

ZKTECO BIOMETRIC TECHNOLOGIES EXPLAINED



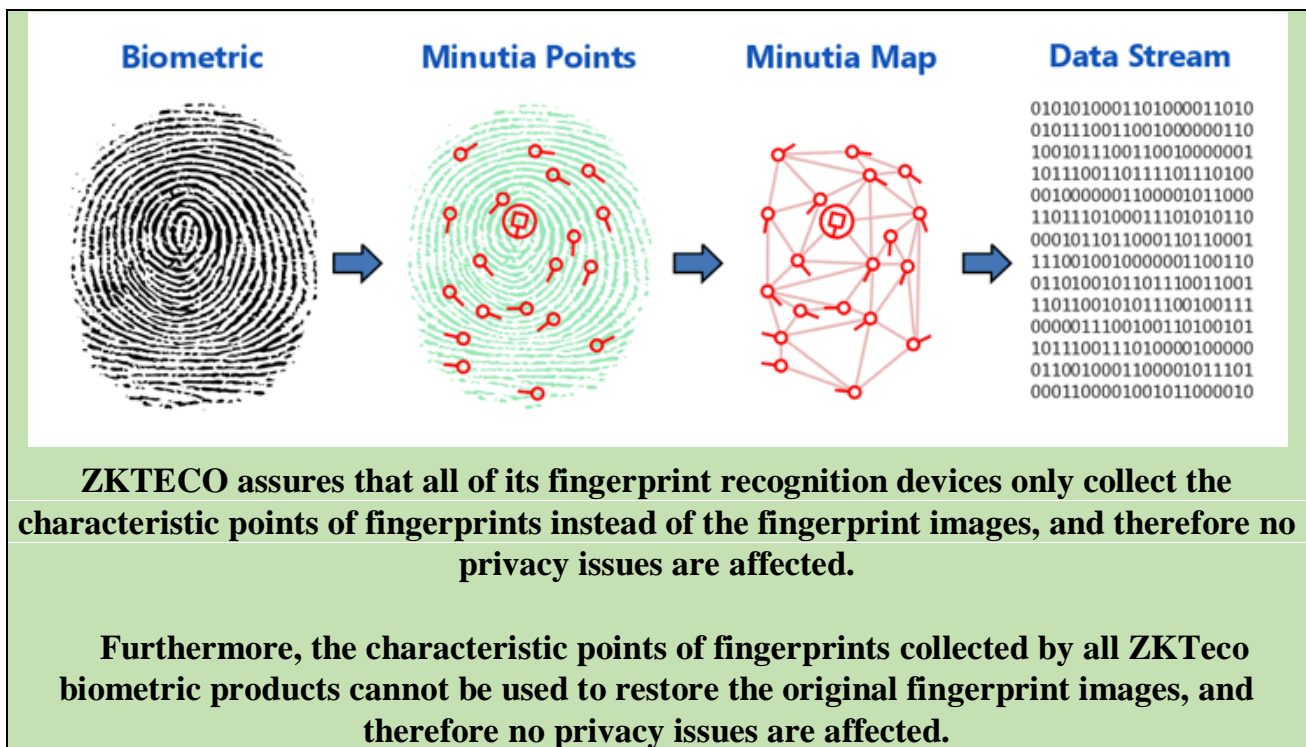
The use of fingerprint scanning for access control and workforce management identification is a common application of biometric technology that is becoming increasingly common due to its ease of use and security. Users can easily swipe a finger to access a smartphone or laptop instead of typing a password, and unlike passwords, biometrics cannot be written down and shared across users. However, when a biometric template is compromised, a user cannot grow a new fingerprint or change their iris in the same way they can change a password. Revocable template techniques improve security by enabling an organization to revoke the existing biometric based security token and reissue the token without modifying the underlying biometric.

How Biometric Matching Works

A fingerprint sensor is an electronic device used to capture a digital image of the fingerprint pattern. The captured image is called a live scan. This live scan is digitally processed to create a biometric template (a collection of extracted features) which is stored and used for matching.

Biometric matching uses templates to convert an image of a biometric trait, such as a fingerprint or iris image, into a searchable set of data. This process is known as the minutia extraction process. For a fingerprint image, points of interest—such as where fingerprint ridges end, converge, or split—are marked by an algorithm or human fingerprint examiner.

These points are then mapped in relation to the center of the fingerprint. The resulting map of minutia points is simply a set of coordinates that computers can quickly search using matching algorithms that return scores that indicate how closely sets of data match. If the score is above an established threshold, the fingerprints are determined to be from the same finger.



As the use of biometric templates in access control grows, so does the security surrounding it.

Biometric templates provide an efficient, secure method to control access and identification to resources within an organization.