

# DIGICAM<sup>®</sup>

*DigiCAM* is a medium-format airborne digital camera system for professional, but affordable digital aerial photography. By employing IGI's core competence in airborne developments, this digital camera is built for aerial survey applications. Combined with IGI's flight management system *CCNS5* and the *AEROcontrol* GNSS/IMU system, *DigiCAM* forms a complete solution for an extremely rapid and automated workflow for the generation of directly georeferenced images.

## Sensor Management Unit

Fitting into IGI's Modular System Concept one camera unit can be extended with multiple cameras to e.g. a *Quattro DigiCAM* or *Penta DigiCAM* system at any time. For upgrading a *DigiCAM* system only one *DigiControl* SMU for each camera is needed. Sharing one graphical user interface, all cameras can be controlled within one TFT display.

*DigiControl* Sensor Management Units come with hot swap Solid State Drive storing units. With no moving parts SSD storing units guarantee the safety of image data and facilitate no limits in altitude. The system provides online flight information e.g. image 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 300 mm fixed focal length are available. Two filters are available for color mode (RGB) and color-infrared mode (CIR).



TFT display, *DigiControl* SMU with *DigiCAM*, camera filters and SSD hot swap storage unit

## 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 are in operation:

### *DigiCAM*

x1 *DigiCAM* with 60 Mpixel

### *Dual DigiCAM*

x2 *DigiCAM* with 118 Mpixel

### *Triple DigiCAM*

x3 *DigiCAM* with 172 Mpixel

### *Quattro DigiCAM*

x4 *DigiCAM* with 235 Mpixel

### *LiteMapper* LiDAR sensor with

x2 *DigiCAM* Oblique

x1 *DigiCAM* Nadir

### *Dual DigiCAM* Oblique

45° images for 3D City Modelling

### *Quattro DigiCAM* Oblique

45° images for 3D City Modelling

### *Penta DigiCAM*

x4 *DigiCAM* Oblique

x1 *DigiCAM* Nadir

# DigiCAM® - Digital Aerial Modular Camera System

## Lenses



Example of lenses:      3.5 / 35 mm    3.5 / 50 mm    2.8 / 80 mm

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 lens can be adjusted to the corridor width of the laser scanner.

## Complete Solution:

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

- Mission Planning Software  
*IGIplan*
- Aircraft Guidance & Sensor Management  
*CCNS5*
- GPS/IMU System for direct georeferencing  
*AEROcontrol* with *AEROoffice*
- Postprocessing Software  
Support of common photogrammetric software packages

## RGB and CIR Images



Place: Siegen, Germany  
Aircraft: Cessna 207

## Highlights

- Affordable medium-format aerial modular camera
- 60, 50 or 40 megapixel resolution
- Single touch screen for multiple systems
- Ethernet connection for further SMU's
- Frame rate up to 1.2 sec
- Rugged, compact and lightweight design
- Hot swap storage unit for unlimited flying time
- RGB or CIR images possible
- Compatible with stabilized mounts
- Combination with *LiteMapper* LiDAR system possible
- Combination with *DigiTHERM* aerial thermal camera system possible
- Multiple sensor head configurations possible to acquire e.g. faster flying speed or oblique images

