

CROSS MATCH

# Enterprise Match Server

*For Fast and Accurate Fingerprint Identification and Verification*

**CROSS MATCH**  
Technologies Inc.®

**C**ross Match Technologies' Enterprise Match Server is a server based computing engine optimized for fingerprint matching applications. The Match Server hardware and software solution is a sophisticated and fast extraction and matching system that matches fingerprints on a 1-to-1 basis for verification and a 1-to-N (multiple) basis for identification purposes.

By using the Enterprise Match Server you can easily utilize your Cross Match fingerprint scanners for a wide variety of applications such as:

- Employee background vetting and credentialing
- Computer log on access control
- Check cashing fraud prevention
- Secure area access control
- Welfare fraud protection

- Visitor management
- Driver's license verification
- Border entry exit control

Whatever the need, with the Enterprise Match Server, you can implement mission critical applications for your customers, employees and other constituencies in support of national security, public safety and economic security.

## How it Works

The Enterprise MatchBox runs as a Web Service and contains an embedded biometrics database, a master controller to process requests, and one or more "match nodes," or servers, that perform the actual search. Each match node is typically a dedicated CPU that is network accessible from the master controller. Match nodes are easily added which allows the system to scale as the load or the database size grows over time. The system automatically distributes the search across the total number of match nodes available.

## CROSS MATCH ENTERPRISE MATCH SERVER

### How it Works (continued)

The Match Server provides customers with a web interface for operations on the biometric database, such as enrolling, deleting and updating users.

The Enterprise Match Server from Cross Match provides you with the best in fingerprint matching solutions:

- **Speed** - searches 8,000 fingerprints per second per "match node" on a 2.4 GHz Xeon CPU
- **Scalability** - Match nodes (servers) can be added as the employee fingerprint database increases
- **Privacy** - system requires no demographic information so privacy is assured
- **Ease of use and flexibility** - the system uses a standards based Web Services interface: JAVA and .NET compatible avoiding client application licensing and version issues
- **Easy integration** - detailed documentation, sample applications and customer support
- **Open system** - works with ANSI/INCITS-378 "M1" or AAMVA minutiae formats

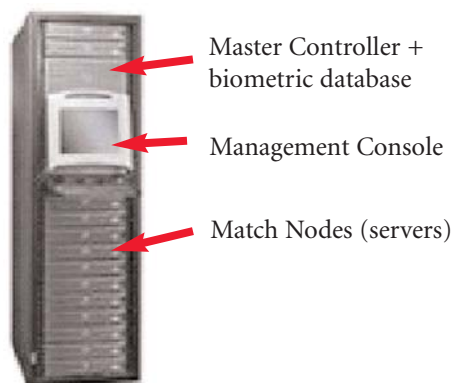
The Match Server is based on an open source architecture designed for cross-platform access and vendor neutrality. The input data formats and minutiae storage formats also follow industry

standards. The Match Server accepts ANSI-NIST Electronic Fingerprint Transmission (EFT) records for enrollment and stores/accepts minutiae data in the ANSI/INCITS-378 or "M1" standard format.

Configuration and control are performed with a regular web browser so no special client software is needed.

### Hardware

The Enterprise Match Server typically runs on standard low cost and reliable x86 server hardware and is delivered as a rack mount server system, as shown below:



### Hardware Highlights

- The server rack is a self-contained system and with its own networking, management console, etc.
- Reliability is enhanced using uninterruptible, redundant power supplies and RAID storage systems
- Uses standard rack-mount server hardware - inexpensive and continually improving in speed

- Multiple, top-tier server suppliers, ensures no vendor lock-in
- Easy to calculate CPU needs based on desired response time and load
- Match nodes are diskless to improve system reliability

### Software

The Enterprise Match Server software is based on an open source architecture that utilizes the GNU/Linux operating system, the Apache Tomcat Servlet Engine with the Apache Axis Web Services framework, and a Postgres SQL database. This provides a well-proven platform with no potential problems with client-side licensing.

### Software Highlights

Web-based Interface - simple browser is needed to access:

- Configuration functions
- Monitoring and logging
- Users and security
- Match Node control and configuration
- Biometric database interface
- Email notification to operators when system detects a problem - reduces downtime
- Multiple configurable email addresses for alert list

### About Cross Match Technologies, Inc.

Cross Match Technologies is an industry leader in the development of a complete line of forensic-quality fingerprint and palm print readers for state, federal, commercial, aviation and international organizations to prevent infiltration, crime and terrorism. Cross Match currently offers the most comprehensive line of biometric products in the industry supported by superior customer service. Cross Match has customers in 50 countries and is responsible for fingerprinting over 20 million people worldwide. Cross Match has sold over 5000 systems and holds or has pending more than 140 patents.

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