

High Resolution Ultra Compact Infrared camera for Non Contact Temperature Measurement

AST-TE700

CE 700°C to 1800°C

Overview

AST-TE700 is a thermal Imaging System, with high spatial and thermal resolution, that provides monitoring of temperature profile of the target object round the clock visually in a display system for demanding real time imaging applications in various industries. Whether in quality control, process monitoring or process automation - the infrared camera TE-700 measures temperatures without contact exactly and reliably. This model is specifically designed for continuous operation in fixed-mount applications. The device is durable, robust and suitable for industrial continuous operation.

TE-700 is available in 768 x 576 Pixels resolution. Thanks to the large measurement temperature range, TE-700 can satisfy thermal profiling need of very large industries. With high shock and vibration tolerance, TE 700 is designed for years of maintenance-free operation. It is an affordable camera in the market with 25Hz frame rate, multi functions and wide temperature range It works at a short wavelength range from 0.85 - 1.1 μm to minimize physically caused temperature measurement errors from emissivity inaccuracies.

In parallel with the visualization of a thermal profile, it can also display monochrome image of the object. In very fast processes or at temperature changes, the data acquisition happens in real-time via Gigabit Ethernet or via USB. With real time data acquisition, images can be transferred to a computer using INFRAVIEW Software*. It can display thermal video, provide continuous thermal output without loss and no appreciable time delay in I/O cards. Multiple clientPCs can also be configured to view thermal video at different locations through LAN.

TE-700 has a thermal image processing software INFRAVIEW at the core of a thermal imaging system which is customizable with Client-Server Architecture for catering to multiple clients at the same time. The modular windows software INFRAVIEW can be configured / customized to cater to application / solution requirements. It is supplied with every TE-700 Camera.



Features

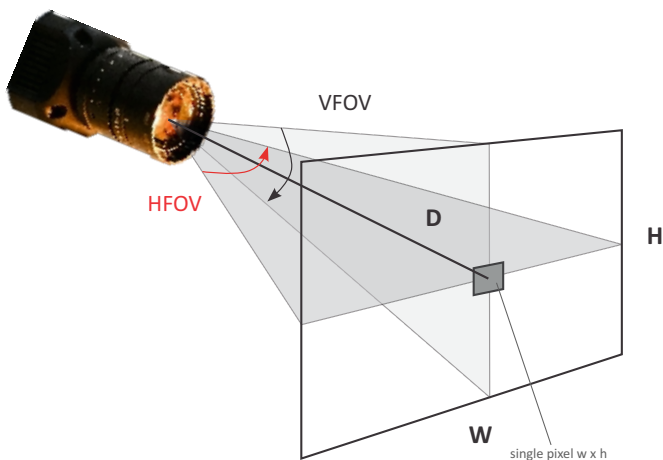
- Wide measurement range 700-1800°C (upto 25Hz frame rate)
- High dynamic CMOS detector with upto 768 x 576 pixels resolution
- Thermal as well as Monochrome Video Display
- Fast thermal data acquisition in real time via Gigabit Ethernet/USB
- Configurable storage and replay temperature video
- Digital and analog input/output modules
- Software controlled parameter settings
- Multiple client PC configuration
- Small aluminum compact housing
- Standard software package
- Integration in customized system solution, including software adjustments

We measure accurate temperature in extreme conditions

Technical Specifications

SYSTEM OVERVIEW	
Temperature Range	700°C - 1800°C
Optional Resolution/ Frame Rate	768 x 576 Pixels@ 25Hz
Detector	High Dynamic CMOS
Spectral Range	0.85 - 1.1µm
Thermal Sensitivity (NETD)	<1 K (700°C [$<1292^{\circ}\text{F}$]), <2 K (1000°C [1832°F])
Video Format for Saving	MPEG-4, AVI
Image Format for Saving	BMP/JPG
Analog Output	4 Channel Analog Current Output
Digital Input	4 Active-high, Buffered Inputs
Digital Output	4 Open Source, Mosfet Outputs
Connectivity	Ethernet/USB
Protocol	GIGE for ethernet, Proprietary for USB
Shutter	Shutter Less
Ambient Temperature	0°C - 60°C
Storage Temperature	-20°C to 70°C
Relative Humidity	20 to 80% non-condensing
Shock	3 Bumps @64 g ½ sinus during 5ms. (on the three axis)
Vibration	15g RMS from 5 Hz to 500 Hz (on the three axis)

Optics Variants (optics with motor focus)



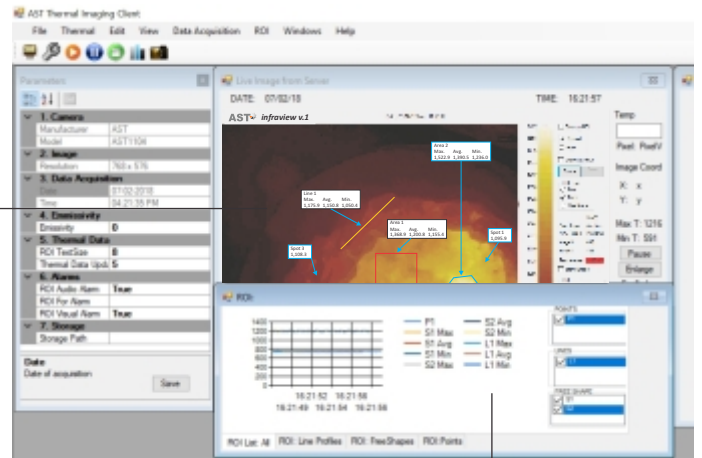
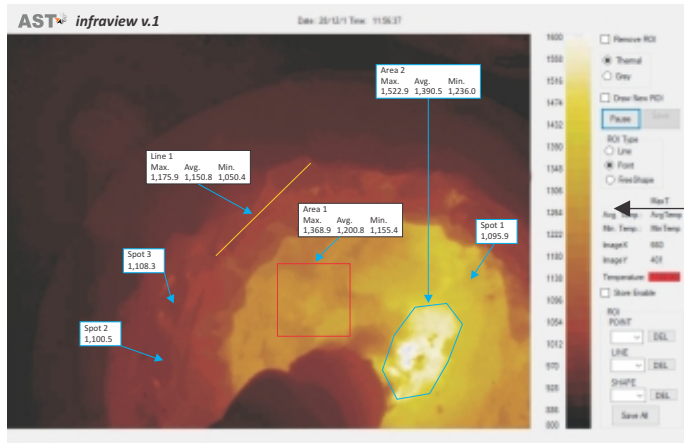
HFOV x VFOV	Dist. (m)	Width (m)	Height (m)	Pixel WxH (mm)
32° x 24°	1 M	0.57	0.43	0.7 x 0.7
	5 M	2.87	2.13	3.7 x 0.7
	10 M	5.73	4.25	4.25 x 4.25
51° x 39°	1 M	0.95	0.71	1.2 x 1.2
	5 M	4.77	3.54	6.2 x 6.2
	10 M	9.54	7.08	12.4 x 12.4
83° x 67°	1 M	1.77	1.32	2.3 x 2.3
	5 M	8.85	6.62	11.5 x 11.5
	10 M	17.69	13.245	23.0 x 23.0

- HFOV = Horizontal Field of View
- VFOV = Vertical Field of View
- D = Measurement Distance
- W = Image Width
- H = Image Height

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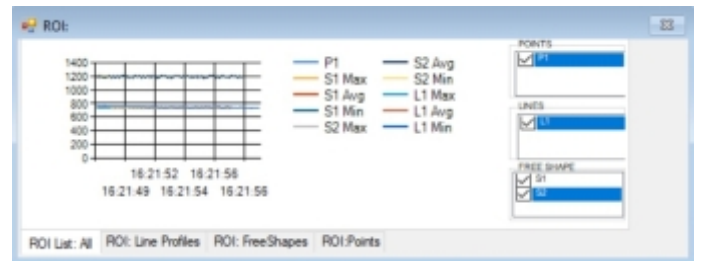
InfraView

AST INFRAVIEW Software allows you to control the camera and record, view, manipulate and store the captured video / image as well as measured temperature data. This real time software allows simple and fast parameterization for documentation of the temperature data optimizing process control. The modular Windows software INFRAVIEW is customizable as per requirement.



Special Features

- Configurable ROI's : point, line, free shape
- Histogram and isotherm visualization
- Hot and cold spot detection
- Color pallet scaling
- Trend charts
- Alarm output
- Video and Image export
- Server client configuration

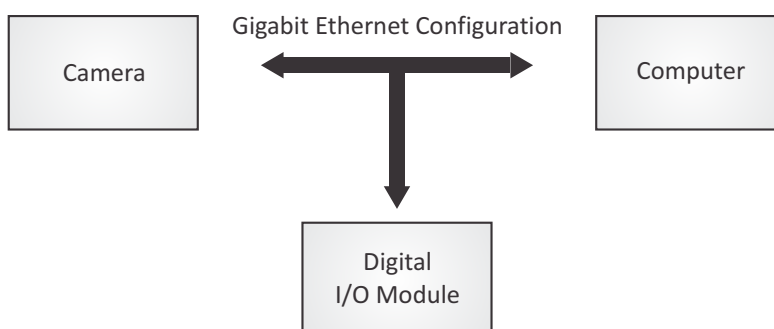


I/O Module



- Multi Function, Multi-channel module
- Dual ethernet 10/100 ports with built-int switch enables daisy-chain networking
- Four analog output (4-20mA) channels (16 bit DACS) to drive remote instruments, controllers, recorders
- Four discrete Input/Output Channels
- Slim 22.5 mm housing with plugable terminals
- Din-rail mounting

Typical Connection Diagram



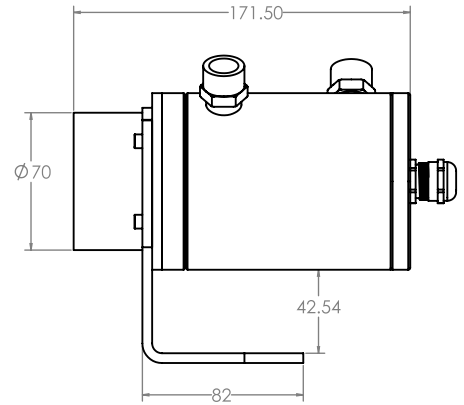
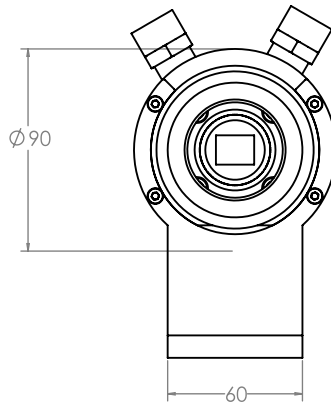
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Accessories

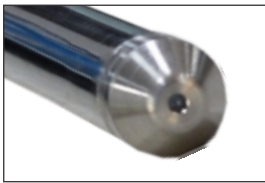
Cooling Jackets



For Camera with Standard Lens
(32°x24°, 51°x39°, 83°x67°)



Pinhole Lens Tube (820 mm long)



Straight View



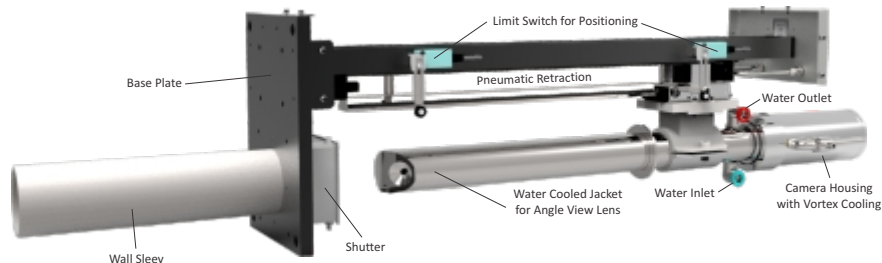
Angle View

- Cement Kiln
- Cement Cooler
- Boilers
- Steel Reheating furnaces
- Glass melting furnaces
- Incinerators

Retraction System



Water Cooling Jacket for Pinhole Straight View Lens with Automatic Retraction System for Furnace View Camera



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