

IRControl

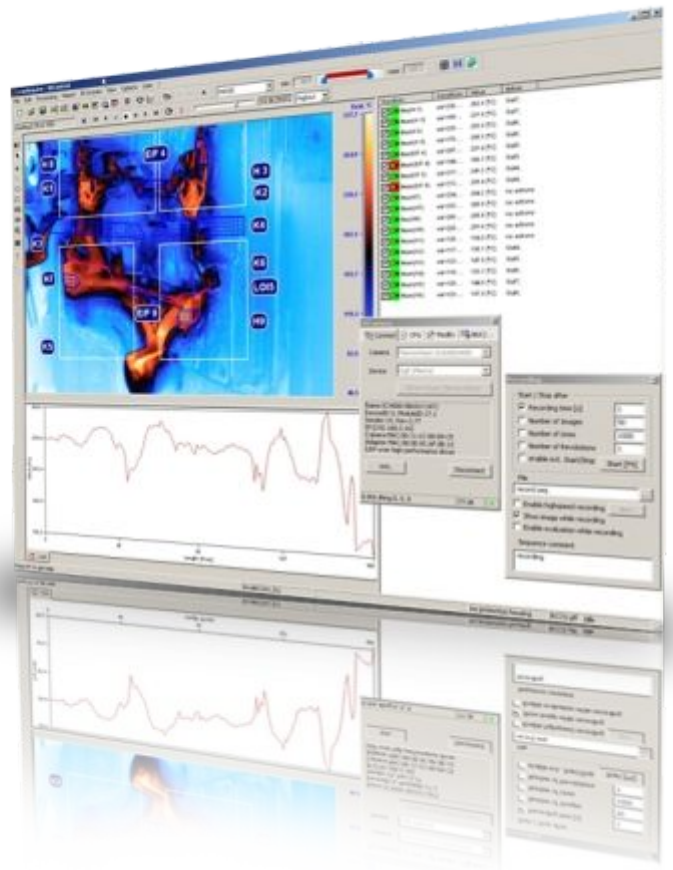
The Software Solution for Infrared Imaging

- Analysis of Thermal Images for Industrial Automation, Process & Quality Control
- Optimized for Real-Time Applications
- Graphical User-Interface for Easy Generation of Application-Specific Solutions
- Various Interfaces for Remote Control and Data Transfer

IRControl

The Software Solution for Infrared Imaging

IRControl is the software solution for infrared image processing in real-time. Therefore an infrared camera records thermal images of workflows. The software analyses the IR images using pre-defined workspaces, which are applicable for measurement, analysis and control tasks. With its different versions and several extension options, IRControl is easily adaptable to most customer requirements. This means IRControl is the ideal solution for all industrial automation, R&D and other challenging applications, where precise temperature control is of high importance.



Main Features of IRControl



Graphical User-Interface for Easy Creation of Application-Specific Workspaces



Highspeed Recording of Image Sequences and Measuring Values



Very Flexible Measuring and Analysis Functions, inclusive Emissivity Adjustment and Image Subtraction



Integrated Script-Engine for the Creation of Macros for Solving Complex Inspection Processes



Remote Control and Data Transfer via COM / DCOM Automation Interface



OPC Server Support for Visualization of Process Data by OPC Standard V1 & V2



Field of View Enlargement by Operation of the Infrared Camera on a Pan-Tilt Unit

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Graphical User-Interface

The screenshot shows the IRControl software interface. It is divided into three main sections:

- Image View (left, blue box):** Contains a live-stream of IR images, configuration of AOIs (Areas of Interest), adjustment of contrast and choice of color palettes, display of differential images, and display of masks for template-matching.
- Workspace (right, orange box):** Used for the definition of measuring, analysis, and control functions. It displays functions, measurements, and thresholds, and signals complied conditions.
- Diagram View (bottom, green box):** Displays temperature profiles and allows for the choice of AOIs.

Versions & Features

	IRControl Basic	IRControl Standard	IRControl Professional
Offline Analysis of Infrared Image Data	Supported	Supported	Supported
Support of Uncooled Infrared Cameras	—	Supported	Supported
Support of Cooled High-End Infrared Cameras	—	—	Supported
IRCalib - Calibration Tool for Cooled High-End Infrared Cameras	—	—	Optional
Online Superframing	—	—	Optional
OPC Server	—	Optional	Optional
Multi-Instance	—	Optional	Optional
IRDomeControl (Pan-Tilt Support)	—	Optional	Optional

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Technical Specifications

Infrared Cameras	
Supported Cameras	Cooled and Uncooled IR Cameras of Various Manufacturers
Camera Interfaces	Gigabit Ethernet, Firewire (IEEE1394), IRFlashLink
Camera Control	IRControl integrates all Control Functions and Parameters of the Relevant Cameras (e.g. Focus, Measuring Range, Recalibration)
Hardware Requirements	Standard PC with High Operating Speed for Real-Time Processing
Supported Operating Systems	Windows 8, 7, XP
Image Processing	
Image Formats	All Image Formats of the Supported Cameras with Full Frame Rate and Dynamic Range
Image Pre-Processing	<ul style="list-style-type: none"> - Emissivity Correction performed separately for each Image Pixel - Image Subtraction - Adjustable Temperature Range for the Implementation of Evaluations - Template-Matching
Operating States	<ul style="list-style-type: none"> - Online: Evaluation of the Camera's Live Image - Offline: Analysis of Recorded Images and Image Sequences
Display of Thermal Images	<ul style="list-style-type: none"> - Auto-Adjust or Manual Scaling of the Displayed Temperature Range - 35 Color Palettes
Display	Thermal Image with Overlay, Temperature Profile and Measuring Program
Measuring Program	
Input	Via Graphical User Interface
Areas of Interest	Point, Line, Polyline, Contour, Rectangle, Polygon, Ellipse, Circle, Temperature Cursor; Number Unlimited
Measuring Functions	Minimum Value, Maximum Value, Range, Mean, Variance, Standard Deviation
Combination of Readings	Total, Difference, Amount, Minimum Value, Maximum Value
Comparison with Target Values	Less Than, More Than, Equal To, Within a Defined Range, Outside of a Defined Range
Definable Actions	<ul style="list-style-type: none"> - Control of Digital Ports - Storage of Individual Images or Sequences - Storage of Readings in a File
Measuring-Program Management	Storage of all Settings as a Workspace File
Remote Control Facility / Data Transfer / Automated Program Execution	
<ul style="list-style-type: none"> - COM / DCOM Automation Interface for Remote Control and Data Transfer, e.g. as Part of Process Control - Macro-Engine for Fully-Automatic Processing of Complex Analytical Sequences 	
Report Functions	
<ul style="list-style-type: none"> - Automatic Report Generation with Display in Microsoft Excel - Export of Thermal Images with and without Overlay - Automatic Logging of Readings in a File 	
Options	
<ul style="list-style-type: none"> - Use as OPC Server According to OPC Specifications OPC DA V1 & V2 (OPC-Data Access) - Retrace of Camera Positions with a Pan-Tilt System, incl. Measuring Plan Call-Up 	
Function for Additional Hardware	
Monitoring and Control Functions for Camera Enclosures of AT - Automation Technology's IRCamSafe-Series	



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