ConveyIR™ Scan
Industrial Process Monitoring System

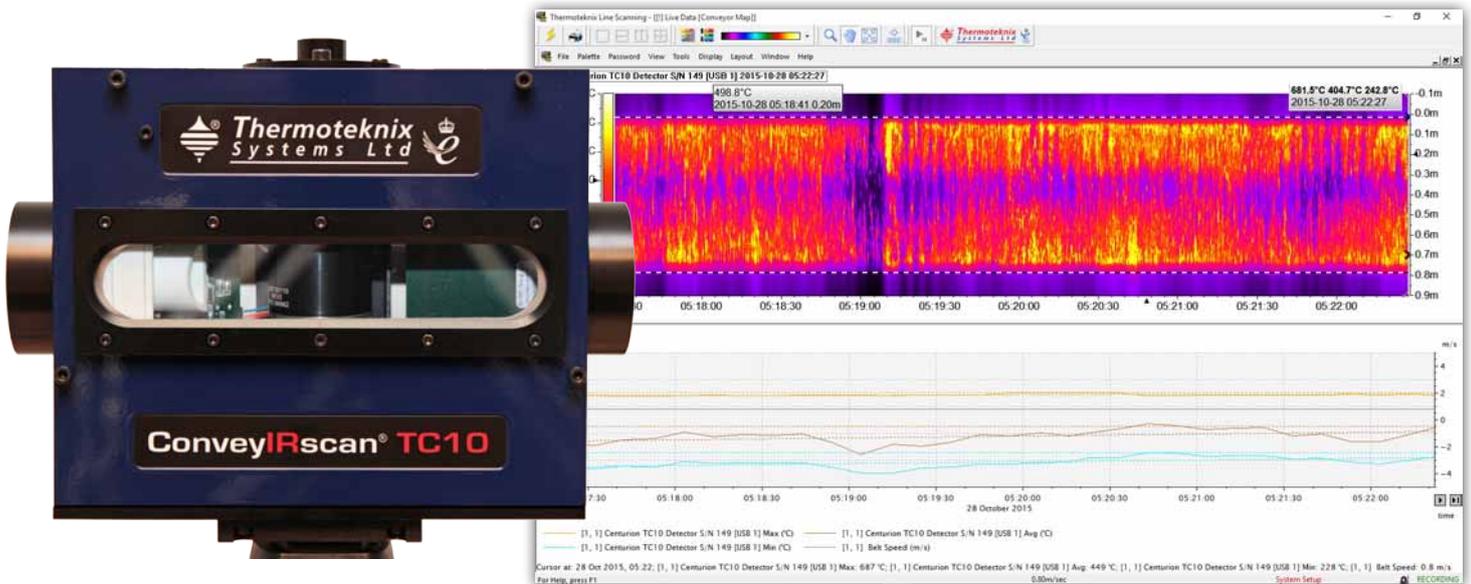## Clinker | Coke | Coal | DRI Pellets | Wood Chips | Grains | Bulk materials

ConveyIR™ Scan Industrial Process Monitoring System

ConveyIR Scan is a high resolution real time temperature scanning and monitoring system for moving product and process line materials. Process changes and variation in materials can result in lack of uniform product temperature at critical points in the production cycle which affect quality and potentially cause damage to conveyors and receiver vessels. These can include direct damage to the conveyor as well as fire and safety hazards.

The system consists of a Thermoteknix compact infrared line scanner, digital electronics, fibre optic connection and PC with application specific ConveyIR Scan software to monitor, alarm and record continuous temperatures of moving products. Non-uniformity of temperature occurring instantaneously or progressively over time can be monitored and alarms triggered to enable process changes to be made to optimise manufacturing quality and minimise energy costs and waste.
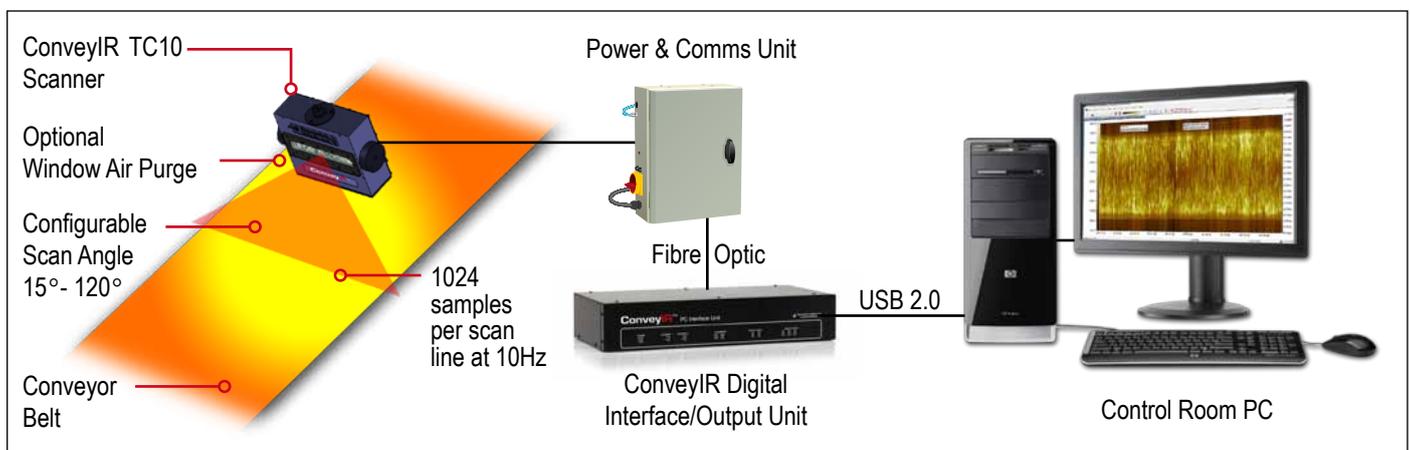
ConveyIR Scan has an expert RETAP™ alarm system which detects changes in process conditions and triggers alarms based on multiple factors beyond simple temperature threshold. This non-contact thermography technology significantly outperforms traditional pyrometer-based approaches providing more than 10,240 individual spot measurements per second over the width of the process line. The live data is stored in an SQL Express database providing historical recall, trending and analysis to improve consistent quality and control.

ConveyIR Scan can interface to host control systems and third party Information Management Systems using industry-standard OPC digital data exchange as well as seamless integration with rotary kiln shell scanning systems including Thermoteknix' WinCem Graphic 8.

ConveyIR RETAP™ Intelligent Scanning

Conveyed materials are traditionally scanned using single spot or point pyrometers. These one dimensional measurement devices are of limited value as they only offer crude indication of temperature within the area of their spot and do not identify distribution of temperature or localisation of size or form of any temperature anomaly in the measurement location. Typically, their alarms are limited to an instantaneous local High/Low threshold which often leads to frequent and disruptive false alarms. ConveyIR Scan however, uses the proprietary Thermoteknix RETAP™ - Real Time Area Processing system. RETAP's unique expert intelligent algorithms take into account the temperature detected, size of the hot area(s) as well as the number of hot or cold zones/anomalies travelling on any section of the process in a given timeframe. These parameters can be set and adjusted by the user to fine tune the sensitivity and accuracy of the alarm monitoring process to meet the needs of production quality and uniformity.

ConveyIR Scan System Setup

SPECIFICATION - ConveyIR Scan TC10 Scanner	
Temperature Range	100ºC to 500ºC (TC10 Model) and 40ºC to 250ºC (TC10L Model)
Thermal Sensitivity	± 1.6ºC at 100ºC
Accuracy	± 4ºC at 60-250ºC <1% at 250-450ºC
Spot Size detection	20mm
Heat Shield	Supplied
Window Air Purge	Optional
Scanning speed	10Hz
Scanning angle	Configurable 15°- 120°
Linear Samples Per Scan	1024
Environmental	IP67
Multiple Scanner Heads	Up to 2 per PC
Alarms (RETAP™ Real Time Area Processing)	Regional - Multiple absolute high/low temperature threshold Intelligent Process - Real time anomaly/size/rate detection

more than just an image...