

# Driver Installation

## for eNBioScan - F



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## Chapter 1

# Before You Begin



Features  
Typical Applications  
System Requirements

## Features

The NITGEN&COMPANY FRD (Fingerprint Recognition Device) is a world-class fingerprint device that uses state-of-the-art technology, to facilitate biometric authentication of a user's fingerprint using a combination of quality hardware and software that is convenient and easy to use.

The FRD is equipped with high-performance and compact NITGEN&COMPANY fingerprint recognition module, which can transfer data to computers to reject any unauthorized user's access.

NITGEN&COMPANY FRD will provide the most reliable authentication by identifying fingerprints with exactness through its high-resolution fingerprint recognition technology that can be used to replace existing password-based security systems. NITGEN&COMPANY FRD is the security device for the next generation, where the security of personal data as well as corporate data is indispensable.

## Typical Applications

Some typical applications for fingerprint authentication technology are as follows:

- Information Technology and Computer Network Security
- Internet Business
- Security for Banking and Financial System
- Medical Information Systems
- Further Security Field using Passwords

## System Requirements

System requirements for eNBioScan - F is as follows:

### ⦿ eNBioScan - F

- CD-ROM drive
- USB 2.0 port (If you are connecting the eNBioScan - F into a hub, you must use a self powered USB hub.)
- Pentium4 2.0GHz or higher
- 256MB RAM or higher
- 512MB available hard disk space
- MS Windows 2000/XP/2003/VISTA

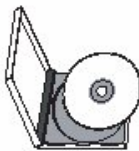
## Package Contents

FRD Kits include the following; Please check the contents of your package.

## 1. USB Type Fingerprint Recognition eNBioScan-F (HFDU05/07)



**eNBioScan-F**



**Installation CD**



**Installation Guide**



## Chapter 2

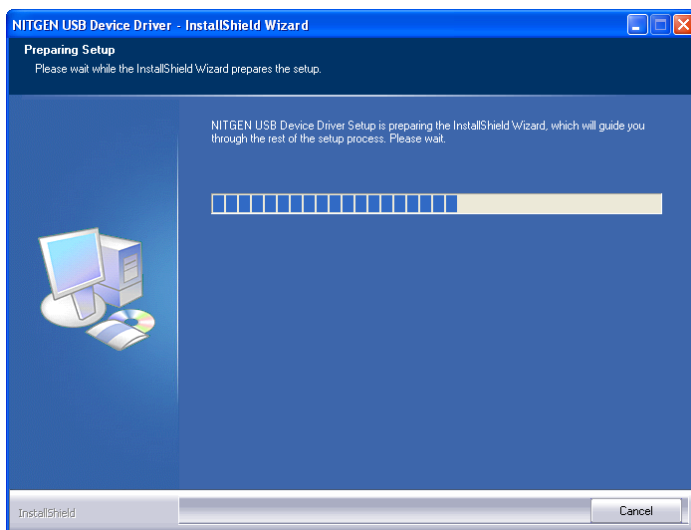
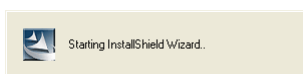
# Driver Installation



USB Driver Installation

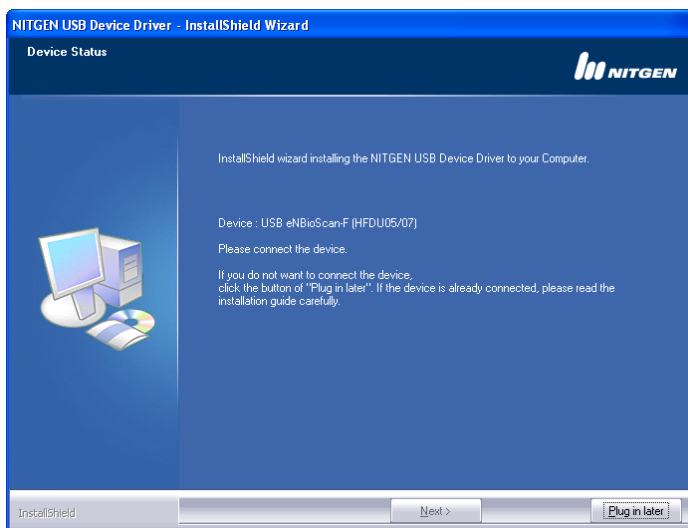
## USB Driver Installation

1. Prior to beginning the installation, please close all applications that are running.
2. Do not plug in the USB FRD until after the drivers have been installed on your system.
3. Insert the Installation CD in your CD-ROM drive. The installation program will start automatically, otherwise when executes setup.exe, follow the instructions presented by the InstallShield Wizard during the driver installation process..

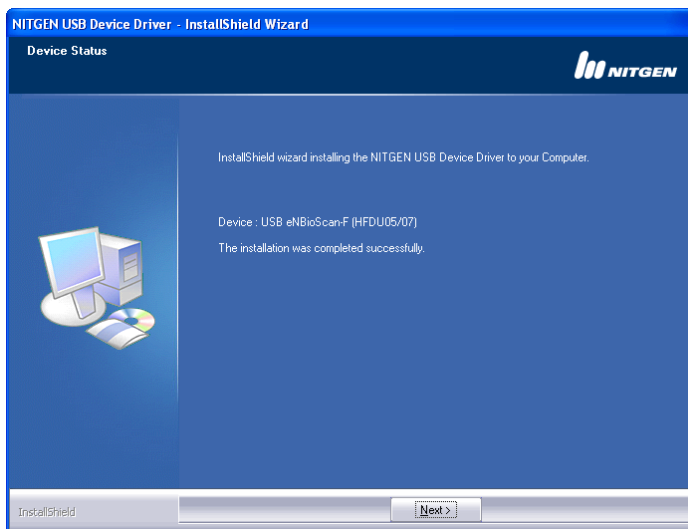




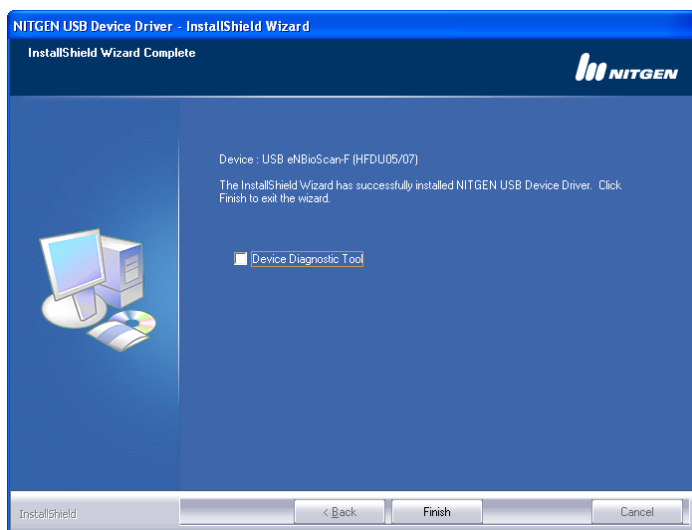
4. When driver installation is completed, it is necessary to check the device status to ensure that it was installed correctly. You will be prompted to connect the USB FRD as shown in the diagram below:



5. Connect the FRD to the USB port, and wait a moment. You can also click “Plug in later” to install it at a later time.
6. When the device installation process is completed, a window will be displayed indicating that “The installation was completed successfully.” Click the “Next” button.



7. Click “Finish”. At this time the installation process will be completed.





## Chapter 3

# How To Use The Device Diagnostic Tool



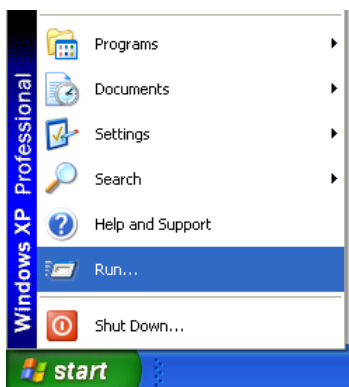
Running the Diagnostic Tool

FlatDemo

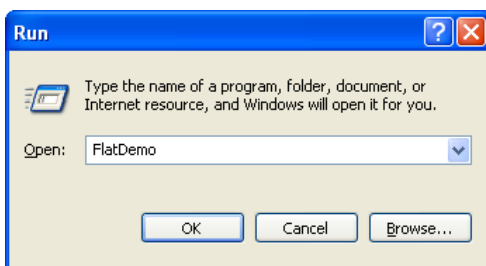
- Device test
- Verify test

## Running the Diagnostic Tool

1. Click Start-Run to run the testing program.



2. Type 'FlatDemo' and click "OK".

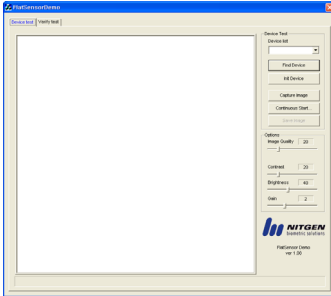


If the eNBioScan-F's device type is 'Roll', type 'RollDemo' and click 'OK'.



# FlatDemo

## - Device test



1. Click “Find Device” to display the list of all devices in the system.

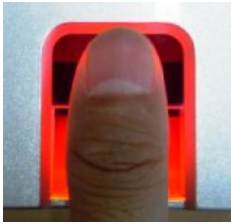


2. Select a device you wish to use. If the device is already connected, it will be shown in the “Device list”.

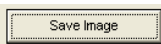


Successful to enumerate... Device not found.

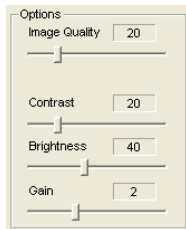
3. Choose a certain device from the list and click “Init Device” to initialize the device, which makes it possible to capture or use other functionalities of the tab. Without initialization, other functionalities of the tab cannot be used.
4. It takes 1~2 seconds to initialize a device. While initializing a device, do not raise the fingerprint on the prism surface.



2. Click “Capture Image” to capture the image. Press the surface evenly to maximize the contact area for a fingerprint core capturing.



6. A flat image can be saved as bmp. There are two ways to save a fingerprint image: 1. click “Save Image”, 2. Right-click the fingerprint image window, choose the pop-up menu and then save the image in your chosen location in the file dialogue.



7. Option values used in Capture function are set up.

Default value:

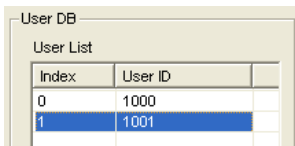
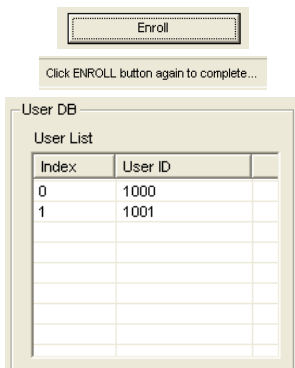
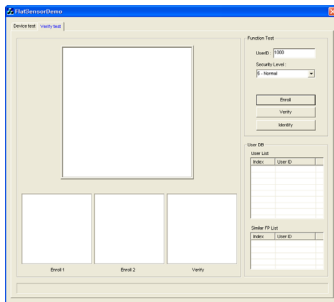
Image Quality – 20

Contrast – 20

Brightness – 40

Gain – 2

## - Verify test



1. Enroll and Verify test, based on the selected device from the Device test tab.

2. An entered fingerprint is enrolled in the user DB. Click the “Enroll” button to input the fingerprint. The fingerprint is required to be entered twice during enrollment because fingerprint template is made from two samples.

3. The user DB is used in the memory by the program and it is not saved in a separate way. A user ID automatically increments from 1000 to 9999 and cannot be set up randomly.

4. The Verification based on 1:1 matching is performed between a selected user ID and user ID in the user DB. Therefore selected user ID must exist in the user DB. Select a user you wish to verify and click “Verify” to perform the verification.

Similar FP List		
Index	User ID	
0	1000	
1	1001	

Successful to identify...

- 1:N matching between the IDs saved in the user DB and the entered fingerprint is performed. It is not required to choose a user ID from the user DB because it is 1:N matching. If the matching is succeed, the message below will be displayed. If similar fingerprints are found, they will be shown in the “Similar FP List”.

User DB

User List

Index	User ID	
0	1000	
1	1001	

Delete User: 1001
Delete all User(total: 2)

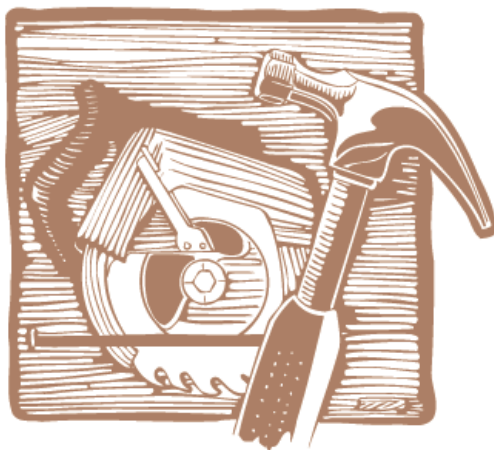
- Data in the user DB can be deleted. Right-click an ID you wish to remove, and then a pop-up menu will be displayed. You can remove IDs you choose or you can delete all user DB. If you only delete IDs you selected, the result of the deletion will be displayed while the total number of deleted IDs will be output if you delete all IDs of the user DB. Where the entire user DB is deleted, fingerprint images and user IDs will also be initialized.



- The currently entered fingerprint image is saved as a file. Right-click the fingerprint image window to select the pop-up menu and then save the image by using the file dialogue.

## Chapter 4

# Troubleshooting



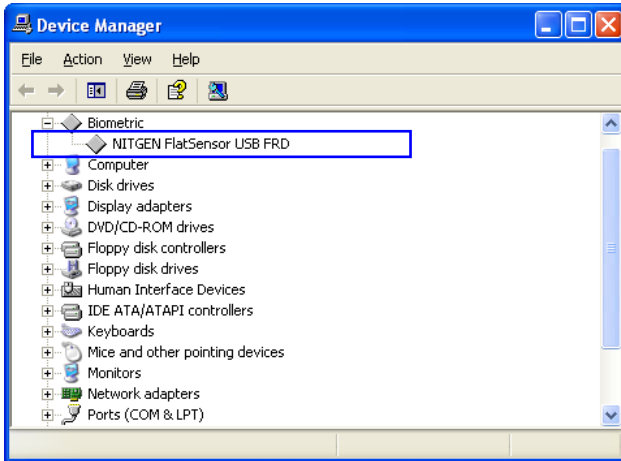
USB FRD Problems

Driver Installation without InstallShield wizard

## USB FRD Problems

### <When the USB FRD doesn't work>

1. Verify that the USB connector of FRD is connected to the USB port correctly.
2. Click **Start-Setting-Control Panel-System** icon and select the '**Device Manager**' tab to verify that the device driver is installed correctly. If it is not installed correctly as shown below, repeat the installation process.



3. If you are using the FRD connected to a USB port in a USB keyboard or Hub, verify that the USB keyboard or Hub has it's own power-supply. The USB FRD should only be connected to hubs that are self-powered.
4. After installed the new device driver, if the device will not operate, connect again.

### <When be connected to the USB 1.1>

1. The eNBioScan-F support only the USB2.0 high-speed in Windows 2000 or higher. So, if you connecting to the USB1.1 port that the eNBioScan-F can't support installing device driver and capture image.

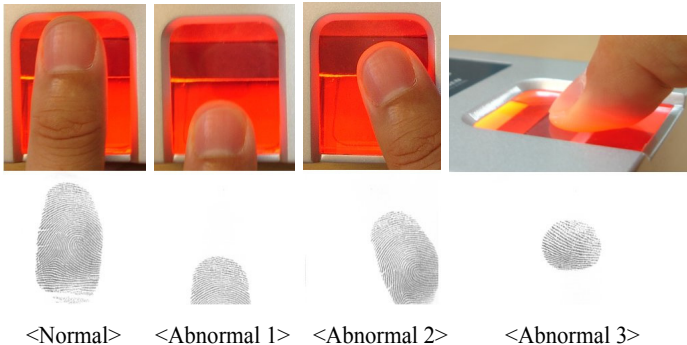
## <Precautions>

1. Be careful when you capture a fingerprint by the eNBioScan-F(Roll type), It can't be captured normally by a strong external light.
2. Be careful when you composite a fingerprint by the eNBioScan-F(Roll type), It can't be composite normally by bad image quality.

## <How to capture a fingerprint?>

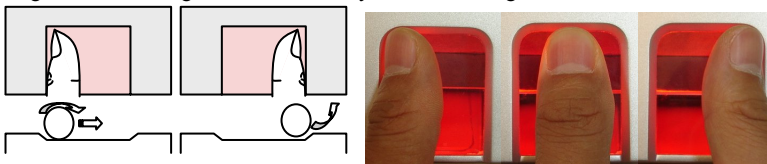
### 1. Flat type device

- To maximize the contact area for a fingerprint core capturing and press the surface evenly.



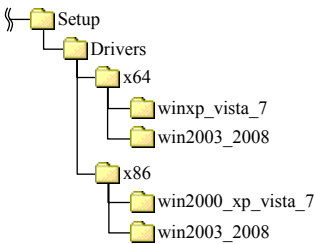
### 2. Roll type device

- Move the finger to the left side and then roll the finger toward the right. Lift the finger toward the right-hand side once you finish rolling it.



## Driver Installation without InstallShield wizard

1. There is O/S folder below \Setup\Drivers. Select an O/S folder for the system. Use the inf file below the O/S folder. The folder contains files required to install device models. In the each folder, fdu05.cat, nfrd05.inf, nfrd05rf.dll and nfrd05rf.sys exist. Below is the folder structure of Setup:



The path of Setup may change. So check the location before installation.





## **INFORMATION TO THE USER**

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense

## **WARNING**

This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures

Any changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment

## Limited Warranty

The NITGEN warrants to the purchaser of the NITGEN's product ("Product"), if properly used and installed, will be free from defects in material and workmanship and will substantially conform to the NITGEN's publicly available specifications for a period of one year after date the Product was purchased.

If the Product, which is the subject of this Limited Warranty, fails during the warranty period for reasons covered by this Limited Warranty, the NITGEN, at its option will :

**REPAIR** the Product by means of hardware and/or software; **OR**

**REPLACE** the Product with another product; **OR**, if the NITGEN is unable to repair or replace the Product,

**REFUND** the then-current value of the Product.

THIS LIMITED WARRANTY, AND ANY IMPLIED WARRANTIES THAT MAY APPLY ONLY TO THE ORIGINAL PURCHASER OF THE PRODUCT OF THE NITGEN AND LAST ONLY FOR AS LONG AS SUCH PURCHASER CONTINUES TO OWN THE PRODUCT OF THE NITGEN.

### EXTENT OF LIMITED WARRANTY

The NITGEN does not warrant that your Product will be free from design defects or errors known as "errata". Current characterized errata are available upon request.

This limited warranty does not cover any costs relating to removal or replacement of any Product that is soldered or otherwise permanently affixed to your electrical boards of the Product.

This limited warranty does not cover damages due to external causes, including accident, demolition, usage not in accordance with product instruction, misuse, neglect, alteration, repair, improper installation, or improper testing.

### HOW TO OBTAIN WARRANTY SERVICE

To obtain warranty service for your Product, you may contact the reseller of the NITGEN in the local country, or you may contact the NITGEN.

To request warranty service from the NITGEN, you should call the NITGEN at 82-31-451-9400 during the warranty period during normal business hours, excluding holidays.

Please be prepared to provide :

- (1) your name, address, and telephone number
- (2) proof of purchase
- (3) serial number of the Product
- (4) an explanation of your problem

[Note: The Customer Service Representative may need additional information from your depending on the nature of the problem]

The replacement is warranted under this written warranty and is subject to the same limitations and exclusions for the remainder of the original warranty period or one year, whichever is longer.

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