

LSP_{HD} Applications

Industry	Application	Typical Temperature Measurement Range	Recommended Scanner
Cement	Rotary Kilns, Conveyors, Dryers	20 to 250 °C / 68 to 482 °F	LSP _{HD} 60
		50 to 400 °C / 122 to 752 °F	LSP _{HD} 61
		100 to 600 °C / 212 to 1112 °F	LSP _{HD} 62
Conveyors	Cement, Asphalt, Coke	20 to 250 °C / 68 to 482 °F	LSP _{HD} 60
		50 to 400 °C / 122 to 752 °F	LSP _{HD} 61
		100 to 600 °C / 212 to 1112 °F	LSP _{HD} 62
Glass	Floatline, Automotive, Holloware, Bending, Toughening/Tempering, Annealing, Solar Panels	150 to 750 °C / 302 to 1382 °F	LSP _{HD} 5FL & LSP _{HD} 50
		500 to 1100 °C / 932 to 2012 °F	LSP _{HD} 52
Iron & Steel	Hot Strip Mill - Roughing Mill Entry/Exit, Coil Box, Edge Heaters, Continuous / Multi-strand caster Hot Plate Mill - Roughing Mill Entry/Exit, Hot Leveller Hot Beam Mill - Beam, Beam caster, Jumping beam detection Reheat Furnace Exit, Rod and Wire	600 to 1400 °C / 1112 to 2552 °F	LSP _{HD} 10
		700 to 1500 °C / 1292 to 2732 °F	LSP _{HD} 11
	Hot Strip Mill - Cooling Section Hot Plate Mill - Run-out table Continuous Annealing line (top of snout before zinc pot) Annealing Furnaces Galvanising and Galvanneal lines	200 to 850 °C / 392 to 1562 °F	LSP _{HD} 20
		300 to 1000 °C / 572 to 1832 °F	LSP _{HD} 21
		400 to 1200 °C / 752 to 2190 °F	LSP _{HD} 22
	Torpedo cars, Ladle safety, Coated steel Galvanising lines (<i>top roll position</i>)	20 to 250 °C / 68 to 482 °F	LSP _{HD} 60
50 to 400 °C / 122 to 752 °F		LSP _{HD} 61	
Paint Coating Lines	100 to 600 °C / 212 to 1112 °F	LSP _{HD} 62	
	50 to 350 °C / 122 to 662 °F	LSP _{HD} 71	
Non-wovens	Non-wovens (Paper rolls, webs)	20 to 600 °C / 68 to 1112 °F	LSP _{HD} 60, 61 & 62
	Polymer-based	50 to 350 °C / 122 to 662 °F	LSP _{HD} 71
Plastics	PVC, Polycarbonates, Polypropylene, Polyethylene, PET, Cellulose acetate and Polystyrene, Thin Plastics, Thermoforming	50 to 350 °C / 122 to 662 °F	LSP _{HD} 71
	Plastic Extruders, Thermoforming	20 to 250 °C / 68 to 482 °F	LSP _{HD} 60
Other Industries	Cold Rolling, Coating Processes, Building Products	50 to 400 °C / 122 to 752 °F	LSP _{HD} 61
		100 to 600 °C / 212 to 1112 °F	LSP _{HD} 62
		20 to 600 °C / 68 to 1112 °F	LSP _{HD} 60, 61 & 62

Intelligent Scanning

Intelligent scanning solutions aim to solve problems by providing more than just a measurement. LAND is able to provide a custom solution according to your requirements – this includes custom temperature ranges, application specific mountings and bespoke communications protocols.

LAND

Non-Contact Temperature Measurement Solutions

An AMETEK® Company

Land Instruments International Ltd
Dronfield S18 1DJ, England • Tel: +44 (0) 1246 417691
Email: land.infrared@ametek.co.uk • www.landinst.com

AMETEK Land, Inc.
150 Freeport Rd., Pittsburgh, PA 15238, U.S.A. • Tel: +1 412 826 4444
Email: irsales@ametek.com • www.ametek-land.com

For full details of all international offices and distributors please visit our websites



0004 Applies in the UK

Applies in the USA

LAND

Thermal Imaging and Temperature Profiles
for Continuous Process Monitoring and Quality Control

LSP_{HD}

Infrared Linescanners

with industry leading...
150 Hz scan speed combined with
1000 samples per scan

An AMETEK® Company

LSP_{HD}

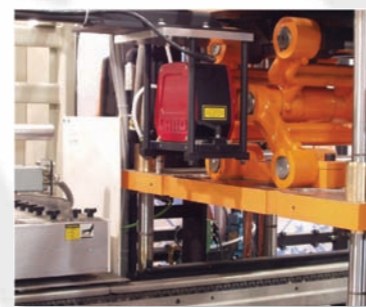
Features & Benefits

- + High resolution, user focusable optical system allowing detection of small temperature differences across the width of the product, providing optimum product quality through improved process control.
- + Designed for operation in harsh industrial environments – sealed to IP65 (NEMA4), where the ambient temperature is up to 150°C (302°F), ensuring maximum measurement availability and longer instrument life.
- + Plug and play installation via a single Ethernet cable connection, reducing installation time, costs and complexity.
- + Range of data output formats for easy connection to the process control system.

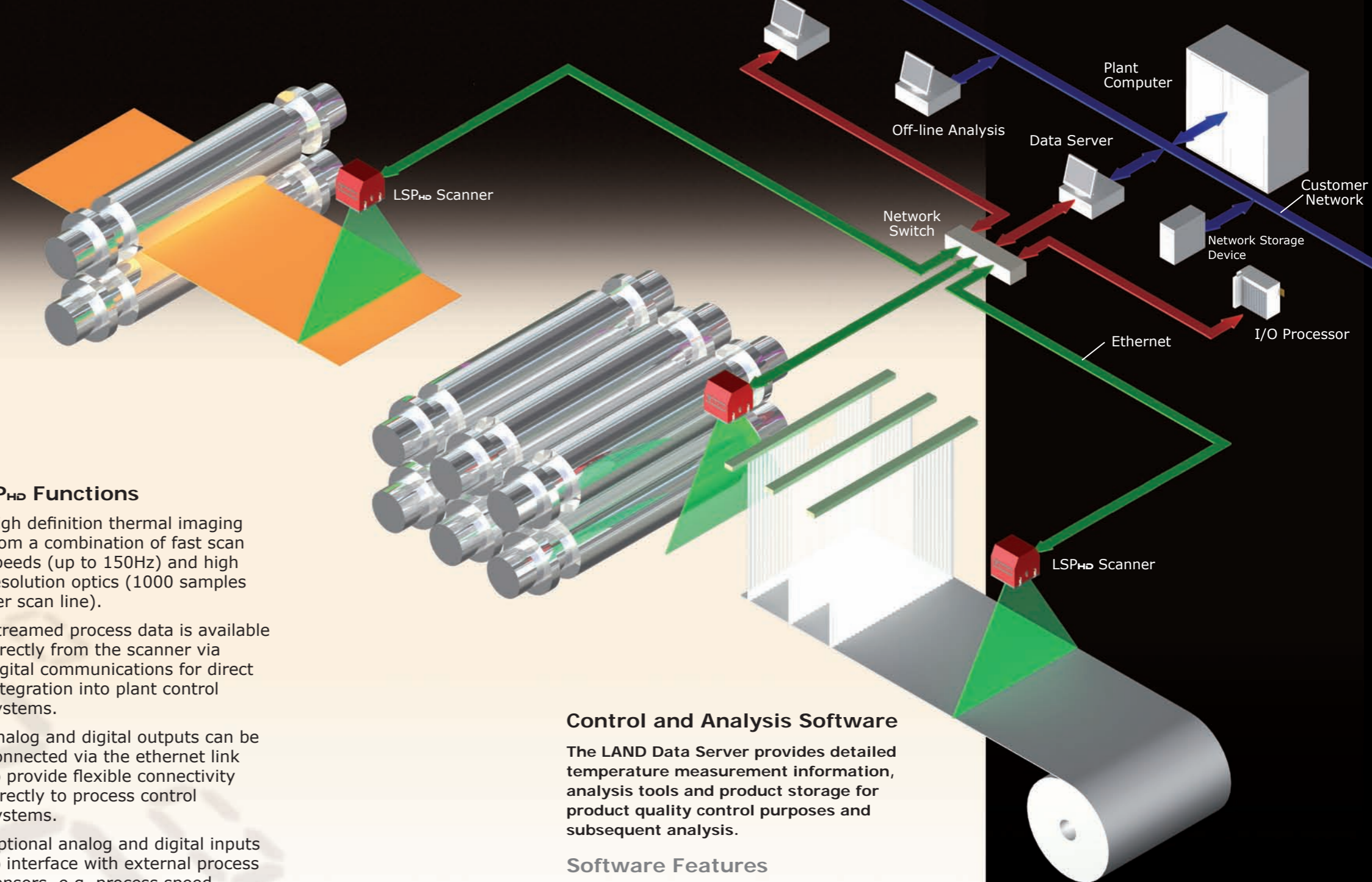


LSP_{HD} Functions

- High definition thermal imaging from a combination of fast scan speeds (up to 150Hz) and high resolution optics (1000 samples per scan line).
- Streamed process data is available directly from the scanner via digital communications for direct integration into plant control systems.
- Analog and digital outputs can be connected via the ethernet link to provide flexible connectivity directly to process control systems.
- Optional analog and digital inputs to interface with external process sensors, e.g. process speed sensors, weld detectors and hot metal detectors



Typical LSP_{HD} installation

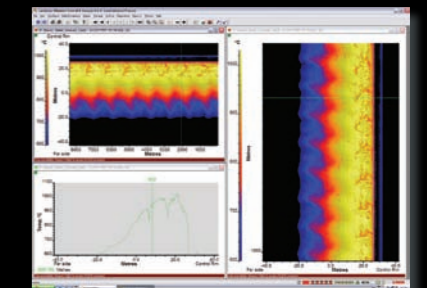


Control and Analysis Software

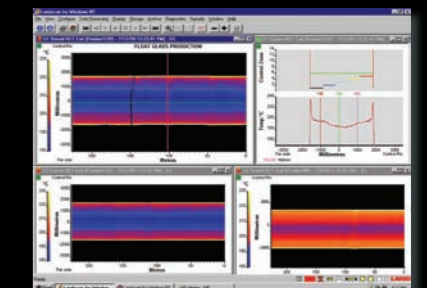
The LAND Data Server provides detailed temperature measurement information, analysis tools and product storage for product quality control purposes and subsequent analysis.

Software Features

- Simultaneous display and processing of multiple live data sources with historical data sources
- Automatic bad product rejection functions
- Flexible interface – provides access to measured temperatures and processed data via a wide range of standard industrial interfaces, e.g. cross-platform TCP/IP protocol, OPC, analog signals or alarm outputs
- Optional support of multiple client workstations – accessing both live and historical data
- Off-line software available to provide access to historical data for quality control purposes



Typical Steel Cast profile



Typical Glass Floatline profile