motor grader. With support for 4-way, 6-way, and pitch controlled blades, any dozer operation can benefit form a 3D-MC^{MAX} system. The MC^{2}+ IMU sensors work together to keep the blade as close to the surface as possible – delivering a smooth and consistent pass for any slope.


10-005

Millimeter GPS

Millimeter Laser Accuracy

For millimeter accuracy, our GNSS technology combined with land-based laser transmitters give paving, fine grading, and concrete jobs an instant upgrade. To get high precision grade verification, simply add a Millimeter GPS system to instantly gain the highest in vertical repeatability on each phase of your project.

Transform your GNSS system into an ultra-precise measuring solution that rivals the accuracy of a robotic total station at a fraction of the cost, while supporting multiple machines from a single instrument.

A true zone of productivity — our Millimeter GPS system broadcasts an entire zone of light spreading in all directions, confidently broadcasting your project site's vertical control. As each sensor sees and captures this light, you instantly gain the highest level of vertical accuracy available, while maintaining speed.

X-53x

3D Excavator System

Conquer all excavation jobs with the versatile X-53x system. Whether you are digging a utility trench, cutting building pads, or repairing a landslide, the X-53x system keeps your bucket on grade anywhere on the job site. The elevation and location of the cutting edge is constantly tracked using the combination of our proven GNSS receivers, antennas, precise tilt sensors, and graphical 3D-MC software. The fusion of these main components form a rock solid system that increases the operators, productivity and optimizes material management, keeping you ahead of the game.

Consistency and speed on projects are key. Our modern GX-55 or optional, larger GX-75 control box displays deliver multiple methods to achieve the highest degree of repeatability and safety using audible alarms as well as bright LED lights to guide you to grade. Document the progress of your excavator tasks and communicate the status in real time to the office right from your cab using the Sitelink3D™ access on your control box.

The current configuration of the X-53x system, with the MC-X1 controller and TS-i3 (500) slope sensors is cutting-edge technology today and “future-proof” ready for enhancements and upgrades.

Sitelink3D™

Site Management System

No more driving to job sites to deliver change orders or new job files. Just send them directly to machinery electronically and troubleshoot issues remotely. Easily view machine progress and production rates from anywhere in the world and customize reports to match your management style.

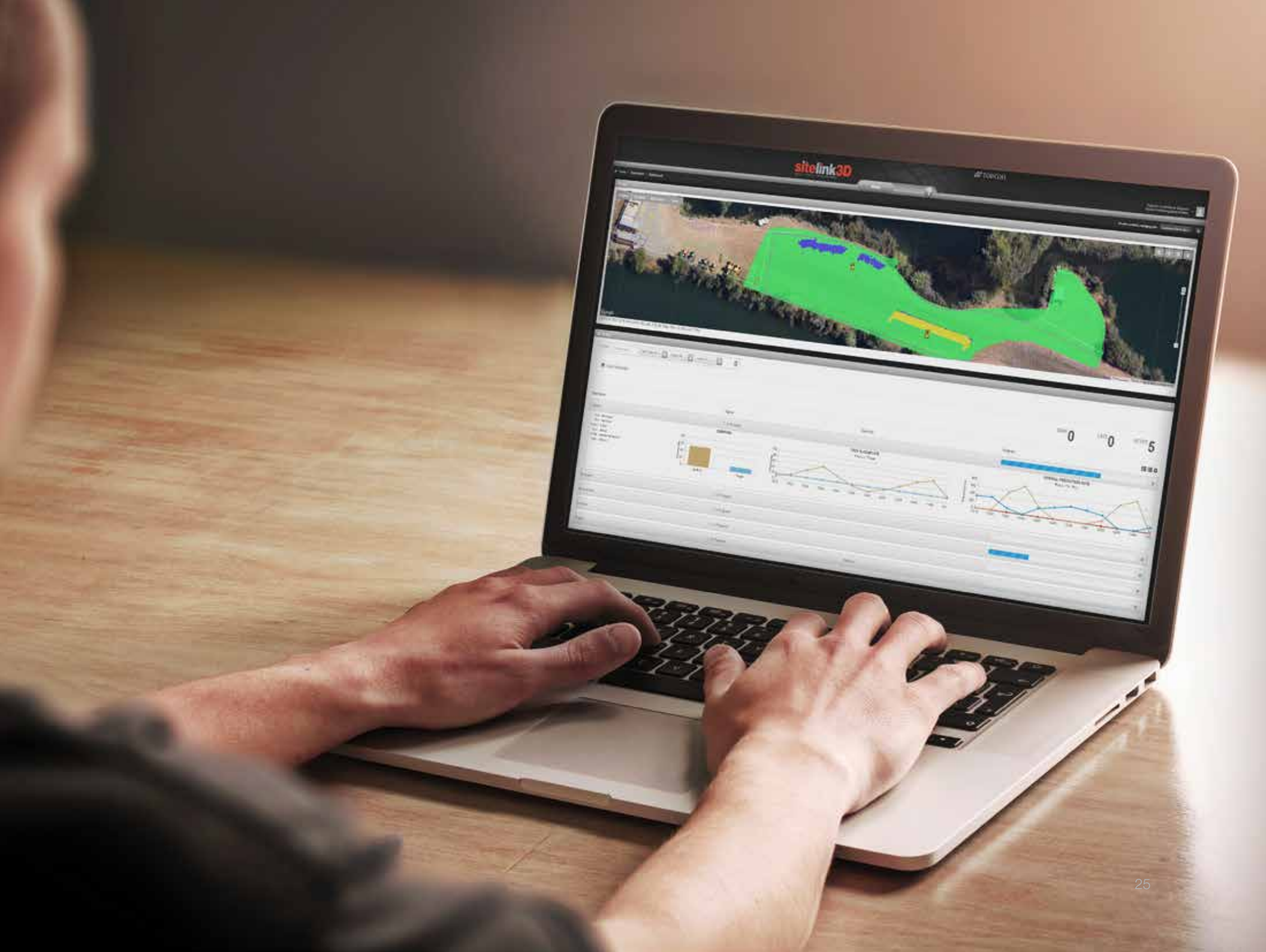
View and manage job site machinery in action. You get tabular views of your project crews, their exact position, activities, and files in use.

- Text messaging and file transfer
- Visibility and tracking
- Remote access and support

Enterprise Version

Sitelink3D™ Enterprise is an advanced package you can purchase for the desktop and laptop versions. You get the extra abilities to:

- Generate intelligent compaction reports
- Create and better manage tasks
- Produce real-time as-built layers, and more...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Machine Control LPS

Robotic Total Stations and Machine Control

Machine control is most commonly associated with GPS/GNSS positioning systems. However, it can be just as efficient and accurate to use a LPS (Local Position System) method. LPS employs the use of a robotic total station tracking an on-machine prism and utilizing radio communications to inform the machine control system of the machine's real-time position. You can build a dedicated Topcon LPS system or LPS can be an option on a system already outfitted for GPS machine control. LPS provides a useful option in areas of bad or impossible satellite or RTK network acquisition. This can include areas with tree cover, near tall buildings inside or under overhead structures.

- Can be the only installed, preferred system
- Can be an add-on option when needed
- Efficient and accurate
- Can solve GPS/RTK connection issues

Your work connected

MAGNET® Enterprise is a secure web-service with unlimited file storage that advances connectivity, provides data oversight, and connects to third-party applications.

MAGNET®

Suite of Software Solutions

Control your business and improve your profit with MAGNET® software. A customizable, integrated full range of software solutions that help you increase productivity at every stage of your project.

MAGNET® software solutions work seamlessly with our 3D products to streamline your jobs.

Plan, manage, and control projects to better track and oversee your assets. Through the MAGNET® solution, there are automatic connections to Autodesk software — single file transfer from Civil 3D environment out to Topcon construction and survey solutions. Simplify processes, and reduce chances for errors.

- Mass haul planning
- Material takeoff
- Machine control file preparation
- File exchange and conversion


MAGNET
enterprise
Enterprise
Field
Office


TOPCON
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Training and support

myTopcon provides direct access to a comprehensive library of training and support content available in a mobile friendly format. With single sign-on access you can browse by product for informative quick guides and training video content.

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