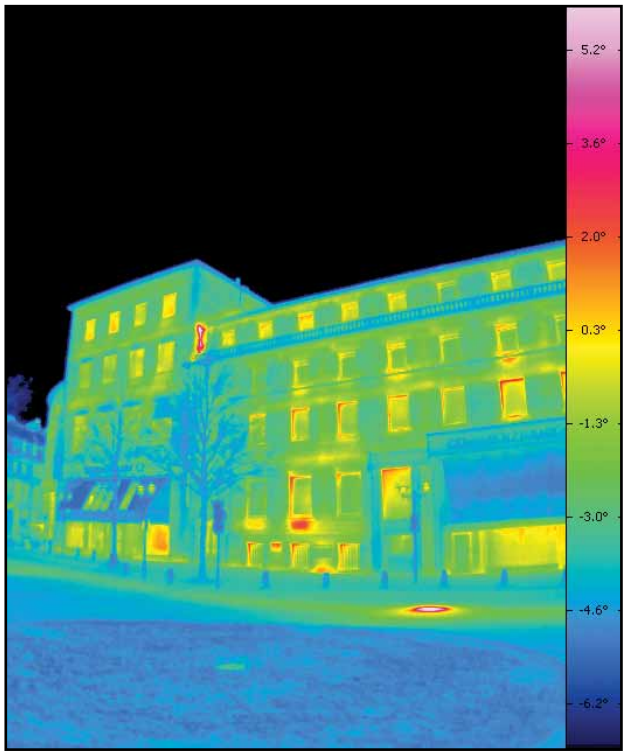
DIGITHERM®

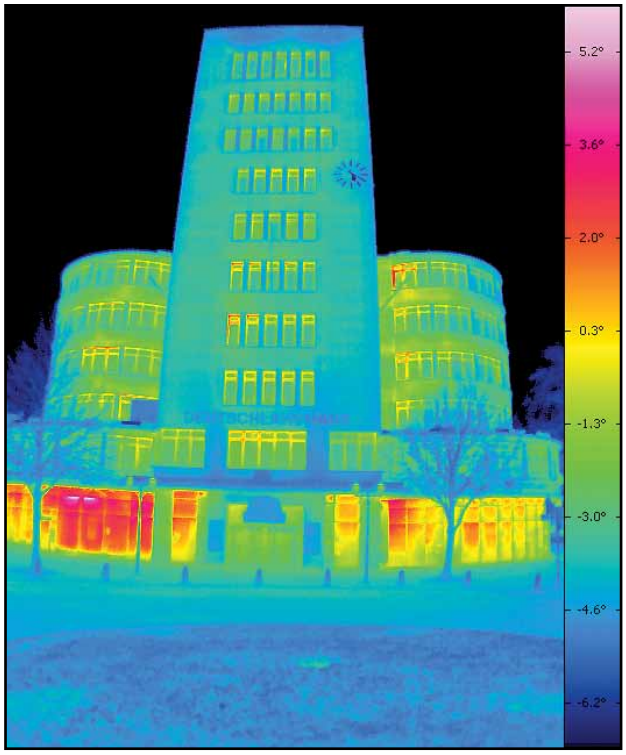
DigiTHERM is IGI's thermal camera system for professional digital thermography. With a thermal resolution of 0.05K, the standard temperature range is -40°C to 120°C. The uncooled microbolometer FPA-detector with 640x480 pixels delivers brilliant thermal images in high quality. Using a graphical user inferface with real time preview, no additional video system is required. Both featuring rugged metal housings and being part of IGI's Modular Sensor Systems, *DigiTHERM* and *DigiCAM* are extremely robust and can be exchanged conveniently and inexpensively during airborne missions. Combined with IGI's mobile laser mapping systems, *LiteMapper* (airborne) or *StreetMapper* & *SAM* (mobile), *DigiTHERM* forms a complete solution for an extremely rapid and automated workflow for the generation of directly geo-referenced thermal images.

Modular Sensor System

8 inch TFT touch-screen,
DigiControl SMU with hot swap storage unit and thermal camera

DigiTHERM is one part of IGI's Modular Sensor Systems. Its components consist of a thermal camera, a *DigiControl* SMU with hot swap storage unit for up to 36 hours of recording time and an 8 inch TFT touch-screen. Using the same components as *DigiCAM*, the changeover between the two systems is realised within minutes.





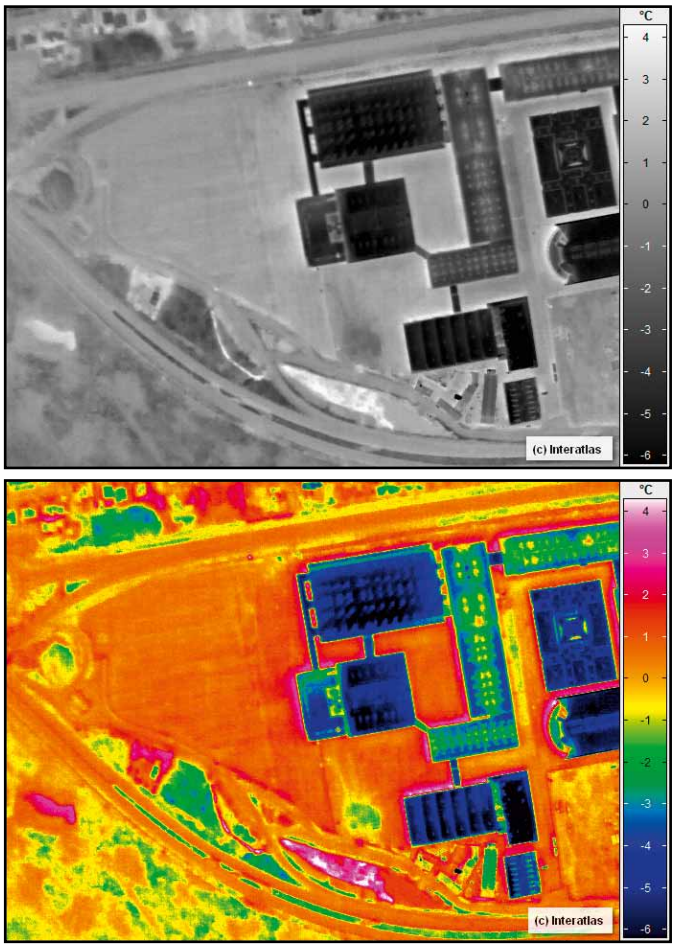
Mobile sample images,
City of Essen, Germany

www.igi-systems.com

DigiTHERM® - Aerial Modular Thermal Camera

Highlights

- Uncooled microbolometer FPA-detector (Focal Plane Array) with 640x480 pixels
- Spectral range 7.5 ... 14 µm
- Pixelsize of 25 µm
- Size of sensor head is 16 x 12 mm
- Standard temperature range -40 ... 120°C
- Temperature resolution of NETD < 50 mK
- Measurement accuracy:
  +/- 1.5 K (0°C ... 100°C)
  otherwise +/- 2 K
- 16 bit dynamic range colors
- Frame rate 60 Hz / Image storing rate 6 Hz
- Rugged lightweight metal housing, IP65 conform
- Pilot-only missions possible
- Automated workflow
- Automated release of exposures at pre-planned positions
- Graphical User Interface with real time previews
- Automatic temperature calibration
- Compliance with a pre-defined overlap
- Operating temperature -15 ... +50°C
- Storing temperature -40 ... +70°C
- Dimensions (sensor head)
  153 mm x 91 mm x 111 mm
- Weight (sensor head) 1050 g
- Easily interchangeable with *DigiCAM*
- *DigiTHERM* mounting possibilities:
  - IGI provides adapters for camera mounts
  - Together with *LiteMapper* LiDAR system and *DigiCAM* digital aerial camera system
  - Together with *StreetMapper* & *SAM* mobile LiDAR system



Airborne sample images with different color palette

Complete Solution:

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

- Mission Planning Software
  IGIplan
- Aircraft Guidance & Sensor Management
  CCNS-5
- GNSS/IMU System for direct geo-referencing
  AEROcontrol with *AEROoffice*
- Postprocessing Software
  Support of common photogrammetric software packages

Applications:

- Capture loss of heat in:
  Populated areas
  Industrial plants
  Pipelines and power lines
- Flow measurement of streams and rivers
- Forrest fire warning system
- Monitoring volcanos
- Animal tracking
- Search and rescue operations
- Support of all LiDAR applications

Lenses:

Available lenses for *DigiTHERM* are:

Wide angle lens:
1.0 / 12.5 mm (FOV 65° x 51°)
Standard lens:
1.0 / 30 mm (FOV 30° x 23°)
Telephoto lenses:
1.0 / 50 mm (FOV 18° x 14°)
1.0 / 75 mm (FOV 12° x 9.1°)

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