

Industry and Critical Infrastructure

Intelligent Process Monitoring for the Industry and Critical Infrastructure

The intelligent use of Thermal Radiometry and event management allows us to reliably monitor temperature-critical processes and provide early warning.





every 5 min ¹
German companies report fire



ca. €1.9 Mio ³
Typical claim caused by major fire incidents during 2003 – 2012



< 20 % ¹
Success rate

Challenge

Intelligent and Reliable Prevention

Important infrastructure for power generation, communication and supply has to be constantly protected and monitored to guarantee reliable and permanent operations not only in emergency situations. With intelligent prevention measures, it is possible to avoid significant costs caused by damages, repair and power cuts.

In Germany alone, companies report fire every five minutes ¹. The economic losses resulting from fire total several billion euros per year. Similarly dramatic are the current available figures describing offenses and burglaries that have partially increased of more than 50 % over the last 5 years ².

In contrast there are crime-solving rates for example on theft committed at commercial premises under aggravating circumstances of less than 20 % ¹ which demonstrates the importance of intrusion and fire prevention. Due to the break down of major production plants and supply facilities, the complete corporation might be at risk of insolvency.

Installations, machinery, equipment and material available on company premises require effective and cost-efficient protection. In addition, operational safety, optimization of work flows and protection against theft, vandalism and espionage are becoming increasingly important.



Intelligent IP Video Solutions

Alarms based on Temperature Events

The new series of MOBOTIX thermal radiometry (TR) models (M15/16, S15/16 and S15/16 PTMount) automatically generate an alarm if the temperature exceeds or falls below the pre-defined temperature

limits or ranges, which is vital in detecting potential fire or heat sources. Typical applications are monitoring of power generators, components of power lines or of machines at power plants or industrial facilities.



Within the complete temperature measurement range of -40 up to +550 °C, up to 20 different temperature triggers can be defined at the same time using the so-called TR (Thermal Radiometry) windows or the whole image from the sensor. Looking at the live image of a MOBOTIX thermal camera for example at an alarm center, makes it

easy to discuss and plan the next steps of intervention. This will help to defuse critical situations and prevent significant damages before they arise. On top, installations can remotely be tested and maintained cost-effectively.



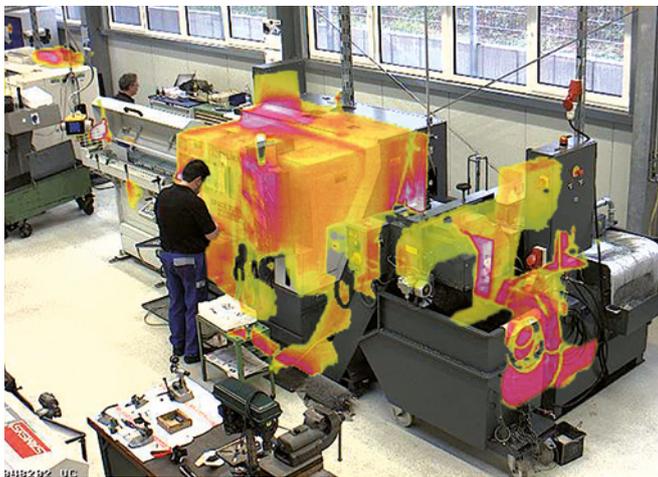
Thermal Radiometry (TR) automatically generates an alarm if the temperature exceeds or falls below the pre-defined temperature range.

MOBOTIX thermal dual camera systems offer thermal overlay to localize so-called hot spots in the visual image to prevent greater damage. Applications range from wood and forest companies to heavy industry and the mining sector.



Perfect for Outdoor Usage

Most of the locations of wind turbines and solar parks, mobile phone base stations or weather and transformer stations are very remote without any infrastructure. Due to an absolute low power consumption between 4 - 6 watts, and the virtually maintenance-free design without any mechanical moving parts or additional equipment, the **MOBOTIX outdoor cameras** are the first choice achieving an unrivaled level of product quality in outdoor deployments. Supplied with alternative energy sources such as solar, wind or fuel cells and equipped with a 3G/4G modem, autonomous operation in all climatic regions of the world is possible. Mean Time Between Failure (MTBF) of more than 9 years underlines perfectly the high quality and reliability of MOBOTIX cameras - Made in Germany.



MOBOTIX Dual-Thermal cameras cover industrial production with thermal overlay

Indonesian Manufacturer of Beverage Products Relies on German IP Video Technology

"The cameras are installed beneath cold and warm piping to monitor production in the cooking and ultra heat treatment areas. These pipes can emit a lot of steam at times. This means that the cameras have to be resistant to extreme conditions, with high temperatures and humidity levels." explains Marvin Bayoumi, Quality Control Manager at PT. Ultrajaya.

Because the camera housings are compliant with protection classes IP65 and IP66 and do not include any moving parts, they can withstand dust, dirt, water and heat.



MOBOTIX has developed and manufactured IP video systems, video management and analysis software in Germany since 2000.

MOBOTIX stands out for its **high level of reliability**. All outdoor cameras are subjected to a stress test for temperatures between -30°C and +60°C (-22°F and +140°F). Without additional components, without heating or cooling and with no moving parts (for example auto iris), they are virtually maintenance free.

MOBOTIX delivers a **perfectly matched package**, starting with the microSD card for storage management and HD audio (microphone and speaker) with VoIP telephony through video analysis, a professional video management system and motion detection software reducing false alarms.

The **decentralized architecture** means that a central computer is not required and the network load is minimal. The intelligent cameras from MOBOTIX process and store image data themselves, trigger events and, in the event of remote access, manage the frame rate and resolution depending on the available bandwidth.

The **6MP Moonlight sensors** and complementary **thermal imaging technology** ensure reliable detection of moving objects, even under the most challenging light conditions and over long distances. As a result, it is possible to cover large areas with just a few cameras. Less power cabling, less IT infrastructure and fewer additional light sources are needed. MOBOTIX cameras are powered using standard PoE and do not require more than 4-5 watts.

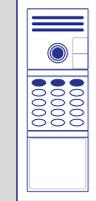
An intelligent IP video system from MOBOTIX allows you to **reduce total costs**. The investment pays for itself after a short time and the free-of-charge software and updates ensure it is a future-proof investment.

Outdoor Dual Lens			Thermal	
M15/16 AllroundDual	S15/16 FlexMount	D15/16 DualDome	M15/16 Thermal	S15/16 DualThermal
				
Robust for extreme conditions	Flexible dual camera	Modular dual camera	Thermal dual	Thermal dual

Outdoor Single Lens			
M25/26 Allround	S15M/26 FlexMount	Q25/26 Hemispheric	D25/26 Dome
			
Robust for extreme conditions	Discreet, video analysis	Discreet, video analysis	Modular Fix dome

Indoor			
i25/26 Panorama	c25/26 Hemispheric	p25/26 Allround	v25/26 MiniDome
			
180° hemispheric	Discreet, video analysis	Modular ceiling camera	Vandalism camera

Door Modules			MxDisplay+
Camera	BellRFID	Keypad	Remote Station
			

Door Sets			
Double Frame		Triple Frame	
			

Retailer information: