

CAT® PHONES |



GET BACK TO WORK
WITH THE CAT® S60/S61

INITIAL EVALUATION DEVICE

ABOUT US

Bullitt has **10 years of experience** designing and building **distinctive, innovative, and fit for purpose** products, targeted at consumers' **unmet needs** in the **underserved market segments**



We bring these products to market under **major global brands** that are **relevant** to the market segment and our target customers

CAT S61® SPECIFICATIONS

The built in FLIR camera allows the device to take a thermal reading



The standard S61 camera

ANDROID OS: Android 8.0 Oreo (with upgrade to P)

BATTERY: 4500mAh capacity battery, QC4.0 compatible, QC3.0, USB type C

MEMORY: 4GB RAM, 64GB ROM (expandable with microSD, up to 2TB)

PROCESSOR: 2.2GHz CPU, Octa-core Qualcomm Snapdragon 630

DROP TEST: Drop tested onto concrete from 1.8m (6 feet)

WATERPROOF: IP68 water and dustproof, up to 3m deep (10 feet) for 60 minutes

MIL-SPEC 810G: Shock/drop proof , temp -30°C (-22°F) to 65°C (149°F) for up to 24 hours

CAMERA: 16MP rear camera, 8MP front camera, 4K video

SCREEN: 5.2" 1080p HD display, optimized for outdoor use, Corning Gorilla Glass 5

CONNECTIVITY: LTE Cat 13, VoLTE, VoWiFi

Wi-Fi: Dual band WiFi (2.4GHz/5GHz) b/g/n/ac

NFC/BLUETOOTH: YES / BT5.0

4G LTE BANDS: 1,2,3,4,5,7,8,12,13,17,25,26,28,29,66

3G BANDS: UMTS 950 (Band 5),900 (Band 8),1700/2100 (B4),1900 (B2), 2100 (B1)

2G BANDS: GSM 850 (Band 5), 900 (Band 8), 1800 (Band 3), 1900 (Band 2)

SENSORS: Thermal Camera 80 x 60 FLIR Lepton 2.5 , Indoor Air Quality Meter, E-Compass, Proximity, Ambient Light, Accelerometer, Gyroscope, Location, Barometer

*** MANUFACTURER 2 YEAR WARRANTY INCLUDED**

MOBILE DEVICES ARE LOADED WITH BACTERIA

The average bacteria on a mobile device surface is up to **20x more** compared to a **toilet seat** ¹

Compared to other surfaces

Mobile device surface: 25,127

Doorknob: **8,643**

Checkout screen: **4,500**

Pet food bowl: **2,110**

Kitchen counter: **1,736**

Toilet seat: **1,201**

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INFECTON RISK MITIGATION

Hard, inert surfaces of mobile phones and other communications devices, allow viruses to remain viable for up to 72 hours (unknown for Coronavirus but similar expected).¹

We typically touch our cell phone 2,600 times a day making it a potent infection risk.²

All Cat Thermal Phones are waterproof and built to withstand regular vigorous cleaning and exposure to chemicals, bleaches and detergents:

- Bleach test with 3000 cycles
- Alcohol abrasion test with 100 cycles
- Real world chemical susceptibility test at 60° room temperature at 95% humidity
- Steel wool abrasion tested
- No additional protective case that can harbor germs

Cat Thermal Phones can also be fully submerged and cleaned in soapy water and/or other available disinfectants.

1. 'Aerosol and Surface Stability of SARS-CoV-2 as Compared with SARS-CoV-1' (March 2020), The New England Journal of Medicine
2. Dscout research (2016)

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PHONE SANTIZING IS ESSENTIAL



All Cat phones are waterproof and built to withstand chemicals, bleaches and detergents. Users can submerge them frequently in soapy water and/or available sanitizers.

They also don't need a case – so no additional unnecessary gaps to store dirt and germs.



CAT[®] S61

**WHEN
SMART
MEANS
CLEAN**

catphones.com

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The CAT S60/S61

- Can be used as an initial screening device for triage when used with a secondary evaluation method (FDA approved thermometer)
- Is capable of downloading business critical Android apps developed to compliment initial evaluation activities (Alarming, cloud storage of evaluation data etc.)
- Can be sanitized using soap and water, hand sanitizer, or detergents (including bleach)
- Is able to detect temperatures outside pre-defined temperature range in controlled environments with a high degree of accuracy

The CAT S60/S61

- Does not replace FDA approved medical grade thermometers
- Does not determine illness
- Is not intended for use in dynamic environments as an initial evaluation tool



SAFEST APP & S61 DEMONSTRATION

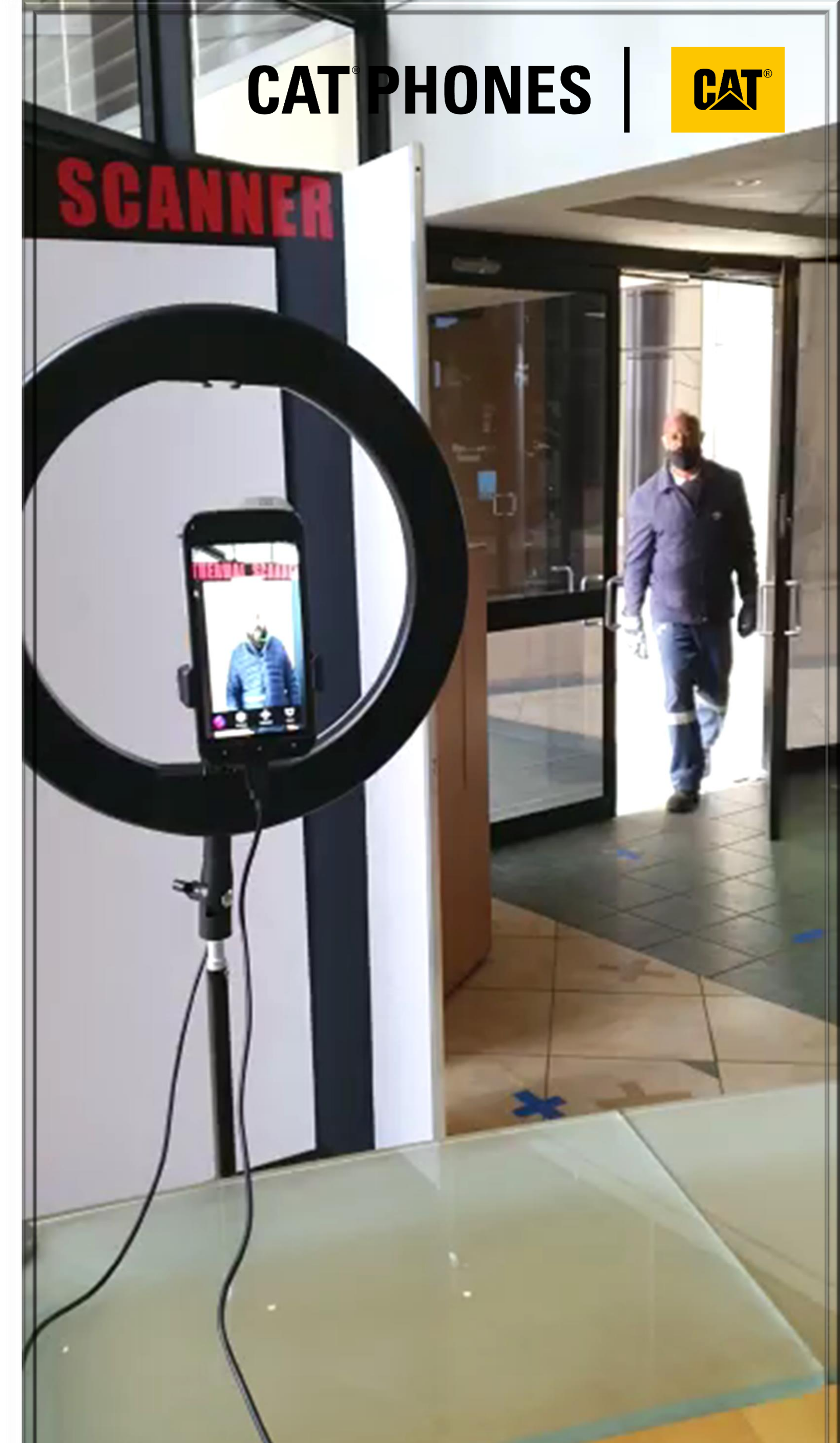
Best Practices

Remove hats and glasses

Avoid direct sunlight in your shot

Avoid temperature emitting sources such as heating and cooling units or electrical units that may have a different temperature than the ambient environment

Face masks can be worn but may need to be adjusted for thermal reading



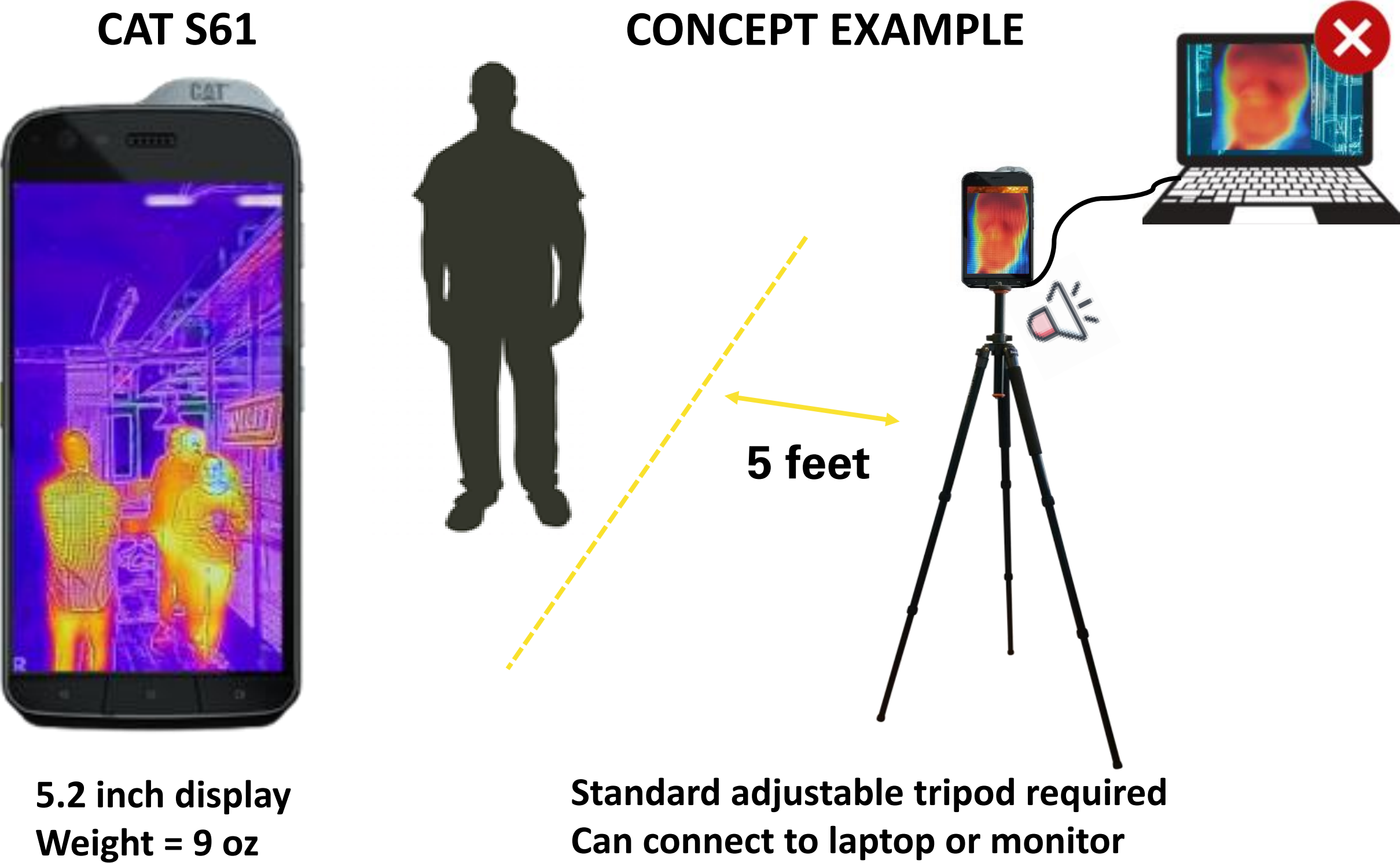
A CAT S61 smartphone is shown vertically. The screen displays the SAFEST app in "CHECKPOINT" mode. At the top of the app interface, it says "Mode: CHECKPOINT" and shows a temperature reading of "35.2°C". The main screen shows a thermal image of a person standing in front of a brick wall and a door. The person is wearing a yellow jacket and a face mask, and their face is highlighted with a green rectangular overlay. The door has a sign that says "PRODUCTION OFFICE". On the wall to the left of the door, there are several safety signs, including one that says "THINK BEFORE YOU ACT" and another that says "THINK SAFETY BEGINS WITH YOU". The phone's status bar at the top shows a checkmark, a target icon, a battery icon, and a signal strength icon. The CAT logo is visible on the top bezel of the phone.

CAT® S61 & SAF/EST app

Easy-to-use temperature screening solution

catphones.com

The SAFEST logo, which consists of a stylized circular graphic with concentric rings in shades of purple and blue, and the word "SAFEST" in a bold, sans-serif font below it.The Google Play logo, featuring the Google Play icon (a colorful triangle) and the text "GET IT ON Google Play".



Effective scanning solution using thermal technology to identify people with elevated skin temperatures while maintaining social distancing.

Anomalies detected assist personnel in determining individuals who may require further evaluation. (optional alarm feature)

Option to tether to a laptop for larger screen or using a mirroring application to control device.

Option to cast to a Chromecast enabled smart TV

- 
Easy Deployment
- 
Low Cost Bundle
- 
Scalable Solution
- 
Automated Application
- 
Waterproof Sanitize

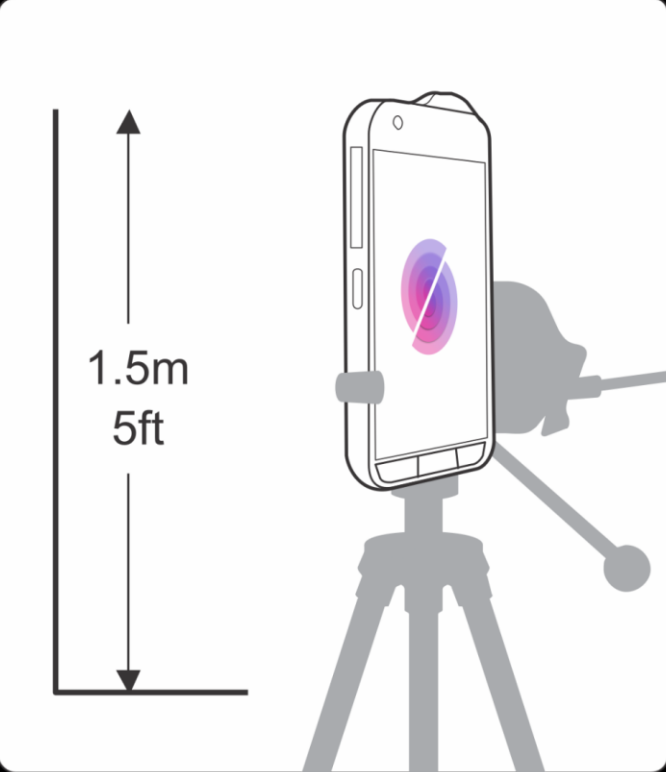


Thermal Scanning with S60 or S61 is done with the use of the **saf/est** application. The **saf/est** application can be found on the Google Play Store only when searching with these Cat phone devices.

SAFest APP – EASY CALIBRATION TUTORIAL

Step by step calibration makes it easy for multiple end users within an organization.

11:21 59%

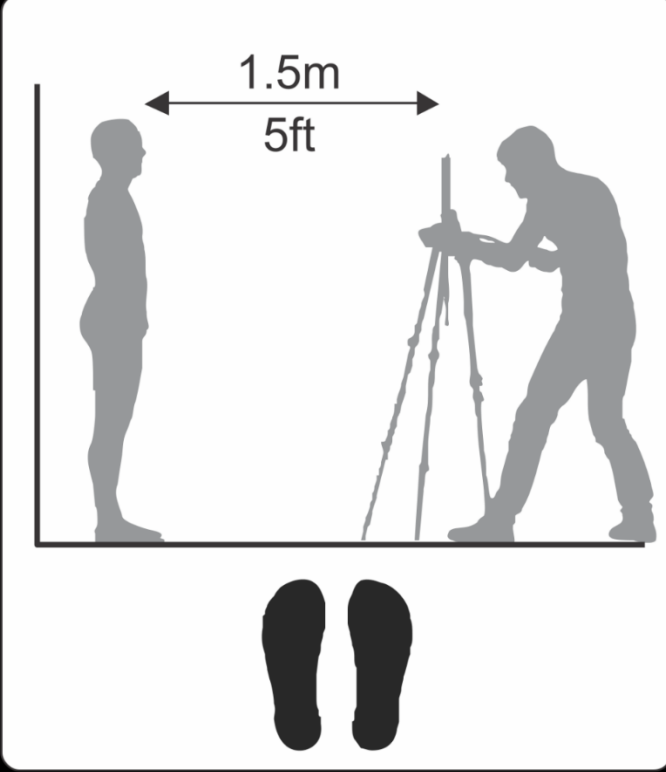


1.5m
5ft

Mount the S60/S61 on a tripod with the camera lens at 1.5m or 5ft from the ground mounted vertically for checkpoint scanning.

● ○ ○ ○ ○ ○

11:22 59%




1.5m
5ft

Mark a position on the floor 1.5m or 5ft from the camera.

○ ● ○ ○ ○ ○

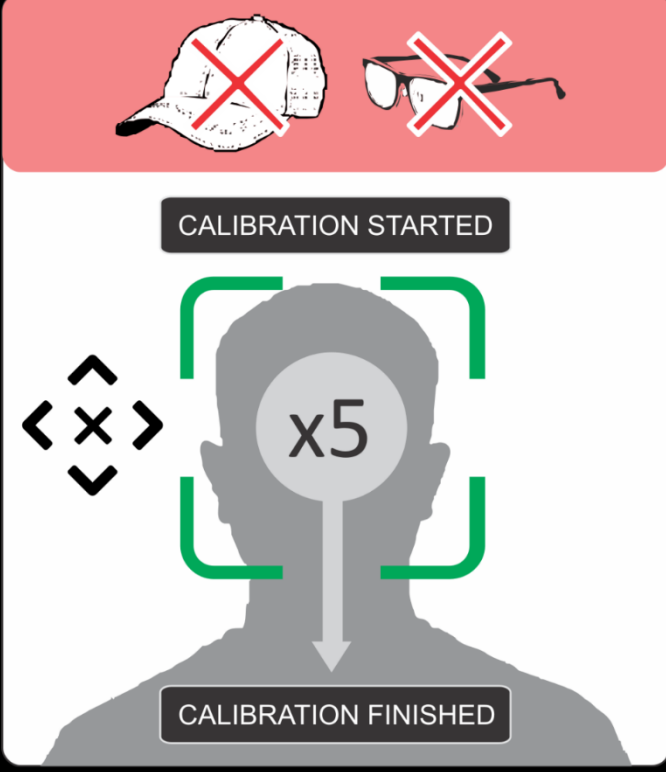
11:22 59%



Position the camera in a well lit area where there is a clean, uncluttered background and no direct sunlight cast onto the subject or background.

○ ○ ● ○ ○ ○

11:22 59%



CALIBRATION STARTED

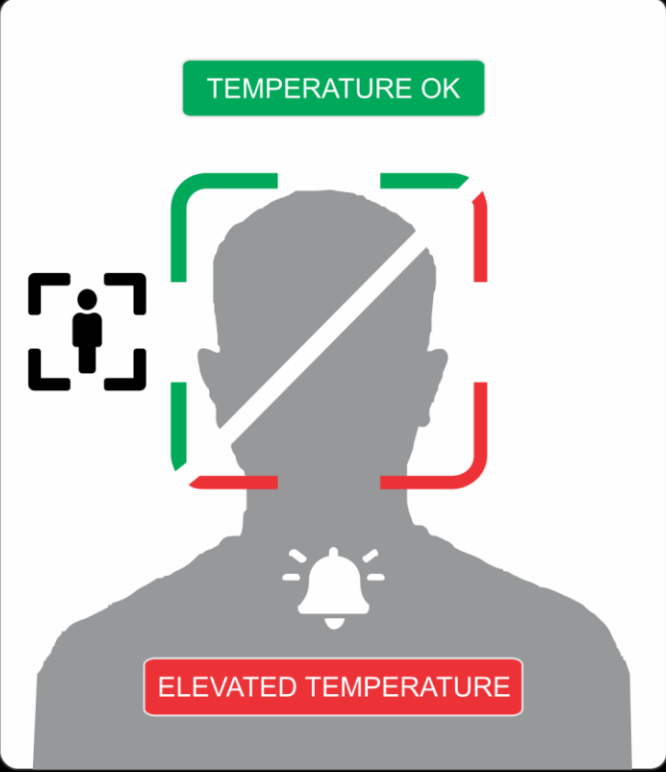
x5

CALIBRATION FINISHED

Use the "Calibrate" button to select calibration. Scan 5 individuals with normal skin temperature. Ensure that hats and glasses are removed.

○ ○ ○ ● ○ ○

11:22 59%




TEMPERATURE OK

ELEVATED TEMPERATURE

Use the "Scan" button to select checkpoint scanning. Scanning will commence automatically when a face is detected. Temperature status will be displayed with

○ ● ○ ○ ○ ○

11:22 59%



SAFEST

To learn more about the SAFest application or to access subscriber cloud based services including:

Statistical screening reports

Geo-located and time stamped incident reports

Biometric staff screening and access reporting

visit: <http://appsafest.com/>

Temperature
Display on/off

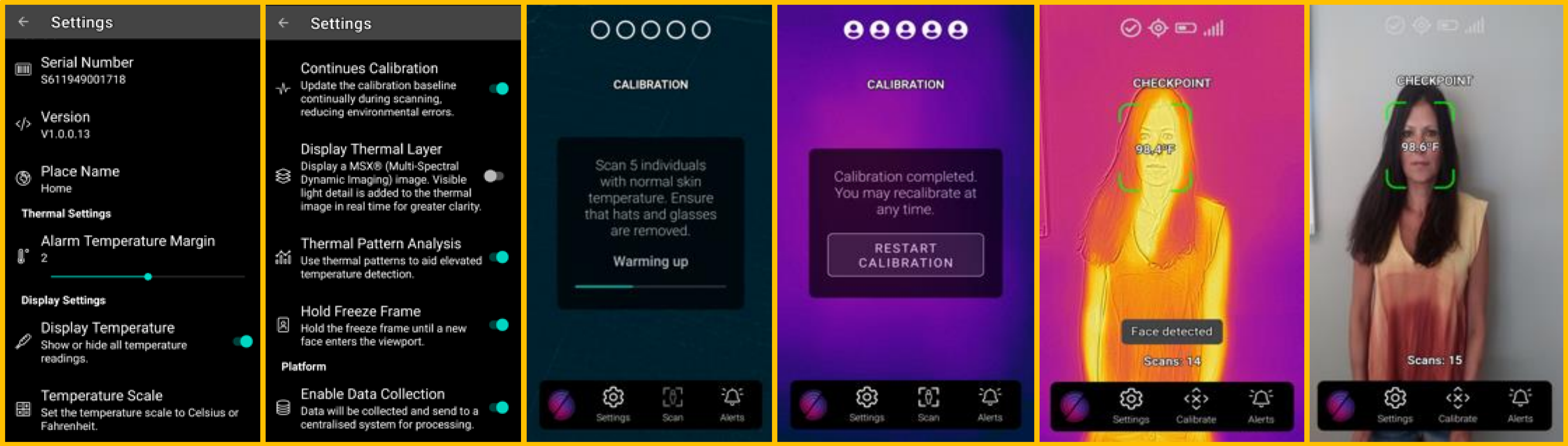
Analytics

Warm Up
Start Calibration

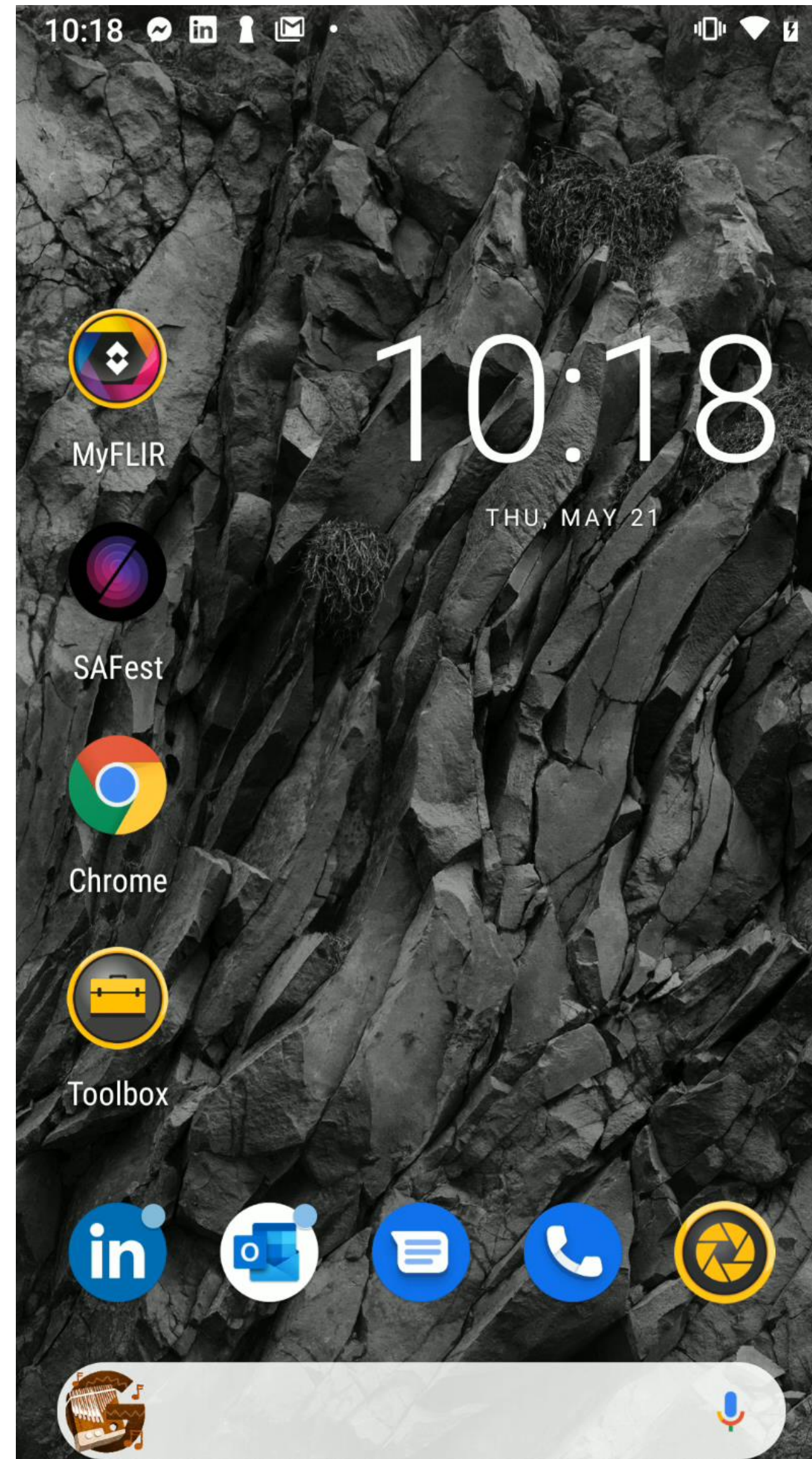
Calibration
Completed

Start Scan
Alarm on/off

Scan Complete

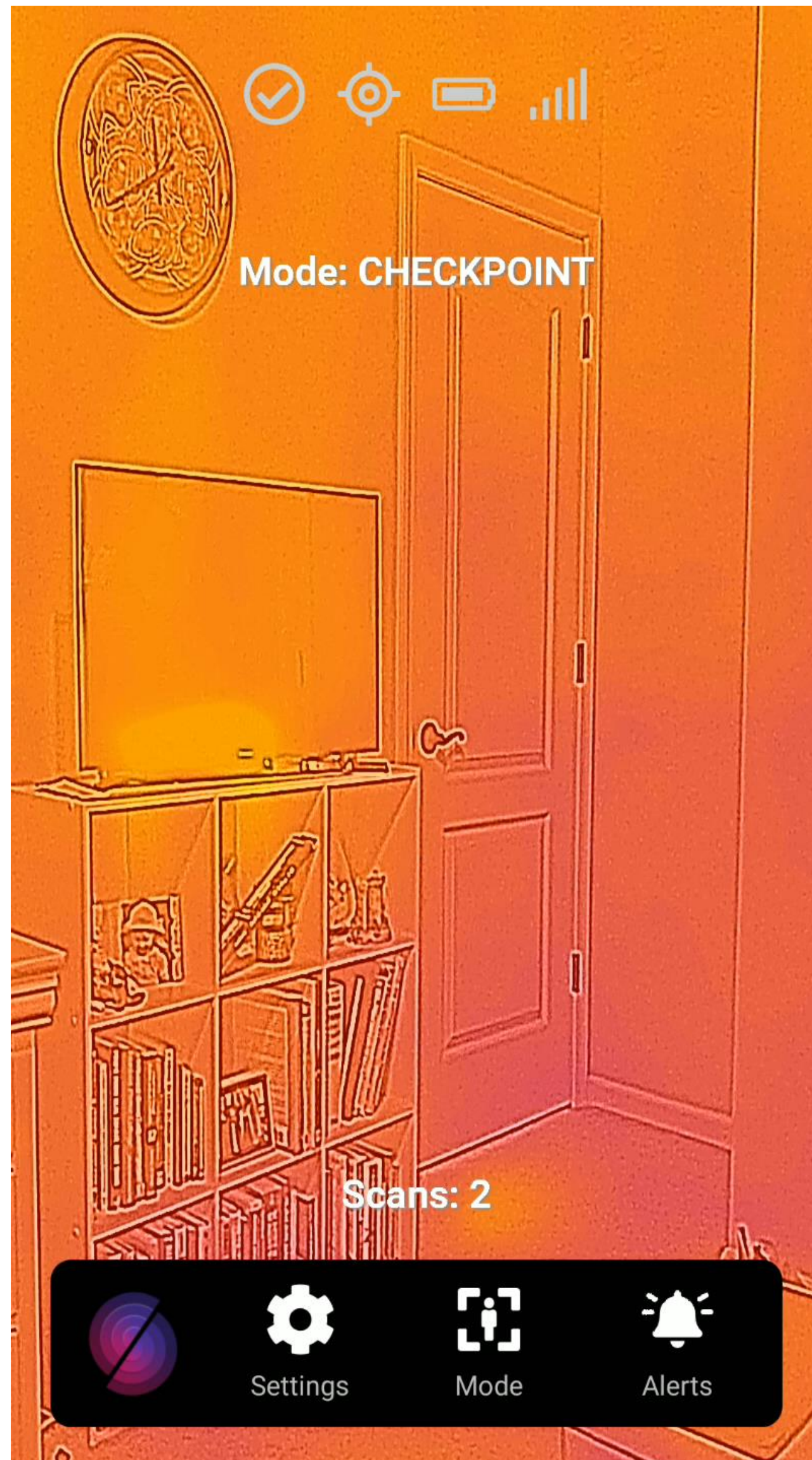


SAFest Startup and Calibration – with IR Video



1. Open the SAFest app
2. Allow app to boot and complete initial setup.
3. Tap mode once to set the Mode to *Calibration*
4. Tap *Start Calibration*
5. Calibration requires a face to be within view to complete

SAFest – Checkpoint with Normal Readings – with IR Video



1. Tap the mode button twice to enter *Checkpoint* mode
2. Each time a face leave and returns to field of view, the app will check for an elevated reading
3. If the reading is in the normal range, *A green box* will display around the face
4. The subject in this video left and re-entered the field of view to simulate several individuals being checked

SAFest APP – CHECKPOINT WITH ELEVATED READING – IR VIDEO

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If the reading is elevated,
A red box around the face will show
and the app will play an optional alert sound

NOTE: A mug with hot water was used to
simulate this elevated reading



CLEARED

No elevated skin
temperature detected



NOT CLEARED

Elevated skin temperature detected
(Recommend secondary screening
with medical grade thermometer)

SAFest APP – SAMPLE THERMAL TEMPERATURE SCANS

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Intelligent Technology:

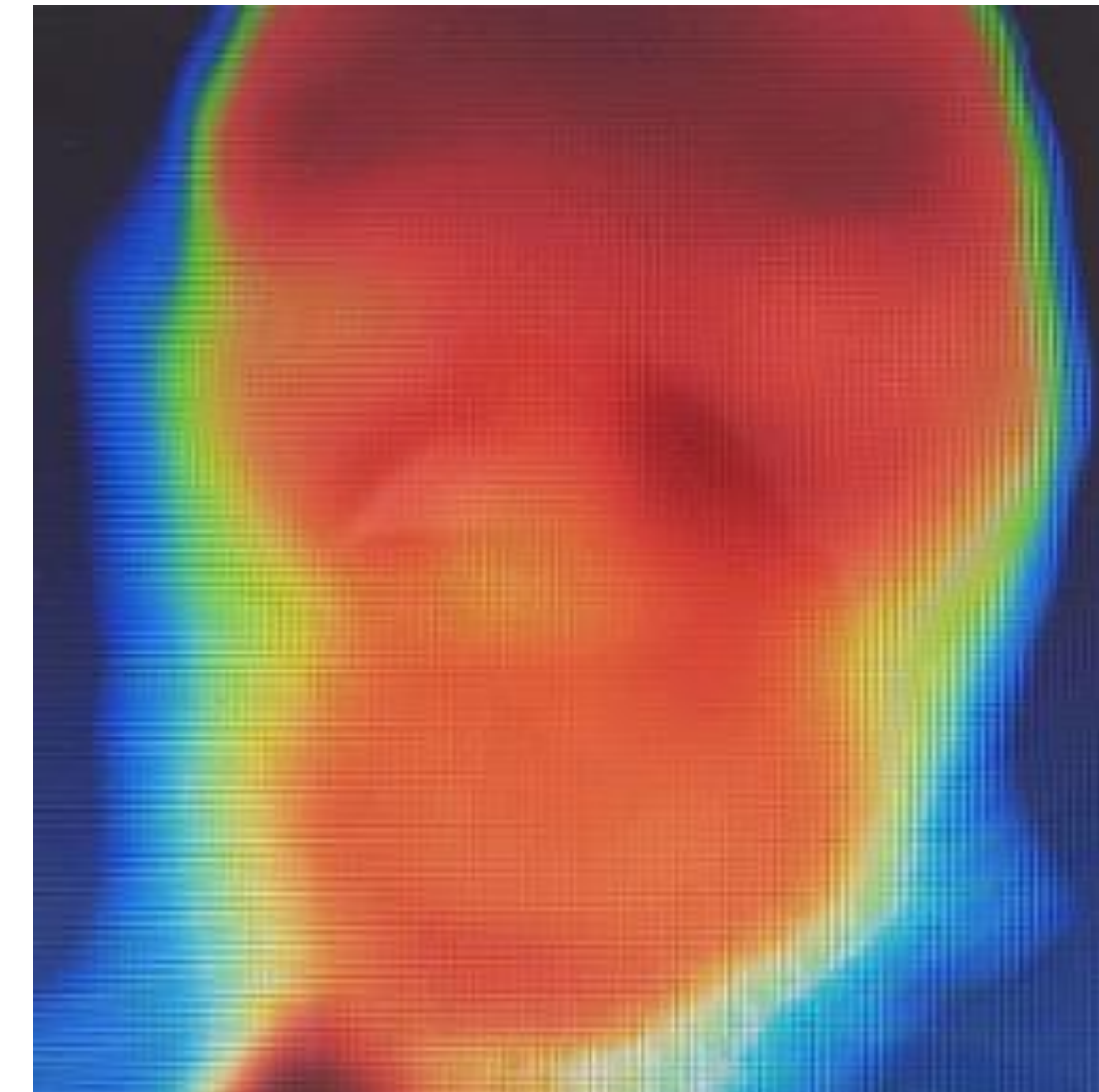
- In frame face detection
- Average baseline temperature algorithm
- Fever subject profiles built in data base
- Auto calibration of ambient environment
- Scan count & alarm notification
- Analytics option



**Subject with
Normal Temperature**



**Subject with
Elevated Temperature**



**Subject with
Fever**



APP EXPLAINS BLACK BODY RADIATION AS IT REALTES TO SAF/EST THERMAL SCANNING

The SAF/EST application uses the black body characteristics of human skin to maintain continuous calibration of the system, and so maintains a continuously variable baseline of normal skin temperature (NST) as the environment changes.

On a cold morning, NST will be cooler than that measured in the same individuals at mid-day or in a temperature-controlled environment. SAF/EST uses this continuous calibration to adapt to these changes and then uses the thermal sensitivity of the Cat S61 (able to detect temperature variations of as little as 0.05 degC) to identify elevated skin temperature (EST) relative to baseline NST.

A black body is an idealized physical body that absorbs all incident electromagnetic radiation, regardless of frequency or angle of incidence. The name "black body" is given because it absorbs radiation in all frequencies. A black body can also emit radiation. A black body is a hypothetical perfect absorber and radiator of energy, with no reflecting power.

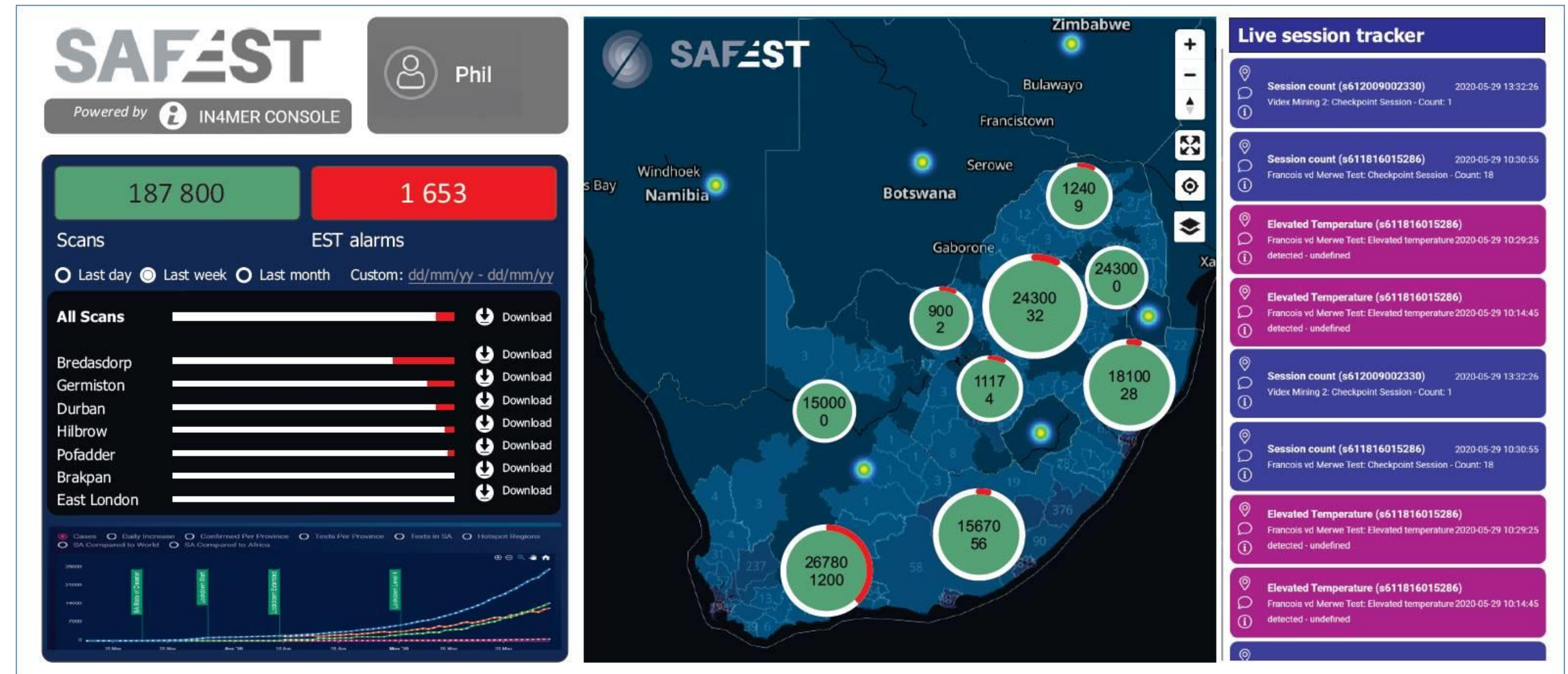
Black bodies are used for continuous calibration of infra-red thermography systems, specifically those that are capable of, and rely on, radiometric accuracy of a medical grade. In these systems the black body emits a uniform temperature against which the IR camera can reference and calibrate to.

Human skin absorbs 95% of IR radiation and, according to most studies, behaves practically like a black body. Human skin, however, does not emit a uniform temperature. Skin temperature varies both in its relation to core body temperature as well as to the skin temperature of other humans due to several influencing factors; including unique physiology, environment, physical exertion and of course febrility. For this reason, the idea of using radiometric accuracy with a black body calibrated system has inherent flaws as there is no adaptability for naturally fluctuating normal skin temperature readings if the reference black body is a fixed value.

SAFest APP – BACK END PLATFORM

Access to data such as:

- Scan alert messaging
- Scan counts
- Scan readings
- Time stamping
- Historical data

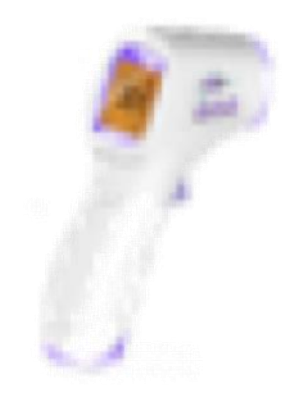


COMPARISON OF WIDELY USED SCREENING DEVICES



CAT S61/S60
INTEGRATED
THERMAL
CAMERA

RRP 729 USD



HANDHELD
'CONTACTLESS'
DIGITAL
THERMOMETER

RRP 50-100USD



MEDICAL
IN-EAR
THERMO-
METER

RRP 60-150USD



MEDICAL-GRADE
THERMAL CAMERA
(E.G. FLIR T530)

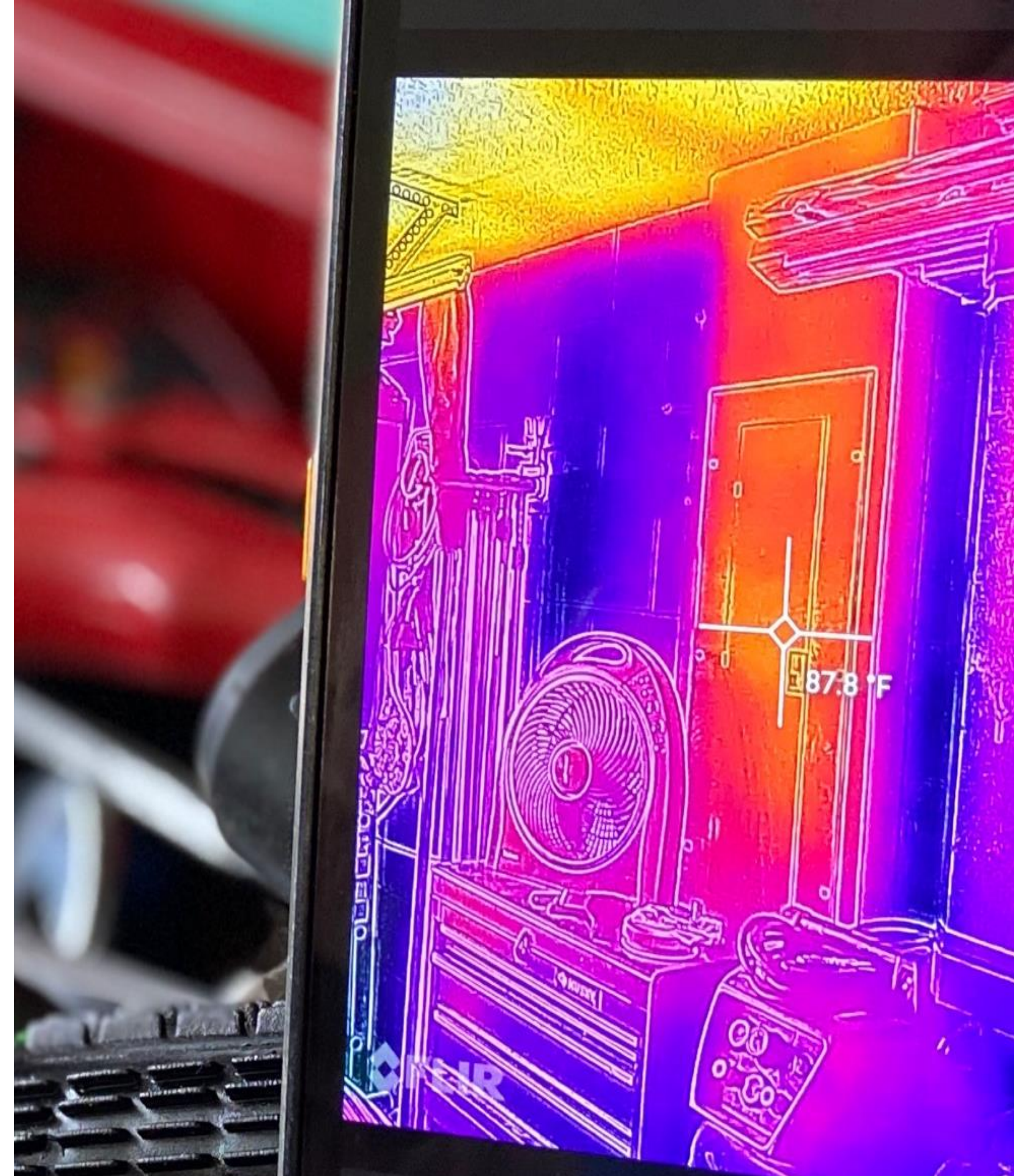
RRP >10,000USD

THERMAL SCREENING	Screening Distance	1.5-2m	1-5cm	Contact required	5m
	Screen Static Individuals	✓	✓	✓	✓
	Screens Moving People	✓	X	X	✓
	Screen Groups	✓	X	X	✓
MOBILE CONNECTIVITY	4G LTE	✓	X	X	X
	Wifi	✓	X	X	SOME
	GPS	✓	X	X	X
	Bluetooth	✓	X	SOME	SOME
INFECTION MITIGATION CLEAN WITH	Bleach	✓	X	X	X
	Alcohol wipes	✓	X	X	X
	Hand Sanitiser	✓	X	X	X
	Soap & Water	✓	X	X	X
	Disinfectants	✓	X	X	X
PRODUCT DURABILITY	Mil-Spec 810G	✓	X	X	X
	Water Proof (IP68)	✓	X	X	X
	Dust Proof (IP68)	✓	X	X	X
	Drop Proof 1.8m Steel	✓	X	X	X
EASE OF DEPLOYMENT	Mobile	✓	✓	✓	TRIPOD
	Out Of Box Deployment	✓	✓	✓	✓
	Zero Training	✓	✓	X	X

THE CAT® S60/S61 RUGGED THERMAL SCREENING SMARTPHONES

GENERAL BUSINESS APPLICATIONS

- Practical business applications in SMB & Enterprise
- Plumbing, HVAC, Electrical, Mechanical etc.
- Has been used in farming to find livestock and identify temperature anomalies
- Can be used in maintenance applications to mitigate expensive repairs due to heat related issues – Bearings, Brakes, Engines
- Easily sanitized (soap, water, detergents including bleach).
Mil-spec 810G certified and waterproof/dust proof (IP68)





CAT PHONES



THANK YOU

The Cat S61 or Cat S60 should only be used as one aspect of a wider temperature screening program. Cat phones can identify individuals in a population that show higher than average skin temperature in relation to a calibrated “normal”. Cat phones do not find individuals experiencing Covid-19/Coronavirus symptoms, and therefore they cannot be used to diagnose Covid-19/Coronavirus, or any other physical condition. We are not advertising these devices for use in the medical industry or for medical purposes. There is no way to thermally detect an infected individual who does not exhibit an elevated skin temperature, and only a qualified and licensed medical practitioner can determine if an individual exhibiting an elevated skin temperature is experiencing any abnormal medical condition. Users should comply with any local laws governing the use of surveillance tools.



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CAT® S61

BIGGER. BETTER. BOLDER.

Integrated thermal imaging camera
Laser assisted distance measure
Indoor Air Quality monitor

BEYOND RUGGED

IP68 and IP69K, MIL SPEC 810G
Sand, dust and dirt resistant
Waterproof: Up to 3M for 60 minutes
Drop Tested: Up to 1.8M (6 ft) onto concrete
Operating Temperatures: -25°C (-13°F) - 55°C (131°F)

CAMERA/ THERMAL CAMERA

16MP rear, 8MP front, 4K video
FLIR Thermal camera: Measurable scene temperature range
-20°C (-4°F) to 400°C (752°F)

LONG LASTING BATTERY

Capacity: 4500mAh (supports fast charging)

MEMORY

64GB ROM (Expandable via microSD™ card)
4 GB RAM

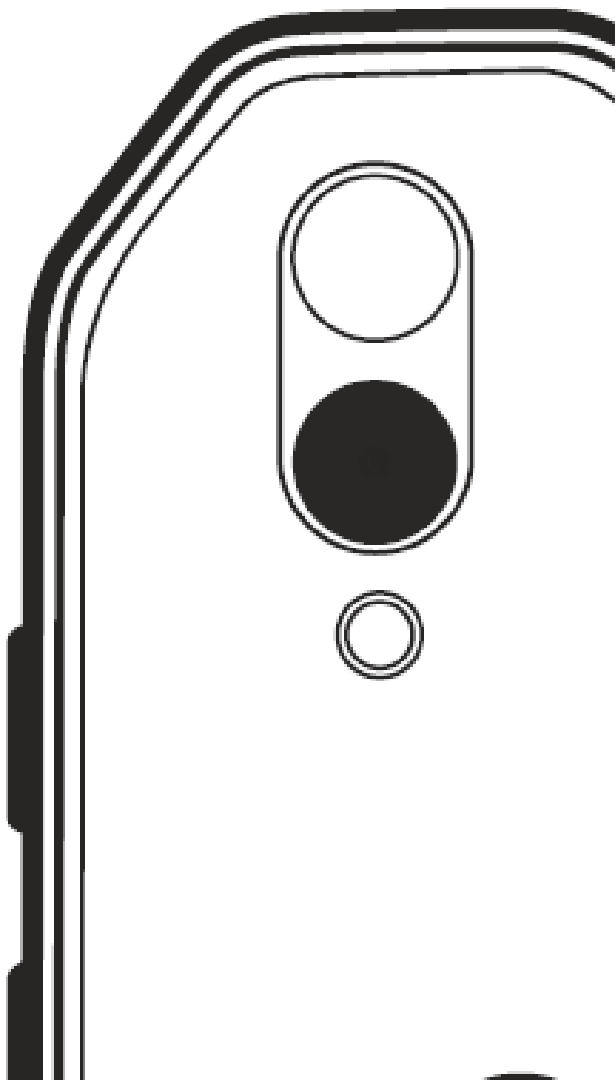
DISPLAY

Super bright 5.2" FHD display
Protected by Corning® Gorilla® Glass 5
wet finger/glove on working technology*

PLATFORM (OS)

Google Android™ 9

*May not work with all gloves.



CAT® S60

**A TURNING POINT IN
SMARTPHONE INNOVATION**

The world's first smartphone with an integrated thermal imaging camera.

BEYOND RUGGED

IP68, MIL SPEC 810G
Sand, dust and dirt resistant
Waterproof: up to 5m for 60mins
Drop Tested: Up to 1.8M (6 ft) onto concrete
Operating Temperatures: -25°C (-13°F) - 55°C (131°F)

CAMERA/ THERMAL CAMERA

13MP rear, 8MP front
FLIR Thermal camera: Measurable scene temperature range
-20°C (-4°F) to 120°C (248°F)

LONG LASTING BATTERY

Capacity: 3800mAh (supports fast charging)

MEMORY

32GB ROM (Expandable via microSD™ card)
3 GB RAM

DISPLAY

Super bright 4.7" HD display
Protected by Corning® Gorilla® Glass 4
wet finger/glove on working technology*

PLATFORM (OS)

Google Android™ 6

*May not work with all gloves.

