



Micro Aerial Pilotless Scanning System (MAPSs)

Introduction

FORUM 8 in conjunction with MITTO Design LLC of Georgia, USA, is pleased to launch an innovative service for partners and customers, worldwide.

MAPSs is a novel low cost method of producing a range of Geo, GIS & 3D interactive mapping products through the use of a pilotless unmanned aerial vehicle (drone), coupled with the latest photogrammetric technology.

The **MAPSs** system consists of the provision of a drone along with full instructions and recommendations regarding the preparation for flight and the actual flying process. In addition the system comes with a training video and details of how to download the data for onward transmission to the MITTO Post-Processing Center.

Data captured by the drone can be processed into a range of products:

- Aerial & Digital Terrain Maps
- 3D Point Clouds & 3D Meshes
- Real-time Interactive 3D VR Simulation Models
- Delivered with a full license of VR-Design Studio



MAPSs Mapping Process

- Select the target area to be mapped and create the flight path by storing GPS waypoints within the drone taking note of any potential obstructions - high buildings and phone towers etc
- Include at least 4 ground control points or linear distance measurements for rectification and geolocation
- Flight time is 8-10 minutes depending on battery and weather conditions
- Set the cameras to take images every 1 second – approximately 500-700 images per flight
- Ensure connection to the maximum number of satellites by delaying the flight by 2 minutes
- After the flight, unload the data to the FORUM8 MAPSs dropbox and order the required post-processing product(s)



An example of the VR-Design 3D Mode produced by MAPSs



The maximum area to be modelled in VR-Design Studio is 20 sqkm

MAPSs (Drone) Hardware Specification

The **MAPSs** drone hardware system comprises:

- DJI Phantom 3 Professional Drone
- Additional batteries
- High speed memory card
- GSM tracker
- An iPad mini
- A travel case to hold all the elements of the drone
- It is assembled and tested before shipping. There is only one part that is not included, which is a SIM card for the GSM tracker
- This should be purchased locally for ensuring cellular network compatibility
- Plus training video and post-processing instructions

Hardware System Price: \$7,500

Post-Processing Fees: Subject to amount of data and product(s) ordered.

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VR-Design Studio (Real-time interactive 3D VR simulation software)

VR-Design Studio is used in a range of urban & transport simulation & modelling applications worldwide, including urban, traffic and pedestrian planning and design, often used for stakeholder consultation.

Users can manipulate 3D space dynamically, import and edit CAD data, build and texture models, automatically build roads, tunnels & bridges, view multiple design alternatives in real-time, both offline and online, as well as being able to visualize and edit intelligent traffic in ways previously not possible.



FORUM 8 the Company

Established in 1987 the company's HQ is in Tokyo, with five other development and support facilities in Japan as well as a Super Computer Cloud Research Lab in Kobe. Overseas offices based in London, Shanghai, Beijing, Seoul, Sydney with remote facilities in San Francisco and Paris.

FORUM 8 also benefits from a network of Partners worldwide.

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