



Suprema Biometrics Configuration Guide

ACS OnSite Aparato®

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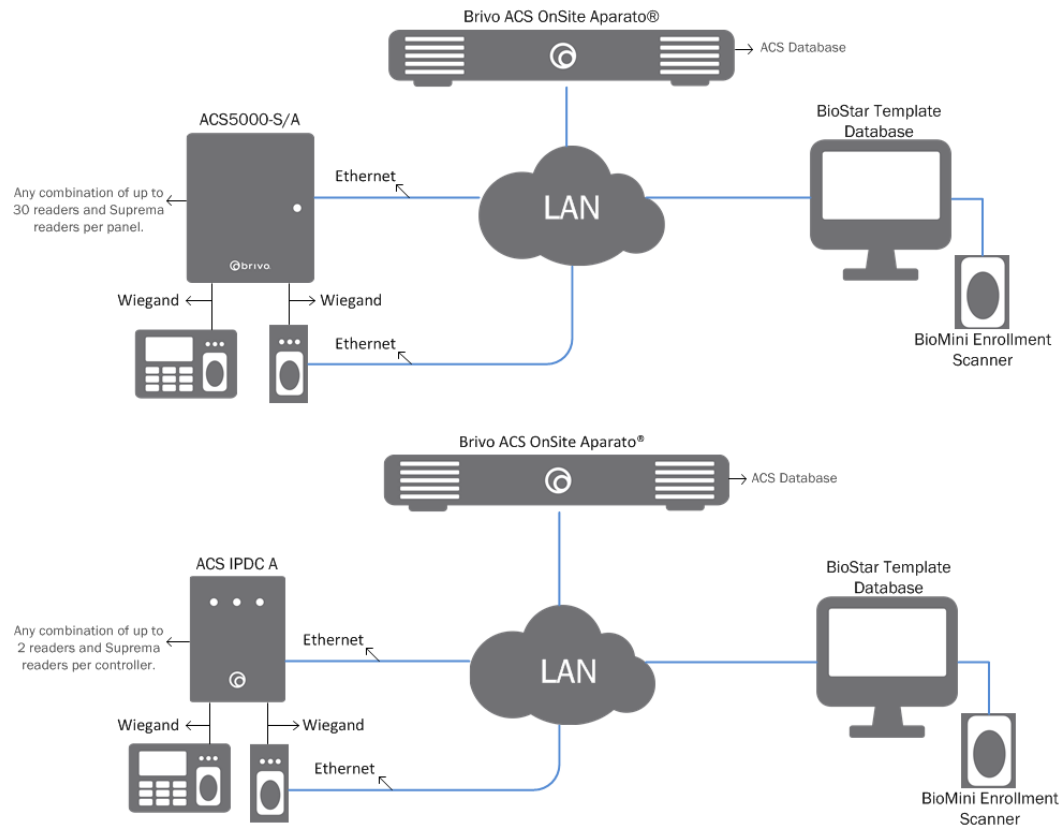
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1. SUPREMA BIOSTAR CONFIGURATION

1.1 OVERVIEW

The Suprema biometric readers communicate with a Brivo access control system after being configured via the Suprema BioStar ACM software. The BioStar must first be installed and configured on a PC. The reader can then be configured and will be able to communicate via Wiegand to a Brivo controller, thus creating a “two database” system. This document will explain the steps needed to configure the BioStar software, to add a device that will communicate to a Brivo controller, and to transfer a user to the device.

The figure below illustrates the Brivo Aparato – Suprema topology.



All wire harnesses necessary are included when purchasing a Suprema reader from Brivo. Suprema 12VDC power supplies for the readers are sold separately.

Be sure to have the following required hardware and software components supplied:

- Suprema fingerprint reader
- Suprema BioMini enrollment scanner
- Brivo controller
- BioStar ACM admin client software
- BioStar ACM admin server software



NOTE: The following includes installation steps for the Suprema BioStar software and the initial programming of the Suprema readers via the local network. The reader comes ready for programming; though prior to conducting the following steps you must power down the Suprema reader and connect it to a hub or switch to create a local private network (do not directly connect to the programming computer).

1.2 BIOSTAR SOFTWARE INSTALLATION AND CONFIGURATION

A. OVERVIEW:


BioStar is a distributed intelligence system. Suprema's access control devices are connected via TCP/IP. User information, access rules and other data can be distributed to each device to speed up authorization time and provide continual operation even when the connection to the network is lost.

B. WORKSTATION SYSTEM REQUIREMENTS:

1. BioStar supports the following operating systems:
 - a. Windows 7
 - b. Windows Server 2008 R2
 - c. Windows Vista.
 - d. Windows XP, Service Pack 1 or later
 - e. Windows 2003
 - f. Windows 2000, Service Pack 4 or later
2. The minimum systems requirement for installing and operating the BioStar software include the following:
 - a. CPU - Intel Pentium or similar processor, capable of processing speeds of 1GHz or faster.
 - b. RAM - 512MB
 - c. HDD - 5GB
3. However, Suprema recommends the following hardware configuration for optimal performance:
 - a. CPU - Intel Pentium Dual Core or similar processor, capable of processing speeds of 2GHz or faster.
 - b. RAM - 1GB for Windows

C. INSTALLATION:

1. Install the BioStar Software:

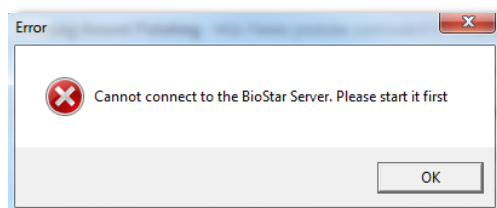
- a.  Contact Brivo Customer Care for a link to download the BioStar software:
 - i. 866-274-8648 option 1
 - ii. customercare@brivo.com

1.3 START THE SERVER

A. On your desktop, you should find a green icon labeled **BioStar Server Config**.



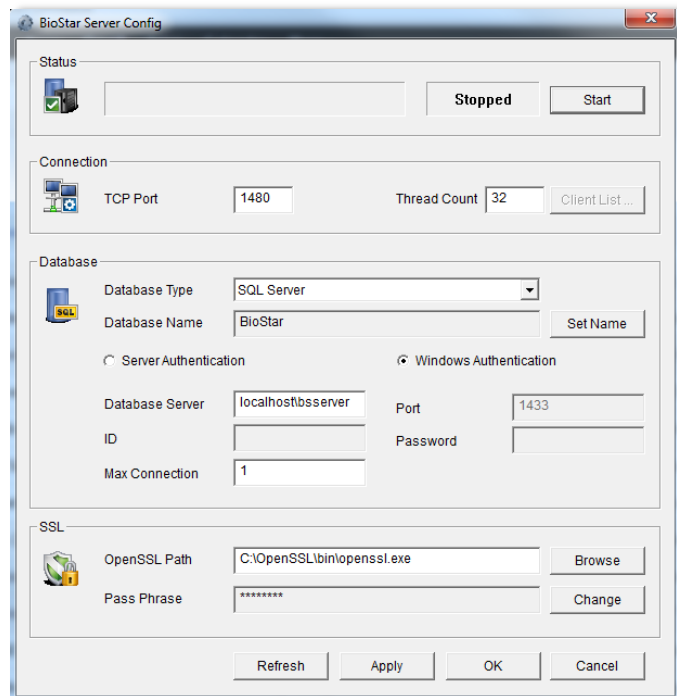
- B. Right click on this icon and select **Run as Administrator** (For Windows XP or older systems you can ignore this and open application).
- C. When the Server Config program starts for the first time, an error message will pop-up. Click **OK**.



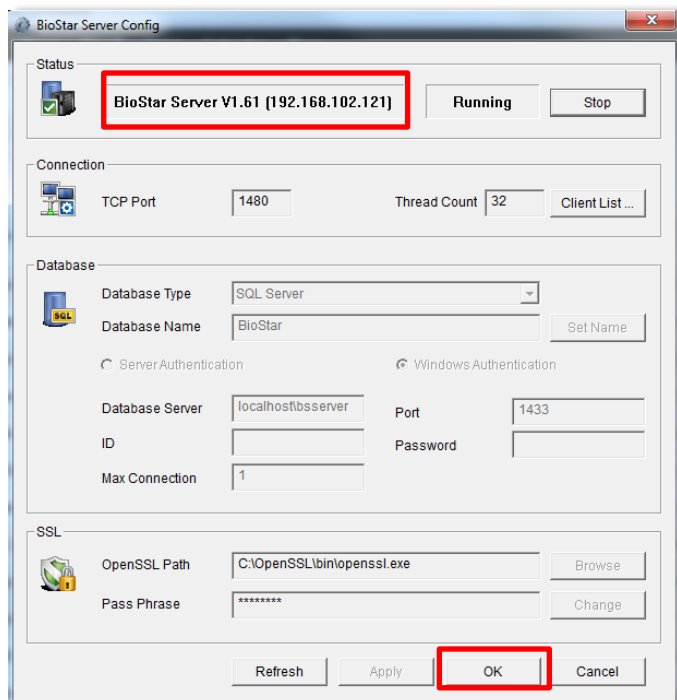
D. Click **Start** in the upper right hand corner of the window.



NOTE: If the service did not start, please ensure that you are running the application as administrator (Step 2) or skip to **If The Server Did Not Start**, section 1.4.



E. An IP address will now appear in the status bar. Click **OK** at the bottom of the page.



F. If the service started, close the BioStar Server Config window.

1.4 IF THE SERVER DID NOT START

- A. Open Windows Services (**Control Panel > Administrative Tools > Services**).
- B. Right click **BioStar Server**, click **Properties**.

- C. Set the Startup Type to be **Automatic**.
- D. Click **Start**.
- E. Close all windows.

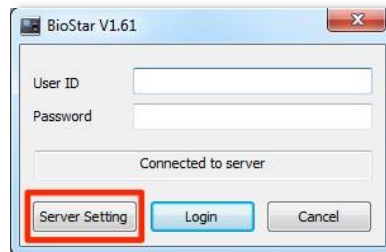
1.5

START THE BIOSTAR CLIENT

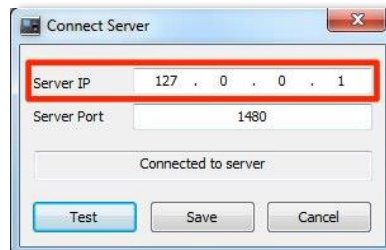
- A. Now that the Server has been configured, click on the BioStar Client icon located on your desktop.



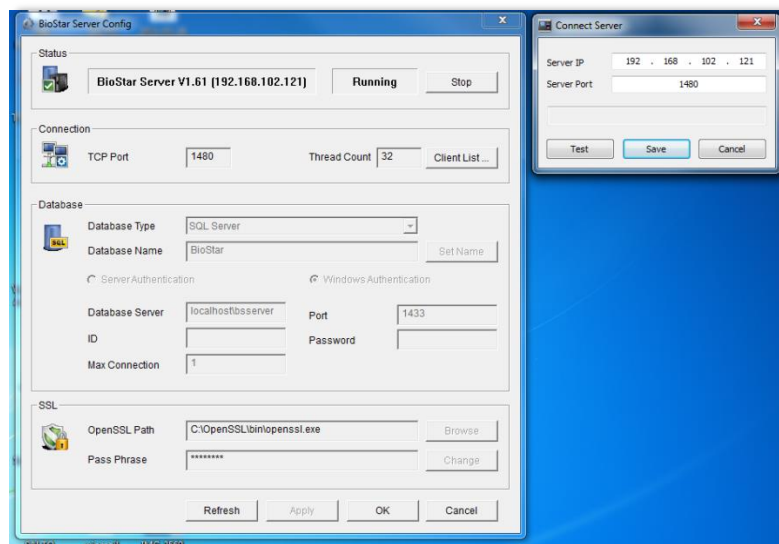
- B. A login screen will appear and say **Connected to Server** just above the login button. Click **Server Setting**.



- C. Enter **127.0.0.1** as the Server IP (Or the PC's current IP Address running BioStar Server).

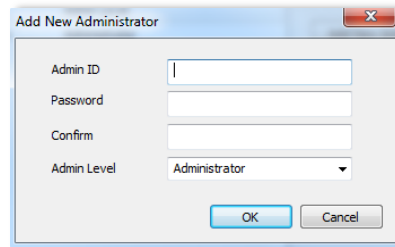


- D. If you are unsure, confirm the Server IP matches the IP address in the Server Config program. Click **Save**.



- E. Click **Test** and ensure that **Connected To Server** is displayed.

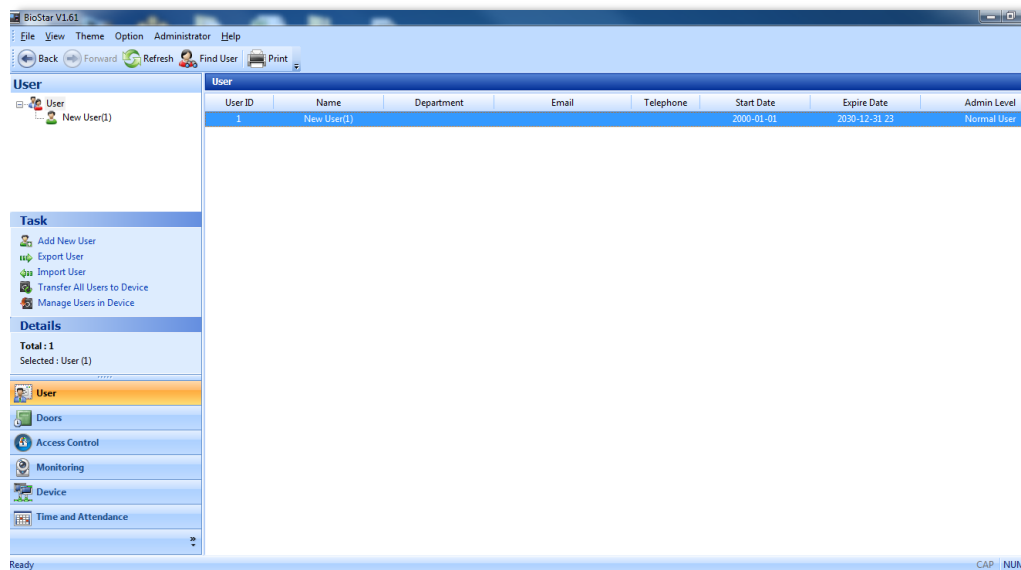
- F. Click **Save**.
- G. The login screen will prompt for a username and new password. This will create the first administrator of the system. Fill in the required information then click **OK**.



The 'Add New Administrator' dialog box contains the following fields and controls:

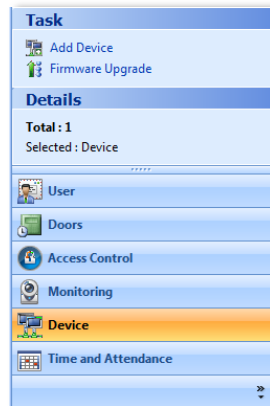
- Admin ID:** A text input field.
- Password:** A text input field.
- Confirm:** A text input field.
- Admin Level:** A dropdown menu currently set to 'Administrator'.
- Buttons:** 'OK' and 'Cancel' buttons at the bottom right.

- H. The BioStar home screen will now pop-up.

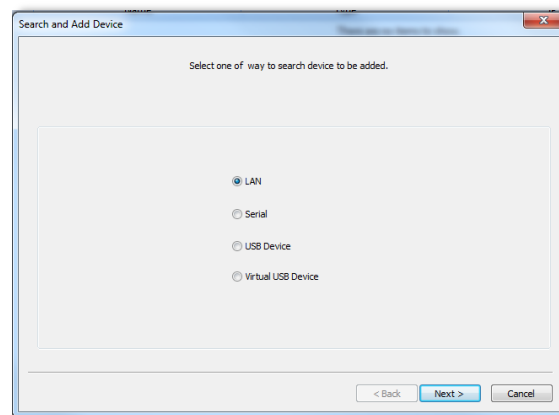


1.6 CONFIGURING DEVICE NETWORK SETTINGS

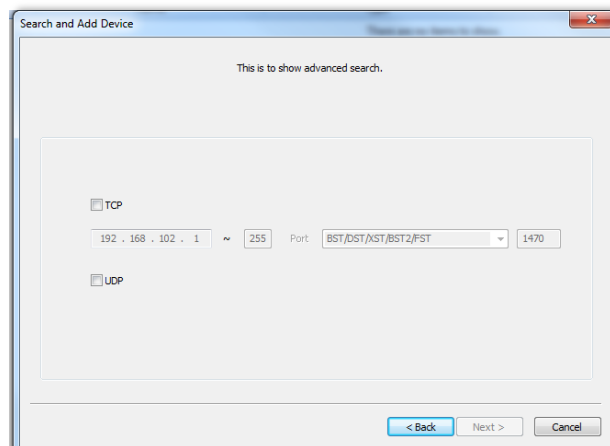
- A. BIOENTRY PLUS/BIOENTRY W NETWORK SETTINGS (USING A DHCP-SUPPORTED LAN – RECOMMENDED):
 1. Connect the BioEntry Plus/BioEntry W to your LAN via Ethernet.
 2. Ensure that the PC running BioStar is on the same subnet as the reader.
 3. In BioStar, click the **Device** menu tab.
 4. Click **Add Device** (located under **Tasks** on left side).



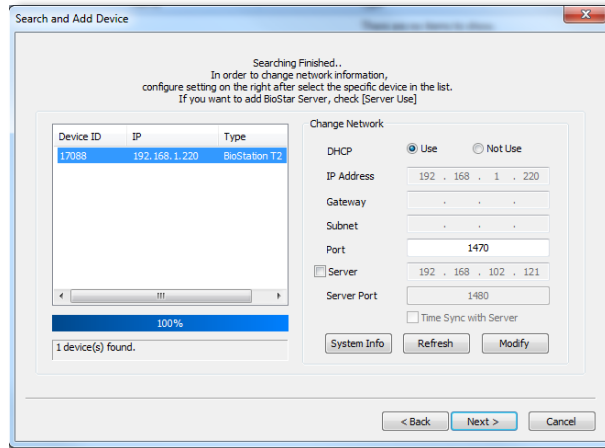
5. Select **LAN** and click **Next**.



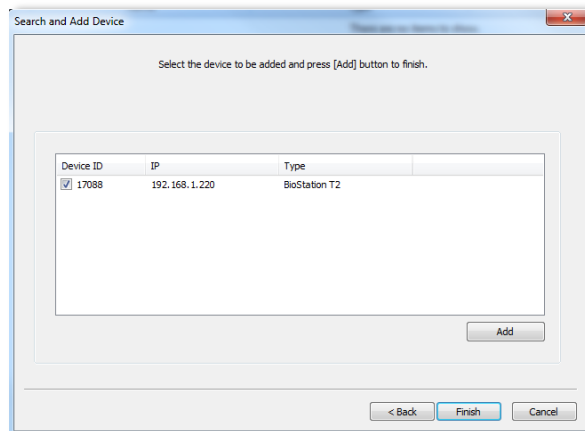
6. Check the box for **UDP** and click **Next**.



7. Wait for the device to be found and then click **Next** (if the device was not found, ensure that the reader is on the same subnet as BioStar, or repeat **Step 6** choosing **TCP** to search for a range of IP addresses).



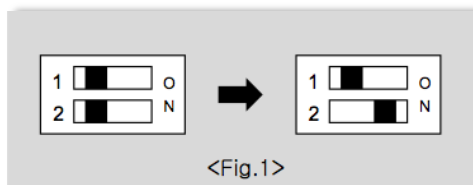
8. Click the **checkbox** next to the device, then click **Add**.



9. A dialogue box **1 Device Added** should appear.
10. Click **OK** and then **Finish**.

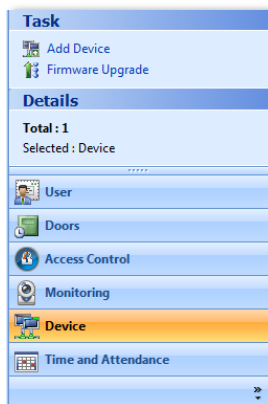
B. BIOENTRY PLUS/BIOENTRY W NETWORK SETTINGS (DIRECT CONNECTION TO PC):

1. Statically set your PC running BioStar to the following address:
 - a. IP Address: **192.168.0.10**
 - b. Gateway: **192.168.0.1**
 - c. Subnet: **255.255.255.0**
2. The following steps refer to the dip switches located on the back of the BioEntry Plus models (for BioEntry W models, please use the RESET soft button located on the back of the device):
 - a. Turn off BioEntry Plus power (BioEntry W models, please skip this step).
 - b. Switch DIP SW #2 to the **ON** position – Fig.1 (BioEntry W models, please press and hold the RESET button for 5 seconds).

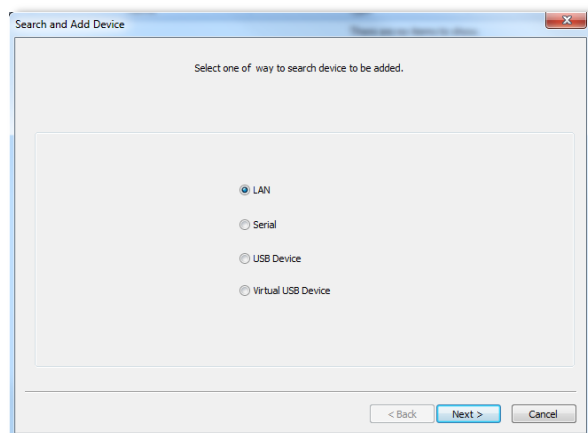


- c. Power up the BioEntry Plus unit (BioEntry W models, please skip this step).
- d. The device IP address has now been reset to **192.168.0.1**

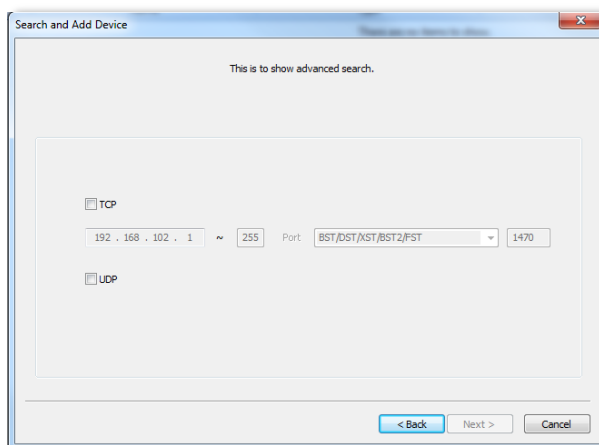
3. In BioStar, click the **Device** menu tab.
4. Click **Add Device** (Located under **Tasks** on the left side).



5. Select **LAN** and click **Next**.

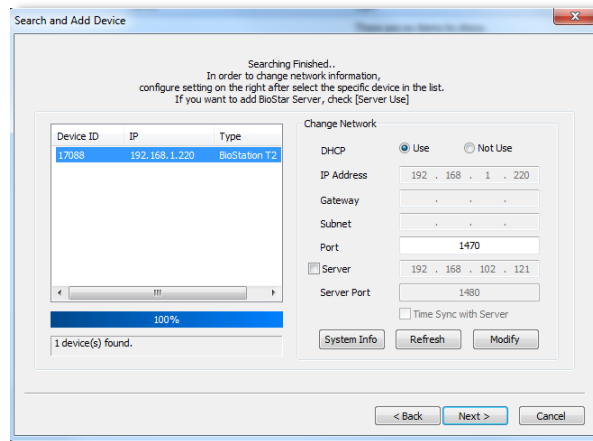


6. Check the box for **TCP**.
7. Enter **192.168.0.0** as the starting range.
8. Enter **2** as the ending range.
9. Click **Next**.



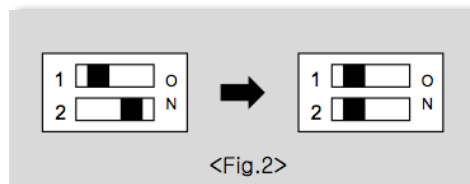
10. Click on the device once it is found and modify the **IP Address**, **Gateway**, and **Subnet** to the following settings:

- a. IP Address: **192.168.0.15**
- b. Gateway: **192.168.0.1**
- c. Subnet: **255.255.255.0**

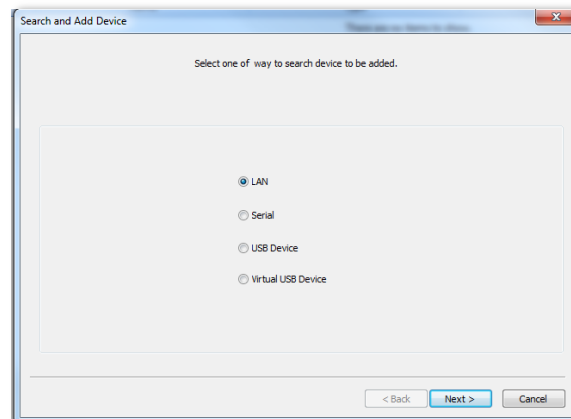


NOTE: Do not enable **Server** or modify the ports.

11. Click **Modify** and confirm changes.
12. Disconnect power from the device (BioEntry W models can skip this step).
13. On the BioEntry Plus, move DIP SW #2 back to the OFF position – Fig.2 (BioEntry W models can skip this step).



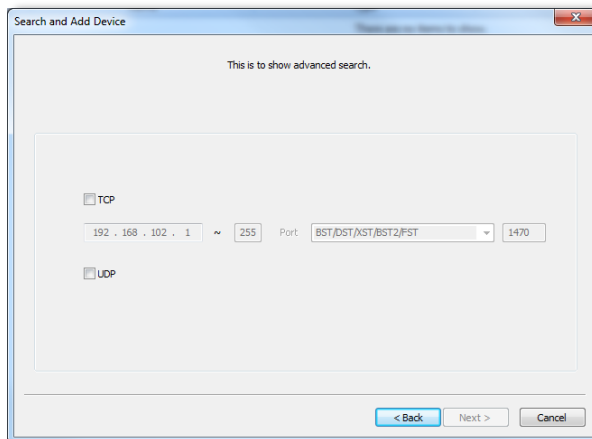
14. Power up the BioEntry Plus (BioEntry W models can skip this step).
15. In BioStar, click the **Device** menu tab.
16. Click **Add Device** (Located under **Tasks** on the left side).
17. Select **LAN** and click **Next**.



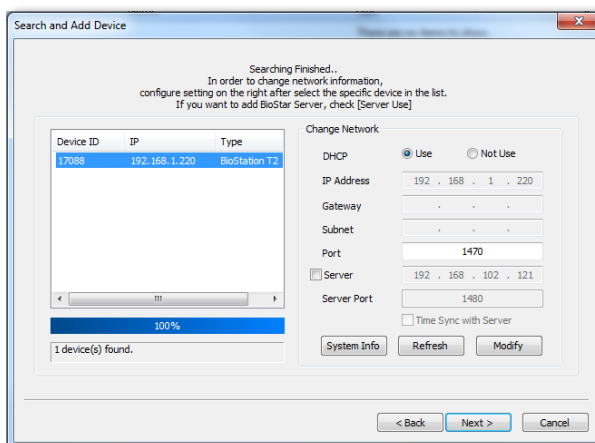
18. Check the box for **TCP**.
19. Enter **192.168.0.14** as the starting range.

20. Enter **16** as the ending range.

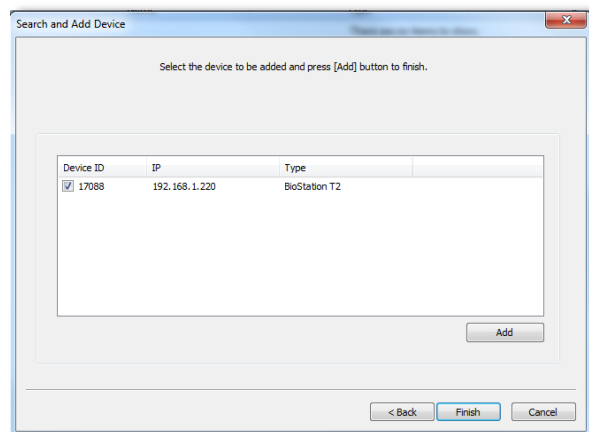
21. Click **Next**.



22. When the device is found, click **Next**.



23. Click the **checkbox** next to the device, then click **Add**.



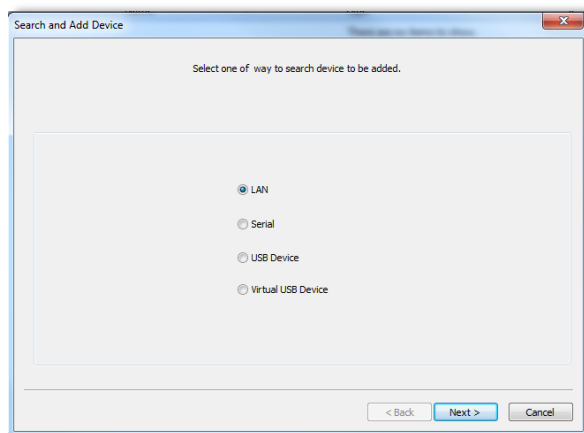
24. A dialogue box displaying **1 Device Added** should appear.

25. Click **OK** and then **Finish**.

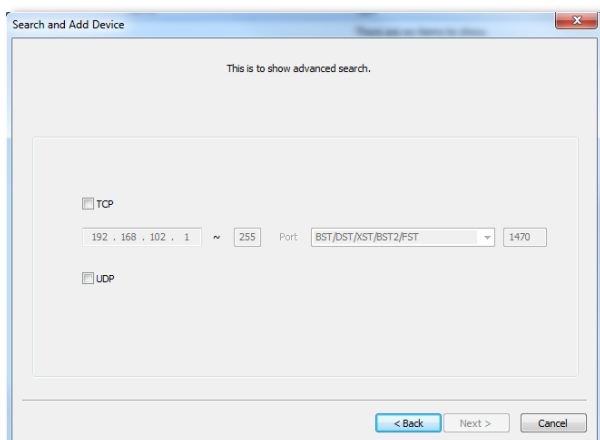
- C. BIOSTATION T2 NETWORK SETTINGS (using a DHCP-Supported LAN):
1. Connect the BioStation T2 to your LAN via Ethernet.
 2. Ensure that the PC running BioStar is on the same subnet as the BioStation T2.
 3. In BioStar, click the **Device** menu tab.
 4. Click **Add Device** (located under **Tasks** on left side).



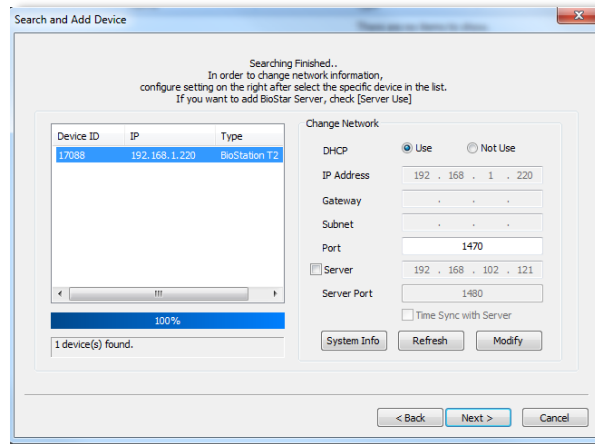
5. Select **LAN** and click **Next**.



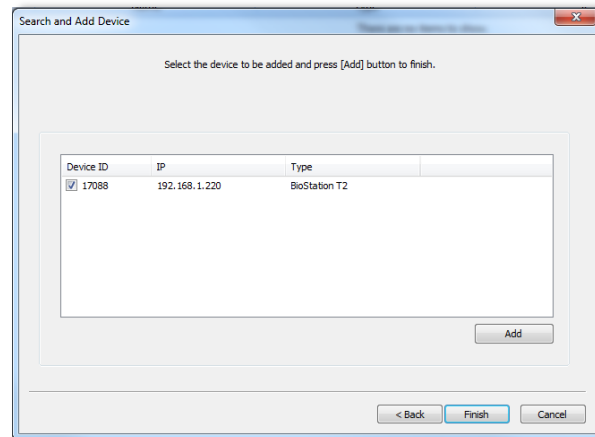
6. Check the box for **UDP** and click **Next**.



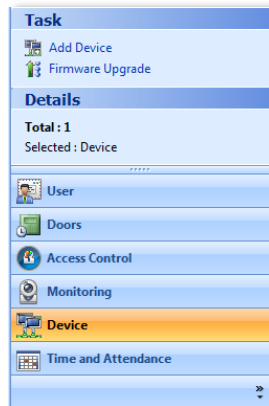
7. Wait for the device to be found and then click **Next** (if the device was not found, ensure that the BioStation T2 is on the same subnet as BioStar, or repeat **Step 6** choosing **TCP** to search for a range of IP addresses).



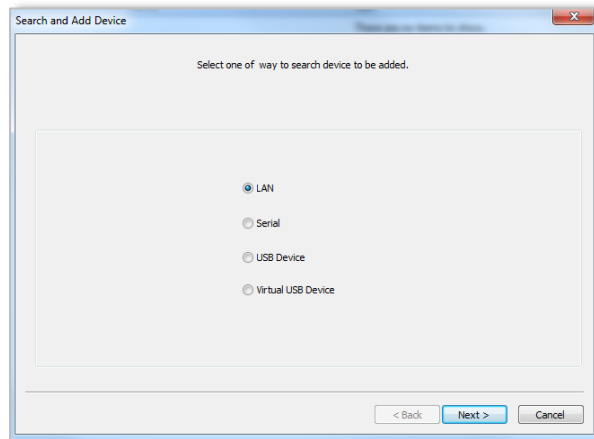
8. Click the **checkbox** next to the device, and click the **Add** button.



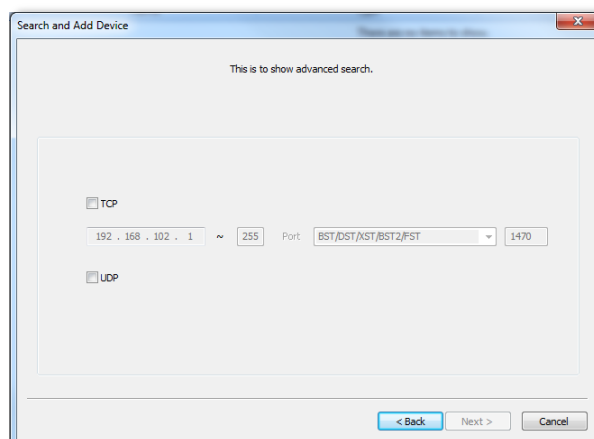
9. A dialogue box displaying **1 Device Added** should appear.
 10. Click **OK** and then **Finish**.
- D. BIOSTATION T2 NETWORK SETTINGS (Direct Network Connection to PC):
1. Statically set your PC running BioStar to the following address:
 - a. IP Address: **192.168.0.10**
 - b. Gateway: **192.168.0.1**
 - c. Subnet: **255.255.255.0**
 2. On the BioStation T2, click **Menu**.
 3. Click **Network**.
 4. Click **TCP/IP**.
 5. Uncheck **DHCP** and enter the device's IP address to be **192.168.0.15**
 6. Click the **V** arrow and enter **255.255.255.0** as the Subnet.
 7. In BioStar, click the **Device** menu tab.
 8. Click **Add Device** (located under **Tasks** on the left side).



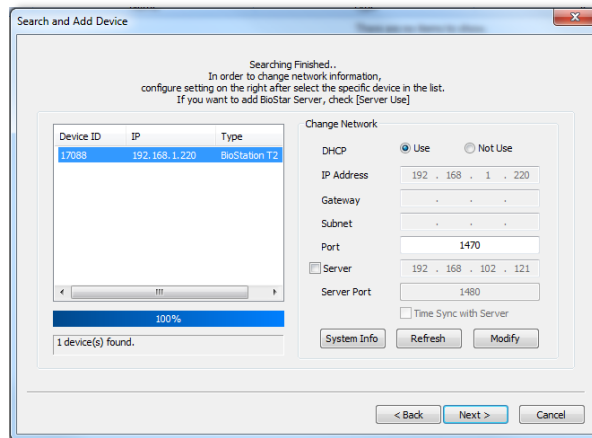
9. Select **LAN** and click **Next**.



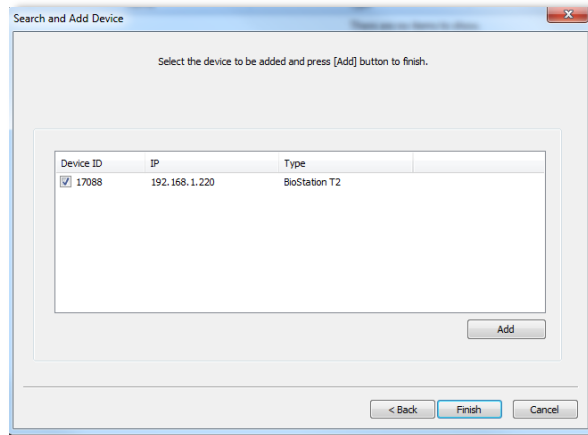
10. Check the box for **TCP**.
11. Enter **192.168.0.14** as the starting range.
12. Enter **16** as the ending range.
13. Click **Next**.



14. When the device is found, click **Next**.



15. Click on the **checkbox** next to the device, then click **Add**.



16. A dialogue box displaying **1 Device Added** should appear.

17. Click **OK** and then **Finish**.

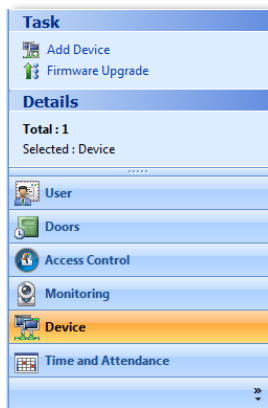
E. BIOSTATION NETWORK SETTINGS (On Device Setup without BioStar):

! IMPORTANT: Setup an administrator password on the reader:
 On the device, click **ESC** > **OK** > **Device** > **Master Password**.
 Enter a secure admin password.
 Click **OK**.
 Press **ESC** back to the home screen.

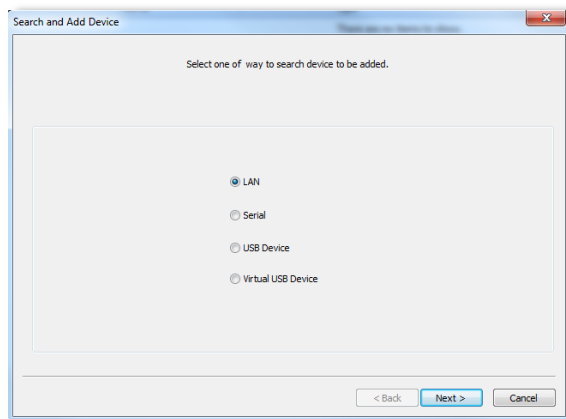
i NOTE: This method only works with 26 bit Standard Wiegand with a FC Code of 0. Please use BioStar for any other configurations.

1. On the BioStation, press **ESC**.
2. Authenticate using an administrators Finger, PIN, or Card (If not administrator has been set, press the OK button).
3. Navigate to **Network**.
4. Navigate to **TCP/IP**.
5. Change **DHCP** to **Not Use** and enter the devices IP address to be **192.168.0.15** (press the > arrow to add decimals).
 - a. Enter **192.168.0.1** as the Gateway.
 - b. Enter **255.255.255.0** as the Subnet.
 - c. Press **OK**.
6. Select **TCP/IP** again.

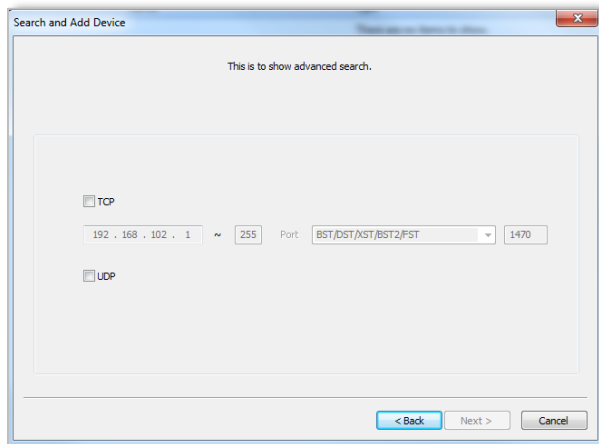
7. Press **F2**.
 8. Select **BioStar** for **Server**.
 9. Enter the Server IP that you will use as the main Biometric Server for BioStar (Press the **>** for decimals).
 10. Enter **8001** under the **Port** field.
 11. Select **Not Use** for SSL.
 12. Press **OK** twice.
- F. BIOSTATION NETWORK SETTINGS (Using a DHCP-Supported LAN):
1. Connect the BioStation to your LAN via Ethernet.
 2. Ensure that the PC running BioStar is on the same subnet as the BioStation.
 3. In BioStar, click the **Device** menu tab.
 4. Click **Add Device** (located under **Tasks** on left side).



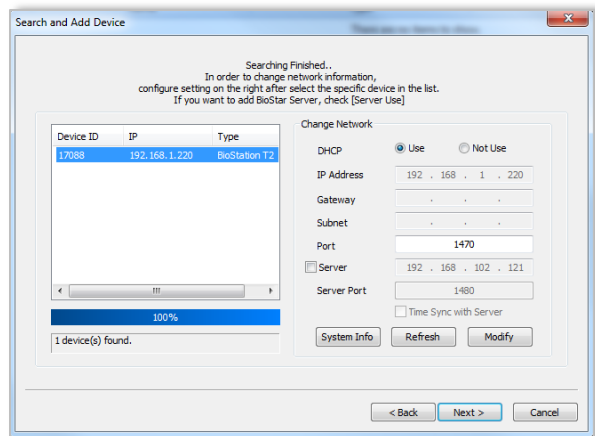
5. Select **LAN**, and then click **Next**.



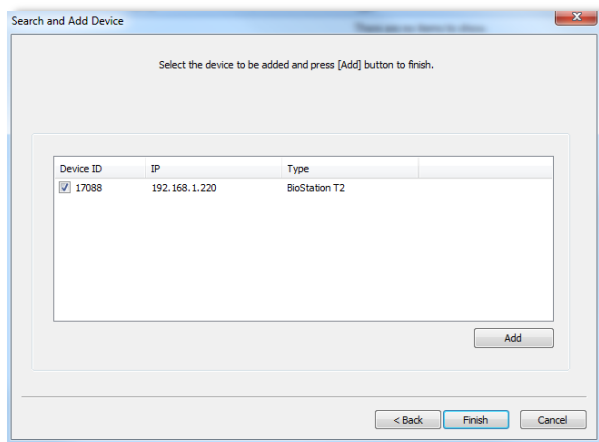
6. Check the box for **UDP** and click **Next**.



7. Wait for the device to be found and then click **Next** (if the device was not found, ensure that the BioStation is on the same subnet as BioStar, or repeat **Step 6** choosing **TCP** to search for a range of IP addresses).

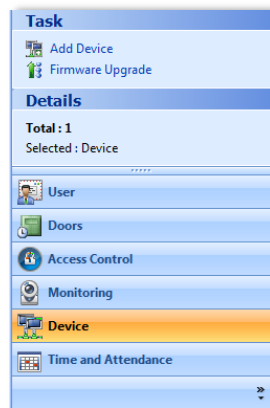


8. Click the **checkbox** next to the device, then click **Add**.

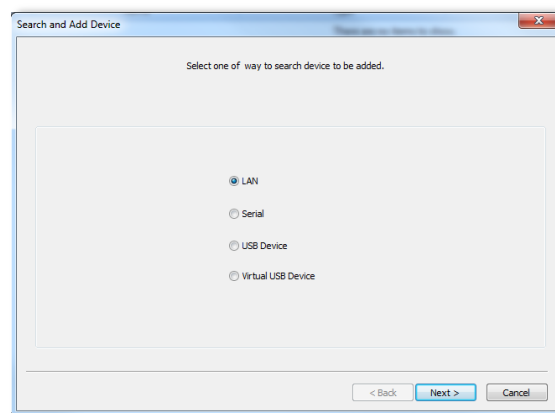


9. A dialogue box **1 Device Added** should appear.
10. Click **OK** and then **Finish**.

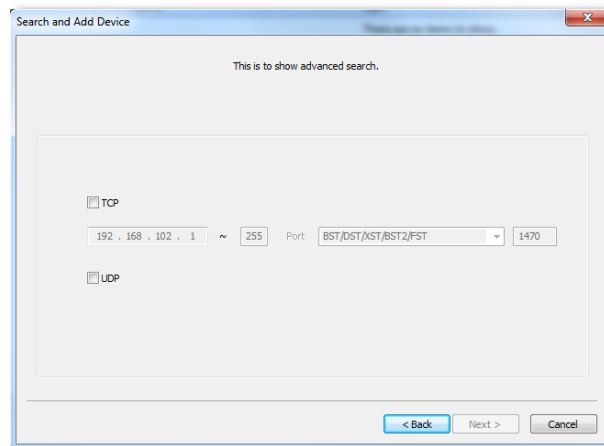
- G. BIOSTATION NETWORK SETTINGS (Direct Network Connection to PC):
1. Statically set your PC running BioStar to the following address:
 - a. IP Address: **192.168.0.10**
 - b. Gateway: **192.168.0.1**
 - c. Subnet: **255.255.255.0**
 2. On the BioStation, click **ESC**.
 3. Authenticate using an administrators Finger, PIN, or Card (if no Administrator password has been set, press the **OK** button).
 4. Navigate to **Network**.
 5. Navigate to **TCP/IP**.
 6. Change **DHCP** to **Not Use** and enter the devices IP address to be **192.168.0.15** (press the **>** arrow to add decimals).
 - a. Enter **192.168.0.1** as the Gateway.
 - b. Enter **255.255.255.0** as the Subnet.
 - c. Press **OK**.
 7. In BioStar, click the **Device** menu tab.
 8. Click **Add Device** (located under **Tasks** on the left side).



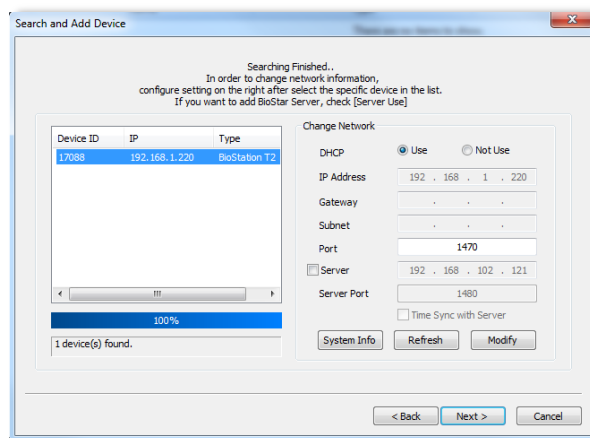
9. Select **LAN** and click **Next**.



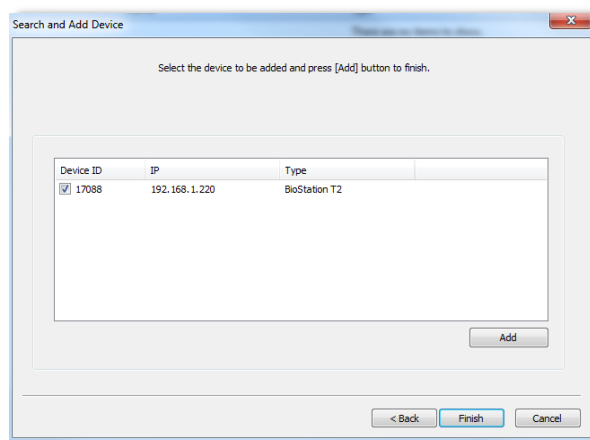
10. Check the box for **TCP**.
11. Enter **192.168.0.14** as the starting range.
12. Enter **16** as the ending range.
13. Click **Next**.



14. When the device is found, click **Next**.



15. Check the **checkbox** next to the device, and click the **Add** button.



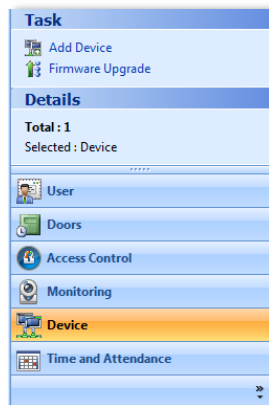
16. A dialogue box **1 Device Added** should appear.

17. Click **OK** and then **Finish**.

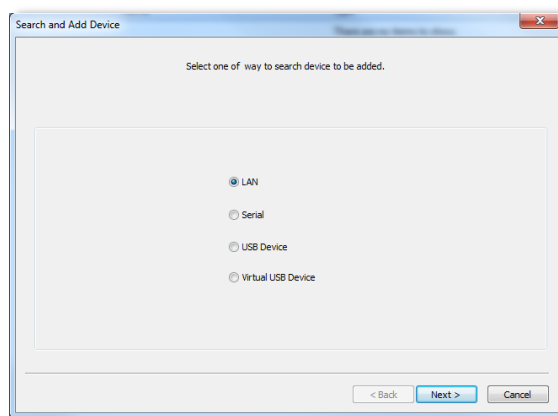
H. BIOLITE NET NETWORK SETTINGS (USING A DHCP SUPPORTED LAN – RECOMMENDED):

1. Connect the BioEntry Plus/BioEntry W to your LAN via Ethernet.

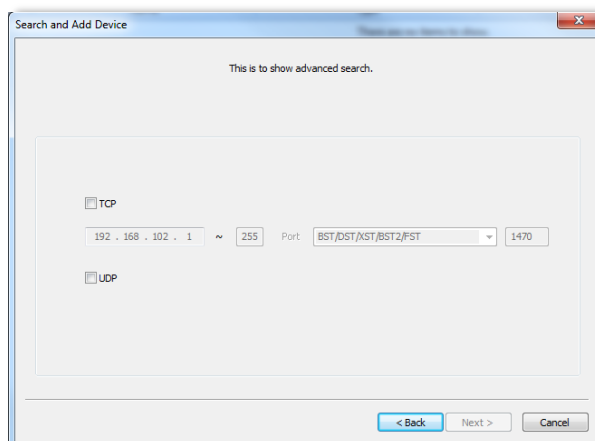
2. Ensure that the PC running BioStar is on the same subnet as the reader.
3. In BioStar, click the **Device** menu tab.
4. Click **Add Device** (located under **Tasks** on left side).



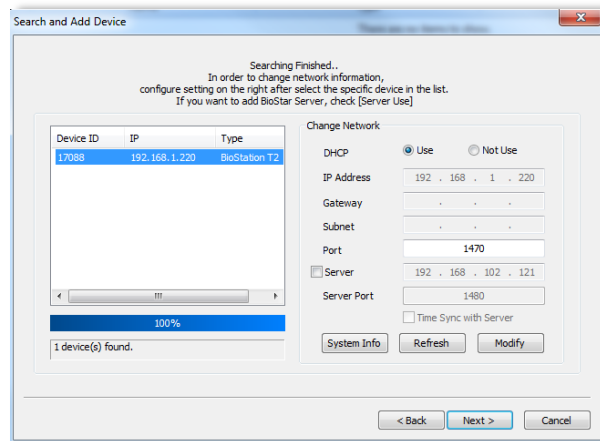
5. Select **LAN** and click **Next**.



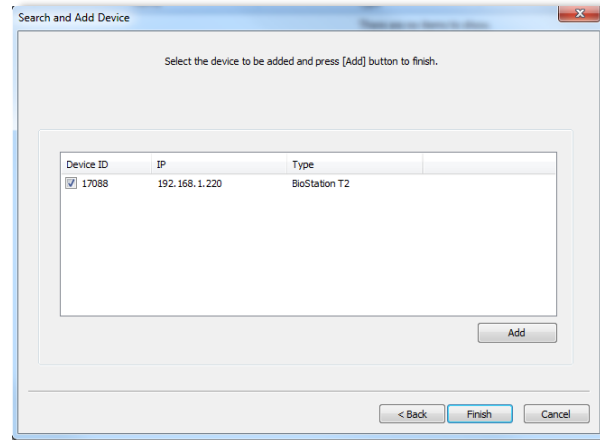
6. Check the box for **UDP** and click **Next**.



7. Wait for the device to be found and then click **Next** (if the device was not found, ensure that the reader is on the same subnet as BioStar, or repeat Step 6 choosing TCP to search for a range of IP addresses).

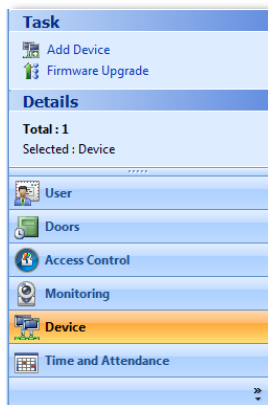


8. Click the **checkbox** next to the device, then click **Add**.

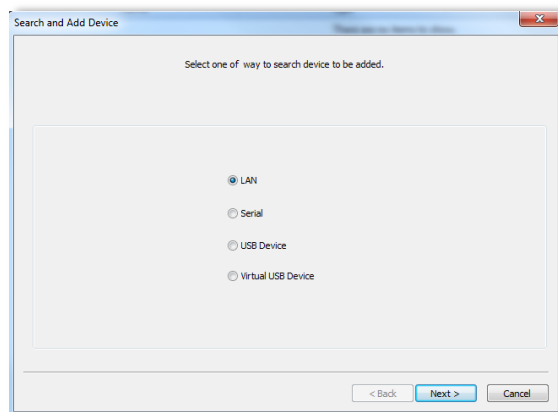


9. A dialogue box **1 Device Added** should appear.
10. Click **OK** and **Finish**.
- I. **BIOLITE NET NETWORK SETTINGS (Direct Network Connection to PC):**
1. Statically set your PC running BioStar to the following address:
 - a. IP Address: **192.168.0.10**
 - b. Gateway: **192.168.0.1**
 - c. Subnet: **255.255.255.0**
 2. On the BioLite Net, create your first administrator password. It is recommended to use the User ID of **1** and password **1234**. This is temporary and will be removed automatically once connected to BioStar.
 3. Press menu once at the **BioLite Net** home screen.
 4. Enter your **Admin ID** and **Password**.
 5. Move the right arrow to the **Device** icon, click **OK**.
 6. Move the right arrow to **I/O**, click **OK**.
 7. Move the right arrow to **TCP/IP**, click **OK**.
 8. Enter **192.168.0.15** as the IP address, (pressing the **>** arrow will enter decimals). Once finished, press **OK**.
 9. Enter the **255.255.255.0** as the subnet.
 10. Enter **192.168.0.1** as the gateway.
 11. Use port **1471**.
 12. Select **Not Use** when prompted for **Server**.
 13. Select **Not Support** for **100-base T Support**.

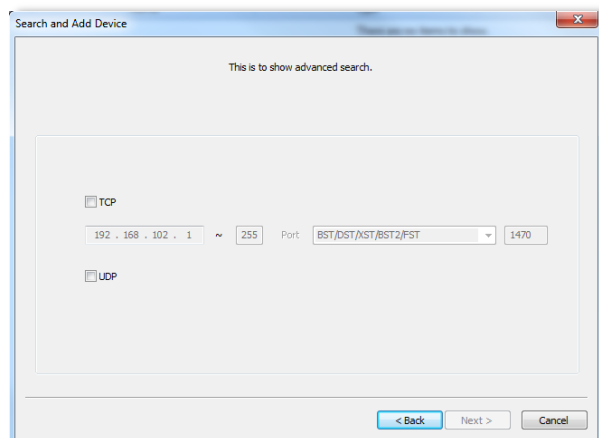
14. In BioStar, click the **Device** menu tab.
15. Click **Add Device** (located under **Tasks** on the left side).



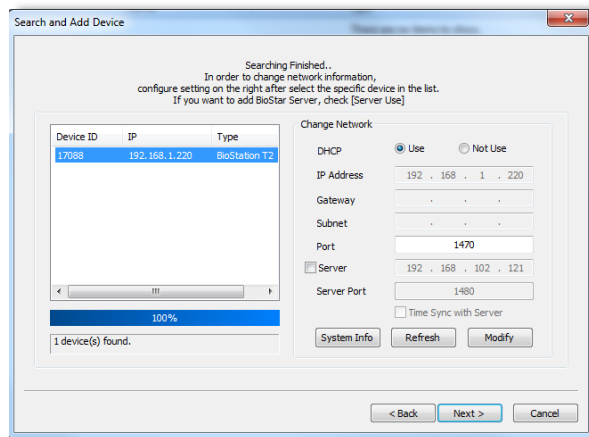
16. Select **LAN** and click **Next**.



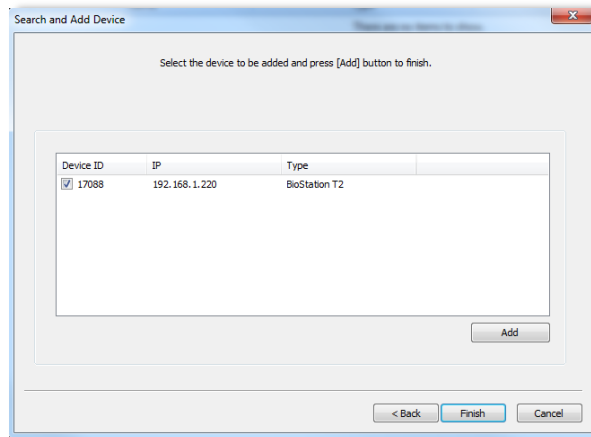
17. Check the box for **TCP**.
18. Enter **192.168.0.14**
19. Enter **16** as the ending range.
20. Click **Next**.



21. When the device is found, click **Next**.



22. Click the **checkbox** next to the device, then click **Add**.



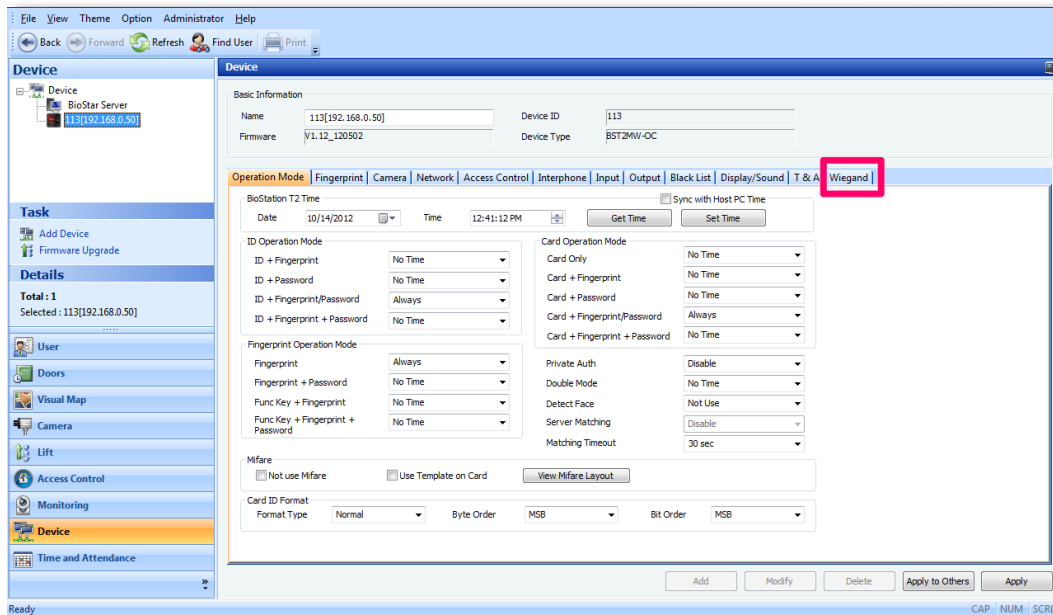
23. A dialogue box **1 Device Added** should appear.

24. Click **OK** and then **Finish**.

1.7 DEVICE CONFIGURATION TO COMMUNICATE WITH BRIVO CONTROLLER

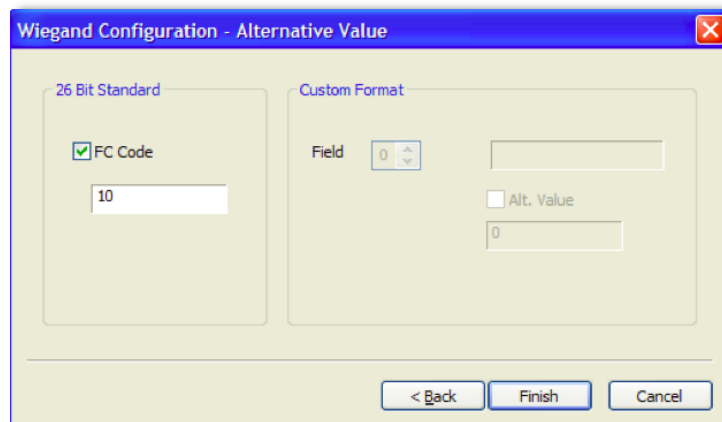
This section will explain how to configure the Suprema reader to communicate via Wiegand to a Brivo controller.

- A. Select your desired device from the device tree.
- B. Click the **Wiegand** tab and choose the desired Wiegand output next to the **Wiegand In/Out** prompt:
 1. If **Wiegand (user) out** is chosen, there must be a user with a card number in the Brivo account that corresponds with a User ID in BioStar.
 2. If **Wiegand (card) out** is chosen, there must be a user with a card number in the Brivo account that corresponds with a card number in a user profile in BioStar.
- C. Confirm the proper Wiegand bit format is configured, then click **Apply**.
- D. The reader is now ready to communicate to a Brivo controller, but it is recommended that you enroll and transfer a fingerprint to the BioEntry Plus for testing. You may then follow the steps for adding an Unknown Card found in the Brivo administrator manual for the appropriate platform being used.

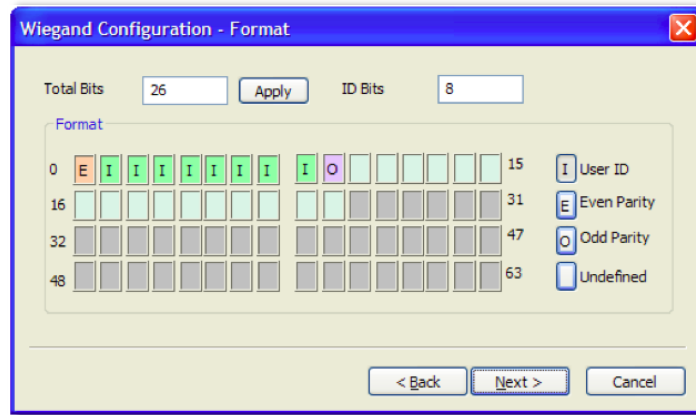


1.8 CONFIGURING A CUSTOM WIEGAND FORMAT IN BIOSTAR

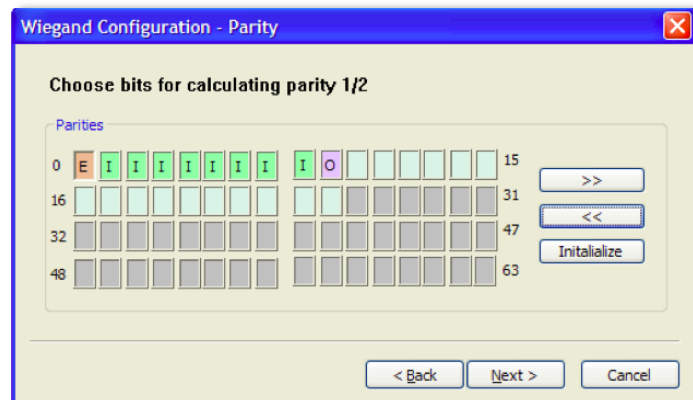
- A. Click the **Wiegand** tab.
- B. Click **Change Format**. This will open the Wiegand configuration wizard.
- C. Click a **radio button** to select one of the following options:
 1. Click **Change Format**. This will open the Wiegand Configuration wizard.
 2. Click a **radio button** to select one of the following options.
 - a. **26-bit standard**: This format is most widely used and consists of an 8-bit FC (facility code) and a 16-bit ID. You cannot change the bit definition of the format or the parity bits of this format.



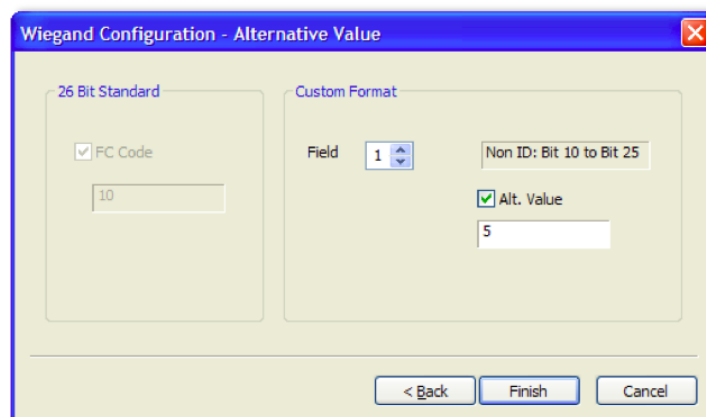
- b. When configuring 26-bit, the only item you can customize is the FC code. To do this, follow through the wizard to the last page, and modify the FC Code under **26-bit Standard**.
- D. **Pass-through**: Use this format to customize only the ID bits. During verification, if the ID is recognized, the Wiegand input string will pass through in its original form. You cannot set the parity bits or alternative values of this format. Non-ID bits are set to 0.
- E. **Custom**: With a custom format you can define the ID bits, parity bits, and alternative values.



- F. After selecting the format within the wizard, click **Next** to advance to the Format window.
- G. If desired, enter a new total number of bits and click **Apply**.
- H. Click the **User ID** button (I) on the right and assign ID bits by clicking the appropriate squares.
- I. Click the **Even Parity** button (E) on the right and assign an even parity bit by clicking the appropriate squares.
- J. Click the **Odd Parity** button (O) on the right and assign an even parity bit by clicking the appropriate squares.
- K. Click **Next**.



- L. In the Parity window, select the bits that will be used to calculate the first parity bit.
- M. As necessary, click the >> button and select the bits that will be used to calculate the additional parity bits. You must perform this step for each of the parity bits that you assigned in Steps 10 and 11. If necessary, you can click **Initialize** to reset the selection.
- N. Click **Next**.

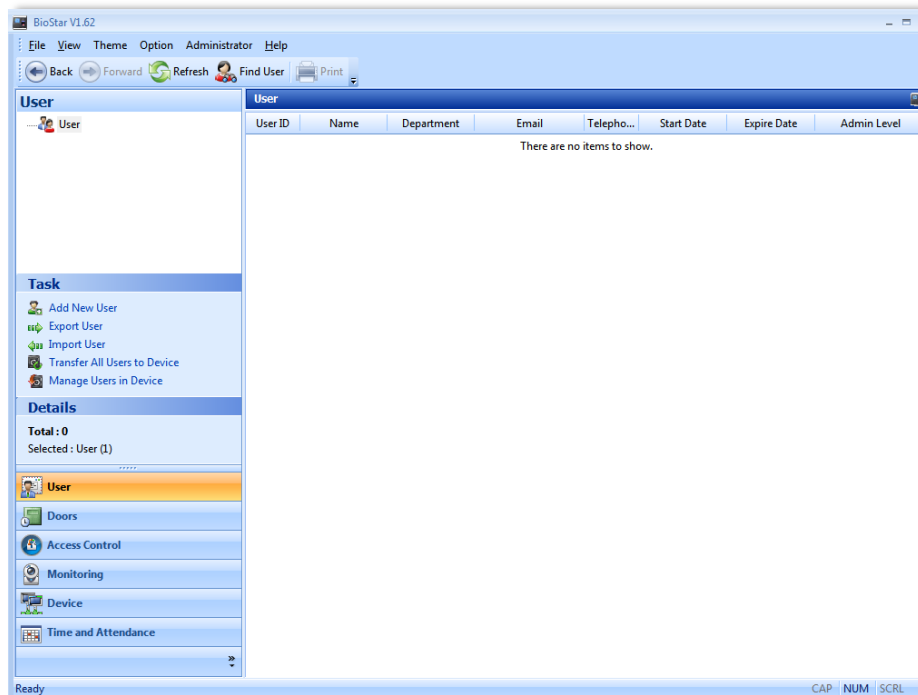


- O. In the Alternative Value window, select a field to customize (non-ID bits only).

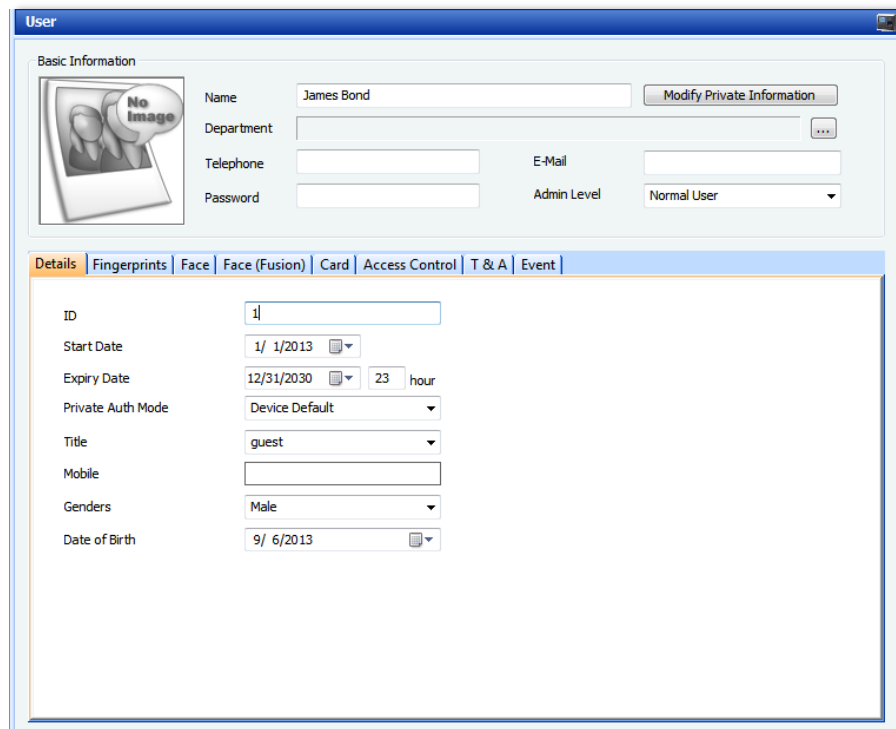
- P. Click the **Alt. Value** checkbox and enter a new value for the output string.
- Q. Click **Finish** to close the wizard.
- R. Click **Apply** (Bottom right corner of BioStar Wiegand tab).

1.9 ENROLLING AND TRANSFERRING A USER TO A DEVICE

- A. Highlight User and then select **Add New User** under Task.



- B. Next on the Details tab provide a **Name**, **ID** and **Start Date**.



User

Basic Information

Name: James Bond Modify Private Information

Department: ...

Telephone: E-Mail:

Password: Admin Level: Normal User

Details | **Fingerprints** | Face | Face (Fusion) | Card | Access Control | T & A | Event

ID: 1

Start Date: 1/ 1/2013

Expiry Date: 12/31/2030 23 hour

Private Auth Mode: Device Default

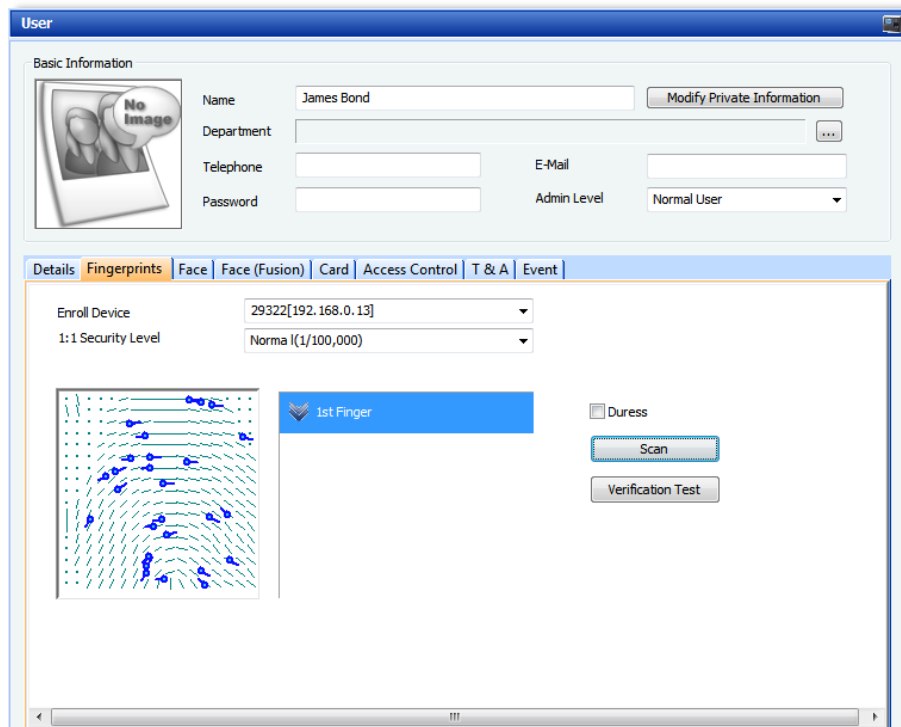
Title: guest

Mobile:

Genders: Male

Date of Birth: 9/ 6/2013

- C. Next on the Fingerprints tab select **Scan**. You will be prompted to **Place Finger on Device**, which will be repeated until you have a successful scan. You may also select **Verification Test** to confirm the fingerprint capture.



User

Basic Information

Name: James Bond Modify Private Information

Department: ...

Telephone: E-Mail:

Password: Admin Level: Normal User

Details | **Fingerprints** | Face | Face (Fusion) | Card | Access Control | T & A | Event

Enroll Device: 29322[192.168.0.13]

1:1 Security Level: Norma I (1/100,000)

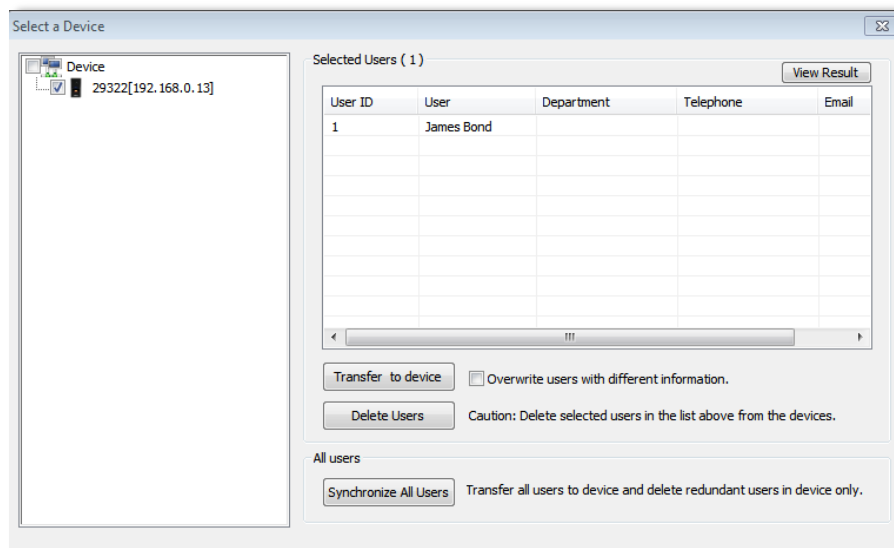
1st Finger

☐ Duress

Scan

Verification Test

- D. Next under Tasks select **Transfer All Users to Device**. Check the desired device, then select the **Transfer to Device** button. You may now test the fingerprint and enroll and Unknown Card in the Brivo Aparato.



i **NOTE:** The Suprema reader(s) are now ready to communicate to the Brivo panel(s). Follow the general steps for adding reader devices and user IDs to the Brivo Aparato system.