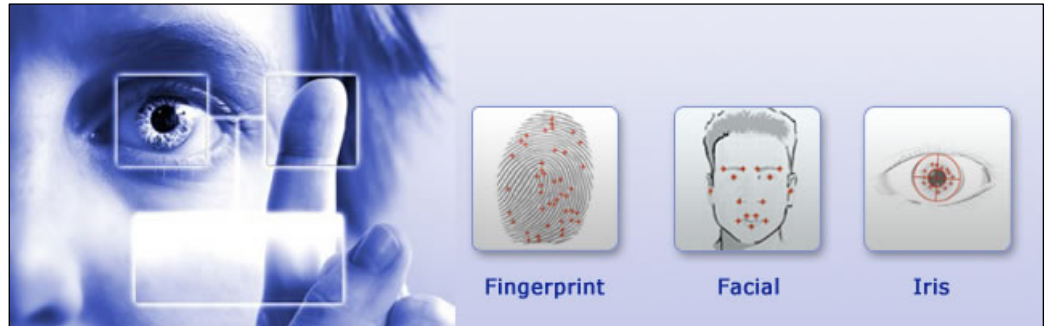


What Biometrics is?

Anviz Advanced BioNANO Algorithm.

Biometrics is automated methods of recognizing a person based on a physiological or behavioral characteristic. Among the features measured are fingerprints, iris, face, hand geometry, handwriting, retinal, vein, and voice etc.

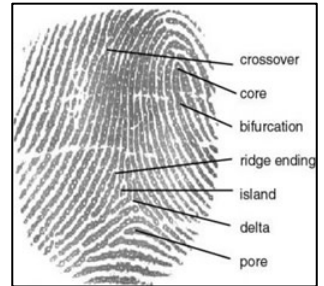


Using a unique, physical attribute of your body, such as your fingerprint or iris, to effortlessly identify and verify that you are who you claim to be, is the best and easiest solution in the market today. That is the simple truth and power of Biometrics Technology today. Although biometric technology has been around for many years, modern advances in this emerging technology, coupled with big reductions in cost, now make biometrics readily available and affordable to consumers, small business owner, larger corporations and public sector agencies alike.

Fingerprint Authentication

Fingerprints are one of those bizarre twists of nature. Human beings happen to have built-in, easily accessible identity cards. You have a unique design, which represents you alone, literally at your fingertips. How did this happen?

Finger skin is made of friction ridges, with pores (sweat glands). Friction ridges are created during fetal live and only the general shape is genetically defined. Friction ridges remain the same all life long, only growing up to adult size. They reconstruct the same if not too severe injury.



Minutiae are the discontinuities of the ridges:

- Endings, the points at which a ridge stops
- Bifurcations, the point at which one ridge divides into two
- Dots, very small ridges
- Islands, ridges slightly longer than dots, occupying a middle space between two temporarily divergent ridges
- Ponds or lakes, empty spaces between two temporarily divergent ridges
- Spurs, a notch protruding from a ridge
- Bridges, small ridges joining two longer adjacent ridges
- Crossovers, two ridges which cross each other
- The core is the inner point, normally in the middle of the print, around which swirls, loops, or arches center. It is frequently characterized by a ridge ending and several acutely curved ridges.
- Deltas are the points, normally at the lower left and right hand of the fingerprint, around which a triangular series of ridges center.



How a Fingerprint Optical Scanner Works

The algorithm is divided into two major processing components, feature extractor and matcher:
Feature Extractor:

ANVIZ new generation fingerprint algorithm has unique function of healing the broken lines in fingerprint image. Input fingerprint images captured from the sensors are noisy, in poor contrast, containing much flaw and smudge. Based on intensive analysis of the image characteristics, powerful image enhancement technique is developed, yielding high quality ridge image. Moreover, a lot of erroneous features are efficiently removed by noisy area reduction technique.



Efficient and stable fingerprint identification algorithm. ANVIZ new generation fingerprint identification algorithm utilizes digital image matching combined with feature extracting algorithm as the research method.

Main feature of the algorithm to ensure the universality and applicability of fingerprint identification with an enrollment success rate of more than 99%.

Fingerprint sensor with blue area source. ANVIZ fingerprint sensor utilizes blue area source (a stable light in spectrum) as background light. The generated image fully matches the real one. Accurate and good in anti-interference. No latent fingerprint impact. The image generated by point source is opposite to the real one and easy to mistake the latent fingerprint for a real one which leaves an emerging security risk. The main feature is no latent fingerprint impact.

