What is the 'Fusion Matching' technology of Suprema FaceStation F2? What are the advantages?

01

FaceStation F2's fusion matching technology provides exceptional authentication result by utilizing both visual and IR face recognition

Using the following elements, the fusion matching technology provides optimal recognition results :

Detection	In bright ambient light conditions, FaceStation F2 detects presence and movement with visual face recognition. In dark or low light conditions, the IR face recognition is used for detection.
Extraction	FaceStation F2 captures the optimal face photo and generates both IR and visual face templates.
Matching	FaceStation F2 performs matching of both IR and visual templates at high speed without sacrificing accuracy thanks to the powerful onboard CPU.
Scoring	Suprema's unique algorithm yields the best matching results by optimizing IR and visual matching scores and balancing them alongside environmental values such as the intensity of Illumination.

Infrared face recognition — **Fusion matching** — Visual face recognition
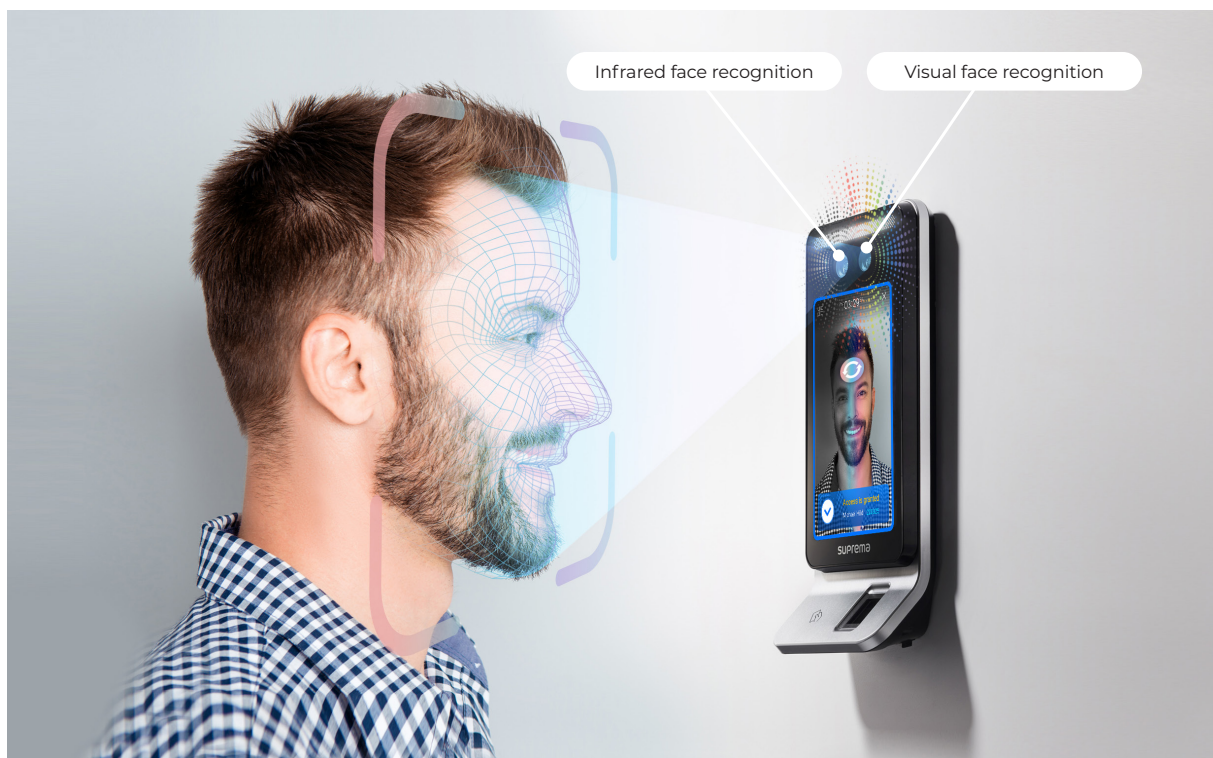
02

FaceStation F2's fusion matching technology provides enhanced anti-spoofing performance as well

FaceStation F2 Anti-Spoofing uses both the IR and visual face recognition to check captured images for intensity of Illumination and other environmental values. Utilizing these factors, the FaceStation F2 is able to detect various types of fake facial representations.

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03

FaceStation F2 brings the strongest methods for mask detection to assist in enforcing health protocols

The algorithm uses a deep learning process with input from images of large populations of actual masked faces. Attempts to fool the device by covering the mouth and nose with a piece of paper or a hand are detected and rejected by the FaceStation F2. (Mask Detection uses only the Visual Camera)

Infrared face recognition   Visual face recognition

04

FaceStation F2's photo enrollment feature allows users to register without being at the terminal

FaceStation F2 will initially use only a visual template to authenticate users enrolled with photos, unlike users enrolled at terminals who are authenticated using both the visual and IR templates. However, regardless of how the user was enrolled, FaceStation F2 updates and improves the templates every time the user is authenticated at the terminal, storing nine IR and visual templates in total. This "adaptive update feature" provides the best recognition rate even with facial changes over time while at the same time minimizing the FAR and FRR values.

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