

MAPPING

Since 1949, **Asia Air Survey** has demonstrated extensive skills and optimised techniques in **aerial surveying** using a wide range of **high definition** analogue and **digital** sensors. **Asia Air Survey** offers superior **professional services** to **governmental** and **non-governmental** agencies, the private sector and **business partners** in engineering, forestry, **natural resources** and **construction design** from local to global scales. The mapping services include reliable and **efficient** technologies such as **LiDAR Terrain Mapping**, **Optical** and **Radar Remote Sensing**, **Digital Photogrammetry**. Over the years, **Asia Air Survey** has refined its topographic mapping techniques given its continuous **development** of **innovative** and cost-effective digital photogrammetry technology such as **AZuka**.

DISASTER PREVENTION

The 2011 **Earthquake** and **Tsunami** in Japan still remain fresh in our minds. In such unexpected difficult circumstances, **Asia Air Survey** uses cutting-edge **geospatial technologies** suitable for rescue planning as well as for **assisting** the **rehabilitation** and **reconstruction** of the disaster-hit areas. Geospatial technologies as well as other technologies are used in **mapping** the **hazard areas** caused by natural disasters. Disaster mitigation is considered a **top priority** in Japan since the country is frequently exposed to earthquakes, tsunamis, debris flows and landslides. **Asia Air Survey** provides timely and **detailed information** on emergency evacuation routes, evacuation areas and emergency centres.

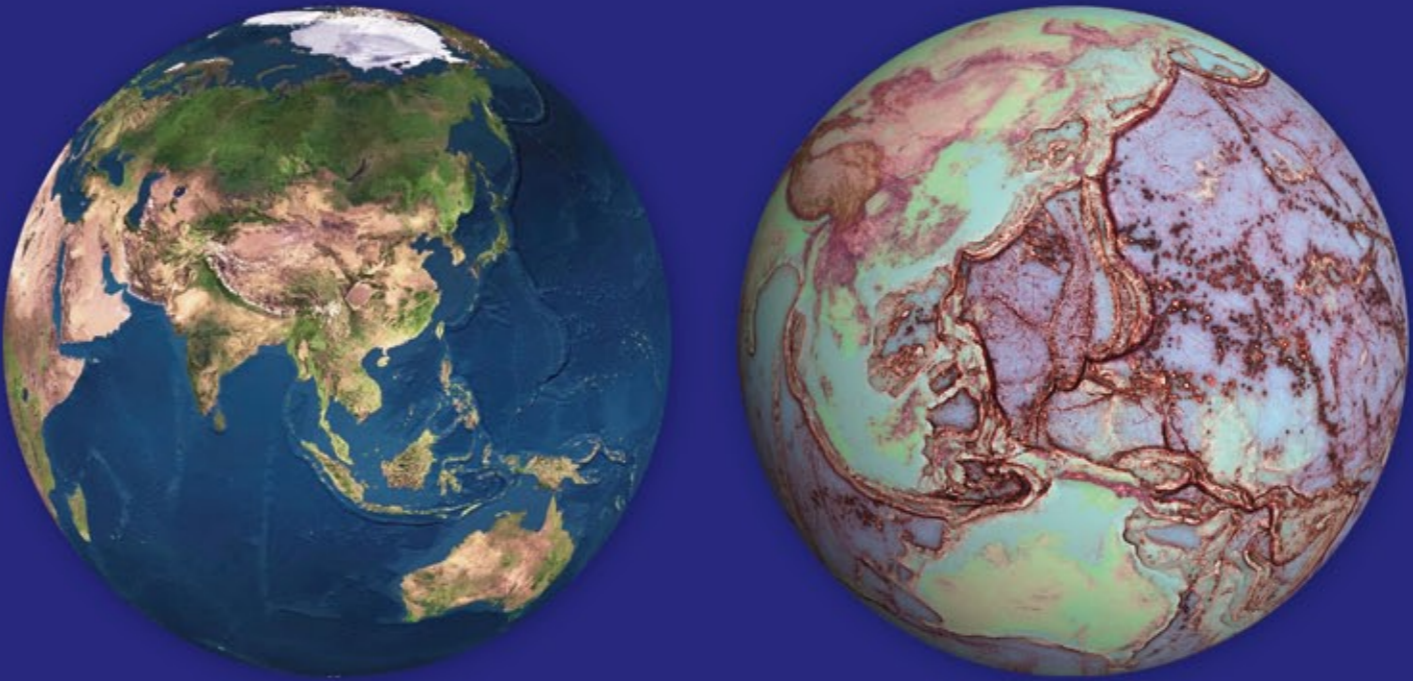


The impact of the 2011 tsunami in the Tohoku area



ASIA AIR SURVEY

CUTTING-EDGE GEOSPATIAL TECHNOLOGY AT YOUR SERVICE



Aerial snapshot of Goryokaku, Northern Japan displayed in true colour (left image) and false colour (right image)

ENVIRONMENTAL SERVICES

Environmental problems such as **global warming** and **pollution** (air and water) are increasing in complexity, threatening our **living environment** and **biodiversity**. **Asia Air Survey** involvement in environmental services includes comprehensive designs, which **support** the **customer** from robust **project design** to implementation. **Asia Air Survey** develops novel **measuring** and **monitoring** tools for **REDD/REDD+** (Reducing Emissions from Deforestation and forest Degradation) implementation framework, Environmental Assessment and Planning, Low Carbon Urban System and Renewable Energy. The company's technical expertise provides **innovative** approaches for environmental **services customised** to meet the needs of different clients.



Forest survey



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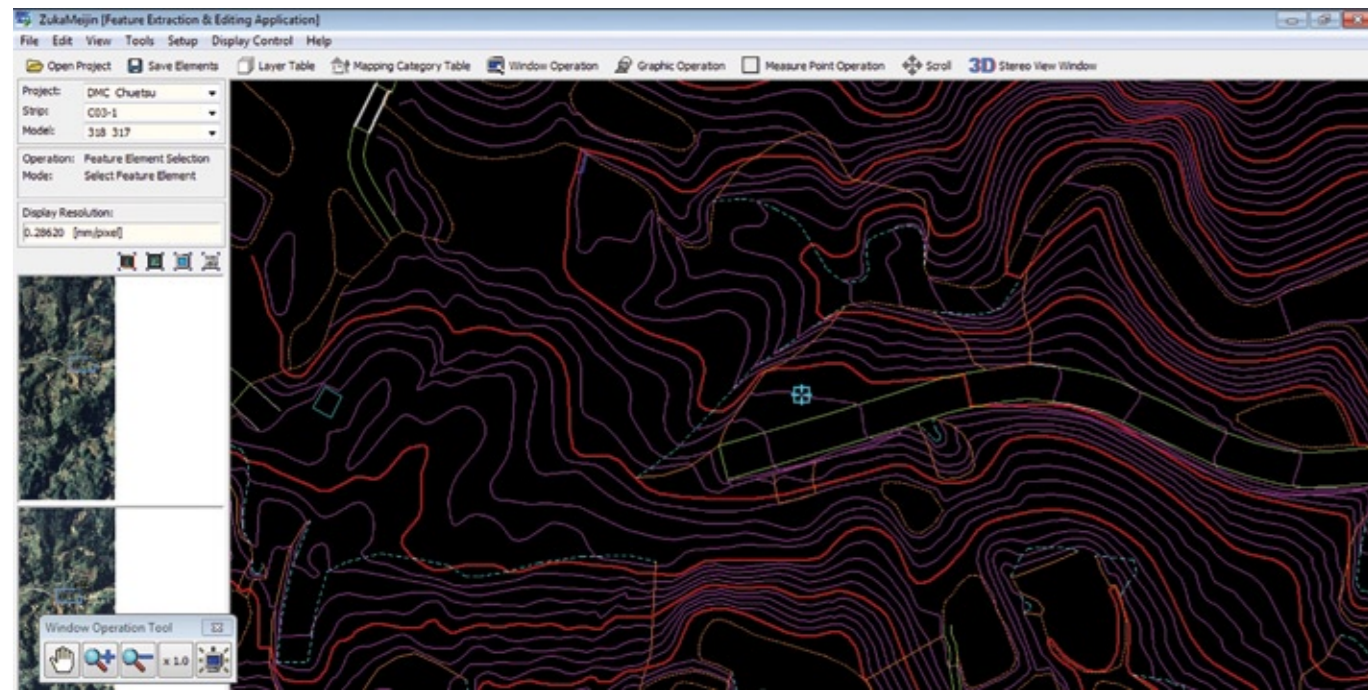
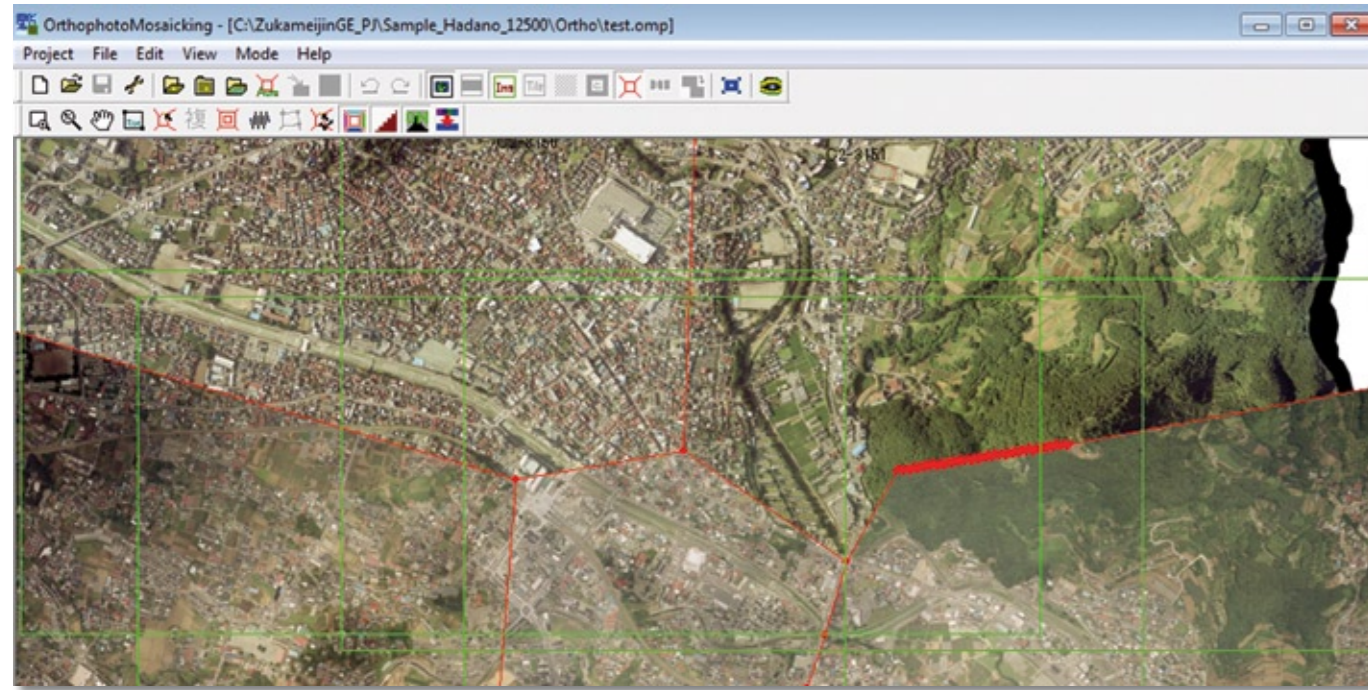
www.asiaairsurvey.com

Asia Air Survey is a Japanese company which provides novel state-of-the-art geospatial technology tailor-made to meet the needs and specifications of the customer.

AZUKA

COMPETITIVE PRICE | EASY TO USE | HIGHLY EFFICIENT

AZuka is a cost-effective **3D digital mapping software**, comprising a plethora of functions such as **aerial triangulation**, **3D measurement**, production of true orthophoto, analytical photogrammetry, automatic **Digital Elevation Model (DEM)** and **TIN** generation. Data products created from **aerial photos** and **satellite images** are seamlessly integrated in **GIS systems**, 3D viewers and **VRLM** building model development. **AZuka** allows data import from both **airborne** and **satellite** sensors platforms such as scanned images, **Digital Mapping Camera (DMC)**, **UltraCam** series, ALOS PRISM, IKONOS, GeoEye, QuickBird, WorldView.



Overview of AZuka graphic user interface



Konabe's tomb displayed in true colour (left image) and as a Red Relief Image Map (right image).

RED RELIEF IMAGE MAP

FEATURE ENHANCEMENT | VOLCANOES AND ACTIVE FAULT SURVEY | HIGH ADAPTABILITY

Red Relief Image Map is an extremely high **stereoscopic colour image** generated from DEM using algorithms developed by **Asia Air Survey**. The technology was developed to fully exploit dense **Digital Surface Model (DSM)** and **DEM** data values derived from **LiDAR** in order to analyse topographic conditions. **Red Relief Image Map** is a completely unique technique for **topographic visualisation** which is different from conventional **shaded relief maps** and **bird's eye view** maps. This type of technology can be used in active **fault survey**, detailed volcanic **investigation**, slope failure and landslides as well as feature enhancements.

GEOMASTER NEO

3D HIGH ACCURACY DATA | 360° PANORAMIC IMAGES
RANGING ACCURACY UP TO 10MM

GeoMaster NEO is a mobile **LiDAR** mapping system, which acquires point cloud data and 360° panoramic imagery to extract **3D** information such as **topography** and **planimetric** features while driving. Each point has three-dimensional coordinate (x,y,z) and reflection intensity value. **GeoMaster NEO's** laser beam reaches up to 500m in flat areas and 100m in built-up areas in diameter. **GeoMaster NEO** is an all-weather system which also operates in low intensity light areas and at night. The system has multiple applications such as **road design**, property inspection, asset management, **urban disaster prevention** and **building information** modeling.



Examples of point cloud data visualisation (left images) and 3D data rendering (right images)



High resolution 360° panoramic view

LV SQUARE

360° PANORAMIC VIEW | VIRTUAL MOBILITY
INFINITE FIELD APPLICATION POSSIBILITIES

LV Square is a novel **image mapping solution** based on cloud **computing** that was developed by **Asia Air Survey**. The system **employs a 360°** seamless image mapping called "**Live View**" which is able to visualise complex and **highly** detailed geospatial information. The user can experience **high level virtual mobility** which cannot be accomplished using **aerial photos**, satellite images or **3D maps**. **LV Square** is a **multi-purpose software** which supports real-estate tax administration, **road network** maintenance management, data collection during the time of **disaster**, tourism industry, **navigation system** to name but a few.