

SHAPING THE FUTURE OF BUILDING CONSTRUCTION WITH LEICA GEOSYSTEMS



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SHAPING THE
FUTURE OF
CONSTRUCTION

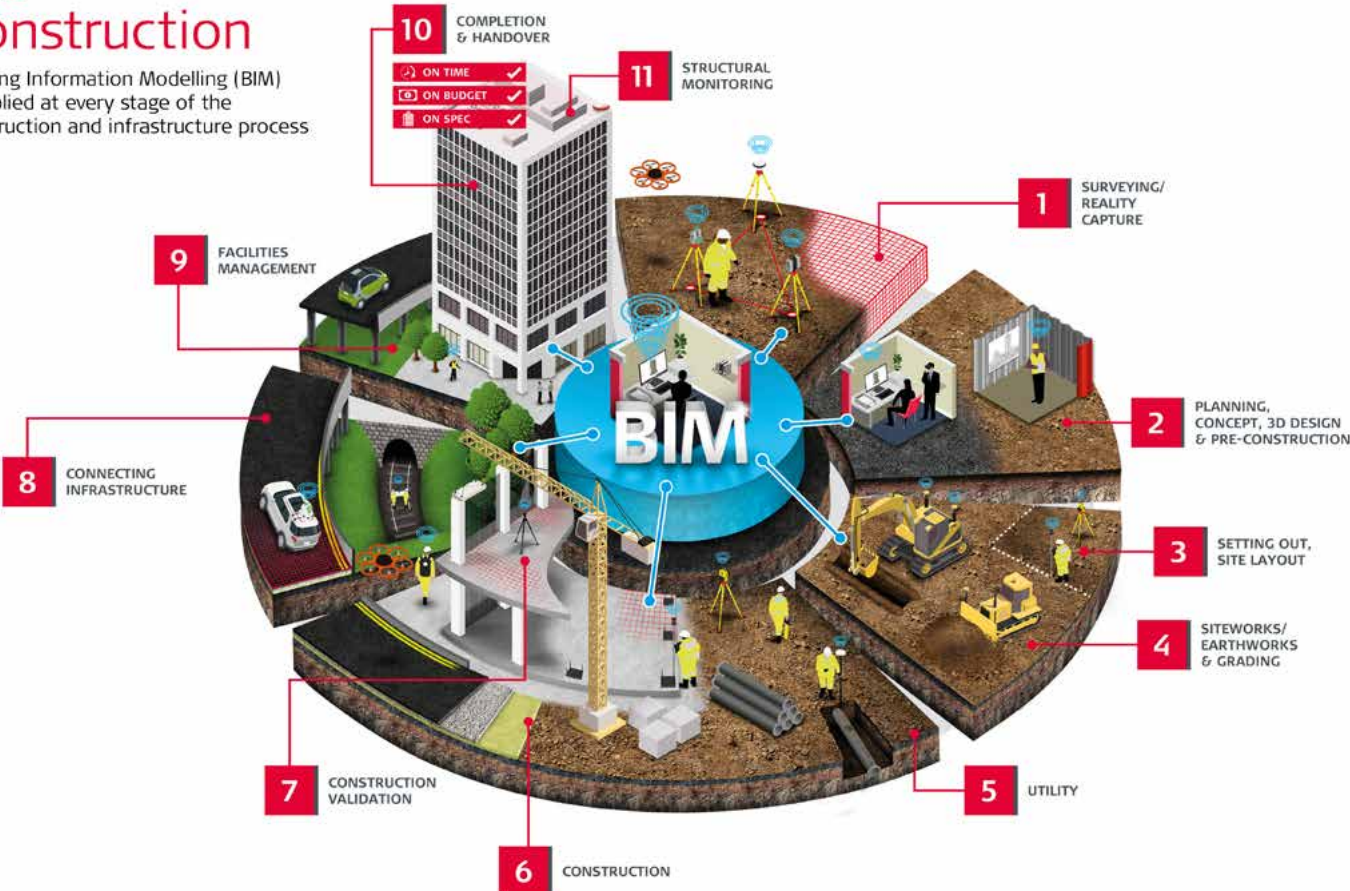
Industries across the spectrum, from utilities to transportation, are evolving to keep up with the pace of change driven by digital innovation. While some are being forced to change, others see the opportunity of embracing new technology to deliver efficiencies, cost savings or a better service.

Digitalising your construction process should be simple. With building construction solutions from Leica Geosystems, we are helping the construction industry solve complex challenges with accurate easy-to-use instruments, and intuitive software so you can confidently move from manual analogue practices to modern digital technology and significantly lower your operational costs without disrupting your current workflow.

Smart reality capture and digital layout solutions help you bridge the gap between traditional methods such as plumb bobs and tape to digital construction workflows saving time, eliminating rework, gaining productivity and enabling you to reap long-term rewards.

Digital
Construction

Building Information Modelling (BIM) is applied at every stage of the construction and infrastructure process.



3D AS-BUILTS

3D As-Built with Leica Reality Capture Solutions reduces rework by starting renovation projects with the most accurate and complete information, thereby avoiding the invisible problems that often become evident during construction, when they are expensive and time consuming to address. Leica Geosystems products range from single digital measurements to millions at a time.



Reality Capture



Virtual Building Modeled
in Point Cloud

MEASUREMENT TYPES



SINGLE POINT



MULTIPLE POINTS



MANY POINTS





THE SHIFT TO DIGITAL CONSTRUCTION

With construction demand at an all-time high, maximising productivity is imperative for today's contractors. Leica Geosystems has designed cutting-edge hardware solutions to gather and process data quickly so you can make informed decisions and keep your site moving efficiently. However, achieving this goal is a challenge. It's not uncommon for projects to incur cost overruns and delays and run months behind schedule. Fortunately, this can be mitigated by using solutions that close the gap between the digital world and the real world.

From the stunning RTC360 Reality Capture Scanner, the efficient BLK360 Laser Imager, the robust ICON Digital Layout platform, the first-of-a-kind BLK3D for 3D measurement, or the industry standard Leica Disto, there is a Leica solution to empower everyone to plan and execute projects with higher quality.

Adopting Digital Construction helps reduce rework by providing accurate information with every step of the way. This insight is the key to keeping projects on time and on budget.

Whether you are taking a single scan to validate the work of a subcontractor or conducting a detailed as-built survey for planning, coordination and verification, our industry-leading software solutions make it simple to create digital reality deliverables.

From the robust high-range P-Series scanners to the Leica BLK360 and the all-new RTC360 Reality Capture Solution, we aim to empower everyone to plan and execute projects with higher quality. Adopting a BIM workflow helps reduce rework by providing accurate information with every step of the way. This insight is the key to keeping projects on time and on budget.



CONSTRUCTION
LAYOUT

Robotic construction layout of the building structure, walls, and mechanical, electrical and plumbing systems reduces rework by using digitally coordinated data from the office directly in the field. Layout with a Digital Construction and robotic process improves productivity two to five times over traditional methods and is much more accurate than traditional manual techniques. Digital layout solution sets range from starting with paper drawings to working with CAD drawings or 3D models.

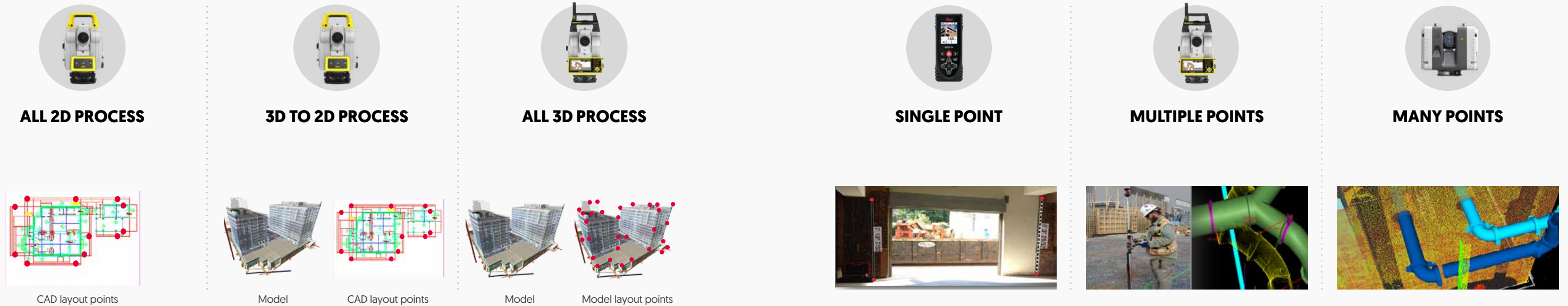
CONSTRUCTION
VALIDATION

Rework can account for 12 to 15 percent of the cost of construction. With accurate progressive reality capture, the ability to catch conflicts before they happen can reduce rework to 1 to 3 percent or less. Laser scanning during construction quickly captures individual or multiple measurements for comparison with models to find future clashes so they can be resolved digitally before they become job- halting, schedule busting change orders in the field. As-builts during construction can be utilized for milestone records, large scale or small scale issue detection, slab flatness analysis and final as-built deliverables.



BUILDING LAYOUT DATA

MEASUREMENT TYPES





Leica iCON iCR80 Robotic Total Station

Achieve more layout points all day every day

The Leica iCON iCR80 construction total station keeps its ‘eye’ on only one thing: the user’s target. Layout more points per day thanks to ATRplus, the most robust automated-aiming, lock and re-lock technology in the market. iCR80 is especially useful in congested sites with many distractions, such as reflections, machines and people moving around. Challenging and changing site conditions should not be an obstacle.

The iCON iCR80 total station is fully compatible with:

- Leica iCON CC80 tablet with an enhanced version of the tailored iCON build construction field software
- Leica Infinity office software and Leica ConX for online sharing of data between the office and the site

The iCON iCR80 features:

- Faster prism search by patented technology, PowerSearch
- Stable data communication with long-range Bluetooth® (up to 400m)
- Easy hand-over control from pole to machine and vice versa
- ATRplus technology, maximising the total station’s ability to remain locked on your target for highest point-to-point layout speed
- “Tune out targets” feature to ignore other distractions in the field
- Fastest re-lock in case of interrupted line of sight

Leica iCON iCR70 Robotic Construction Total Station

Super-modern technology for good old-fashioned accuracy.

Leica Geosystems’ new construction total station, the Leica iCON iCR70, facilitates the move from traditional analogue measurement methods to modern digital layout techniques, which are a necessity within modern BIM processes and achieve the high productivity and accuracies demanded by the building construction industry. iCR70 can be used by the existing construction workforce with minimal training and do not disrupt existing construction processes.

The iCON iCR70 total station is fully compatible with:

- Leica iCON CC80 tablet with an enhanced version of the tailored iCON build construction field software
- Leica Infinity office software and Leica ConX for online sharing of data between the office and the site

The iCON iCR70 features:

- 4 buttons keyboard for simple operation
- Fast prism search by patented technology SpeedSearch
- Stable data communication with long-range Bluetooth® (up to 400m)
- Aligned to modern BIM processes, fully-rendered 3D design models can be easily shared via ConX from the design office to the field crews.

		Leica iCON iCR70	Leica iCON iCR80
ANGULAR MEASUREMENT			
Accuracy ¹ Hz and V	Absolute, continuous, diametrical ¹	2" [0.6 mgon], 5" (1.5 mgon)	1" (0.3 mgon), 2" [0.6 mgon] 5" [1.5 mgon]
DISTANCE MEASUREMENT			
Range ²	Prism [GPR1, GPH1P] ³ Non-Prism / Any surface ⁴	1.5m to 3500m R500: 1.5m to >500m	G1.5m to 3500m 30: 1.5m to 30m, R1000: 1.5m to >1000m
Accuracy / Measurement time	Single [prism] ^{2,5} Single [any surface] ^{2,4,5}	1mm + 1.5ppm / typically 2.4s 2mm + 2ppm / typically 3s	1mm + 1.5ppm / typically 2.4s 2mm + 2ppm / typically 3s ⁶
Laser dot size	At 50m	8mm x 20mm	
Measurement technology	System analyser	Coaxial, visible red laser	
AUTOMATIC AIMING			
Target aiming type		ATR	ATRplus
Target aiming range ² / Target locking range ²	Circular prism [GPR1, GPH1P] 360° prism [GRZ4, MPR122]	1000m / 800m 800m / 600m	1500m / 1000m 1000m / 1000m
Accuracy ^{1,2} / Measurement time	ATR angle accuracy Hz, V	2" [0.6 mgon], 5" [1.5 mgon] / typically 3-4s	1" [0.3 mgon], 2" [0.6 mgon], 5" [1.5 mgon] / typically 3-4s
PRISM FAST SEARCH			
Prism search type		SpeedSearch	PowerSearch
Range / Search time	360° prism [GRZ4, MPR122]	300m / typically 7s	300m / typically 5s
GUIDE LIGHT (EGL)			
Working range / Accuracy		5–150m / typically 5cm @ 100m	
GENERAL			
Field software	Leica iCON field software	iCON Field Software running on field controller [CC80] connected via Radio or cable.	iCON Field Software running on the instrument
Machine Control capability	With optional Machine Control App	No	Yes
Display & keyboard		4 button keyboard with status LEDs	5" [inch], WVGA, colour, touch, face I standard /face II optional, 22 keys, illumination
Processor	TI OMAP4430 1GHz Dual-core ARM® Cortex™ A9 MPCore™	Operating system – Windows EC7	
Power management	Exchangeable Lithium-Ion battery	Operating time 8–10h	Operating time 6–8 h
Data storage	Internal memory Memory card	2 GB SD card 1 GB or 8 GB	
Interfaces	RS232, USB, Bluetooth®, WLAN		
Weight	Total station including battery	5.0kg	5.3kg
Environmental specifications	Working temperature range Dust / Water [IEC 60529] / Humidity	–20°C to +50°C IP55 / 95%, non-condensing	

¹ Standard deviation ISO 17123-3
² Overcast, no haze, visibility about 40 km, no heat shimmer
³ 1.5m to 2000m for 360° prisms (GRZ4, GRZ122)
⁴ Object in shade, sky overcast, Kodak Gray Card (90% reflective)
⁵ Standard deviation ISO 17123-4
⁶ Distance > 500m: Accuracy 4mm + 2ppm, Measurement time typically 6s
The Bluetooth® trademarks are owned by Bluetooth SIG, Inc.
Laser radiation, avoid direct eye exposure. Class 3R laser product in accordance with IEC 60825-1:2014.



Leica iCON gps 30

Access the iCON GNSS performance

Designed to facilitate the shift from traditional measurement methods using tapes and strings, to modern digital methods, the iCON gps 30 offers an easy-to-use and economic solution for construction measurement tasks.

Equipped with Leica iCON field software, the iCON gps 30 can be used to:

- Increase productivity of any construction project by adapting digital measurement methods
- Define and document the position of water and sewer lines, oil and gas pipes or power and communication lines as part of the utility construction process
- Stakeout rough outlines for subsequent building construction tasks or subdividing real property
- Transfer outlines from design to field in landscape gardening projects or road construction
- Simple survey of ground control points for UAV workflows
- Designed with the operator in mind, the iCON gps 30 is an exceptionally lightweight and compact GNSS RTK rover, providing consistently accurate positions through advanced RTK technologies.

Integrated with the well-established iCON field software, tailored to typical construction workflows, the iCON gps 30 speaks the language of construction site professionals.

The iCON gps 30 is compatible with:

- Leica iCON CC70 and CC80 field controller
- Leica iCON field software
- “Tune out targets” feature to ignore other distractions in the field
- Fastest re-lock in case of interrupted line of sight

¹ Glonass L3, BeiDou B3 and Galileo E6 will be provided through future firmware upgrade.
² Measurement precision, accuracy, reliability and time for initialisation are dependent upon various factors including number of satellites, observation time, atmospheric conditions, multipath etc. Figures quoted assume normal to favourable conditions. A full BeiDou and Galileo constellation will further increase measurement performance and accuracy.
³ Might vary with temperature, age of battery, transmit power of data link device.
⁴ Depending on the used iCON field controller.

Leica iCON GPS 30		
GNSS PERFORMANCE		
GNSS Technology	Absolute, continuous, diametrical ¹	Adaptive on-the-fly satellite selection
Leica SmartCheck	Continuous check of RTK solution	Reliability 99.95%
Signal tracking	SmartTrack	GPS (L1, L2, L2C, L5), Glonass (L1, L2, L3'), BeiDou (B1, B2, B3'), Galileo (E1, E5a, E5b, Alt-BOC, E6')
Number of channels		320 hardware channels
MEASUREMENT PERFORMANCE & ACCURACY ²		
Time for initialisation		Typically 6 s
Real-time kinematic [Compliant to ISO17123-8 standard]	RTK, Multifrequency	Hz 10 mm + 1 ppm / V 20 mm + 1 ppm
Code differential	DGPS / RTCM	Typically 25 cm
COMMUNICATIONS		
Communication ports	Lemo Bluetooth®	USB and RS232 serial Bluetooth® 4.1 class 1 & sealed and protected 8-pin Lemo combined USB / Serial232 port
Communication protocols	RTK data protocols Network RTK	80 m / 80 m
External data links		Leica, Leica4G, CMR, CMR+, RTCM 2.2, 2.3, 3.0, 3.1, 3.2 MSM VRS, FKP, iMAX, MAC (RTCM SC104)
GENERAL		
Field software and controller	Leica iCON site	Leica iCON CC70 / CC80 field controller
User interface	Buttons and LEDs	On / Off button, 3 status LEDs
Power management	Internal power supply External power supply Operation time ³	Exchangeable Li-Ion battery (2.6 Ah / 7.4 V) Nominal 12 V DC, range 10.5 - 28 V DC 8 h GNSS 7 h receiving RTK data with CC70 modem
Weight and dimensions	Weight Diameter x Height	0.7 kg / 2.5 kg standard RTK rover setup on pole 186 mm x 71 mm
Environmental	Temperature Drop Proof against water, sand and dust Vibration Humidity Functional shock	-40 to 65°C operating, -40 to 80°C storage Withstands topple over from a 2 m survey pole onto hard surfaces IP66/IP68 (IEC60529 / MIL STD 810G CHG-1 510.6I / MIL STD 810G CHG-1 506.6 II / MIL STD 810 G CHG-1 512.6 I) Withstands strong vibration (ISO9022-36-05 / MIL STD 810G 514.6 Cat.24) 95% (ISO9022-13-06 / ISO9022-12-04 / MIL STD 810G CHG-1 507.6 II) 40 g / 15 to 23 msec (MIL STD 810G 516.6 I)

Leica iCON GPS 30 – GNSS RTK ROVER		
SUPPORTED GNSS SYSTEMS		
Dual-frequency / Multi frequency		✓ / •
GPS / GLONASS / Galileo / BeiDou		✓ / • / • / •
RTK PERFORMANCE		
DGPS / RTCM, RTK Unlimited, Network RTK		✓
POSITION UPDATE & DATA RECORDING		
5 Hz positioning		✓
ADDITIONAL FEATURES ⁴		
UMTS / CDMA phone modem		•



LEICA iCON iCT30 Construction Layout Tool

Easy-to-use and durable layout tool for one-person operation

Increased complexity in construction projects and the strong trend towards digitalisation and Building Information Modelling (BIM) in the Building Construction industry make digital layout methods and processes crucial. Facilitating the move from conventional analogue measurement methods to modern digital layout techniques, Leica Geosystems developed the easy-to use construction layout tool Leica iCON iCT30 to bring digital and automated layout technology to any construction site.

The iCON iCT30 allows users to:

- Move away from conventional analogue layout methods and easily adopt modern digital layout
- Increase productivity due to one-person operation of the iCON iCT30
- Layout lines for various foundation, structure and building exterior applications
- Layout interior drywall and insulation installations
- MEP layout of hanger locations for HVAC and duct work, inserts and slits for sheet metal work
- Fully automatic layout routines of points on floor or ceiling and lines for pipe wall penetrations
- Effectively do as-built checks and control measurements in vertical construction

With a measurement range of up to 80 m and an angular accuracy of 9", the iCT30 meets most requirements for layout applications.

The iCON iCT30 features:

- 4 buttons keyboard for simple operation
- Prism search by AutoSearch
- Most stable lock on prism for construction layout tools
- Tailored iCON build software with streamlined use of fully rendered models in IFC format
- Telescope for simpler aiming
- Reflectorless measurements
- Bluetooth
- IP66 rating

		Leica iCON iCT30
ANGULAR MEASUREMENT		
Accuracy ¹ Hz and V	Absolute, continuous, diametrical ¹	9" [2.7 mgon]
DISTANCE MEASUREMENT		
Range ²	Prism Non-Prism / Any surface ³	1.5 m to 80 m 1.5 m to 80 m
Accuracy / Measurement time	Single (prism) ^{2,4} Single (any surface) ^{3,4}	1mm / typically 2.4 s 2mm / typically 3 s
Laser dot size	At 50m	8 mm x 20 mm Coaxial, visible red laser
AUTOMATIC AIMING		
Target aiming type		ATR
Target aiming & Target locking range ²	Prism	80 m / 80 m
Accuracy ^{1,2} / Measurement time	ATR angle accuracy Hz, V	9" [2.7 mgon] typically 3-4 s
PRISM SEARCH		
Prism search type		AutoSearch
Range / Search time	Prism	80 m / typically 15 s
GUIDE LIGHT (EGL)		
Working range / Accuracy		5–80 m / typically 2 cm @ 40 m
GENERAL		
Field software	Leica iCON field software	iCON build software running on field tablet connected via BT or LR-BT [optional]
Display & keyboard		4 button keyboard with status LEDs
Laser Plummet		Yes
Power management	Exchangeable Lithium-Ion battery	Operating time 8–10 h
Interfaces	RS232, USB, Bluetooth®	
Weight	Layout tool including battery	5.0kg
Environmental specifications	Working temperature range Dust / Water [IEC 60529] /Humidity	–20 °C to +50 °C IP55 / 95 %, non-condensing

¹ Standard deviation ISO 17123-3
² Overcast, no haze, visibility about 40 km, no heat shimmer
³ Object in shade, sky overcast, Kodak Gray Card (18% reflective)
⁴ Standard deviation ISO 17123-4
The Bluetooth® trademarks are owned by Bluetooth SIG, Inc. Laser radiation, avoid direct eye exposure. Class 3R laser product in accordance with IEC 60825-1:2014.



Leica iCON gps 70 Series
Ultimate performance for your construction site

The Leica iCON gps 70 series represents the most efficient construction GNSS rovers. With the iCON gps 70 T you can measure and stakeout points quicker than ever before without the need to keep the pole vertical and level the bubble. The combination of the latest GNSS technology and inertial measurement unit (IMU) equips the iCON gps 70 T with permanent tilt compensation and makes it resistant to any magnetic interference. Being fully calibration-free, the iCON gps 70 T is ready when you are – anytime, anywhere.

Features

- Permanent tilt compensation
- Calibration free
- Resistant to magnetic interferences
- Compact and lightweight housing
- Superior GNSS Technology for maximum accuracy and reliability. Features Leica SmartTrack+ and SmartCheck+ and Leica xRTK.
- SmartLink Fill – bridges RTK communication gaps up to 10 minutes
- SmartLink - Achieve centimetre accurate positioning worldwide - perfect when working in remote areas around the globe
- Unique flexible software licencing and feature upgrade concept. You can order packages or individual licences when you need them, investing when you need to.

Leica iCON GPS 70 Series		
GNSS TECHNOLOGY		
Self-learning GNSS	Leica RTKplus SmartLink fill (worldwide correction service)	Adaptive on-the-fly satellite selection Bridging of RTK outages up to 10 min (3 cm 2D) ²
Leica SmartCheck	Continuous check of RTK solution	Reliability 99.95%
Signal tracking	SmartTrack	GPS (L1, L2, L2C, L5), Glonass (L1, L2, L3 ³), BeiDou (B1, B2, B3 ³), Galileo (E1, E5a, E5b, Alt-BOC, E6 ⁴)
Number of channels		555 (more signals, fast acquisition, high sensitivity)
Tilt compensation ¹	Increased measurement productivity and traceability	Calibration-free Immune to magnetic disturbances
MEASUREMENT PERFORMANCE & ACCURACY ²		
Time for initialisation		Typically 4 s
Real-time kinematic (Compliant to ISO17123-8 standard)	Single baseline Network RTK	Hz 8 mm + 1 ppm / V 15 mm + 1 ppm Hz 8 mm + 0.5 ppm / V 15 mm + 0.5 ppm
Real-time kinematic tilt compensated ¹	Topographic points (not for static control points)	Additional Hz pole tip uncertainty typically less than 8 mm + 0.4 mm/tilt down to 30° tilt
Post processing	Static (phase) with long observations Static and rapid static (phase)	Hz 3 mm + 0.1 ppm / V 3.5 mm + 0.4 ppm Hz 3 mm + 0.5 ppm / V 5 mm + 0.5 ppm
COMMUNICATIONS		
Communication ports	Lemo Bluetooth®	USB and RS232 serial Bluetooth v2.1 + EDR, class 1.5
Communication protocols	RTK data protocols Network RTK	Leica, Leica 4G, CMR, CMR+, RTCM 2.2, 2.3, 3.0, 3.1, 3.2 MSM VRS, FKP, iMAX, MAX (RTCM SC 104)
Built-in data links	Radio modem	Fully integrated, receive and transmit, external antenna 403 - 470 MHz, 1 W output power, up to 28800 bps over air or 902-928 MHz (licence free in North America); up to 1.0 W output power
External data links		UHF / VHF modem
GENERAL		
Field software and controller	Leica iCON site	Leica CC80 field controller
User interface	Buttons and LEDs Web server	On / Off and Function button, 8 status LEDs Full status information and configuration options
Data recording	Storage Data type and recording rate	Removable SD card, 1 or 8 GB Leica GNSS raw data and RINEX data at up to 20 Hz
Power management	Internal power supply External power supply Operation time ³	Exchangeable Li-Ion battery (2.8 Ah / 11.1 V) Nominal 12 V DC, range 10.5 - 26.4 V DC 7h receiving (Rx) data with internal radio, 5 h transmitting (Tx) data with internal radio, 6 h Rx/Tx data with internal phone modem
Weight and dimensions	Weight Diameter x Height	1.20 kg / 3.50 kg standard RTK rover setup on pole 173 mm x 173 mm x 108 mm
Environmental	Temperature Drop Proof against water, sand and dust Vibration Humidity Functional shock	-40 to 65 °C operating, -40 to 85 °C storage Withstands topple over from a 2 m survey pole onto hard surfaces IP66 / IP68 (IEC60529 / MIL STD 810G CHG-I 510.6 I / MIL STD 810G CHG-I 506.6 II / MIL STD 810G CHG-I 512.6 I) Withstands strong vibration (ISO9022-36-08 / MIL STD 810G 514.6 Cat.24) 95% (ISO9022-13-06 / ISO9022-12-04 / MIL STD 810G CHG-I 507.6 II) 40 g / 15 to 23 msec (MIL STD 810G 516.6 I)

Leica iCON GPS 70				
SUPPORTED GNSS SYSTEMS	BASE	VALUE	PERFORMANCE	ULTIMATE
L5	•	•	•	✓
GPS / GLONASS / Galileo / BeiDou	✓ / • / • / •	✓ / • / • / •	✓ / ✓ / • / •	✓ / ✓ / ✓ / ✓
RTK PERFORMANCE				
DGPS/RTCM, RTK Unlimited, Network RTK	•	✓	✓	✓
SmartLink fill / SmartLink	• / •	• / •	• / •	✓ / •
POSITION UPDATE & DATA RECORDING				
5 Hz positioning	✓ / •	✓ / ✓ ₁	✓ / ✓	✓ / ✓
RINEX data logging	✓	•	✓	✓
ADDITIONAL FEATURES ⁴				
Tilt compensation ¹	•	✓	✓	✓
RTK reference station functionality	✓	•	✓	✓
UHF Radio (receive & transmit) modem	✓	•	•	•

LEICA iCON iCB50 & iCB70 Manual Total Stations

The no-tapes and no-strings approach to measuring tasks on site



LEICA iCON iCB50 Manual Total Stations

Leica Geosystems’ new manual construction total station, the Leica iCON iCB50, simplifies your first step from conventional analogue layout methods to modern digital techniques which are needed for modern BIM processes. Easy-to-use and designed specifically for applications in the building construction industry, the iCB50 is usable with minimal training of the existing workforce, making you ready for the no-tapes and no-strings approach to construction layout.

The iCON iCB50 allows users to:

- Layout points and lines quickly and accurately
- Layout complex structures easily
- Quickly perform verticality checks on formwork and structures
- Complete fast and accurate as-built measurements
- Work with digital design data including fully rendered models in IFC format

Working directly with digital design data on board of the instrument allows the operator to prepare and execute construction tasks faster, simpler and more accurately. Benefit from simplified stakeout and as-built tasks on the construction project and the ability to react quicker to changes and updates in the design.

The iCON iCB50 features:

- iCON build on-board software
- 5 inch colour touch screen and full numeric keyboard
- FineFocus telescope to simply aim to a defined target
- 2” and 5” angular accuracy
- Reflectorless measurements
- Bluetooth
- IP66 rating

Leica iCON iCB70 Manual Construction Total Station

The Leica iCON iCB70 manual construction total station makes you layout more points per day on your construction project with either prism or reflectorless measurements. Featuring mobile data capability, the iCB70 lets you transfer construction data between the office and the instrument directly, keeping your project progress and plans constantly up to date, assuring that you do not miss any changes in design. Facilitating the move from conventional analogue layout methods to modern digital workflows, the iCB70 helps you to achieve the productivity and accuracies demanded by the building construction industry.

The iCON iCB70 allows users to:

- Keep tight project tolerances by measuring to a prism
- Layout points and lines quickly and accurately, even on complex structures
- Perform verticality checks on formwork and structures
- Complete fast and accurate as-built measurements
- Report volume calculations directly on site
- Work with digital design data including fully rendered models in IFC format
- Transfer construction data directly to and from the instrument

Equipped with the construction-tailored and easy-to-use software platform iCON build, the Leica iCON iCB70 manual construction total station guarantees efficient layout and as-built tasks.

The iCON iCB70 features:

- iCON build with ‘build plus’ on-board software
- 5 inch colour touch screen and full numeric keyboard
- FineFocus telescope to simply aim to a defined target
- 1”, 2” and 5” angular accuracy
- Prism and reflectorless measurements
- Bluetooth and WLAN
- Mobile data (GSM / GPRS / UMTS / LTE) as an option
- IP66 rating

	Leica iCON iCB50	Leica iCON iCB70
ANGULAR MEASUREMENT		
Accuracy Hz and V	Absolute, continuous, diametrical ¹ <ul style="list-style-type: none">• Display resolution: 0.1" (0.1 mgon)• Quadruple axis compensation• Compensator setting accuracy²: 0.5" / 1.5"• Compensator range: +/- 4' (+/- 0.07 gon)• Electronic level resolution: 2"• Circular level sensitivity: 6" / 2 mm	<div>2" / 5"</div> <div>1" / 2" / 5"</div>
DISTANCE MEASUREMENT		
Range	<ul style="list-style-type: none">• Prism (GPR1, GPH1P): 1.5 m to 3.500 m• Reflective Tape 60 mm x 60 mm > 250 m Non-Prism / Any surface <ul style="list-style-type: none">• R5003	<div>X</div> <div>✓</div> <div>✓⁴</div>
Accuracy / Measurement time	Single prism <ul style="list-style-type: none">• Single: 1 mm + 1.5 ppm (typical 2.4 s)• Continuous: 3 mm + 1.5 ppm (typical < 0.15 s)• Reflective tape 60 mm x 60 mm• Single mode: 3 mm + 2 ppm (typical < 2 s) Non-Prism / Any surface <ul style="list-style-type: none">• 0 m - 500 m: 2 mm + 2 ppm (typical 3 - 6 s)	<div>X</div> <div>✓</div> <div>✓⁴</div>
Laser dot size	<ul style="list-style-type: none">• At 30 m: 7 mm x 10 mm• At 50 m: 8 mm x 20 mm• At 100 m: 16 mm x 25 mm	<div>✓</div> <div>✓</div> <div>✓</div>
Telescope	<ul style="list-style-type: none">• Magnification: 30x• Resolving power: 3"• Focusing range: 1.55 m / 5.08 ft to infinity• Field of view: 1°30' / 1.66 gon / 2.7 m at 100 m	<div>✓</div> <div>✓</div> <div>✓</div>
GENERAL		
Display and keyboard	5" (inch), 800 x 480 px WVGA, colour, touch, 22 keys	5" (inch), 800 x 480 px WVGA, colour, touch, 22 keys
	2nd keyboard	•
	Key Illuminated	<div>✓</div> <div>✓</div>
Operation	<ul style="list-style-type: none">• Endless drives for HZ & V• Trigger-Key: user definable with 2 functions	<div>✓</div> <div>✓</div>
Power management	Exchangeable Lithium-Ion battery⁵ <ul style="list-style-type: none">• Operating time with GEB361• nn Operating time with GEB331 Battery charging time with <ul style="list-style-type: none">• GKL341 charger for GEB361 / GEB331• GKL311 charger for GEB361 / GEB331	<div>up to 18 h</div> <div>up to 9 h</div> <div>3 h 30 min / 3 h</div> <div>6 h 30 min / 3 h 30 min</div> <div>3 h 30 min / 3 h</div> <div>6 h 30 min / 3 h 30 min</div>
	External supply voltage <ul style="list-style-type: none">• Nominal voltage 13.0 V DC & 16 W max	<div>✓</div> <div>✓</div>
Data Storage	<ul style="list-style-type: none">• Internal memory: 2 GB Flash• Memory card: SD card 1 GB• USB memory stick: 1 GB	<div>✓</div> <div>✓</div>
Interfaces	<ul style="list-style-type: none">• RS2326, USB device• Bluetooth⁷• WLAN8• Mobile Data sidecover: LTE-Modem for internet access	<div>✓</div> <div>✓</div> <div>X</div> <div>X</div> <div>✓</div> <div>✓</div> <div>•</div>
Laser plummet (Laserclass 2)	Accuracy <ul style="list-style-type: none">• Plumb line deviation: 1.5 mm at 1.5 m instrument height• Diameter of laser point: 2.5 mm at 1.5 m instrument height	<div>✓</div> <div>✓</div>
Field software	iCON build field software	iCON build plus (incl. Sketching, Layout Points, Layout Lines, Checks, As-built, Volumes, Cut/Fill, Slopes, Stakeout)
	Software options	iCON build plus (Volumes, Cut/Fill, Slopes, Stakeout), Layout Objects, Hidden Point, Tilted Plane, 2Face and Set, Roding, Drill Pattern, MC Calibration
Weight	4.5kg	4.5kg
Environmental specifications ⁹	<ul style="list-style-type: none">• Working temperature range: -20°C to +50°C• Dust / Water (IEC 60529) / Humidity: IP66 / 95%, non-condensing• Military Standard 810G	<div>✓</div> <div>✓</div> <div>✓</div>

Legend:

1. 1" (0.3 mgon), 2" (0.6 mgon), 5" (1.5 mgon)

2. Angular accuracy / Compensator setting accuracy: 1" / 0.5" (0.2 mgon), 2" / 0.5" (0.2 mgon), 5" / 1.5" (0.5 mgon)

3. R500: Kodak gray 90% reflective (1.5 m to >500 m), Kodak gray 18% reflective (1.5 m to >200 m)

4. iCB70 Laserclass 2 model is Prism mode only, without reflectorless measurement and laser pointer

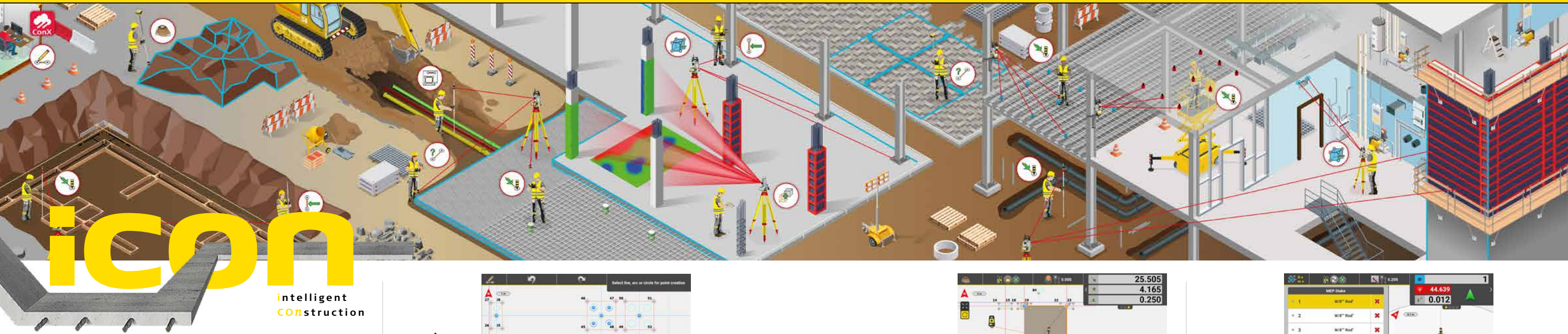
5. Distance/angle measurement every 30 seconds

6. 5 PIN Lemo-0 for power, communication and data transfer

7. For communication and data transfer

8. For internet access, communication and data transfer, WLAN range up to 200 m

9. Storage temperature: -40°C to +70°C



LEICA iCON BUILD

The complete solution for all positioning and measuring tasks on site

Leica iCON.
Understanding construction.

Leica iCON build provides unmatched versatility and flexibility.

It enables you to carry out all positioning related tasks with just one solution. In addition, each iCON build application offers unique features and benefits, performance and accuracy.

Customize and extend your iCON field toolbox.



"EXTEND YOUR BUSINESS TO EARTHWORKS"
iCON build is part of the unique iCON field toolbox, providing you with one solution for all your construction tasks across the entire job site. iCON field offers you the possibility to extend and customize applications according to your needs.

www.leica-geosystems.com/icon



Sketching

Applications

- Point Pilot for fast and intuitive input of plan dimensions
- Create points, arcs, lines, anchor bolts, patterns etc. within seconds
- Create centre points, mid points and intersections points from design data quickly and easily

Benefits

- Easily replicate digital blueprints
- Fix incomplete data in the field by adding missing structures
- Immediate response to changes on site
- Update plans to reflect true situations



Layout Lines

Applications

- Layout control lines, parallels, perpendiculars or arcs and align structures in relation to them
- Apply horizontal and vertical offsets
- Stake out strings to mark elevation for curb reference

Benefits

- Aligning columns and anchor bolt patterns easy and fast
- Simply rebuild and extend incomplete structures
- Monitor offset value to speed up form work erection
- Repeatable positioning of profile boards and precise transfer of alignments eliminating risk of board damage



Volumes

Applications

- Calculate volume of a stockpile or pit, comparison between surfaces or to the elevation
- Apply compaction factor in relation to your material
- Read out balanced site elevation

Benefits

- Accurate and flexible volume calculations, independent of size or shape
- Calculation of truck loading considering compaction factors
- Balance out Cut & Fill for optimised material and machine usage
- Monitor ongoing progress of earthworks



Checks

Applications

- Check distances (horizontal, vertical, sloped)
- Check grades and angles
- Check area and perimeter in 2D and 3D
- Info panel shows all results at a glance supported with graphics in map

Benefits

- Verify on site correct placement of walls, formwork, columns, pipes, etc.
- Decide in the field based on facts rather estimates
- Precise input for pre-fabrication of manholes, ventilation systems, windows or orders of sand, pavement, etc.



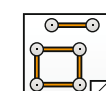
Points & MEP Layout

Applications

- Simply lay out sketched or imported points directly from the map
- Intuitively navigate to selected hanger, slit, insert, conduit, outlet, etc.
- Auto-select next point from list or the nearest from current location

Benefits

- Optimised in/out, left/right display via split screen and viewing options
- Colour code clearly indicates quality of laid out points
- Integrated tolerance checks increase precision and reduce errors Important point info available as code in info panel, e.g. "3/4" insert"



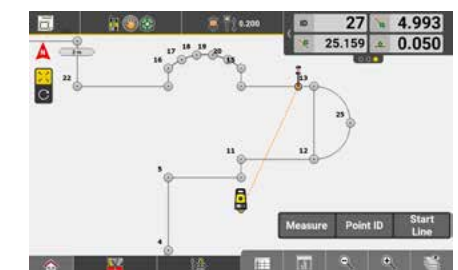
As-Built

Applications

- Capture points, lines or arcs in one step with immediate graphical representation
- Apply codes per point and store measurements automatically
- Unique Start/Stop line feature accelerates line creation

Benefits

- Reduce site visits by visually verifying the measurements in the field
- Assign as-built data to individual layers while collecting points
- Back-up your control lines
- Store accurate 3D data as base for any CAD/BIM office operation or architectural planning





LEICA iCON BUILD

Layout Objects straight from MEP/BIM design models

Layout Objects straight from MEP/BIM design models

- Difficult coordination between VDC/BIM design teams in the office and construction experts on site
 - Non-standard data sets cause loss of critical constructible information
 - Data overload with complex design models
- These challenges can be easily overcome with the Leica iCON build Layout Objects App. This easy-to-use solution enriches your data with intelligent model object information without over-complicating the process.

Object-driven construction layout:

- Keep using object meta-data with the only construction layout field solution supporting an object-driven layout approach based on IFC data
- Immediately start laying out by simply loading IFC data straight from your MEP/BIM design software and graphically selecting objects
- Simplify complex design data in an easy-to-read graphical interface with iCON build's unique "Zlider Bar"



DIGITALISE THE CONSTRUCTION SITE WITH THE LAYOUT OBJECTS APP

Intuitively reduce complex projects into workable packages



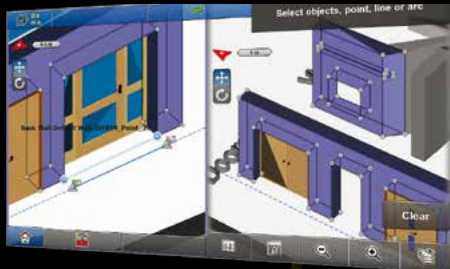
Process directly to fill layout list from object selection



No more coordination issues between VDC/BIM design teams in the office and construction teams on site



Zlider Bar allows you to vertically cut out building model elements for best map visualisation



Import IFC files from MEP/AEC/BIM design software and visualise 3D design models



Map organisation and object selection via typical IFC tree structure



Object-driven layout process with automatically generated object's corners and edges

LEICA BLK3D

Real-time, professional grade,
in-picture 3d measurement.



Take a picture. Measure anything.

The BLK3D captures images and places precise measurement at your fingertips. Share images and measurements in multiple formats.

The art of photogrammetry. Simplified.

Unmatched combination of a calibrated stereo-camera, advanced algorithms and real-time edge computing fused with leading Electronic Distance Measurement technology.

New dimensions for 2D pictures.

The BLK3D creates images that contain precise three-dimensional measurements.

Progressive project documentation for architecture, engineering and construction.

Capture critical moments throughout the life of a building.

Access projects. Anywhere, anytime.

Measure in your image – on the handheld imager, on the desktop, on-site or in the office.

Object detection and snapping.

Auto-Snapping uses computer vision technologies to select the right points for your measurements.

Working with digital floorplans.

Store your measurable images on the device and on desktop. Organize your projects by tagging measurable images with searchable keywords for easy recall and share them in multiple formats.



BLK3D PRODUCT SPECIFICATIONS	
GENERAL	
Dimensions (H x W x D)	180.6 x 77.6 x 27.1 mm (7.11 x 3.06 x 1.07 in)
Weight (with rechargeable battery)	480 g (17 oz)
Temperature range	Storage: -25 to 60 °C (-13 to 140 °F) Operation: -10 to 50 °C (14 to 122 °F) Charging: 0 to 40 °C (32 to 104 °F)
Tripod adapter	Supports 1/4-20 UNC screw adapters
TECHNOLOGY	
Operating system	Android 7.1.2 (Nougat)
Processor (with integrated GPU)	Snapdragon 820E QuadCore (2.35 GHz)
Real-time Processor	STM32F446
Screen	5.0" IPS, HD 720x1280 LCD capacitive multi-touch screen, chemically strengthened, brightness: 450 cd/m2 Pixels: 2 x 10 MP (15.8 cm diagonal base line) Field of view: 80°
Stereo camera	Focal length: 4.0 mm (22 mm in 35 mm equiv. in 1:1) Aperture: F3.0
EDM camera	Pixels: 2 MP Field of view: 14°
I/O	USB Type-C 1.0 for data transfer and charging (water-resistant), integrated speaker and microphone
Keyboard	Three physical buttons (Power, Laser/Photo capture, Photo capture), four touch buttons (Back, Home, Recents, Laser/Photo capture)
Additional sensors	Compass, 3D accelerometer and 3D gyroscope
Laser class	2
Laser type	655 nm, 0.95 mW
STORAGE	
Internal storage	64 GB (equals 14000 single-shot or 5000 multi-shot 3D images)
COMMUNICATION	
Bluetooth® Smart	Bluetooth v4.1 and v2.1 Radiated power: 1.78 mW [BLE] Radiated power: 10.00 mW [BT classic] Frequency: 2402-2480 MHz
Wireless LAN	Standard: 802.11 b/g/n Radiated power: 6.31 mW Frequency: 2412-2472 to 2412-2462 MHz
GPS	A-GPS and GLONASS
POWER MANAGEMENT	
Battery	Rechargeable battery pack Li-ion (3.80 V, 3880 mAh, 14.7 Wh)
Power management	AC adapter (input: 100-240 V AC) External charger (input: 100-240 V AC) (optional)
Charge time	< 3.5 h (with AC adaptor) < 5h (with optional external charger) Typical capture: 4h / 220 multi-shot captures ¹ Continuous capture: 2.5 h / 1000 single-shot captures ¹ Laser measurements: 6.5 h / 9500 laser measurements Auto power off: after 3 h in sleep mode
Operating time	

3D IMAGE DISTANCE MEASUREMENT	
2D in-picture accuracy ^{2/3}	± 3 mm (0.12 in)
3D in-picture accuracy ^{2/3}	± 6 mm (0.24 in)
LASER DISTANCE MEASUREMENT	
Accuracy with favourable conditions ⁴	± 1.0 mm (0.04 in) ⁶
Accuracy with unfavourable conditions ⁵	± 2.0 mm (0.08 in) ⁶
Range with favourable conditions ⁴	250 m (820 ft)
Range with unfavourable conditions ⁵	120 m (394 ft)
Smallest unit displayed	0.1 mm (1/32 in)
X-Range Power Technology™	yes
Ø laser point at distances	6 / 30 / 60 mm (10 / 50 / 100 m)
TILT MEASUREMENT	
Measuring tolerance to laser beam ⁷	± 0.2°
Measuring tolerance to housing ⁷	± 0.2°
Range	360°
P2P MEASUREMENT WITH DST 360 (OPTIONAL)	
Working range vertical sensor	-64° to > 90°
Accuracy vertical sensor up to	± 0.1°
Working range horizontal sensor	360°
Tolerance P2P function at distances (combination of sensors and distance measuring) approx.	± 2 mm / 2 m ± 5 mm / 5 m ± 10 mm / 10 m
SOFTWARE OPTIONS OVERVIEW	
BLK3D Mobile	
BLK3D Mobile (included)	Reality Capture, Laser, Organiser, 3D Image export to pdf and jpg
Sketch & Document Option (optional)	Sketch Plan , P2P Measure, Smart Room, Plan export to pdf, jpg, DXF and DWG (2D/3D/raw)
BLK3D Desktop	
BLK3D Desktop Base (optional)	Organiser, Measure, working with plans
3D Model Option (optional)	3D Modelling on 3D Images
Minimum system requirements	Windows 7, 8.1, 10 with 64-bit; 6 GB RAM

1. Wi-Fi® off, Bluetooth® off, flash off, screen brightness 50%.

2. Multi-shot with recommended baseline length.

3. Measurement precision, accuracy, and reliability are dependent upon various factors including distance and position to object, baseline length, texture of object, light conditions, ambient temperature, calibration etc. Figures quoted assume normal to favourable conditions at close range and are subject to change.

4. Applies to 100 % target reflectivity (white painted wall), low background illumination, 25 °C.

5. Applies to 10 to 100 % target reflectivity, high background illumination, - 10 °C to + 50 °C.

6. Tolerances apply to ranges from 0.05 m to 10 m with a confidence level of 95%. The maximum tolerance may deteriorate to 0.1 mm/m between 10 m to 30 m, to 0.20 mm/m between 30 m to 100 m and to 0.30 mm/m for distances above 100 m.

7. After user calibration. Additional angle related deviation of ±0.0.1° per degree up to ±45° in each quadrant.



100 x 165mm

REALITY CAPTURE MADE STUNNINGLY SIMPLE

Architects, Engineers, Surveyors & Builders

The Leica BLK360 captures the world around you with full-colour panoramic images overlaid on a high-accuracy point cloud. Simple to use with just the single push of one button, the BLK360 is the smallest and lightest 3D laser scanner of its kind. Anyone who can operate an iPad can now capture the world around them with high resolution 3D panoramic images.



Speed

On-the-fly image and point cloud processing in the field.

Portability

This small, lightweight scanner fits in a messenger bag, giving you the flexibility to scan wherever, whenever.

Ease of Use

Push-button scanning that's automatically registered in the mobile version of ReCap 360 Pro.

Simplified Data Collection

This small, lightweight scanner fits in a messenger bag, giving you the flexibility to scan wherever, whenever.

Interoperability

Connect reality capture data to Autodesk's design solutions.

BLK360 PRODUCT SPECIFICATIONS	
GENERAL	
Imaging scanner	3D scanner with integrated spherical imaging system and thermography panorama sensor system
DESIGN & PHYSICAL	
Housing	Black anodized aluminium
Dimensions	Height: 165 mm / Diameter: 100 mm
Weight	1kg
Transport cover	Hood with integrated floorstand
Mounting mechanism	Button-press quick release
OPERATION	
Stand-alone operation	One-button operation
Remote operation	iPad app, Apple iPad Pro® 12.9"/iOS 10 or later
Wireless communication	Integrated wireless LAN (802.11 b/g/n)
Internal memory	Storage for > 100 setups
Instrument orientation	Upright and upside down
POWER	
Battery type	Internal, rechargeable Li-Ion battery (Leica GEB212)
Capacity	Typically >40 setups
SCANNING	
Distance measurement system	High speed time of flight enhanced by Waveform Digitizing (WFD) technology
Laser class	1 (in accordance with IEC 60825-1:2014)
Wavelength	830 nm
Field of view	360° (horizontal) / 300° (vertical)
Range*	min. 0.6 - up to 60 m
Point measurement rate	up to 360'000 pts / sec
Ranging accuracy*	4mm @ 10m / 7mm @ 20m
Measurement modes	3 user selectable resolution settings
IMAGING	
Camera System	15 Mpixel 3-camera system, 150Mpx full dome capture, HDR, LED flash Calibrated spherical image, 360° x 300°
Thermal Camera	FLIR technology based longwave infrared camera Thermal panoramic image, 360° x 70°
PERFORMANCE	
Measurement speed	< 3 min for complete full dome scan, spherical image & thermal image
3D point accuracy*	6mm @ 10m / 8mm @ 20m
ENVIRONMENTAL	
Robustness	Designed for indoor and outdoor use
Operating temperature	+5 to +40° C
Dust/Humidity	Solid particle/liquid ingress protection IP54 (IEC 60529)
DATA ACQUISITION	
Acquisition	Live image and scanned data streaming Live data viewing and editing Automatic tilt measurements



Get the bundle that makes capturing reality as easy as clicking a button

BLK360 Imaging Laser Scanner

- Smallest and lightest laser scanning system in the world
- Weight: 1kg, Size: 100mm x 165mm
- Under 3 minutes for a full 360° reality capture
- 3-D image point cloud available in real time
- Selectable resolution settings
- Calibrated full spherical image, HDR, LED flash support

Leica Cyclone REGISTER 360

Cyclone REGISTER 360 empowers users of any skill-level to work smarter, deliver results more accurately, visualise in more detail and collaborate more effectively - placing the user at the centre of their projects.

Leica Cyclone FIELD 360

As part of the Leica Geosystems 3D Reality Capture Solution, the Leica Cyclone FIELD 360 mobile-device app links the 3D data acquisition directly in the field with the RTC360 laser scanner, ScanStation P30/P40 and P50 survey-grade laser scanners, or BLK360 imaging laser scanner and the final data registration with Leica Cyclone REGISTER 360 post-processing office software.

All specifications are subject to change without notice.
All accuracy specifications are one sigma unless otherwise noted.
Scanner: Laser class 1 in accordance with IEC 60825-1:2014.
Copyright Leica Geosystems AG, Heerbrugg, Switzerland 2017.



PRO2 PRODUCT SPECIFICATIONS

3D SENSING

- Structured light (infrared) 3D sensor
- 20 seconds capture time per scan/sweep
- 99% accurate within range
- 15 ft (4.5 m) maximum range
- 3D Data Registration: Automatic
- Depth Resolution: 10 points per degree (3600 points at equator, 1800 points at meridian, about 4 million points per pano)

CONSTRUCTION

- Durable texture black plastic enclosure
- Manufactured in USA
- Size: 9.0" H, 10.25" W, 4.38" D (230 x 260 x 110 mm)
- Weight: 7.5 lb (3.4 kg)
- Color: Black

PHOTOGRAPHY

- Output Pano Pixels: 134.2 MP, equirectangular
- Export images up to 8092px x 4552px
- Lens: 4K Full Glass
- White Balancing: Automatic full-model
- 360° (left-right) x 300° (vertical) field of view

DATA

- WiFi to transfer data from camera to iOS device through the Capture app
- WiFi 802.11 n/ac 5 Ghz

BATTERY

- Lithium ion battery
- Can scan for 8 hours on one charge
- 4.5-hour charge time

GPS

- Included



3D for Architecture, Engineering & Construction

Whether you work in architecture, engineering, or construction, you'll be able to streamline documentation, 3D scan as-builts, and collaborate with ease. With Matterport, you can also reduce costs and help save the most precious commodity — your time.

Architecture and Engineering

Streamline design and BIM modeling processes with digital twin cloud data of site conditions.

Our platform integrates seamlessly with your existing software - from SketchUp, to Revit, AutoCAD, and other BIM software.

Construction

Build more efficiently with collaborative project review. Use BIM360 or Procore with Matterport to enable quick and easy collaboration and manage all aspects of your project in 3D.

Procore is the most used construction software in the world.

Pro2 3D Camera

The gold standard for professional 3D capture from our best-in-class camera.

Quality

High-quality 3D capture with unlimited 4K print quality photography. Professional photo resolution (134 megapixels) and 3D accuracy. Great at scanning any size space. Perfect for homes, apartments, hotels, commercial buildings.

Flexible

With a single capture, get everything you need to market, inspect, or redesign a real-world space. With the Matterport Pro2 camera and a Matterport subscription plan, you gain access to premium features.

Easy

Easy to use 3D capture with the press of a single button and minimal training.

Compatible

Pro2 pairs with the Matterport Capture app for both iOS and Android devices.



Matterport Axis

Revolutionary motorized mount for smartphone makes it easier than ever to capture more spaces in less time with added precision.



LEICA RTC360 3D REALITY
CAPTURE SOLUTION
FAST. AGILE. PRECISE.



Fast

The Leica RTC360 laser scanner makes 3D reality capture faster than ever before. With a measuring rate of up to 2 million points per second and advanced HDR imaging system, the creation of coloured 3D point clouds can be completed in under 2 minutes. Plus, automated targetless field registration (based on VIS technology) and the seamless, automated transfer of data from site to office reduce time spent in the field and further maximise productivity.



Agile

Small and lightweight, the Leica RTC360 scanner's portable design and collapsible tripod mean it's compact enough to fit into most backpacks, ready to be taken anywhere. Once on-site, easy-to-use, one-button operation makes for fast, hassle-free scanning.



Precise

Low noise data allows for better images, resulting in crisp, high-quality scans that are rich in detail and ready for use in a range of applications. Combined with Cyclone FIELD 360 software for automated registration in the field, the Leica RTC360 scanner offers outstanding precision that can be checked on-site.

The Leica RTC360 3D reality capture solution empowers users to document and capture their environments in 3D, improving efficiency and productivity in the field and in the office through fast, simple-to-use, accurate, and portable hardware and software. The RTC360 3D laser scanner is the solution for professionals to manage project complexities with accurate and reliable 3D representations and discover the possibilities of any site.

Key Features

- Highly portable, highly automated, intuitive and designed for maximum productivity, the RTC360 solution efficiently combines the RTC360 a high-performance 3D laser scanner, Leica Cyclone FIELD 360 mobile-device app for edge computing for automatically registering scans in real time, and Leica Cyclone REGISTER 360 office software to integrate your 3D model seamlessly into your workflow.
- Capture scans, including enriching High-Dynamic Range (HDR) imagery, in less than two minutes.
- Automatically record your moves from station to station to pre-register your scans in the field without manual intervention.
- Augment your data capture with information tags illustrating the opportunities for better planning, reflect site reality, and boost your teams' situational awareness.



Pre-registraton in the field

As part of the RTC360 solution, the Cyclone FIELD 360 app links the 3D data acquisition in the field with the laser scanner and data registration in the office with Cyclone REGISTER 360. On-site the user can automatically capture, register and examine scan and image data. The user interface combines easy handling of complex calculations with a graphical user guidance that offers a remarkable user experience, also for novice users.

RTC360 PRODUCT SPECIFICATIONS	
GENERAL	
3D Laser Scanner	High-speed 3D laser scanner with integrated HDR spherical imaging system and Visual Inertial System (VIS) for real time registration
PERFORMANCE	
Data acquisition	< 2 min for complete full dome scan and spherical HDR image at 6mm @ 10m resolution
Real time registration	Automatic point cloud alignment based on real time tracking of scanner movement between setups based on Visual Inertial System (VIS) by video enhanced inertial measurement unit
Double scan	Automatic removal of moving objects
SCANNING	
Distance measurement	High-speed, high dynamic time of flight enhanced by Waveform Digitizing (WFD) technology
Laser Class	1 (in accordance with IEC 60825-1:2014), 1550nm (invisible)
Field of view	360° (horizontal) / 300° (vertical)
Range	Min. 0.5 - up to 130 m
Speed	Up to 2'000'000 pts / sec
Resolution	3 user selectable settings (3/6/12mm @ 10m)
Accuracy*	Angular accuracy 18" Range accuracy 1.0 mm + 10 ppm 3D point accuracy 1.9 mm @ 10 m 2.9 mm @ 20 m 5.3 mm @ 40 m
Range noise* **	0.4 mm @ 10 m, 0.5 mm @ 20 m
IMAGING	
Camera	36 MP 3-camera system captures 432 MPx raw data for calibrated 360° x 300° spherical image
Speed	1 minute for full spherical HDR image at any light condition
HDR	Automatic, 5 brackets
NAVIGATION SENSORS	
Visual Inertial System	Video enhanced inertial measuring system to track movement of the scanner position relative to the previous setup in real time
Tilt	IMU based, Accuracy: 3' for any tilt
Additional sensors	Altimeter, Compass, GNSS
OPERATION	
On scanner	Touch-screen control with finger touch, full colour WVGA graphic display 480 x 800 pixels
Mobile devices	Leica Cyclone FIELD 360 app for iPad or Android tablets including: - Remote control of scan functions - 2D & 3D data viewing - Tagging - Automatic alignment of scans
Wireless	Integrated wireless LAN (802.11 b/g/n)
Data storage	Leica MS256, 256GB exchangeable USB 3.0 flash drive



DESIGN & PHYSICAL	
Housing	Aluminium frame and sidecovers
Dimensions	120mm x 240mm x 230mm / 4.7" x 9.4" x 9.1"
Weight	5.35kg / 11.7 lbs, nominal (w/o batteries)
Mounting mechanism	Quick mounting on 5/8" stub on lightweight tripod / optional tribrach adapter / survey tribrach adapter available
POWER	
Internal battery	High-speed, high dynamic time of flight enhanced by Waveform Digitizing (WFD) technology
External	1 (in accordance with IEC 60825-1:2014), 1550nm (invisible)
ENVIRONMENTAL	
Operating temperature	-5° to +40° C
Storage temperature	-40° to +70° C
Dust/Humidity***	Solid particle/liquid ingress protection IP54 (IEC 60529)

All specifications are subject to change without notice.
All accuracy specifications are on a level of confidence of 68% according to the Guide of the Expression of Uncertainty in Measurement (JCGM100:2008) unless otherwise noted.
* At 89% albedo.
** For single shot measurements
*** For upright and upside down setups with a +/- 15° inclination
Scanner: Laser class 1 in accordance with IEC60825:2014
iPhone and iPad are trademarks of Apple Inc.
Android is a trademark of Google.

LEICA CYCLONE FIELD 360

VIEW. CHECK. ADD.



LEICA CYCLONE FIELD 360 SPECIFICATIONS	
GENERAL	
IOS or Android app	In-the-field app for remote scanner control, data management, quality control, data tagging and automatic pre-registration on-site
SCANNER CONTROL	
Remote scanner control with access to all control features	
DATA MANAGEMENT	
Create, edit and delete scan jobs	
DATA COMMUNICATION & TRANSFER	
Communication	Bi-directional wireless communication between scanner and tablet
Transfer	Automatic transfer of scan data from scanner to tablet; automatic synchronisation of all app created data from tablet to scanner
QUALITY CONTROL	
Point cloud navigation	Navigate single and registered point clouds in 2D map view, 360° panoramic view or in full 3D view
Point cloud display	Display point clouds in full HDR colour, rainbow intensity or grey-scale mapping
Measurement	Take and tag measurements within the point cloud
DATA TAGGING	
Add image, video, voice, text or any other file-based tags to point cloud	
PRE-REGISTRATION	
Auto alignment	Integrated wireless LAN (802.11 b/g/n)
Visual alignment	Leica MS256, 256GB exchangeable USB 3.0 flash drive
INTEROPERABILITY	
Sensor hardware	Leica RTC360 laser scanner
Cyclone software	Leica Cyclone REGISTER 360 1.5 or higher, requires active REGISTER 360 license for activation
SYSTEM REQUIREMENTS	
Platform	Android tablet computer running on Android 6.0 or higher, e.g. Samsung Galaxy Tab S3 Apple iPad tablet computer running on iOS 11.1 or higher, e.g. iPad Pro with 10.5" screen
DATA TAGGING	
Contact your local Leica Geosystems representative or an authorised Leica Geosystems distribution partner.	



View

As part of the Leica Geosystems Reality Capture 360 solution, the high performance Leica Cyclone FIELD 360 mobile-device app is the perfect field companion for the Leica RTC360 3D laser scanner. With its intuitive user interface, remote scanner control and on-site point cloud display, navigation is a breeze - even for novice users – with full imagery and point cloud data delivered directly to your tablet using edge computing technology.



Check

Direct data access and visualisation are the foundation for quality control in the field; with Cyclone FIELD 360, automatically pre-registered point cloud data enables users to quickly conduct on-site quality control checks, improves productivity and makes for better informed decisions in the field.



Add

For improved registration in Leica Cyclone REGISTER 360 post-processing, and to add extra value and information to 3D data, Cyclone FIELD 360 enables on-site tagging of measurements, videos, images, text or voice files to the point cloud geometry simply by using your tablet.





DJI MATRICE 300 RTK
THE CYBER WORKHORSE



DJI MATRICE 30 SERIES
POWER IN PORTABILITY

A New Standard for the Commercial Drone Industry

The Matrice 300 RTK is DJI's latest commercial drone platform that takes inspiration from modern aviation systems. Offering up to 55 minutes of flight time, advanced AI capabilities, 6 Directional Sensing & Positioning and more, the M300 RTK sets a whole new standard by combining intelligence with high-performance and unrivaled reliability.

Suitable for a wide range of applications;

- Powerline Inspections
- Search and Rescue
- Wind Turbine Inspection
- Bridge Inspection
- Firefighting
- Construction Site & Mining Mapping
- Offshore Rig Inspections
- Precision Agriculture
- Solar Panel Inspection
- Telecom Inspection



DJI P1

Full Frame - The New Benchmark for Aerial Surveying

The Zenmuse P1 integrates a full-frame sensor with interchangeable fixed-focus lenses on a 3-axis stabilized gimbal.

Designed for photogrammetry flight missions, it takes efficiency and accuracy to a whole new level.



DJI L1

A Lidar + RGB Solution for Aerial Surveying

The Zenmuse L1 integrates a Livox Lidar module, a high-accuracy IMU, and a camera with a 1-inch CMOS on a 3-axis stabilized gimbal. When used with Matrice 300 RTK and DJI Terra, the L1 forms a complete solution that gives you realtime 3D data throughout the day, efficiently capturing the details of complex structures and delivering highly accurate reconstructed models.

Zoom Camera

- 48 MP
- 5x-16x Optical Zoom

Wide Camera

- 12 MP
- 1/2" CMOS Sensor

Thermal Imaging Camera

- Resolution: 640×512@30Hz
- Temperature Measurement
- Accuracy: ± 2° or ± 2%

Laser Rangefinder

- Range: 3 m - 1200 m
- Accuracy: ± (0.2m+D×0.15%)

Powerful Flight Performance

- 41-min Max Flight Time
- 15 m/s Wind Resistance
- 7000 m Service Ceiling
- 25 m/s Max Speed

Advanced Intelligence

- Smart Inspection
- Smart Low-Light Photo
- Low-Light FPV Camera

Safe and Reliable

- IP55 Protection
- -20° ~ 50° Temp. Operating Range
- 6 Directional Sensing & Positioning
- Quad-Antenna OcuSync 3 Enterprise + DJI Cellular
- AirSense ADS-B Receiver

DJI FlightHub 2

- 2.5D Base Map and Cloud Mapping
- Low Latency Live Streaming
- Live Annotations
- Cross-device Compatibility

Revolutionary Flight Experience

- DJI RC Plus with IP54 Protection
- Redesign Pilot 2 Flight App
- 6 Hr On-Screen Time
- 4 Antenna OcuSync 3 Enterprise

DJI Dock

- IP54 Protection
- 35° ~ 50° Temp. Operating Range
- 25-Min Fast Charge
- 7 km Operation Radius
- DJI Cloud API

Phantom 4 Pro V2.0

Featuring a 1-inch CMOS sensor that can shoot 4K/60fps videos and 20MP photos, the Phantom 4 Pro V2.0 grants filmmakers absolute creative freedom. The OcuSync 2.0 HD transmission system ensures stable connectivity and reliability, five directions of obstacle sensing ensures additional safety, and a dedicated remote controller with a built-in screen grants even greater precision and control. [1] A wide array of intelligent features makes flying that much easier. The Phantom 4 Pro V2.0 is a complete aerial imaging solution, designed for the professional creator.



PIX4D CRANE CAMERA SOLUTION

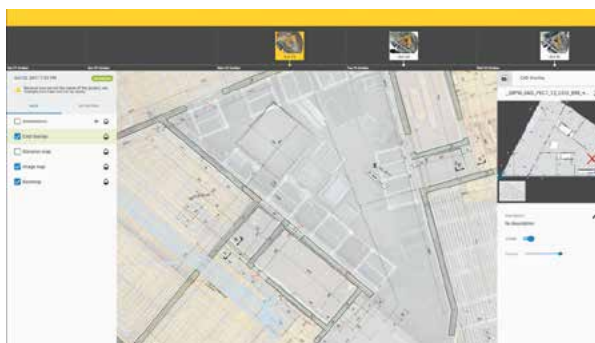
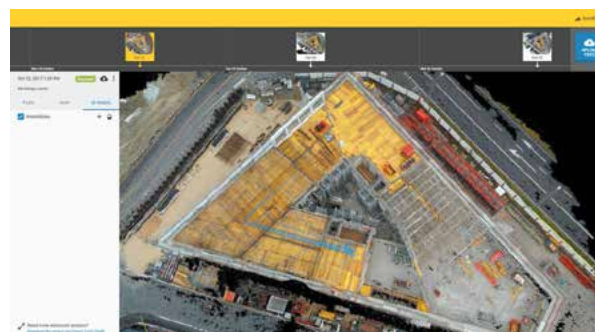
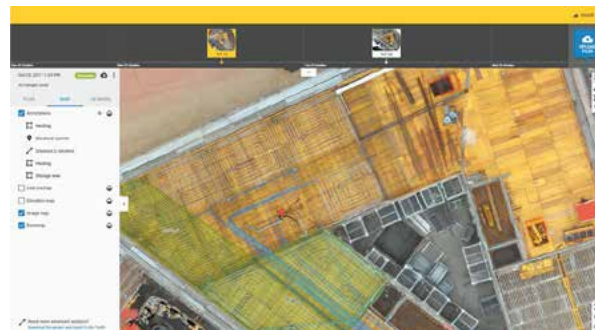
UNIQUE SOLUTION FOR AUTOMATED AND DAILY 2D/3D AS-BUILT UPDATES OF CONSTRUCTION SITES

Revolutionize the way you collect and verify as-built data of your site with the Pix4D Crane Camera

- Get visual site updates automatically, easily, quickly and remotely
- Facilitate project collaboration by providing real-time information
- Verify the as-built against as-design with built-in measurement and CAD drawing overlay tools
- Rapidly detect, document and communicate scheduling and build errors
- Document and communicate site progress to keep your 4D BIM up to date

Daily outputs

- Original high resolution images
- 2D georeferenced orthophotos
- 2D elevation maps
- 3D models
- 3D point clouds

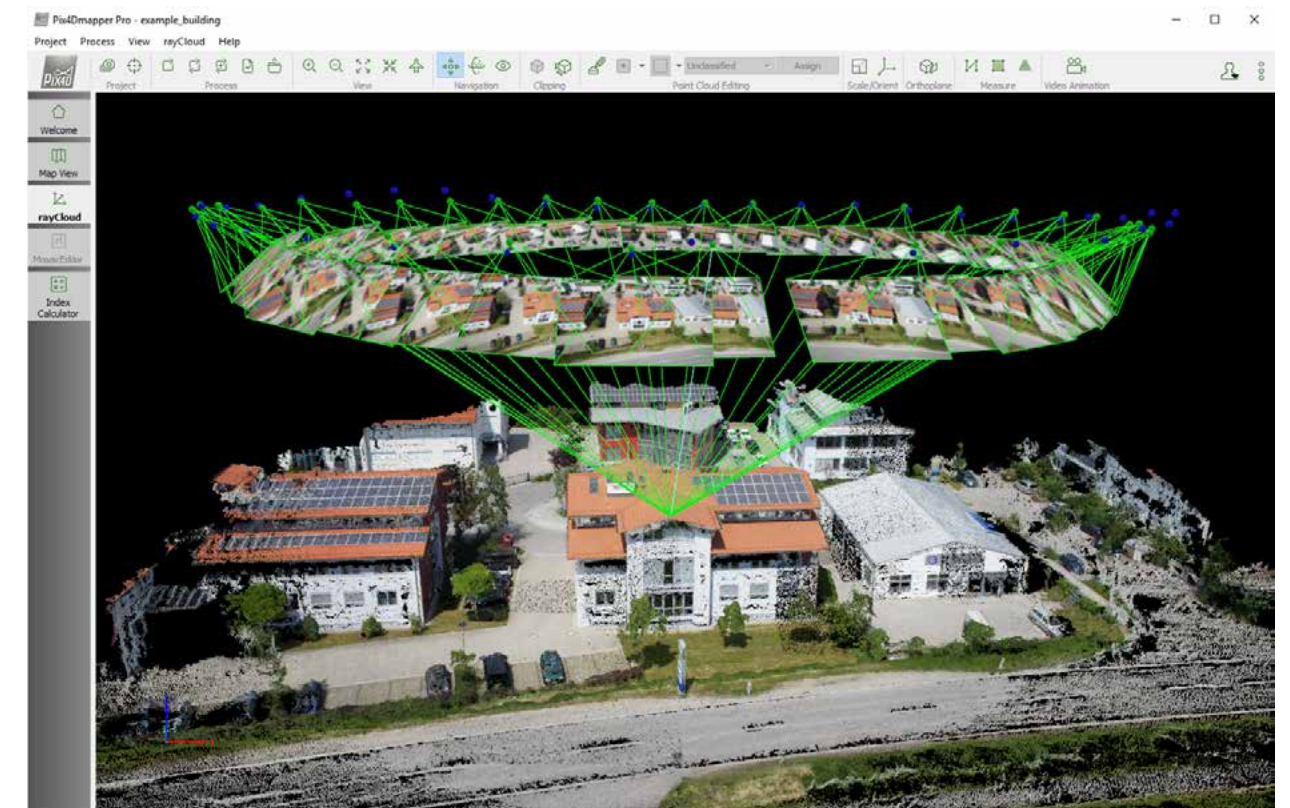
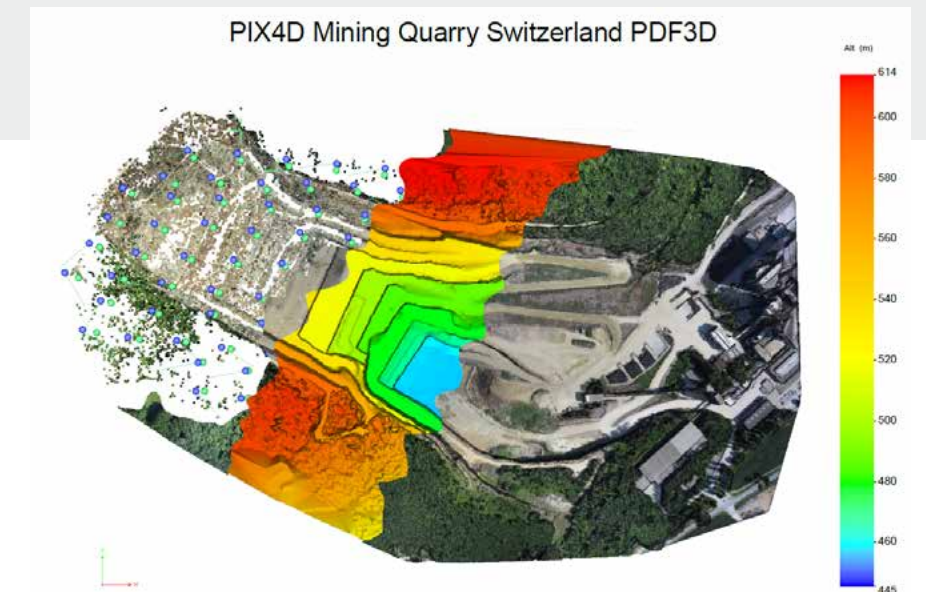


PIX4DMAPPER

Pix4Dmapper turns your images into highly precise, geo-referenced 2D maps and 3D models. They're customizable, timely, and complement a wide range of applications and software.

Deliverables include:

- 3D point cloud
- Digital surface & terrain models
- Orthomosaic
- Volume calculation
- Contour lines
- 3D Textured mesh models
- Thermography



SAFE AND FAST LOCATION OF UNDERGROUND UTILITIES

Locating and tracing underground utilities is a major concern, therefore detecting the position of buried cables and pipes before excavation work can help prevent operator injury, asset damage risks and any subsequent costs.



DD130 - cutting edge technology brings simple, accurate utility location

#872940

Ease of Use

The locator requires minimal adjustment to locate services. Removing the sensitivity control also ensures detectable services cannot be missed where the user reduces sensitivity too much.

In-built Self Test

A quick check can easily be performed by staff or users to ensure units are working correctly. This can be carried out when off-hiring locators or handing over to users for the first time. Ease of Use

Signal Strength Indication (SSI)

Features numeric signal strength readout, specifically designed for easy cable identification.

Hazard Zone

Alert the user to shallow services within 30cm of the locator. This can enable users to change their method of breaking ground and prevent cable strikes.

512Hz , 640Hz , 8kHz and 33kHz frequencies

A mixture of low and high frequencies gives operators flexibility. They can use the standard avoidance frequency (33kHz) or long distance tracing frequency (512 or 640Hz).

DA Signal Transmitters



#850273



#850275

Accessories



Trace Rods



Transmitter Clamps



Sondes



Property Plug Connector



Bags

Looking at the underground in 3D

The vLoc3-Pro utility locator introduces new innovative tools for locating buried utilities assuring damage prevention while gathering information for analysis. With two sets of screened 3D antennas signal distortion is easily detected and displayed on the bright full colour display. Along with classic locate screens the vLoc3 series locators offer new locate perspective screens of Vector Locate for fully automatic non-walk over locating, Transverse Graph showing both peak and null simultaneously providing immediate measurement of signal distortion, Plan View showing the relative orientation of the cable at any angle, and a new graphical Sonde screen with guidance arrows leading to the sonde location even when it is vertical.



Leica Zeno FLX100 - Adapt to your needs

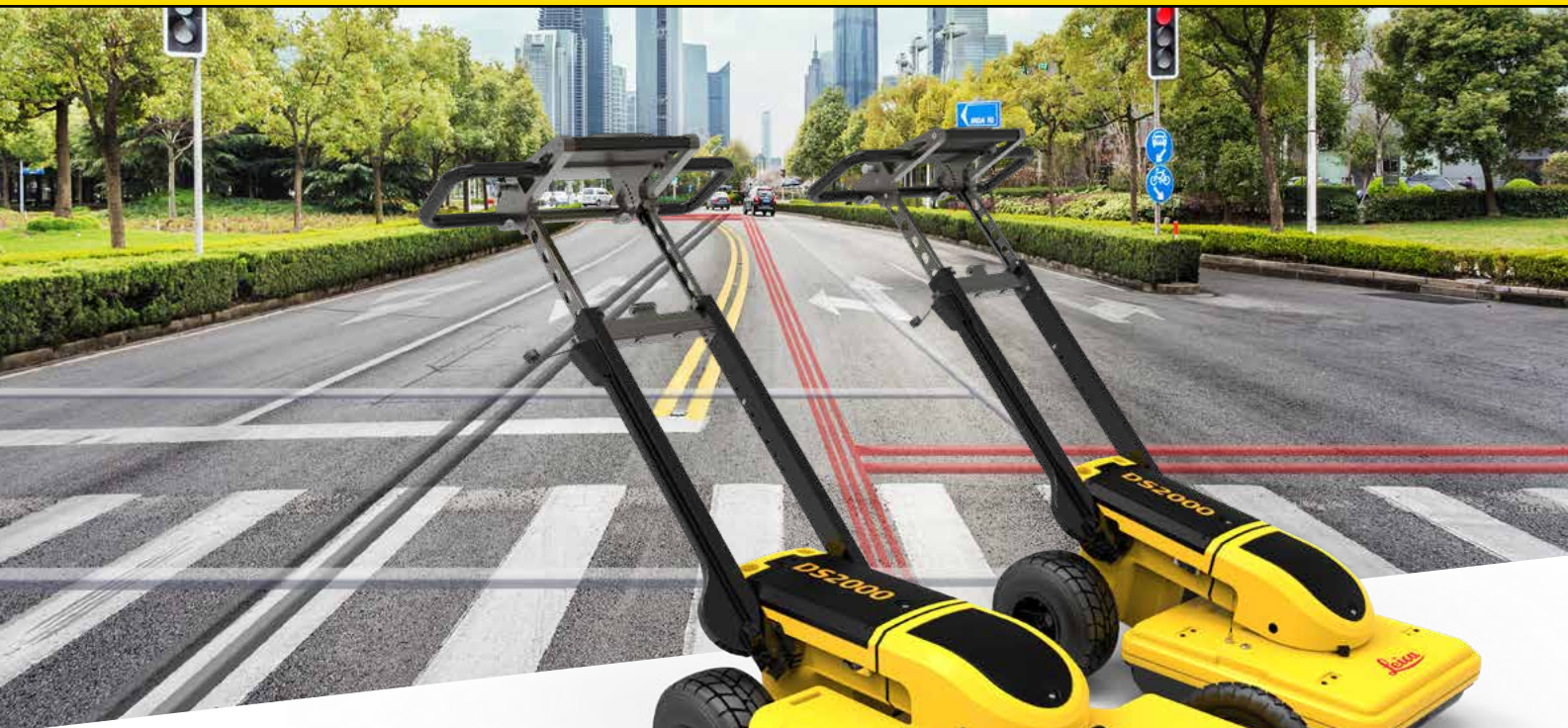
#LG915866

Location data is a commodity that underpins decision making no matter the industry.

The Leica Zeno FLX100 smart antenna captures spatial data in a simple and flexible way allowing you the freedom to work how you want.

A universal handheld tray enables you to pair the FLX100 with your own smartphone or tablet. For higher accuracy data capture just use a survey pole leveraging HxGN SmartNet RTK technology.

Use Leica Zeno Mobile for the ultimate experience in professional data capture or pair with Leica Zeno Connect to enable high accuracy positioning in other data collection apps on various operating systems.



Leica DS2000

#LG847111 #LG847112

Leica DS2000 Utility Detection Radar

Uncovering safer, faster, more

There's a lot going on underground that you need to know about before you ever start to dig. The Leica DS2000 Utility Detection Radar finds all potential threats, including non-conductive pipes and fibre optics, increasing safety by lowering the risk of accidentally hitting underground assets.

Increase safety, speed up work and lower asset management costs with the ability to prevent hazardous outages and collect more information. The DS2000 betters your business by making it safer, faster and more efficient.

Key benefits

- Increase safety when the DS2000 identifies all potential threats
- Get to assets and recover quicker from outages when you know exactly where underground utility assets are located
- Dual-frequency antenna to detect deep and shallow targets simultaneously
- Easily collect and understand data with the DS2000's simple and intuitive software and data storage
- Simple data storage and export to continue working on the post-processing at the office
- Effortlessly manoeuvre around the most challenging sites with the DS2000's advanced ergonomics
- Expert knowledge of Leica Geosystems with more than 270 service centres worldwide

Detection and underground mapping solution

Combined with the Leica GG04 high-accuracy smart antenna and the vLoc3 Pro utility locator, the DS2000 is the complete detection and underground mapping solution that will enhance your business by making it faster and more efficient.



Optional high-accuracy GNSS antenna and utility locator



C-Thru

All-in-one GPR for accurate scanning and real time analysis of concrete structures



LEICA DSX UTILITY DETECTION SOLUTION

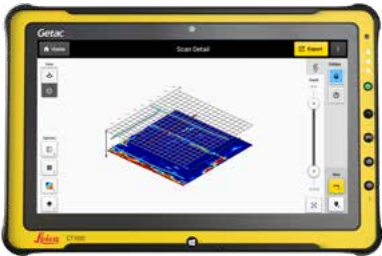
For utility repair and maintenance, civil engineering and surveying companies, the Leica DSX utility detection solution, consisting of a portable hardware with intuitive software allows to easily locate, visualise and map utilities. Unlike any other ground penetrating radar (GPR) system, the Leica DSX maximises productivity with cutting-edge software that automates data analysis and creates a 3D utility map on the field.

Uncovering utilities clearly and effortlessly



Reliable Detection Result

- Detect all types of underground utilities in high resolution to assure reliable avoidance zones
- Verify detected utilities with support of smart algorithm
- Import of POI's and utility records to help you make better decisions



Instant 2D/3D Utility Map

- Save your time on site by mapping underground utilities in just minutes
- Export utilities in CAD or BIM-ready formats for further usage
- Create professional reports, customized to your and your customers' needs



Ease of Use

- Ensure smooth and accurate underground utility detection without expert knowledge
- Complete utility detection and mapping in just a few steps through intuitive user interface
- Scan anywhere and at any time, even in narrow areas and under severe conditions



Integrated Solution

- Offer a complete workflow from acquire to excavate
- Locate underground utilities with survey-grade accuracy
- Generate utility maps, compatible with all coordinate reference systems



Disto D1 #LG843418

Measure distances in seconds, without help from another person, by just pressing a button. Avoid the risk of work accidents during cumbersome and dangerous measuring processes, e.g. when measuring heights.



Disto D110 #LG808088

The world's smallest laser distance meter with integrated Bluetooth® Smart technology. By using its precise measurements users can create floor plans and sketch easily by connecting it with the Leica DISTO™ sketch app on a smartphone or a tablet.



Disto D2 #LG837031

Now with Bluetooth, a fully integrated intelligent endpiece, a bright white display and an ISO certified measuring engine that drives 1.5 mm accuracy and 100 m measuring range.



Disto X3 #LG850833

The rugged Leica DISTO™ X-series combines innovative measuring technologies with a site-proof design and simple user interface. Together with the Leica DST 360, the X-series can be turned into a powerful 3D capturing station.



Disto X4 #LG85107

The DISTO™ X4 is equipped with a Pointfinder camera allowing you to easily target distant objects in bright sunlight. Even if the laser dot cannot be seen, the target appears clearly on the large colour display. The high-resolution screen ensures a crystalclear image. Distance measurements are absolutely precise over long distances.



Disto D510 #LG792290

Large colour screen, digital view finder, Bluetooth and 360° tilt sensor in one. Power Range technology can measure up to 200 metres to a target plate.



Disto D810 #LG792297

Large touch screen for quick and intuitive operation. Using common gestures such as swipe and zoom with two fingers, all the functions are simply and easily accessible. Measurements can also be taken using the touch screen. This avoids unintentionally moving the Leica DISTO™ D810 touch during the measurement.

Measure with a picture

It has never been easier to determine an object's width, height, surface area or even its diameter. Only one measurement at the correct angle is needed. Once taken, simply align the two arrows on your screen to the required points in your measurement picture and the result will show. The Pointfinder's 4x zoom, and the device's overview camera, make measuring objects of any size an easy task.

Documentation using pictures

The camera function on the Leica DISTO™ D810 touch can be used to create pictures or screen shots for recording purposes, which can then be downloaded to a computer via the USB interface. Thus no details about the measured target points need be lost.

High precision

The camera function on the Leica DISTO™ D810 touch can be used to create pictures or screen shots for recording purposes, which can then be downloaded to a computer via the USB interface. Thus no details about the measured target points need be lost.



Disto S910 #LG805080

Equipped with P2P Technology, the Leica DISTO™ S910 revolutionises measurement using hand-held laser distance meters. The integrated Smart Base enables to measure distances (e.g. widths) between any two points from one location. The combination of the Smart Base and the integrated tilt sensor opens up completely new possibilities making the Leica DISTO™ S910 the most versatile laser distance meter on the market.

Capture measurement data in CAD format

A world's first! The Leica DISTO™ S910 can save all the measured points into a dxf file, as a floor plan, wall layout or even as 3D data, which can be downloaded later in the office to a PC via the USB interface. To provide you with complete and reliable documentation, the Leica DISTO™ S910 also stores all the pictures showing where you measured to. This simplifies the task of creating more accurate drawings, or smoothes the process of quality checks.

Real-time transfer of point data

Measurement data can be transferred directly on site over the WLAN interface to a laptop to be further processed in your preferred software. Establishing the connection is extremely easy — similar to a hotspot. You can transfer as many measurement points as you like — with or without pictures — and create or check documentation in real-time. The free Leica DISTO™ transfer with Plugin software also supports the transfer of your results into AutoCAD® and BricsCAD®.

Model	Range	Tilt Sensor	Bluetooth	Viewfinder
Disto D1	40m	NO	YES	NO
Disto D110	60m	NO	YES	NO
Disto D2	100m	NO	YES	NO
Disto X3	150m	YES 360°	YES	NO
Disto X4	150m	YES 360°	YES	YES
Disto D510	200m	YES 360°	YES	YES
Disto D810	250m	YES 360°	YES	YES
Disto S910	300m	YES 360°	YES	YES



P2P TECHNOLOGY
by Leica Geosystems



Pointfinder
4x zoom



SWISS Technology
by Leica Geosystems



Bluetooth
SMART



X-RANGE
POWER TECHNOLOGY





GZM26 #LG723385
GZM26 target plate (flat A4 size)
210 x 297mm.



GZM27 #LG723774
GZM27 target plate (Plus section)
73 x 98mm / 147 x 98mm.



GZM30 #LG766560
GZM30 target plate. 274mm x 197mm.



Leica Tripod TRI 70 #LG794963
- Aluminium tripod with easy fine adjustment
- Working height from 0.40m to 1.15m



Leica Tripod TRI 100 #LG757938
- Aluminium tripod with easy fine adjustment
- Working height from 0.70m to 1.72m



GLB30 #LG780117
Made by UVEX Germany, super light laser visibility glasses for better visibility of laser dot outdoors, with 3 different lenses; laser visibility, safety glasses and sun glasses.

FTA360 adapter #LG799301
- Stable adapter with fine adjustment for convenient and accurate aiming
- Minimized measuring deviation for indirect measurement
- Fits perfectly on Leica TRI70 and TRI100 tripod

Item number	Description
LG780117	Leica Disto glasses with 3 interchangeable lenses; clear (safety), tinted (sunglasses) and red (laser).
LG723385	Disto GZM26 target plate (flat A4 size - 210 x 297mm)
LG723774	Disto GZM27 target plate (73 x 98mm / 147 x 98mm. Used for interior work.)
LG766560	Disto GZM30 target plate (274 x 197mm)
SLKF630	SLIK Tripod for Disto/ Lino
LG794963	Disto TRI 70 Tripod for fine adjustment
LG723774	Disto TRI-100 TRIPOD, Fine adjustment
LG769459	Disto LSA360 adapter for pole or tripod
LG778359	Disto TA360 adapter for 1/4" thread tripods
LG766560	Disto Plastic target plate. 274 x 197mm
LG667169	Disto soft carry case
LG788956	Leica UC20 AAA battery charger, includes 2 x AAA batteries.
LG828414	FTA360-5 adapter



Complete 3D Measurements
Stay in control - in whatever shape of room. Capture and record distances, areas, inclinations, and angles effortlessly, even for inaccessible points. Forgotten measurements and handwriting errors are things of the past.



Room scan
Whether in fully automatic or manual mode: you can measure complete rooms, walls, windows, structural connections or stairs – from only one station point.



Projector
Whether ceiling grid or project layout for floors or walls – the Leica Disto 3D projects your design onto any surface – point for point.



Tools
Quick tools inspire the user: establish plumb, create level reference points, or precisely transfer offsets or locations.



#LG844692



Leica Disto 3D Package
#LG844692

It can do everything
– Measure plan position, height and distance, in all three spatial axes
– Intuitive user guidance
– Measure from one station – every visible point can be measured by targeting with the visible laser dot - without the need to walk to the target
– Measure to difficult-to-reach points, such as roof edges
– As-built records of ceiling, floor and roof surfaces, volumes, inclination, falls, height differences, angles
– Plumbing of points, parallel offsetting of axis, levelling, transferring levels from wall to wall. Forget spirit level and measuring tapes!
– Realtime display of measurements as drawings on the screen
– Camera display to aid in positioning points.
– Pocket calculator
– Record and export in the form of standard tables, photos, DXF files, and text files to USB stick.

LEICA DISTO PACKAGES



LEICA LINO LASER LEVELS



Leica DISTO™ S910 Pro Pack
#LG806677



Leica DISTO™ D810 Pro Pack
#LG806648



Leica DISTO™ D510 Pro Pack
#LG823199



DST360 Kit for X series Disto
#LG848783

LEICA LINO LASER LEVELS



Leica Lino ML180 #LG784438

With the Smart Targeting function it is possible to produce layout drawings very efficiently without help from another person, even involving long distances. The laser line is aligned with the XCR Catch receiver by just pressing a key. When producing layouts of up to 100 m, accuracy is extremely important in order to prevent expensive errors. This is where the precision of the electronic self-levelling system provides a real advantage.



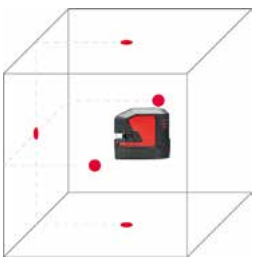
Leica Lino L4P1 #LG834838

Multi line laser to cover a wide range of applications. It can be turned by 360° on a base plate with fine adjustment thus facilitating simple and easy marking of 90° layouts. It is easy to exchange the Li-Ion batteries with 24 hours of operation with normal alkaline batteries. Target plate red, Li-Ion battery pack, international charger with 4 plugs, Alkaline battery tray, hard case.



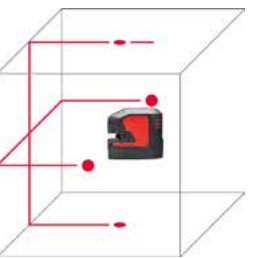
Lino L2S Starter Kit #LG848435

L2 red cross line laser



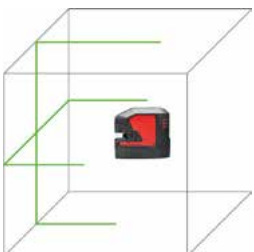
Lino L2 Kit #LG864413

L2 red cross laser



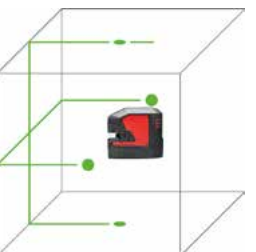
Lino P5 Kit #LG864427

P5 red 5 point laser



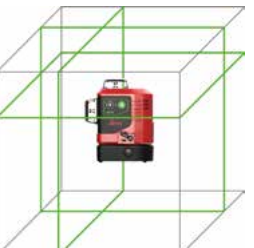
Lino L2P5 Kit #LG864431

L2P5, red cross with 5 points



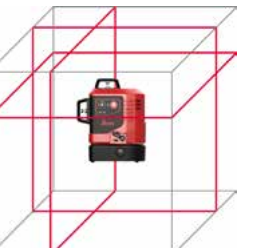
Lino L2G Kit #LG864420

L2G, green cross line



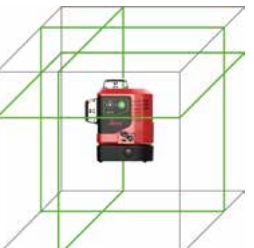
Lino L2P5G Kit #LG864435

L2P5G, green cross with 5 points



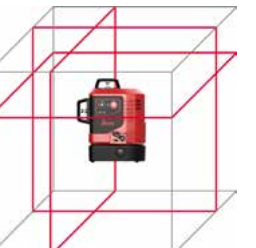
Lino L6G Kit #LG912971

L6G, 360° laser line projection



Lino L6R Kit #LG912969

L6R, 360° laser line projection



Technical Data	Lino L2s	Lino L2	Lino L2Gs	Lino L2G	Lino P5	Lino L2P5	Lino L2P5G	Lino L4P1	Lino L6Rs	Lino L6R	Lino L6Gs	Lino L6G	Lino ML180
Range*	25 m	25 m	35 m	35 m	30 m	25 m	35 m	15 m	25 m	25 m	35 m	35 m	20 m
Smart Targeting	–												yes
Levelling accuracy	±0.2 mm/m												±0.07 mm/m
Self-levelling range	±4°							±3°	±4°			±5°	
Dot accuracy	–				±0.2 mm/m				–			±0.1 mm/m	
Horizontal line accuracy	±0.3 mm/m				–	±0.3 mm/m		±0.2 mm/m	±0.3 mm/m			±0.1 mm/m	
Vertical line accuracy	±0.3 mm/m				–	±0.3 mm/m		±0.2 mm/m	±0.3 mm/m			±0.1 mm/m	
Beam direction	vertical, horizontal				up, down, forward, right, left	vertical, horizontal, up, down, right, left	vertical, horizontal, up, down, right, left	3 vertical, 1 horizontal, 1 plumb down	1 x 360° vertical front, 1 x 360° vertical side, 1 x 360° horizontal			vertical forward + right + left, horizontal, plumb down	
Laser type	635 nm/class 2		525 nm/class 2		635 nm/class 2		525 nm/class 2	635 nm/class 2			525 nm/class 2		635 nm/class 2
Protection class	IP54												
Battery type	AA 3 x 1.5V	Li-Ion rechargeable	AA 3 x 1.5V	Li-Ion rechargeable	AA 3 x 1.5V	Li-Ion rechargeable	Li-Ion rechargeable	Li-Ion rechargeable	AA 3 x 1.5V	Li-Ion rechargeable	Li-Ion rechargeable	Li-Ion rechargeable	NiMH rechargeable
	(or AA 3 x 1.5V)		(or AA 3 x 1.5V)		(or AA 3 x 1.5V) (or AA 3 x 1.5V) (or AA 4 x 1.5V)				(or AA 3 x 1.5V)		(or AA 3 x 1.5V) (or AA 3 x 1.5V)		(or D 2 x 1.5V)
Operating time**	up to 13 h [AA]	up to 44 h [Li-Ion]	up to 7 h [AA]	up to 28 h [Li-Ion]	up to 37 h [AA]	up to 44 h [Li-Ion]	up to 28 h [Li-Ion]	up to 24 h [Li-Ion]	up to 25 h [AA]	up to 36 h [AA]	up to 11 h [AA]	up to 11 h [AA]	up to 12 h [NiMH]
Weight with batteries	500 g	530 g	500 g	530 g	495 g	530 g		1173 g	751 g	781 g	781 g	781 g	2200 g
Warranty	2 years warranty 3 years warranty after registration on www.disto.com												

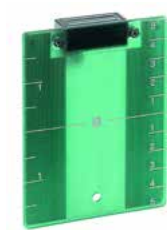
*depending on lighting conditions ** depending on laser mode



Leica RGR200
laser receiver
#LG866090



Leica UAL130
#LG866131



Leica target plate for
green line lasers
#LG823195



Leica target plate for
red line lasers
#LG758831



CLR-290
ceiling pole
#LG761762



TWIST 250
strong magnetic pivoting
adapter recommended for
L2s-1, L2-1, L2G-2
#LG866133



TWIST 360
strong magnetic pivoting
adapter recommended for
P5-1, L2P5-1, L2P5G-1
#LG866130



Leica Lino Li-Ion battery
pack spare part
3.6V/5.2Ah, recommended only
for P5-1, L2s-1, L2-1, L2G-2, L2P5-1,
L2P5G-1
#842427

FIT, FAST, TOUGH – SELECT
THE PERFECT TEAM PLAYER
FOR YOUR SITE

Leica Rugby lasers are the toughest rotating lasers suitable for all construction applications. Level, align and square much quicker than ever before, eliminating costly errors and downtime.



600 Series



Leica Rugby 610
One button simplicity

- Simple and reliable, one button laser where no mistakes are possible
- Superb performance with all Leica Rod Eye receivers – extend your working range using the Rod Eye 140 Classic and the Rod Eye 160 Digital



Leica Rugby 620
Simple & reliable - no mistakes possible

- Concrete forming, pad placement and framework levelling; setting foundations and footings has never been more efficient
- Slope matching up to 8% in single axis



Leica Rugby 640
Versatility inside and outside

- Fit for any interior and exterior levelling, aligning and squaring application
- Scan 90 – make layout easier by quickly moving the beam to the left or right side



Leica Rugby 680
Dial-in dual grade

- Easy to use digital display
- Dual grade to ±8%
- Shock and water proof to IP67



Rugby CLA-ctive

Covers all your application needs

With the unique capability to adapt to any application needs through software upgrades and onboard operation, the Leica Rugby CLA-ctive is the first upgradable laser to maximise productivity and performance on-site. The upgrade options deliver unmatched performance in any levelling, aligning, and squaring tasks, making it a real all-rounder.

Basic Instrument including battery, charger and carrying case

#6016027 Rugby CLA-ctive Basic

Rugby CLA-ctive packages including battery, Combo receiver, charger and carrying case.

#LG6016028CLC Rugby CLA-ctive & CLX250, manual grade

#LG6016029CLC Rugby CLA-ctive & CLX500, manual grade, lay down

#LG6016031CLC Rugby CLA-ctive & CLX600, auto single grade, lay down

#LG6016032CLC Rugby CLA-ctive & CLX700, auto dual grade, lay down



Rugby CLH

Leica Rugby CLH simplicity allows for effortless use of the capabilities of the laser system. It saves time by simplifying processes and making you far more productive. Its robust design secures measurement stability and accuracy for your daily tasks. The upgrade options allow for maximised performance in all levelling application

Basic Instrument including battery, charger and carrying case

#LG6012274 Rugby CLH Basic

Rugby CLH packages including battery, charger and carrying case

#LG6012276 Rugby CLH & CLX200, manual grade

#LG6012277 Rugby CLH & CLX300, semi auto single grade

#LG6012278 Rugby CLH & CLX400, semi auto dual grade



Leica Rugby	CLH	CLA-ctive
Warranty	5Y/2Y knockdown	5Y / 2Y knockdown
Grade capability* [X/Y Axes]	8%	15%
Self-levelling accuracy**	± 1.5 mm at 30 m (± 1/16" at 100 ft)	± 1.5 mm at 30 m (± 1/16" at 100 ft)
Self-levelling range	± 6°	± 6°
Operating range with Combo, RE 140/160	1350 m diameter	1350 m diameter
Remote range	600 m diameter	600 m diameter
Laser class	1	2
Environmental standard	IP68/MIL-STD-810G	IP68/MIL-STD-810G
Operating temperature	-20 °C to +50 °C -4 °F to +122 °F	-20 °C to +50 °C -4 °F to +122 °F
Storage temperature	-40 °C to +70 °C -40 °F to +158 °F	-40 °C to +70 °C -40 °F to +158 °F
Rotation speed	10, 15, 20 RPS	0, 2, 5, 10, 15 RPS
Batteries (Li-Ion)	Li-Ion	Li-Ion
Battery operating time**	50 h	50 h
Battery charging	5 h (full charge) 1 h fast charge = 8 h operating	5 h (full charge) 1 h fast charge = 8 h operating
Dimensions [H x W x D]	230 mm / 9,1 in 296 mm / 11,7 in 212 mm / 8,3 in	230 mm / 9,1 in 296 mm / 11,7 in 212 mm / 8,3 in
Weight with batteries	3,8 Kg / 8,3 lbs	3,9 Kg / 8,5 lbs

* Up to 45° with adapter. ** Accuracy defined at 25°C (77°F) battery life depending upon environmental conditions. All specifications are depending on activated functionality.





Pentax AP-200

Rugged and dependable, ideal for engineering and construction use.

AP224: #TBA, AP228: #TBA
AP230: #TBA, AP241: #TBA

- 20, 24 or 28x magnification
- Short focusing of 0.4m
- IP54 weather proof



NA700 series

Mid range levelling.

NA720 #LG641982, NA724 #LG641983,
NA728 #LG641984, NA730 #LG641985

- NA720: 1km d run, 2.5mm
- NA724: 1km d run, 2.0mm
- NA728: 1km d run, 1.5mm
- NA730: 1km d run, 1.2mm
- Shortest focus range of 0.5m
- 3 year warranty
- IP57 – weather proof
- Operating temp -20°C to +50°C



Sprinter 50/150M/250M
Digital Level

Simply aim, focus and press measure.
Fast and error free digital levelling

Sprinter 50: #LG762628, Sprinter 150:
#LG762630, Sprinter 250: #LG762631

- Sprinter 50 accuracy: 1km d run, 2mm
- Sprinter 150/250 Accuracy:
1km run, 1mm
- Measures bar coded staff up to 100m away
- 1000 point memory for M models
- 2 year warranty



Leica LS15 & LS10 Digital Levels

Highly precise levelling measurements

LS15: #804549 & #804548, LS10: #804550

- Alphanumeric keypad
- Electronic bubble (LS15)
- Integrated autofocus (LS15)
- Overview Camera (LS15)
- Digital Compass (LS15)
- 30,000 meas. internal memory
- LS10 accuracy:
 - + 1km d run, 0.3mm (with Invar)
 - + 1km d run, 1.0mm (with standard)
- LS15 accuracy:
 - + 1km d run, 0.2mm/0.3mm (with Invar)
 - + 1km d run, 1.0mm (with standard)
- Exchangeable Lithium-Ion battery 10-12hr
- Measures bar-code staff up to 110m



NAK2

For survey grade levelling.

#LG352038

- Auto level
- Accuracy 1km d run, 0.7mm
- 0.3mm accuracy with parallel plate micrometer
- 32 x magnification
- Operating temp -20° to +50°
- IP53 weather resistant
- 3 year warranty



The world's smallest pipe laser.
Leica Piper 100 #LG748704 and Piper 200 #LG748710



The Leica Piper series of pipe lasers are perfect for storm and sanitary sewer construction, gravity flow pipe line and anywhere grade and line are required with a single beam.

Built with rugged aluminium housing, Piper lasers perform exceptionally well in the toughest conditions. The Piper is the only laser piper laser in the world that fits inside a

100mm [4 inch] pipe, making it the perfect tool for road crossings or tight culverts. Alignmaster is Leica patented technology in the Piper 200. The laser searches and finds the target for quick second day setups.

Model	Piper 100	Piper 200
Item Number	LG748704	LG748710
Display	Digital	Digital
Alignmaster	No	Yes
Line & Grade Locks	Yes	Yes
Line Adjustment	6m @ 30m	6m @ 30m
Self-levelling	-15 % to +30 %	-15 % to +30 %
Grade range	-10 % to +25 %	-10 % to +25 %
Grade entry	Direct or by remote	Direct or by remote
Working range	200m	200m
Remote control	Yes, wireless	Yes, wireless
Housing	Aluminium	Aluminium
Operating time	40 hours	40 hours
Charging time	4 hours	4 hours
Battery pack	GEB221 Li-Ion	GEB221 Li-Ion
Waterproof	IPX8 – 9m	IPX8 – 9m
Diameter	100mm	100mm
12V cable	No	No

Layout Projects will never be the same.

Most levels see the world as level and plumb. **SmartTool™** digital levels can measure all angles in a 360° range with a large easily seen digital readout. So installing a deck, stair rail, extending a roof will be simpler and less time consuming.

Framing

Roof Pitch calculations, rake walls, level and plumb readings and more...

Concrete work

Wheel chair ramps, Grading, Setting forms, setting proper drainage and more...

Finish Carpentry

Shimming cabinets, accurately measuring miter joints and saw angles



SmartTool Gen3

SmartTool Gen 3 models include IP65 protection, module backlight, rugged aluminium housing

Model	Part Number
SmartTool Digital Level (60cm)	519750
SmartTool Digital Level (120cm)	519751
SmartTool Module (17cm)	519752
SmartTool Digital Level (60cm) Gen 3	519763
SmartTool Digital Level (120cm) Gen 3	519764
SmartTool padded cover (60cm)	7130750
SmartTool padded cover (120cm)	7130751
SmartTool module cover	519132



Smart Tool 20cm Module #519752



Smart Tool 120cm #519751

The original digital spirit level

SmartTool – The original digital spirit level

SmartTool is the industry standard digital level. Extremely durable and easy to calibrate, it will keep its accuracy for years.

Features include:

- Digital display with backlight.
- 1mm accuracy per meter.
- Display in degrees, inches/feet, or percent.
- Hold button to retain measured value.
- Audible beep at level or plumb.
- Very strong railing.
- Easy to calibrate.
- 9V battery included.



Magnetic bracket for Smart Tool Module #519769



Smart Tool 60cm #519750

Smart Tool cover 60cm #7130750

Smart Tool cover 120cm #7130751

Smart Tool cover module #519132

The batteries available from Leica Geosystems are of the highest quality in respect of temperature tolerance, recharging capability, operating time and cycle behaviour.



GEB111 #LG667318



GEB121 #LG667123



GEB212 #LG772806



GEB222 #LG793973



GEB235 #LG832119



GEB236 #LG832120



GEB242 #LG793975



GEB331 #LG799190



GEB371 #LG818916



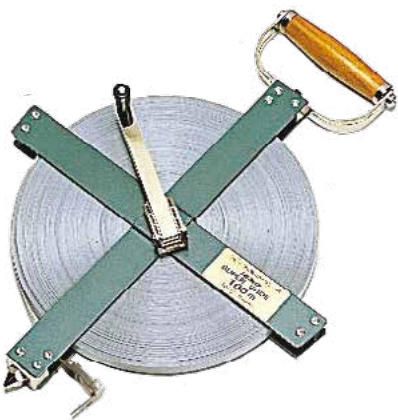
GEB361 #LG799191

Leica Batteries

Item Number	LG667318	LG667123	LG772806	LG793973	LG832119	LG832120	LG793975	LG799190	LG818916	LG799191
Model Number	GEB111	GEB121	GEB212	GEB222	GEB235	GEB236	GEB242	GEB331	GEB371	GEB361
Chemistry	NiMH	NiMH	Li-Ion	Li-Ion	Li-Ion	Li-Ion	Li-Ion	Li-Ion	Li-Ion	Li-Ion
Output	6V / 2.1Ah	6V / 4.2Ah	7.4V / 2.6Ah	7.4V / 6.0 Ah	10.8V/4.4Ah	10.8V/9.3Ah	14.8 V / 4.8Ah	11.1V/2.8Ah	13V/250Wh	11.1V/5.6Ah
Instrument	TPS400/800 & DNA	TPS400/800 Builder & DNA	CS10/15 field controllers & GNSS receivers	System1200, TS11/12/13/15/16, Flexline, GS10 GNSS, & Piper 100/200	CS35 tablet	CS35 tablet	TM30 / TS30, Nova TM50 / TS60 / MS60 / P16, P30, P40	CS20 field controller, LS Digital Level	requires GEV242 for charging	LS Digital Level

SURVEY ACCESSORIES – MEASURING TAPES

Tajima Engineer Steel



Tajima Symron Fibreglass



Symron Tapes

High quality fibreglass tapes with end hooks.

- 30m Myzox - #6400030M
- 30m fibreglass - #6400030
- 50m fibreglass - #6400032
- 100m fibreglass - #6400034

Tajima G-Lock Fibreglass



G-Lock measuring tapes

The original "armoured" tape measures with the thick elastomer cover that protects the tape casing and end hook and provides a comfortable, sure grip. Compact and smooth working tapes, with superior engineering and easy-to-read crisp, clean scales imprinted on white backgrounds. In standard, metric and standard/metric dual-scale models.

- 25mm wide, 7m long - #6100056
- 25mm wide, 8m long - #6100057
- 25mm wide, 10m long - #6100059

Tajima Hi-Lock



Hi-Lock measuring tapes

Compact and smooth working tapes, engineered with heavy-gauge ABS casings, triple-riveted end hooks and cushioned return stops. All feature easy-to-read crisp, clean scales imprinted on white backgrounds, in standard and standard/metric dual-scale models.

- 16mm wide, 3m long - #6100054
- 19mm wide, 5m long - #6100055
- 25mm wide, 5m long - #6100058
- 25mm wide, 7m long - #6100052

Tajima Engineer Plastic Coated Steel 30m / 50m



Engineer Tapes

High quality tapes with end hooks, all featuring crisp, clean scales. Available in fibre glass or steel.

- 30m plastic coated steel - #6300031.
- 50m plastic coated steel - #6300032
- 100m steel - #6300037

Tape Refills

- 100m Symron
- 30m Engineer #6900001
- 50m Engineer #6900002
- 100m Engineer #6900006

SURVEY ACCESSORIES – PENTAX BINOCULARS

PENTAX
SPORT OPTICS
Since 1938

Z Series
Ultimate performance

S Series
Superior quality

A Series
Advanced compact

U Series
Versatile & compact

Experience bright and crystal-clear views thanks to the innovative coating technology. All models increase the transmission of light and have adopted full multi-coatings to avoid flare and ghosting. Additionally all the roof prism models adopt a new coating to significantly improve the transmission of visual light. The full range from high end models to handy compact models will offer you the best binoculars to enrich your viewing experience.



SURVEY ACCESSORIES – PENTAX & RICOH

CR Kennedy is the sole importer of Pentax and Ricoh for Australia, and stocks the full range of compact cameras, SLRs, and lenses. For the best prices on current models, please contact a CRK sales representative.



Ricoh Theta X

The latest in a line of high-quality 360-degree Theta cameras, the X allows you to keep track of a building site while crucial work is being completed. With its 48MP sensor and image stabilisation, you can produce stunning 60MP still files utilising advanced stitching technology, as well as brilliant 5.7K 360-degree movies at 30p. This camera runs on a rechargeable battery, while it can record directly to the included internal memory or a Micro SDXC Card.



GLS115
Provides prism heights of 100, 400, 700, 1000 or 1300mm.

From left to right:
GLS14, GLS11, GLS12, GLS13, GLS30,
GLS31, GLS111, GLS112, GZW12



Leica Poles

Item number	519616	LG385500	LG754391	LG78226	LG403427	LG752292	LG766359	LG748967	LG667309	LG667310	LG642106
Model	Nedo	GLS11	GLS12	GLS13	GLS14	GLS30	GLS31	GLS105	GLS111	GLS112	GLS115
Min height	-	1.24m	1.39m	1.39	-	1.36m	1.36m	1.28m	1.4m	1.47m	100mm
Max height	0.8m	2.15m	2.0m	2.0m	0.2m	2.0m	2.0m	2.11m	2.60m	3.65m	1.3m
Bubble	-	Circular adjustable	Circular adjustable	Circular adjustable	Circular adjustable	Circular adjustable	Circular adjustable	Circular adjustable	Circular adjustable	Circular adjustable	clip-on adjustable
Thread	Spiggot	Spiggot	Spiggot	5/8"	Spiggot	5/8"	Spiggot	1/4"	Spiggot	Spiggot	1/4"
Material	Aluminium	Aluminium	Aluminium	Aluminium	Aluminium	Carbon Fibre	Carbon Fibre	Aluminium	Aluminium	Carbon Fibre	Aluminium

SURVEY ACCESSORIES – PLUMB BOBS



Plumb Bobs

Item number	A10-5012	A10-5016	A10-5024
Model	11-550	11552	11554
Description	Plum Bob 340g	Plum Bob 455g	Plum Bob 680g

Gammon Reel

Item number	526002	526001
Model	11729	11730
Description	3.6m	2.1m

Plumb Bob Accessories

Item number	580035	580030	531507	7090463	882400491	882400501	882400481
Model	11555A	11555B	651507				
Description	Plum Bob cap	Plum Bob Point	Point & Plum Bob hook	Plumbob pouch	Plumbob pouch for 340	Plumbob pouch for 455	Plumbob pouch for 680



HPRC – HIGH PRECISION
RESIN CASES

HPRC cases are designed tough for any purpose, including: survey, photography, military, police, naval, and much more.

Manufactured and designed in Italy, HPRC cases are made to the highest standards, and protect your equipment from dust, water, impacts, corrosion and chemical agents.

All HPRC cases come with a life time unconditional warranty. Sizes range from small flash card cases all the way to large wheeled trunks.

For more information, visit www.hprccases.com.au



H P R C C A S E S
MADE IN ITALY



Internal Dimension 375x265x152(mm)
External Dimension 405x330x165(mm)



Internal Dimension 450x320x175(mm)
External Dimension 480x385x190 (mm)



Internal Dimension 480x360x198 (mm)
External Dimension 550x420x215 (mm)



Internal Dimension 430x320x160 (mm)
External Dimension 500x370x185 (mm)



Internal Dimension 1140x350x160 (mm)
External Dimension 1175x410x181 (mm)

Prisms

Leica prisms are manufactured from high-quality optical glass which is worked to strict specifications. All reflective surfaces are provided with a resistant coating so that the reflectivity is not adversely affected by dirt or condensation.

Item Number	Model NO.	Prism type	Holder	Centring Accuracy	Range	Comments
LG641617	GPR121	Circular	Yes	1.0mm	3,500m	
LG641618	GPR111	Circular	Yes	2.0mm	2,500m	
LG726295	GPR112	Circular	No	N/A	2,500m	Monitoring/Mining prism
LG753492	GPR113	Circular	Yes	2.0mm	2,500m	
LG362830	GPR1	Circular	No	1.0mm	3,500m	
LG639985	GRZ4	360°	No	5mm	2000m	
LG754384	GRZ122	360°	Yes	2.0mm	2000m	Can be used in SmartPole configuration
LG644327	GRZ101	360°	Yes	1.5mm	2000m	
LG641762	GMP104	Mini Prism	Yes	N/A	2000m	Monitoring Prism with L-Bar for fixed installation
LG641662	GMP101	Mini Prism	Yes	1.0mm	2000m	Includes bubble, target plate, spike and bag.
LG641615	GMP111	Mini Prism	Yes	2.0mm	2000m	Includes bubble, and GLS115 mini reflector pole
LG642534	GMP111-0	Mini Prism	Yes	2.0mm	2000m	0 constant prism. Includes bubble, and GLS115 mini reflector pole
LG555631	GPH1P	Circular	Yes	0.3mm	3,500m	Compatible with Leica TDM5005 and TDA5005

Prism Dimension Information

Prisms	Constants [mm]	
Circular prism GPH1P	0.0	
Circular prism GPR121/111	0.0	
Miniprism GMP101	+17.5	
Miniprism GMP111* GMP111-0**	+17.5 0.0	
Reflective tape	+34.4	
Flat prism CPR 105	+34.4	
360° prism GRZ4	+23.1	
360° prism GRZ122	+23.1	
360° Mini prism GRZ101	+30.0	



GRZ122 #LG754384



GRZ101 #LG644327



GMP104 #LG641762



GMP101 #LG641662



GMP111 #LG641615



GMP112 #LG742329



SMP222 #LG644187



GPH1P #LG555631



GLS115 #LG642106



GPR121 #LG641617



GPR111 #LG641615



GPR112 #LG726295



GPR113 #LG753492



GPR1 #LG362830



GRZ4 #LG639985

Prism Accessories

Item Number	Model Number	Description	Suits
LG362820	GPH1	Prism Holder	GPR1
LG400080	GPH3	3 Prisms Holder	GPR1
LG726296	GHT112	Mounting Kit	GPR112
LG362823	GZT4	Target Plate	GPH1
LG727406	GDZ112	Rain Shelter	GPR112
LG642344	GVP608	Soft bag	GMP111, GRZ101
LG742329	GMP112	Pole extension	GMP111
LG743503	GAD105	Pole adapter	GMP111 prism to Leica Spigot adapter
LG742006	GAD103	Pole adapter	GRZ101 prism to Leica Spigot adapter
LG642106	GLS115	Mini reflector pole	GMP111

SURVEY ACCESSORIES – SPRAY PAINT



Dy-Mark Spray & Mark is Australia’s best selling marking paint. All cans have an inverted nozzle,weigh 340g and are suitable for a range of applications such as surveying, construction, landscaping, civil works, etc. Cans are available as individual items or in packs of 12.

Item Number	Description
7090332B	Survey spray black
7090332DB	Survey spray dark blue
7090332FG	Survey spray fluro green
7090332FO	Survey spray fluro orange
7090332FP	Survey spray fluro pink
7090332FR	Survey spray fluro red
7090332G	Survey spray green
7090332GR	Survey spray grey
7090332O	Survey spray orange
7090332R	Survey spray red
7090332W	Survey spray white
7090332Y	Survey spray yellow
7090338	Spray paint holster (plastic)
7090337	Spray paint arm with wheel
7090370	Spray paint long arm
7090339	Spray marking chalk yellow
7090440	Spray marking chalk white



Spray paint long arm
#7090370



Spray paint arm with wheel
#7090337

SURVEY ACCESSORIES – GENERAL FLAGGING TAPE

Item Number	Description
7090481DB	Dark Blue
7090481DG	Dark Green
7090481FL	Fluro Lime
7090481FO	Fluro Orange
7090481FP	Fluro Pink
7090481LG	Light Green
7090481O	Orange
7090481R	Red
7090481SB	Sky Blue
7090481W	White
7090481Y	Yellow
7090480	Red/White
7090482	Fluro Orange

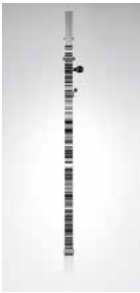
These vinyl flagging tapes are ideal for surveyors, and available in a wide range of colours. All rolls are 25mm x 100m.



SURVEY ACCESSORIES – STAVES



LR39 and LR34



SMP222



GTL4C



GMP111



GMP112



GRZ4

Leica

Item Number	Model	Digital level	Description
LG764452	GSS1I3	Sprinter	3m/1 section fibreglass, barcode & E face
LG522794	GKNL4M	DNA	4m/3 section fibreglass, barcode & E face
LG757761	GTL4M	DNA	4m/4 section fibreglass, barcode & mm graduations
LG667113	GTL4C	DNA	4m/4 section aluminium, barcode & mm graduations
LG746613	GSS1I2	Sprinter	4m/4 section aluminium, barcode & E face
LG741882	GSS1I1	Sprinter	5m/4 section aluminium, barcode & E face
LG563733	GWCL60	DNA	0.6m/1 section barcode & Invar scale face
LG563659	GPCL2	DNA	2m/1 section Invar bar & barcode face
LG560271	GPCL3	DNA	3m/1 section Invar bar & barcode face



E Face Staff

Myzox

Item Number	Model	Description
091597	SUM33EB	3m/3 section E face - 118cm with cover
011053	SUM33MB	3m/3 section Metric - 118cm with cover
091551	ALG-55EB	5m/5 section E face - 127cm with cover
011001	ALG-55MB	5m/5 section Metric - 127cm with cover
011201	ALS-74	7m/4 section Metric - 182cm with cover
011101	GFS-55	5m/5 section Metric - Fibreglass

Astor

Item Number	Model	Description
519104WC	3M/3E	3m/3 section E face - 118cm with cover
519102WC	3M/3M	3m/3 section Metric - 118cm with cover
519121WC	5M/5E	5m/5 section E face - 127cm with cover
519118WC	5M/5M	5m/5 section Metric - 127cm with cover
519175WC	7m/5E	7m/5 section E face - 182 cm with cover

Accessories – Staff Bubble

Item Number	Description
519097	LR39 Staff Bubble Plastic
519098	LR34 Staff Bubble Metal
519092	LR7 Staff Bubble detachable for Astor
519618	Clip on Bubble for GTL4 Staves
111114	SA60 bubble for Myzox 5m & 7m staves
111115	SB60 bubble for Myzox 3m staves
211090	Staff 5/8" thread prism adapter
	NPA-1

CST Cut and Fill Rods

Item Number	Model	Description
519012	06-TLM	Cut & fill rod, 2.4m, 2 section.

SURVEY ACCESSORIES – BI-PODS

Leica and CST bi-pods are ideal for holding prism poles in the field.



GSR2 #LG555720
for 25mm diameter poles
[Leica GLS11/GLS11K].



GSR111 #LG667319
suitable for poles of all diameters.

SURVEY ACCESSORIES – BAGS



Leica GVP716 backpack carrying system #LG833516

Easy-to-mount backpack system for carrying all large TPS and GPS container including TS/MS60 containers



Leica GVP736 backpack for RTC360 #LG865471



Leica GVP735 mission bag for BLK360 #LG853640

Transport & protection bag for BLK360 scanner and accessories including control tablet and tripod.



Seco tripod / prism pole heavy duty bag - orange #SEC8180-20-ORG

SURVEY ACCESSORIES – TRIPODS



Leica CTP101 #LG726831



Leica GST05 #LG399244



Leica GST05L #LG563630



Leica CTP106 #LG789913



Leica GST20-9 #LG394752



Leica GST120-9 #LG667301



Leica GST29 tripod for BLK360 #LG853638



Leica GST80 lightweight tripod for RTC360 #LG842066



Vanguard Alta Pro 2+ 263AT aluminium tripod for Leica BLK360 #V243658



Vanguard Alta Pro 2+ 263CT carbon fibre tripod #V243665

Customer Care
PACKAGES »

Leica Geosystems Customer Care Packages ensure you achieve maximum value from your investment. When you buy a CCP from Leica Geosystems, you immediately start to benefit from instant access to our network of professional support and service team while you work. With a range of three different Customer Care Packages, you will be sure to obtain the package that best suits your particular requirements and budget. From Basic to Silver, Leica Geosystems has the right Customer Care package for your business.



Leica Geosystems' information portal puts a world of information at your fingertips. myWorld provides instant access to information and knowledge that helps keep you and your Machine Control Solution up-to-date, for maximum value and efficiency. myWorld is the perfect complement to Customer Care packages.

CUSTOMER CARE PACKAGES

Available upon request.



Customer Support

Receive direct telephone and online access to our machine control professionals. They will work with you to solve any problems that may arise, whether they are operational questions, solution configuration issues or general advice.



Field Service

Annual preventative inspection of the solution carried out by experienced technicians minimizes repairs and downtime and ensures reliable machines. The annual Field Service inspection will include a visual and a system check, and a check of the calibration measurements. This gives higher up-time and more reliable machines.



Software Maintenance

Benefit from the latest software improvements and new features that keep you and your solution up-to-date to maximize productivity. Updates for your software can be retrieved from myWorld or talk to your local Leica Geosystems representative about the opportunities.



Extended Warranty

Leica Geosystems Machine Control products come standard with a one-year warranty. The coverage may be extended to a maximum of five years, covering labor and spare parts. An extended warranty provides the additional security of knowing that unplanned costs in the future can be avoided.

We carry a comprehensive range of hire equipment to cover nearly all construction measurement applications

These include:

- Total stations
- Theodolites
- GPS/GNSS
- Machine control
- Optical and laser levels
- Pipe lasers
- Cable locators
- Accessories such as staves, tripods, prisms, etc.

What does this mean to you?

- The fleet consists of the world's most advanced equipment, kept in excellent condition
- We supply basic training for rapid productivity
- Allows you to evaluate on the job without purchase commitment
- Gives you the equipment you need for the one-off job
- Allows you to take on jobs you otherwise couldn't handle



REPAIRS AND SERVICE

Service Centres

We have service centres at all of our offices. With technicians who have been factory trained, workshops that are accredited by Leica Geosystems, and use of only genuine components, CR Kennedy can offer you the best service for your instrument. We offer replacement instruments from our hire fleet during a servicing to minimise down time.

We service and repair all the equipment we sell, including:

- Total stations
- Theodolites
- GPS/GNSS equipment
- Laser levels
- Optical levels
- Tribrachs
- Tripods

And much more!



HxGN SmartNet

GNSS data over the world's largest reference station network.

HxGN SmartNet is an integrated 24/7 GNSS network RTK and GNSS correction service, built on the world's largest reference network, enabling GNSS-capable devices to quickly determine precise positions.

The service is provided continuously by a highly-available infrastructure and professional support team with more than 10 years of experience reliably delivering the service. HxGN SmartNet is an open-standard correction service, able to use with any GNSS device, and is constantly monitored for integrity, availability and accuracy.

With more than 4,000 reference stations based on Leica Geosystems technology that ensure position accuracy in any application, HxGN SmartNet is easy-to-use and provides the fastest precise positions.

HxGN SmartNet was built to provide high-precision, high-availability network RTK corrections for any application, using any constellation, while at the same time being open to all. With easy access to precise correction data, Network RTK users experience the best availability, reliability and traceability using internationally recognized standards, together with flexible and affordable subscription options that meet the needs of the local market. With a robust, traceable and repeatable network RTK correction, users can expect centimeter-level accuracies. Quality of service is guaranteed through our highly sophisticated data center and monitoring systems.



“ 3 years ago, we began our journey documenting projects in 3D and utilising a range of different software and hardware to do that. Given that we work in a range of different sectors, particularly in existing conditions, some of the products such as the Leica BLK360 laser scanner, have been imperative to our workflows to aid in developing our shop drawings for those projects and coordinate around the existing services. More recently we have implemented the utilisation of the Leica iCON iCR70 total station, which has really improved our workflow on site and has enabled our team to focus on the task at hand rather than consuming all their time setting out. For example, in one of our recent projects we estimated that it would have taken 2 men 4 days via traditional methods to lay out all our duct work on site, but when utilising our construction technical lead and the iCR70 we were able to complete that work in one day with one man via digital layout. ”

**Matt Payne,
PJM Engineering.**

“ In years gone by we have always been focused around using paper plans or sketches or markups. Recently we have noticed a shift in the marketplace and started to see a shift in the way builders build. We could see that there is a drive towards BIM modelling or 3D modelling and predicted this would enable us to use clash detection and to foresee design issues before the building is constructed or before we are even on site. Whereas in the past the 2D drawings would not allow this type of conflict resolution easily. Hence, we needed to find a way to get on board with the designers and architects to ensure that what we did was in line with what they had designed. So, we decided to drift towards the digital geospatial side of the business and met with the CR Kennedy team in Mascot. Within 15 minutes of seeing the iCON iCR70 and Build field software we were impressed with how intuitive and user friendly it was to use were comfortable this was the digital solution we needed for site. ”

After having made the decision to go with an alternate supplier, we quickly did a backflip and decided to go with CR Kennedy and the Leica iCON – it was good business decision. ”

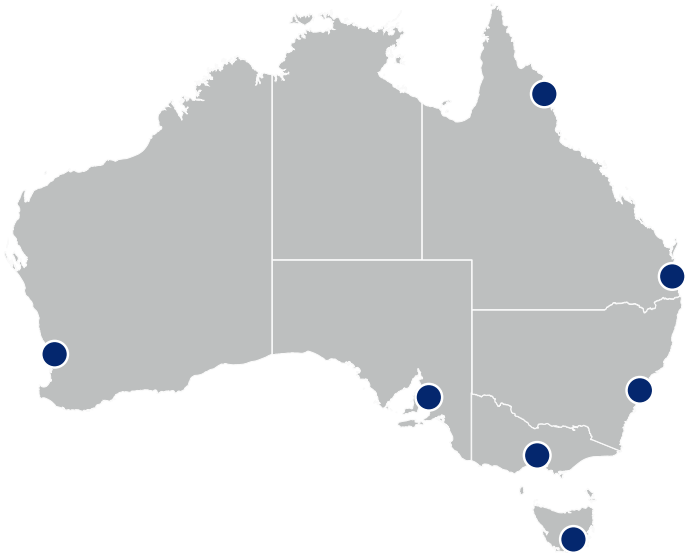
**Ashley Moran,
Ashmor Plumbing.**

Coverage you can count on:

Leica Geosystems is proudly distributed by C.R. Kennedy. The Largest importer and distributor of surveying equipment in Australia.

We offer a comprehensive end-to-end service from initial consultation and evaluation through to installation, training and support for the widest range of machine control and positioning applications.

Our nationwide organisation makes it possible for us to offer personal service and support wherever we are needed.



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