7403-K150

Biometrics Module (Fingerprint Recognition)

Kit Instructions
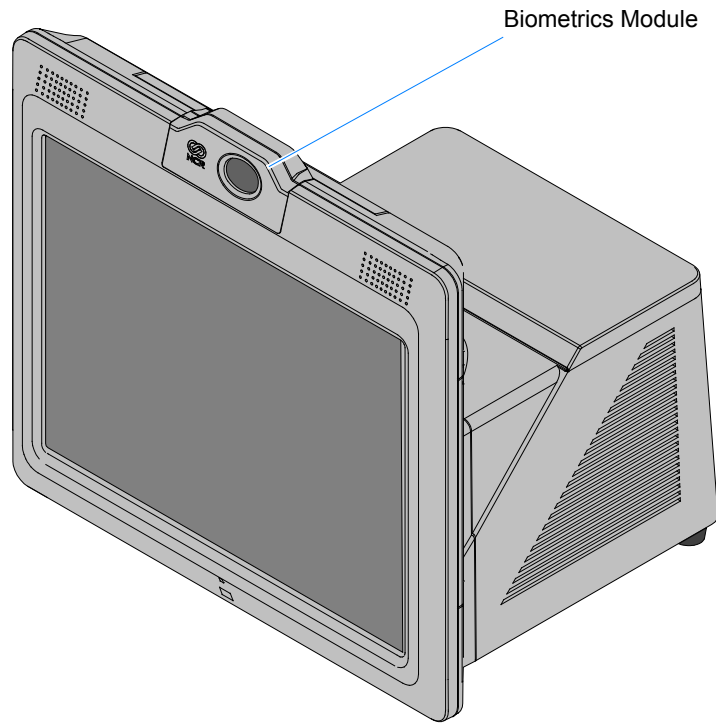
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Issue B

Revision Record

Issue	Date	Remarks
A	May 2009	First issue

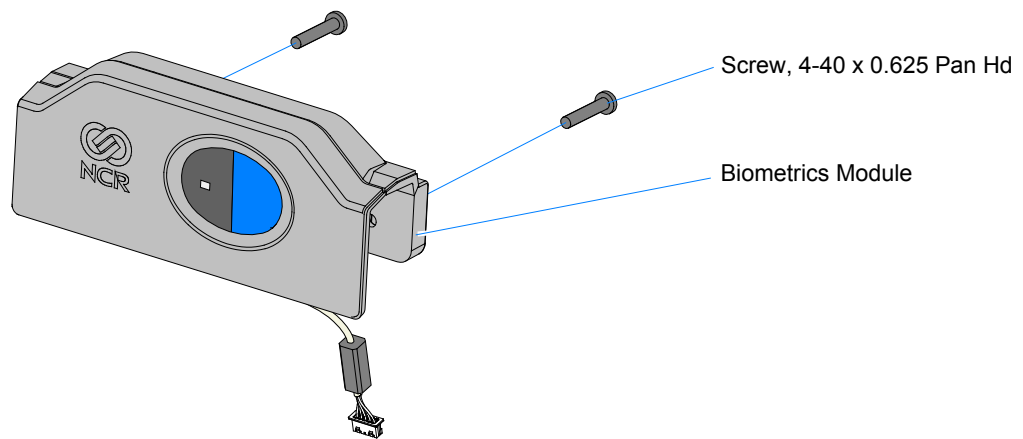# Introduction

This kit provides an integrated U.are.U® Biometrics module for the 7403 terminal, providing fingerprint recognition capabilities.

Biometrics Module

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Kit Contents

Screw, 4-40 x 0.625 Pan Hd

Biometrics Module

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Installation Procedures

Caution: Static Electricity Discharge may permanently damage your system. Discharge any static electricity build up in your body by touching your computer's case for a few seconds. Avoid any contact with internal parts and handle cards only by their external edges.
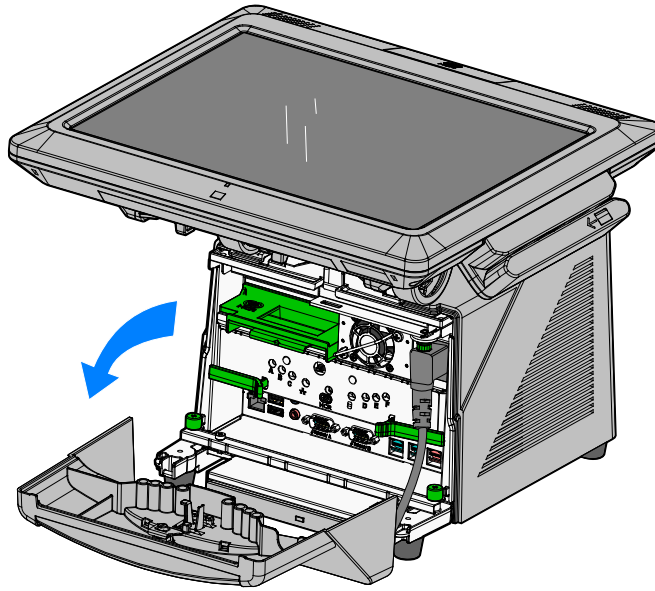
1. Disconnect power to the terminal.

   Caution: Disconnect the AC power cord before disassembling the terminal. The ON/OFF switch does **NOT** remove power to the unit.

   a. Remove the Front Cover.

   b. Insert the Security Key and turn it 90 degrees clockwise.
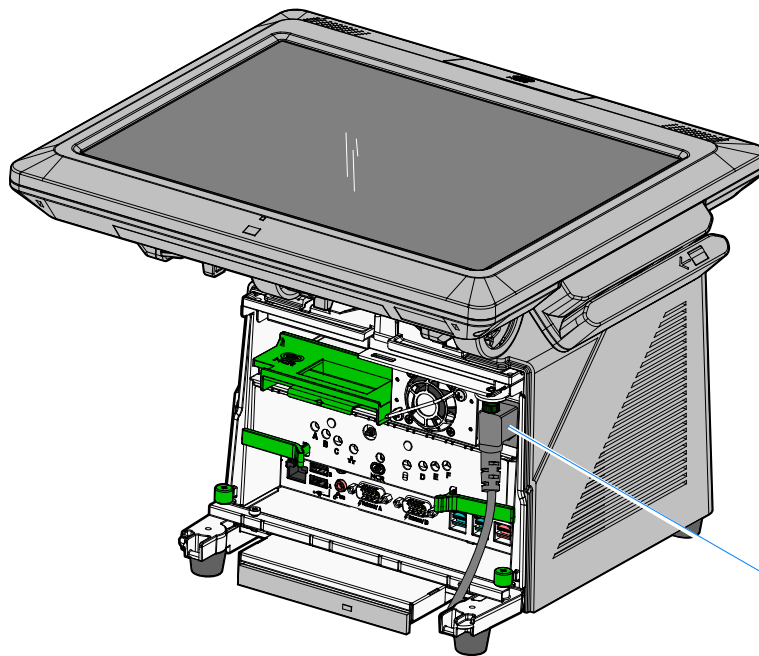

Security Key

Front Base Cover

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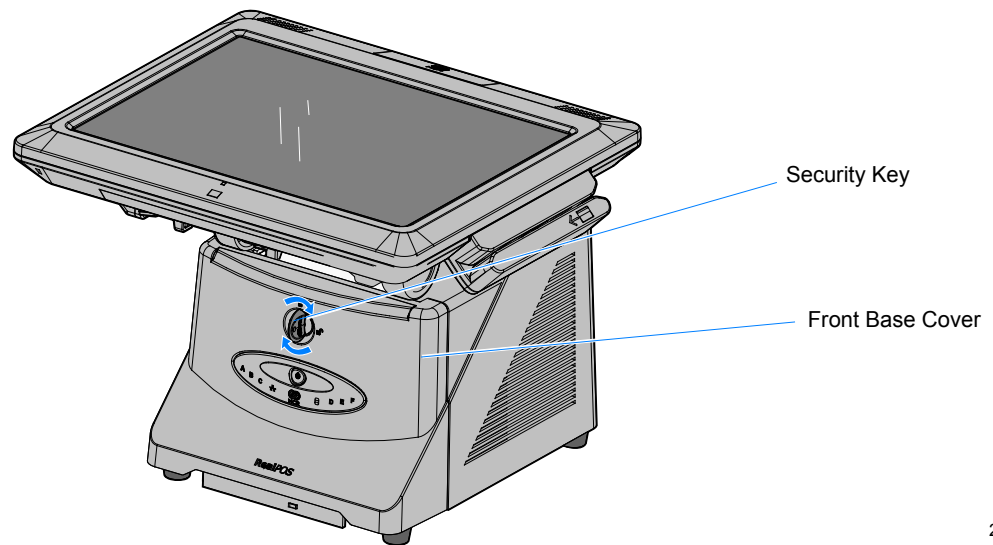
c. Pivot the top of the Front Base Cover toward the front of the unit and remove it from the terminal.

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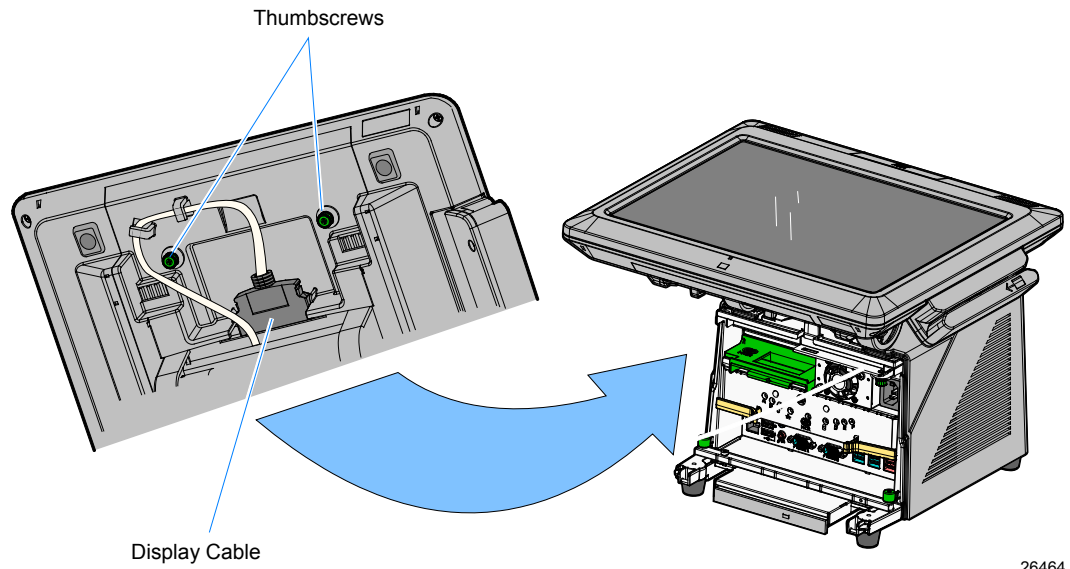
d. Disconnect the Power Cord from the Power Supply.

AC Power Cord

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2. Disconnect the Display Cable.

3. Loosen the Display thumbscrews (2).

Thumbscrews

Display Cable

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4. Depress the Display Release Latches (2) and slide the Display Head toward the rear of the terminal to disengage it from the chassis.
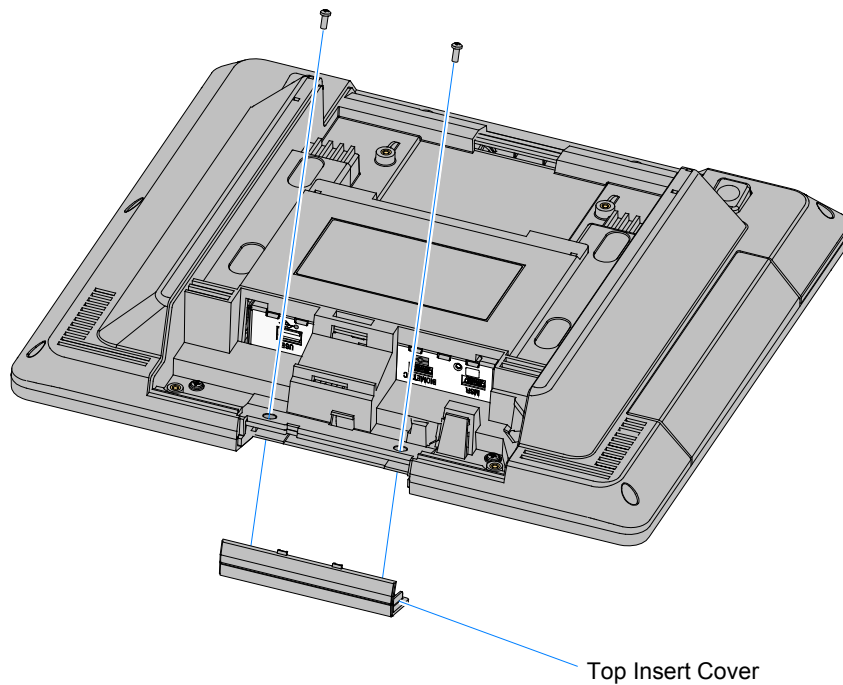
Display Latches

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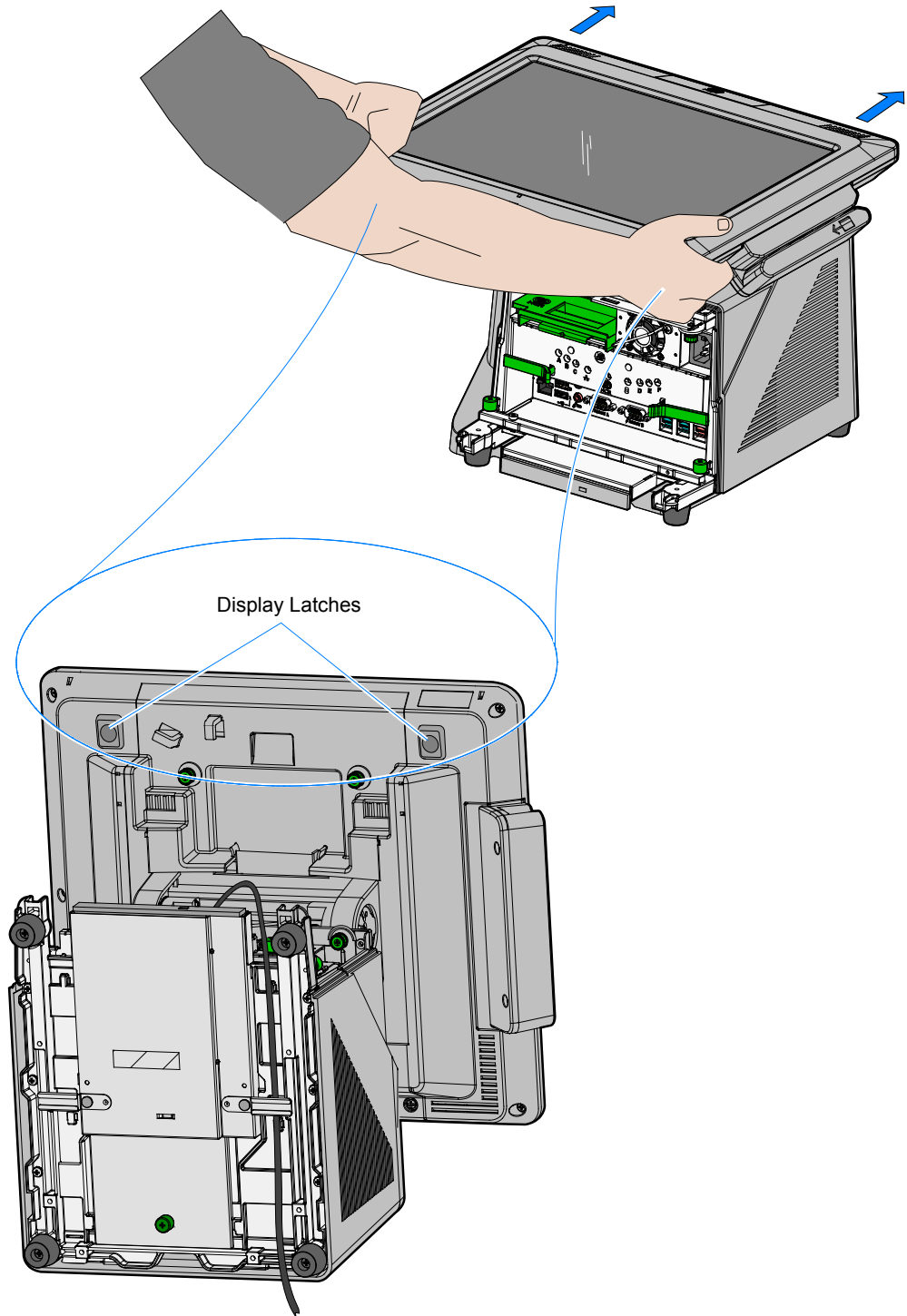
5. Lay the Display Head on a flat, non-scratch surface to avoid scratches to the Touchscreen and Front Bezel.

6. Loosen the captive screws (2) that secure the Top Access Cover and then remove the cover from the Display Head.

Top Access Cover
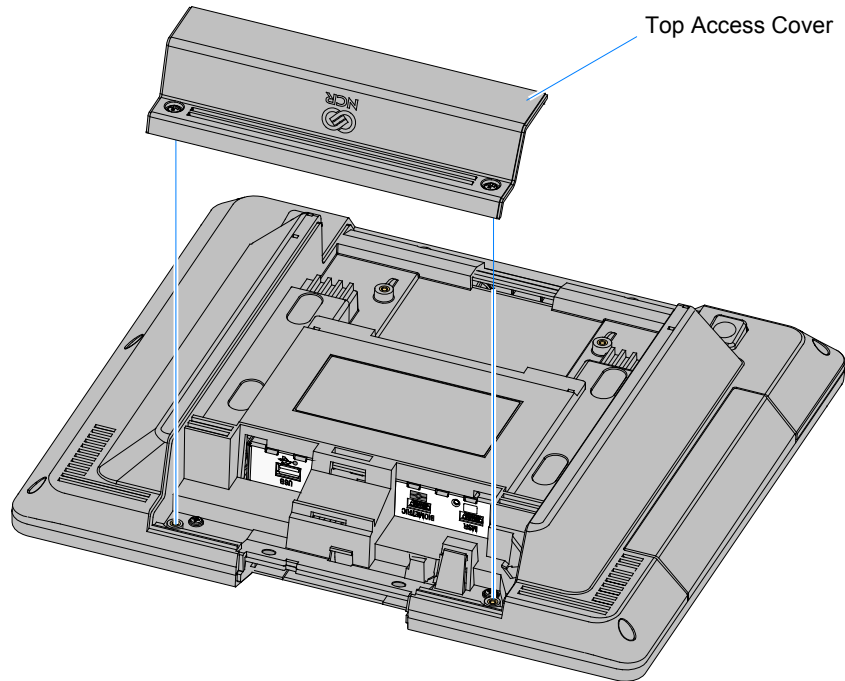
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7. Remove the Top Insert Cover from the Display Head 2 screws).

Top Insert Cover

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8. The below illustration shows how to fold the cable. It is easier to pre-fold the cable before assembling the module onto the Display Head. Fold the cable with a loop that routes through the slot in the Biometrics Module Back.

Cable Loop
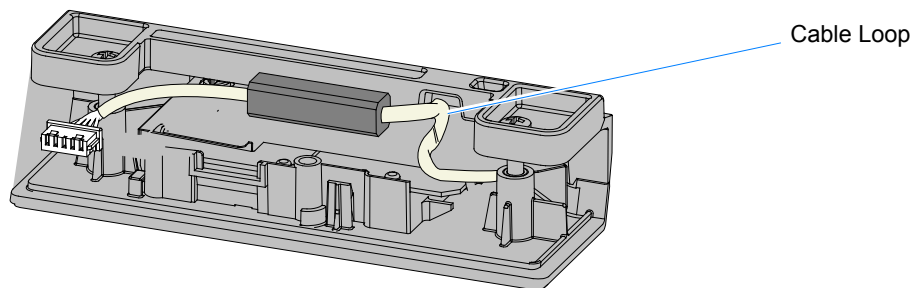
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9. Separate the Biometrics Module Back from the Biometrics Module Assembly by gently pivoting the bottom edges of the Biometrics Module Front and Back as shown below to unlatch the pieces at the top eges.

Biometrics Module Back

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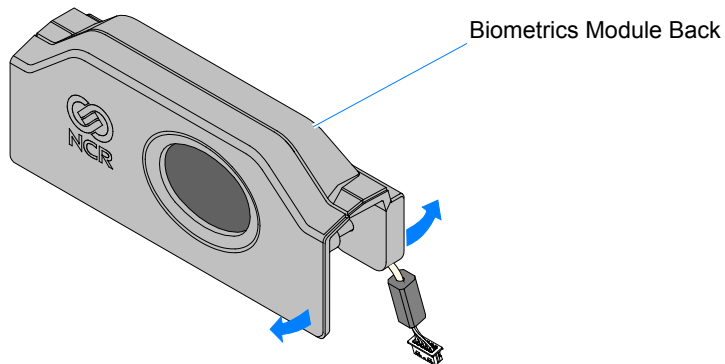
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10. Install the Biometrics Module Assembly onto the Display Head.

    a. Position the front portion of the Biometrics Module Assembly on the Display Head. There is a square slot in the Rear Cabinet that the cable is routed through.

        Note: Make sure the Plastic Insulator is installed.

Biometrics Module Back

Plastic Insulator

Biometrics Module Front
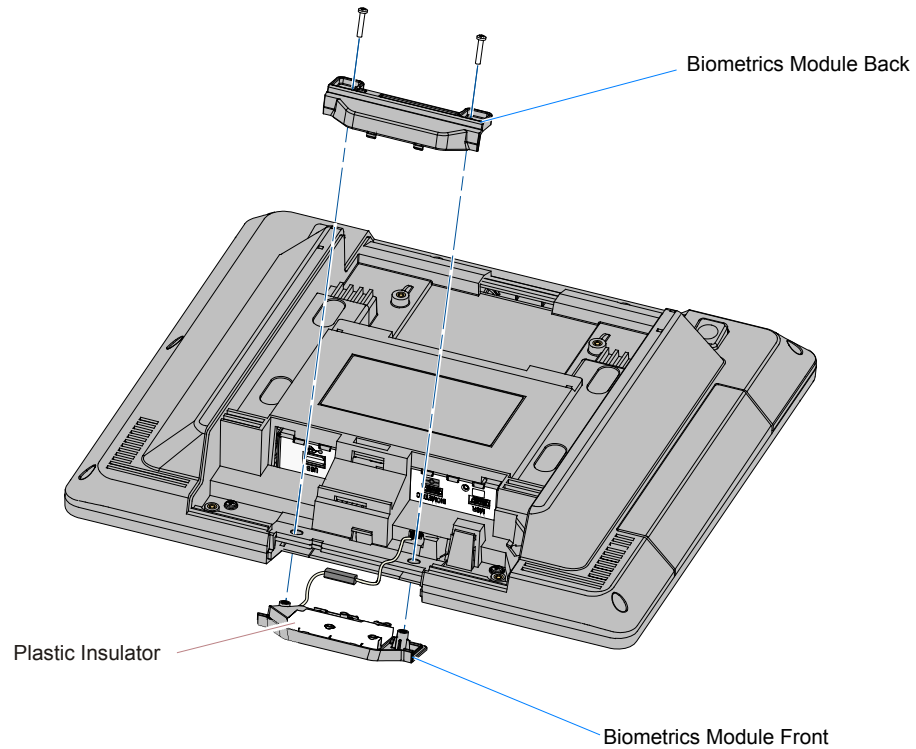
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    b. Secure the assembly with the Biometrics Module Back (2 screws).

11. Connect the Biometrics Module Cable to the Display Head.

Biometrics Module Cable Connector
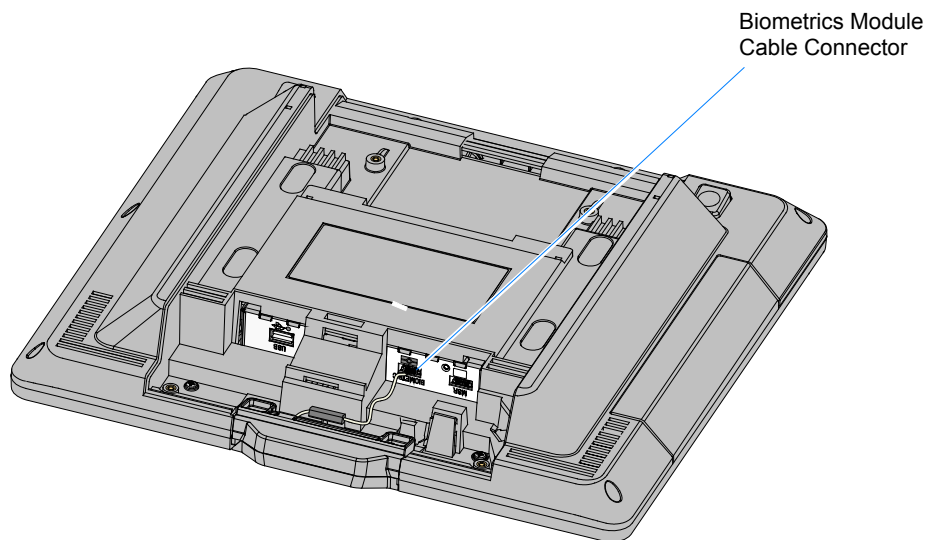
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12. Reassemble the unit using the reverse order.

   a. Install the Top Access Cover

   b. Install the Display Head onto the base

   c. Connect the Display Head Cable

   d. Connect the Power Cord

   e. Install the Front Base Cover.

Driver/SDK Download

The driver and SDK can be downloaded from the Digital Persona web site. Download the 4500 model items.

http://www.digitalpersona.com/DigitalPersona-U-are-U-Software-Development-Kits-(SDKs)/

Digital Persona provides the SDK for a fee. The provider of the POS application has the rights to distribute the DP Run Time Engine (RTE).

Using the Biometrics Module

Guidelines for Fingerprint Registration

High quality fingerprint templates are imperative for the security of the biometric security system. Low quality fingerprint templates can impact future read rates. Therefore, using the Biometrics Module should be done very carefully. In case of inexperienced users who are using the module for the first time, the process should be assisted (guided) by an administrator or experienced user.

Procedures

Prior to using the module make sure the fingerprint sensor is clean: See the *Sensor Cleaning Procedure* section.

Normal Usage

Place your finger flat and straight on the sensor. If this is not possible, try to place your finger on the sensor in the same angle every time.

Registering a New Fingerprint

Multiple images (4) are required to register a fingerprint into the system. Therefore, great care should be taken to place the same part of the fingerprint on sensor every time. The best way to achieve this is to:

1. Lean the finger comfortably against the front of the housing with the fingertip raised.

2. Bend the tip of the finger down to touch the sensor.

3. After the fingerprint image is captured (light blinks), lift tip of the finger up.

Location of the Fingerprint on the Sensor

The core of the fingerprint must be centered on the sensor.

The Biometric Module algorithms automatically recognize it if the fingerprint is placed too low, too high, or too far to the left or right side of the sensor and then provide the user with feedback to improve the fingerprint placement.

Pressure: Put your finger gently on sensor. Do not press it down too firmly (or too lightly). Exert approximately the same amount of pressure as if you were pressing a doorbell button.

Choose the correct finger: To obtain a good fingerprint image, and a good fingerprint template, the print itself must be a good quality. A damaged fingerprint, e.g. with cuts, will not result in a high quality template. The most suitable fingers to use are the index finger or middle finger. The small finger is not recommended because it typically contains fewer details.

Troubleshooting & Cleaning

Troubleshooting

If the reader is having difficulty acquiring a scan of your fingerprint, consider the following:

- The reader window may need cleaning, see *Cleaning the Reader*.
- You may not be touching the reader correctly. In order for the reader to acquire a good scan of your fingerprint, you must place the pad of your finger—not the tip—in the center of the oval window, and apply gentle, even pressure. Do not *roll* your finger. Pressing too hard distorts your fingerprint. Pressing too lightly does not expose a large enough area of your fingerprint.
- Make sure you hold your finger on the reader until you see the reader light blink. This can take longer if the skin is dry. Then, lift your finger. Although you may use any finger with the reader, your index finger of either hand works best.
- If the reader is capturing your fingerprint (as indicated by the reader blink) and you have tried all the above suggestions, you may need to re-register your fingerprint.

Cleaning the Reader

Depending on the amount of use, the reader window may need to be cleaned periodically.

To clean it, apply the sticky side of a piece of adhesive cellophane tape on the window and peel it away.
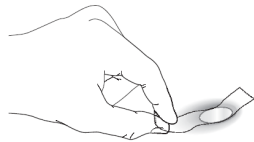
Under heavy usage, the window coating on some readers may turn cloudy from the salt in perspiration. In this case, gently wipe the window with a cloth (not paper) dampened with a mild ammonia-based glass cleaner.

Reader Maintenance Warnings

There are several things you should never do when cleaning or using the reader

- Do not pour the glass cleaner directly on the reader window.
- Do not use alcohol-based cleaners.
- Never submerge the reader in liquid.
- Never rub the window with an abrasive material, including paper.
- Do not poke the window coating with your fingernail or any item, such as a pen.

Caution: The fingerprint reader is for indoor home or office use only.

USB Controller Configuration

Check the USB controller configuration using the following steps:

1. Click **Start** → **Settings** → **Control Panel** → **System**.

2. Click the **Hardware** tab.

3. Click the **Device Manager** button.

   - In the Device Manager verify that you have an entry called *Universal Serial Bus controller*.

   - If this entry does not exist, you need to contact the vendor of your USB hardware for information on how to correctly configure the USB controller.

4. If the entry does exist, continue to next step.

5. Open the **Universal Serial Bus controller** icon by clicking on the plus **(+)** sign to the left of the icon. Verify that there is a *USB Root Hub* icon and an icon for the *USB Port*.

   - If either of these icons is missing or have exclamation points or red X's on them, contact the computer manufacturer for information on correctly configuring the USB Controller.

   - If these settings appear to be correct, the sensor may be faulty and should be replaced.