HANDHELD THERMO-VISION CAMERA

Function & Scope

- The infrared Thermal imaging and temperature measurement camera should be fully automated and shall be useful for thermo–vision scanning, having capability to identify hot spots, heat.
- The camera shall have the laser pointer facility with distance measurement feature.
- The instrument shall be portable and battery operated.
- The infrared thermal imaging and measurement system should be based on un-cooled focal plane array (UFPA) technology.
- It shall also have a built in digital colour visual camera, thus creating a colour visual image of corresponding thermal image.
- It should be possible to store the thermal and visual image together with measured temperature information.
- The system should be lightweight, hand-held with rechargeable, field replaceable battery
- The equipment shall be well balanced for one hand operation.
- Camera shall have the facility to freeze/ hold the image and store a single image or multiple of images either continuously or periodically.
- Emissivity correction should be from 0.01 to 1.0
- The equipment should be possible to record and monitor the video continuously.

S.No.	Parameters	Specifications
1.	Temperature Measurement Range	With Auto Switching Feature from -40 Deg C to 150 Deg C and 0 Deg C to 650 Deg C
2.	Temperature Alarm	Full screen maximum, minimum and average temperature tracking; The maximum, minimum and average temperature tracking of analysed target; full screen temperature threshold alarm (image, voice and flash).
3.	Model Type	Handheld for easy use on field
4.	NETD	Lesser than or Equal to 45 mK
5.	Spectral Range	7.5-14 µm
6.	Accuracy	At least ±2˚ C or ±2%
7.	Frame rate	Min 30 Hz
8.	Field of View:	Standard Lens: 25°X19°
9.	Min. Focus distance	0.1m
10.	Focus Mechanism	Manual, Automatic Focus, Touch Auto Focus, Continuous Auto Focus
11.	Image Mode	IR, Visual, MIF, PiP
12.	Image Adjustment	Automatic, Semi-automatic, Manual
13.	Palettes	Min 15 Different colour Palettes
14.	Shot Recognition	Auto
15.	Spatial resolution	1.70 m Rad

16.	Detector Resolution	Detector : 256 x 192 Pixels (This shall be complied only with Detector Resolution and not super resolution)
17.	Super Resolution	Min 512 X 384 Pixels
18.	Digital Zoom	1.1 to 8X
19.	Image/ Video storage feature:	Yes min 64 GB Inbuilt Storage and min 64GB SD card (Both removable micro SD memory card and on-board flash memory shall be available)
20.	Image Format	JPG with temp info
21.	Video Format	MP4 format (without temp info) can be used to record audio synchronously; Irgd (with temp info), up to 30 Hz for temperature analysis
22.	Should be able to capture both video and images.	Yes
23.	Interface for image/ video transfer	USB, HDMI, SD Card , Wi-Fi, Data (IR image) shall be transferred/copied to PC without manufacturer software.
24.	Screen	Minimum 4.3” Colour 800 X 480 pixels touch screen LCD
25.	Image Annotation	Voice, Text, Mark
26.	Voice Annotation	up to 60 sec
27.	Parameter setting	Emissivity, Reflected Temperature, Target Distance, Humidity, Atmospheric Transmittance, optical Transmittance, dew point
28.	Image analysis mode	5 Spot, 5 Line, 5Area
29.	Software Features	Should have proper software analysis software for PC with 3D analysis, Image blending technology. Should have mobile software with live monitoring facility through WIFI.
30.	Operating Temperature	-20^{o}C to 50^{o}C
31.	Battery	Min 5 hours of operation on battery with Lithium-ion rechargeable battery
32.	Power	Should be capable of operating directly on 230V, 50Hz nominal supply
33.	Built-in digital camera (for visible light):	at least 5MP with laser pointer distance meter
34.	Ingress Protection	IP 54
35.	Drop test	2m Drop Test

36.	Weight	Should be less than or equal to 1.15 Kg with batteries
37.	Hardware feature's	Laser (Indication, Ranging 0.1m to 40m), Illuminator, Microphone, Speaker, Electronic Compass, GPS
38.	Accessories to supplied	1. Lens covers, 2. Lithium-ion battery, 3. Power adapter, 4. Adapter plug Cable (double-headed TYPE-C USB), 5. TYPE-C USB cable, 6. Ethernet Cable, 7. TYPE-C to RJ45, 8. SD card (64 GB) , 9. Wrist strap.
39.	**SERVICE AFTER SALE:**	▪ Bidder will have to submit the documentary evidences of having established mechanism for prompt services as & when required.