



# AST

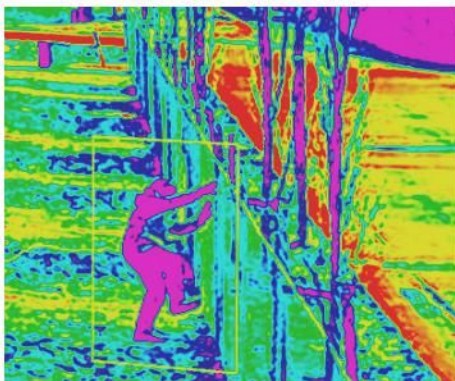
 imaging

Enhance Temperature Visibility



# PREDATOR 360

Security & Surveillance System



## System Overview

PREDATOR 360 is a Thermal + Visual camera based surveillance system for detecting any human or vehicle intruder into a secured area or perimeter. It keeps scanning a configurable area or 360 degree continuously and can start tracking any detected objects with minimum false detection and generate alarms. It is backed by high precision radiometry thermal camera and visual camera with zoom capability. It's a highly customizable solution which can have various DRI (Detection/Recognition/Identification) capability based on requirement.

## Features

- A Real time Thermal and Visual surveillance system with IP66 enclosure
- Automatic or manual (configurable) 360° Pan, -80° to 45° Tilt capability
- Up to 32x optical zoom for visual camera and digital zoom for Thermal camera(Optional Optical Zoom).
- Customizable and feature rich InfraView™ – IDS Software
- Configurable audio/visual alarms on screen, SMS, EMAIL or hooter (when used with I/O Card) when intruder is detected
- Weather proof Military grade Hardware for Long Life and Reliable operation. Also, this system includes Heater & cooling fan arrangement

## Thermal Camera Specification

MTI 640

Detector Data	
Type	Uncooled FPA detector
IR Resolution	640 x 480, 17µm
Spectral Range	8 - 14µm
NETD	<40mK@f1.0, 30Hz 300 K
Frequency	Up to 30Hz
Image & Temperature Measurement Performance	
Digital zoom	2x, 4x
Temp. Measurement Range	-20°C - 120°C
Accuracy	±2°C or ±2% of reading
Tracking	Real Time display and Automatic/ Manual tracking of detected threat.
Optical filter/Window transmittance	Correction according to the transmittance table
Color Palettes	12 types including white hot, black hot, iron red, rainbow
Data Storage Option	
Image	BMP/JPG format
Video	AVI format
Report Generation	Word format, customization possible

Power and Output Options	
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)
Environmental Data	
Operation Temp. Range	-30°C ~ +60°C
Humidity	95% (non-condensing)
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 MTI 640 (w/75mm lens) Integration cable, Software CD-ROM, Warranty card, registration card, Calibration certificate, packing kit

## Visible Camera

- 1/2.8" 2.13MP Sony Progressive Scan CMOS
- 2MP Full Real-time HD Quality Image
- up to 32x Optical Zoom
- Auto & Fast Focus / Zoom
- H.264/H.265 Dual Engines
- Motion Detection
- Defog Function/Mirror Image
- Privacy Mask Function
- ONVIF Protocol Compatible
- Defog Function
- Protection Level : IP66
- Working Temperature : -20°C~+60°C

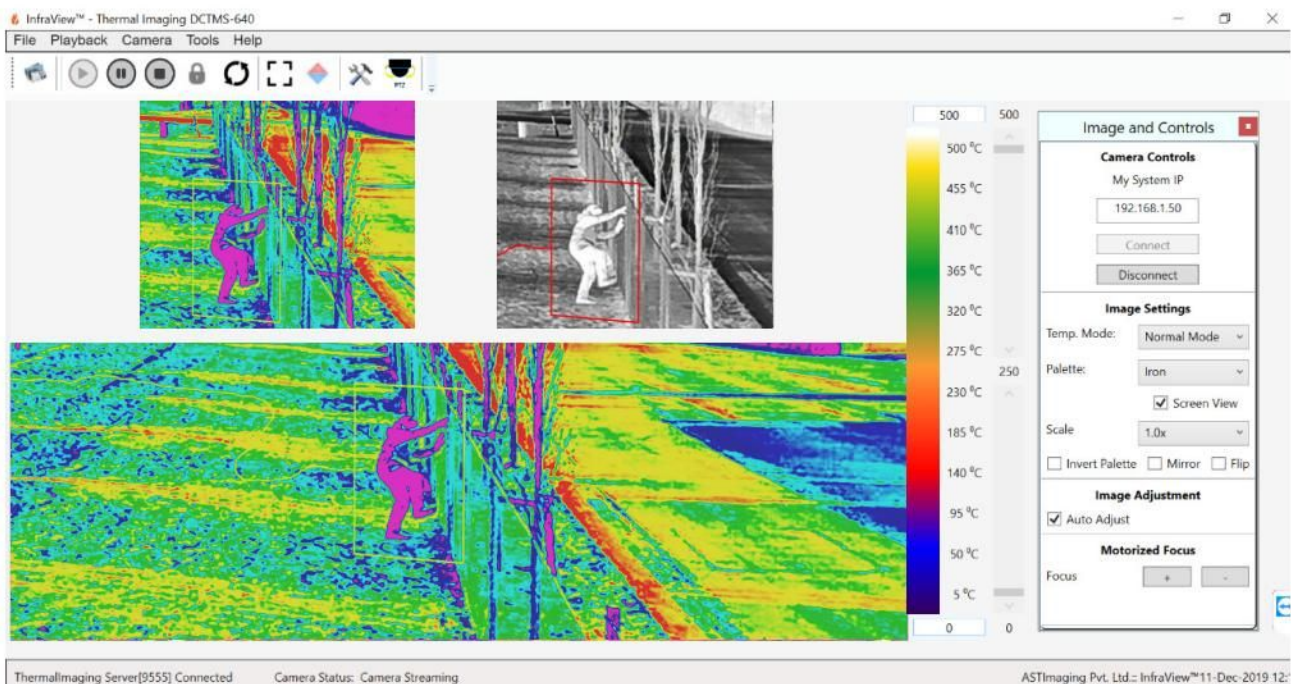
## DRI (detection Recognition Identification)

LENSES	DETECTION		RECOGNITION		IDENTIFICATION	
	Human	Vehicle	Human	Vehicle	Human	Vehicle
50mm	1 Km	2.7 Km	0.26 Km	0.67 Km	0.13 Km	0.33 Km
75mm	1.5 Km	4 Km	0.38 Km	1 Km	0.19 Km	0.5 Km
100mm	2 Km	5.3 Km	0.5 Km	1.3 Km	0.25 Km	0.67 Km
150mm	3.1 Km	8 Km	0.78 Km	2 Km	0.39 Km	1 Km
200mm	4.1 Km	10.7 Km	1 Km	2.6 Km	0.5 Km	1.3 Km
250mm	5.2 Km	13.4 Km	1.3 Km	3.3 Km	0.65 Km	1.7 Km
300mm	6.2 Km	16 Km	1.5 Km	4 Km	0.75 Km	2 Km
37.5 -150mm	0.78 -3.1 Km	2 - 8 Km	0.2 – 0.78 Km	0.5 - 2 Km	0.1- 0.39 Km	0.25 - 1Km
25 – 225mm	0.5 - 4.6 Km	1.3 - 12 Km	0.13 - 1.1 Km	0.33 - 3 Km	0.06 - 0.55 Km	0.16 – 1.5 Km

\* DRI Specified is for an Average Human Subject, 70% accuracy. Distance will reduce for higher accuracy.

## InfraView™ IDS Software

InfraView™ IDS Software processes the Thermal and Visual images transmitted via Predator 360. It also controls the movement of Pan & Tilt Drive. Predator 360 InfraView™-IDS Software is completely customizable as per the different locations and user requirements. Predator 360 InfraView™ IDS Software is able to detect, recognize, identify and automatically track Human/Vehicle intrusions in any desired area.



## Special Features

- Displays Real-Time Video (Visual + Thermal)
- Detection of human and Vehicle
- Automatic & Manual Tracking of intruders
- Option to configure detection algorithm using multiple preset temperature, can work as counter measure to deceptive thermal wear, mesh.
- Capability to approximate speed of detected moving intruder
- Capability to alert situational awareness information like if intruders gun has been fired recently or if the intruder has been running.
- Capability to compute approximate GR ( Grid reference ) as per Indian Defense Forces requirement
- Can work as Enemy Artillery Site Detection System when used with suitable long range lens.
- Manual Rotation, Focus and Zoom controls on demand
- Integration with I/O card which allows automatic or manual controlling of flash light, hooter, animal sound (dog barking/panther roar, snake hissing etc) on detection of any human intruder.
- Defogging Ability for harsh visibility conditions
- SMS/Email & Audio/Visual Alerts using optional I/O Module
- 360° Panoramic Thermal and Visual presentation
- Live Dashboard with Threat counters and Alerts

## System Components

### ACH-10

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



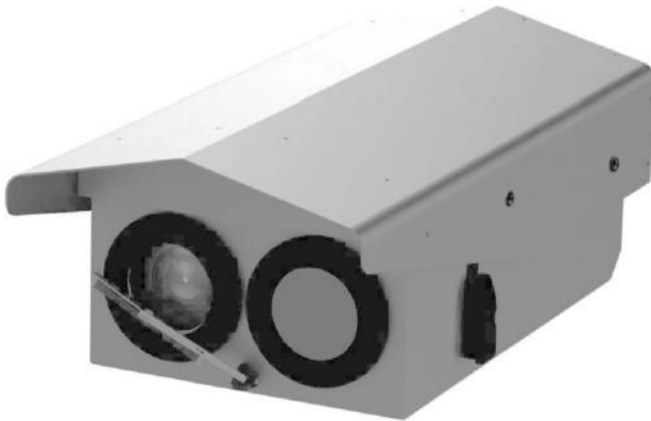
### ACH- EX 20

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



### 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)



### P-T System360°

Pan (Endless) -75°~ 30° Tilt  
(Reference no : 9100-02)



## About AST Imaging

AST Imaging Pvt Ltd is promoted by Accurate Sensing Technologies Pvt Ltd (AST), represented by Vinay Rathi, basically it is technocrat company engaged in R&D, Manufacturing and Marketing of Non contact temperature measurement solution Aluminum surfaces with low, unstable and variable emissivity characteristics. Today AST is a leading name among manufacturers of Infrared Pyrometers for non contact temperature measurement in Processes Industries like Steel, Aluminum, Cement, Glass and non metals etc.

The company was incorporated on 8th Jan 2018 with corporate identity U74999RJ2018PTC059965 pursuant to sub-section (2) of section 7 of the Companies Act, 2013 (18 of 2013) and rule 18 of the Companies (Incorporation) Rules, 2014 by Ministry of Company Affairs, Government of India with the address as : C/o Tempsens Instruments India Pvt Ltd, B-188A Road No 5 MIA Madri, Udaipur, Udaipur, Rajasthan, India, 313001

### AST Imaging Pvt. Ltd.

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