



**BRIDGE ABUTMENT**  
TARGET POSITION  
TGT LAT: 36.8589°  
TGT LONG: 77.3981°  
DISTANCE: 326 METERS  
BEARING: 187°

## Remote PhotoPositioning: *Verifiable, Fast & Safe*

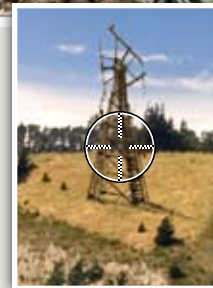
ikeGPS provides **unparalleled mapping-grade GIS data capture** in a fully-integrated, multifunction handheld device.

ikeGPS combines a **laser rangefinder, GPS, digital camera, compass, and computer** in a **single handheld device**. ikeGPS enables faster, safer, and more efficient field GIS data acquisition through **Remote PhotoPositioning**: multiple targets up to 1000 meters distant can be positioned from a single location.

ikeGPS produces a **geotagged digital image of each target**, with crosshairs showing precisely which target was captured and other relevant data superimposed right on the image - providing a new degree of verifiability, speed, and safety in GIS data acquisition.



**SATELLITE DISH**  
TARGET POSITION  
TGT LAT: 36.8547°  
TGT LONG: 77.3648°  
DISTANCE: 402 METERS  
BEARING: 189°



**RADIO TOWER**  
TARGET POSITION  
TGT LAT: 38.9889°  
TGT LONG: 77.5883°  
DISTANCE: 689 METERS  
BEARING: 185°



**OIL REFINERY**  
TARGET POSITION  
TGT LAT: 38.9885°  
TGT LONG: 77.3588°  
DISTANCE: 809 METERS  
BEARING: 178°

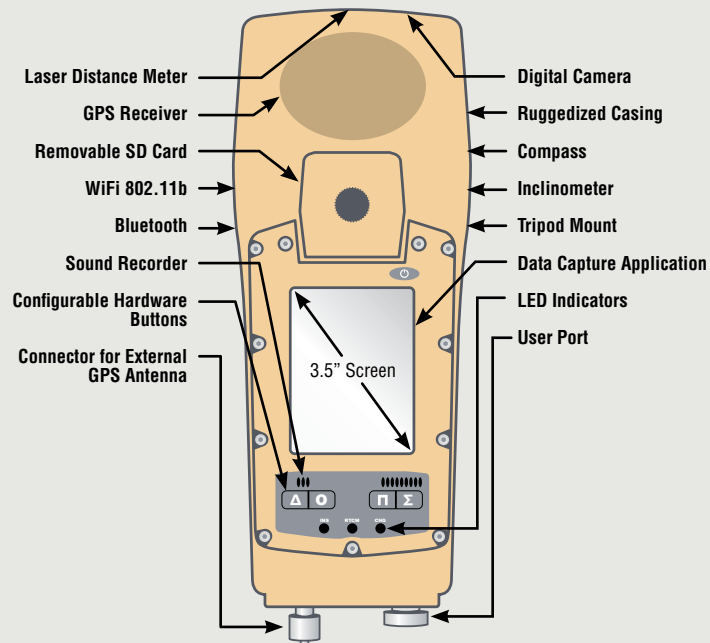
### ikeGPS Models

MODEL	RANGE	CAMERA RESOLUTION	GPS TYPE
ike105	100 Meters	1.3 MegaPixels	Mapping-Grade
ike205	300 Meters	3.2 MegaPixels	Mapping-Grade
ike305	1000 Meters	3.2 MegaPixels	Mapping-Grade
<b>ike504</b>	<b>1000 Meters</b>	<b>3.2 MegaPixels</b>	<b>SAASM *</b>

\*The **ike504** features a SAASM (Selective Availability / Anti-Spoofing Module) GPS receiver.

ikeGPS is an ideal solution for a wide range of GIS data acquisition, particularly when time, budget, and safety are critical. Using ikeGPS, field data can be rapidly collected while keeping the operator safe from environmental dangers or other hazardous conditions. ikeGPS Remote PhotoPositioning accelerates GIS data capture by eliminating the need to be physically located at the target. Data is verifiable and immediately usable.

ikeGPS Applications	
ASSET INVENTORY	
EMERGENCY RESPONSE PLANNING	
DAMAGE ASSESSMENT	
MILITARY ENGINEERING & RECONNAISSANCE	
TRANSPORTATION INFRASTRUCTURE MAINTENANCE & REPAIR	
UTILITY FIELD ASSESSMENTS / INVENTORY	
PUBLIC SECTOR & LAW ENFORCEMENT	
ENVIRONMENTAL RESEARCH AND PLANNING	
RAPID SITE ASSESSMENT	



## ikeGPS Specifications

### PHYSICAL

Size: 11.8" x 4.3" x 3.1" (300mm x 110mm x 80mm)  
 Weight: 2.6lbs (1200g)  
 Tripod Mount: Standard Camera 1/4"  
 Main Connector: Power/USB/RS232/RTCM  
 Touch Screen: Over LCD display  
 Buttons: 4 user programmable  
 Casing: Plastic (ABS + polycarbonate)  
 Protection: IP645  
 Battery: Internal rechargeable Li-Polymer  
 Operation Time: 6 to 8 hours\*  
 DC Input: 11 to 17 Vdc @ 1.5A max  
 Charging Time: 3 - 4 hours

### DISPLAY

Screen Size: 3.5" diagonal  
 Screen Resolution: 64k color Transflective  
 Viewable Image: 320 x 240 pixels

### LASER DISTANCE METER

Laser Range:\*\*\*\*

Model	Maximum Range
ike105	100m
ike205	300m
ike305	1000m
ike504	1000m

Laser Accuracy:  $\pm 0.5m + 0.5\%$  of range  
 Wavelength: 905nm (invisible infrared)  
 Safety: Class 3R Safe to naked eye over all distances.

### COMPUTER

Processor: 624MHz Intel® PXA 270 processor  
 RAM: 64MB  
 Non-volatile System Memory: 128MB Flash ROM  
 Non-volatile Storage Memory: Removable SD card 1GB

Operating System: Microsoft Windows Mobile 5  
 Communication: USB 1.1, Bluetooth, Wi-Fi and RS232

### GPS

Channels: 12 channel parallel "all in view" tracking  
 Frequency: L1 C/A code and carrier phase  
 Update Rate: 1Hz  
 Autonomous Position Accuracy: < 5m (SEP)  
 Antenna: Built in patch antenna, or optional external antenna via TNC connector  
 DGPS Position Accuracy: < 1m (SEP) \*\*  
 Typical Times:  
 • First Fix (Cold Start): 2.5 min  
 • First Fix (Warm Start): 45 s  
 • First Fix (Hot Start): 22 s  
 Multipath Mitigation: Yes  
 DGPS Real Time: RTCM-SC104 Messages

Datum: User Selectable  
 DGPS Post Processing: Optional.  
 SBAS (WAAS, EGNOS): Supported.

### DIGITAL CAMERA

Model	Max. Resolution
ike105	1.3 Mega Pixels (1280 x 1024)
ike205	3.2 Mega Pixels (2048 x 1536)
ike305	3.2 Mega Pixels (2048 x 1536)
ike504	3.2 Mega Pixels (2048 x 1536)

24 bit color  
 Output Image Format: JPEG or Bitmap

### SOFTWARE\*\*\*

Data Capture Applications:  
 • CSV file format  
 • ArcPad™ shapefile format  
 Desktop synchronization: ikeSync

### OPTIONAL SOFTWARE\*\*\*

DGPS Post Processing:  
 • ikeSync including DGPS Post-Processing powered by Waypoint® GrafNav Lite™  
 • ESRI® ArcPad Application Builder  
 • ike Software Development Kit  
 On board GIS:  
 • ESRI® ArcPad

### DIGITAL COMPASS

Accuracy (Tilt 0° to 30°): 3.0° RMS  
 Accuracy (Tilt 30° to 60°): 4.0° RMS

### INCLINOMETER

Roll and Pitch Range:  $\pm 60^\circ$   
 Accuracy (0° to 30°): 0.4°  
 Accuracy (30° to 60°): 1.0°

\* Depending on method of operation  
 \*\* Sub-meter accuracy specification requires data to be collected with a minimum of five satellites, a maximum Position Dilution of Precision (PDOP) of four, minimum satellite Signal to Noise Ratio (SNR) of 30dB, minimum satellite elevation of fifteen degrees and reasonable multipath conditions. Ionospheric conditions, multipath signals or obstructions of the sky by buildings or dense trees may degrade precision by interfering with signal reception. Wide Area Augmentation System (WAAS) is only available in North America, European Geostationary Navigation Overlay Service (EGNOS) is only available in Europe.  
 \*\*\* Other third party applications are available for ikeGPS  
 \*\*\*\* Laser distance meter range and accuracy may vary depending on target and atmospheric conditions (fog, rain etc)  
 Please note that due to constant improvement of our products, Surveylab Ltd reserves the right to update specifications without notice.