



ANDREAS ANGERER | KEY ACCOUNT MANAGER
EMEA

THERMOGRAFIE FORUM EUGENDORF 2020

THERMOGRAFIE MITTELS DROHNEN UND IN SICHERHEITSANWENDUNGEN

18. 9. 2020

N

OUR COMPANY

TICKER:
NASDAQ:FLIR

MARKET CAP⁽¹⁾:
\$6.1 B

HEADQUARTERS:
Arlington, VA

ACTIVE IN:
173 Countries

EMPLOYEES:
4,200+ worldwide



\$1,092M FY 2019⁽²⁾ REVENUE

INDUSTRIAL TECHNOLOGIES

- Building / electrical / mechanical inspection cameras
- Thermal camera cores
- Machine vision cameras
- Automotive and Advanced Driver Assistance System (ADAS)
- Lab / R&D cameras
- Firefighting cameras
- Commercial UAS
- Security cameras
- Intelligent transportation systems
- Smart/safe cities

\$795M FY 2019 REVENUE

DEFENSE TECHNOLOGIES

- Airborne systems
- Unmanned solutions
- Integrated systems
- Border surveillance
- Maritime systems
- Radiation and explosives detectors
- Chemical-biological threat detectors

FLIR: ALLES AUS EINER HAND

Vertically Integrated



Camera and Software Engineering
(Niceville, FL)



Detector Cores
(Goleta, CA)



Optics
(PA and MA)



Services
(USA and Sweden)



FLIR SCIENTIFIC / TEST RANGE CAMERAS

Integrated Imaging Solutions

- Blackfly S
- Grasshopper
- Oryx
- Firefly
- Gazelle



RS-Series



X-Series



A-Series

1.0 μ m

1.7 μ m

3.0 μ m

5.0 μ m

8.0 μ m

14.0 μ m

UV

Visible

NIR

SWIR

MWIR

LWIR

FLIR MUVE C360

- Multi Gasdetektor
- CO, Cl₂, O₂, NO₂, H₂
- S, SO₂, LEL



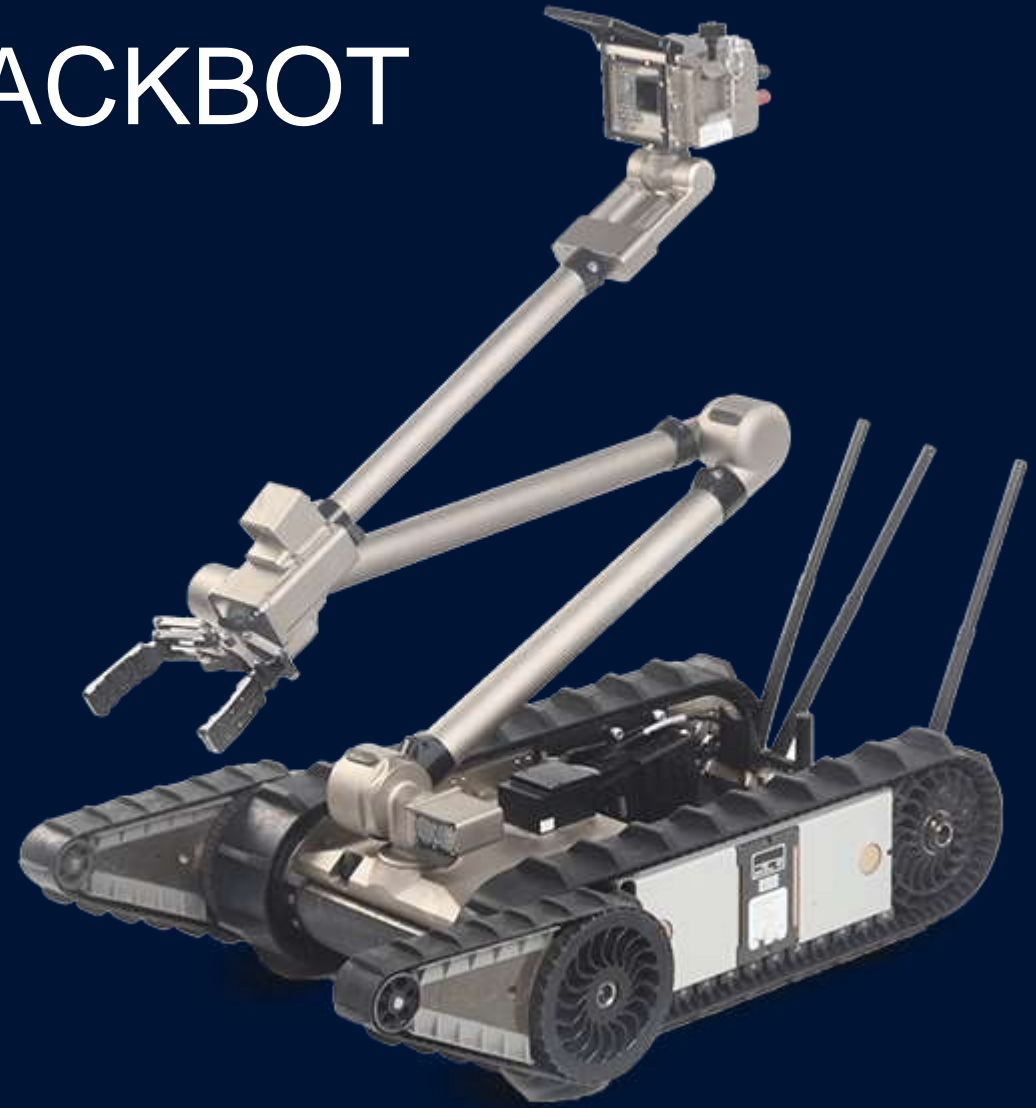
FLIR BLACK HORNET

- 33 Gramm
- 3 Kameras IR und VIS
- 25 Minuten Flugdauer
- 2km Reichweite
- 15 Knoten Wind



- 40.000.- US\$

FLIR FIRST LOOK / PACKBOT



FLIR CENTAUR / KOBRA

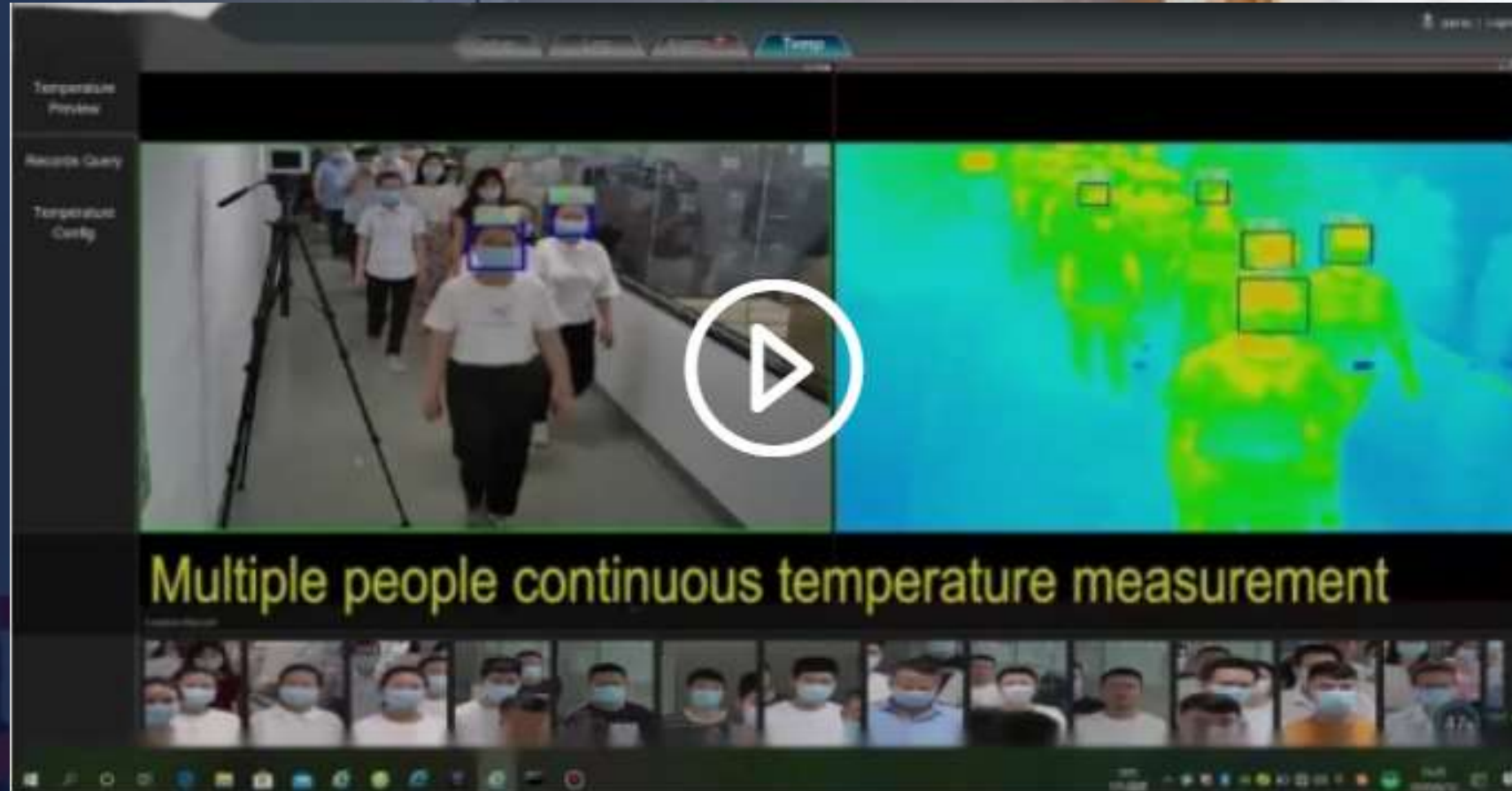


FLIR EST LÖSUNGEN

- Neue FLIR Screen EST™ Software
- Neue on-camera EST Modes
- Neue EST Models

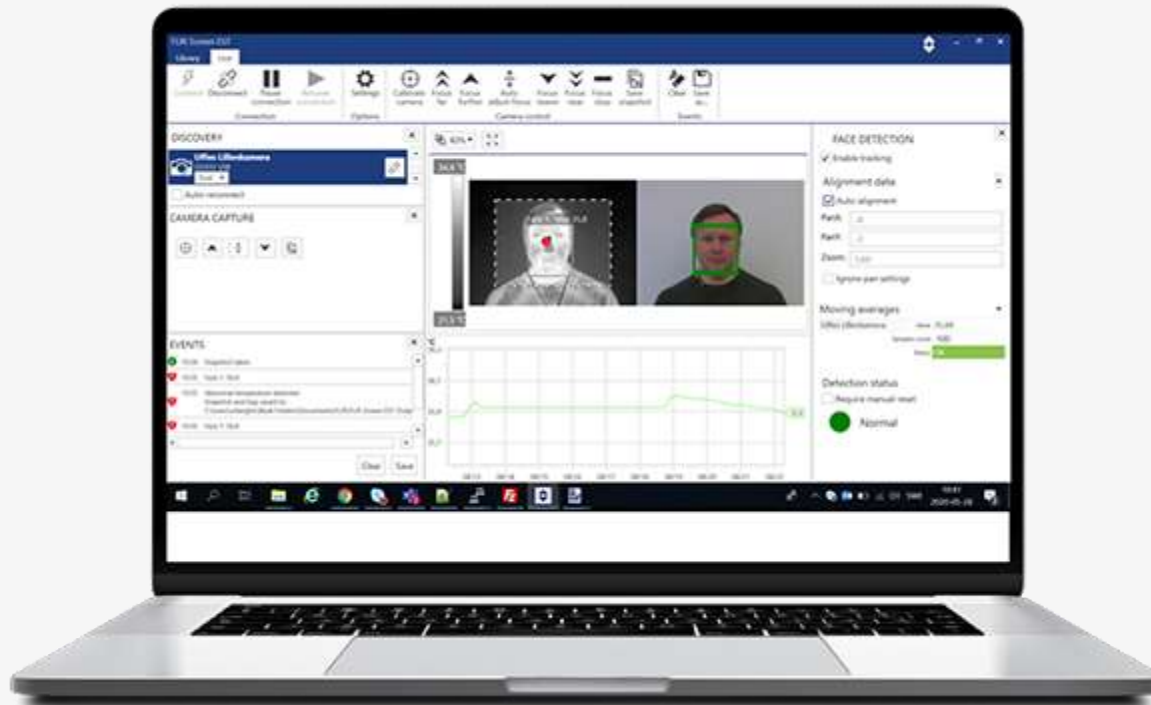
MESSTECHNISCHE PROBLEME

- Geometrische Auflösung
- Messgenauigkeit
- Hintergrund





FLIR KOMPATIBLE KAMERAS



T5xx*/T8xx*



A400/A700

Exx*

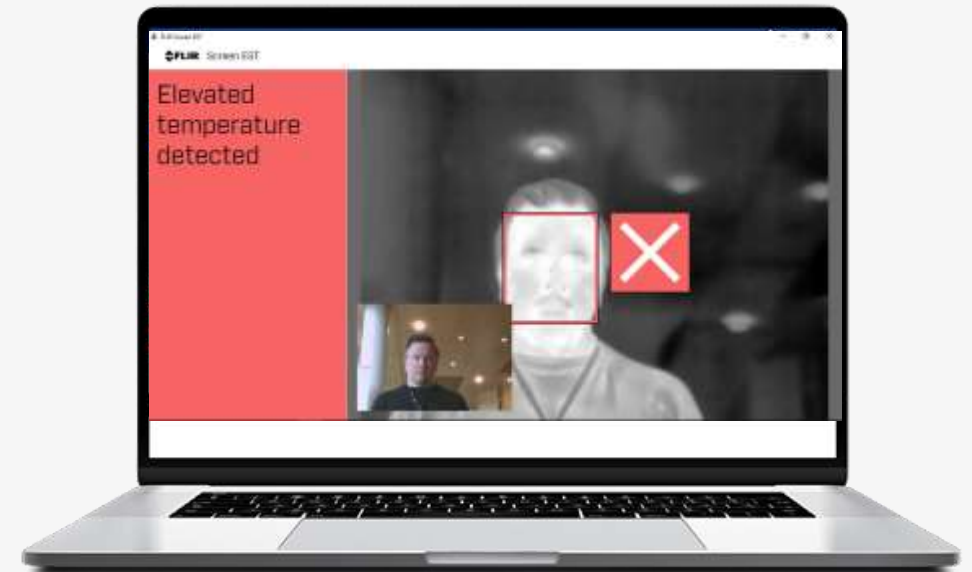
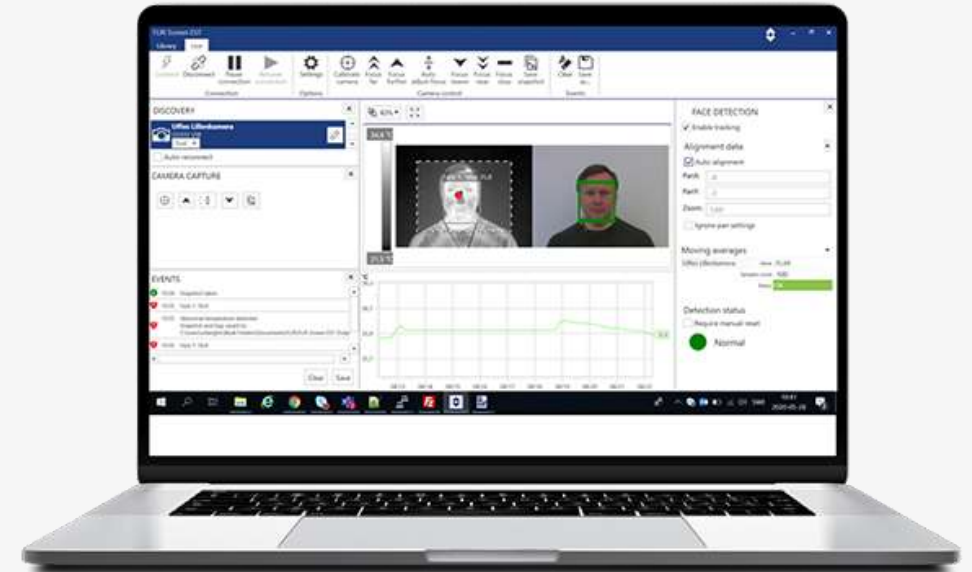


*Dual Streaming wird benötigt

FLIR SCREEN-EST™

KEY FEATURES

- ✓ Automatische Gesichtserkennung und Alarmierung
- ✓ Abstandsüberwachung, zwischen Kamera und Person
- ✓ Automatische Aktualisierung der Durchschnittstemperatur
- ✓ Operator und “Kunden” Interface
- ✓ Vereinfachte Benutzeroberfläche
- ✓ Vollständig anpassbar für eine lokale Optimierung



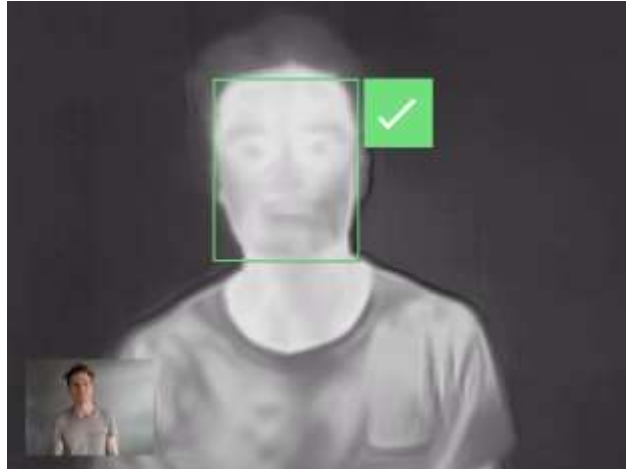
GENAUES UND SCHNELLES SCREENING

ERHÖHTE GESCHWINDIGKEIT UND GENAUIGKEIT

GEWÄHRLEISTET DEN RICHTIGEN
ABSTAND



AUTOMATISCHE PLATZIERUNG DES
MESSBEREICHS



EINFACHE, KLARE UND SCHNELLE
ERGEBNISSE





SYSTEM SETUP

EQUIPMENT SETUP

Was benötigen Sie

- Standard Windows 10 laptop/desktop
- FLIR Screen-EST muss installiert sein
- Exx / T5xx / T8xx Kamera mit Dual Streaming Option oder A400 / A700 Streaming Advanced Kamera
- Stativ oder ähnliche Kamerahalterung
- USB- oder Ethernet-Kabel sowie das dazugehörige Stromkabel
- Optionale Anzeige für die zu überprüfende Person



USB + Power
(T911846)



HDMI



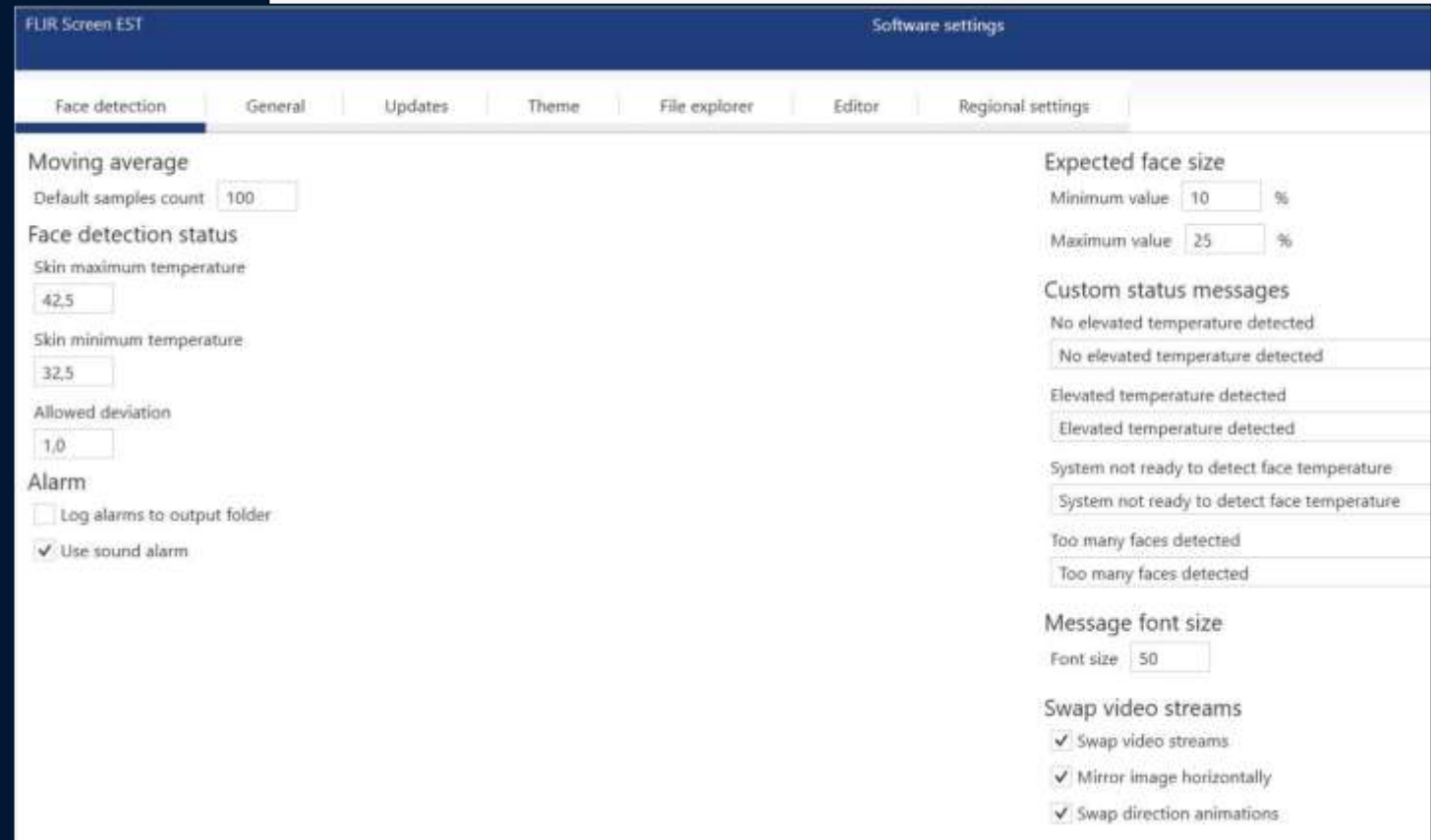
KONFIGURATION DER SOFTWARE

SETTING PAGE

- Gesichtserkennung
- Temperaturalarmstufen
- Benutzerdefinierte Nachrichten

OTHER SETTINGS

- Generelle und regionale Einstellungen



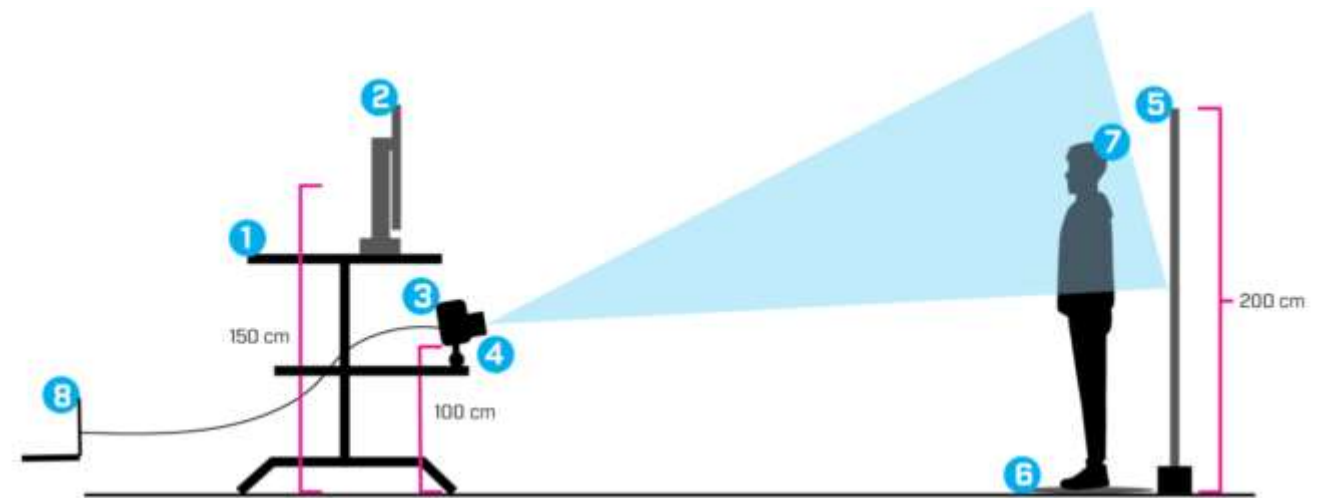
The screenshot shows the 'Software settings' window for 'FLIR Screen EST'. The 'Face detection' tab is selected. The settings are organized into several sections:

- Moving average:** Default samples count is set to 100.
- Face detection status:**
 - Skin maximum temperature: 42,5
 - Skin minimum temperature: 32,5
 - Allowed deviation: 1,0
- Alarm:**
 - ☐ Log alarms to output folder
 - ☒ Use sound alarm
- Expected face size:**
 - Minimum value: 10 %
 - Maximum value: 25 %
- Custom status messages:**
 - No elevated temperature detected: No elevated temperature detected
 - Elevated temperature detected: Elevated temperature detected
 - System not ready to detect face temperature: System not ready to detect face temperature
 - Too many faces detected: Too many faces detected
- Message font size:** Font size is set to 50.
- Swap video streams:**
 - ☒ Swap video streams
 - ☒ Mirror image horizontally
 - ☒ Swap direction animations

SCREENING-SETUP AM STANDORT

FLOOR PLAN SETUP

1. Tisch
2. Anzeige für die gescreente Person
3. IR Kamera zeigt auf Person at person
4. Tischhalterung
5. Hintergrund
6. Bodenaufkleber
7. Screening-Objekt (Person)
8. Computer



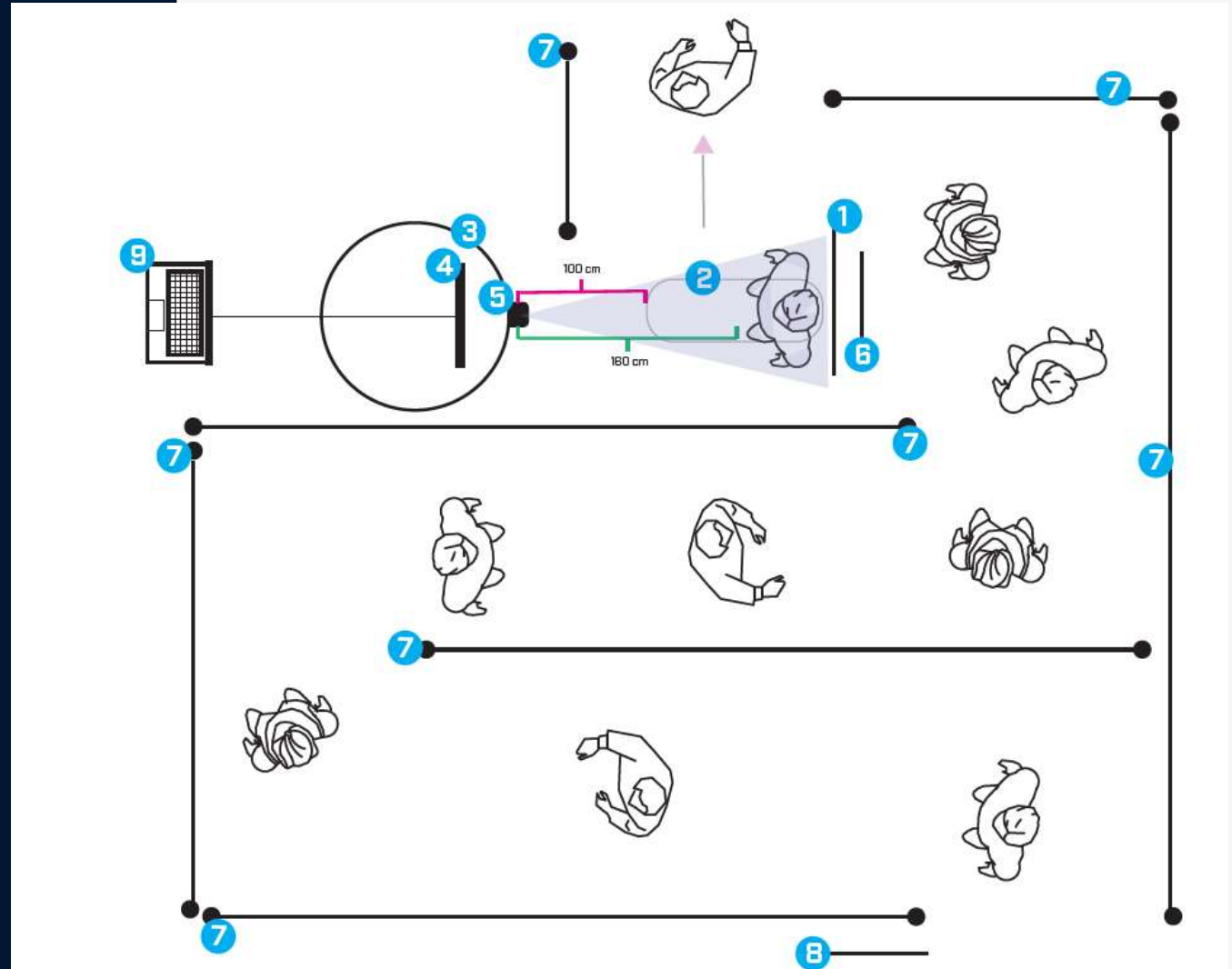
SCREENING FLOW –

OPTION 1

- Make sure get a good flow of people
- Die Personen müssen die Kontrollstation sicher passieren
- Informations-Rollups bieten klare Richtlinien
- Entscheiden Sie, was wann zu tun ist
- Grüne Anzeige, oder Rot wenn eine erhöhte Temperatur erkannt wurde

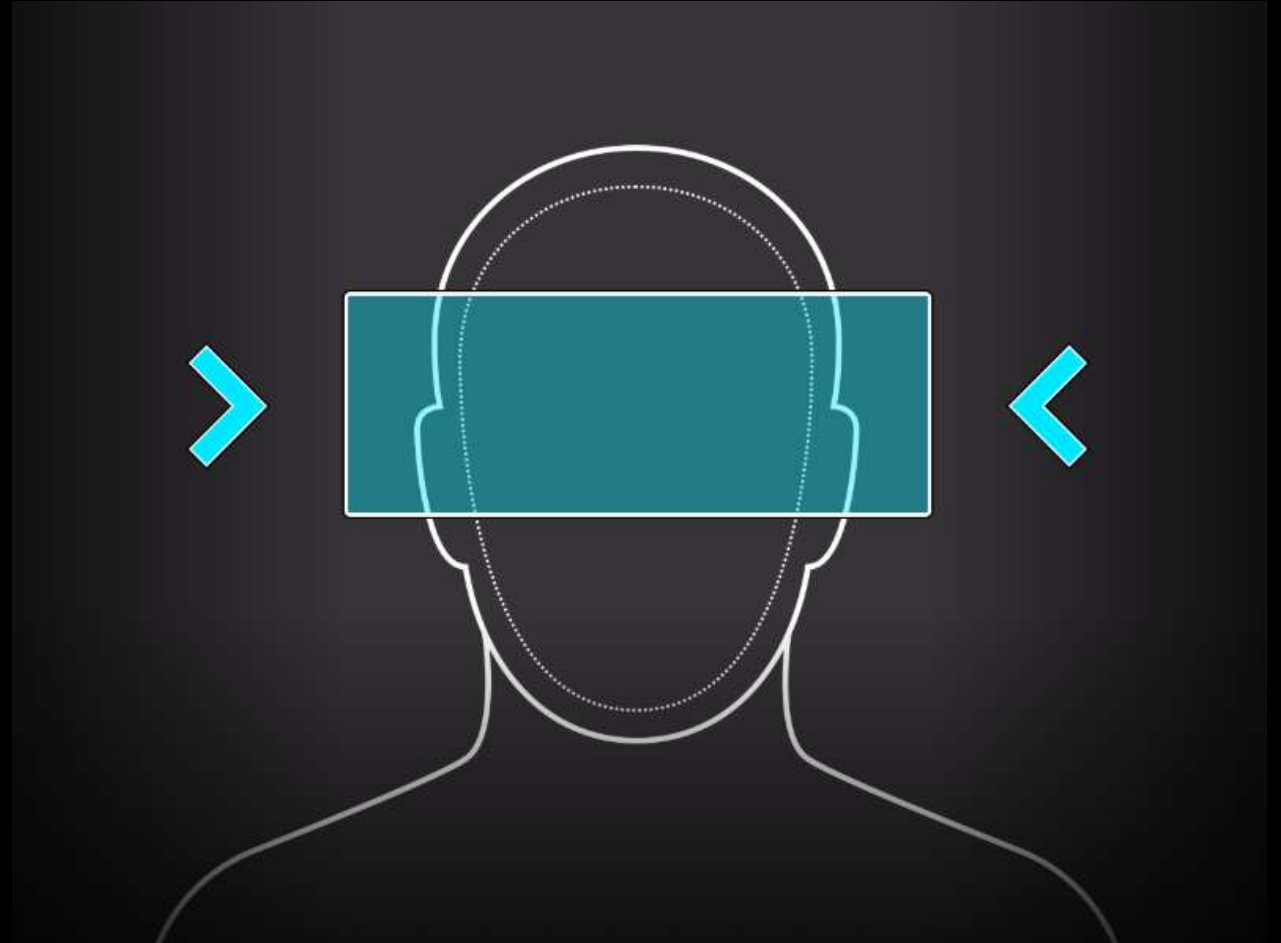
DESCRIPTION

- | | | |
|---------------------------|------------------------------------|------------|
| 1 Screening back-drop | 5 IR-Camera | 9 Computer |
| 2 Placement floor sticker | 6 Screening instructions (Roll-up) | |
| 3 Table for Camera setup | 7 Queue indicator | |
| 4 Monitor facing user | 8 Screening information (Roll-up) | |



NEW EST PRODUCTS

NEUE ON- CAMERA- SCREENING- MODI



HANDHELD ON-CAMERA SCREENING MODES

3 Modi zur Auswahl...

1. Manual Mode - (**Included**)

- Keine Rückmeldung an den Benutzer (bestanden / nicht bestanden)
- Manuelle Probenahme
- "Fernbedienungstaste" kann verwendet werden



1



HANDHELD ON-CAMERA SCREENING MODES

3 Modes to choose from...

1. Manual Mode - (Included)

- Keine Rückmeldung an den Benutzer (bestanden / nicht bestanden)
- Manuelle Probenahme
- "Remote Button" kann verwendet werden



1

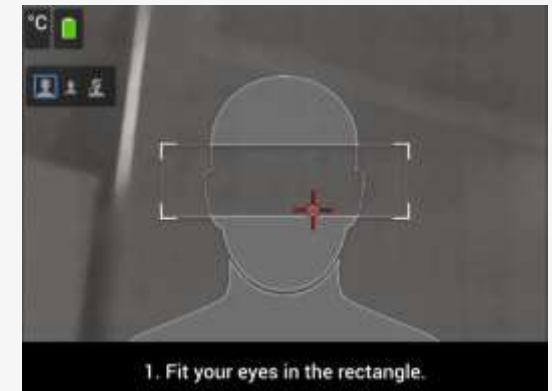


2. Operator Mode - (Benötigt Remote Button: T131171 \$45)

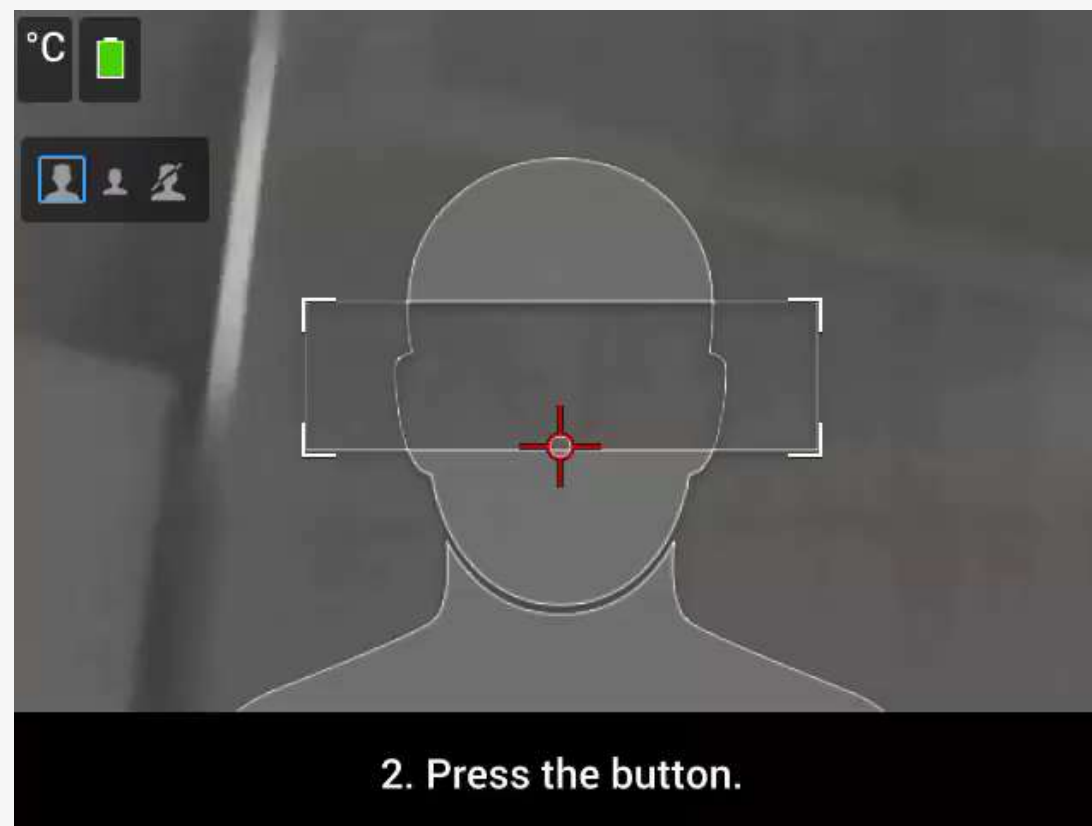
- Rückmeldung an den Benutzer (bestanden / nicht bestanden)
- Manuelle Probenahme (jeder Einzelne)
- mit "Remote Button"



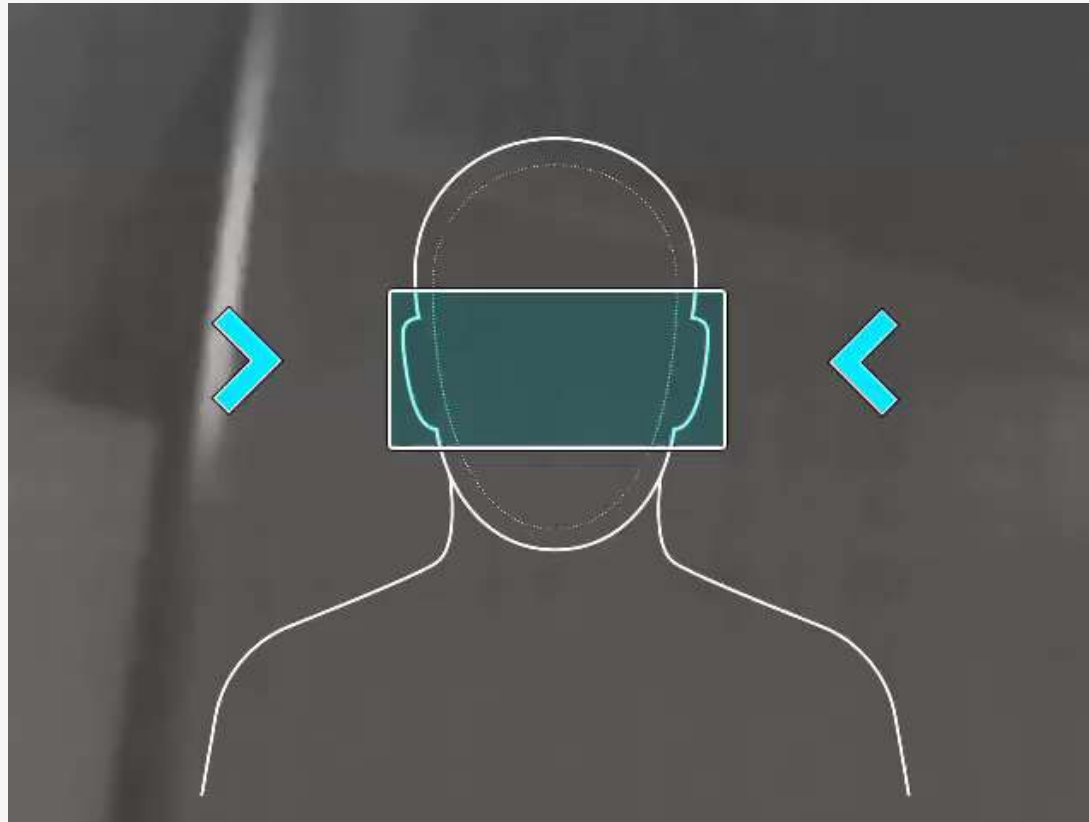
2



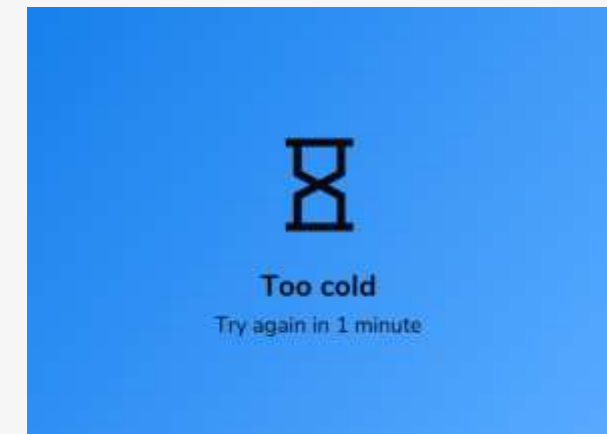
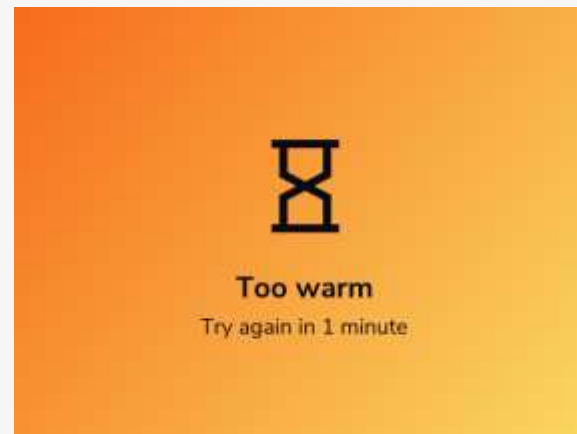
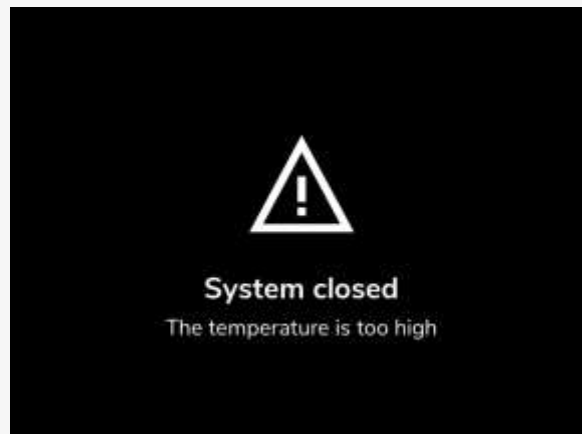
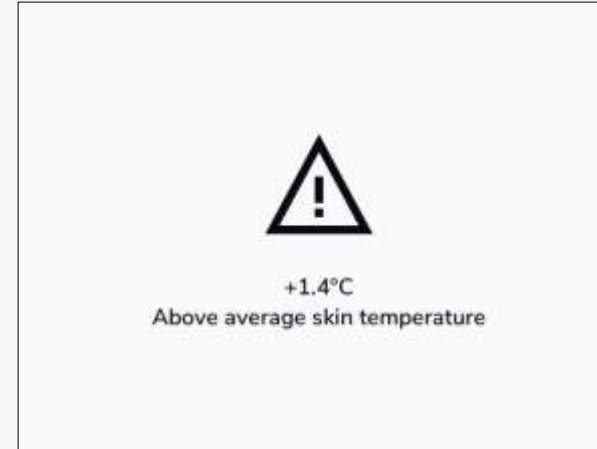
VIDEO (OPERATOR MODE)



VIDEO (AUTO-MODE)



HANDHELD ON-CAMERA SCREENING MODES



HANDHELD ON-CAMERA SCREEN EST™ MODES

How to update...

Manual Mode / Operator Mode

1. Go to <https://flir.custhelp.com/>

2. Select



3. Select the correct firmware



4. Download / Unzip / follow instructions

5. Optional - Purchase the

Button



Free Update

How to upgrade...

Auto Mode

1. Ensure camera has the latest firmware (update if needed)

2. Contact service to request your upgrade. Be prepared to provide:

- Camera serial number

3. Follow instructions with the upgrade package.

Upgrade

NEW EST PRODUCTS

NEW -EST™ CAMERA MODELS



HANDHELD EST™ MODELS

(AVAILABLE TO BOOK JUNE 30TH / SHIPPING END OF AUGUST)

	E54-EST	E86-EST	T540-EST	T560-EST
<i>IR resolution</i>	320 x 240	464 × 348	464 × 348	640 x 480
<i>Focus</i>	Manual	Autofocus		
<i>Lenses</i>	17 mm, 24° (FIXED)	24° (17 mm) or 42° (10 mm)		
<i>Measurement Range</i>	15°C - 45°C (59°F - 113°F) Temperature outside of range will appear as <15°C or >45°C			
<i>Screening Accuracy (drift)</i>	±0.3°C (±0.5°F)			
T850112	Auto Screen-EST Mode / Included			
T850111	Dual Streaming / Included			
T131171	Remote Operation Button / Included			
T911846ACC	USB 2.0 A to USB Type-C with Power Supply / Included			



Compatible with
Screen-EST™
Desktop Software

FIXED EST™ MODELS

	A500-EST	A700-EST
IR resolution	464 × 348	640 x 480
Lenses	24° (17 mm) or 42° (10 mm)	
Measurement Range	15°C - 45°C (59°F - 113°F) Temperature outside of range will appear as <15°C or >45°C	
Screening Accuracy (drift)	±0.3°C (±0.5°F)	
	Smart Sensor / Included	
	Advanced Package / Included	
	Wi-Fi Antenna / Included	
	Visual Camera / Included	
	Auto Screen-EST Mode / Included	



Compatible with
Screen-EST™
Desktop Software

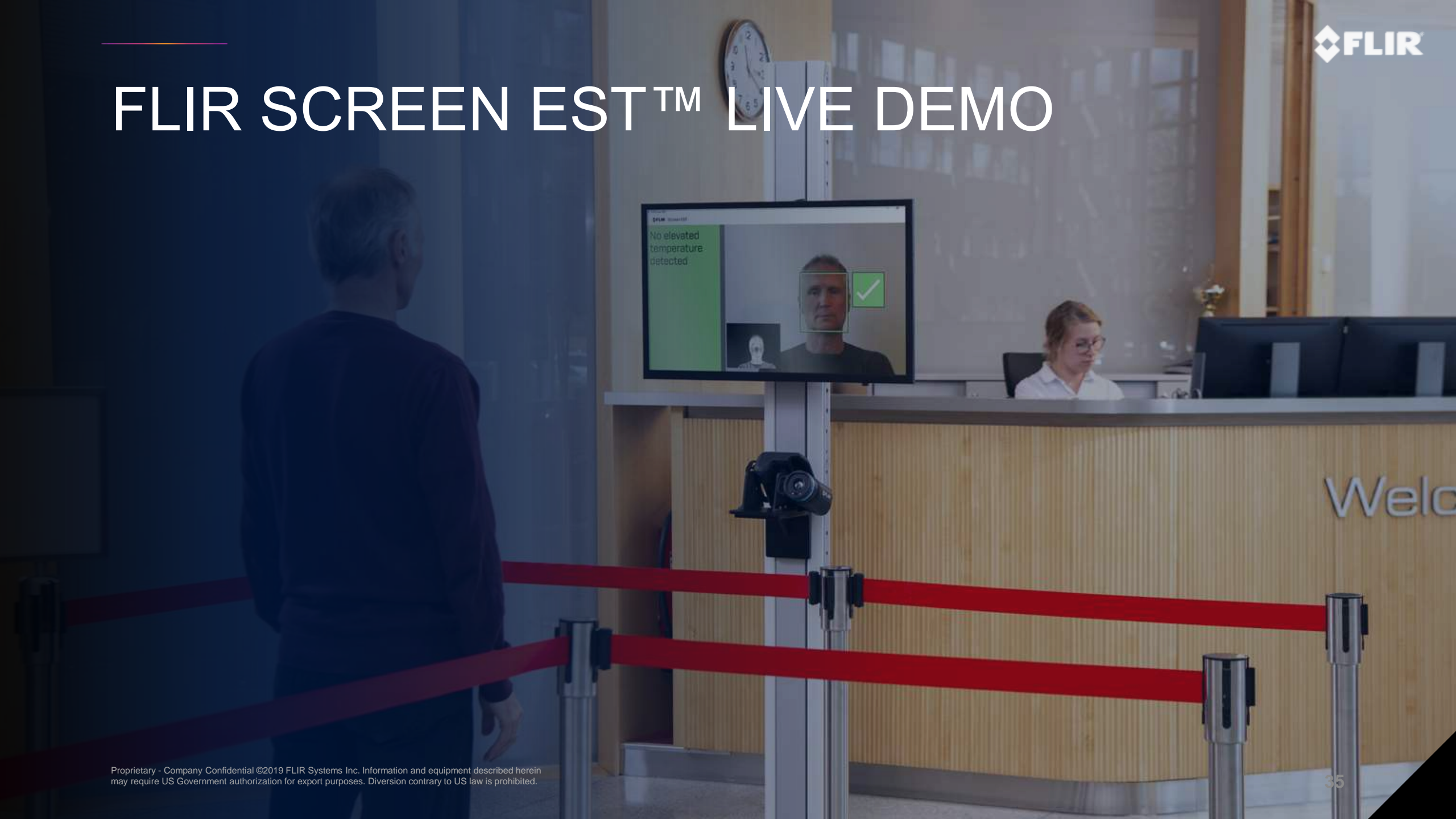
SCREEN-EST™ DESKTOP UPDATE

(SEPTEMBER 2020)

- Portrait Mode
- Verbesserte Messung des inneren Auges
- Digitale I / O-Verbesserung
- ...and many more



FLIR SCREEN EST™ LIVE DEMO





The World's **Sixth Sense**®