

# Iwane Mobile Mapping Solution Visualization to Geospatial



**IMS2**

*Into The Future*

## Complete Mobile Mapping Solution:

- Simple & Compact Terrestrial Data Capture Hardware
  - Advanced Data Processing Tools
  - Variety of Applications (Desktop, Web & Mobile) for different market verticals
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- Seamless and Parallax free Geo-Referenced Omni Directional Imagery (360 Degrees) with 12 Megapixel Resolution
  - In-house developed Image Capture software for enhanced image capture and quality control
  - Highly Accurate GPS/ IMU positioning and orientation sensors
  - Automated generation of high density feature point during post processing for detailed image analysis (CV Technology)
  - Advanced data processing tools ensure vibration free images without a dead hole
  - Enhanced GIS Feature Extraction: Point, Line, area features and attributes can be mapped, edited and exported in various formats
  - End User applications with advanced features such as 3D measurements, geo-tagging, database creation

## APPLICATION AREAS

- GIS & Survey
- Asset Inventory & Management
- Geo-Database Creation & Management
- Planning & Simulation
- Situational Awareness
- Emergency Response
- Realty & Tourism
- Virtual Advertising

**IWANE LABORATORIES, LTD.**



## Omni Directional Camera Coupled With Highly Accurate GPS/IMU & Other Sensors

- Omni Directional Camera with 6 CCD lenses with captive shooting software (IL Shooter) to determine the orientation, image quality, FPS, real time absolute position
- High Accuracy GPS + IMU for positional accuracy and reliability
- Geo-referenced, time stamped 360 Degree imagery



Data Acquisition Software

## Simple, Compact and Flexible

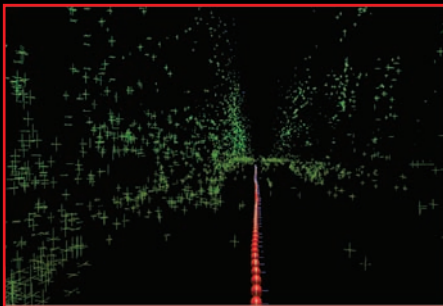
- Simple system configuration requires only one shooting PC and a HDD (eSata connection) inside the vehicle.
- Portable and can be easily mounted on any vehicle type, also available in a backpack version
- Can be integrated with any type of GPS device depending on accuracy requirement and budget



IMS2 Mounted On Rack

## Camera Vector Technology (CV Technology™)

CV Technology assigns accurate 3D coordinates to every pixel in each video frame using camera vectors - vectors from the camera center. To calculate the camera vectors, three-dimensional camera positions and attitudes are determined by tracking the movements of multiple points in every frame. Utilizing a full scope of 360° spherical images that include points at a variety of elevations, the camera position and attitude can be accurately computed, maximizing precision of camera vectors.



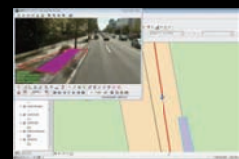
## IMS2 Application Features



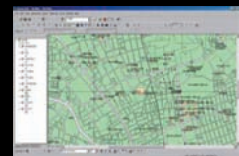
3D Coordinate Measurement



Geo-Tag Object



Draw Point, Polyline and Polygon



Integration with ArcGIS®



Measurement between two points



Overlay Computer Graphics

## Advanced Post Processing Tools & Technique

The IMS2 comes as bundled package with advanced data processing software tools which fulfill the image quality and accuracy requirements of clients.

- IL Movie Maker
- IL CV Maker
- IL Image Complementer
- IL Map Adjustor

## Unique Capabilities

- In absence of good GPS data, absolute accuracy can be calibrated during post processing phase using data from GCP survey or accurate base map.
- Populate Geo-Database in the form of point, line and polygon with attributes in a GIS environment.
- Import existing GIS data into geospatial video as a feature. Can verify, edit and populate the missing features.

Data Capture

Post Processing

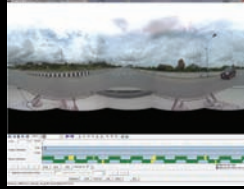
Applications



Map Adjustor



CV Analysis

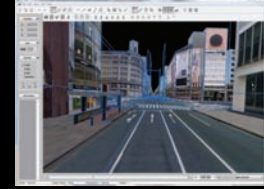


Movie Editing

ALV for ArcGIS



iiCosmo



3D PCCI

PROCESS CYCLE

SPECIFICATIONS

Omni Directional Camera	Configuration: 6 CCD Lenses Resolution: 1600 (H) x 1200 (V) pixels (each lens) Frame Rate: 15 FPS
Positioning Device	Standard Device: Garmin 18x Optional Device: Novatel Span-CPT / Trimble R7 / Trimble 5700 Can Support D-GPS, RTK
Inclination Sensor	Linear Range: X direction ± 10 degrees Y direction ± 10 degrees Resolution: 2 Minutes Accuracy: ± 6 minutes
Spherical & CV Process	Image Field of View - Desktop Application. 360(H)x360(V) Web Application. 360(H)x180(V) Image Resolution: Feature Point per frame: 500 (minimum) per frame
Physical Attributes	Weight: 50 Kgs (incl. of carrying case approx.) Vehicle Compatibility: Any Vehicle
Shooting PC	OS: WindowsXP SP2 or later (32 bit) CPU: Intel CoreDuo 1.4 GHz or higher RAM: 2GB or larger Graphics Card: NVIDIA dedicated graphic chip, 256 MB or larger video memory Port: e-SATA x 1, USB x 2 IEEE1394b x 1 (or Express Card/ 34-slot x 1)

USER APPLICATIONS

ALV™ for ArcGIS®  
Desktop based GIS/ Asset Management Application



ArcGIS® (Verison 9.3 or Higher)  
ArcGIS® Server

iiCosmo  
Flash Based Interactive Web Application



3D PCCI  
Photo Realistic 3D Model Software Tool



Digital Street Scanner (DSS) Ortho Tool  
High Resolution Ortho Image Tool



Mobile Compatibility:

- iphone
- Android



## IMS2 Mobile Mapping Solution

For further inquiries, please contact us at: [sales@iwane.com](mailto:sales@iwane.com)

For latest developments, visit us at [www.iwane.com/en/](http://www.iwane.com/en/)

### CONTACT

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