

SAVANCE
EIOBOARD

L-1 Identity Solutions Fingerprint Reader

Savance

Phone: 248-478-2555 | Fax: 248-478-3270

www.eioboard.com | support@eioboard.com | www.savance.com

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L-1 Identity Solutions Fingerprint Reader

Fingerprint Reader Hardware Installation (4G V-Flex)

Here are the instructions for setting up the fingerprint reader to the computer. This applies to the 4G V-Flex model only.

1. Unbox your L-1 Identity Solutions Fingerprint Reader.



2. Connect the power adapter into the back of the unit in the round connector. Plug the other end into the wall. The unit's lights should turn on.



L-1 Identity Solutions Fingerprint Reader



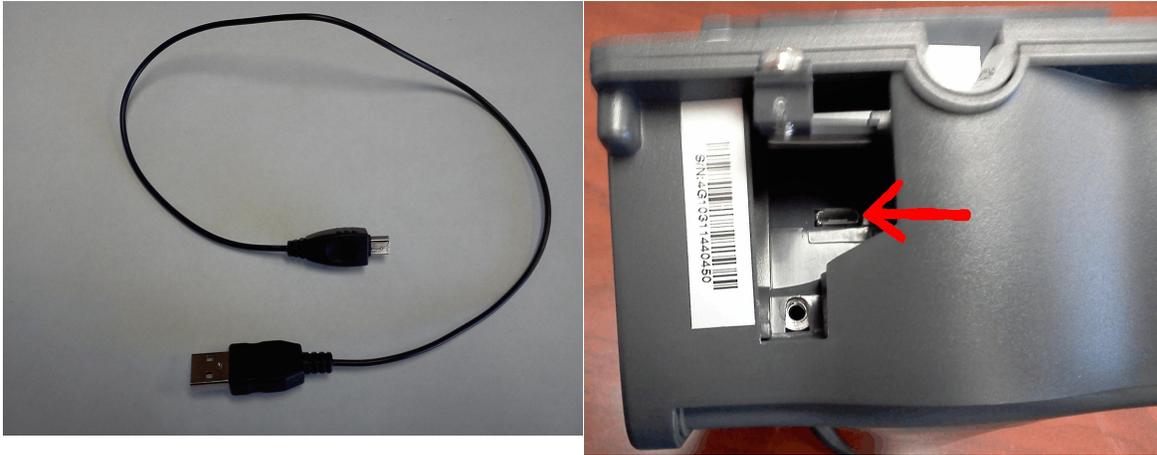
3. One option for communicating between the fingerprint reader and the SecureAdmin fingerprint software is to use an Ethernet cable. You would plug one end of the Ethernet cable into the back of the unit, and the other end into a router or switch on your network. Please note, the EIOBoard software cannot communicate with the fingerprint reader with this option.



4. A second option for communicating between the fingerprint reader and the SecureAdmin fingerprint software is to use a micro USB cable (A-Male to Micro-B). If you have connected the unit to your network using the Ethernet cable option, you wouldn't need to do this step. You would plug one end of the USB cable into the bottom of the unit, and the other end into the computer. You would need to unscrew the bottom cover on the fingerprint reader in order to access the USB jack. Please note, the EIOBoard software cannot communicate with the fingerprint reader with this option.



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5. Now your device should be powered on and ready to be connected to the SecureAdmin software.

Fingerprint Reader Hardware Installation (4G V-Flex Lite)

Here are the instructions for setting up the fingerprint reader to the computer. This applies to the 4G V-Flex Lite model only.

1. Unbox your L-1 Identity Solutions Fingerprint Reader.



L-1 Identity Solutions Fingerprint Reader

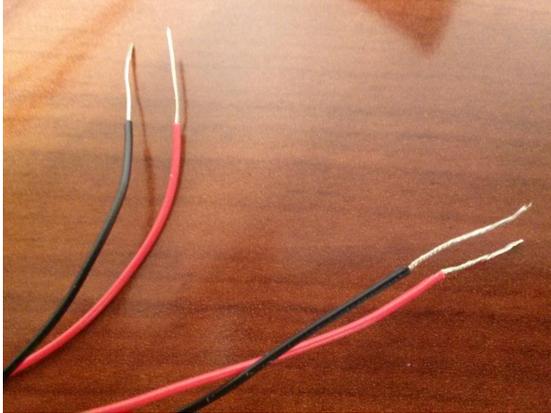


2. The power adapter must be wired to the wiring harness of the fingerprint reader. Cut the end off the AC adapter and separate the voltage and ground wires. Locate the DC 12-24V (red) and DC GND (black) wires on the wiring harness. There will be 2 of each, and all 4 wires must be used. Connect the red wires on the harness to the voltage wire on the adapter. Connect the black wires on the harness to the ground wire on the adapter.



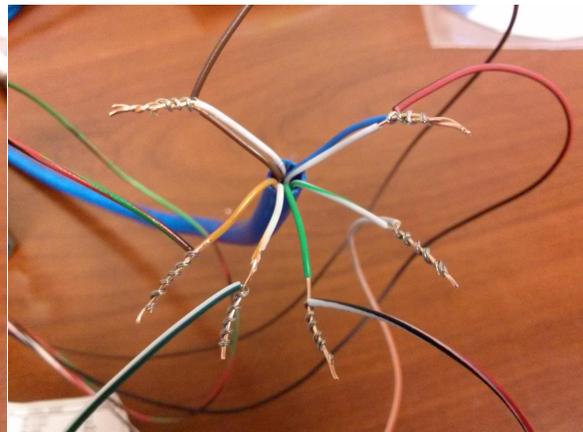
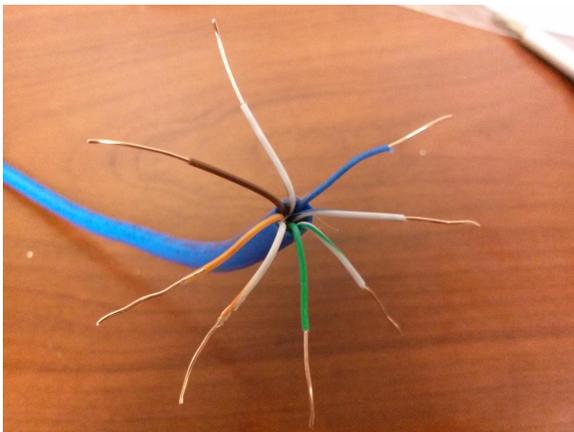


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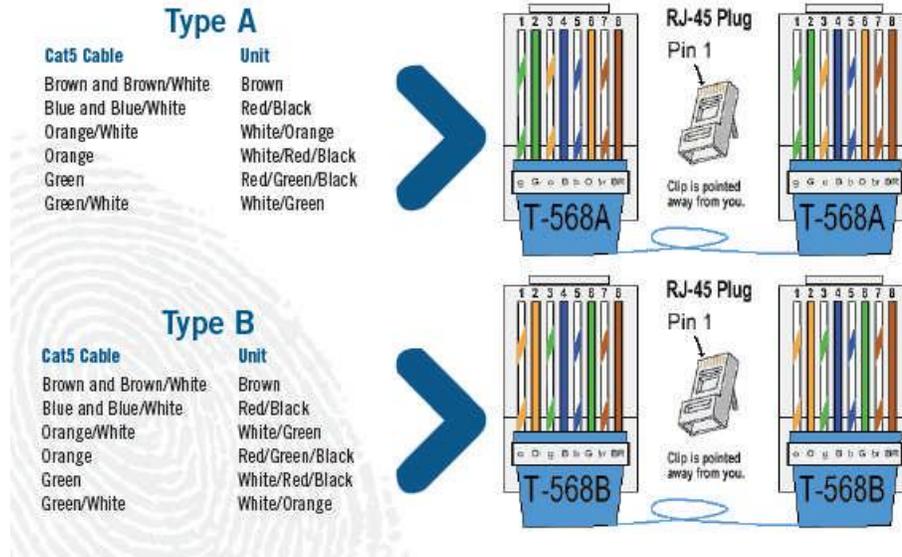
4G V-FLEX LITE		
Harness Pin	Harness Connector	Harness Wire Color
1 & 2	DC 12-24V	Red
3 & 4	DC GND	Black

- One option for communicating between the fingerprint reader and the SecureAdmin fingerprint software is to use an Ethernet cable. You would plug one end of the Ethernet cable into a router or switch on your network. There is no Ethernet jack on the 4G V-Flex Lite, so the wires need to be spliced and directly wired to the wiring harness connected to the reader. Use the screenshots below for reference. Please note, the EIOBoard software cannot communicate with the fingerprint reader with this option. Also note that the PoE only powers the Smart Card reader function of the fingerprint reader, which EIOBoard does not support at this time.





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4G V-FLEX LITE					
Harness Pin	Harness Connector	Harness Wire Color	Ethernet Pin	T-568A Color	T-568B Color
21	ETH_TXP	White/Green	1	Green/White	Orange/White
22	ETH_TXN	Red/Green/Black	2	Green	Orange
23	ETH_RXP	White/Orange	3	Orange/White	Green/White
24	ETH_RXN	White/Red/Black	6	Orange	Green
25	POE_VIN+	Red/Black (NOT Black/Red)	4 & 5	Blue & Blue/White	Blue & Blue/White
26	POE_VIN-	Brown	7 & 8	Brown & Brown/White	Brown & Brown/White

- A second option for communicating between the fingerprint reader and the SecureAdmin fingerprint software is to use a micro USB cable (A-Male to Micro-B). If you have connected the unit to your network using the Ethernet cable option, you wouldn't need to do this step. You would plug one end of the USB cable into the bottom of the unit, and the other end into the computer. You would need to unscrew the bottom cover on the fingerprint



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reader in order to access the USB jack. Please note, the EIOBoard software cannot communicate with the fingerprint reader with this option.

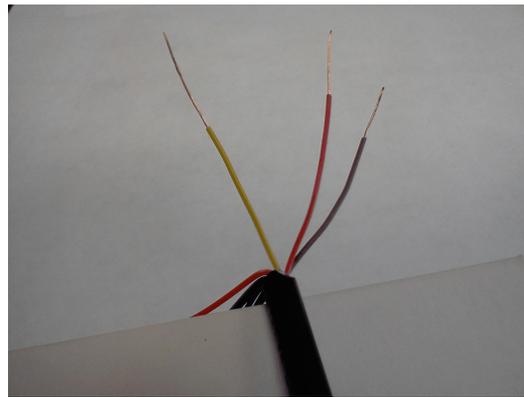


5. Now your device should be powered on and ready to be connected to the SecureAdmin software.

Kiosk/Punch RS-232 Wiring Installation (Option 1)

This option is ONLY available with the non-Lite model.

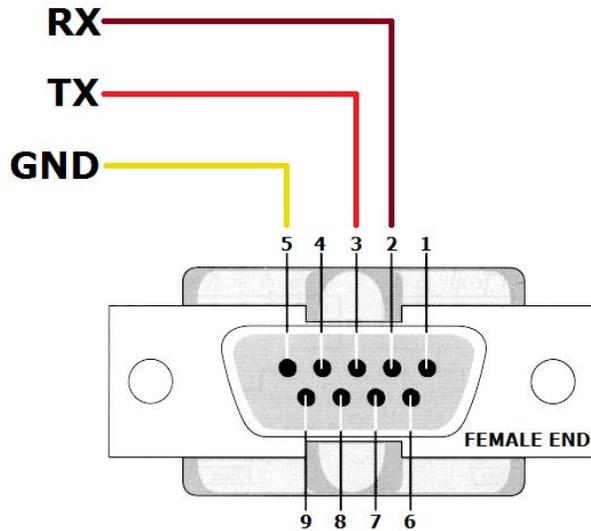
1. The fingerprint reader needs an additional wired connection to the computer. This is so the device can communicate with the EIOBoard Kiosk software. You should have a serial cable with a brown, red, and yellow wire sticking out of one end.





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- On the 9-pin serial cable that Savance supplies, the red wire (pin 2) connects to TX, the brown wire (pin 3) connects to RX, and the yellow wire (pin 5) connects to GND. Other serial cables may have different colored wires associated with the pin numbers.



- You will need to twist together the three wires on the serial cable to the corresponding wires on the supplied wire harness. You will need to use the following 3 wires on the harness:

Harness Pin	Harness Connector	Harness Wire Color	Serial Pin	Serial Connector	Serial Wire Color
2	RS232_RX	Violet/White	3	TX	Red
4	RS232_TX	Violet	2	RX	Brown
5 or 6	SGND	Black/Red	5	GND	Yellow



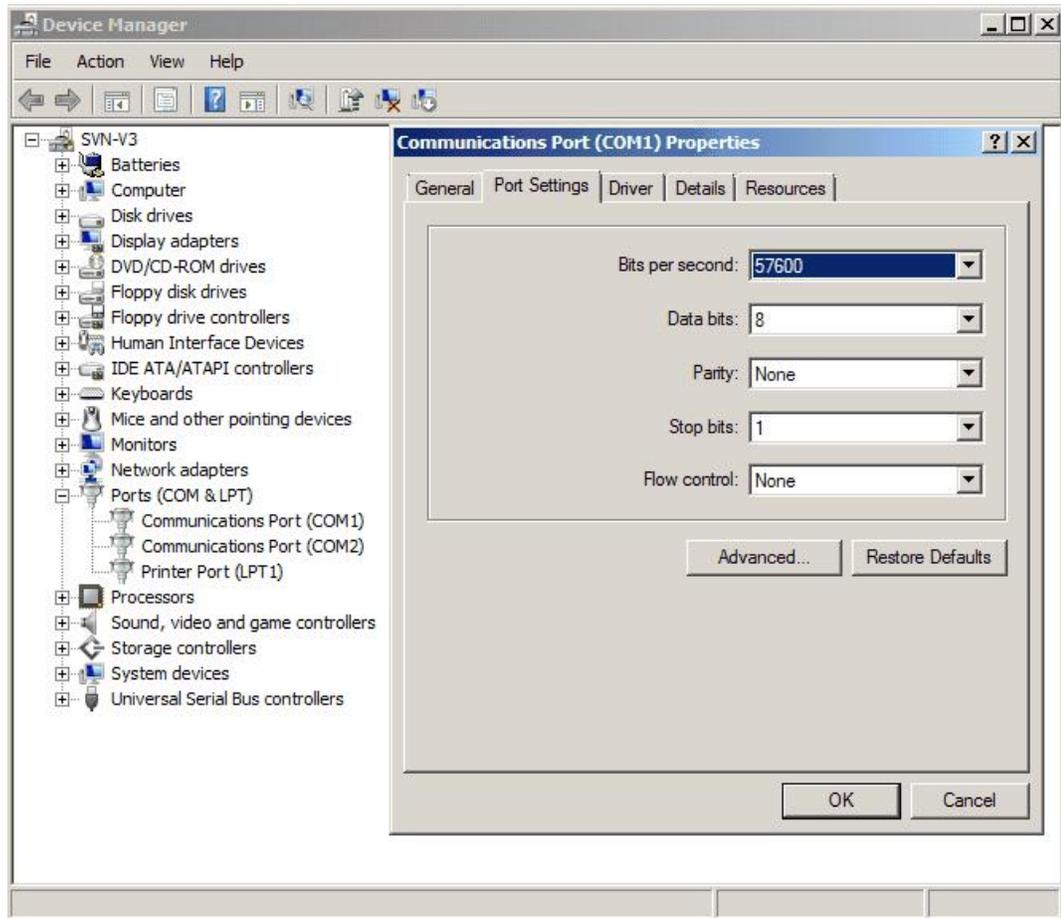
L-1 Identity Solutions Fingerprint Reader



4. You can now plug one end of the wired cable into the fingerprint reader and the other end into an available COM port on the computer. You will then need to configure the COM port that the serial cable is plugged into. This can be done in Device Manager, which can be launched from the Control Panel. Navigate to Ports (COM & LPT) and then select the Communications Port that will be used. Right-click and hit Properties. Tab over to Port Settings. Make sure the bits per second is 57600, data bits is 8, parity is None, stop bits is 1, and flow control is None. Hit OK to save. It is now recommended to restart the computer after the serial connection has been made.



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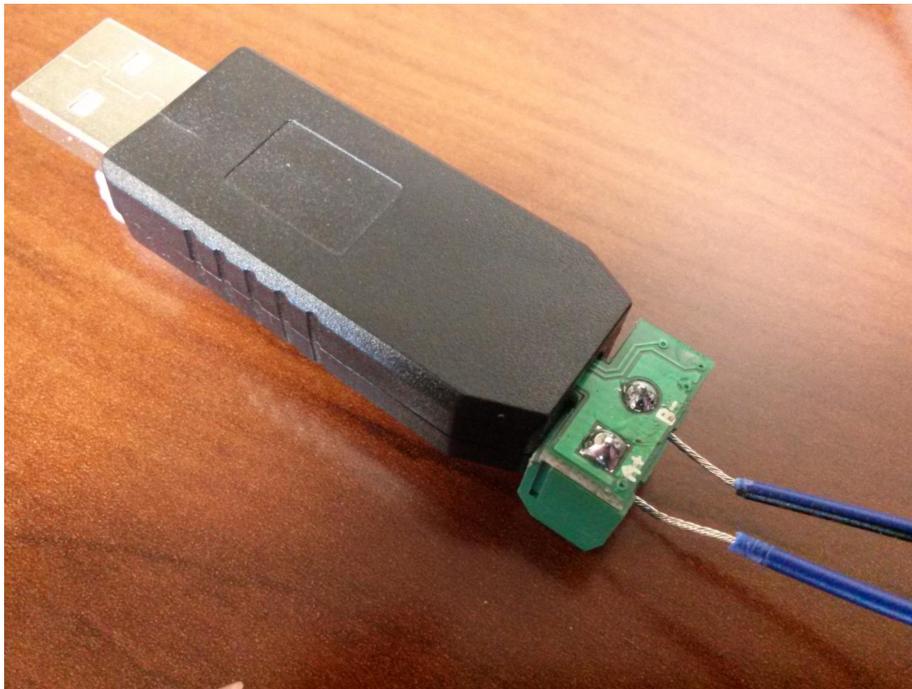




Kiosk/Punch RS-485 Wiring Installation (Option 2)

If you have a RS-485 to USB adapter, that can be used in lieu of a modified serial cable and a Serial-to-USB adapter. From the fingerprint reader wiring harness, connect the blue wire to the A+ wire connector, and the blue/black wire to the B- connector. Plug the USB connector into the PC, and it will show up as a virtual COM port in the Device Manager. Set the bits per second to 57600, just like in the screenshot above. Now you should be ready to configure the Kiosk or Punch software to use this COM port. If Windows does not automatically install the driver, you can obtain it from here:

- <http://www.eioboard.com/downloads/drivers/CH341SER.ZIP>





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4G V-FLEX			
Harness Pin	Harness Connector	Harness Wire Color	USB to RS-485 Adapter Connector
1	RS485A	Blue	A+
3	RS485B	Blue/Black	B-
5 or 6	SGND	Black/Red	N/A

4G V-FLEX LITE			
Harness Pin	Harness Connector	Harness Wire Color	USB to RS-485 Adapter Connector
17	RS485A	Blue	A+
19	RS485B	Blue/Black	B-
20	RS485_GND	Black/Red (NOT Red/Black)	N/A

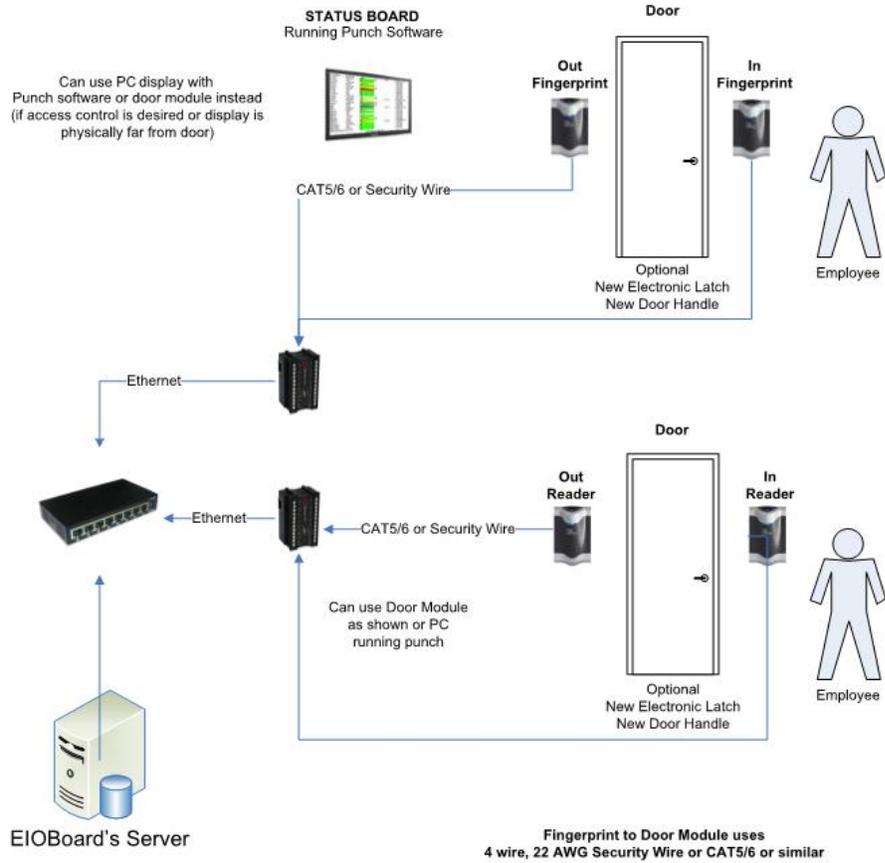
Infinias Door Module Wiegand Wiring Installation (Option 3)

The fingerprint reader can also be attached to the Infinias Door Module for communication with the EIOBoard Server. This option replaces the modified serial cable method. This option is generally used when you need the fingerprint reader to also control a door latch. This option is also ideal when the fingerprint reader is being placed too far away from the Kiosk to make the serial connection. **NOTE: This option applies to customer-hosted EIOBoard installations only.**

1. Here is an example diagram of one possible fingerprint reader setup with the Infinias Door Module. This example shows a configuration of 4 fingerprint readers used to control 2 doors. In this scenario, 2 Infinias Door Modules would be required.



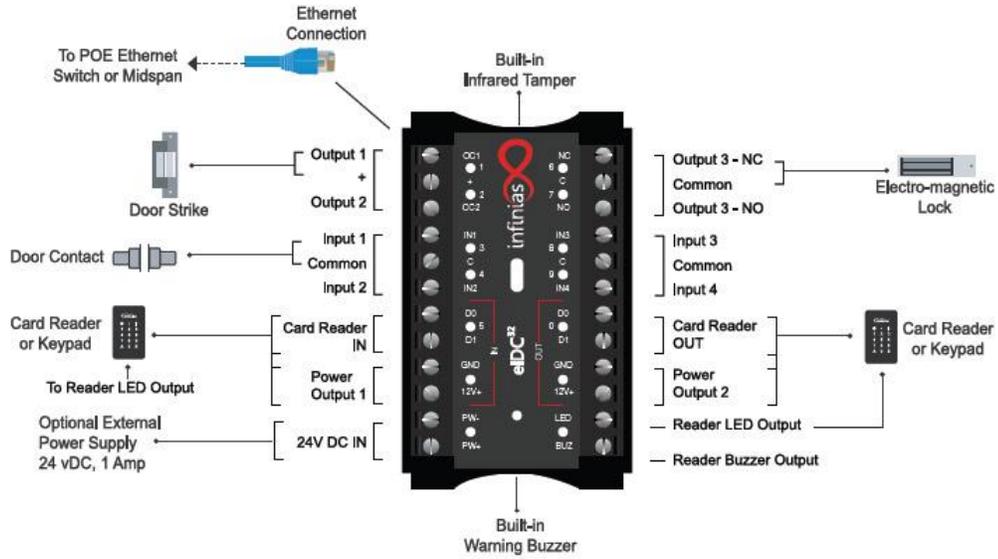
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- Here is a closeup of the front of the unit. This also shows you what each of the inputs and outputs are used for.



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- The Infinias door module must be powered over Ethernet (POE). A power supply like this can be used. In this picture, the white Ethernet cable plugs into the Infinias unit. The blue cable plugs into your Local Area Network. The power supply plugs into a wall outlet for power.





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4. You will need to insert three wires into the Infinias unit from the supplied wire harness, which plugs into the fingerprint reader. You will need to use the following 3 wires on the harness:

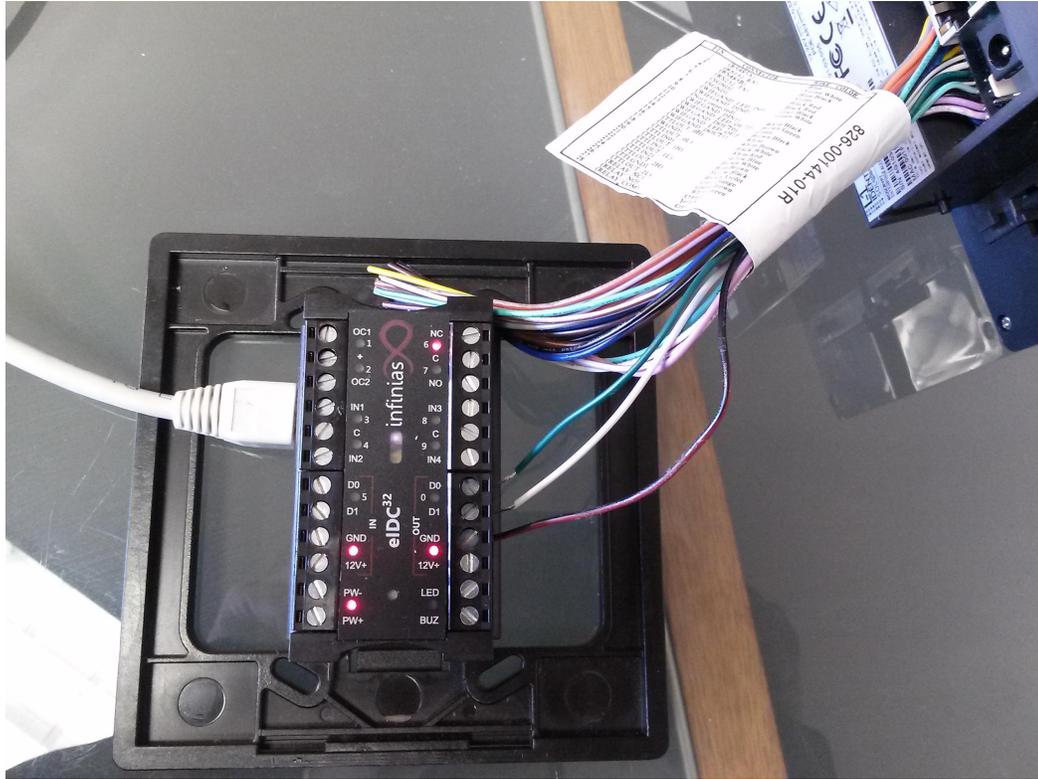


Harness Pin	Harness Connector	Harness Wire Color	Infinias Input
12	WIEGAND_DOUT 0	Green	D0
14	WIEGAND_DOUT 1	White	D1
5 or 6	SGND	Black/Red	GND

5. You can insert the wires on either the IN or the OUT side of the Infinias unit, depending if your fingerprint reader is meant for entering (coming in) or exiting (going out) a location. If you have two fingerprint readers, you can attach both to the unit. The picture below depicts a fingerprint reader in the OUT setup.



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6. If the fingerprint reader needs to be a longer distance away from the Infinias unit, you can use 4 wire, 22 AWG security wire, CAT 5/6, or something similar in between.
7. The Infinias Door Module communicates to the EIOBoard server directly to change statuses for fingerprint authenticated users. For information about connecting the Infinias unit to the server or setting it up for door access control, please refer to the respective help guides on our website, www.eioboard.com.



L-1 Identity Solutions Fingerprint Reader

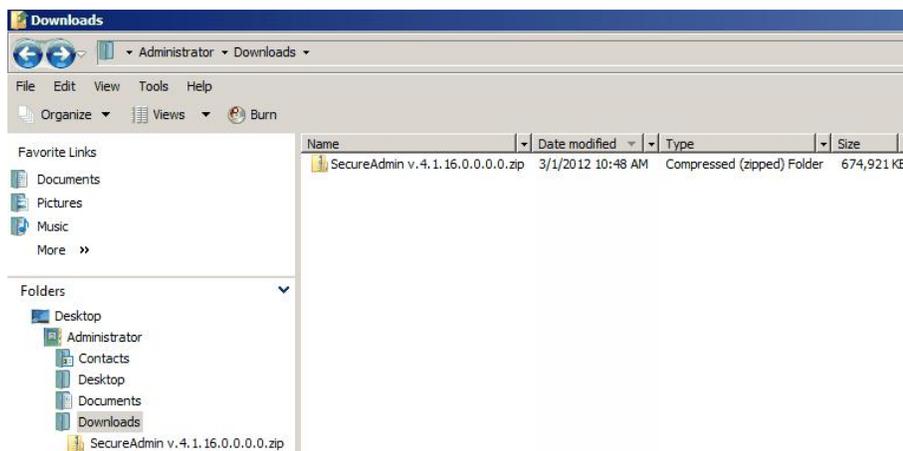
SecureAdmin Software Installation

Follow this software installation section **only** if the SecureAdmin software has not already been installed on your computer. **Make sure you download the correct software package pertaining to your specific model of the fingerprint reader and your computer.**

1. Download the L-1 Identity Solutions SecureAdmin software. You can obtain it from these link:

4G V-Flex	
64-bit Version	http://www.eioboard.com/downloads/SecureAdmin_v4.1.16_64-bit.zip
32-bit Version	http://www.eioboard.com/downloads/SecureAdmin_v4.1.16_32-bit.zip

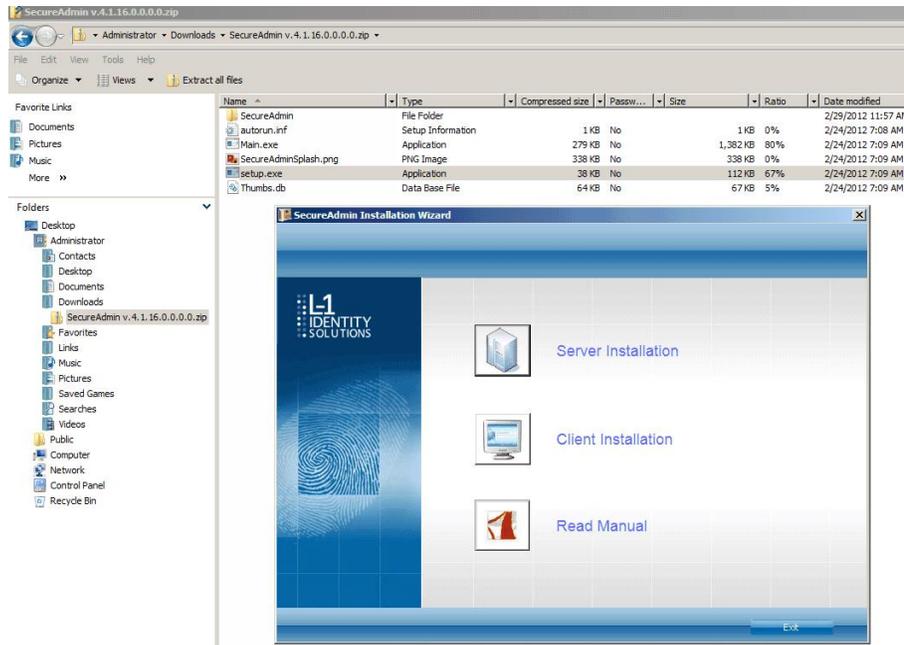
4G V-Flex Lite	
64-bit Version	http://www.eioboard.com/downloads/SecureAdminLite_v4.1.16_64-bit.zip
32-bit Version	http://www.eioboard.com/downloads/SecureAdminLite_v4.1.16_32-bit.zip



2. Double-click on the SecureAdmin_v4.1.16 ZIP file to view its contents. Run the setup.exe file by double-clicking on it. The SecureAdmin Installation Wizard will pop up on the screen.



L-1 Identity Solutions Fingerprint Reader



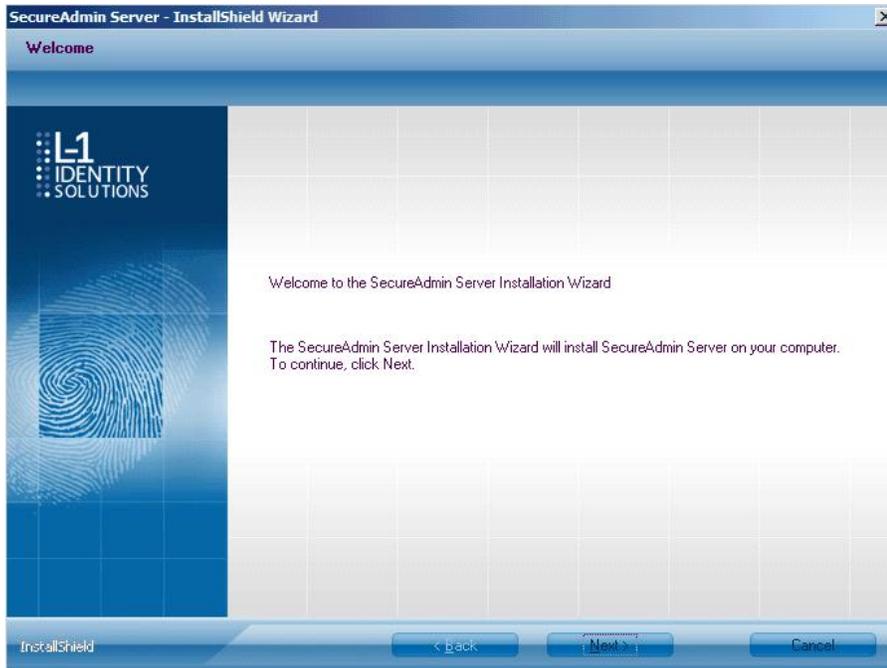
3. Choose the 'Server Installation' option on this screen.



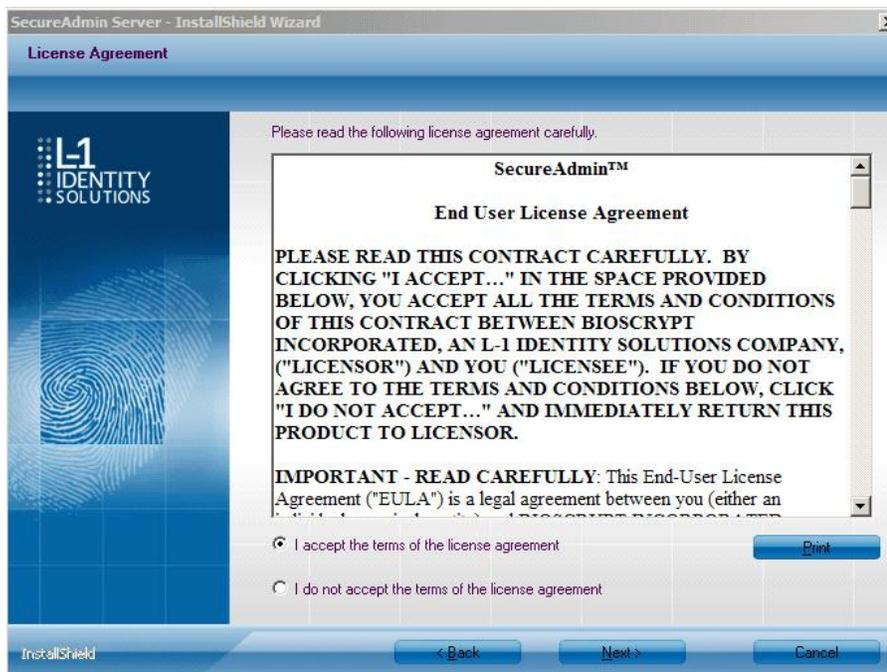
4. The SecureAdmin Server Installation Wizard will start and prompt you to click Next to continue.



L-1 Identity Solutions Fingerprint Reader



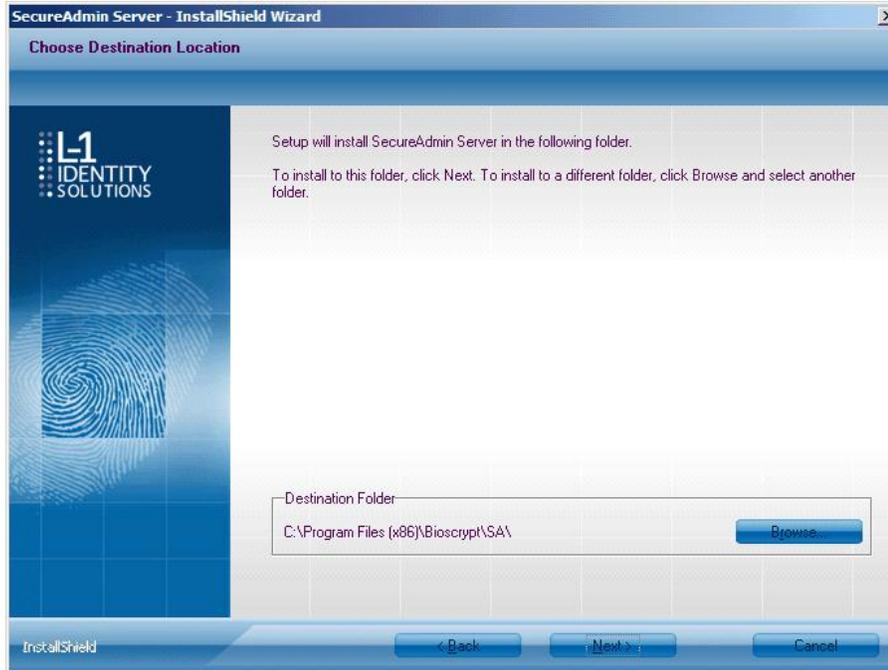
5. Choose 'I accept the terms of the license agreement' and hit Next.



6. The next screen will allow you to change the install destination folder for the server. You can hit Browse to change this. Otherwise, you can hit Next to continue.



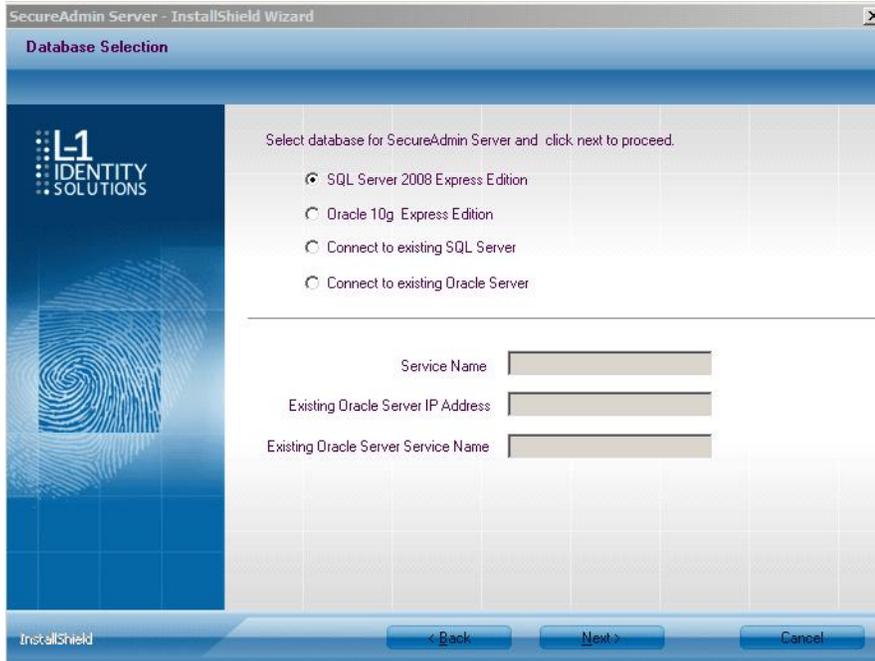
L-1 Identity Solutions Fingerprint Reader



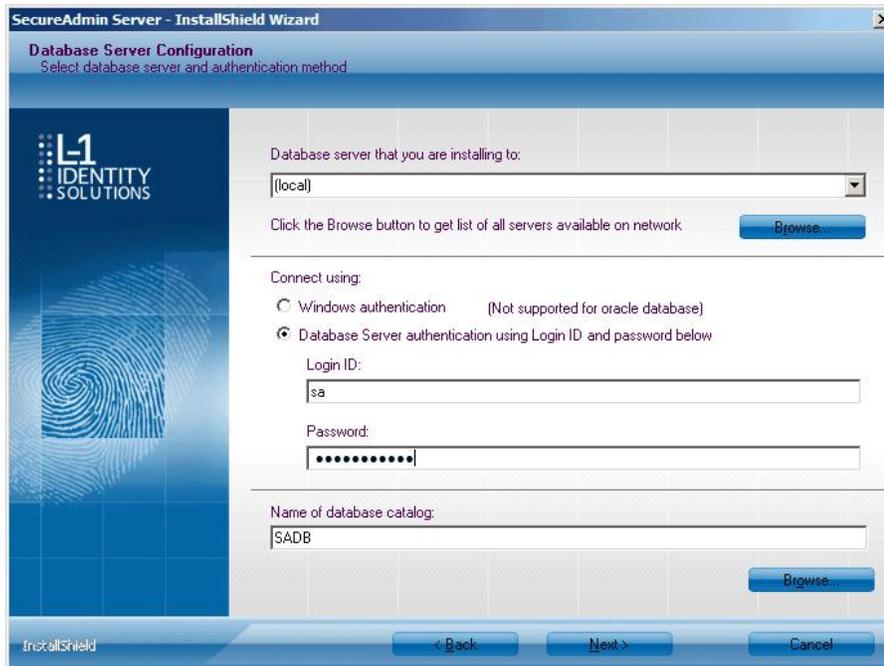
7. You now need to select where the fingerprint database is to be installed. If you already have an existing SQL Server set up on this or another computer that you would like to use, you can choose the 'Connect to existing SQL Server' option. Otherwise, you can leave 'SQL Server 2008 Express Edition' selected and hit Next.



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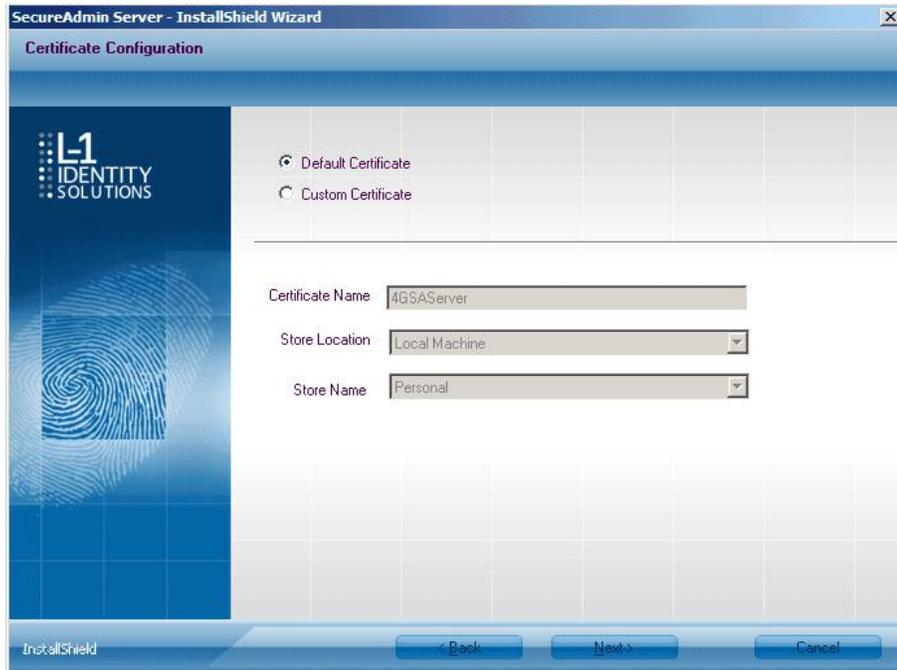
8. This screen will allow you to configure the database. Choose 'Database Server authentication using Login ID and password below'. Type in EBwebs@vant for the password. Hit Next.



9. Leave 'Default Certificate' selected and hit Next.



L-1 Identity Solutions Fingerprint Reader



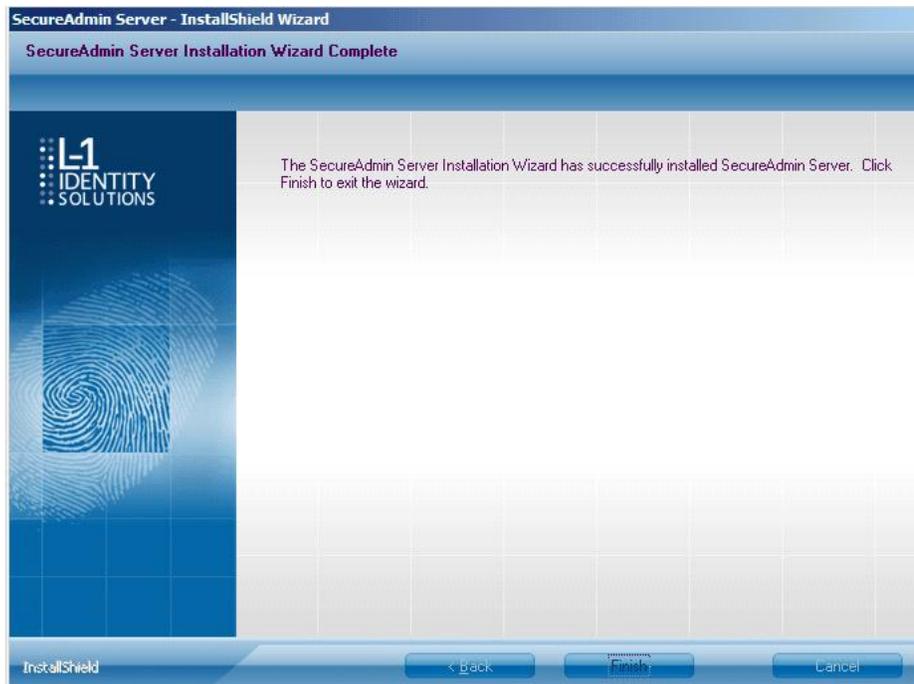
10. You will now be prompted to enter a user name and password for the SecureAdmin Server. Type in EBwebs@vant in the 'Password' and 'Confirm Password' boxes and hit Next.





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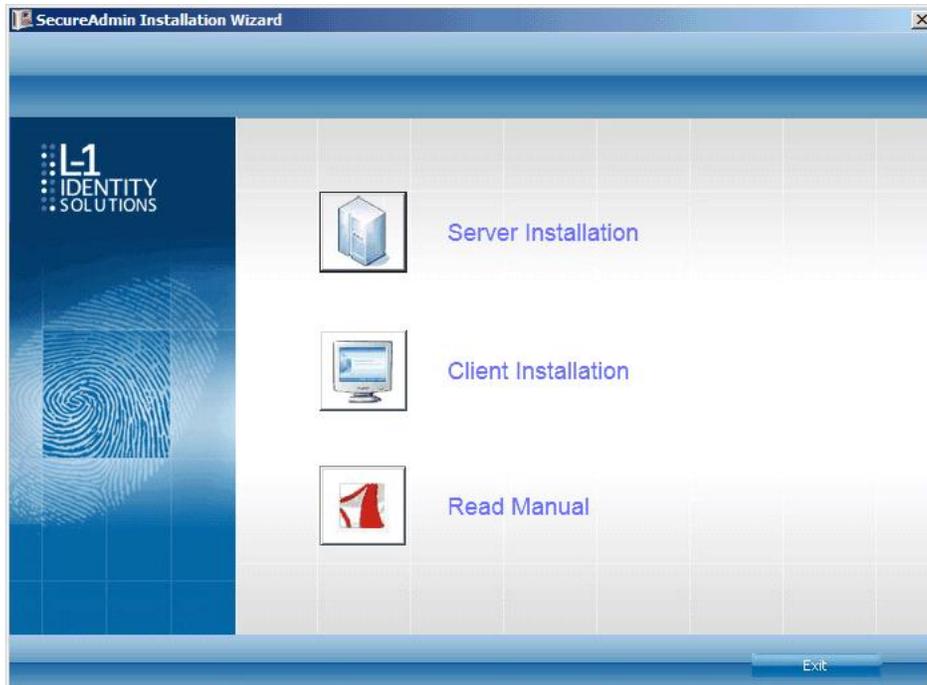
11. The installation process will now begin, and may take a few minutes to complete. Once it does, you should get a confirmation screen that the SecureAdmin Server Installation Wizard has successfully installed SecureAdmin Server. Click Finish.



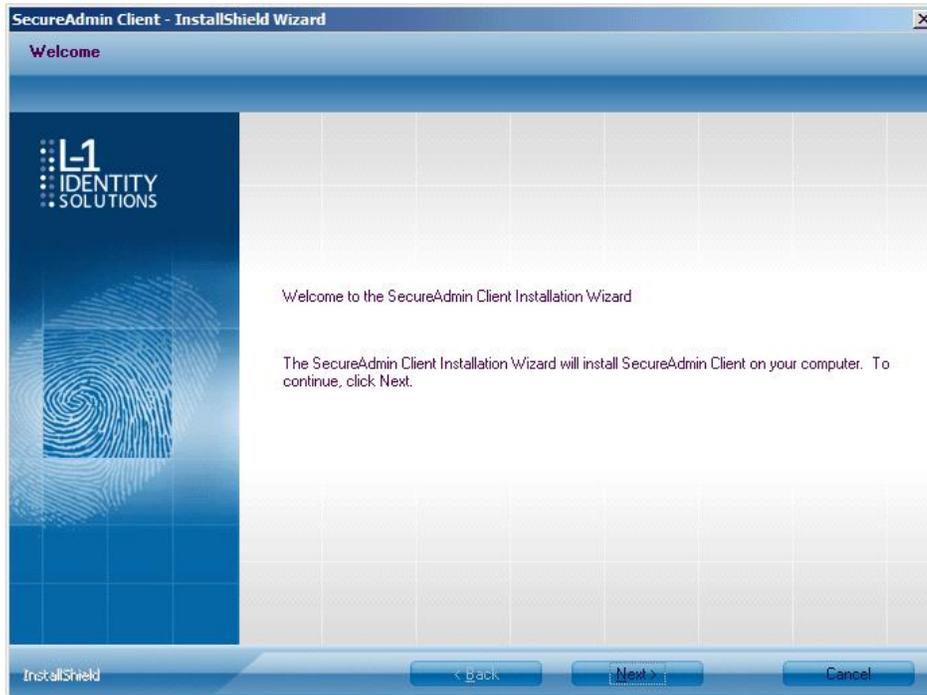
12. You will be brought back to the first SecureAdmin Installation Wizard screen that you saw. Now choose 'Client Installation'.



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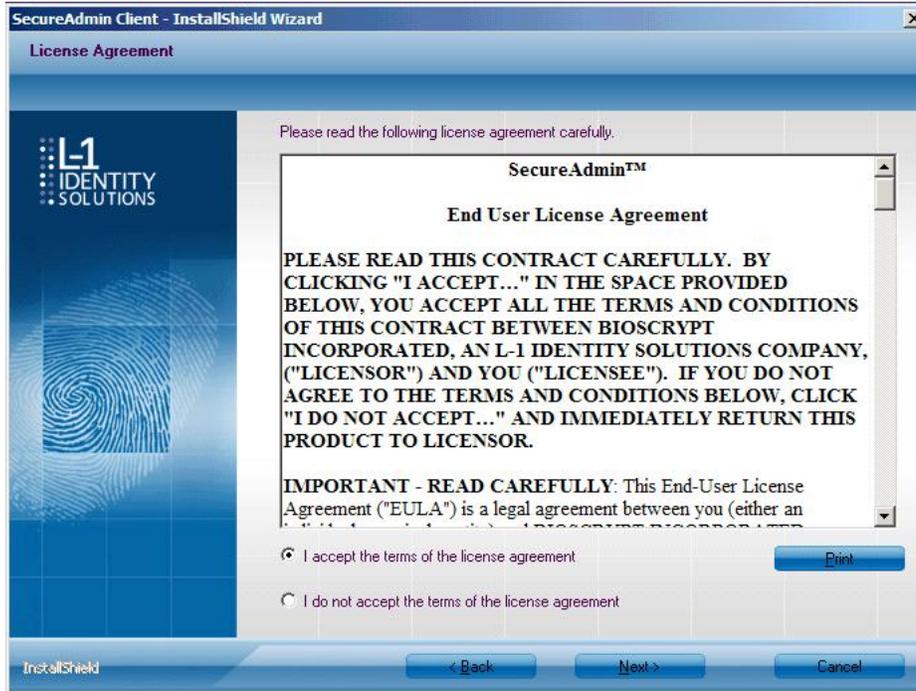
13. The SecureAdmin Client Installation Wizard will start and prompt you to hit Next to continue.





L-1 Identity Solutions Fingerprint Reader

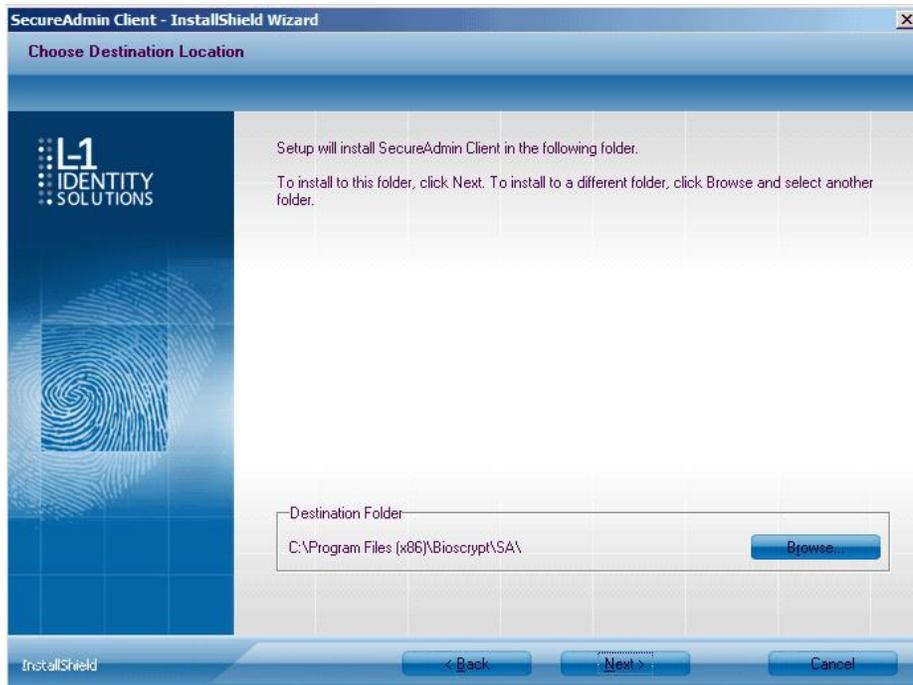
14. Choose 'I accept the terms of the license agreement' and hit Next.



15. The next screen will allow you to change the install destination folder for the client. You can hit Browse to change this. Otherwise, you can hit Next to continue.



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16. You can leave 'Display fingerprint image' selected and hit Next.



17. Leave 'Default Certificate' selected and hit Next.



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18. The SecureAdmin Client installation will now begin. Once it finishes, place a checkmark in the 'Create Desktop Icon' checkbox and hit Finish.

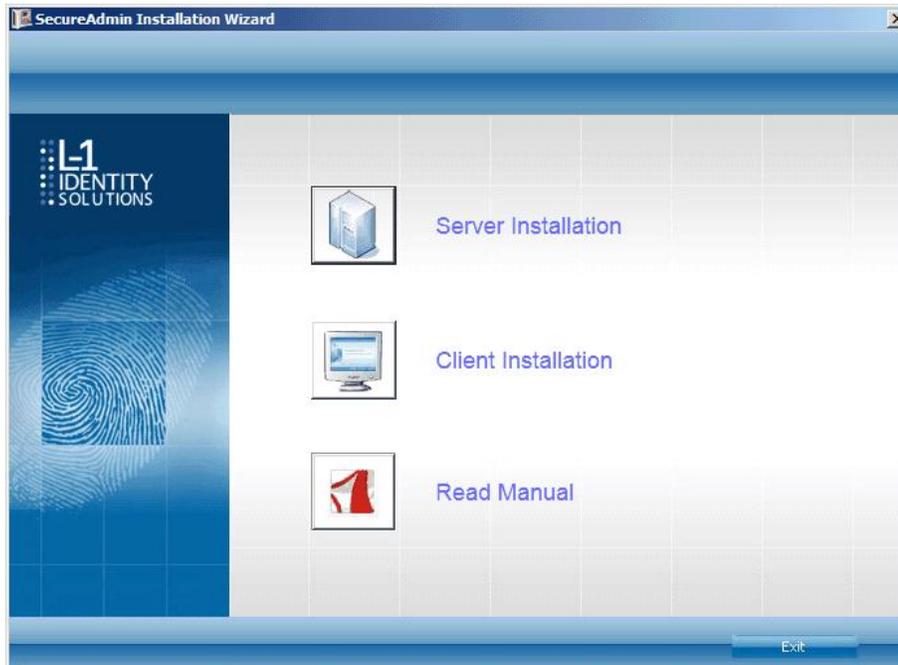


19. You will once again be brought back to the first SecureAdmin Installation



L-1 Identity Solutions Fingerprint Reader

Wizard screen that you saw. Now hit Exit to close this out.



20. The SecureAdmin Server and Client are now installed. You are now ready to begin configuration.

SecureAdmin Software Configuration

Once the L-1 Identity Solutions Fingerprint Reader and SecureAdmin software have been installed on your computer, you are ready to configure it.

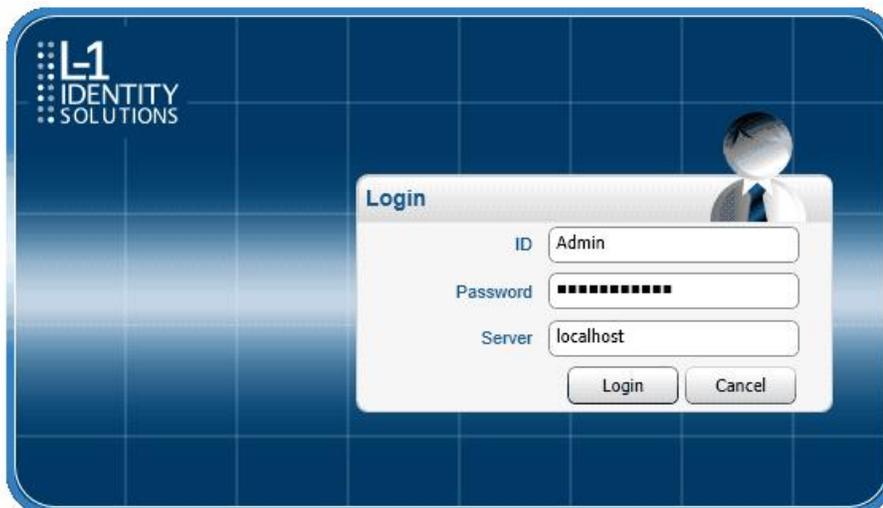
1. Locate the SecureAdmin icon on your desktop. Double-click to launch the SecureAdmin Client.



L-1 Identity Solutions Fingerprint Reader



2. You will be brought to the login screen. Enter Admin as the ID and EBwebs@vant as the password, and then hit the Login button.





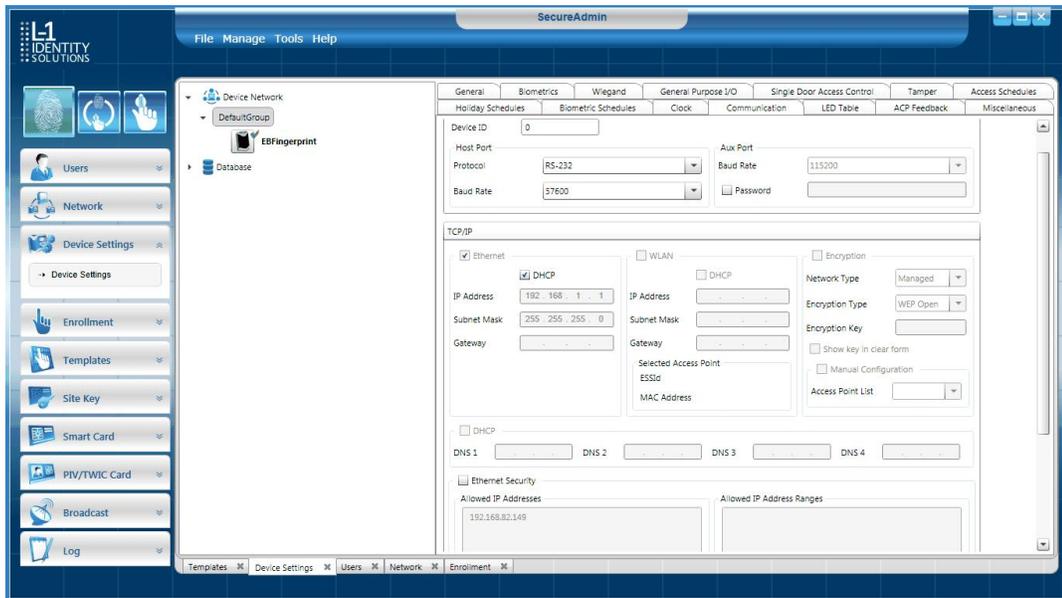
L-1 Identity Solutions Fingerprint Reader

- You will be brought to the SecureAdmin application's main screen. The first thing you need to do is configure the device, so make sure it is attached to the PC and powered on. Click the Device Settings button in the left column. Hit the arrow next to Device Network to expand that. Then hit the arrow next to DefaultGroup. You should now see EBFingerprint underneath DefaultGroup, and the icon should have a green checkmark on it. This means that the fingerprint reader is attached to the computer and functioning correctly. Click on EBFingerprint, and you will have the option to select from a number of different tabs on the right. Change the following settings to these values on the Communication tab, underneath Host Port.

Host Port

Protocol: RS-232 <OR> RS-485
Baud Rate: 57600

After making these changes, be sure to scroll down to the bottom and hit the Apply button to save your settings.



- Likewise, click on the Miscellaneous tab. Under Send Verification Result, place a checkmark in the Always (With ID) checkboxes for both Host Port and Auxiliary Port.

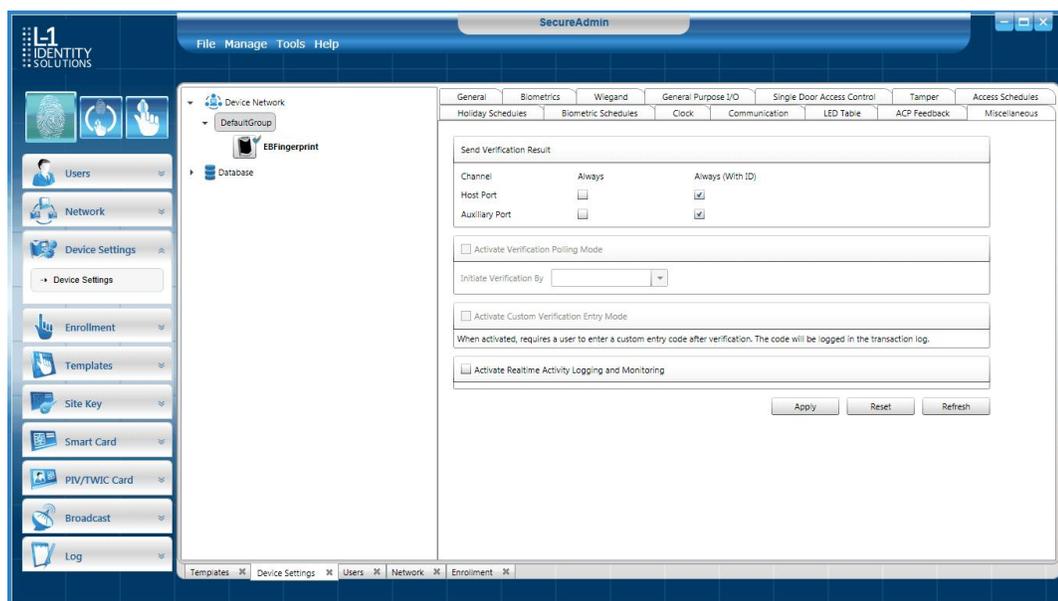
Send Verification Result

Host Port: Always (With ID)
Auxiliary Port: Always (With ID)



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Hit the Apply button to save your settings.



5. You are now ready to begin the fingerprint enrollment process. Hit the Enrollment button on the left column. Hit the Fingerprint Quick Enrollment button.



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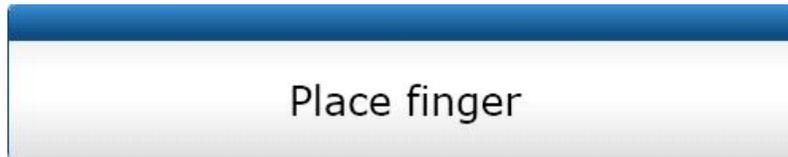


6. The Enroll Finger screen will come up. Make sure you select EBFingerprint as the current device, and make sure it says that it is online. You need to enter the Template ID, which should match the EIOBoard User ID of the person you are enrolling. This information is stored in the EIOBoard user's profile. Every person who will be using the fingerprint reader should have a unique user ID stored in their profile. Once this information is keyed in under Template ID, hit the Enroll button.



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7. You will now be prompted to place the finger on the fingerprint reader.



8. The fingerprint will be scanned, and an image of it will appear on the screen. It will also give you a measurement of the quality, content, and minutiae. If you would like to capture a better quality fingerprint scan, then you can hit the Re-Enroll button. Otherwise, you can hit the Next button.

9. Now you will be brought to the User Information screen. Fill out the first



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and last name of the user that you are enrolling, then hit the Save button. Make sure the template ID carried over correctly from the previous screen. Also choose which finger of which hand was scanned. Now hit the Next button.

The screenshot shows a software window titled "Step 2 of 3 User Information". It is divided into three main sections: "User", "Template User Data", and "Finger Data".

- User Section:** Contains text boxes for "First Name" (Test User), "Middle Name", and "Last Name" (User). It also has dropdown menus for "Company" (Demo Company), "Site" (Demo Site), and "Department" (Demo Department). A "User Group" dropdown is set to "Demo User Group". A "Save" button is located to the right.
- Template User Data Section:** Includes a "Template ID" text box (151300), a "User Type" dropdown (User ID), an "Index" text box (0), and a "Password" checkbox. It also features "Template Name" (Test User), "Access Schedule" (0: No Access Schedule), "Employee ID" (0), "Observe Holidays" checkbox, and "Write Wiegand String" checkbox. An "Extended ID" text box is at the bottom.
- Finger Data Section:** Shows a "Fingerprint Data" image of a scanned fingerprint. To its right are two hand diagrams with dots indicating finger positions. Below the diagrams is an "Activate Duress Finger Mode" checkbox. On the far right, there are two "Security" dropdown menus, both set to "Medium".

At the bottom of the window are "Next" and "Close" buttons.

10. The Broadcast Template screen will come up. Make sure Save to Device(s) is checked. Also make sure Device network, DefaultGroup, and EBFingerprint are all checked. Hit the Finish button.

The screenshot shows a software window titled "Step 3 of 3 Broadcast Template". It contains several checkboxes and a tree view:

- Checkboxes: "Save to Database" (checked), "Save to Smart Card" (unchecked), and "Save to Device(s)" (checked).
- Tree View: A tree structure where "Device network" is checked, "DefaultGroup" is checked, and "EBFingerprint" is checked.

At the bottom of the window are "Verify", "Finish", and "Close" buttons.



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11. Make sure the next screen says that the template transferred successfully. Hit the OK button.



12. Your SecureAdmin software should now be fully configured and ready to work with the EIOBoard Kiosk.

EIOBoard Kiosk Software Configuration

You are now ready to configure the EIOBoard Kiosk to work with the fingerprint reader. If the software hasn't already been installed, first follow this guide for instructions on doing that:

<http://www.eioboard.com/HelpfulGuidesandPages/KioskGettingStarted/Installation.aspx>

1. Locate the EIOBoard Kiosk icon on your desktop. Double-click to launch.





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- Click the Employee Login button. Enter 7282623 for the User ID, and then hit the Login button.

4:11:59 PM

Please Enter your User ID

7282623

1	2	3
4	5	6
7	8	9
Clear	0	<

Login

Main Screen



- Click on the Comms tab. On the left side, choose the correct COM port assigned to the fingerprint reader. This information can be obtained in Windows Device Manager. For this example, COM3 was chosen. Select the Fingerprint option underneath that. You can optionally check Prompt with Badge ID for testing purposes, and then uncheck this later when you verify that it is working.

General	Status	Comms	Fingerprint	Door Control	Views	Status Buttons	Returning Buttons	Guests
---------	--------	-------	-------------	--------------	-------	----------------	-------------------	--------

COM3	COM1
------	------

<input type="radio"/> None <input type="radio"/> Magnetic Strip <input checked="" type="radio"/> Fingerprint <input type="radio"/> PCProx/Barcode <input type="radio"/> HID Module	<input checked="" type="radio"/> None <input type="radio"/> Magnetic Strip <input type="radio"/> Fingerprint <input type="radio"/> PCProx/Barcode <input type="radio"/> HID Module
--	--

Assign authentication with unrecognized badge

Allow clearing badge

Prompt with Badge ID

Remove Lead Digit

Assign Badge

Version: 7.1.76

Exit App	Register	Save	Cancel
----------	----------	------	--------



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- Now click on the Fingerprint tab. Choose 115200 as the baud rate. Hit the save button.

General Status Comms **Fingerprint** Door Control Views Status Buttons Returning Buttons Guests

Enable USB UrU/FS80 Fingerprint

Open Registration Form When Not Matched

Acceptance Threshold Value

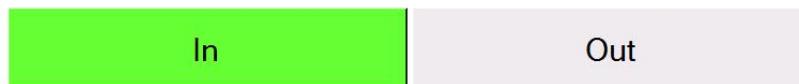
Baud:

Version: 7.1.76

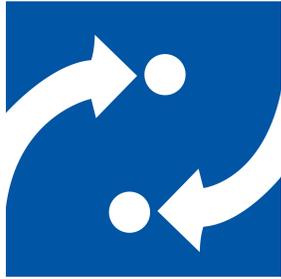
- You will be brought back to the main screen. You are now ready to test this out. Scan your fingerprint, and if everything was set up correctly, you should receive a welcome message.

Welcome Test User!

In



- That should complete your setup of the L-1 Identity Solutions Fingerprint Reader. If you have any questions or need any assistance, feel free to give us a call at 248-478-2555.



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3.1.0**