Accu⊕pt

ThermCAM-HT

High Resolution
Ultra Compact Infrared
Camera for Non Contact
Temperature Measurement Solutions

THermCAM-HT is a thermal Imaging Camera, with high spatial and thermal resolution, that provides monitoring of temperature profile for real time applications in various industries. Whether in quality control, process monitoring or process automation - the infrared camera ThermCAM-HT measures temperatures without contact exactly and reliably.

Product Highlights

- ThermCAM-HT works at a short wavelength range from 0.85 - 1.1 µm to minimize physically caused temperature measurement errors from emissivity inaccuracies.

- Configurable storage and temperature video recording

- Provide continuous thermal output without loss and no appreciable time delay in I/O cards.

- High shock and vibration tolerance for maintenance-free operation.

Temperature Ranges

700-1800°C (upto 25Hz frame rate)

Detector

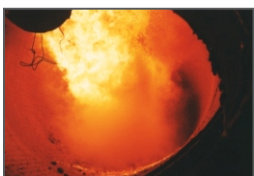High dynamic CMOS detector with 640 x 480 pixels resolution

Software Features

- Configurable ROI's with trend charts and alarm output.
- Histogram and Isotherm visualization.
- Multiple color palette scaling options.

Output Interface

- Fast thermal data acquisition in real time via Gigabit Ethernet
- Digital and analog input/output modules

Typical Applications

| Cement Industry | Steel Industry | Glass Industry | Oil & Gas Industry | Power Industry |

Accurate Opto Electronics Pvt. Ltd.

ThermCAM-HT

Overview

The compact design of the ThermCAM-HT enables the integration of the camera into compact process applications, while the solid and robust housing guarantees reliability even in harshest industrial environments. The ThermCAM-HT can be installed with an optional water/air cooled enclosure for additional protection in harsh industrial environments where ambient temperatures exceed ~50°C.
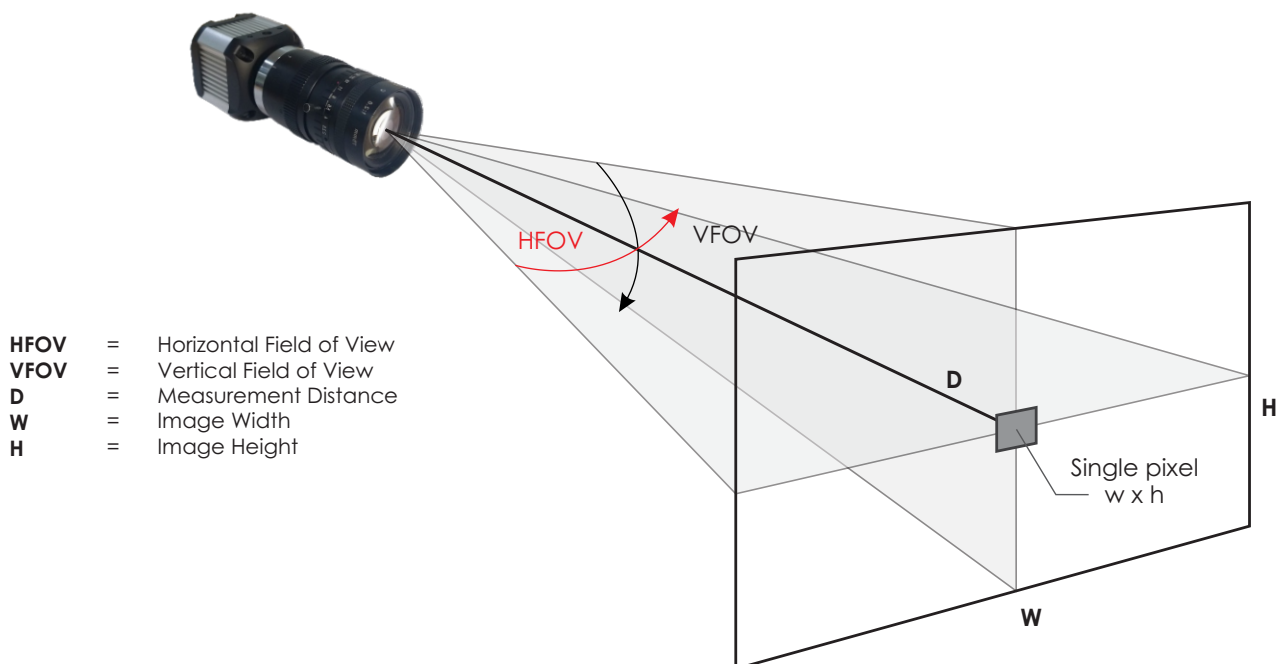
The built-in Gigabit Ethernet interface (GigE) allows the camera to be connected to the network for high speed data transmission to InfraView™ software for further analysis.

Optics Variants

A wide range of lenses are available for the ThermCAM-HT, making it suitable for most industrial applications. The table and picture show the correlation between the measurement distance, different optics, and the size of the measurement fields.

Measurement Field (HFOV x VFOV)	Distance of object	Width (m)	Height (m)	Pixel WxH (mm)
12.4° x 9.3° (FL=20 mm)	1 M	0.22	0.16	0.34
	5 M	1.09	0.82	1.70
	10 M	2.18	1.63	3.40
20.6° x 15.5° (FL=12 mm)	1 M	0.36	0.27	0.57
	5 M	1.81	1.36	2.83
	10 M	3.63	2.72	5.67
37.0° x 28.2° (FL=6.5mm)	1 M	0.67	0.50	1.05
	5 M	3.35	2.51	5.23
	10 M	6.69	5.02	10.46

Note : Other lens options are also available as per application requirements.

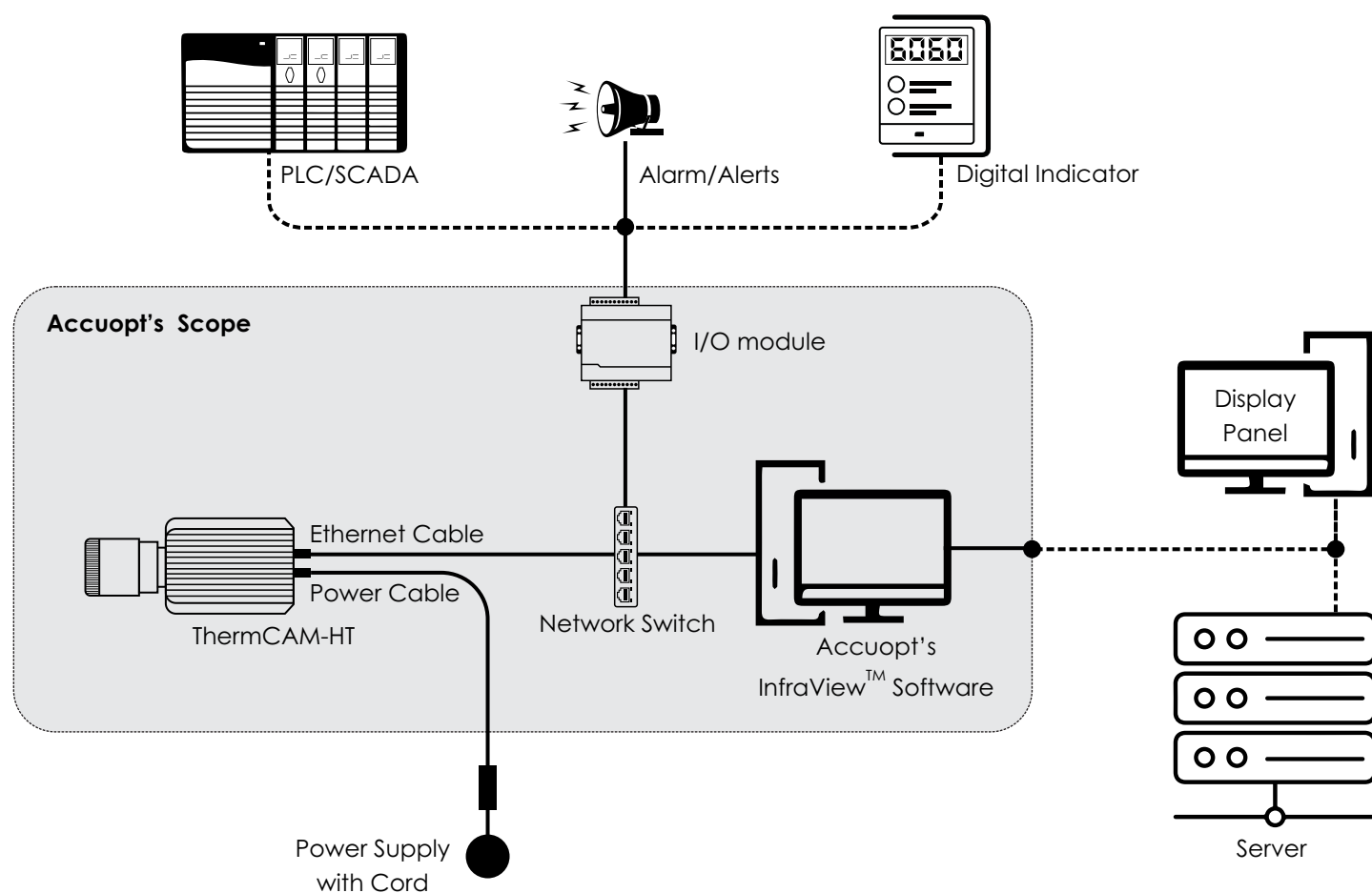|		
HFOV	=	Horizontal Field of View
VFOV	=	Vertical Field of View
D	=	Measurement Distance
W	=	Image Width
H	=	Image Height

SYSTEM CONFIGURATION

Accuopt thermal imagers offer several configuration options.

ThermCAM-HT Over Network

The system can be set up by connecting the camera directly to a dedicated computer using Ethernet connection which can be extended for remote access/intranet. Also camera can be paired with a network device(switch) which can be further connected with I/O module to get alarm/alerts, analog/digital output for digital indicator and PLC/SCADA systems.

PLC/SCADA   Alarm/Alerts   Digital Indicator

Accuopt's Scope

I/O module

Ethernet Cable

Power Cable

ThermCAM-HT

Network Switch

Accuopt's
InfraView™ Software

Display Panel

Server

Power Supply
with Cord

ThermCAM-HT

INFRAVIEW™ SOFTWARE

ThermCAM-HT 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.

Accuopt's INFRAVIEW™ software allows you to control the camera 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 for optimizing process control.
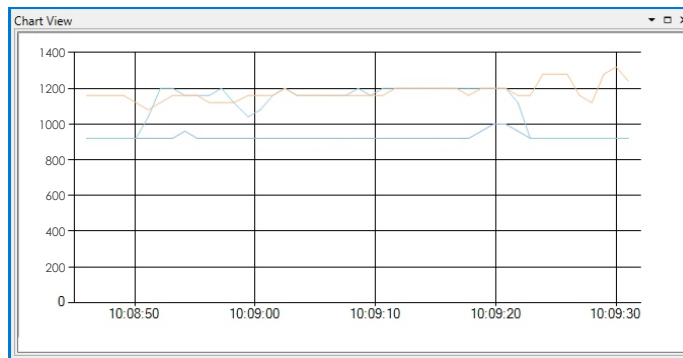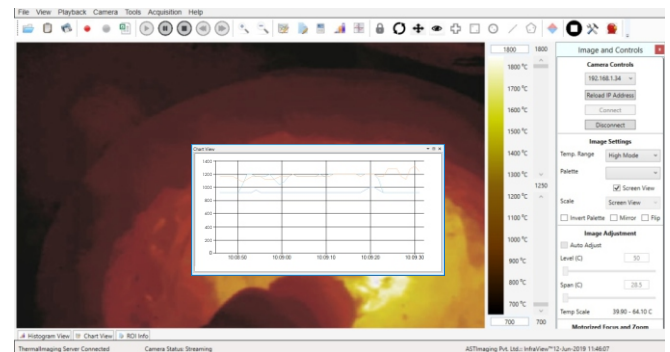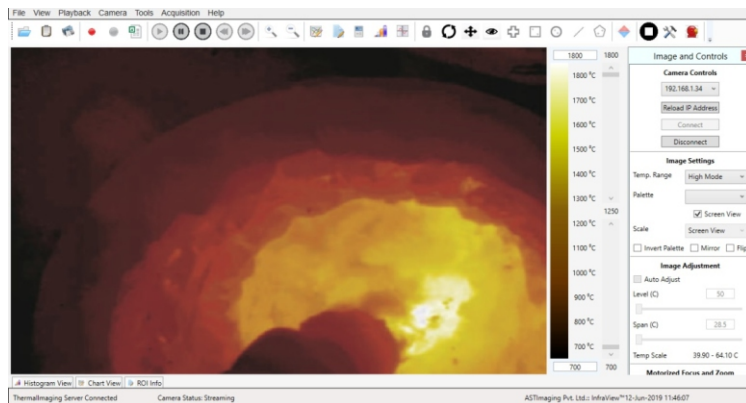
## SALIENT FEATURE LIST FOR INFRAVIEW™ SOFTWARE

- Adjustable emissivity, background, and transmission settings

- Real-time display of thermal images

- Includes 9 different color palates

- Multiple types of ROI including point, line, and area with min./max./avg. temperature display

- Includes analysis tools like histogram and temperature trend chart for multiple ROI's.

- Alarm generation for entire or ROI based on minimum, maximum or average temperature

- Analog and digital output module

- Triggered capture based on alarm conditions

- Data export to text or Microsoft Excel (includes thermal image, ROI table summary/data, image data) or to text

- Analyze previously recorded images using RAW data

- Export captured sequences to mp4

- Optional SDK

- Additional software for Real Time Temperature dashboard, analysis and report generation.

Accuopt

STANDARD ACCESSORIES

- Power Cord 3 Mtr.
- Ethernet Cable 10Mtr.
- Standard Infraview™ Software
- Lens
- SMPS

OPTIONAL ACCESSORIES

Water Cooling Jacket with Air Purge

206.00
Ø 46.00
Ø 110.00
50.00
63.00
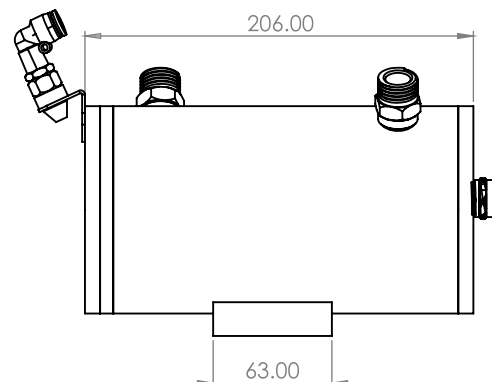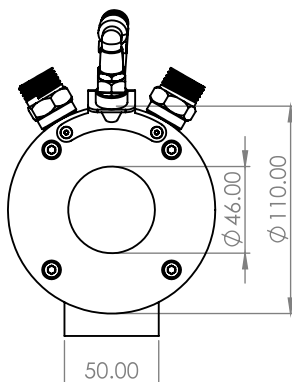
I/O Module

I/O Module

The I/O module consist of digital input/digital output(relay output) and analog 4 - 20mA, which can be mounted on Din-rail. It provides analog and relay outputs with respect to temperature. These outputs can be customized for temperature indication, alarm generation or error reporting.

- All I/O are user settable for range and ROI selection.
- I/O Channel parameters can be customized via software, as per requirement.
- I/O works on Ethernet and provide with Din rail Mounting for Easy Installation.

Workstation/Laptop (for Single Camera Only)

- Processor : Intel i5 8th Generation or Higher
- RAM : 8 GB
- HDD : 1 TB or Higher
- SSD : 256GB
- 2 Nos Gigabit Ethernet port
- Operating System : Windows 10Pro

Wall Mounting
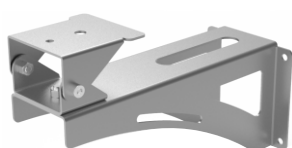
Power Supply

Tripod

Network Devices

ThermCAM-HT

Performance Specifications	
Temperature Range	700°C - 1800°C
Resolution	640 x 480 pixels
Detector	High Dynamic CMOS Detector
Frequency	upto 25Hz
Emissitivity	0.01 - 1.0 adjustable
Spectral Range	0.85 to 1.1µm

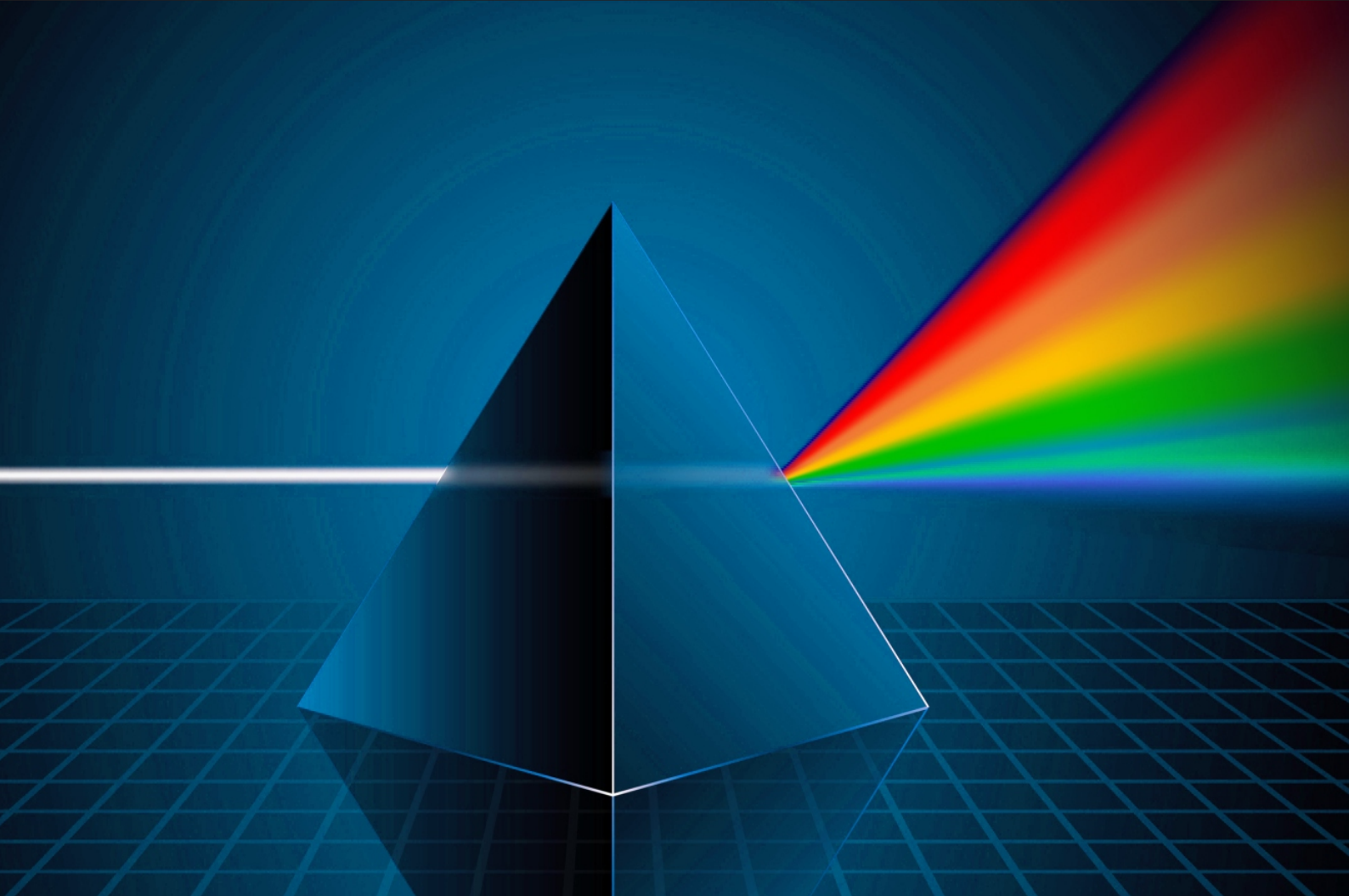| Interface Specifications	
Digital	Gigabit Ethernet (1000MBit/s)
Connection	Power Connector, RJ-45 Ethernet Connector
Video Format for Saving	MP4
Image Format for Saving	JPEG

Electrical Specifications	
Power Supply	12 V DC
Power Consumption	< 12 Watt.

Environmental / Mechanical Specifications	
Ambient Temperature	0°C - 50°C
Storage Temperature	-20°C - 70°C
Relative Humidity	20 - 80% non-condensing
Shock Resilience	3 Bumps @64 g ½ sinus during 5ms. (on the three axis)
Vibration Resilience	15g RMS from 5 Hz to 500 Hz (on the three axis)
Weight	~500g
Protection Class	IP54(IP65 Available with additional enclosure)

I/O Module Specifications	
Analog Output	4 Channel Analog Current Output (4 - 20mA)
Digital Input	2 Isolated Inputs
Digital Output	2 Relay Outputs
Power Supply	5 V DC

Cooling Jacket Specifications	
Inlet/Outlet (Cooling)	½" BSP Thread
Inlet For Air Purging	PU Pipe suitable for 6mm nozzle
Water Flow Rate	6-8 L/min
Air Pressure	Min. 3 bar (Moist Free)
Mounting	5 x M5 Thread

ABOUT ACCURATE OPTOELECTRONICS

AccuOpt – Accurate Optoelectronics Pvt Ltd. is a world-leading manufacturer of thermal imaging camera and solution. Based on technological innovations, AccuOpt Technology offers parts or end-to-end solutions for Industrial, Defense, Surveillance and Medical fields.

Specifications are subject to change without notice. Not responsible for errors or omissions. Accurate Optoelectronics Private Limited.

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