TOPCON

SURVEY / MAPPING CATALOGUE







YOUR PRODUCTIVITY.
TECHNOLOGY.

Always innovative

Topcon *is the worldwide leading developer and manufacturer of precision positioning equipment and offers a wide selection of innovative Surveying, Engineering, GNSS systems, Laser, Machine Control solutions, Mobile Mapping and GIS products.*

At Topcon we know your geo-business world is getting increasingly competitive. Therefore it is vital to constantly investigate and utilise each and every competitive advantage available with your positioning solutions to stay at the top of your profession. We pride ourselves in continually developing innovative and potentially world leading technologies. Utilising unique technologies, our products provide the best solutions to simplify and improve your everyday tasks.

Topcon's innovations help you increase your productivity, satisfy challenging demands of your clients and assist you to enter new markets.

At Topcon we understand that the choices available for positioning tools can sometimes seem a little bewildering; because of this, we have compiled this catalogue in order to assist you to make the right decisions as to what you need to for your specific projects.

TOPCON

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Overview Topcon Technologies used in diverse fields of application

TSshield™ – offers cloud-based support to maximise your total station investment. Receive updated information when firmware is not up to date or view device information via a dedicated web portal. If ever lost or stolen, you can track its location and send a code that locks the instrument until it is recovered.

LongLink™ – is our license-free long-range communications technology for both GNSS and optical sensors. LongLink enhances workflows in many ways; data collectors can work where needed... at the remote position with both robotic and conventional total station. Or control multiple rovers from a single base using LongLink.

VanGuard™ – Our VanGuard chipset is the most advanced GNSS solution available. With 226 Universal Tracking channels offering L1/L2/L5 triple-frequency support for modernised multi-constellation GNSS systems, VanGuard has a compact 'system-on-chip' multi-core design and offers a comprehensive peripheral and networking interface.

TECHNOLOGIES

Matrix Detection – Available on our range of high precision MS AX sensors, this technology automatically locates any prisms within a specified area, totally eliminating the need for manual guidance even with close-up prisms adjacent to each other!

Capture Reality – With our imaging heritage, it's no surprise to find imaging technology in many of our high end sensors. These allow users to not only measure, but to Capture Reality; using the IS-3, GLS-1500, IP-S2 mobile mapping and even from high resolution imagery from DSLR cameras.

Long Range – The IS-3 Imaging Station features our incredible reflectorless technology which enables measurements of up to 2,000 m with pinpoint accuracy. Imagine being able to set up and carry out survey measurements from inaccessible locations or scan quarry faces from great distances.

Universal Tracking – Topcon's G3 GNSS receivers feature our Universal Tracking technology, which allows for reception of all currently available and future planned GNSS signals. It allows the future proofing of Topcon's receivers by not restricting channel selection at the time of manufacture.

PowerTrac™ – The revolutionary PowerTrac™ engine dramatically increases power for prism tracking. Employing entirely new optics, laser system, and further advanced algorithms, PowerTrac allows the PS Series to keep tracking a moving prism even under the toughest environmental conditions.

Fence Antenna™ – Offering enhanced sensitivity not available with other RTK system, Fence Antenna is a revolutionary new antenna design. High performance low elevation satellite tracking and advanced multipath suppression are just two of the significant features available on Fence Antenna systems such as GR-5, HiPer SR & PG-S1.

The world of precision – Topcon solutions

Topcon offers – The most complete range of Total Stations on the Market today. With an ongoing commitment to only the best quality materials and ergonomic design characteristics, every instrument in the range is manufactured to exacting standards. This results in Total Stations that have a build quality that is second to none, high accuracy that will give years of reliable operation.

Whether you are looking for a Total Station for a small construction project, a Robotic solution for Surveying or a Monitoring Sensor, Topcon have the instrument to suit your needs. Topcon's ethos of providing the best quality and attention to detail is evident throughout the range. The ease of use and dependability saves you time and money, no matter what your project.

Survey
Precision Measurement

- Engineering
- Monitoring
- Cadastral
- Topographic
- Survey
- Construction

TOPCON SOLUTIONS

GIS / Mapping
Mobile Data Gathering

- Utilities
- Governmental
- Environment
- Agriculture
- Forestry
- Asset Management

Efficient and Easy – Being able to offer easy to use software that integrates geographically related workflows in combination with our outstanding hardware is one of Topcon's highest priorities. It doesn't matter what industry you are from; Government, Utility and Infrastructure, Environment or Public Safety; with Topcon's GIS and Mapping solutions for handheld and Mobile Mapping systems you are able to fulfill all of your tasks in the most efficient and time-saving manner.

Our comprehensive software solutions, which you are able to customise to your method of working, ensures that non-surveyors are also able to carry out your required tasks and offers huge benefits to your organisation.

Topcon Imaging products – enable you to Capture Reality and record all the detail on your project. What you see is what you get; the products focus on this unique functionality and combine the strengths of clear visual and accurate geometric information to allow you to communicate all job information and structure to your client. The Imaging product range ensures that you will always head back to the office with everything you need to deliver the end result, saving you time and money in the process.

From discrete point measurement to complete full colour pointclouds the Imaging portfolio provides the right tool for every situation and scale of work. No job is too big or too small, Topcon have the solution you need to realise your vision.

- Engineering
- Survey
- Construction
- Photogrammetry
- Forensics
- 3D Visualisation

Imaging
Capture Reality

TOPCON SOLUTIONS

GNSS
Satellite Positioning

- Engineering
- Geomatics
- Marine
- Cadastral
- Survey
- Networks

Intelligent GNSS workflow – By working with Topcon's GNSS solutions, you are automatically adding intelligence into your workflows and job practices. Our extensive GNSS product range ensures that you can pick the right solution that fits your work tasks and needs.

GNSS technology not only is used for identifying simple positioning tasks, it is becoming a baseline technology that couples coordinated positions with advanced toolsets to provide further value added information to more fully analyse operations and maintenance phases. Make use of it with our patented GNSS solution technology. With a comprehensive range of networks, recievers and antennas, we can supply your exact requirements.

MS AX – Measuring Stations

MATRIX DETECTION

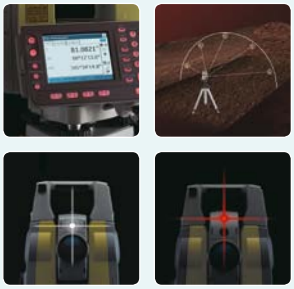
Topcon's MS AX range of robotic total stations are the highest precision sensors available. Whether your measurement task involves monitoring prisms on a dam wall, alignment observations through a tunnel or high accuracy infrastructure layout, the MS AX is the perfect tool for the job. Designed specifically for projects where accuracy can not be compromised, the MS AX is available with either a 1" or super precision 0.5" angular measurements and 0.5 mm distance measurement.

Featuring the revolutionary Matrix Detection Monitoring technology, the MS AX can make the estabishment of large number targets on a monitoring or tunnelling project a rapid and simple task, completely eliminating user errors.

KEY FEATURES - MS AX

- 0.5" / 1" Angular Accuracy (MS05AX / MS1AX)
- Distance Accuracy of 0.5 mm
- 1" / 1 mm over 100 m Auto-Collimation Accuracy
- Matrix Detection for auto-target detection
- Pinpoint 400 m Reflectorless Range (MS1AX)

SURVEY



MSP Software

Monitoring Solutions – In addition to supplying you with the most accurate and durable Monitoring Sensor on the market – the Topcon MS Series, Topcon offer all the additional hardware and software required for any monitoring project. With off the shelf solutions to control and power one instrument. For multiple instrument networked solutions, we have a package which is suitable for you.

Automatic and comprehensive reporting of displacement is available throughout the range, with SMS and mail notification when tolerances are exceeded.

MS AX Package

- **Complete System**
  - MS AX 0.5" or 1" Instrument
  - Dual Charging Cradle
  - Choice of optional field controllers
  - Li-Ion Batteries
  - Compact Carry Case
  - Onboard Software
  - Compatible with third party monitoring solutions
  - Manuals & Utility software

MS MEASURING STATION

IS-3 – Imaging Stations

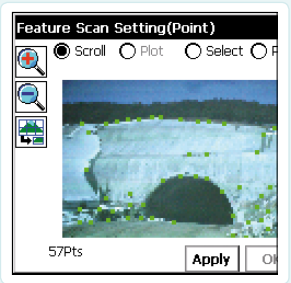
Take the power, accuracy and speed of the innovative Topcon robotic instruments, add our legendary imaging capabilities and faster scanning speeds... and you have the IS-3.

With dual wide angle and coaxial imaging sensors, superior tracking technology, up to 2 km reflectorless range, integrated WiFi and interference free 2.4 GHz Spread Spectrum data communications, the IS-3 is the most advanced and powerful imaging robotic station available. Incorporating our fast iSCAN measurement routine to enable thorough automated data collection defining your subject using real-time image capture: options include Feature Detection or Grid Scan to automatically measure significant points or a 'regular' grid.

KEY FEATURES - IS-3

- Twin Cameras – wide angle and coaxial for true through the lens view
- iSCAN intelligent feature scanning
- 20 points per second scan rate, with 2000 m range
- iDRIVE lets you visually operate from the controller and easily switch from imaging to prism tracking
- Photo Fieldbook – creates a 360° panorama in seconds
- Long range wireless with up to 10 fps

SURVEY



WT-100 – Using the new WT-100 wireless data link device, users can dramtically extend their wireless working range... now up to 300 m!

This means that users are able to increase the range with which they can use the incredible 10 frames per second live video feed from the IS to lock on to the prism with pin point precision using iDRIVE.

IS Package

- **Complete Imaging Robotic System**
  - IS-3 1", 3" or 5" Instrument
  - Charging Cradles
  - Choice of field controllers
  - WT-100 WiFi device
  - Lightweight 360° prism
  - Onboard Software
  - ImageMaster (Remote Control and Office Processing software)
  - Manuals & Utility software

IS IMAGING STATION

PS – Robotic Total Stations

LONGLINK

This new advanced solution features an incredible array of new and existing features, including TSshield for advanced security and maintenance, PowerTrac tracking technology, IP65 environment rating and our exclusive LongLink™ – offering up to 600 m wireless communication.

The new RC-5 quick-lock sub-system improves prism searching and finding capabilities, whilst the IACS advanced angular accuracy and powerful & accurate EDM make this the most advanced robotic total station available.

You can work directly on the bright, colour touchscreen or with the alphanumeric keyboard, to achieve higher levels of production with MAGNET™ Field on-board software.

KEY FEATURES - PS

- PowerTrac™ prism tracking
- LongLink™ Communications Technology
- TSshield™ Security and Maintenance
- IP65 dust and waterproof rating
- IACS automatic angle measurement calibration
- Large graphic and colour touchscreen

SURVEY

INTEGRATED SURVEYING

By integrating GNSS RTN (Network RTK) and Robotic Total Station (RTS) technologies, your job site productivity can be increased dramatically.

By using the PS robotic with our handheld GRS-1 RTK controller & PG-S1 antenna and MAGNET Field, this method of working is easy!

PS

RC-5

MAGNET

- **Standard packages**
- PS Total Station
- Battery and Charger
- Lens Cap and Hood
- Tool Kit
- Quick Guide and Digital Manual
- Carry Case and Carry Straps

PS Package

Field Controllers

Tesla

FC-2600

FC-250

GRS-1

OS – Windows CE Total Stations / ES – Reflectorless Total Stations

The OS Series – is an entirely new instrument based around a rugged and weather proof IP65 magnesium-alloy construction, featuring Windows Mobile and running MAGNET Field on board. Using our long range LongLink technology, job control is where it's needed... at the detail pole, enhancing data collection and dramatically improving stakeout speed and accuracy.

The ES Series – redefines construction grade total stations, introducing a number of new features, all combined in a small lightweight package. It has an extended reflectorless range of up to 500 m and can also measure to standard prisms at a range of 4,000 m. The ES also sees the introduction of our TSshield remote service and LongLink technology.

MAGNET

KEY FEATURES - OS

- Advanced Security and Maintenance with New TSshield™
- MAGNET Field On-board
- Exclusive LongLink™ Communications Functionality
- Fast and Powerful EDM
- Advanced Angle Accuracy

SURVEY

ES

KEY FEATURES - ES

- Advanced Security & Maintenance with New TSshield™
- Exclusive LongLink™ Communications Functionality
- Fast and Powerful EDM
- Advanced Angle Accuracy
- Super Long Battery Life – 36 Hours!
- Rugged, Waterproof Design

Standard packages

- OS Total Station
- Battery and Charger
- Lens Cap and Hood
- Tool Kit
- Digital Manual on USB
- Quick Guide
- Carry Case and Carry Straps

OS Package

Standard packages

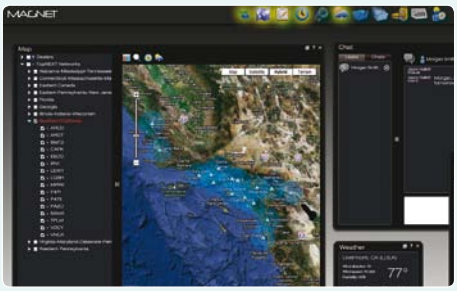
- ES Total Station
- Battery and Charger
- Lens Cap and Hood
- Tool Kit
- Digital Manual on USB
- Quick Guide
- Carry Case and Straps

ES Package

MAGNET Enterprise / MAGNET Office Topo

MAGNET Enterprise – The cloud-based environment that simplifies the maintenance and management of field and office data workflows. Track assets and communicate with everyone involved in a project. Login from any browser for data exchange, internet chat, and to observe field measurement plotting within Google Maps in real-time.

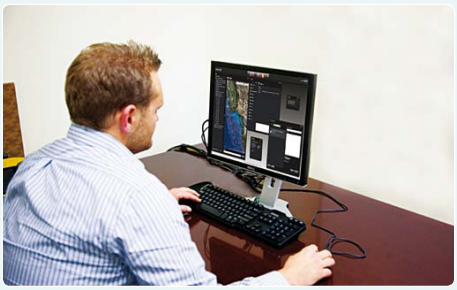
The heart of MAGNET Enterprise is a web browser environment that runs with Widgets that allow complete configuration of how you like to work, so that you have what you need, where and when you need it. All it takes is a web browser to communicate, collaborate, and exchange data.



KEY FEATURES - MAGNET Enterprise

- Team-based collaboration
- Secure Cloud Storage – 500 MB standard, add more as needed
- Exchange data between field and office in real time
- Live chat with multiple members
- Automated e-mail alerts
- View surveyed points and lines overlaid on the Google® map

SOFTWARE



KEY FEATURES - MAGNET Office

- Enterprise cloud storage and data exchange
- Standalone or add-on for AutoCAD
- Full Processing and Adjustment
- DTM creation, volume and section analysis
- Multiple Graphical Data Views

MAGNET Office Topo – provides you with the complete desktop survey solution. Whether it's a simple boundary survey with a one page print out of the site or a complicated multi-surface construction jobsite with roads, utilities, machine control, and buildings, Office Topo gives you everything you need to complete a project.

From field-to finish, control the critical data flow from data collection, raw file analysis, engineering design, to final print copy or customer specified export format.

Office Topo is also Enterprise-enabled, simply subscribe to MAGNET Enterprise and upload, download, communicate and gather data in 'Real-Time' from the field with just a touch of a button.

The solution features numerous COGO and survey specific routines, functions such as bearing / distance intersections, and calculation of point position from offset and distance data are available. Survey specific tools such as traverse editors, deed editors, legal description writer, point translations, and many more are at your fingertips.

MAGNET Field / MAGNET Office Tools

MAGNET Field – Available to run on our range of field controllers as well as on board our OS reflectorless and PS robotic total stations, MAGNET Field takes care of all your field operations from data transfer and management, control establishment, topographic survey, volume calculations stakeout, scanning, COGO and much more besides.

Working with MAGNET Enterprise, your data can be transferred from MAGNET Field in real time to your office operatives running MAGNET Office, who can then carry out required processing and then transfer the data back to the field to implement, for instance, last minute design changes to a construction site.

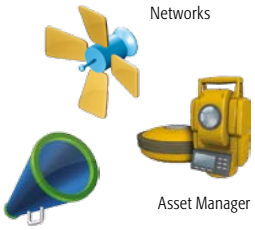
MAGNET

KEY FEATURES - MAGNET Field

- Intuitive Graphical Interface
- Real time data transfer through MAGNET Exchange
- Runs on controllers and total stations
- Full COGO functionality
- On board volume calculations

SOFTWARE

Tools



Networks

Asset Manager

News

KEY FEATURES - MAGNET Tools

- MAGNET Field supported
- Post Process: GPS, GLONASS, RINEX
- Reports including graphic views and report templates
- Including 2D, 3D, and Google® Earth views
- Broad import / export format flexibility

MAGNET Tools – Available standalone or as an AutoCAD Civil 3D embedded interface, Office Tools is processing software for positioning applications. All versions have direct connections to MAGNET Enterprise cloud storage and internet chat.

Stay connected with the field by exchanging files or even watching field measurements appear on the Tools screen in real-time... imagine seeing live shots with coded line work appear on your screen.

Office Tools allows you to collect, process and adjust all your site data directly from your Topcon devices or remotely via an internet connection from your regional CORS network Post-process using Static, Kinematic, Stop and Go methods.

Carry out full Least Squares adjustment and produce wide ranging reports which can be output to Word, Excel or HTML. Choose from a number of graphical map, time based or tabular representations of the data.

MAGNET™

DL-500 Series – Electronic digital level

DL-501 – This digital level has been designed to achieve the highest level of precision and productivity in levelling and height measurement applications. Featuring a wireless operation, a number of innovative technologies are implemented for unmatched productivity while eliminating error factors during measurement. The DL-501 sets the ultimate benchmark in precision digital levels.

The DL-501 is capable of achieving an incredible 0.2 mm measurement precision when used with our original Super-Invar RAB-Code Staves. It also features onboard software which supports height difference measurement and data recording in the following procedures: BF, BFFB, BBFF, BFBF, aBF, aBFFB, aFBBF. Measurement tolerances can be set in each route for on-site accuracy checks.

KEY FEATURES - DL-501

- 0.2 mm precision (ISO17123-2)
- Optional Remote Trigger for wireless operation
- Dual-axis Tilt Sensor
- SD Card for Data Storage
- BIS20A / 30A staff with ±0.1 ppm / °C linear expansion coefficient
- Weight (including battery) 3.4 kg

SURVEY

DL-502/503

KEY FEATURES - DL-502 / 503

- Fast 1.5 second measuring time
- Auto-detection of staff attitude
- Ability to measure lowest height on rocking staff
- Sub-millimetre mesaurement accuracy
- Extended 16 hours battery life

DL-502/503 – These digital levels maximise work efficiency whilst at the same time minimise human errors, providing consistent measurement precision and speed regardless of the operator's skill level.

Incorporating cutting-edge Random-Bidirectional (RAB) coding technology, the DL-502/503 provides exceptional accuracy, stability and speed, under a variety of environmental conditions. Even when the staff surface is partially shaded, or in low lighting conditions the DL-502/503 instantly shows reliable results. Using the world's first "Wave-and-Read" technology, the DL-502/503 allows the rod person to wave the staff back and forth, instead of keeping the staff plumb, so identifying the true and correct staff reading.

DL-502 Package

- **Standard configuration**
  - DL-502/503 Digital Level unit
  - BDC46B Li-ion battery
  - CDC68 charger
  - EDC113 AC power cable
  - Hex wrench
  - Vinyl cover
  - User manual
  - Carrying case

HiPer II – Dual Frequency GNSS Receiver

The HiPer II – receiver is designed on these clearcut concepts. This state-of-the-art receiver not only offers further enhanced ability, but also increases receiver performance and user-friendliness. The fully customisable structure provides maximum flexibility to choose your required options.

Our GPS+GLONASS, dual-frequency signal tracking technology offers superior positioning capability over the GPS only receivers. It makes a real difference where sky visibility is limited such as in urban canyons or in woodlands, near tall fences or other blockages. With integrated UHF Radio and GSM Cellular Modems available it's simple to work in the environment of your choosing.

KEY FEATURES - HiPer II

- Dual frequency GPS & GLONASS
- Magnesium-Alloy Construction
- Bluetooth® connectivity
- Integrated UHF Radio & GSM Modems
- SD / SDHC Memory Card Slot for flexible storage options

GNSS

MAGNET

- **Dual Receiver Package**
- Two HiPer II Receivers
- Charging Cradles
- PC Data Cables
- Hard Carry Case
- Radio Antennas
- Manuals & Utility software
- Fixed Height Tripod

HiPer II Package

Field Controllers

Tesla

FC-2600

FC-250

FC-236

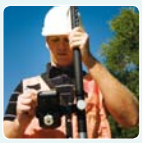
GR-5 – Advanced GNSS Receiver

UNIVERSAL TRACKING

Offering advanced design features not found in other receivers, the GR-5's modern design provides the flexibility and ease-of-use you demand.

With a rugged magnesium I-beam construction for unbeatable strength and durability, and incorporating our Fence Antenna™ technology for unparalleled tracking performance, the GR-5 also boasts easily accessible SDHC card memory and dual hot-swappable batteries for unlimited continuous operation.

As well as being totally committed to the GPS, GLONASS and GALILEO satellite systems, Topcon is also committed to the precision signals from the developing systems from China, Japan and India.



KEY FEATURES - GR-5

- 216 Universal Tracking Channels
- Multi-constellation (GPS, GLONASS, GALILEO)
- FenceAntenna™ Technology
- Multiple Radio and Cellular Modem combinations
- SDHC data storage support

GNSS

GR-5

GR-5

- **Dual Receiver Package**
  - Two GR-5 Receivers
  - Charging Cradles
  - PC Data Cables
  - Hard Carry Case
  - Radio Antennas
  - Manuals & Utility software
  - Fixed Height Tripod

GR-5 Package

Field Controllers

Tesla

FC-2600

FC-250

FC-236

HiPer SR – Dual Frequency GNSS Receiver

Cable-free and simple to operate, the HiPer SR is the most compact base and rover RTK system available.

The field-rugged and fully-integrated design delivers a 300 meter working radius through Topcon's new LongLink™ technology. This innovative wireless data link was developed specifically for the HiPer SR, and provides reliable and interference-free RTK base-to-rover communications that don't require an FCC license to operate.

Our VanGuard GNSS chip is at the heart of the HiPer SR. In addition to precision measurement and advanced multipath rejection, the chip offers support for all modernised GNSS constellations and incorporates Topcon's patented Universal Tracking Channel technology.

MAGNET

KEY FEATURES - HiPer SR

- Vanguard GNSS Board Technology
- Quartz Lock Loop™ technology
- Simultaneous LongLink operation with multiple rovers;
- Sealed battery pack for up to 15 hours operation;
- Lightweight and shock-resistant magnesium alloy housing
- Withstands a 2 meter pole drop onto concrete.

GNSS

HiPer SR FenceAntenna

HiPer SR Powerunit

Universal Tracking - While other GNSS receiver designs must dedicate channels to a specific satellite system or signal – requiring more and more channels as additional GNSS signals become available – with Universal Tracking Channels, any channel can track any available signal.

HiPer SR Package

- **Dual Receiver Package**
  - Two HiPer SR units
  - Battery Charger
  - Tribrach with adapter
  - 10 cm pole adapter
  - Mini USB cable / Serial Cable
  - Carrying Case

Tesla RTK – GNSS Controller / Tesla – Field Controller

PG-S1

Tesla RTK – The Topcon Tesla RTK builds on its field controller sibling; with the integrated RTK level GNSS receivers, it is the largest screen, single-handed, handheld controller on the market that can also be utilised as a network RTK rover.

Make full use of the MAGNET Field user experience; using touchscreen technology, the Tesla RTK features direct touch access to all graphic controls. MAGNET Field is optimised for the display, while the Windows® Mobile 6.5.3 provides a modern interface and added expansion application options. The fast 806 MHz processor drives any Topcon field application software with ease.

MAGNET

KEY FEATURES - Tesla RTK

- Integrated RTK GNSS receiver
- Large 5.7" VGA Color Touchscreen
- Fast 806 MHz processor
- IP67 Environment Rating
- 3.2 MP Camera
- 3.5 G Cellular module

GNSS

Tesla

KEY FEATURES - Tesla

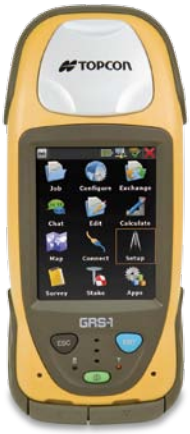
- 5.7" Full Colour Touch Screen
- Environment Proofing to IP67
- Bluetooth, WiFi 802.11b/g
- Cell Modem, 3.2 MP Camera & GNSS options
- Hot-swappable batteries
- Windows Mobile 6.5.3

Tesla – The Tesla's most prominent feature is its screen… with a large 5.7" full colour VGA LCD display, and a full active viewing area, switching from landscape to portrait; you can use the device exactly how you need to, for all applications.

Available in three different versions; with the top of the range featuring GPS and DGPS (WAAS) functionality, 3.2 MP digital camera and 3 G GSM cellular modem connectivity for full communication capabilities.

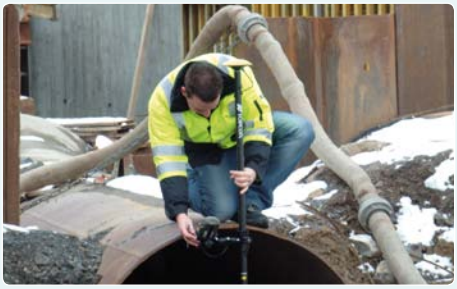
Using the integrated WiFi, Bluetooth or RS232C Serial connection, the Tesla can be used as an advanced field computer our GNSS receiver range or total stations such as our IS-3 or PS.

GRS-1 – Dual Frequency GNSS Controller



Topcon's GRS-1 is the world's smallest and lightest handheld RTK controller/receiver. By integrating a dual frequency GPS/GLONASS receiver board and L1 capable antenna within the unit, the GRS-1 can be used as the perfect handheld mapping grade unit. With the addition of a G3-A1 survey-grade external antenna the unit can be easily and quickly converted into RTK level device.

The internal GSM cellular modem can be used to receive NTRIP based corrections from your local TopNET+ network correction service, or you can use the optional RH-1 radio pack to connect into a local UHF based system. With an internal digital camera, integrated compass and fast, the GRS-1 has everything you need to get the job done quickly and efficiently!



KEY FEATURES - GRS-1

- Small and lightweight design
- Internal GSM Modem for easy network connectivity
- Scalable and expandable system
- Integrated digital compass
- Handheld or on Pole - m to cm accuracy

GNSS

GRS-1

MAGNET

The GRS-1 has a number of options available to allow it to connect into different corrections services. The internal cell modem and RH-1 UHF radio pack can be use to achieve centimetric level RTN positioning. You can also use the cell modem for DGNSS correction services, or the BR-1 Bluetooth® connected Beacon receiver can be used to get high accuracy mapping grade positons free of charge.

BR-1

GRS-1 Package

● Standard configuration

- GRS-1
- BT-66Q Li-ion battery
- BC-30 charger
- AC power cable
- Vinyl cover
- User manual
- Carrying case

NET-G3A – GNSS CORS Receiver / GB-5 – GNSS Receiver

The NET-G3A is the World's First reference receiver to provide Universal Signal Tracking. Using a patented technology, the NET-G3A incorporates 144 Universal Tracking Channels, capable of tracking signals from all available systems (GPS, GLONASS, GALILEO) as well as all future planned satellite positioning constellations.

The NET-G3A is intended for use as a highly sophisticated CORS (Continually Operating Reference Station), whether this is working alone as a standalone base station on a local worksite or as part of a regional or national network correction service. With an integrated web interface, the NET-G3A can be configured remotely via your standard web browser.

NET-G3A

KEY FEATURES - NET-G3A

- 144 Universal Channel Paradigm-G3 Chip
- Multi-Constellation Technology
- Low power consumption
- Superior Signal tracking and Performance
- Compatible with ALL signals for existing and planned satellite navigation systems

GNSS

GB-3

KEY FEATURES - GB-3

- Dual frequency receiver
- Flexible system
- Suitable for base station static or backpack solutions
- 72 Universal Channel G3 Chip Technology
- Selectable Port Configuration

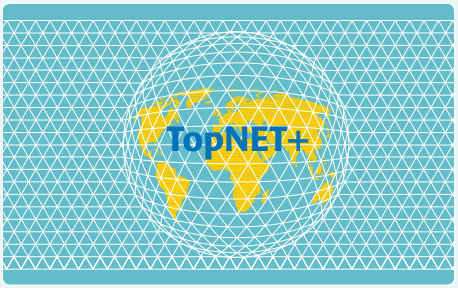
The GB-3 – introduces our incredible G3 technology to users who like to keep their options open when it comes to configurations. Featuring the latest 72 Universal Channel G3 Technology capable of receiving signals from all present and future satellite constellations GPS, GLONASS and GALILEO. A stand alone receiver without internal antenna or modem, the GB-3 offers maximum flexibility for use as a reference stations, mobile base station for RTK, static or kinematic survey of RTK rover backpack solutions.

GB-3 - Versatile G3 GNSS Receiver

G3-A1 – Geodetic Antenna

TopNET+ Correction Software / TopNET*live* Service

TopNET+ – Is Topcon's dedicated GNSS network correction software which is in use throughout Europe providing correction services for end users. Subscribers to such services can carry out their usual surveying activities without the need for a GNSS base station, as network corrections are supplied to the rover using a low cost GPRS connection, offering real time positioning in the coordinate system of your choice. With a number of different accuracy levels available, TopNET+ subscription services can be used for mapping level activities such as local authoriuty asset management, precision agricultural tasks, up to the highest level of Network RTK suitable for most surveying, engineering and machine control projects.



KEY FEATURES - TopNET+

- Multi-constellation system
- Fully scalable solution
- Choice of communications type
- Quality monitoring of satellite and site parameters
- Automated email based warning system Station
- Upgrade from CORS to VRS Network Correction service

GNSS

KEY FEATURES - TopNET*live*

- Immediate start of increased productivity
- Minimises base station investment
- Maximise the job focus
- Leave base station security worries behind
- Always work with a constant level of precision
- Online user management tools

TopNET*live* – is our GNSS network, which brings together our strategy for global GNSS services. These offer subscription based, high quality real-time GNSS network RTK and DGNSS correction data for many applications including surveying, construction, GIS mapping and machine control. Eliminating the setup of base stations, network solutions offer many advantages to surveyors, construction site and machine operators requiring RTK correction data on demand. GNSS users working anywhere within the network boundary, can connect to TopNET live services with a mobile internet connection, and receive fully modelled Network RTK corrections.

TopNET*live*

Rugged Field Controllers

FC-250 – If you are looking for a compact controller that provides incredible performance, look no further than Topcon's FC-250. Incorporating Windows Mobile 6.5 operating system with a crisp, bright, colour touch screen display the FC-250 really makes your field data come alive. With the dual removable media for data storage and transfer, the easy to access rechargeable battery and the compact handheld design, FC-250 is the perfect field controller for any job. The FC-250 also provides a wide range of wireless technologies, coming as standard with Bluetooth and WiFi. It also has the options to use the Snap-In RS-1 Spread Spectrum Radio for use with our QS & IS ranges of robotic total stations.

FC-250

KEY FEATURES - FC-250

- Rugged environmental protection to IP66
- WiFi, Bluetooth and optional RS-1 Wireless functionality
- Ultra-bright full-colour 3.8" VGA touch-screen display
- Ultra-bright full-colour 3.8" VGA touch-screen display
- Fast 806 MHz processor easily handles all processing needs
- Multiple data transfer options, SD & CF Card and USB Sticks

FIELD CONTROLLERS

FC-2600

KEY FEATURES - FC-2600

- High resolution 5 MP digital camera
- IP67 and MIL-STD 810F Environmental Protection
- 55 key alpha-numeric keyboard for ease of data entry
- Hot-swappable Li-Ion batteries for infinite work-time
- Comprehensive Wireless connectivity options
- Windows CE 6.0 Operating System

The FC-2600 – ruggedised and waterproof full keyboard interface makes for a perfect controller. Large keys ensure correct data entry, even with gloved hands! Bluetooth® connect to your robotic total station or GNSS receiver for wireless control. The LCD display is crisp and bright, even in direct sunlight.

The FC-2600 has built-in WiFi communication that connects to the Topcon Imaging Station. The connection can be made directly to the IS, or to the extended range WT-100, for a productive Live Video display robotic system. With an incredible battery life of up to 42 hours, the FC-2500 also features dual hotswappable Li-Ion batteries.

Rugged Field Controllers

Our FC-236 – packs a huge number of features into a compact and lightweight unit. With full numeric keypad, extended and intelligent battery life, integrated cellular modem, 3 MP camera, internal L1 GPS receiver, compass and powerful Windows Mobile operating system, this controller has everything you could possibly need as a field computer system and more!

Coming as standard with a 806 MHz processor, Windows Mobile, 4 GB of flash memory and 128 MB RAM, the integrated SDHC card slot allows for Secure Digital cards up to 16 GB to be used for data storage and transport.

FC-236

KEY FEATURES - FC-236

- Integrated SiRF Star III GPS receiver
- WiFi, Bluetooth® and Cell modem for wireless data exchange
- Multiple connectivity options for data transfer
- 3 Mega Pixel Auto-focus Camera
- Industry leading IP67 & MIL-STD-810G Environmental Protection

FIELD CONTROLLERS

FC-25A

KEY FEATURES - FC-25A

- Incredibly lightweight field controller (320 g)
- Rugged design with IP65 Ingress Protection
- WLAN / Bluetooth® Wireless
- Field-exchangeable Li-ion Battery
- Integrated digital camera, compass and altimeter

FC-25A – Featuring an exceptionally rugged, pocket-sized and lightweight construction, the Topcon FC-25A is the controller designed to work in the most severe work site conditions.

With environmental rating of IP65 and MIL-STD-810G, the FC-25A will work where ever you need it to work. It is also the smallest and lightest controller available. Weighing in at only 320 gm and measuring only 144 mm tall by 83 mm wide, you'll forget you are carrying it! The embedded 20 channel GPS chipset provides positional information by point positioning or by DGPS using SBAS corrections.
The FC-25A also incorporates a 3 MP auto focus camera, electronic compass and an altimeter for GIS data collection applications.

IP-S2 HD Compact+ / IP-S2 HD – Mobile Mapping

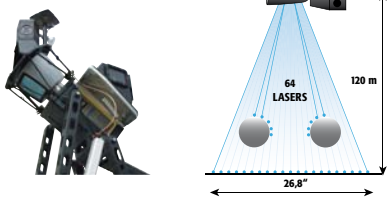
Topcon's IP-S2 Mobile Mapping System overcomes the challenges of mapping 3D features at a high level of accuracy and speed. Accurate vehicle positions are obtained using three technologies:

– dual frequency GNSS receiver
– inertial Measurement Unit (IMU)
– external wheel encoders

These technologies work together to sustain a highly accurate 3D position for the vehicle. IP-S2 Compact+ includes up to five LiDAR scanners oriented to cover the road-side objects and adjacent buildings up to 30m away. IP-S2 HD includes a scanner with 64 individual lasers, resulting in a very dense point cloud and a range of 100m. Both systems bring a high resolution digital camera provides 360° spherical images at fixed distance or time intervals.

GIS / MAPPING

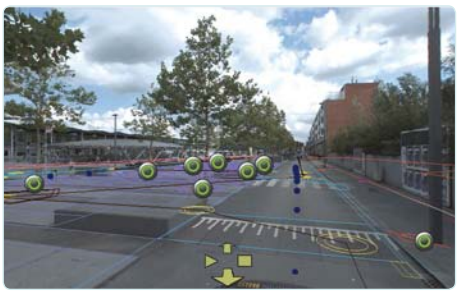
VELODYNE LASER SCANNER HDL-64E
scans both sides of features



Data post processing – Tracking both GPS and GLONASS signals, the inertial measurement unit (IMU) and wheel sensors allow to accurately determine the location of the scan data and images collected... even if the data was collected while driving near obstructions or through tunnels where satellite signals can be blocked.

Orbit Asset Inventory management allows integration of IP-S2 data with other sources like aerial imagery, maps, drawing or other data layers. The software offers full GIS software functionality and allows users, or teams of users, to create GIS data sets and deliver asset inventories with unparalleled ease of use and efficiency. Orbit software loads both the IP-S2 point cloud and images and allows flexible and efficient inventory creation.

The Client-Server architecture allows team working within a single data set. A separate publishing server allows sharing of data with end-users over the web.



GLS-1500 Laser Scanner / IS-3 Imaging Station

LONG RANGE TECHNOLOGY

The GLS-1500 gives high quality observations with effective and simple field operation. With a scan range up to 500 m the GLS is a versatile tool that lets you work many different environments. The stand-alone capability of this instrument easily manages the extremes of the measurement world.

Emphasising the benefits of laser scanning on site, you are not tied to a PC, you do not have to worry about power and site work is easy because you are only dealing with one box. However you can always connect to the PC with the ScanMaster Software or Tablet with the ScanMaster Field software and see the data as it is being collected at up to 30,000 points per second.

KEY FEATURES - GLS-1500

- Consistent 4 mm precision
- Precise Scan Technology
- 500 m maximum range
- Class 1 eye safe laser
- Integrated camera

IMAGING

KEY FEATURES - IS-3

- Two Digital Cameras – Wide Angle and 30x optical zoom
- iSCAN Technology – Intelligent Scanning up to 20 points p.s.
- iDRIVE – touch screen control
- up to 2000 m reflectorless measurement
- iCONTROL – WiFi Remote Control by PC or Field Controller

CAPTURE REALITY

The IS-3 is a revolutionary approach to complete job site documentation. Capture discrete points with images, or scan key features to get a clear overview of exactly what was measured and where.

With its unique, through the lens 30x telescopic zoom, ImageMaster software, advanced tracking technology and integrated WiFi robotic data communications – the IS-3 is the most advanced, longest range, and most powerful imaging station of its time.

Fast iSCAN measurement routines enable a thorough data collection to define your subject in real-time data as 'photography with dimension'. Options include Feature Detection or Grid Scan to automatically measure significant points or a "regular" grid defined by rectangle, polygon, section or complete 360°.

Topcon's IS-3 showcases our proven robotic technology. Its wide angle dual digital Imaging cameras allow you to view your data in-situ from a full colour, real-time image on a touch sensitive LCD display. Navigate around your point and zoom in to measure up to 2000 m away, and be confident that the point you see on the screen, is the point you see through the telescope thanks to digital imaging precision from Topcon.

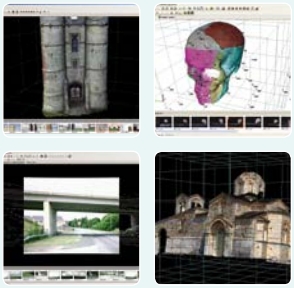
IS-3 – Imaging Station

ImageMaster / ScanMaster Office Software

CAPTURE REALITY

Pictures and Pointclouds all in one location! ImageMaster Pro is the revolutionary approach to get the full picture and meaningfully represent your 3D data. Combining our proven software based photogrammetric tools with the management of scanner and total station data; it enables you to read remotely sensed and physically measured information in a single software environment. In one simple process, your 3D data is turned into a snapshot of reality bringing your project to life.

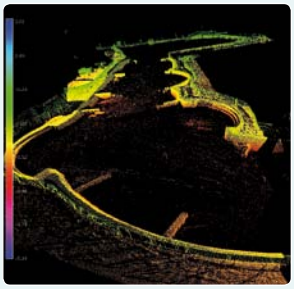
ImageMaster Photo creates 3D models from stereo images from an "off-the-shelf" cameras & measured individual points and can quickly generate contour lines, points, polylines and surface measurements-fast, powerful, effective and accurate.



KEY FEATURES - ImageMaster

- Effective & simple desktop Photogrammetry with
- Clear step-by-step interface
- Make your "Off-the-shelf" digital camera a measurement tool
- Combine Images, points & pointclouds in a single solution
- Produce models with accuracies up to 0.4 mm

IMAGING



KEY FEATURES - ScanMaster

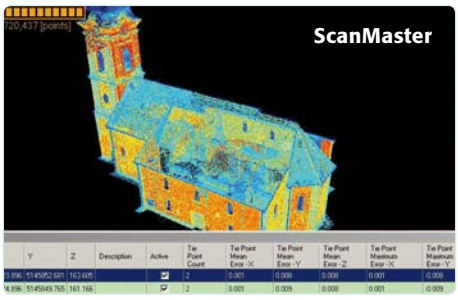
- High volume scan and imaging data management
- Intuitive and User-friendly solution
- Automated Data extraction
- Mass 3D point cloud acquisition and manipulation
- Compatible with many data formats

Let the points paint the picture! ScanMaster is the fast, efficient way to handle mass 3D data and turn it into easy-read images that keep you and your customers, in the picture. The powerful GLS scanner control and processing software offers a modern, streamlined interface giving the perfect alternative to traditional point-cloud processing techniques.

ScanMaster Field is a stripped-down implementation designed for use on Tablet PC, this graphical interface allows you to work with typical survey work-flows whilst viewing your data in 2D spherical view or 3D data view.

ScanMaster Office provides unique tools to enable you to extract information directly from the pointcloud, without requiring meshing or TIN creation. Automatically extract edges from scans or quickly extract sections, profiles, edges from regions; plane intersection; quick polyline sketches. You can easily prepare your data for presentation using slices, noise filtering, re-sampling of clouds. ScanMaster covers everything you need to work with your point-cloud.

ScanMaster CADLink lets you get the points across to your CAD environment. Access your familiar CAD workflows whilst measuring points directly on the point cloud. The easy way to meet your customer requirements.



ScanMaster – Office Software

Topcon TotalCare / Technical Services

TotalCare – The Topcon support team knows who they are working for… our customer. With this in mind, we use the following definition: "Customer Support is a function of how well an organisation is able to constantly and consistently meet and exceed the needs of the customer."

We take this very seriously at Topcon. Using state of the art helpdesk software operated by our enthusiastic support personnel, we are constantly striving to not only improve our customers experiences with their equipment, but also to develop customer relationships, and thus enhance the way in which we provide solutions.

The Topcon TotalCare website is at the heart of our support network. Maintained by the global support group, there are downloads and knowledge base entries for Survey, GNSS, GIS, Machine Control, Lasers, Telematics, Scanners and Mobile Mapping Solutions.
www.totalcare.eu

Support

Maintenance

TOPCON

Total Care™

KEY FEATURES - TotalCare

- Global support team
- Integrated Helpdesk system
- Support contract options
- Downloads for software, firmware, manuals, specifications, etc
- Total Support for full product range

TOTALCARE / SERVICES

Service

Analysis

WARRANTY

KEY FEATURES - Technical Service

- Pre-inspection delivery services
- Warranty options
- Maintenance and adjustment advice
- Highest level of calibration activities
- Repair back-up
- Spare part advice

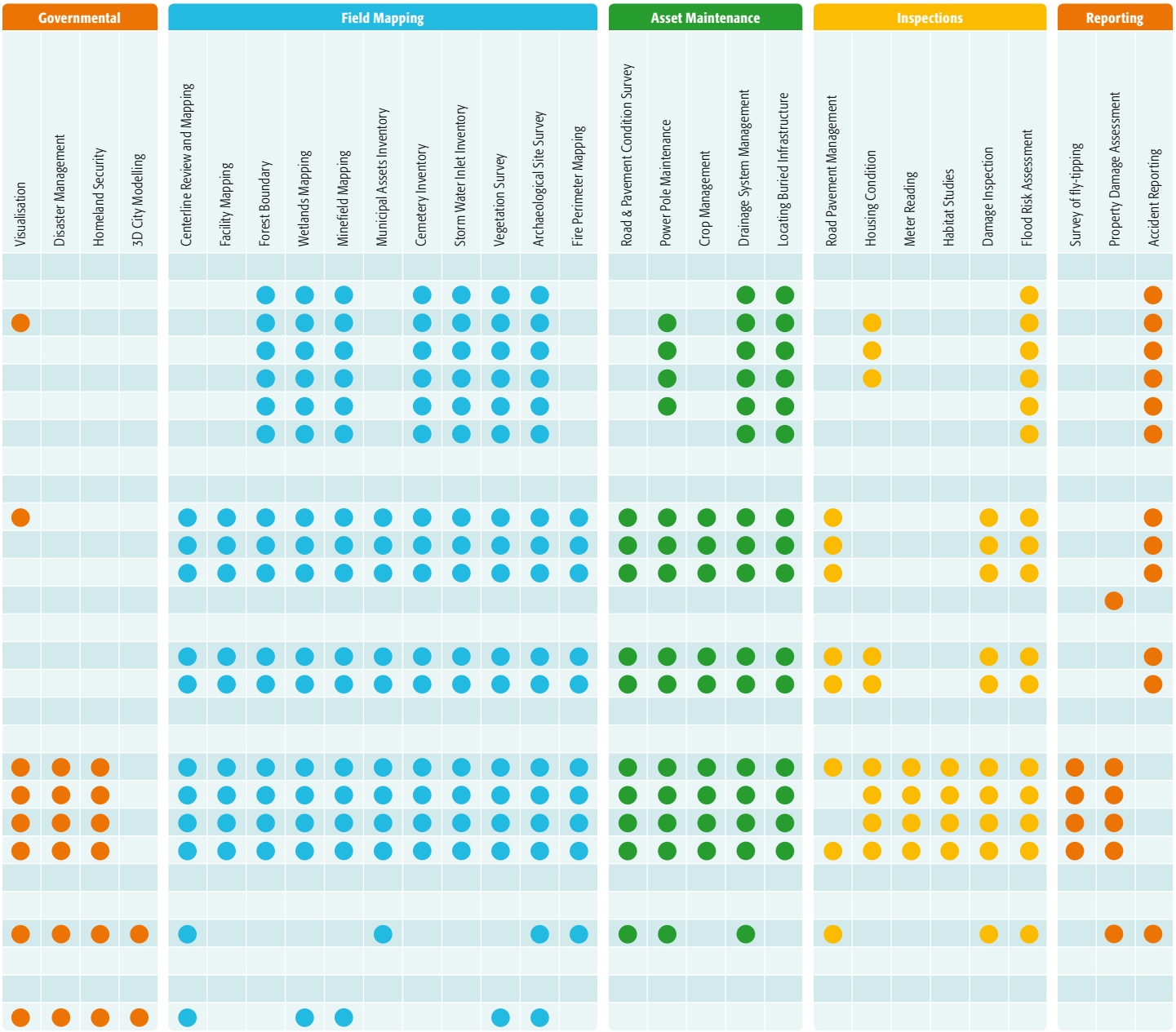
Technical Service – Our daily goal is to offer high-quality service, support and repair to the customer. Topcon does this by training the distribution network service engineers. Major advantages are a short turnaround time for repairs, and communication in the language of the country.

For new product launches, all network service engineers receive intensive hands-on service & repair training.

Product Application Matrix – Survey & Mapping

Applications	Survey													Engineering							Construction		
	Control	Cadastral	Topographic	Archaeological	Forensics	Hydrographic	Measured Building	Geodetic	As-built	Continually Operating Reference Station	Imaging	Photogrammetry	Building Façade	Structural	Deformation Control	Engineering	Mine and Quarries	Process Plant Modelling	Slope Stability	Volume Calculations	Setting Out	Roads	Feature Location
Optical																							
MS AX	●	●	●	●	●	●	●	●	●				●	●	●	●	●	●	●	●	●	●	
IS-3	●	●	●	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●	●	●	●	
PS Series	●	●	●	●	●	●	●	●	●				●	●	●	●	●		●	●	●	●	
OS Series	●	●	●	●	●	●	●	●	●				●	●			●			●	●	●	
ES Series																					●	●	
DL-500	●			●			●	●	●					●	●	●	●				●	●	
GNSS																							
Hiper II	●	●	●	●	●	●		●	●											●	●	●	
HiPer SR	●	●	●	●	●	●		●	●											●	●	●	
GR-5	●	●	●	●	●	●		●	●											●	●	●	
NetG3A	●							●	●	●				●	●	●				●	●	●	
GB-3	●	●	●	●	●	●		●	●	●				●	●	●				●	●	●	
GRS-1 RTK	●	●	●	●	●	●		●	●											●	●	●	
Tesla RTK	●	●	●	●	●	●		●	●											●			
DGNSS																							
GRS-1 DGNSS				●	●	●					●									●			●
FC-236 DGNSS				●	●	●					●									●			●
FC-25A DGNSS				●	●	●					●									●			●
Tesla				●	●	●					●									●			●
Mobile Mapping																							
IP-S2 Compact					●						●		●							●			●
Laser Scanning																							
GLS-1500		●	●	●	●	●	●				●	●	●	●		●	●	●	●	●			

Product Application Matrix – Survey & Mapping



TOPCON

About Us

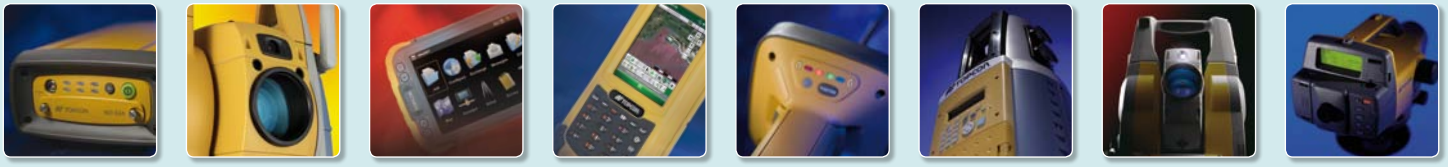
With over 75 years worth of experience in the manufacture, distribution and support of products, Topcon is well placed to offer comprehensive support to cater for all your needs.

Established in 1932, the Topcon Group today is represented by a workforce of over 6,000. Topcon develop, manufacture, sell, and provide services for a wide range of high technology products for the capture, analysis and presentation of spatial datain the macro, micro and nano worlds.

Investment in research and development leading to innovative new solutions and products is key to the Topcon philosophy and is evident in a number of industry firsts that include the first coaxial EDM total station, the GTS-1 and the unique GPT-7000i series imaging total stations incorporating digital cameras.

Additionally, Topcon has produced the first and only available millimetre GPS+ system, and the first to offer a true GNSS (Global Navigation Satellite System); dual frequency, dual constellation, GPS plus GLONASS geodetic grade receivers.

Topcon recently developed the technology to add Galileo and Beidou 2 (Compass) in a new, state-of-the-art Universal Signal Tracking chip, ensuring total future-proofing of investment.



www.topcon.eu

Your local authorized Topcon distributor is:

SYNERGY POSITIONING SYSTEMS
3/52 Arrenway Drive, Albany
Auckland, New Zealand
Free Call: 0800-867-266 **Phone: +64-9-476-5151**
Fax: +64-9-476-5140 **Email: info@synergypositioning.co.nz**
Website: www.synergypositioning.co.nz

SYNERGY POSITIONING SYSTEMS

T700EN - English - B