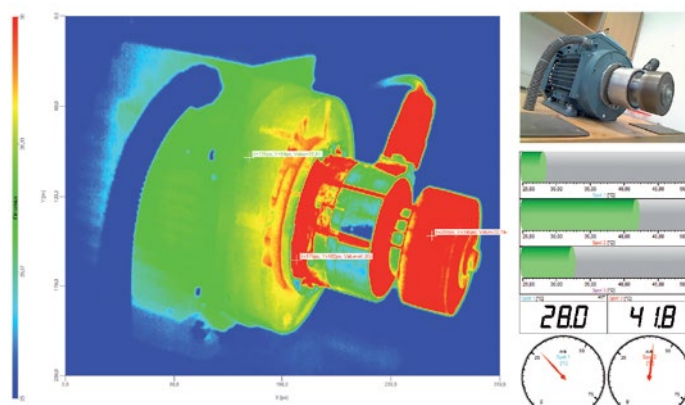


Infrared Camera Data Acquisition

- **Contactless temperature measurement**
- **Add a FLIR IR camera to any DEWETRON system for recording analog, digital, CAN, counter, video and thermal images**
- **Supports FLIR IR cameras**
 - Small and lightweight
 - Ethernet or FireWire® interface
 - Typical accuracy $\pm 2^\circ\text{C}$ or $\pm 2\%$ of reading
- **Fully integrated in DEWESoft™**
 - Cursor temperature measurement
 - Min., max., average temperature in a selected area
 - Trend graph in time domain
 - Temperature charts
 - Automatic range change
 - Alarm conditioned triggering



Thermography systems are useful for many applications, especially in the fields of:

Production

In production DEWETRON systems with thermal imaging cameras are used to optimize and monitor critical, quality relevant processes.

One example is injection molding where the quality of the final product heavily depends on the allocation of the even-heat to the entire molding frame. Pressure and distance are further relevant measurands for quality assurance.

Research & Development

In product development measuring thermal distribution and heat patterns is a great improvement to support design and testing procedures. A wide field of applications in areas such as automotive, railway, mechanical testing, micro-electronics, industrial plants and many more can be supported with thermal imaging.

Electrical/Mechanical

Thermal imaging cameras are used to measure and visualize temperature distributions of electrical equipment and machinery.

Predictive maintenance concepts lead to substantial cost savings for our customers.

Automation

Industrial process monitoring and product verification are areas, where precise temperature detection (even through steam or smoke) is used to ensure stable operating conditions.

Gas Imaging

Contactless leak detection during operation is used at plants. Repair downtime is reduced and safety is exceptionally high as critical areas are monitored from a distance.

Building

Infrared thermography is used to improve and diagnose energy efficiency, moisture and electrical problems within buildings.

Supported FLIR cameras:

- A300, A310, A315, A320, A325, A615
- SC305, SC325, SC645, SC655

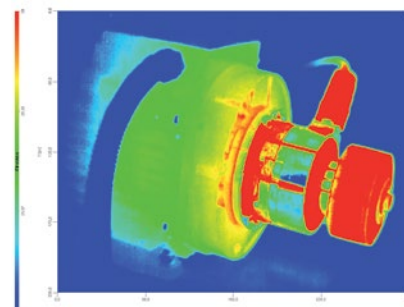
Example Configuration



DEWE-2600 or any other
DEWETRON system

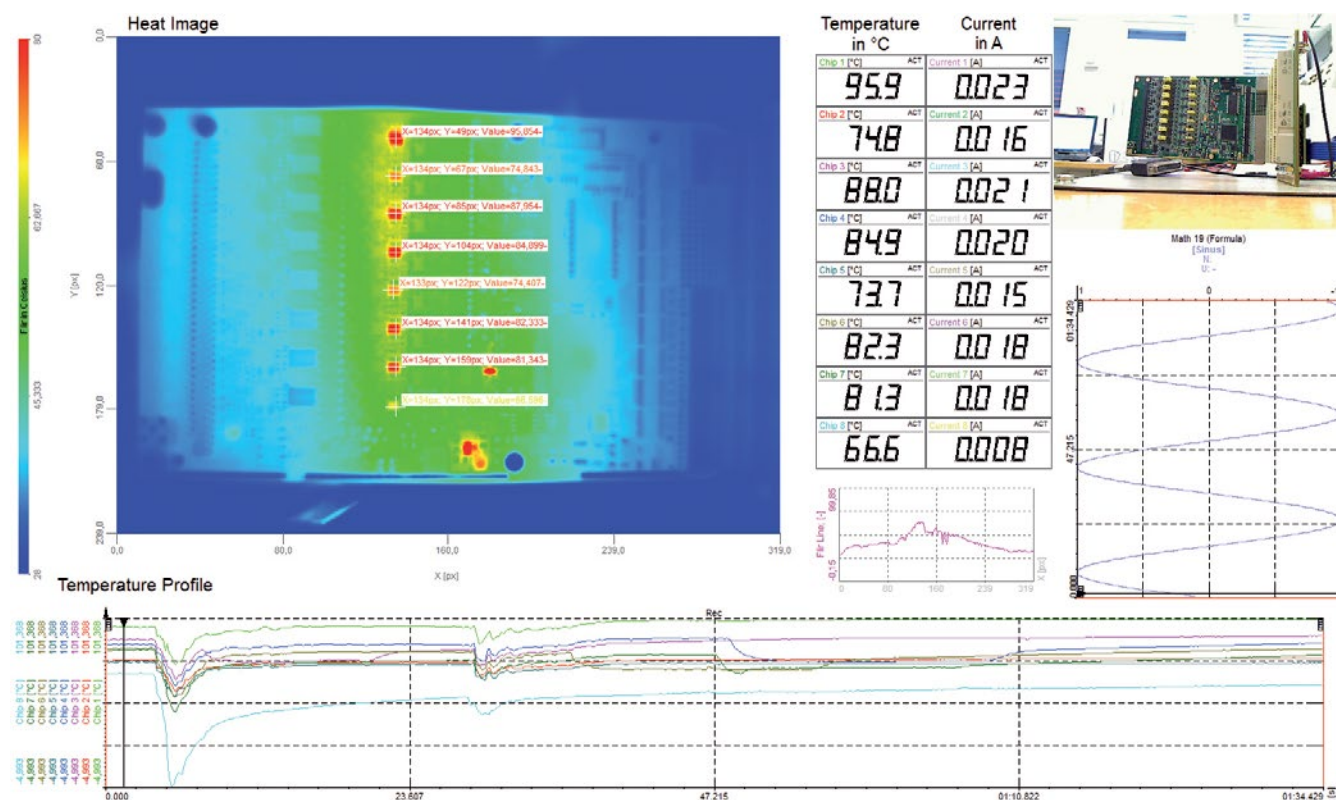


Infrared camera



Infrared camera data acquisition

IR-data acquisition synchronized with video, analog and digital channels, CAN, GPS, counters ...

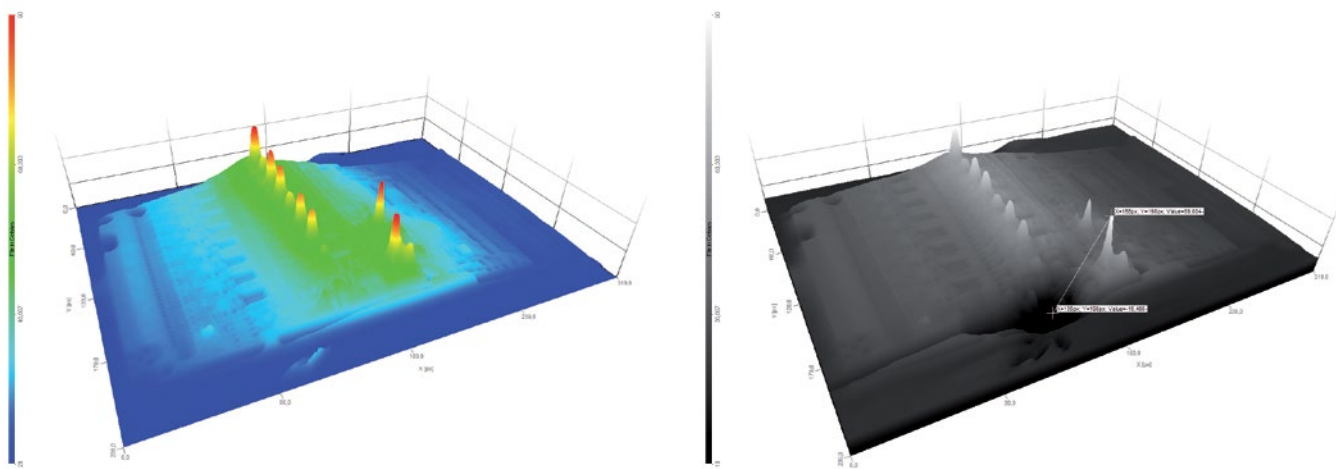


This Software setup shows the IR heat image of a PCB with 8 chips under test. The cursor temperature on each chip is monitored (digital instruments) and each temperature profile is plotted at the bottom. As heat images are stored as matrices internally, any mathematic function can be applied per measurement point, per line (providing wave graphs) or per defined area, including statistical functions such as minimum, maximum, average, etc.

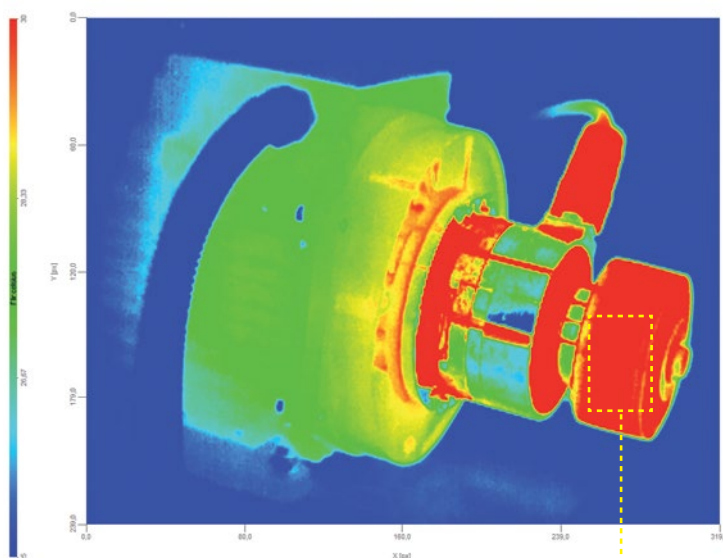
Additional channels are synchronously measured and displayed. In the top right corner of the screenshot there is real-time video, the right column of digital instruments shows measured currents and the recorder on the far right shows an additional analogue measurement channel.

Special Features

- Supports FLIR cameras of A series and SC series
- Compatible to every new DEWETRON system
- Enhanced features:
 - Level/sense change (Upper limit, lower limit sensitivity)
 - Cursor temperature. (Up to 10 points)
 - Max., min., average temperature in the area (statistics)
 - Automatically range change. (-40° to 120° Celsius degree range <-> 0° to 500° Celsius degree range)
 - Trend graph in time domain on cross cursor
 - Mathematics at trend graph
 - Wave graph

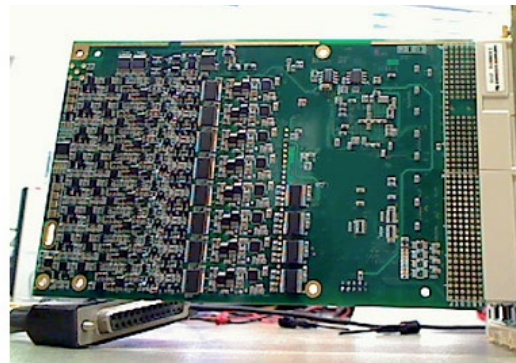
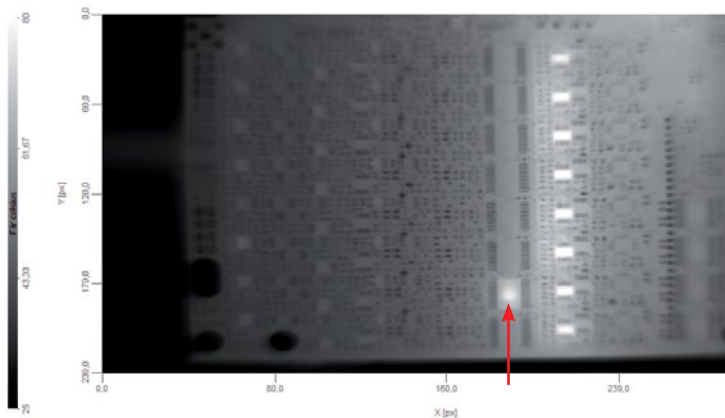


3D plot shows temperature peaks and valleys, including delta cursor to measure temperature difference between two points.



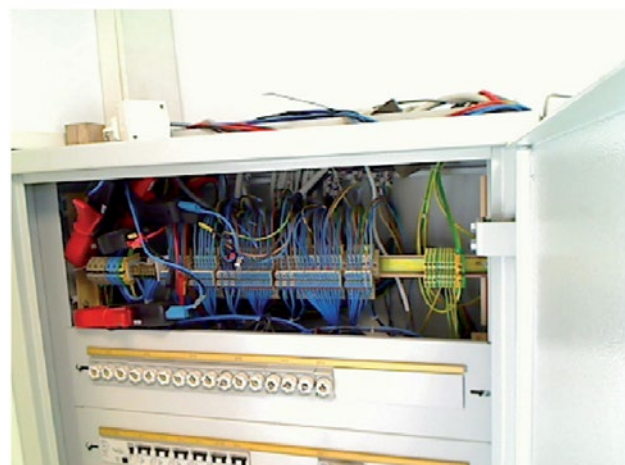
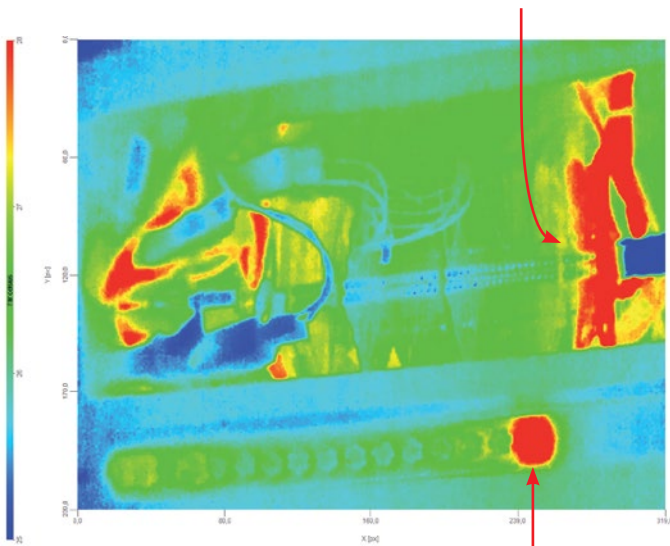
Statistical functions such as Minimum, Maximum, Average can be calculated for a defined reference area.

Application examples



Electronics engineering - quality control

The heat-image shows a PCB with 8 ICs in a vertical row, the 7th chip showing unusual high temperature – fault is imminent.



Electrical installation - safety check

Electrical cabinet with warming from high currents shown in heat image – the fuse on the right side is much warmer than the rest; it shows one circuit under high load

Rotating machines - condition monitoring

This screenshot is showing the heat image of an electric motor including bearings with three cursor positions for spot temperature readings, live video and different analog and digital meters to visualize temperature data.

