



NEUROtechnology



Add-on for
VeriLook SDK and
MegaMatcher SDK

Smartcard Face-Match



Smartcard Face-Match

Add-on for VeriLook SDK and MegaMatcher SDK

Document updated on February 4, 2010

CONTENTS

Why Smartcard Face-Match	3
Add-on structure	4
System requirements	5
Licensing Smartcard Face-Match Add-on	6
Prices	7

A common face identification system performs matching on a PC's processor. The **Smartcard Face-Match Add-on** offers match on card technology that stores the original unique face template on a smartcard and performs face template matching in a microprocessor embedded in the card. This method ensures that personal biometric information does not transfer to an external computer as it would in a more basic template-on-card system.

The Smartcard Face-Match Add-on allows developers to integrate storage and verification of face templates on a JavaCard with existing biometric systems based on VeriLook SDK or MegaMatcher SDK. The add-on is developed utilizing a set of ISO/IEC standards to enable easy integration into existing smart card and/or biometric systems.



Why Smartcard Face-Match

Smartcard Face-Match Add-on provides a number of advantages over simple smartcard or face identification systems, including:

- **Enhanced security.** Two-factor authentication checks both the validity of the smartcard and the identity of the person presenting the card.
- **Privacy.** The original template remains on the smartcard, providing a safeguard against misuse of information or fraudulent scanning systems.
- **Fast verification.** The matching algorithm performs verification on the card in about **0.8 seconds** (on NXP JCOP v2.2).
- **Low smartcard memory requirements.** Smartcards with small amount of RAM can be used, as only **10 bytes** of smartcard's RAM (transient memory) are required. The add-on was tested on NXP JCOP, JTOP and Oberthur family smartcards. Customers can use any other smartcard that implements JavaCard 2.2.1 and GlobalPlatform 2.1.1 specifications.
- **Multiplatform.** The add-on includes PC-side development components for Microsoft Windows and Linux platforms.
- **Easy integration.** Implementing the system will not require major overhauls of existing infrastructure, as the add-on is developed utilizing a set of ISO/IEC standards (7816-3:2006, 7816-4:2005 and 7816-11:2004) to enable easy integration into existing smart card and/or biometric systems.



Add-on structure

The Smartcard Face-Match Add-on is available as **Standard version** that includes PC-side software and 3 smartcards (NXP JCOP 31 v2.2/36K) with preloaded face matching engine. Additional smartcards with preloaded engine are also available.

The components of Smartcard Face-Match Add-on are:

- Face matching engine preloaded on smartcards
- JavaCard components:
 - On-card face biometric APIs
 - Off-card terminal sample
- PC-side development components:
 - Library for communication with a smartcard (wrapper for .NET is included)
 - Enrollment sample console applications for Windows and Linux (written in C)
 - Verification sample console application for Windows and Linux (written in C)
 - Enrollment and verification sample GUI application for Windows (written in C#)
 - Documentation



System requirements

- System requirements for installation and usage of components on JavaCard:
 - JavaCard 2.2.1 compatible smartcard
 - 9 kB of EEPROM (persistent memory) free
 - 10 bytes of RAM (transient memory) free
- System requirements for installation and usage of components for Microsoft Windows:
 - PC with x86 compatible CPU
 - Windows 2000/XP/2003/2008/Vista/7 OS
 - Microsoft .NET framework 2.0 (for .NET components)
 - Microsoft Visual Studio 2005 SP1 or newer (for application development)
- System requirements for installation and usage of components for Linux:
 - PC with x86 compatible CPU
 - Linux OS 2.4 or newer
 - GCC-3.3.x or newer
 - GNU Make 3.80 or newer
 - PCSC-Lite 1.4.4 or newer
 - ccid-1.3.0 or newer

Recommended development tools

Neurotechnology recommends these development tools for using with the Smartcard Face-Match Add-on:

- J2SE SDK v1.4.2.
- Java Card Development Kit v2.2.1 or
- JCOP tools plug-in v3.1.2 for Eclipse IDE.

The latter development tool provides functionality for working with any smart card implementing Java Card 2.1.1/Java Card 2.2.1 and OpenPlatform 2.0.1/GlobalPlatform 2.1.1 specifications.



Licensing Smartcard Face-Match Add-on

The Smartcard Face-Match Add-on is available only to existing VeriLook 3.1/3.2/3.3/4.0 SDK or MegaMatcher 2.1/3.0/3.1 SDK customers. The add-on's PC-side software can be used only on PC that has MegaMatcher or VeriLook installation license.

The add-on is available as **Standard version** (EUR 290). Integrators can develop only an **end-user** product using Smartcard Face-Match and sell/install the product to their own customers.

Standard version

The Standard version of the add-on is intended for customers who would like to obtain smartcards with the preloaded face matching engine and use them for their applications.

The Standard version of Smartcard Face-Match Add-on includes PC-side software and 3 smartcards (NXP JCOP 31 v2.2/36K) with the preloaded face matching engine. The Java code of the engine is not included.

Smartcard Face-Match Add-on customers can obtain additional smartcards with the preloaded face matching engine for their product installation or development at any time. Prices for additional smartcards with the preloaded face matching engine are on the next page.

Smartcard Face-Match enterprise license

Smartcard Face-Match enterprise license allows an **unlimited use** of the face matching engine in the smartcard products in the certain territory, market segment or project. These limitations would be included in the licensing agreement.

For more information please contact us.



Prices for Smartcard Face-Match Add-on

- The prices are **effective from February 3, 2010**. The prices may change in the future, so please **download and review the latest version** of the brochure before making an order.
- Quantity discounts do not accumulate over time.
- The prices do not include any taxes.
- Product shipping cost depends on delivery country
- Our customers can gain a discount for our products by getting the Solution Partner status.

Smartcard Face-Match Add-on For VeriLook and MegaMatcher

Smartcard Face-Match Add-on. Standard version (3 smartcards with the preloaded face matching engine are included)	€ 290.00
--	----------

Additional Smartcard Face-Match licenses

Quantity	Additional smartcards with the preloaded face matching engine (prices per smartcard)
1-9	€ 17.00
10-19	€ 16.00
20-49	€ 15.00
50-99	€ 14.00
100-199	€ 13.00
200-499	€ 12.00
500-999	€ 11.00
1000-1999	€ 10.00
2000-3999	€ 9.00
4000+	Please contact us for more information

SmartCard Face-Match products can be ordered:

- online, at www.neurotechnology.com/cgi-bin/order.cgi
- via a local Neurotechnology distributor; the list of distributors is available at www.neurotechnology.com/distributors.html