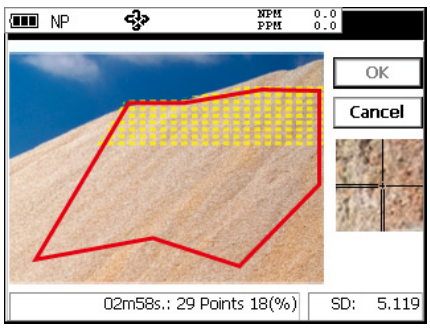
TOPCON

IS IMAGING STATION

CAPTURE REALITY



- Scan with live images
- 2,000m (6,500ft) reflectorless measurement
- Remote image display by TopSURV and Image Master
- Powerful X-TRAC 8 Auto-Tracking Technology
- Two Digital Cameras – wide angle and 30X tele-zoom

Topcon's NEW laser scanning alternative, from the World Leader in digital imaging

IS - the 3rd Generation

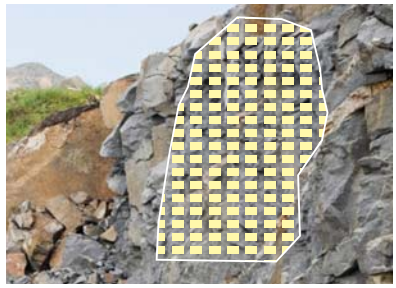
Refined EDM Enhances Long-Range Scanning

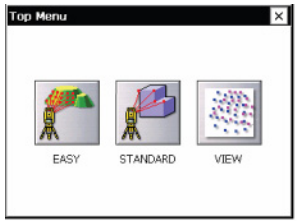
Refined Non-Prism EDM offers:

- 2,000m (6,500ft) super-long-range non-prism measurement
- Increased LNP distance measurement speed
- Faster and more reliable automatic scanning
- Accuracy improvement of NP measurement

The high-speed scan "Grid Scan"

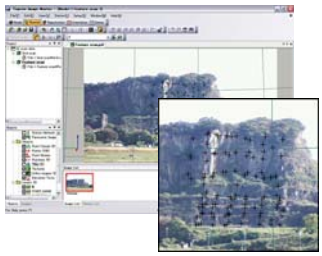
The high speed measurement Grid Scan obtains 3D data by automatic scanning at a specified pitch within a specified area. Using Topcon's image analyzing software, 3D models can be created from the data.





Easy Scan Mode

Easy Scan Mode is employed to maximize the simplicity of scanning workflow.
With a standardized procedure flow, scans can be completed with enhanced work efficiency.



"Feature Scan" to assist area measurement

This method automatically extracts features (corners) from the image of a specified area. Together with the Grid Scan, it greatly enhances performance on every job.

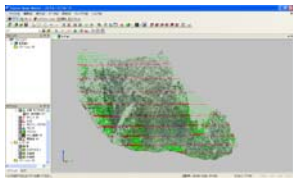


Image Master for IS

With Image Master, TIN images can be formed from 3D point cloud data. Using TIN data, it is possible to create texture-mapped 3D data, which are available for various usages including calculating surface area, calculating volume, and measuring distance.

Remote Operation of IS

Image Master provides image and scan control of the IS through WLAN connection using the internal WLAN module. Remote operation is at your fingertips.

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CAPTURE REALITY

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X-TRAC 8 - Advanced Auto-Tracking Technology and Wide-Range Wireless LAN to Enhance the Imaging Robotic Capability

X-TRAC 8 - Advanced Auto-Tracking Technology

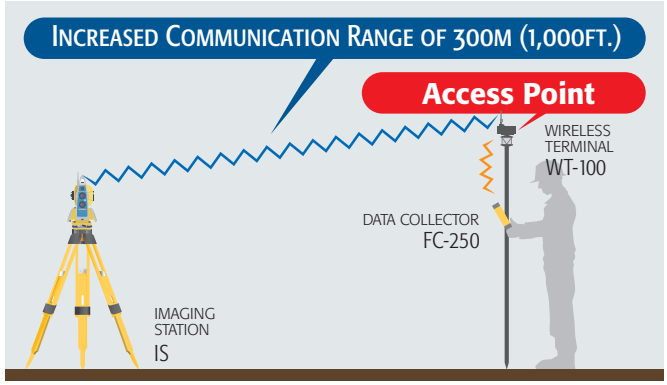
New X-TRAC 8 technology provides extremely quick and powerful auto-tracking capability even under the harshest environments, enabling dramatic increase of one-person survey efficiency.

Extremely powerful X-TRAC 8 technology provides:

- 1,000m long-range auto-tracking capability.
- Accurate tracking even in most obstructed sites or with intensive sunlight.
- RC-4 QuickLock remote option enables rapid prism search and lock for one-person survey.

Increasing Communication Stability

The WT-100 acts as an access point for the IS instrument and a field controller, increasing stability of data and image transmission. The IS can be operated from distance of up to 300m (1,000ft) using real-time digital camera images on a field controller's screen.



*The range of wireless transmission varies according to the environmental status such as barriers and obstacles. Direct the antenna of the WT-100 toward the IS for seamless communication.

Two Built-in Digital Cameras -Wide Angle and Tele-Zoom

You can view the surrounding area and focus on the object with the wide angle camera and use the tele-zoom through 30x optical lens for the precise collimation. The clear tele-zoom image is displayed through the automatic focus adjustment. The images are stored in the internal memory as well as being displayed on the screen.

One-man Survey System - QuickLock and stable WLAN connection

When combined with a data collector and RC-4 system, the IS is perfect for a one-man survey system. The IS represents the third generation of Topcon's world's first QuickLock technology. By just pressing a button, the RC-4 reacquires the IS again easily and quickly. With its stable WLAN connection, and smooth, fast live video operation, the IS ensures a stress-free, efficient survey.

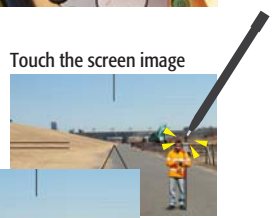
Continuous Monitoring

Whether done with mounted prisms or reflectorlessly, this monitoring function compliments the everyday use function of our robotic surveying.

"Touch Drive" to handle the instrument

Touching the object on the image causes the instrument to rotate to the tapped object. The telescopic-view image provides zoom display with the same view angle of telescope. The Touch Drive also enables pinpoint measurement that allows the accurate collimation just like looking in the telescope.

Touch the screen image



Find and lock the prism

Application Software

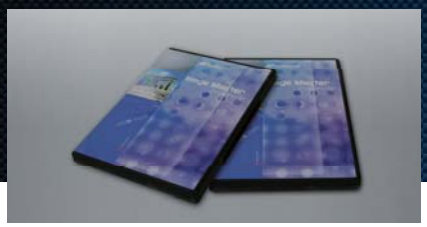


Image Master Suites (Optional)

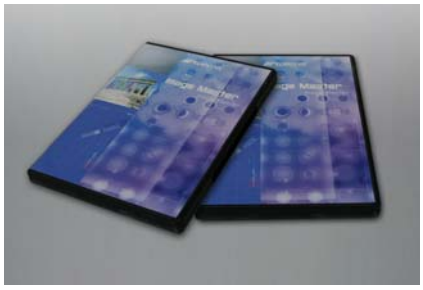
Image Master Pro

Complete version of Image Master Suites. In addition to all the functions of Image Master Std, strong 3D Photogrammetry measurement by digital cameras is supported.

Image Master Std

Upgrade version of Image Master for IS. Survey tools like Contour Line, Cross Section, Area, Volume calculations are supported.

Standard Accessories



•IS •TopSURV OnBoard for IS •Image Master for IS
•Battery Pack BT-65Q(3) •Dual Battery Charger BC-30D
•Plastic carrying case •USB Cable F-25 •Sun shade
•Plumb bob set •Tool kit with case •Shoulder belt(2)
•Plastic rain cover •Instruction manual (CD)
•Display protect sheet(4) •Silicon cloth

Quick Reference Chart of Image Master series

Functions		For IS	Pro	Std
Import	Point File	●	●	●
	Point Cloud File		●	●
	Shape File		●	●
	Ortho-image File		●	●
	TopSURV Scanning File	●	●	●
Export	Point File	●	●	●
	Point Cloud File	●	●	●
	Shape File	●	●	●
	Ortho-image File		●	●
Survey Tools	Point,Polyline	●	●	●
	TIN	●	●	●
	Contour Lines		●	●
	Elevation Text		●	●
	Cross Section		●	●
	Texture Mapping	●	●	●
	Distance	●	●	●
	Area Surface	●	●	●
	Volume	●	●	●
IS Remote access		●	●	●
Stereo Image Measurement			●	

TOPCON
It's time.

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Specifications

IS IMAGING STATION

Model		IS301	IS303	IS305
Telescope				
Length		165mm		
Objective Lens		45mm(EDM49mm)		
Magnification / Minimum Focus		30x / 1.4m		
Image		Erect		
Field of View		1°30'		
Resolving Power		3"		
Minimum Focus		1.4m		
Angle Measurement				
Method		Absolute Reading		
Minimum Reading		0.5"/1"	1"/5"	1"/5"
		(0.1/0.2mgon)	(0.2/1mgon)	(0.2/1mgon)
Accuracy		1"(0.3mgon)	3"(1mgon)	5"(1.5mgon)
Tilt Correction / Compensating Range		Dual Axis / Compensating Range:±6'		
Distance Measurement				
Prism mode				
1prism	condition1 *1	3,000m(9,842ft)		
3prisms	condition1 *1	4,000m(13,123ft)		
9prisms	condition1 *1	5,000m(16,404ft)		
Accuracy	Fine0.2mm/1mm	±(2mm+2ppmxD)m.s.e		
Non-Prism Mode *2		1.5m-250m		
Non-Prism Accuracy *2	Fine0.2mm/1mm	±(3mm)m.s.e		
Non-Prism Long Mode *2		5m-2,000m		
Non-Prism Long Accuracy *2 *3	Fine1mm	±(10mm+10ppmxD)m.s.e		
Image Sensor				
Wide		Angle of field :33°/ 1.3M Pixel		
Telescope		Angle of field :1°/ 1.3M Pixel		
Image Speed		10frame / sec		
Auto-Collimating/Auto-Tracking/Motor Driving				
Rotating Speed		Max.85°/sec		
Coarse Movement		Shuttle Driving (7steps)		
Fine Movement		Jog Driving (minimum step about 1 second)		
Auto-Tracking Range *1	Prism Type 2	1.5m to 1,000m		
	Pinpole Prism	1.5m to 600m		
	A6/A7 360°Prism	5m to 600m		
Auto-Tracking Speed		Max.15°/sec		
Auto-Collimating area		±5°		
Auto-Tracking/Auto-Collimating Laser		Class1(invisible laser)		
Auto-Collimating accuracy *4(Repeated reproducibility 1σ)		1.2mm or below (stand still 100m or below)		
Scan mode				
Scan range		250m (Non-Prism Mode)		
		2,000m (Non-Prism Long Mode)		
Scan speed		Max.20pts/sec		
Standard Deviation		5mm		
Coordinates Accuracy		12mm		
Computer Unit				
Operating System / Processor		Windows® CE.NET5.0/Intel PXA255 400MHz		
Memory		128MB RAM, 2MB Flash ROM, 1GB micro SD Card		
Display		3.5inch TFT Color LCD,Touch Screen		
Interface		RS-232C/ CompactFlash/ USB(TypeA,TypeminiB)		
Wireless Communication				
Bluetooth		Communication distance :About 5m / Ver.1.2 / Class2		
SS Wireless Function		Communication distance: About1,000m*5 / Transmission output max 100mW		
Wireless LAN Function		Transmission specifications:IEEE802.11b/g		
Others				
Dust / Water Protection		IP54(IEC60529)		
Ambient Temperature Range		-20°C to +50°C(-4°F to +122°F)		
Size		338(H)x220(W)x185(L)mm		
Instrument height		196mm		
Weight		Instrument 6.2kg, Battery (BT-65Q) 0.2kg Tribrach 0.7kg		
Rechargeable Battery BT-65Q		DC7.4V, 5000mAh		
Maximum operating time (at+20°C, when not using assist-focus)		Normal use(when using wireless LAN): 2.7h*6/ Continuous Scanning:3h*7		

*1 Condition1:Slight haze with visibility about 20km,moderate sunlight with light heat shimmer.
*2 Kodak gray card white surface
*3 Up to 500m
*4 The air condition is stable and prism is staying. Automatic Collimation accuracy is available only for prism use except for reflector tape.
*5 Wireless communication range may vary depending on obstruction and other environmental conditions.
*6 Continuous double face observations using automatic collimation
*7 When not using wireless LAN and SS wireless

Your local Authorized Topcon Dealer is:

Specifications subject to change without notice

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