



With a tap on the sensor, **positive id+** provides real-time, single-digit biometric identity validation.



## Inmates Under Your Thumb

**positive id+** provides a fast, economical, easy-to-use and reliable single-digit, positive identification system that has been designed specifically for the needs of jail and corrections operations.

## Fully Integrated

**positive id+** can be fully and seamlessly integrated into an agency's existing network infrastructure, and easily added to any PictureLink enabled workstation. In addition, **positive id+** can receive the NIST output from any LiveScan device and automatically enroll the fingerprints in the **positive id+** system for matching.

Moreover, **positive id+** supports major biometric standards (ANSI/NIST ITL-1-2000 and ANSI/INCIST 378 2004) – facilitating tighter integration with existing fingerprint technologies from other vendors. For example, fingerprint templates from other identification systems can be imported into **positive id+**, and **positive id+** fingerprint templates can be exported to external identification systems.

As a result, **positive id+** can provide a fully-integrated, biometric identification capability that can operate with your existing records or jail management environment.

- Fully integrates with the existing RMS/JMS systems, and can seamlessly integrate with the agency's existing network topology in most cases.
- Supports image import from Livescan 10 Print Systems (NIST Type 4) and scanned 10 print cards.
- Fingerprint templates can be exported & imported.
- Supports **WSQ** fingerprint image storage format.

## AutoCapture

**positive id+** provides advanced fingerprint capture technology that ensures that the fingerprint is acquired at the optimal moment. The Auto Capture feature continuously scans the reader and automatically triggers image capture when the print image is most favorable. By doing so, Auto Capture ensures that the maximum amount of data is available upon which to base recognition.

## Latent Image Removal

**positive id+** incorporates latent image removal technology. Each time a finger is scanned, a "latent image" smudge remains on the sensor. This can result in a false acceptance or rejection of the subsequent fingerprint captured on the scanner. Latent image removal technology electronically removes the latent image and significantly improves recognition results.

## MINEX Certified Algorithm

**positive id+** uses the MegaMatcher 2.0 algorithm for fingerprint matching. MegaMatcher is one of only 18 algorithms worldwide to receive full MINEX\* Certification for both fingerprint template encoding and matching.

This powerful fingerprint matching algorithm currently enables matching of 9,000 to 30,000 fingerprints per second, and can identify fingerprints even if they are rotated, translated and/or have deformations.

*\* The Minutiae Interoperability Exchange Test (MINEX) evaluates fingerprint template encoding and matching to determine compliance with government Personal Identity Verification program for the identification and authentication of federal employees and contractors.*

- Provides immediate biometric identification
- Supports One-to-One and One-to-Many searches
- Supports match capabilities for both rolled and flat fingerprints
- Permanently stores the fingerprint as an image file in the main image set
- Fully integrates with the existing host systems
- Supports image import from LiveScan 10 print systems (NIST Type 4) and scanned 10 print cards
- Incorporates **WSQ** compression and decompression libraries
- Supports biometric standards: ANSI/NIST ITL-1-2000 and ANSI/INCIST 378 2004
- Supports SQL and Oracle



**positive id+** offers a fully scalable 1:1 and 1:n biometric matching sub-system, performing reliable identification & fast request processing with large databases.

## Powerful & Flexible Matching Capabilities

**positive id+** provides a powerful system for "one to one" and "one to many" biometric matching. The flexible match capabilities support both rolled and flat fingerprints, providing reliable matching of flat-flat; flat-rolled; or rolled-rolled fingerprints. The algorithm follows the commonly accepted matching scheme, which uses a set of specific fingerprint points ("minutiae"). Adaptive image filtration eliminates noises, ridges, ruptures & stuck ridges – and extracts minutiae from even poor quality fingerprints.

Due to the specific scanning technique (i.e., rolling from nail to nail), "rolled" fingerprints usually have much bigger deformation than those scanned using the "flat" technique. However, **positive id+** is able to match both rolled fingerprints and flat fingerprints. This is because the algorithm does not require the presence of the fingerprint core or delta points. Instead, **positive id+** can process a match based on peripheral fingerprint features, and can do so even if the fingerprint is rotated, translated and/or deformed.

**positive id+** utilizes the database entries, which are **pre-sorted** using specific global features. Initially, the fingerprint match process is performed using the global features to quickly narrow the selection set. The global feature search focuses on those database entries having features most similar to the subject fingerprint. If matching within this group yields no positive result, a more thorough search is conducted based on a secondary set of global features, and so on, until the match can be located. In many cases a correct match will be found within the first global pass. As a result, the number of comparisons required to achieve a positive identification decreases drastically, and the effective matching speed increases correspondingly.

## Scalable & Fast Architecture

Designed for scalability and growth, **positive id+** provides nodal system scalability so that additional system components can be added as the system grows. In addition, **positive id+** includes AFIS cluster software, which is inherently fault-tolerant. In the event of a nodal failure, the cluster will continue to operate (although the matching

speed may decrease slightly). As a result, **positive id+** supports large scale systems and provides a variety of capabilities to support the requirements associated with large scale implementations.

Moreover, the scalable AFIS cluster architecture supports parallel matching, which enables the system to maintain high productivity and efficiency by distributing the processing power over multiple matching engines. The matching speed increases proportionally with the number of cluster nodes and can be scaled to achieve the desired system performance. This architecture facilitates scaling to achieve real-time processing, and is capable of handling databases of a practically unlimited size. For example, a matching cluster with ten nodes is able to match up to 300,000 fingerprints per second. This scalable architecture allows the system to be upgraded to maintain system performance as the size of the database increases.

<b>Required fingerprint resolution</b>	<b>&gt; 250 dpi; recommended 500dpi</b>
<b>Fingerprint enrollment time</b>	<b>less than 1 second</b>
<b>Matching speed</b>	<b>up to 30,000 fingerprints/second multiplied by the number of cluster nodes</b>
<b>Size of one record in the database</b>	<b>300-1000 bytes (configurable)</b>
<b>Maximum database size</b>	<b>Unlimited</b>

