

ike 504™

A GIS-Integrated Encrypted-GPS Targeting and Data Capture Device

ike is the ideal solution for GPS data capture:

- in dangerous or inaccessible environments
- when safety, accuracy, and efficiency are important
- for mapping locations where traditional GPS devices cannot operate
- to comply with DoD requirements for OCONUS operation

ike can provide operators with a rapid, safe, flexible, and reliable method to collect geospatial information from a position up to 1,000 meters (3,280 feet) away and with the push of a button ties all this data to a photograph of the target.

Traditional GPS

The operator must stand at the target location to obtain its GPS coordinates.

ike GPS

The operator can point and shoot at a target from a safe and convenient position to obtain its GPS coordinates.



The ike 504 model:

GPS	Selective Availability/Anti-Spoofing Module (SAASM)
Camera	3.2 megapixel
Range	1,000 meters / 3,280 feet
Currently Used By	U.S. Army Corps of Engineers and other U.S. Department of Defense organizations
Purpose	<ul style="list-style-type: none"> • Military and Intelligence Operations • Infrastructure Surveys • Specialized Mapping • Exercise Planning



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The ike Range:



Microsoft® Windows Mobile 5 customizes user interfacing through ESRI® ArcPad Application Builder™. Microsoft embedded Visual Basic™ or embedded Visual C++™ with ike Software Development Kit.



A 3.2-megapixel digital camera with crosshairs verifies target capture. The photo is locked with the target's GPS position and timestamped in a GIS database.



The internal compass measures bearing to the target, stores directions, and displays data when mapped on the ike or with other applications (e.g., SAIC's GeoRover®).



Provides target and ike position data at time of capture. Enhanced GPS encryption, anti-spoofing, and anti-jamming satisfy DoD's OCONUS requirements.



Measures the distance to the target, with an ike-to-target range of up to 1,000 meters (3,280 feet).



Target images are mapped on ike with ESRI® ArcPad™. Data stored in spreadsheet (.csv) or GIS (.shp) files are transferred using Microsoft ActiveSync™.



Connectivity: ike's WiFi 802.11b and Bluetooth® capabilities support wireless communications. A standard removable SD card stores ike data. Data transfer through USB and RS232 connections.



Exclusively from SAIC

For more information, contact:

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SAIC
From Science to Solutions

ike 504 is a laser distance meter, digital camera, compass, SAASM GPS receiver, and computer all in one handheld unit.

Technical Specifications

Physical

Size: 300mm x 110mm x 80mm (11.8in x 4.3in x 3.1 in)
Weight: 1.2kg / 2.6lbs
Tripod Mount: Standard Camera 1/4"
Main Connector:
Power/USB/RS232/RTCM
External Antenna: TNC female
Touch Screen: Over LCD display
Buttons: 4 user programmable
Casing: Plastic (ABS + polycarbonate)
Operating Temperature: -10°C to +40°C
14°F to 104°F
Storage Temperature: -15°C to +60°C
5°F to 140°F
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

Laser

Range: 1,000 meters / 3,280 feet
Accuracy: $\pm 0.5m / 1.6ft + 0.5\%$ of range
Wavelength: 905nm (invisible infrared)
Safety: Safe to the naked eye over any distance
21.CFR1040.10 IEC60825-1:2001 Class 3R

Display

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

Computer

Processor: 624MHz Intel® PXA 270
RAM: 64MB RAM
Non-volatile System Memory:
128MB Flash ROM
Non-volatile Storage Memory:
Removable SD card
Operating System:
Microsoft Windows Mobile 5
Communication: USB 1.1, Bluetooth,
WiFi and RS232

GPS

Channels:
12 channel parallel "all in view" tracking
Frequency:
L1/L2 dual frequency tracking
L1 - C/A, P(Y); L2 - P(Y)
Position Accuracy:
SDGPS < 2m/6.5ft (CEP)
WAGE < 4m/13ft (CEP)
PPS < 12m/39ft (CEP)
Typical Times:
First Fix (Cold Start) < 110 sec
First Fix (Warm Start) < 90 sec
First Fix (Hot Start) < 10 sec
DGPS Real-Time:
RTCM 194-93/SC 104 Messages
DGPS Post Processing: Optional

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°

Digital Camera

Captured Image Resolution:
2048 x 1536 pixels
3.2 Megapixel 24 bit color
Output Image Format: JPEG or Bitmap

Software**

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

Optional Software**

ESRI® ArcPad Application Builder
ike Software Development Kit



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*depending on method of operation
**other third party applications are available for ike



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