

# DIGICAM™

The IGI *DigiCAM* is a medium-format airborne digital camera system for professional, but affordable digital aerial photography. By using IGI's core competence in airborne developments, the digital camera is built by IGI for airborne conditions and aerial survey applications. Combined with IGI's flight management system *CCNS4* and the *AEROcontrol* GPS / IMU system the *DigiCAM* forms a complete solution for an extremely rapid and automated workflow for the generation of directly georeferenced images.

## Powerful Visual Imagery



Camera head, lens, camera body and digital back.



Display, *DigiControl* with 2 Storage Units, Camera head and filters



## Performance Features and Benefits

- Affordable medium-format airborne digital camera system; return on investment within the first project
- Ruggedized, compact and lightweight design
- Pilot-only missions possible
- 39 Megapixel high resolution system
- Image repetition rate: 1.9 sec
- Automated workflow
- Automated release of exposures at pre-planned positions
- Loss-free raw data format of photographs
- Calibrated camera system
- Compliance of a pre-defined overlap
- Combination with *LiteMapper* LiDAR system possible
- Integration with the *CCNS4* aircraft guidance, positioning and sensor management system offers fully automated operations
- Integration with *AEROcontrol* possible for direct georeferencing and integrated sensor orientation
- *DigiCAM* and *AEROcontrol* build the perfect combination for orthophoto production of aerial surveys within a day
- *DigiCAM* mounting possibilities:
  - IGI provides mount adapters for most common mounts
  - Together with the *LiteMapper* LiDAR system
- Double sensor head configuration possible for faster flying speeds resulting in an increased efficiency due to less flying time

*DigiCAM* is a modular designed system. Its components consist of a camera, two storage units for 6400 images and an 8 inch TFT touch-screen. The system provides online flight information e.g. preview, histogram, GSD and remaining images. An online adjustment of shutter, aperture and ISO values is possible. IGI offers a variety of different lenses. Lenses with: 28, 35, 50, 80, 100, 150, 210 and 300mm focal length are available. Two filters are available for color mode (RGB) and color-infrared mode (CIR).

# DigiCAM™ - Digital Aerial Modular Camera System

## Lenses:



**Example of Lenses:**    3.5/35 mm    3.5/50mm    2.8/80mm

The lenses for each *DigiCAM* are thoroughly selected in order to fulfill all demands of digital aerial photography. All lenses are of high precision and high luminous intensity.

For operations combined with a LiDAR system such as the *LiteMapper*, the lense can be adjusted to the corridor width of the laser scanner.

## Applications:

- Geographic Information Systems (GIS)
- Remote sensing
- Corridor mapping, e.g. power lines, pipelines, highways
- Rapid response applications
- Infrastructure and urban applications, tourism
- Support of all LiDAR applications

## Complete Solution:

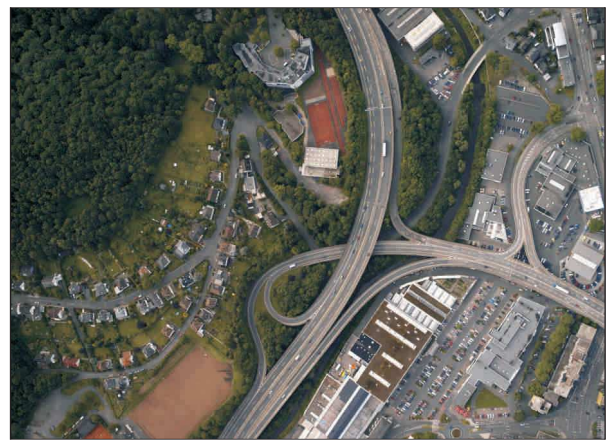
IGI offers a complete solution for a modern digital mapping camera system. Components are:

- Mission Planning Software:  
*IGIplan*
- Aircraft Guidance & Sensor Management:  
*CCNS4*
- GPS / IMU System for georeferencing:  
*AEROcontrol* with *AEROoffice*
- Calibration Software:  
*BINGO30*
- Postprocessing Software:  
Software packages e.g. TerraPhoto, OrthoMaster or OrthoVista

The *DigiCAM* suits the *LiteMapper*, IGI's LiDAR system perfectly.



## RGB and CIR Images:



**Place:** Siegen, Germany    **Altitude:** approx. 700 m  
**Aircraft:** Cessna 207    **Lens:** 50 mm  
**GSD:** 15 cm

## Modular System:

*DigiCAM* is a modular designed system. Two cameras can be used to get RGB and CIR images of the same area in just one flight. Following arrangements have been accredited:

- **DigiCAM**  
1x *DigiCAM* with 39 Mpixel
- **Double-DigiCAM**  
2x *DigiCAM* arranged vertically
- **Dual-DigiCAM**  
2x *DigiCAM* with 74 Mpixel
- **Dual-DigiCAM Oblique**  
45° Images for 3D City Modelling
- **Triple-DigiCAM**  
3x *DigiCAM* for extreme wide swath width
- **Quattro-DigiCAM**  
4x *DigiCAM* with 145 Mpixel
- **Quattro-DigiCAM Oblique**  
45° Images for 3D City Modelling
- **Penta-DigiCAM**  
4x *DigiCAM* oblique  
1x *DigiCAM* vertical

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