

COMPANY PROFILE

Spatial Excellence

Photomapping Services was founded in Melbourne in 1969 and is 100% Australian owned and operated. Photomapping gained early recognition as the leading specialists in the field of precise photogrammetry. Industry pioneers, Photomapping provided the first analytical photogrammetric services to Australia. We now employ over 45 staff across our offices located in North Melbourne (Head Office) and Bendigo (Regional Office). We are affiliated with United Photo and Graphic Services in Blackburn.

Photomapping continues to be an industry leader, equipped with world class state-of-the-art laser scanning systems, our Optech multipulse LiDAR is redefining airborne terrestrial mapping and measurement in the skies of Australia. Our esteemed reputation and continued success allows us to offer complete flight-to-product mapping services throughout Australia and across the Asia Pacific region.

Our Team

Our experienced and highly qualified team of GIS specialists, photogrammetrists, cartographers, data analysts, aerial photographers, LiDAR engineers, navigators, and spatial professionals provide our clients high quality, cost effective and tailored mapping solutions. Our team brings together a wealth of experience, specialist skills and knowledge from working in defence mapping organisations, government, and industry.

Our Services

Photomapping Services are the mapping and airborne imagery specialists with a focus on delivering spatial solutions including:

- Photogrammetry
- Aerial Photography and Digital Imagery
- LiDAR Airborne Laser Scanning
- GIS Data Capture, Revision and Management
- Cartography and Custom Map Production

We have dedicated 7 days a week access to a range of modern twin-engine fixed-wing aircraft under 5-year service agreements. Rotary aircraft are also available. Select aircraft are fitted with our advanced ALTM Optech 167KHz Multipulse LiDAR with integrated medium format 39 Megapixel ROLLEI Digital Camera (Infra-Red and True Colour) and our Zeiss LMK 2000 and LMK 1000 large format 152mm film cameras. Coupled with our world class LiDAR Laser measurement technology, is our LITTON Inertial Measurement Unit (IMU), the most advanced position and orientation system available for airborne vehicles with integrated airborne GPS.

Quality Service Provision

Photomapping undertakes all operations and production in accordance with its accredited Quality Management System, certified under ISO 9001: 2000 by SAI Global (formerly Standards Australia). Photomapping is a member firm of the Australian Spatial Information Business Association (ASIBA).

Specialists in Photogrammetry, Imaging, GIS & Mapping

Utilising leading edge photogrammetric and ESRI ArcGIS™ workstations, our highly experienced teams can process an array of photogrammetric products from orthorectified digital imagery, mosaics, to digital 3D elevation products derived from orthophotos or LIDAR, including Digital Elevation Models (DEMs), spot heights, contours and breaklines, right through to customised topographic mapping. Photomapping is appointed as a select member of the Geoscience Australia panel for the provision of topographic map and digital spatial data services to the Australian Government. As a panel member, Photomapping regularly provides Geoscience Australia the complete range of photo mapping services from spatial data acquisition and revision, metadata completion, and topographic map production.

Service Region

Photomapping provides aerial photography, photogrammetry and GIS services throughout Australia and across the Asia Pacific region. We are accustomed to local, regional and remote area mapping and airborne capture. We fly aerial photography for Melbourne, Sydney, Hobart, Brisbane, Darwin, Perth and all regional centres. Our offices are located in North Melbourne (Head Office) and Bendigo (Regional Victoria). Our dedicated flight operations depart from Essendon Airport in Melbourne and we utilise the photographic film processing services of affiliated company United Photo and Graphic Services in Blackburn. Conveniently based at Essendon Airport, aircraft can be rapidly deployed throughout Victoria, New South Wales, South Australia, Tasmania and Queensland.

Our Expertise

Photomapping Services has demonstrated experience providing our complete range of spatial and photo mapping services to clients across a breadth of disciplines and sectors. Our aerial imagery and photo mapping capabilities are being employed by industry, government, and private sector clients from the land management, agriculture, environmental management, catchment and flood monitoring, and mining sectors. With over 38 years as a leader in our field Photomapping has the experience and expertise to meet your entire mapping, GIS and spatial information needs. Our sought-after specialist services are being applied to:

- Agriculture, Farming
- Planning, Land Management
- Transport, Road Networks
- Environment, Habitat Mapping
- Catchment Management Authorities, Flood Mapping
- Mining and Quarry Site Mapping (Orthoimagery and LiDAR)

An Affiliated Company – United Photo & Graphic Services

One of our key suppliers for over 20 years, United Photo and Graphic Services are now an affiliated partner company of Photomapping Services. Lindsay Saunders, Director of Photomapping Services, acquired United Photo and Graphic Services in 2006 and together with a large capital investment Photomapping greatly expanded its airborne spatial capabilities and competitive edge. Photomapping continues to utilise the specialist capabilities of United Photo and Graphic Services, which includes aerial photography, film archival, film processing, film reproduction and duplication services. The common directorship allows seamless *flight-to-product* service provision and priority flight planning to clients. We also offer exclusive access to the Victorian Government and Australian Government aerial photo archives as a licensed reseller.

LiDAR Airborne Laser Scanning

Equipped with the latest in world leading Airborne Laser Terrain Mapping (ALTM) measurement technology, our Optech Gemini Multipulse LiDAR records 3D elevation data at 167kHz. The Optech LiDAR features multi-pulse data capture enabling more efficient and economical data collection with the added advantage of real-time medium format (39 Megapixel) digital camera imagery (IR or True Colour) to be captured simultaneously. Utilising the camera combined with the LiDAR provides a viable option in critical incident response or high volume requests. Our LiDAR system:

- ALTM Optech LiDAR 167KHz with integrated Medium Format 39 Megapixel ROLLEI Digital Camera. Coupled with a LITTON LN-200 IMU internal position and orientation system for airborne vehicles with integrated airborne GPS.

Orthophoto & 3D Elevation Capability

Since Photomapping Director Lindsay Saunders acquired United Photo and Graphic Services P/L in 2006 and with a further capital investment, Photomapping has greatly expanded its airborne spatial capabilities and competitive edge. We can now provide clients complete flight-to-product solutions and exclusive access to the Victorian and Australian orthophoto archives. Our specialist production equipment includes:

- Softcopy Photogrammetric Workstations
- ESRI ArcGIS™ Workstations
- Trimble™ GPS Receivers
- Imatizer™ 2304 precise photogrammetric scanner (colour, B&W, diapositive and negative mediums at up to 12 microns, $\approx 2,117$ dpi)
- Kodak™ 1811 Versamat film processor
- Geosystem Delta™ precise large format scanners
- HEPA filtered room under positive pressure for precision scanner operations

Camera Systems

- Zeiss LMK 2000, 152mm lens with anti-vignetting filter, equipped with Forward Motion Compensation (FMC), Gyro-stabilised platform, also compatible with our IMU (refer to LiDAR System).
- Zeiss LMK 1000, 152mm lens and 88.5mm super wide-angle lens with anti-vignetting filter, equipped with Full Image Motion Compensation, Track Air - Flight management system. This secondary camera provides dedicated redundancy and duality for urgent/large production requests.
- Fairchild aerial camera, 300mm lens used for oblique photography.
- Medium Format 39 Megapixel ROLLEI Digital Camera (IR and True Colour) integrated with LiDAR.

Our Flight Capability

Our selection of state-of-the-art airborne LiDAR and photo capture systems installed in a range of fixed-wing aircraft based at Essendon airport allows rapid deployment throughout the entire State. Our dedicated flight service contracts on 5-year lease terms ensure 7 days a week availability and zero downtime redundancy.

GIS Services & Mapping

Photomapping Services offers spatial data revision and enhancement of your GIS databases using authoritative map data throughout Melbourne, Sydney, Victoria and Australia. We also offer cost effective large format scanning services for individual jobs or full reproduction of your entire paper or film based map and orthophoto collection.

Photomapping Services offers a range of GIS services complementing our spatial data revision and data management services. Photomapping will undertake GPS Control surveys for your mapping projects. GPS Ground Control and airborne GPS are utilised in georeferencing Photomapping's aerial photography and photogrammetric mapping projects. Photomapping can also conduct detailed hydrology and drainage mapping for councils, utilities, catchment management and water authorities. We can customise the digital drainage and hydrology data to directly add into your existing GIS.

Photomapping Services produces topographic maps for numerous purposes for a large variety of clients. We provide mapping services for projects of all sizes from the smallest job to a full GIS mapping solution for cartographic retail release covering thousands of square kilometres. The Scale of the cartographic product can vary from 1: 50 to 1: 2.5 Million.

Value for Money

Photomapping has developed a range of imagery, elevation and LiDAR based solutions allowing full optionality to ensure economical acquisition, and value for investment and quality. Photomapping employs the latest state-of-the-art digital spatial technologies and cutting edge softcopy photogrammetry systems to ensure expedient processing and to maintain the highest quality of end product. We offer clients optimised tailored solutions for project turn around and delivery of a range of orthophoto, elevation and LiDAR based spatial products right through to topographic mapping solutions.

We have the capacity to fully customise the end product for the client according to their investment and usage needs. We work with clients to decide on the most appropriate alternatives to meet the technical, financial and timing requirements for the project. Optional project scenarios:

Fine Acquisition, High Quality Specification, featuring:

- 60-80% Forward overlap, and 30-40% Side overlap.
- Full orthorectified colour balanced mosaic preparation.
- High order DEM and ortho-draped elevation solutions.
- Combination LiDAR and orthoimagery (digital or photo) in natural colour or IR.
- Film scanned at up to 12microns, final product up to 0.05m pixel, accuracy of $\pm 0.10m$.

Rapid Acquisition, Medium Quality Specification, featuring:

- Accelerated capture and film processing.
- Optimised automated rectification and mosaic preparation.
- LiDAR capability with integrated digital camera – LiDAR DEM and digital orthoimagery (IR or true colour), ideal for rapid mapping.
- Film scanned at 12-15microns, accuracy $\cong \pm 0.15m$ to $\pm 0.35m$.

Custom Specifications available:

- Preferred flight time – sun angle, night (LiDAR), season, leaf-off requirements, coastal zone, or alpine.
- End-product format, all commercial formats available for imagery (ie. ECW, JPEG2000 Lossy etc.) and spatial products (ie. ESRI, MapInfo, Microstation etc).
- Metadata population (spatial / textual).
- High-order orthorectification and colour balancing mosaic optionality.

PHOTOMAPPING SERVICES

North Melbourne (Head Office)
133 Abbotsford Street
NORTH MELBOURNE
VICTORIA, AUSTRALIA 3051
Tel: +61 3 9328 3444
Fax: +61 3 9326 6476
Email: phomap@photomapping.com.au

Bendigo (Regional Office)
119 Condon Street
BENDIGO
VICTORIA, AUSTRALIA 3550
Tel: +61 3 54418311
Fax: +61 3 54414711
Email: bendigo@photomapping.com.au

United Photo and Graphic Services
4/2 Apollo Court
BLACKBURN
VICTORIA, AUSTRALIA 3130
Tel: +61 3 9877 3922
Fax: +61 3 9894 2971
Email: info@unitedphoto.com.au



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Endorsed
Company**
ISO 9001: 2000
QEC 4583
SAI Global