



Thermoscreen IS640 Competitive Matrix

Fever Screening Feature/Capability	Industrial Infrared Camera	Dual Camera (IR + visual)	Optotherm Thermoscreen
Measurement Accuracy	+/- 2°C (or 2%) whichever is higher	*	+/- 0.3°C
Measurement Sensitivity	*	*	< 0.04°C
Thermal Camera Array Resolution	320 x 240 or lower	320 x 240	640 x 480
Thermal Camera Frame Rate	†	†	60 Hz
Camera calibration compensation for small ambient temperature changes to improve measurement accuracy and scene uniformity	No	No	Yes
<p>Blackbody Required: Many competing fever screening systems require a reference calibration source to be placed within view of the camera during operation to correct for camera inaccuracy. The use of an external reference source adds complexity, increases setup time, decreases portability, and places restrictions on the areas in which the system can be operated.</p> <p>In addition, the use of a reference source can lead to significant instability and measurement errors if misalignment occurs between the camera and source or if environmental factors cause the source temperature to drift during operation.</p>	*	*	Not Required
<p>Integrated Visual Camera: A visual camera is mounted inside the camera enclosure next to the infrared camera to provide continuous visual images of subjects as they pass through the screening zone. Real-time video enables operators to quickly identify subjects as they are being screened. Highlighted areas and temperature values on the thermal image are transferred to the visual image so that operators can quickly process screening results.</p>	No	Yes	Yes
<p>Automated Screening Mode: Thermoscreen guides subjects through the screening process by issuing verbal commands, thus reducing the demands on operators, allowing them to focus their attention on processing fever violations.</p> <p>During the screening process, individuals are required to stand still to prevent image blur from degrading measurement accuracy. Important: Subject movement can reduce a subject's measured temperature by more than 3°C (5.4°F), resulting in ineffective screening measurements.</p>	No	No	Yes

Because the facial skin temperature that indicates a fever can vary depending on time of day and other factors affecting specific subject groups, individuals are evaluated based on the screening measurements of previously screened subjects, not on a fixed temperature threshold. Evaluating subjects in this manner results in a screening process that minimizes missed detections and false violations.			
Fever Screening Alarm	*	*	Yes: verbal commands and alarm tones via system speakers
Thermal Camera Enclosure: Designed to prevent unwanted radiant energy from affecting screening measurements.	No	*	Yes
Turnkey System: Complete system including radiometric infrared camera, integrated visual camera, fever screening Software, computer, and mobile computer stand/cart. All software is pre-installed and each system is fully tested prior to shipment.	No	Yes	Yes

* Dependent on manufacturer and model.

† Many fever screening systems incorporate a thermal camera operating at 9 Hz (for reduced export regulations). Operation at 9 Hz results in less effective screening due to a reduced number of thermal image frames to detect high skin temperatures.