

## High Resolution Long Wavelength Ultra Compact Infrared camera for Non Contact Temperature Measurement

### LTE-640

TE-640 is an affordable thermal camera in the market, with 30Hz frame rate, multi functions and wide temperature measurement range. It provides ultimate inspection tools and unprecedented easy-to use designs to fit your needs. Whether in quality control, process monitoring or process automation - the infrared camera TE-640 measures temperatures without contact exactly and reliably. The device is durable, robust and suitable for industrial continuous operation.

It is available in 640 x 480 Pixels resolution. It works at wavelength range from 8 - 14  $\mu$ m.

The modular thermal image processing software INFRAVIEW is customizable with Client-Server Architecture for catering to multiple clients at the same time. It can be configured / customized to cater to application / solution requirements. It is supplied with every TE-640 Camera.

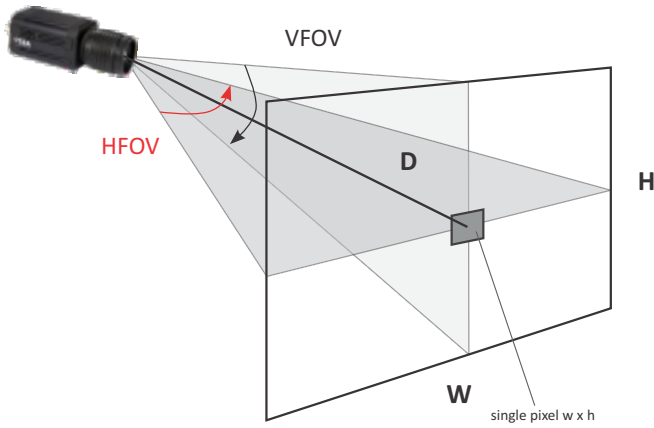


## Technical Specifications

Detector Data	
Type	Uncooled FPA detector
IR Resolution	640 x 480
Pixel Pitch	17 $\mu$ m
Spectral Range	8 - 14 $\mu$ m
NETD	<50mK@f1.0, 30Hz 300 K
Frequency	30Hz
Lens Data	
FOV	48.8° x 37.6°, 30.4° x 23.1°, 17.7° x 13.3°
Focus	Motorized
Lens Type	4.8 mm to 300mm lenses, manual / motorized focus, zoom
Image & Temperature Measurement Performance	
E-zoom	2x, 4x
Temp. Measurement Range	-20°C - 120°C 0°C - 500°C (Switchable)
Accuracy	±2°C or ±2% of reading
Temp. measurement calibration	Auto
Hot Spot Tracking	Real time display of hot spot location and temperature values
Setting	Date/Time, °C/°F K, language
Emissivity Correction	0.01 to 1.0 adjustable; correction by predefined transmission table
Background temperature correction	Auto, according to the background temperature input
Optical filter/Window transmittance correction	Correction according to the transmittance table
Atmospheric transmittance correction	Auto, according to the reflecting ambient temperature, distance, relative humidity and ambient temperature input
Color Palettes	12 types including white hot, black hot, iron red, rainbow

Data Storage	
Image	BMP/JPG format
Video	AVI format
Report Generation	Word format, customization possible
Power System	
Network Interface	100M ethernet, Rj45 interface, temperature data transmission
CVBS interface	Analog video output, offering ground observation information
Power interface	DC12V
I/O	4 Analog O/P & 4 Digital I/O (Optional)
Power Consumption	4W
Environmental Data	
Operation Temperature Range	-10°C ~ +60°C
Storage Temperature Range	-40°C ~ +70°C
Humidity	≤ 95% (non-condensing)
Encapsulation	IP54 (IEC60529)
Shock	25G, IEC60068-2-29
Vibration	2G, IEC60068-2-6
EMC	CE/FCC
Physical Data	
Weight	290g without lens
Size	92 x 62 x 52 mm without lens
Mounting	UNC 1/4" -20 standard mount, M3 thread
Packing	
Standard	Thermal Imaging camera LTE 640(w/20mm lens) Integration cable, Software CD-ROM, Warranty card, registration card, Calibration certificate, Packing kit

# Optics Variants (optics with motorized focus)



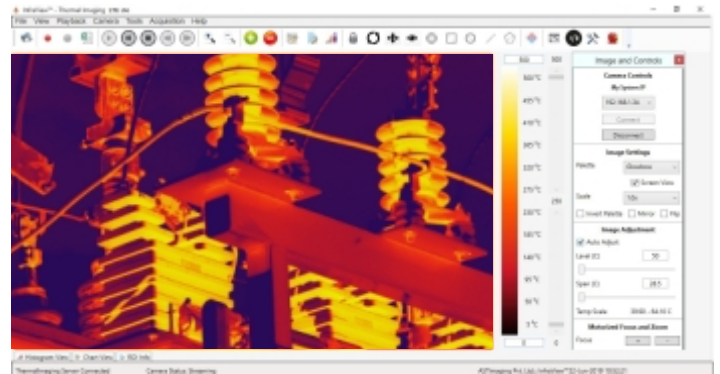
HFOV = Horizontal Field of View  
 VFOV = Vertical Field of View  
 D = Measurement Distance  
 W = Image Width  
 H = Image Height

HFOV x VFOV	Dist. (m)	Width (m)	Height (m)	Pixel size (mm)
48.8° x 37.6°	1 M	0.91	0.68	1.40
	5 M	4.54	3.40	7.10
	10 M	9.07	6.81	14.20
	15 M	13.61	10.21	21.30
	20 M	18.14	13.62	28.40
30.4° x 23.1°	1 M	0.54	0.41	0.85
	5 M	2.72	2.04	4.25
	10 M	5.43	4.09	8.50
	15 M	8.15	6.13	12.75
	20 M	10.87	8.17	17.00
17.7° x 13.3°	1 M	0.31	0.23	0.50
	5 M	1.56	1.17	2.40
	10 M	3.11	2.33	4.90
	15 M	4.67	3.50	7.30
	20 M	6.23	4.66	9.70

## InfraView™

TE 640 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.

AST INFRAVIEW™ Software allows you to control the camera to 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.



### Special Features

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

## Accessories

### Housing Unit

**ACH-10**  
 IP 66 Single Camera Housing with Sunshield Built in wiper/Fan/Heater & Ge window  
 (Reference no: 9100-03)



**ACH-30-1/2**  
 IP 55/66 Dual Camera Housing with Sunshield Built in wiper/Fan/Heater & Ge window  
 (Reference no: 9100-04  
 Reference no: 9100-05)



**ACH- EX 20**  
 Single camera housing with ATEX certification and Ge Window  
 (Reference no: 9100-06)



# Accessories

## Visible Camera Option

- AVC - 36 (36 x optical zoom) Ref. No. - 9100-08  
(Sony 2 MP CMOS Sensors)
- AVC - 20 (20 x Optical Zoom) Ref. No. - 9100-09  
(Sony 2 MP CMOS Sensors)

## 48 VDC 7A SMPS

- 48 VDC 7A Integrated Power Supply for Combined Unit Camera (Thermal & Visual, PT System & Housing)  
Ref. No. - 9100-10

## Pan Tilt System

P-T system 360° Pan (Endless)  
-75°~ 30° Tilt  
(Reference no : 9100-02)



## I/O Module



DIN RAIL Mounted I/O Module  
(Ref No. 8900-07)

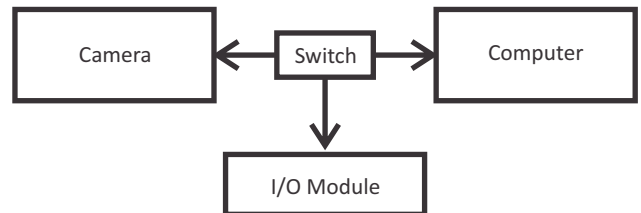
An I/O module acts as an interface between computer and thermal camera. The I/O module provides analog and relay outputs with respect to temperature. These outputs can be customized for temperature indication, alarm generation or error reporting.

- All I/O are user settable for range and ROI selection
- 4 analog outputs 4-20mA
- 2 Relay Outputs
- 2 Isolated Digital Inputs for triggering
- I/O can be customized according to user requirement
- I/O works on Ethernet
- Din rail Mounting for Easy Installation

## PC Specifications

Processor : Intel i7 8th Generation or Higher  
RAM : 8 GB  
GPU : 2 GB  
HDD : 1 TB  
Operating System : Windows 10

## Typical Configuration with PC



## Applications

- Quality Management
- Process Automation and Process Control
- Research & Development Projects : Non-Destructive Testing of materials, Studies of Aspects in Veterinary Medicines
- Early fire detection in storage buildings, forests and even in cities.
- Traffic Control
- Process Control in Metallurgy
- Inspection of electrical equipment
- Building thermography around thermal bridges and localization of weak points in walls

## Standard Accessories

- 12 VDC power supply
- Ethernet cable 5 mtr.
- Infraview Software

Included in standard package with LTE 640 camera

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