IS-3

TOPCON

Imaging Station

- Scanning, imaging and robotic total station
- Two digital cameras – wide angle and 30X tele-zoom
- Long range scanning
- Dual communication 2.4GHz radio and WiFi
- 6,500 ft. (2,000m) reflectorless measurement

IS-3 Imaging Station

The power, accuracy, and speed of a total station with the auto-scanning capabilities of a laser scanner; Topcon's IS-3 takes material management, as-built design, and structural/environmental monitoring out of the clouds and puts it at your fingertip.

A new way to scan

Topcon's IS-3 combines the best of two worlds, advanced imaging and high-accuracy surveying, incorporating real-time field imagery with spatial data. The IS-3's powerful functionality is controlled using Topcon's exclusive ImageMaster™ software that produces "photography with dimension", a revolutionary and cost effective alternative to laser scanning.

Long Range Scanning

Nobody can provide the combination of laser scanning and robotic surveying like Topcon with the IS-3. With the long non-prism range of up to 6,500 ft. (2,000m), the robotic instrument can now scan long distances as well. Mining and monitoring applications can be accomplished with the IS-3.

Remote Networking

The IS-3 has WLAN capability and can be controlled remotely. Imagine sitting in the comfort of your office or vehicle and being able to scan, measure, control, and see what the IS-3 is seeing.

Touch Drive - Turn and select a point on screen

Simply touch the screen image to drive the cross hairs where you want. For the highest degree of data accuracy, clarity of image is key. That's why Topcon incorporates telescopic zoom with an LCD. Using the telescope, pinpoint features to be measured or monitored precisely up to 6,500 ft. (2,000m) away.
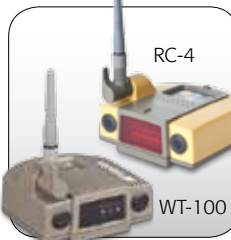
Six On-board Scanning Methods
- Grid Scan by Specified Plane
- Grid Scan by Square
- Grid Scan by Polygon
- Grid Scan by 1-Line
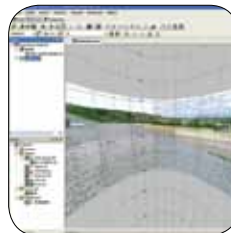- Grid Scan by All-Around
- Feature Scan (all the above)

6,500 ft. (2,000m) Reflectorless EDM Technology
- Long range power means unsurpassed short range performance
- Most powerful reflectorless EDM available
- Pinpoint accuracy with narrow, focused beam

Integrated Radio System
- 2.4GHz Interference free spread spectrum radio + WiFi
- Optional RC-4 long-range radio and QuickLock
- Optional WT-100 long-range WiFi

Photo Fieldbook
- A 360° panoramic image from any occupation point
- Document the jobsite with photographs referenced on the horizontal and vertical angle grid

Continuous Monitoring

With a WiFi connection, image-based monitoring can be done continuously and remotely. Whether done with mounted prisms or reflectorlessly, this monitoring function compliments the everyday use function of our robotic surveying. The IS-3 features *Bluetooth*® and WiFi technology making continuous monitoring easy.

Whether monitoring a mine, creating volume calculations, creating an area topo, structural/environmental monitoring, or even documenting as-builts, Topcon's IS-3 provides a value-priced alternative to laser scanning.

Set points to scan on the LCD with a tap...

TOPCON

How it Works

Topcon's IS-3 features dual digital imaging cameras providing a color, real-time image on the touch LCD display.

To define a scan area, simply tap the image display, or for uniform measurement of an area, select the grid feature. The IS-3 "locks" these points to their exact position on the image, even when the instrument is rotated.

Once all points to be measured are chosen, the IS-3 performs a reflectorless measurement of each point.

Spread Spectrum Wireless + WiFi Built-in

Assist Focus with Focus Knob

Powerful 6,500 ft. (2,000m) Reflectorless EDM

Servo Motors with Auto Track

Protected Compact Flash Card Slot

Digital Camera Wide 4X View

Live Color Image Display

On-board Battery

Windows® CE Touch Screen

Through the Lens Camera 30X View

XTRAC8

- Advanced new prism tracking
- Maintains lock in tough environments
- Fast and accurate lock
- Extended RC-4 range

IS-3 Package Contents

- Imaging Station
- Batteries (3) and Charger
- USB Data Cables
- On-board TopSURV
- Manuals and Software CDs
- Tribrach
- Sun and Rain Shields
- Carry Case

SPECIFICATIONS

Angle Measurement

Method	Absolute Reading
Minimum Reading	1"/5" (0.1/0.5mgon)
Accuracy	1", 3", 5" (0.3mgon)
Tilt Correction	Dual Axis
Compensating Range	±6 ft. (1.8m)

Distance Measurement

Prism Mode	
1 prism	9,840 ft. (3,000m)
3 prism	13,120 ft. (4,000m)
9 prism	16,400 ft. (5,000m)
Accuracy (Fine)	±(2mm+2ppmxD*) m.s.e.
Non-Prism Mode	4.9 ft. - 820 ft. (1.5m - 250m)
NP Accuracy (Fine)	±(3mm)m.s.e.
Non-Prism Long Mode	16.4 ft. - 6,500 ft. (5.0m - 2,000m)
NP Long Mode Accuracy	±(10mm+10ppmxD*) m.s.e.

Imaging

Cameras (2)	1.3mp
Image speed	1 - 10fps
Scanning	Max 20 pts/sec

User Interface

OS	Microsoft Windows® CE.NET 4.2
Processor	Intel® PXA255 400Mhz
Screen	Full Color Touch-screen

For more specification information:
topconpositioning.com/is3

Topcon TotalCare

This online resource comes with real live people ready to help. Get expert training from Topcon University's large collection of online materials, and expert help directly from Topcon Technical Support.

Access software and firmware updates, current publications, and guidance from the experts at Topcon all right from your computer or mobile device.

Please visit the TotalCare website to learn more.
topcontotalcare.com

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SOFTWARE AND PACKAGES

ImageMaster Sofware
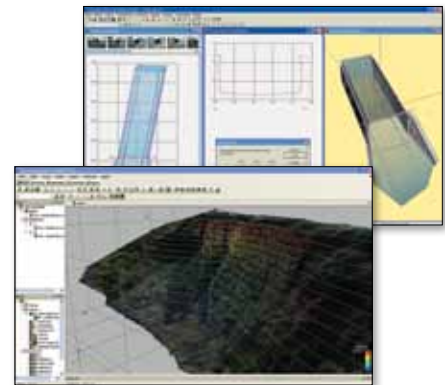Imaging Station Control and 3D Image Modeler Software

ImageMaster IS compliments the Topcon Imaging Station (IS). The functionality includes WLAN control of the IS. Measurements can be taken as individual points or grid scan areas defined by user resolution. The advantage of this edition is the ability to have a Live Video feed over WLAN to the IS. Controlling the IS with a large color screen from a PC or laptop is revolutionary. An entire survey can be completed from the comfort of your vehicle or remotely via internet connection.

Advanced Features

In addition to the unique data capturing and 3D modeling functions, ImageMaster has several advanced features for manipulating and handling the models and model data.
Advanced features include:

- Calculation and display of model cross sections
- Calculation and display of contour lines
- Area calculations
- Distance measurements or point to point
- TIN model generation
- Rendering models
- Ortho-images
- A variety of export formats (DXF, ASCII, VRML etc.)

Recommended Packages

Robotic Package
- Topcon IS-3
- Robotic Kit
- On-board TopSURV
- ImageMaster IS Version

Applications:
Topographic Land Surveys, Boundary Surveys, Construction Layout, Scanning from on-board TopSURV, Scanning from WiFi connected ImageMaster running on a PC.

Scanning Package
- Topcon IS-3
- ImageMaster Standard Version
- On-board TopSURV

Applications:
Long-range Scanning: quarry, mining, construction site, landfills.

Mid-range Scanning: bridge, embankments, dams, levy, monitoring.

Short-range Scanning: interior of buildings, lot as-builts.

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