# Information

North East Time Recorders
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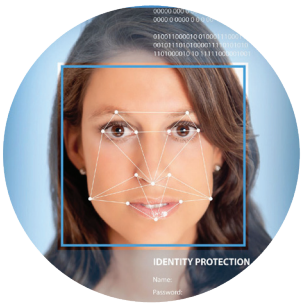
# What are biometrics?

Biometrics is the science and technology of measuring and statistically analysing biological data. In the time management industry, biometrics usually refers to technologies for measuring and analysing human body characteristics such as eye retinas and irises, facial patterns, fingerprints, and hand measurements.

## Eyes - Iris & Retina Recognition

The use of the features found in the iris to identify an individual. The use of patterns of veins in the back of the eye to accomplish recognition.

## Face Recognition




The analysis of facial features or patterns for the authentication or recognition of an individual's identity.

## Fingerprint Recognition

The use of the ridges and valleys (minutiae) found on the surface tips of a human finger to identify an individual.

## Hand Geometry Recognition

The use of the geometric features of the hand such as the lengths of fingers and the width of the hand to identify an individual.

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# What makes fingerprint the ideal solution for attendance, access control and job costing?

Fingerprint biometrics eliminates "buddy punching". No more falsified time cards. No more unauthorised access to restricted area of your buildings.

Fingerprint biometric solutions are better suited for attendance, access and job costing than mag-stripe badges and proximity cards because a fingerprint cannot be stolen or lost. Consequently, there is no on-going cost with biometrics. No-more ordering replacement cards and remember, a fingerprint reader requires virtually no maintenance – an occasional wipe with a soft cloth will clean a reader fitted in the most dirtiest environment.

Fingerprint biometric systems are extremely accurate, quick to implement, and cost effective.

Readers too large for access control. Can be light sensitive.

Low cost. Readers are very small. Perfect for attendance, access control and job costing installations.

Readers too large for access control. Can be light sensitive.

Expensive. Not suitable for multi-door access.

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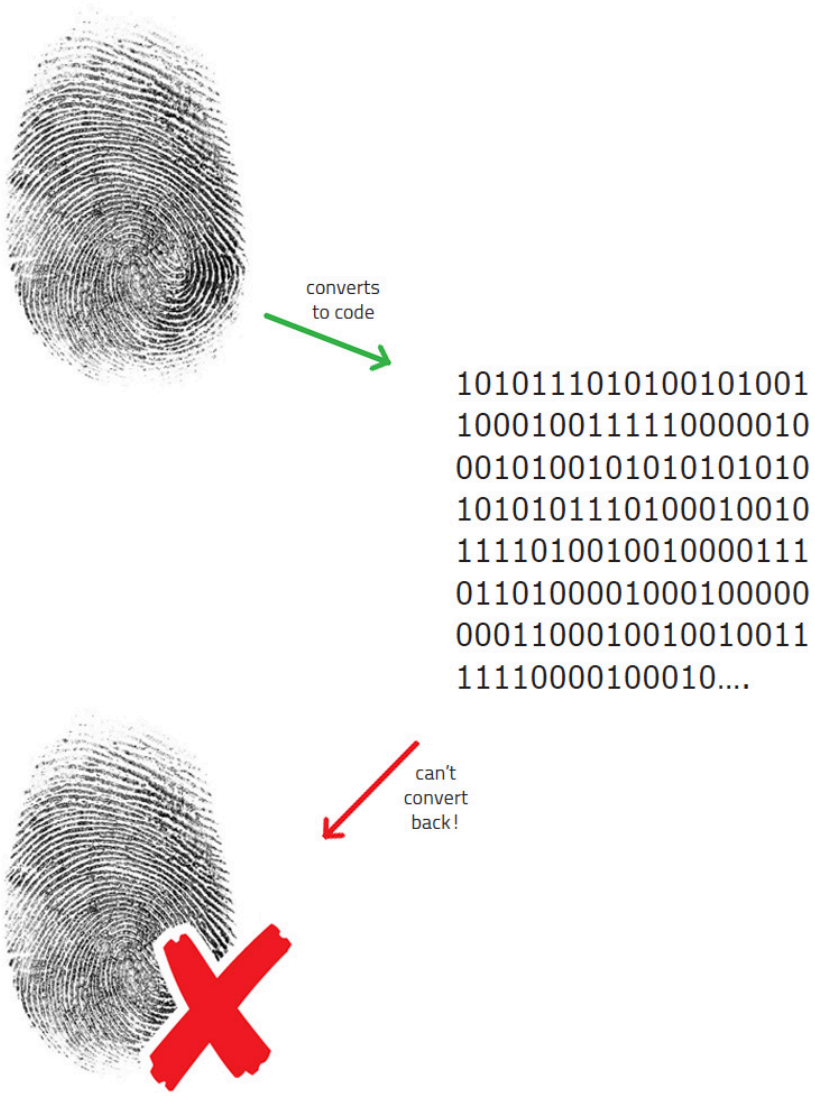
# Can employee fingerprints be recreated or worse - stolen?

# No!

Infinity biometric fingerprint readers never store an image of your actual fingerprint.

The fingerprint sensor identifies unique minutiae points and measurements within your fingerprint and creates a digital template (not an image) for matching.

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# So what is template?

A fingerprint template is a set of lines, angles and measurements (minutiae) based upon the unique characteristics of an individual's fingerprint. These details are captured upon enrolling a person's fingerprint into the system, and later used for 1:1 or 1:n matching.

No actual fingerprint images are stored in the Infinity database - the template is simply a mathematical representation of your fingerprint's unique characteristics.
Two templates per employee are recorded. The templates are referred to as the primary and secondary templates. We normally recommend registering the right thumb and right index finger.

It is important to note that Infinity biometric templates are encrypted and cannot be reverse-engineered to form a fingerprint image.

Infinity uses a world standard fingerprint template methodology approved by NIST (National Institute of Standards and Technology), the leading biometric standards organisation.

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# Now for some technical stuff: "What is 1:1 and 1:n matching?"

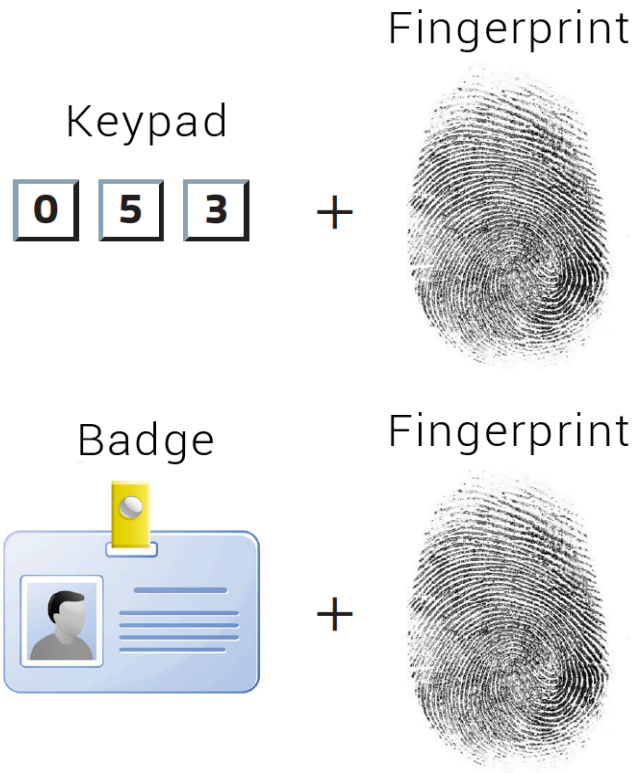
**1:1 matching is the name for verification**

This is a method of examining one biometric record against another in order to determine whether the two match.

This is the type of biometric match that occurs when a biometric system is set up for badge plus finger matching.

The user presents a badge or enters a number which tells the biometric reader who the user is supposed to be.

The user then proves their identity by scanning a finger on the device.
This type of matching is very fast and accurate, and has been in use for some time.

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# Now for some technical stuff: "What is 1:1 and 1:n matching?"

**1:n matching is the name for identification**

1:n matching is a means of identifying a person against a broad database of other users simply by means of a fingerprint.

The user simply places his / her finger on the biometric reader, and a very rapid search is initiated in order to find and verify the user's identity.

This type of matching is more convenient since no PIN numbers or cards are required. This is the most popular method and is used by the majority of Infinity biometric installations

Fingerprint Only

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# Why are Infinity biometrics better than others?

**Infinity biometric sensors are designed by SecuGen Corporation, the world's leading provider of advanced, optical fingerprint recognition technology.**

## Durable.

SecuGen fingerprint sensors are extremely rugged and feature a virtually indestructible sensor prism. From the sensor surface to the internal lens and electronic components, SecuGen sensors are designed to be strong and dependable to deliver consistent performance in indoor, outdoor, hot, cold and other harsh environments.

## Accurate.

SecuGen sensors are very accurate thanks to a patented optic design that produces distortion free images from which data points are extracted for matching. Higher quality images mean greater precision, less false rejection and acceptance, and better overall performance.

## Maintenance-free.

Unlike semiconductor-based sensors and other optical sensors in the market, SecuGen sensors are made with a hard quartz-like material that needs no coatings but resists scratches, ESD, corrosion and other stresses. The optic parts are tightly assembled so that if the sensors are ever dropped, there is no need for recalibration.

## Cost-effective.

SecuGen designs, develops and manufactures fingerprint sensors that are built to last. SecuGen guarantees the best product quality in the industry, which translates into savings by eliminating costly replacements and losses from system downtime

SecuGen Biometric Solutions

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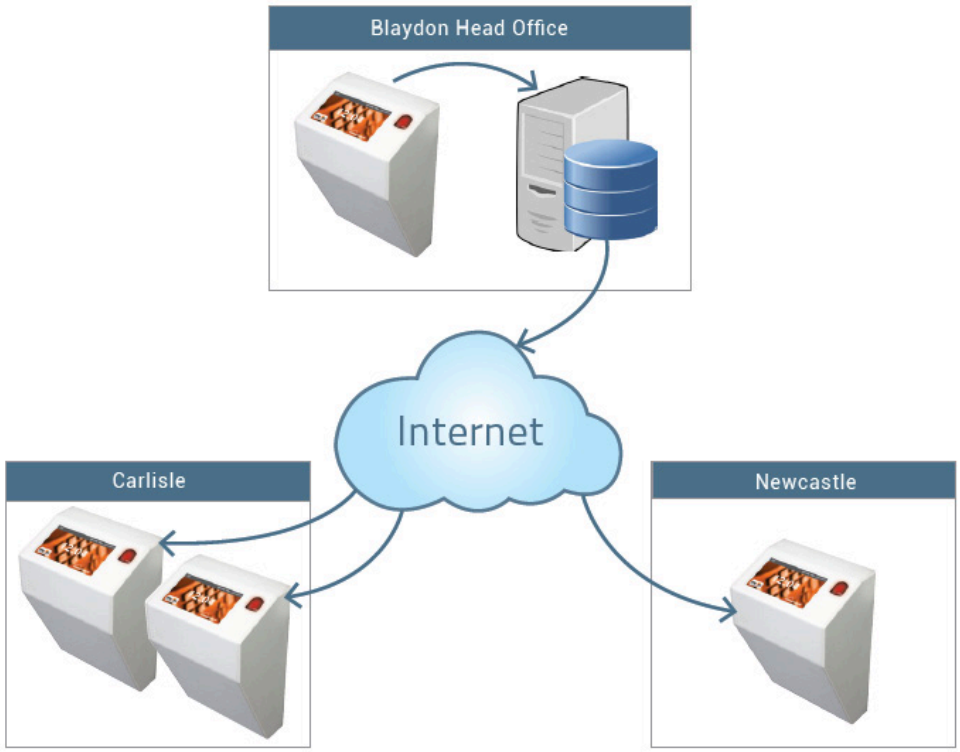
# Can Infinity biometric terminals be installed at different sites around the country?

Infinity biometric terminals, just like our standard terminals, are extremely simple to install and configure. Sitting on your standard network, they collect information locally and then pass the data back to the software every few seconds. They can be installed on both local networks (LANs) and wide networks (WANs). We have many customers that have installed terminals initially at their head office and then expanded their system to incorporate sites in other towns and even other countries!

Here is a simple diagram of a multi biometric terminal installation with the head-office in Blaydon and two remote sites, one in Carlisle and one in Newcastle. Please note that if one of the sites closed down, say Carlisle, the terminal could be very easily relocated to a new location anywhere else in the country.

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# Data Protection

## The Law on Biometrics

Several pieces of legislation are relevant to the issue of biometrics, but of these the Data Protection Act 1998 is the most important. The Act provides a framework to ensure that personal information is handled properly and provides individuals with rights, such as the right to find out what personal information is held on them.

The Act stipulates that anyone processing personal information must comply with eight principles. They are:

1. **Fair and lawful processing of data**
2. **Processing for limited purposes**
3. Adequate, relevant and non-excessive storage of data
4. Keeping data accurate and up to date
5. **Ensuring data is not kept for longer than is necessary**
6. Ensuring data is processed in line with other rights
7. **Keeping data secure**
8. Ensuring data is not transferred to other countries without adequate protection

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# Data Protection

The first, second, fifth and seventh principles (highlighted) are the most relevant to this issue. The protections they provide are as follows:

**1. Fair and lawful processing of data** requires that employers ensure that staff are informed about and understand the purpose for which their personal data is being processed. Infinity uses this data to

*a.* ensure that timekeeping & data collection records are accurate.

*b.* ensures a secure environment offering a high level of physical access control.

**2. Holding biometric data for limited purposes** means that it should not be used for any purpose not directly related to that for which it was collected. Infinity biometric data is not only held as template data but is also encrypted within the SQL database.

**5. Ensuring personal data is not kept for longer than it is needed.** This means that biometric data on staff should be destroyed as soon as they cease to be employed by that employer. On Infinity biometric installations, a special script ensures that an employee's biometric data is automatically destroyed 30 days after they are flagged as leaving the employment of the company.

**7. The security principle** means that biometric data should be protected against unauthorised processing and accidental loss, destruction or damage. timeware® ensures that biometric data is encrypted but it is the companies responsibility to ensure that system backups are kept up-to-date and that system passwords are never compromised. There is nothing in law to stop employers introducing biometric monitoring in the workplace if they satisfy the conditions set out above.

**If you have any further questions, please contact us on 0191 414 4241**

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