

*ISO 19794-4 Support C++*



*Programmer's Manual*

*Ver 1.x*

© Copyright 2009 – 2012 NITGEN&COMPANY Co., Ltd.

**ALL RIGHTS RESERVED**

**Specifications subject to change without notice.**

"NITGEN", the NITGEN logo, "eNBSP", "NBioBSP", "NBioAPI",


"NITGEN Fingkey Mouse", and "eNDeSS" are trademarks of

NITGEN&COMPANY Co., Ltd. All other brands or products may be trademarks

or service marks of their respective owners.

# Table of contents

<b>CHAPTER 1 INTRODUCTION.....</b>	<b>1</b>
<b>CHAPTER 2 COMPONENTS.....</b>	<b>2</b>
<b>CHAPTER 3 APPLICATION PROGRAMMING INTERFACE (API) 3</b>	
■ <b>Definitions .....</b>	<b>3</b>
■ <b>NIMPORTRAW .....</b>	<b>3</b>
■ <b>NIMPORTRAWSET .....</b>	<b>3</b>
■ <b>API .....</b>	<b>4</b>
NBioAPI_ExportRawToISOV1 .....	4
NBioAPI_ExportRawToISOV2 .....	5
NBioAPI_ImportISOToRaw .....	6
NBioAPI_FreeExportISOData .....	6
NBioAPI_FreeImportRawSet .....	6



# Chapter 1 Introduction

NExportRawToISO Module is intended to help you develop using ISO 19794-4 data format for C++ compatible.

This module is compatible with eNBioBSP SDK, supports Windows (x86 or x64), Linux (x86 or x64), and environment of development (C++, Java, .NET).



## Chapter 2 Components

ISO 19794-4 folder created from the installation is as follows:

### ■ Linux folder

bin : contains libNExportRawToISO.so to support x86 or x64.

Inc : contains header files to help you develop.

Samples : contains sample files.

### ■ Windows folder

bin : contains NExportRawToISO.dll and test program to support x86 or x64

DotNet : contains NITGEN.SDK.NBioBSPISO4.dll and test program for .NET-compatible.

inc : contains header files to help you develop.

Lib : contains NExportRawToISO.lib to support x86 or x64.

Sample C++ : contains files for C++ compatible sample.

Sample DotNet : .contains files for .NET-compatible sample.

### ■ Java Wrapper

Library for Java is contained in "eNBioBSP SDK for java". (v1.4.4.0 or higher)

# Chapter 3 Application Programming Interface (API)

## Definitions

Defined value assigned by Nitgen to compress a raw image.

Literal	Value	Mean
NEXPORT_COMPRESS_MOD_NONE	0	No compression
NEXPORT_COMPRESS_MOD_WSQ	1	WSQ

## NIMPORTRAW

Contains a raw image.

Type	Name	Description
NBioAPI_UINT8	nFingerID	Finger index Refer to NBioAPI_FINGER_ID in "eNBioBSP SDK"
NBioAPI_UINT16	nImgWidth	Width of image
NBioAPI_UINT16	nImgHeight	Height of image
NBioAPI_UINT32	nDataLen	Image data length
NBioAPI_UINT8*	pRawData	Image data

## NIMPORTRAWSET

Contains a raw image set.

Type	Name	Description
NBioAPI_UINT8	nDataCount	The number of data
NIMPORTRAW_PTR	pImportRawData	Array pointer of <a href="#">NIMPORTRAW</a>

# ■ API

```
NBioAPI_RETURN NBioAPI_NBioAPI_ExportRawToISOV1(NBioAPI_EXPORT_AUDIT_DATA_PTR pAuditData,
                                                NBioAPI_UINT8** pISOBuf,
                                                NBioAPI_UINT32* pISOBufLen,
                                                NBioAPI_BOOL bIsRollDevice,
                                                NBioAPI_UINT8 nCompressMod);
```

## Description

Converts from fingerprint raw data to ISO 19794-4 data using fingerprint image captured by "NBioAPI\_NBioBSPToImage " API of eNBioBSP SDK and returns error code.

---

## Parameters

NBioAPI\_EXPORT\_AUDIT\_DATA\_PTR pAuditData

[in] fingerprint image structure captured using "NBioAPI\_NBioBSPToImage " API of eNBioBSP SDK

NBioAPI\_UINT8\*\* pISOBuf

[out] returns pointer of ISO 19794-4 data

NBioAPI\_UINT32\* pISOBufLen

[out] returns pointer of ISO 19794-4 data length

NBioAPI\_BOOL bIsRollDevice

[in] image type

Value	Description
NBioAPI_TRUE	Roll image
NBioAPI_FALSE	Flat image

NBioAPI\_UINT8 nCompressMod

[in] compression type (refer to [Constant](#))

---

## Return Value

NBioAPI\_RETURN

Error Code of eNBioBSP SDK

---

NBIOAPI_RETURN	NBIOAPI	NBIOAPI_ExportRawToISOV2(NBIOAPI_UINT8	nFingerID,
		NBIOAPI_UINT16	nImgWidth,
		NBIOAPI_UINT16	nImgHeight,
		NBIOAPI_UINT8*	pRawBuf,
		NBIOAPI_UINT8**	pISOBuf,
		NBIOAPI_UINT32*	pISOBufLen,
		NBIOAPI_BOOL	bIsRollDevice,
		NBIOAPI_UINT8	nCompressMod);

#### Description

Converts from fingerprint raw image to ISO 19794-4 data from fingerprint image captured by eNBioBSP SDK Module and returns error code.

#### Parameters

NBIOAPI\_UINT8 nFingerID  
[in] Finger index (refert to NBIOAPI\_FINGER\_ID of "eNBioBSP SDK")

NBIOAPI\_UINT16 nImgWidth  
[in] ] Width of raw image

NBIOAPI\_UINT16 nImgHeight  
[in] Height of raw image

NBIOAPI\_UINT8\* pRawBuf  
[in] Pointer of raw image

NBIOAPI\_UINT8\*\* pISOBuf  
[out] Pointer of ISO 19794-4 data

NBIOAPI\_UINT32\* pISOBufLen  
[out] Pointer of ISO 19794-4 data length

NBIOAPI\_BOOL bIsRollDevice  
[in] image type

Value	Description
NBIOAPI_TRUE	Roll image
NBIOAPI_FALSE	Flat image

NBIOAPI\_UINT8 nCompressMod  
[in] Compression type (refer to [Constant](#))

#### Return Value

NBIOAPI\_RETURN  
Error Code of eNBioBSP SDK



```
NBioAPI_RETURN NBioAPI NBioAPI_ImportISOToRaw(NBioAPI_UINT8* pISOBuf,
                                                NBioAPI_UINT32 nISOBufLen,
                                                NIMPORTRAWSET_PTR pImportRawSet);
```

#### Description

Converts from ISO 19794-4 data to fingerprint raw image and returns error code.

#### Parameters

NBioAPI\_UINT8\* pISOBuf  
 [in] Pointer of ISO 19794-4 data  
 NBioAPI\_UINT32 nISOBufLen  
 [in] Pointer of ISO 19794-4 data length  
[NIMPORTRAWSET\\_PTR](#) pImportRawSet  
 [out] Returns pointer of raw image in pISOBuf

#### Return Value

NBioAPI\_RETURN  
 Error Code of eNBioBSP SDK

```
void NBioAPI NBioAPI_FreeExportISOData(NBioAPI_UINT8* pISOBuf);
```

#### Description

Releases a memory allocated by NExportRawToISO Module.

#### Parameters

NBioAPI\_UINT8\* pISOBuf  
 [in] Pointer ISO 19794-4 data

#### Return Value

void

```
void NBioAPI NBioAPI_FreeImportRawSet(NIMPORTRAWSET_PTR pImportRawSet);
```

#### Description

Releases a memory of NIMPORTRAWSET structure allocated by NExportRawToISO Module.

#### Parameters

[NIMPORTRAWSET](#) pImportRawSet  
 [in] Pointer of [NIMPORTRAWSET](#) structure

#### Return Value

void