



WatchNET ACCESS

WatchNET Access Integrated Security Management Software

Installing and Configuring Fingerprint Reader



User Manual



WAB-P/U-FCRS

Biometric Fingerprint Reader

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Revision History

Revision	Date	Author	Description of Changes
1.0	03/28/2014	Peter Punzalan	Manual Created.

Chapter 1 Introduction

1.1 Summary

WAB-FCRS is an innovative fingerprint card access reader which fully integrates fingerprint and RFID technology. The very compact design makes it suitable for installation on door frames. The WAB-FCRS has standard Wiegand output to connect seamlessly with access controllers. This unit can easily replace the existing card readers with a biometric unit to upgrade the security to a higher level by use of fingerprint and card. The fingerprint enrollment is made easy when connected to WatchNET Access control software through the standard card enrollment screen in the software.

Model Definition:

WAB P FCRS ----- Built-in Proximity Reader

WAB U FCRS ----- Built-in Mifare Reader

1.2 Features

- P: Wiegand output format following the card
- U: Standard WG26/34 bits output which can be compatible with any kind of Access Controller
- Dustproof, waterproof features, suitable for any installation site
- Fast response, anti-interference, low power consumption and good stability
- WDT watchdog, having a power-on self-test function
- Fast fingerprint matching speed, 480 fingerprints within one second
- Multi-threaded code designed to take advantage of multi-core CPU
- 500dpi optical fingerprint sensor, anti scratch
- The world's leading fingerprint algorithm, refusing false fingerprints
- POE (Power Over Ethernet)
- Blue / Green light to show Valid or Invalid
- Production under ISO: 9001 standard system, high quality
- It can be connected to a door controller or work as a standalone unit

1.3 Specifications

- CPU: ARM, 32 Bits, Cortex-M4, 400MHz DSP
- Memory: 16MB Flash memory +4 MB RAM
- Fingerprint capacity: 480 PCS, (Identify fake FP)
- Support Card types:
 - P:** Biometric fingerprint reader, proximity, multi-technology reader Supports proximity, plus certain HID 125Khz and AWID 125Khz
 - U:** Biometric fingerprint reader, supports CPU and Mifare technology (Smartcard)
- Fingerprint Sensor: 500 dpi optical sensor
- Authentication modes:
 - FingerPrint Only
 - FingerPrint or Card
 - FingerPrint + Card
- Communication Interface: Wiegand output, TCP / IP
- Relay Output : 1 (NC, NO, COM)
- Reader Output: 1 (Wegand Output)
- Reader Input : 1 (For IN/OUT Readers)
- FAR/FRR specs : -0.001% / +0.001%
- Voltage: POE+ / 12VDC
- Operating Current: ≤200mA
- Standby Current: ≤150mA
- Working Temperature: -20°C to 65°C
- Working Humidity: 0~95%
- Dimension: 135mm L x 58mm W x 45mm
- Weight: 400g

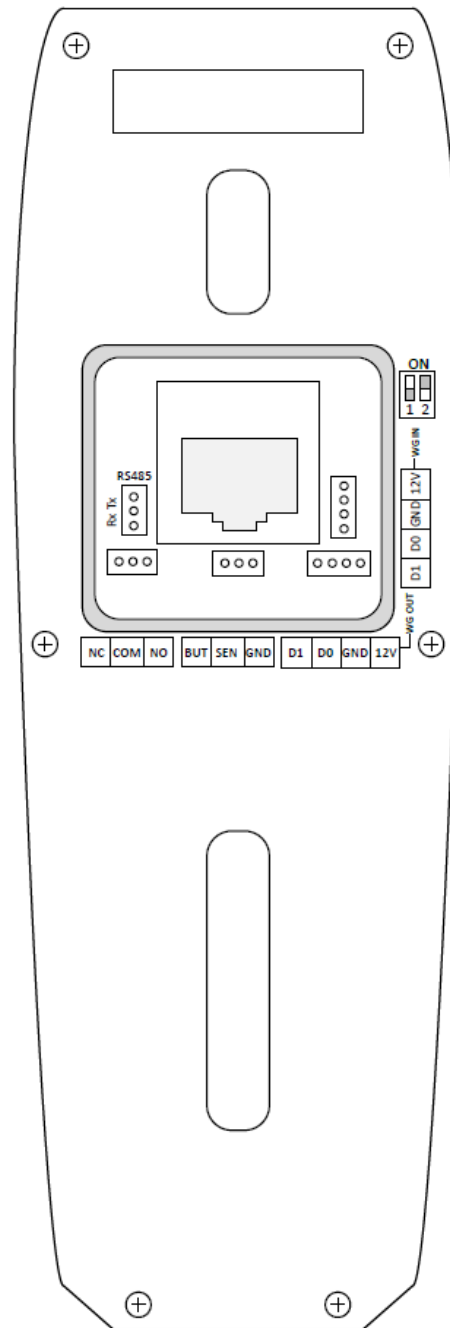
1.4 Application Mode

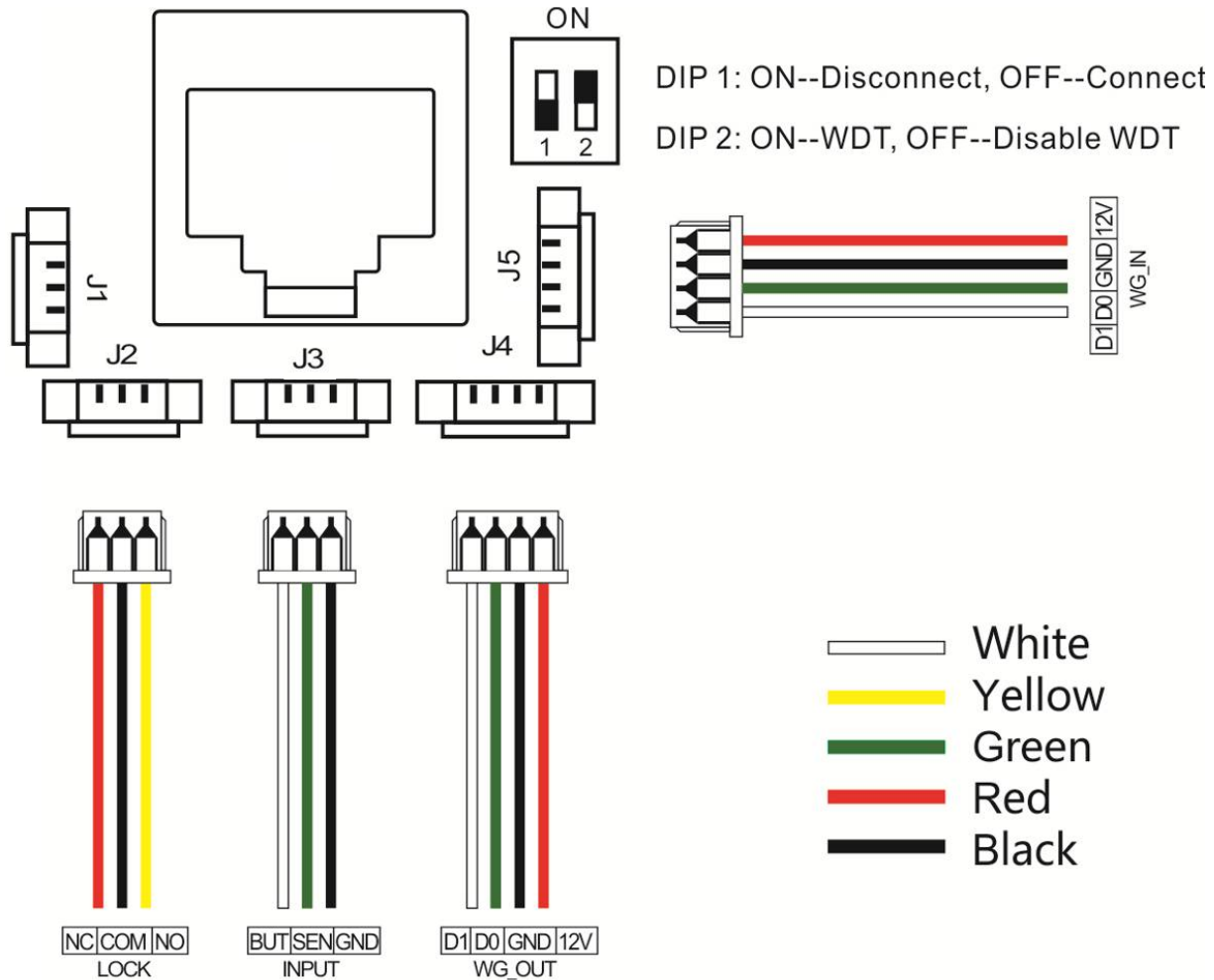
2 Application Modes :

- Standalone Fingerprint Reader (Works as 1 door with lock relay, door contact, REX button)
- Outdoor/Indoor reader for Watchnet Access controllers

Chapter 2 Wiring Diagram

2.1 Reader Back Pinouts

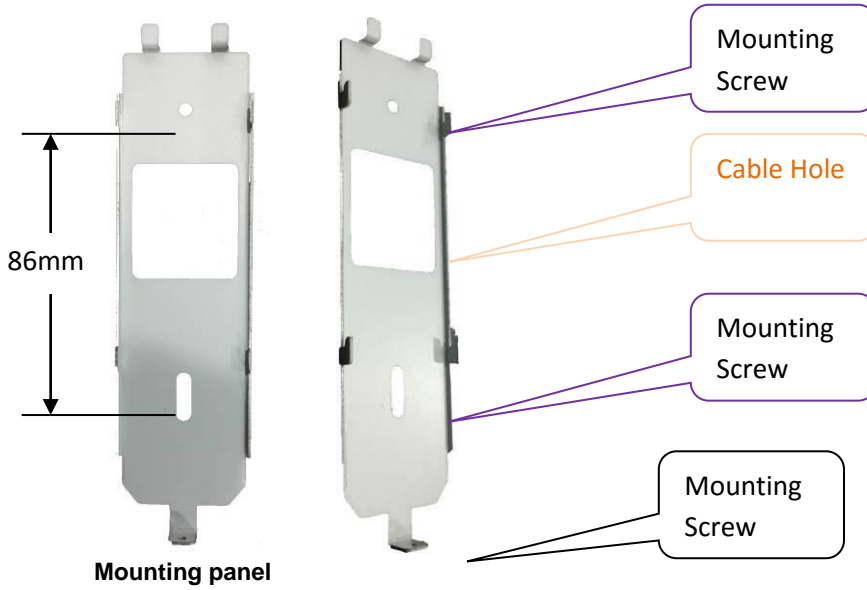




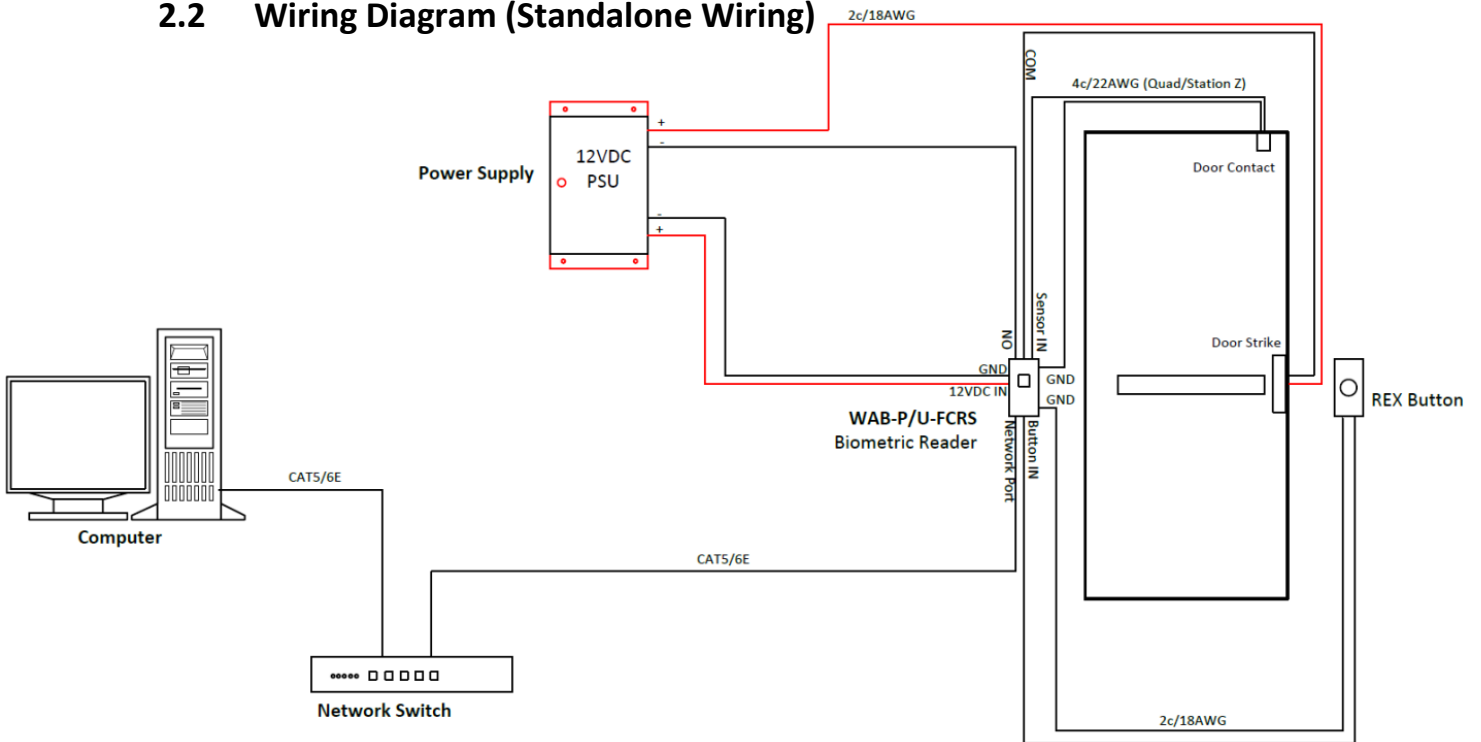
Icon	Symbol	Description
J1	RX	RS 485 Connection
	TX	
	GND	
J2	NC	Normally Closed (Lock Output)
	COM	COM in (Lock Output)
	NO	Normally Open (Lock Output)
J3	BUT	REX (Request to Exit Button)
	SEN	Door Contacts/Sensor
	GND	Ground
J4	D1	Data 1 Wiegand Out (Connection to Controller)
	D0	Data 0 Wiegand Out (Connection to Controller)
	GND	Ground (Ground IN)
	12V	12V (+12VDC IN)
J5	D1	Data 1 Wiegand In (Reader Input)
	D0	Data 0 Wiegand In (Reader Input)
	GND	Ground (Reader Output)
	12V	12V (+12VDC Output)

LED:

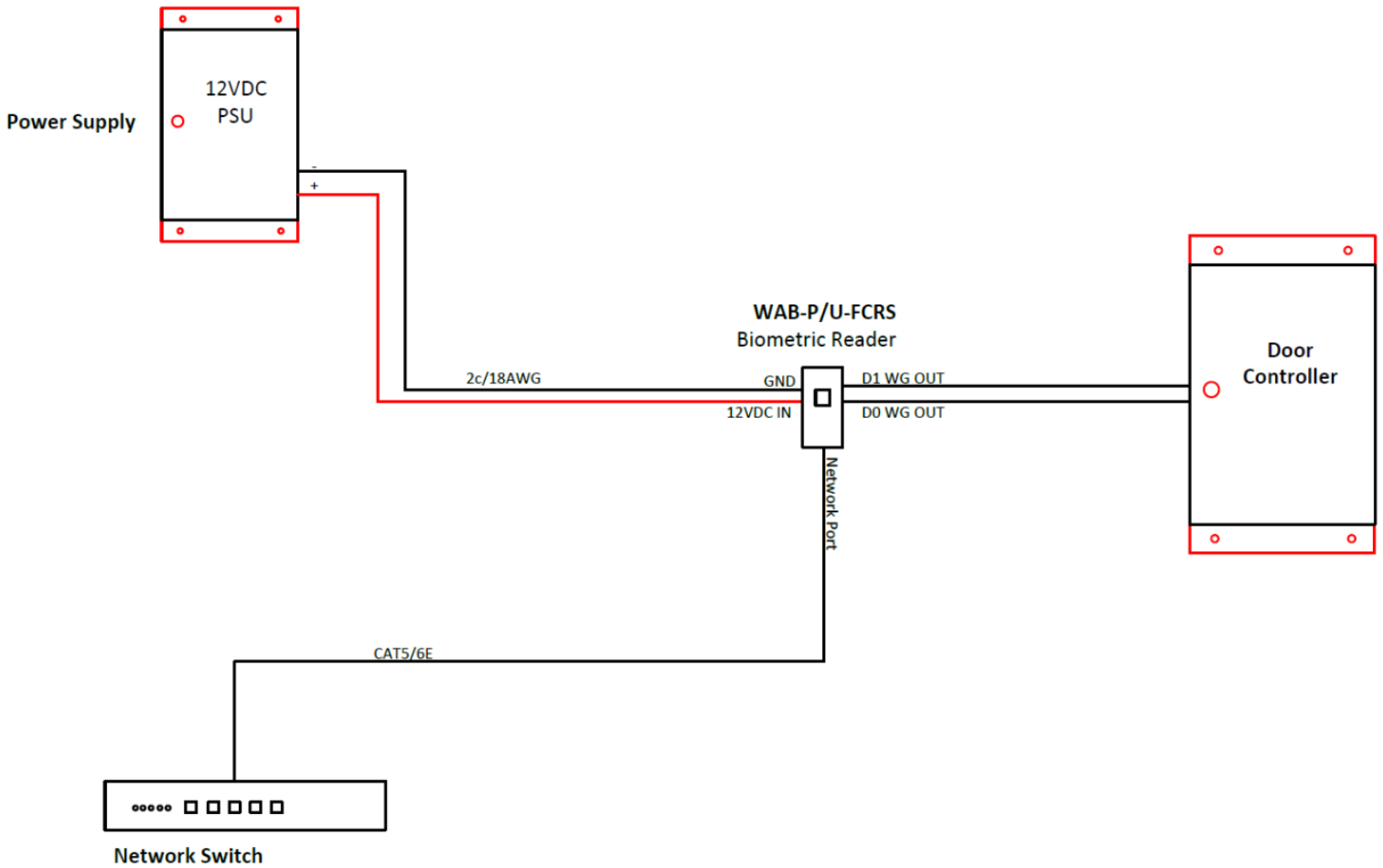
- Blue LED – Power Indicator (Standby mode)
- Green LED – Sensor Indicator (Relay Indicator)



2.2 Wiring Diagram (Standalone Wiring)

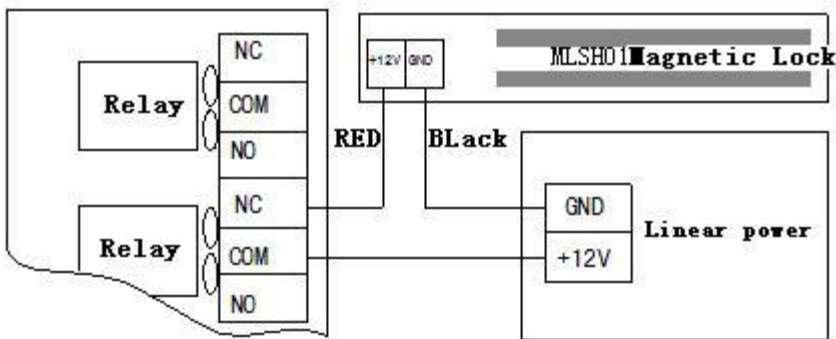


2.3 Wiring Diagram (External reader wiring)

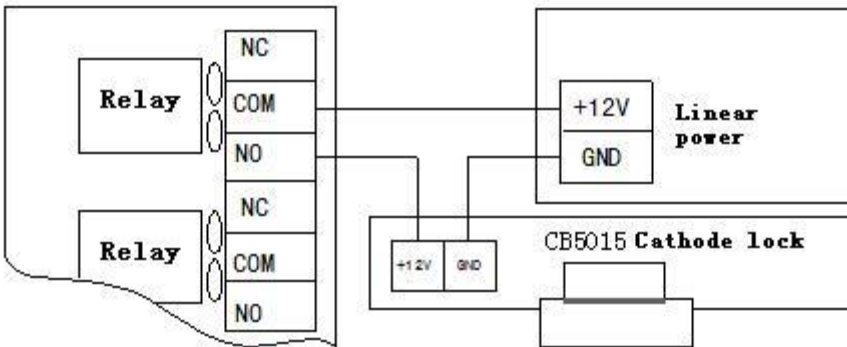


2.4 Lock Wiring Diagram

Magnetic Lock Diagram



Electric Strike



2.5 Dip Switch

- DIP 1: ON---Disconnect(will not be connected to the software), OFF---Connect
- DIP 2: ON---Enable WDT(Watch Dog), OFF--- Disable WDT(Watch Dog)

Default Setting (Right picture):

- DIP 1: OFF---Connect, will be connected to the software
- DIP 2: ON---Enable WDT(Watch Dog), More stable



Chapter 3 Configuring Fingerprint reader

3.1 Enrolling Fingerprint Reader

1. Select Fingerprint Series on **Communication Configuration – Fingerprint** Tab
2. Open **Controller Configuration – Search – NET** – and select the WAB-P-FCRS reader
3. Assign IP and enter the Host IP based on the network settings and Server’s IP
4. Save and close Controller Configuration

Note: Enrolling biometric reader is same procedure when enrolling a controller

3.2 Enrolling Fingerprint Users

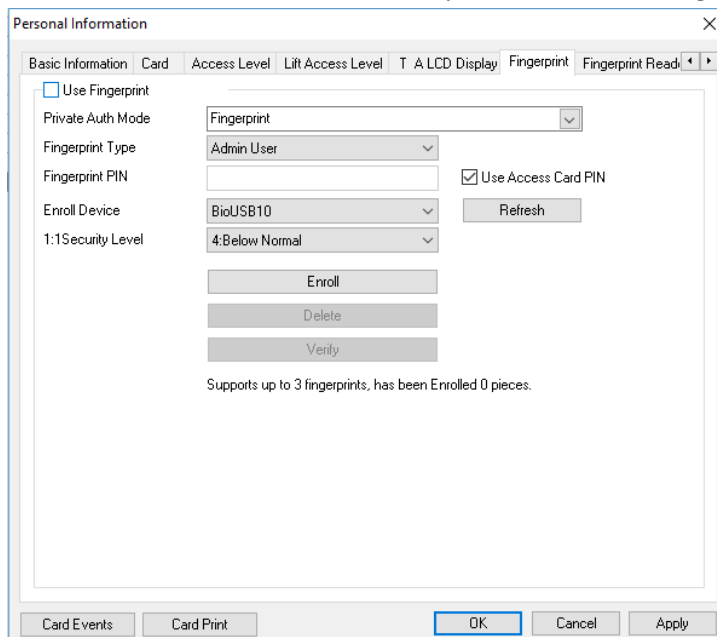
There are two ways of enrolling fingerprint readers:

1. Enroll Fingerprint users using the desktop enrollment scanner
2. Enroll Fingerprint using Biometric Reader

3.2.1 Enrolling Fingerprint using Enrollment scanner

3.2.1.1 Plugin Fingerprint Scanner and make sure it is properly installed

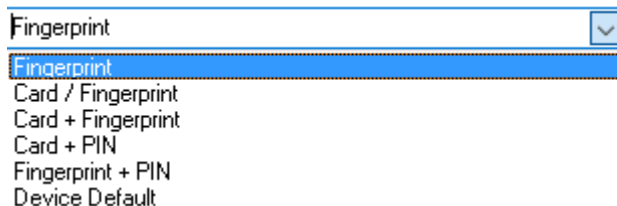
3.2.1.2 Add the User or select the user you wish to enroll fingerprint and go to **Fingerprint Tab**



3.2.1.3 Enable Use Fingerprint

Use Fingerprint

3.2.1.4 Select the **Private Auth Mode** you wish



- Fingerprint – Fingerprint Only
- Card / Fingerprint – Card or Fingerprint
- Card + Fingerprint – Card plus Fingerprint
- Card + Pin – N/A
- Fingerprint + Pin – N/A
- Device Default – Fingerprint only

3.2.1.5 Select **Enroll Device: BioUSB10**

Enroll Device

3.2.1.6 Click Enroll and another window will pop-up for enrollment software

Note: Simply follow the steps below

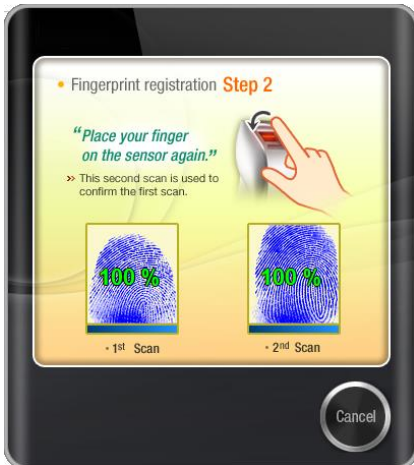
3.2.1.6.1 Click Next



3.2.1.6.2 Select the finger you wish to enroll and scan



3.2.1.6.3 Place the finger on the sensor



Note: You'll need to place your finger 2 times

3.2.1.6.4 Once successfully enrolled finger will be highlighted, click Next to continue



3.2.1.6.5 Click Finish when done



3.2.2 Enroll Fingerprint using Fingerprint Reader

3.2.2.1 Add the User or select the user you wish to enroll fingerprint and go to **Fingerprint Tab**

Personal Information X

Basic Information | Card | Access Level | Lift Access Level | T A LCD Display | **Fingerprint** | Fingerprint Read

Use Fingerprint

Private Auth Mode: Fingerprint

Fingerprint Type: Admin User

Fingerprint PIN: Use Access Card PIN

Enroll Device: FingerPrint Reader(001)

1:1 Security Level: 4:Below Normal

Supports up to 3 fingerprints, has been Enrolled 0 pieces.

Card Events | Card Print | | |

3.2.2.2 Enable Use Fingerprint

Use Fingerprint

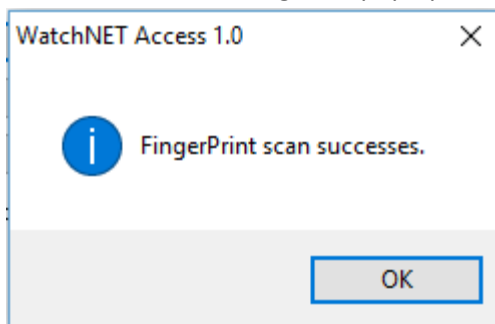
3.2.2.3 Select **Enroll Device** as **FingerPrint Reader(001)**

Enroll Device: FingerPrint Reader(001)

Note: If using multiple reader, rename each reader first so it won't be confusing when selecting the device

3.2.2.4 Click **Enroll** and the fingerprint scanner will start flashing, place finger to scan

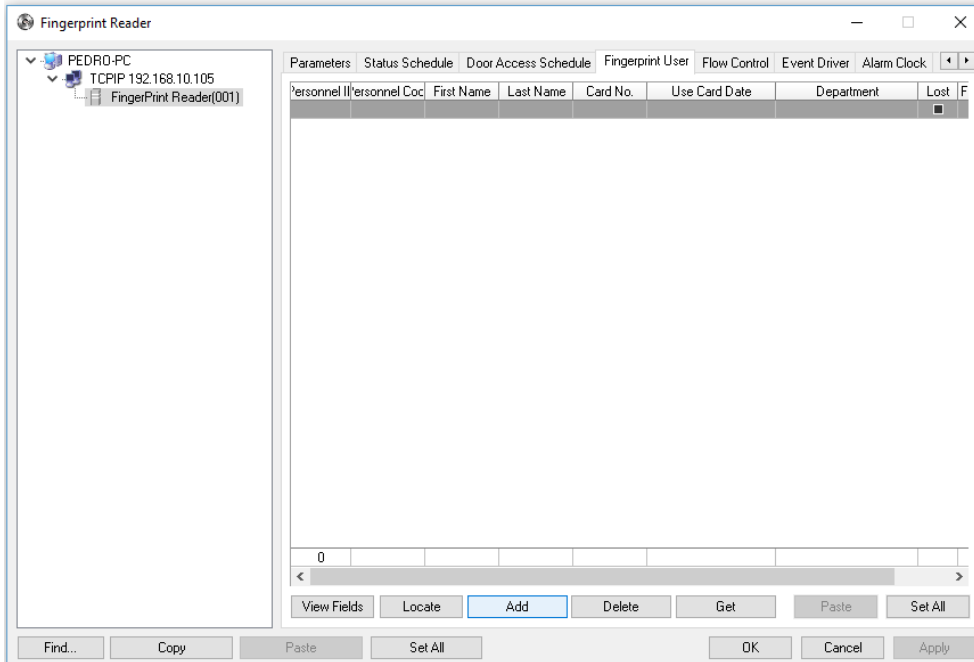
3.2.2.5 Once finish a message will pop up:



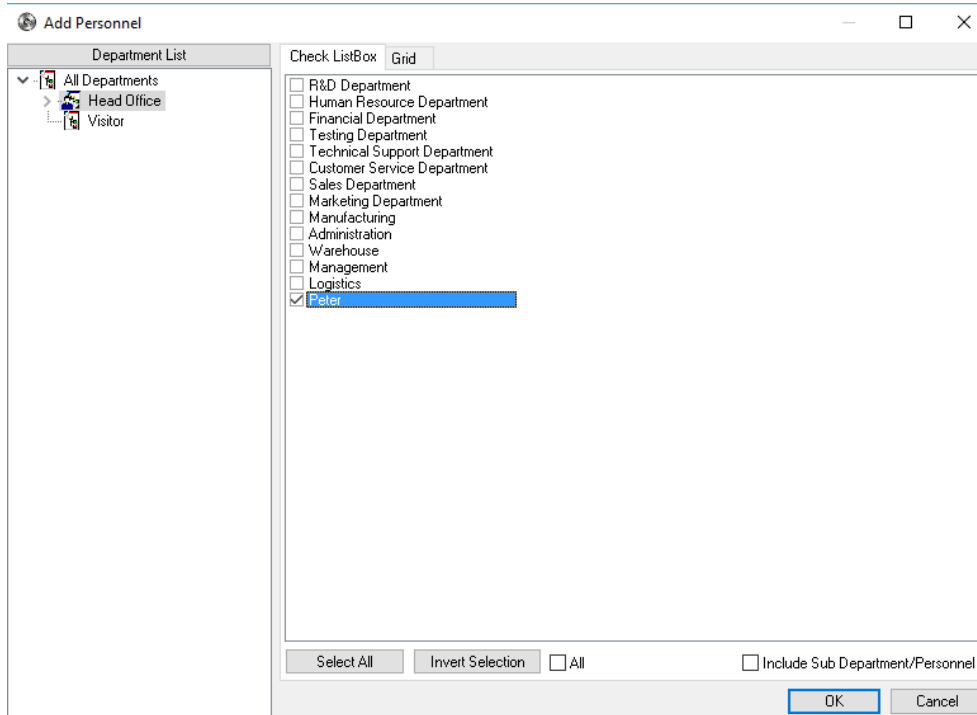
3.3 Downloading Fingerprint users into Fingerprint Reader



Go to **Fingerprint Reader**, go to **Fingerprint User Tab**



And add the user.





After adding the user, go to **Controller Configuration**, select the Biometric reader and click **Download Configuration** on the bottom.

