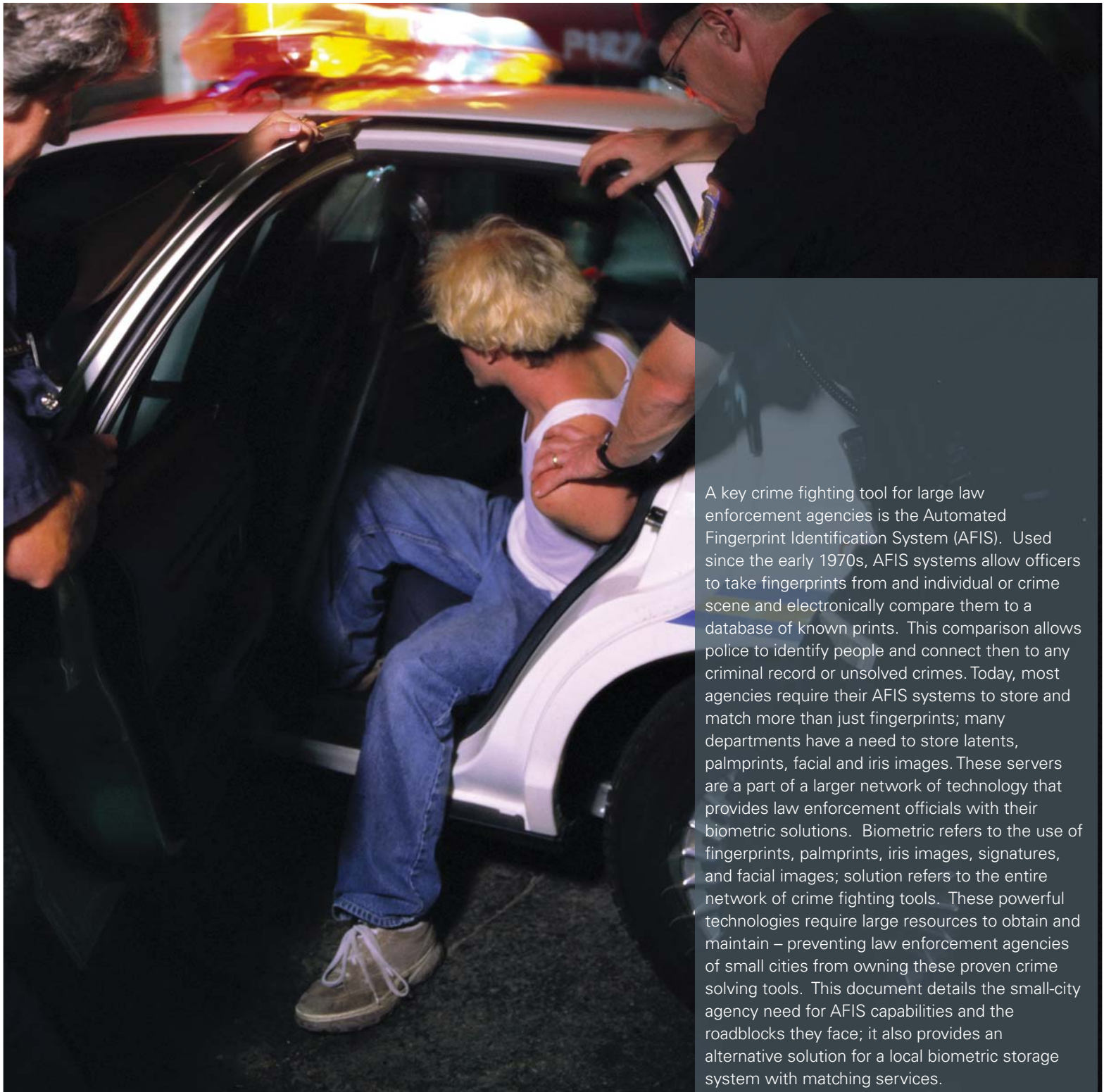


# Biometric Storage Systems with Matching Capabilities for Local Agencies

Motorola Metro ID



A key crime fighting tool for large law enforcement agencies is the Automated Fingerprint Identification System (AFIS). Used since the early 1970s, AFIS systems allow officers to take fingerprints from an individual or crime scene and electronically compare them to a database of known prints. This comparison allows police to identify people and connect them to any criminal record or unsolved crimes. Today, most agencies require their AFIS systems to store and match more than just fingerprints; many departments have a need to store latents, palmprints, facial and iris images. These servers are a part of a larger network of technology that provides law enforcement officials with their biometric solutions. Biometric refers to the use of fingerprints, palmprints, iris images, signatures, and facial images; solution refers to the entire network of crime fighting tools. These powerful technologies require large resources to obtain and maintain – preventing law enforcement agencies of small cities from owning these proven crime solving tools. This document details the small-city agency need for AFIS capabilities and the roadblocks they face; it also provides an alternative solution for a local biometric storage system with matching services.



## AFIS Use

The primary use of an AFIS system is to allow officers to search against a database of criminal records, verify the identity of an individual, and connect them to criminal records or outstanding warrants. Moreover, officers use AFIS technologies to help complete investigations. Police can take fingerprints or palmprint data from a crime scene or direct from an individual and search this information against a database of known criminals. With the mobile component, officers are able to search an individual's biometric data against the AFIS database wirelessly while out in the field.

## The Small City and County Problem

AFIS systems are traditionally found serving large law enforcement agencies. A problem for many agencies of small cities and counties is the costs associated with the purchase of an AFIS solution, which can run into the millions of dollars. The process of selecting an AFIS vendor is extensive, requiring the contracting of consultancy services to establish AFIS needs, benchmark tests, and proposal reviews to determine which solutions best fits agency requirements. Furthermore, installation of an AFIS system can take months and could be very expensive. Also, the maintenance of a system requires expert resources and constant upkeep to ensure proper functioning. Purchasing the wrong solution, can be a multimillion dollar mistake.

Most law enforcement agencies of small cities or counties have to rely on state AFIS systems to provide identification services. This can create delays in responses due to the numerous inquiries central systems must process. Also, many central sites have limits to the type of biometrics submitted for database matching, such as fingerprints and mugshots only. Moreover, central sites maintain declination policies that can discard data that may prove useful in the future. Also, most central sites do not store information collected from misdemeanors.

It is common for central systems to not track palmprints; but data suggest many individuals are identified using palmprints collected from crime scenes. A New York Times survey of law enforcement agencies indicated that at least 30 percent of the prints lifted from crime scenes are palmprints. Unfortunately, the addition of tools needed to capture, store and match palmprints can significantly increase the cost of a multi-million dollar AFIS solution.

Mobile identification is yet another challenge for these agencies. Mobile capabilities remote allow searches against a database, and with a match, connection of suspects to arrest records. Moreover, some agencies have jurisdiction over a wide area making it difficult to bring suspects to a station for identity verification. The streets are left unguarded when an officer has to return to a precinct for suspect identification.

Nearly 95% of crimes are committed locally; most are crimes of opportunity.



## The Solution

A system to process fingerprint, palmprint and latent searches on local sites is the ideal solution to the local agency problem. The delay in processing prints or the time it takes to search against an entire central database increases the risks a suspect will be released. Two of the most critical timeframes for local law enforcement to resolve crimes are the first 24 hours after the crime has been committed and immediately after the police stop a suspect.

The majority of the local law enforcement agency requirements are summarized as:

- An efficient booking process
- Fast local identification for local crime resolution
- Electronic archiving of local bookings and records, as well as efficient submission to central sites
- Expert tools for tenprint, palmprint and latent processing
- Fingerprint identification in the field
- A safeguard against technology obsolescence to protect their investment
- Solution that fits local budgets and makes efficient use of limited resources

A biometric database and matching system designed to function as an AFIS solution with small agency budgets in mind would be an ideal solution. Motorola's Metro ID, with all its optional components, provides local agencies with comparable benefits to an AFIS solution in a package design specifically for local agencies

Metro-ID provides a complete, flexible solution which allows your agency to pick and choose the solution components required to solve your current needs. Furthermore, the system can be easily upgraded to add modular components as future system demands necessitate.

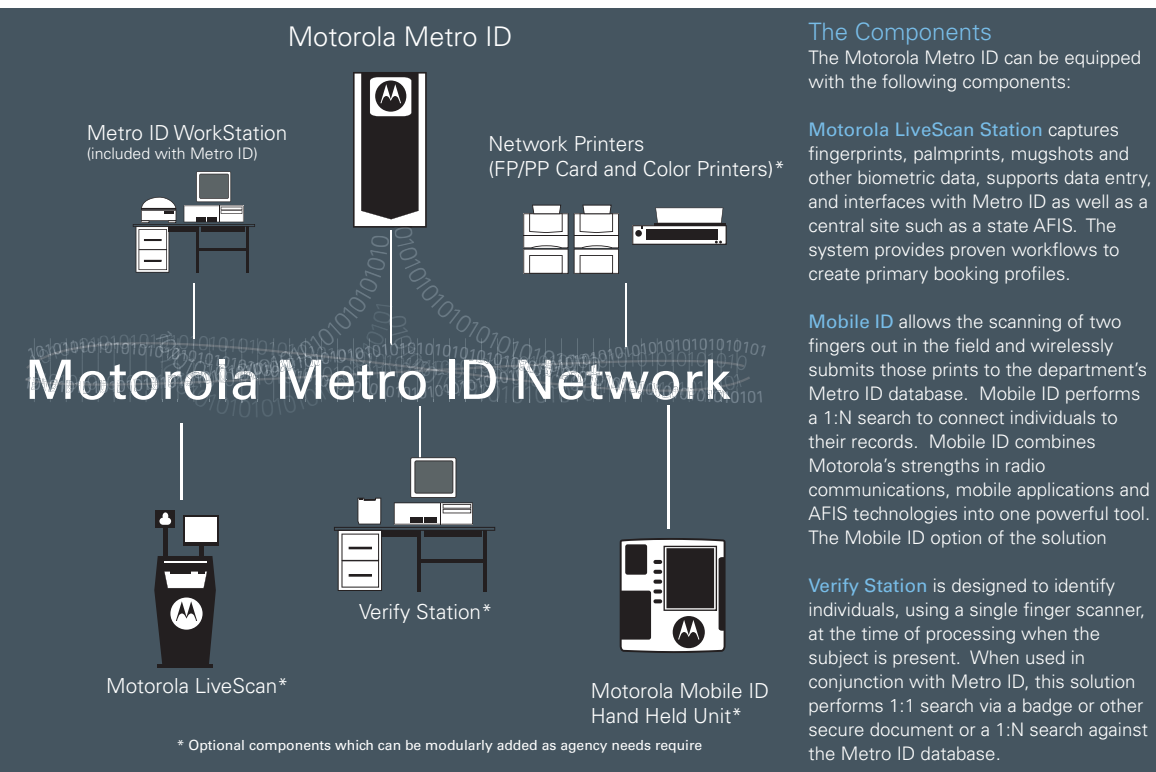
This comprehensive solution allows local law enforcement officers to capture, store, encode, match, and search biometric data. Using advanced matching algorithms such as Minutiae Matching and Expert Matching, Metro ID can search in variety of ways using tenprint vs. tenprints, tenprints vs. unsolved latents, latents vs. tenprints, latent vs. unsolved latents and latent palmprints vs. palmprints. The Metro ID system comes equipped with plenty of computational power to perform the most advanced matching algorithms in seconds. Metro ID is compliant with National Institute of Standards and Technology (NIST) file formats as well as National Fingerprint File (NFF) FBI certified.

## Crime and the Need for AFIS in Small Cities and Counties:

Nearly 95% of crimes are committed locally; most are crimes of opportunity. The Atlantic Monthly pointed out, in 1994, when discussing crimes and communities "In Congress politicians, right and left, often begin discussions of crime control by pointing out that 95 percent of all crime is local. ..." In an attempt to illustrate the blurring lines between the big cities and small communities, the Chicago Tribune printed the following remarks in 2002 by criminologist Arthur Lurigio of Loyola University of Chicago: "The city and suburban distinction with regard to crime is slowly disappearing. The suburban areas now have some of the same problems that the inner cities had 10 to 20 years ago."

Meanwhile, local recidivism rates are roughly 67% in most areas; consequently there is a great deal of responsibility placed on law enforcement agencies of small cities and counties to maintain detailed information on criminals and their records.

Crime in smaller cities is on the rise. As aggressive policing in places like Boston, New York, and Los Angeles helped dramatically lower the nation's overall crime rate in the 1990s, many smaller cities and counties are now seeing a rise in murder, assaults, and other violent crimes. According to preliminary FBI statistics, cities with 10,000 people or fewer saw a 15 percent increase in violent crimes from 2002 to 2003. In May 2006, CNN reported more than 1,000 inmates were added to the nation's prisons and jails each week from June 2004 to June 2005. Also, a recent report from the DOJ Bureau of Justice Statistics reported that the number of individuals held in local jails increased 200% more than the number held in state prisons from midyear 2004 to midyear 2005. Of this ever-increasing total number of inmate population, it is estimated one-third of the nation's inmate population is held in local prisons.



# Metro ID – AFIS capabilities for Law Enforcement Agencies of Small Cities and Counties

## Motorola Metro ID Highlights:

- Fully integrated biometric solution includes fingerprints, palmprints, mugshots
- Advanced capabilities to search specific regions of the palm
- Scalable database supports 25K/50K/75K records
- State of art enhanced security features to assure database integrity
- Built-in connectivity to Motorola Printrak LiveScan systems
- Mobile-ready
  - Mobile Gateway included for optional connection to Motorola Mobile AFIS
- Fast and accurate matches on both rolled images and flat impressions as well as palm latent images
- Proven workflows
- Latent connectivity to FBI
  - Application integration of ULW to submit to FBI IAFIS database
  - Interface to LEO
- NIST compliant
- Compliant with National Fingerprint File (NFF) FBI certification
- Multi-incident modes of operation
- Supports minutiae matching and expert matching
- Includes review capabilities and reports suite to generate essential reports
- Utilizes commercial-off-the-shelf (COTS) hardware
- Windows XP™ operating system for workstations
- Linux® operating system for the server
- Database built on Oracle® 10g architecture
- Adheres to industry software standards such as XML, http, and Java
- Expansion capabilities to meet the requirements of Law enforcement agencies for small cities and counties

The Motorola Metro ID and added components provide a biometric storage system with matching capabilities design to meet law enforcement budgets of small cities and counties. The benefits received are:

- Local database addresses the recidivism problem by allowing small-city agencies to search their database and identify those more quickly who have previously entered their facility.
- Local database provides law enforcement agencies to determine their own declination policy as well as store biometric data collected from misdemeanor crimes.
- Small-city agencies receive the tools to solve crimes with fingerprints, palmprints and latents in the station or remotely out in the field (fingerprints only).
- Latent examiners are provided with advance enhancement tools and the flexibility to choose automatic or manual encoding with the power to add, remove, or modify minutiae points.
- Law enforcement agencies of small cities have effective case management tools that allow investigators to store crime scene prints and photos
- Small-city agencies have over 100 different methods of latent encoding to improve latent search results times.
- Law enforcement agencies of small cities and counties are not limited by central site quotas for search submissions.
- Officers are provided with field identification tools. This is a critical capability, providing officers with the ability to determine the identity of a person in the field without having to return to an office or station.
- Law enforcement officers of small cities and counties are provided mission critical information out in the field. Up to 50 mobile units can be deployed creating an effective communication tool to identify people and connect them to their records immediately.

Metro ID builds upon Motorola's 30 plus years of biometric experience in serving law enforcement communities worldwide. Motorola understands that law enforcement agencies of small cities and counties must negotiate their own specific set of challenges. This solution is specifically designed to meet these challenges with rapid identification to expedite crime resolution, efficient booking, local control over records with electronic archiving, and expert tools for latent processing. Motorola Metro ID provides tools needed today while maintaining modular flexibility and upgrade capabilities to meet the demands of tomorrow.



### Motorola, Inc.

[www.motorola.com/biometrics](http://www.motorola.com/biometrics)  
[biometrics@motorola.com](mailto:biometrics@motorola.com)

Europe: +34 91 400 2330  
Asia: +65 648 63 395

North America: +1 888 493 3590  
Latin America: +1 954 723 8959

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