Automatic Body Temperature Scanner User Manual

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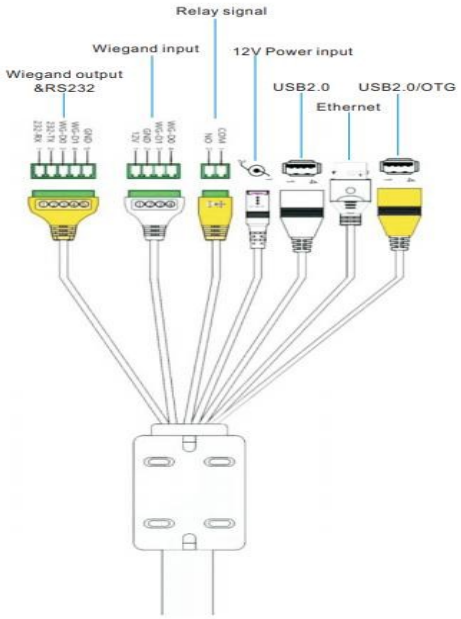
1. Introduction

TALOSYS Automatic Body Temperature Scanner integrates high-precision thermal imaging temperature measurement sensor, image processing, image recognition, and other technologies into an intelligent monitoring system. The product has features such as body temperature detection, mask detection, attendance monitoring, and remote control. It can be used to manage access rights at security gates or to control other devices.

1.1 Interfaces

This device supports multiple interfaces as shown in the image below.



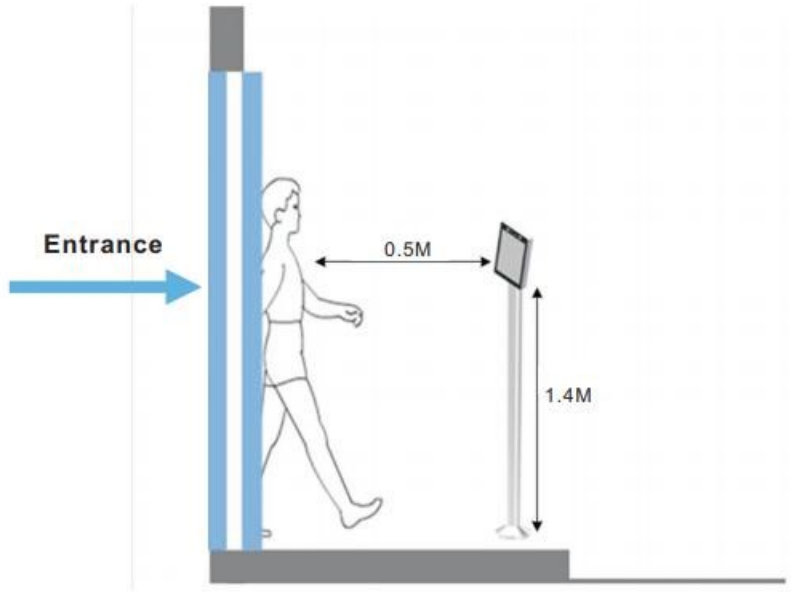
The Wiegand input and output interfaces can be used to control entry gates that use the popular Wiegand protocol. The Relay interface is used to control other devices based on the temperature monitoring results. Ethernet and USB ports can be used to connect the scanner device to other computing devices.

The DC 12V adapter provides power to the scanner and it is connected to the standard power outlet on the other end. The adapter can be replaced by a battery that provides equivalent DC 12V 4A output.

1.2 Scanner Placement

After assembling the scanner based on the Quick Setup Guide, locate a suitable spot to place the scanner. Consider the following:

1) The device should be set next to the entrance to monitor body temperature.
2) The recommended tilt angle of the scanner device is usually set between 0 and 5 degrees.
3) The distance from the device to the person being scanned for temperature is between 6 inches to 1.5 ft for best results.



1.3 Ambient Light

The device works well in regular light. If it is very dark in the room, it helps to turn on regular light. There should be no backlight as in a TV studio as it interferes with the infra-red camera.
For best results, the device should be setup indoors to ensure that there is no direct sunlight between the device and person being monitored.

2. Operation

2.1 Plug and play Operation

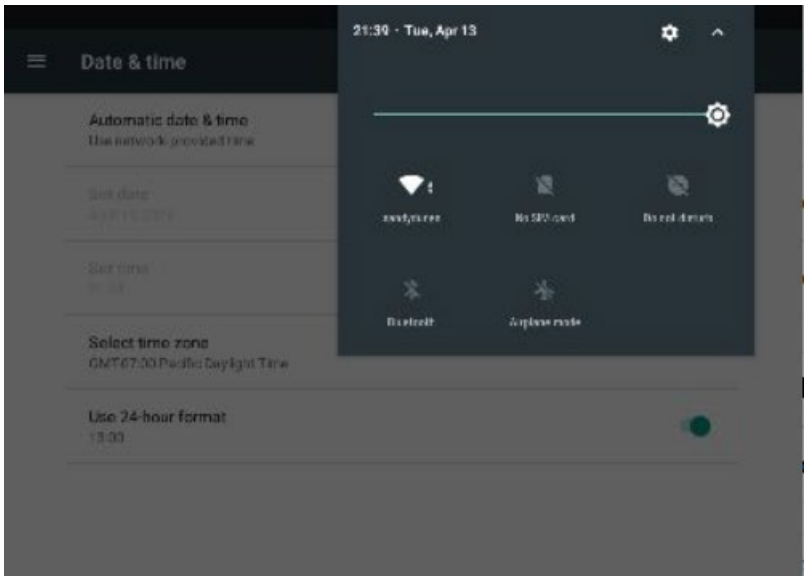
The assembled temperature scanner is a plug and play device that works out of the box when connected to the power supply.
The scanner beeps and starts up. Wait for 10 seconds. The scanner starts taking temperature when you are in the range of the scanner. During this time, if you find that the first detection is slow or the temperature value is abnormal, it is because the scanner calibration has not been completed. Allow the device to stabilize in a minute or so.

2.2 Basic Configuration Changes

Press a finger on the blue diamond at the bottom left until the password window appears. Press within the password box shown by a green dot.

Click on the ?123 button at bottom left of the device keyboard that appears. Then, type the password 123456 and click the Submit button.

Drag down the screen on top right. The Wi-Fi icon appears. Click on it and set it up as per your available Wi-Fi connection.

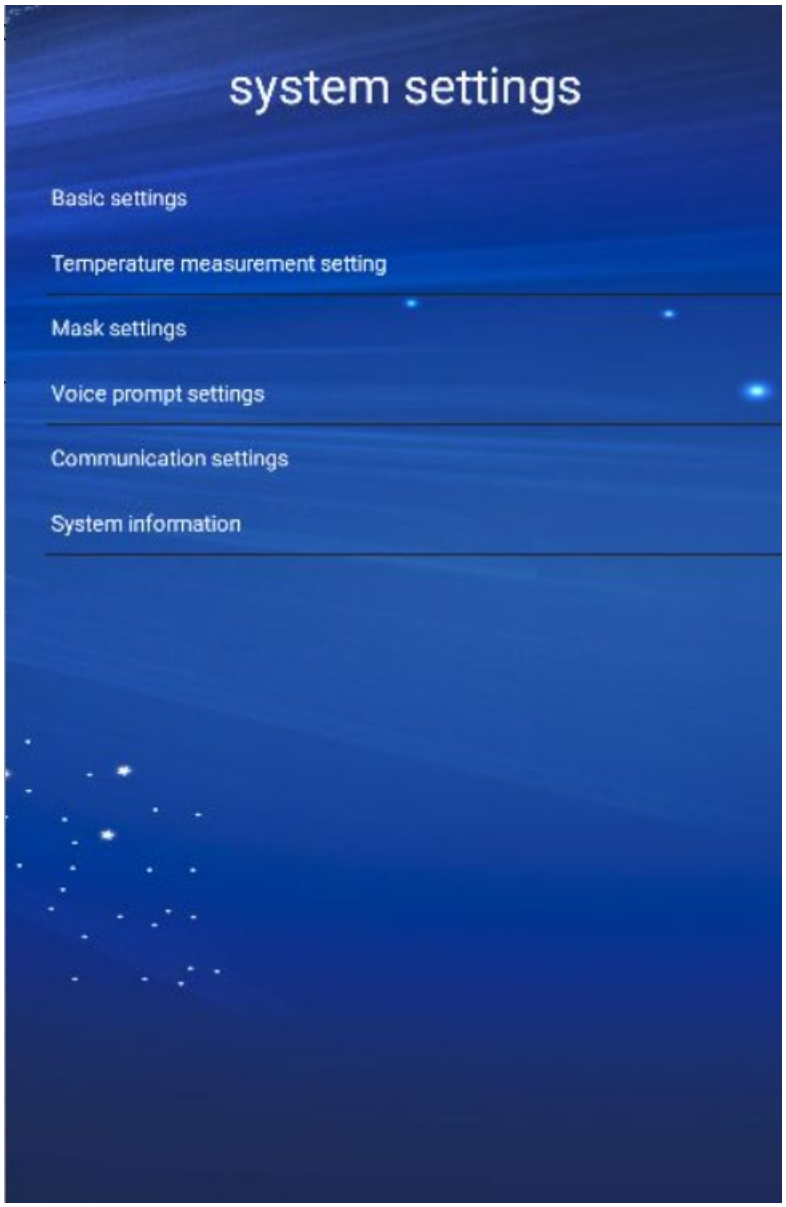


The date and time use the network provided time but if you need to change the time zone and time settings based on your location use the Android settings gear icon. Then, click on Date & Time and change the settings.

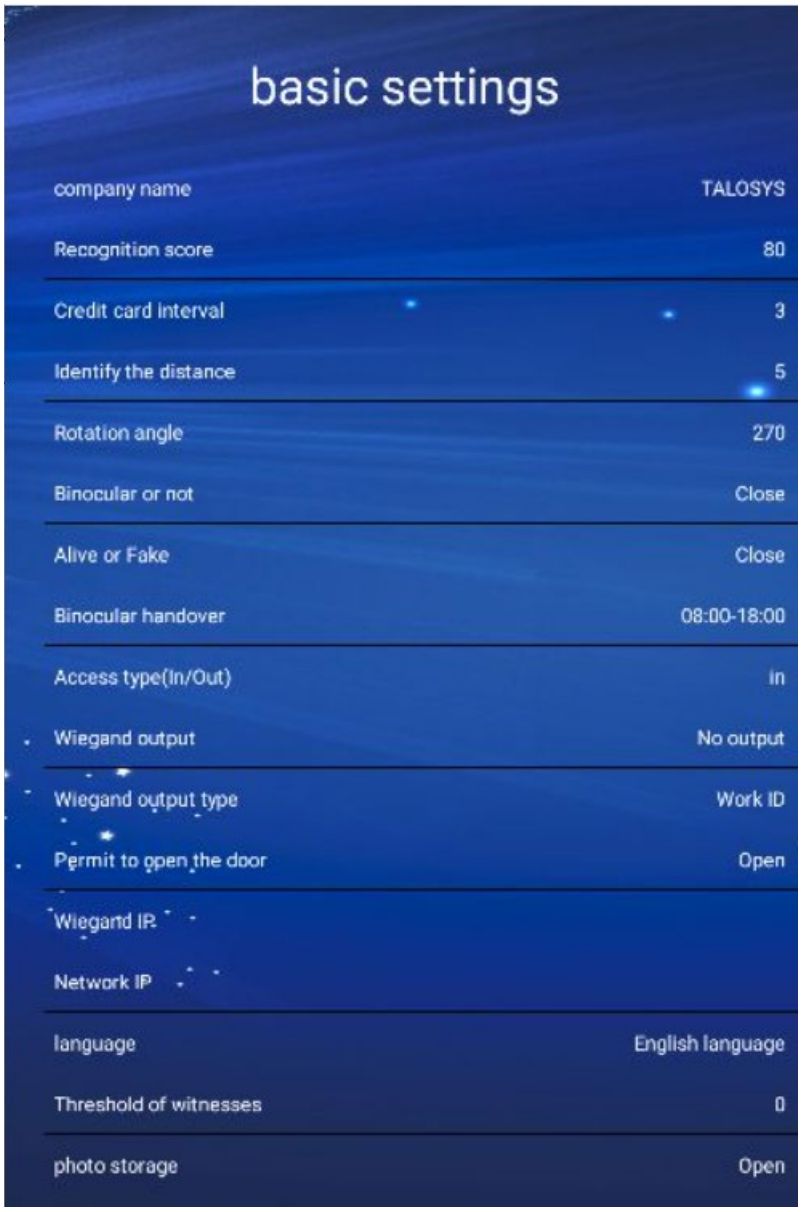
3. Advanced configuration

The scanner device is a modified Android device and largely works like an Android phone or tablet with a touch screen. It can perform many complex tasks beyond taking temperature measurements. The configuration can be completed from the scanner without a need to connect it to a computer. After entering the password, you see the following screen:

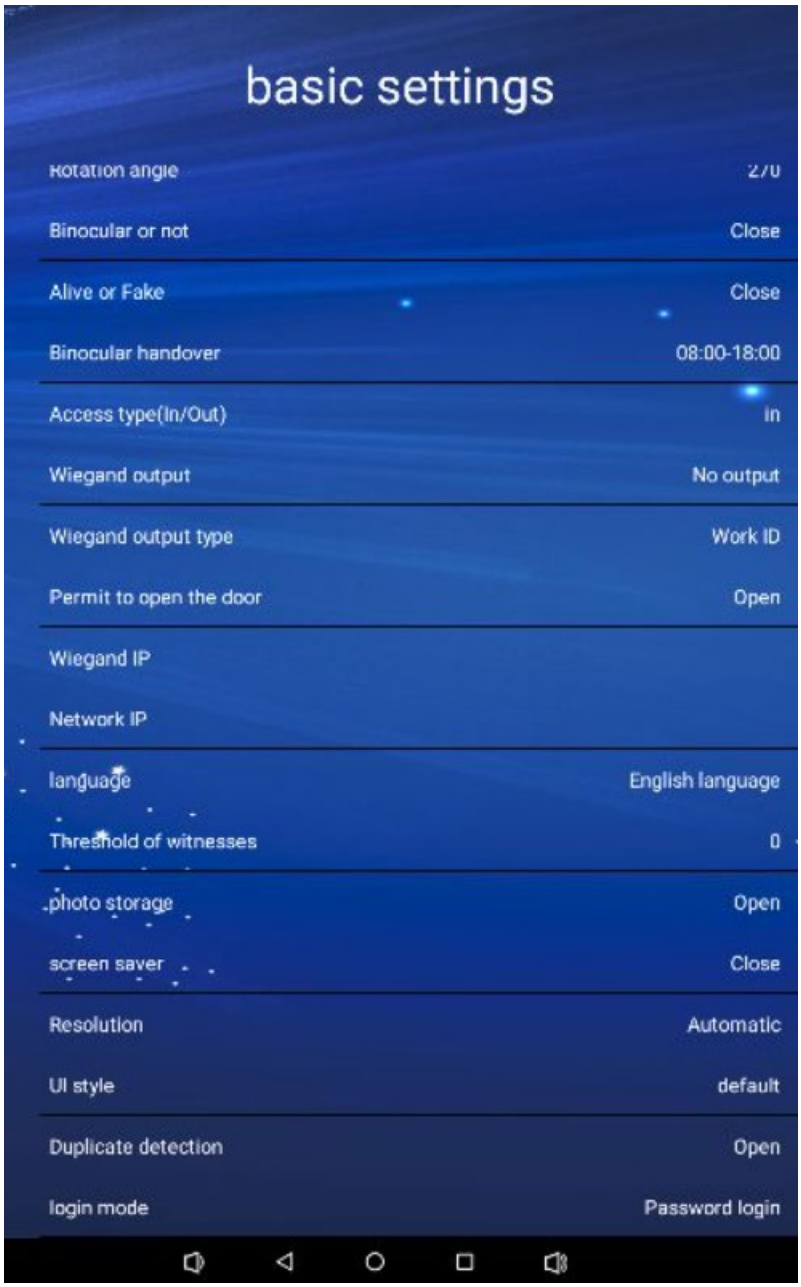
A click on the System Settings shows additional settings for temperature detection, mask detection, voice options, and network.



Under basic settings, the following parameters are available.

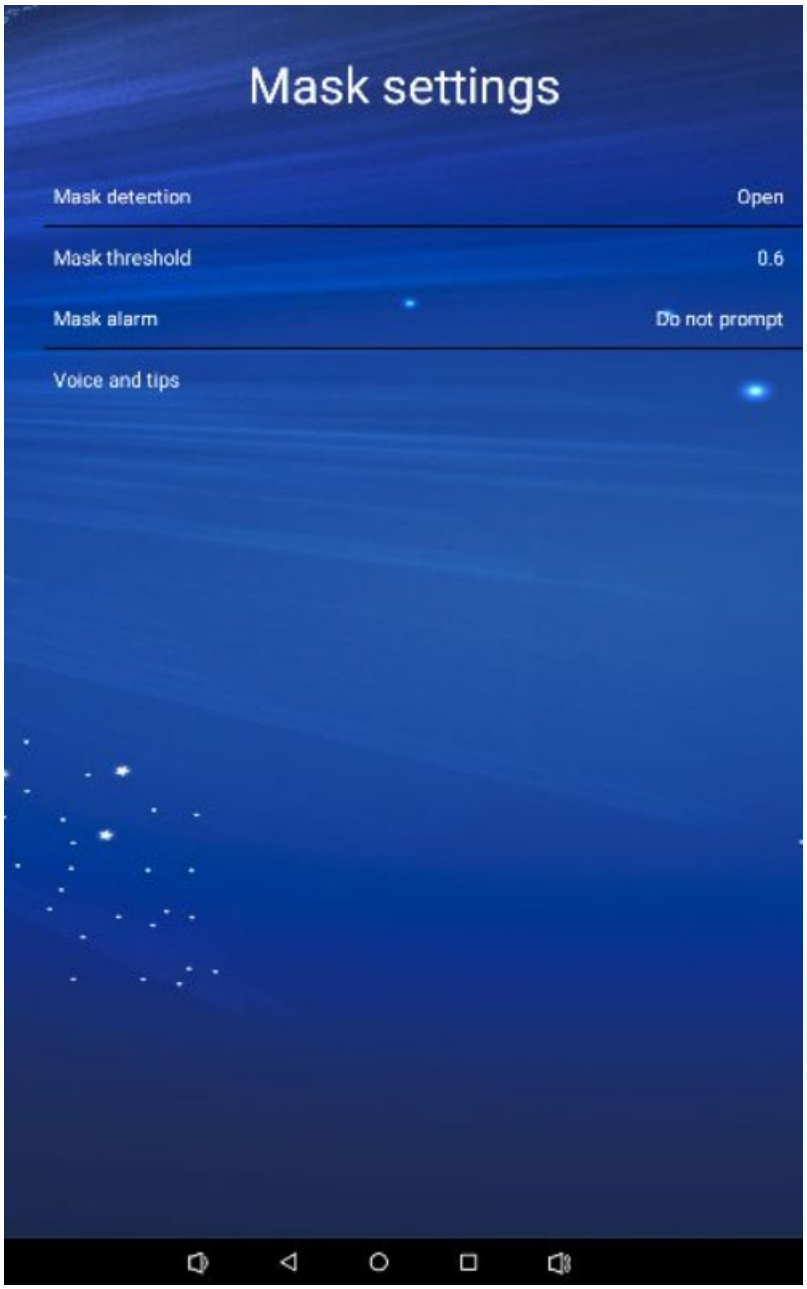


More basic settings….

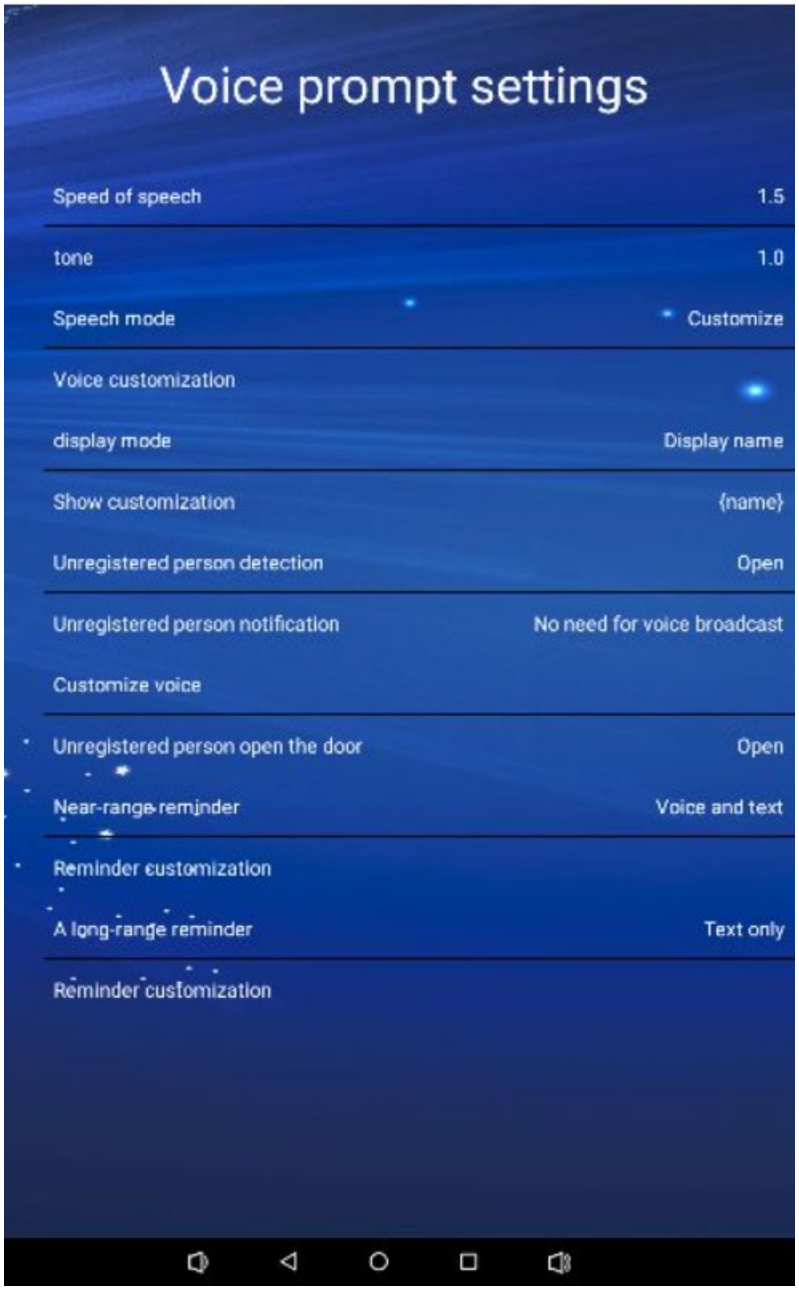


It is recommended that you do not change these settings. TALOSYS support person will advise when a setting needs to be changed and to what value.
Under temperature settings, you have access to the following parameters:

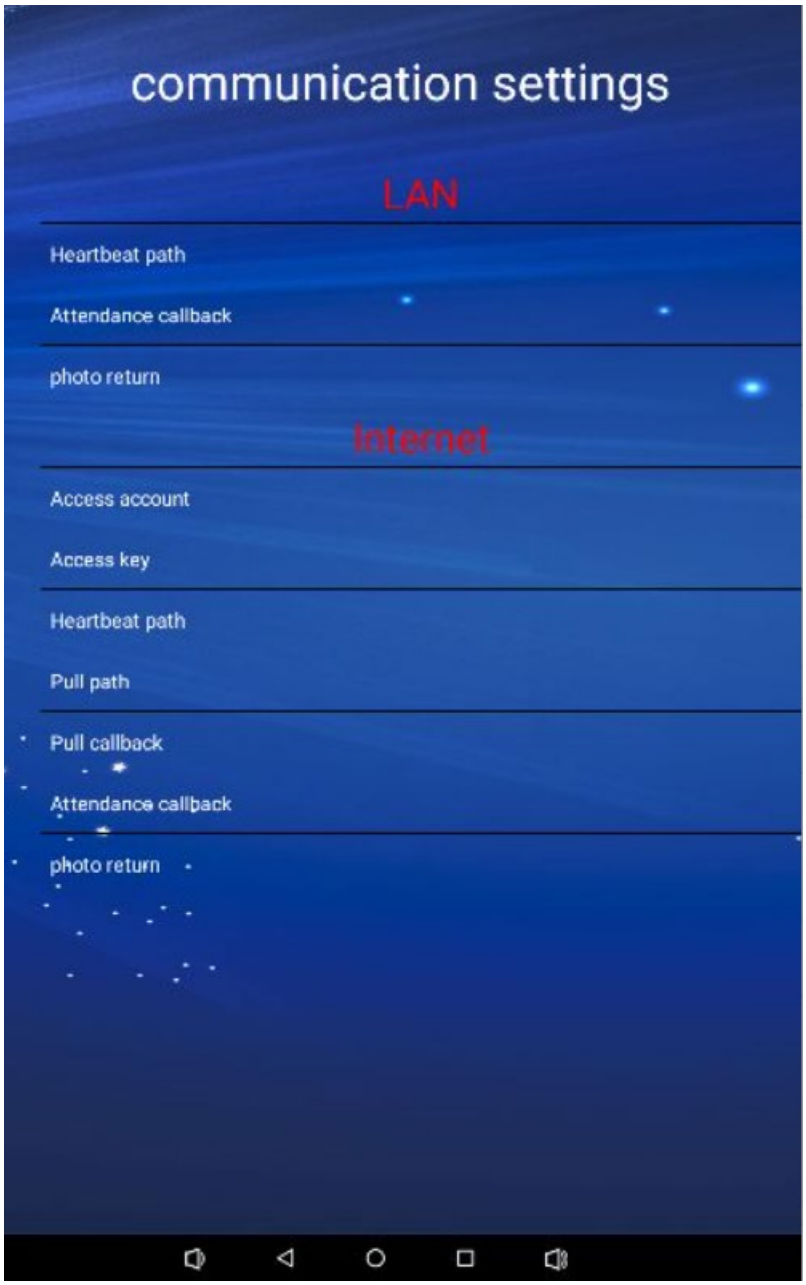
Mask settings cover the following:



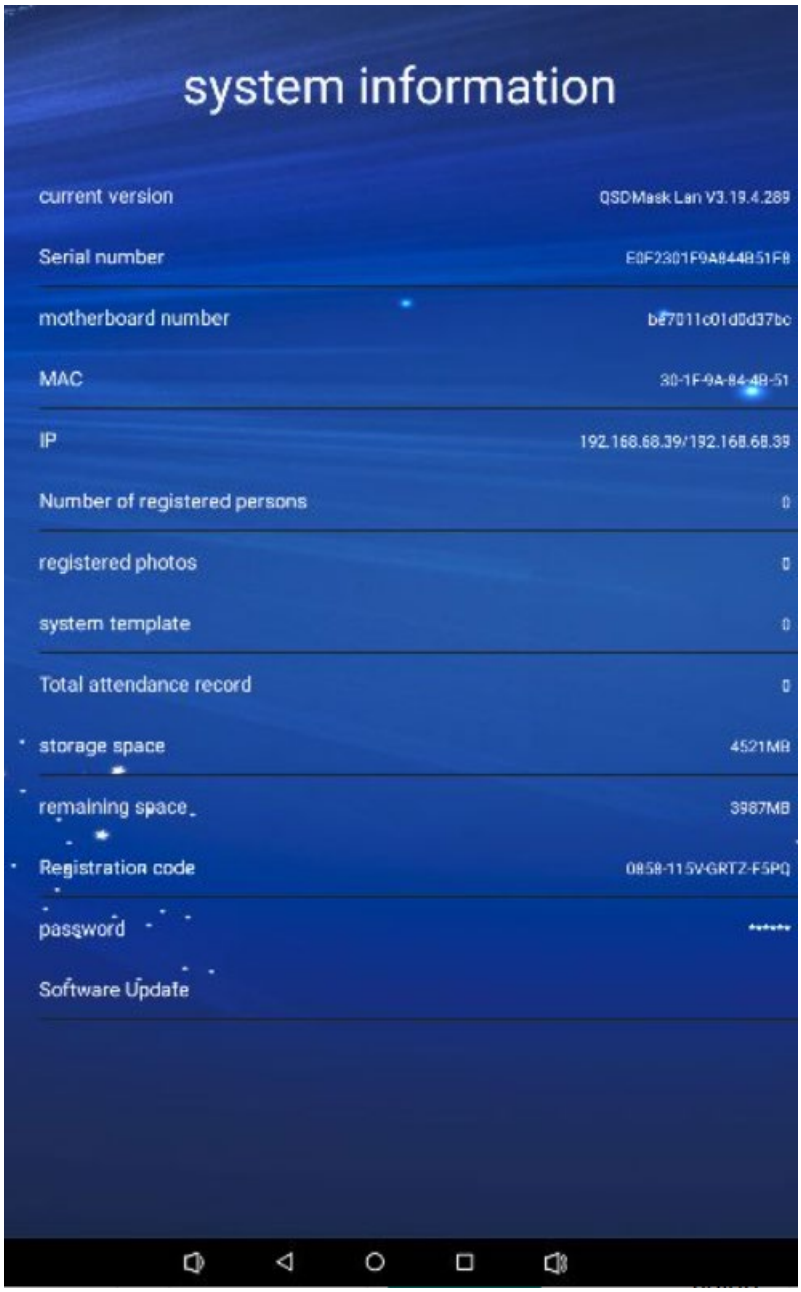
Voice prompt settings:



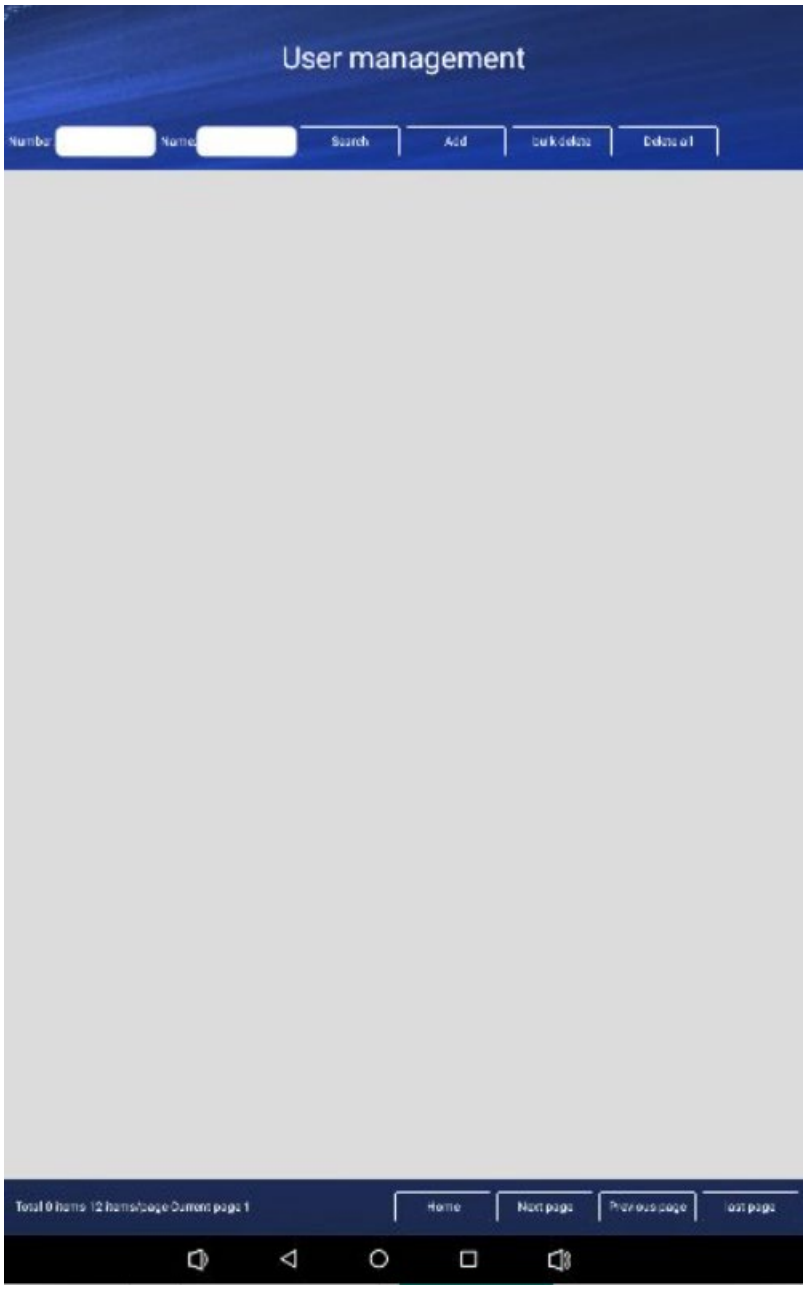
Communication settings:

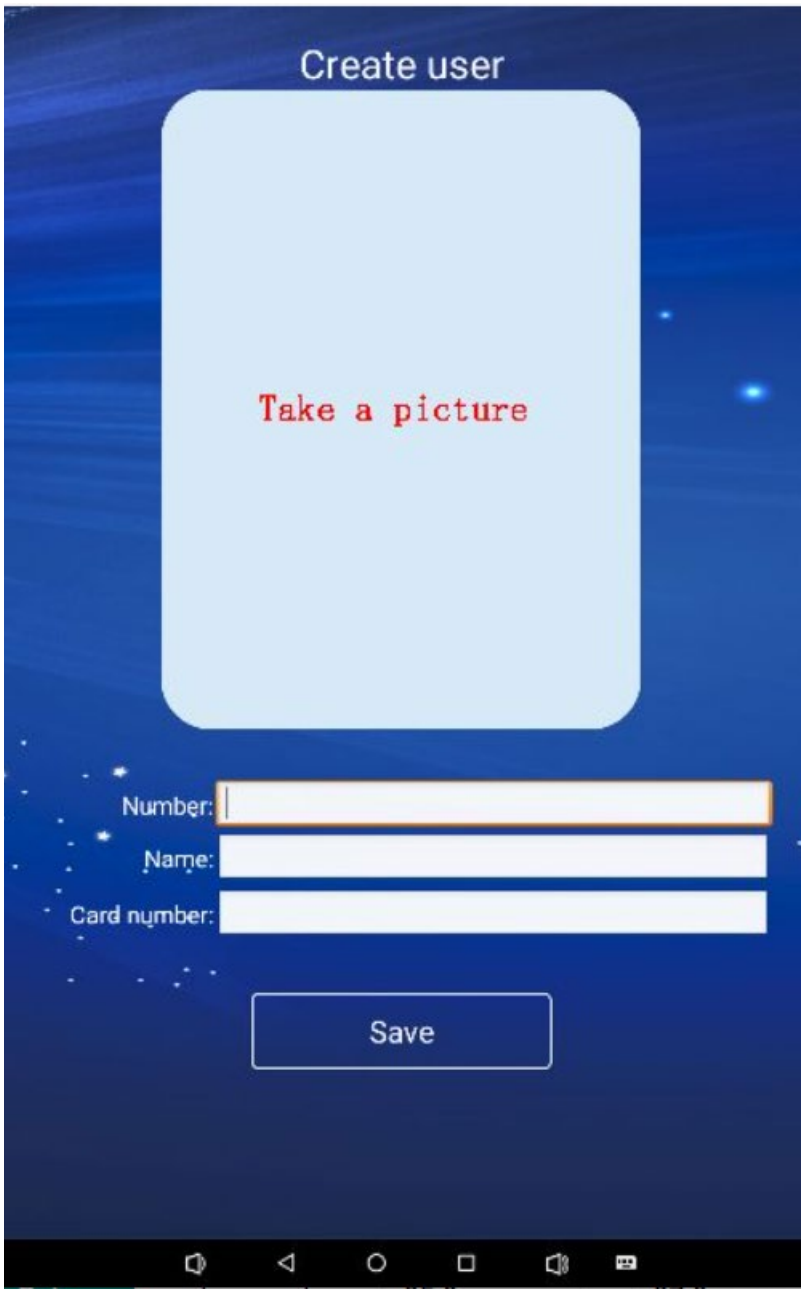


The system information shows details about the system:



Using the User Management system, you can add employee details and have their pictures taken directly from the device. The difference between employees and visitors/strangers is that the details about employees are pre-recorded in the system and then the system can automatically identify them.


User management
Number
Name
Search
Add
Bulk delete
Delete all
Total 0 items 12 items/page Current page 1
Home
Next page
Previous page
Last page


Create user
Take a picture
Number:
Name:
Card number:
Save

From the Attendance Management system, you can manage employee/staff attendance details and export the results to an Excel format file.

3.1 IP settings

After connecting to the Wi-Fi, the screen will show device IP details such as 192.168.68.23. Your numbers will depend on your Wi-Fi settings.
The default factory IP address for the scanner is set to DHCP dynamic address. Once the device is connected to the Wi-Fi network, it is automatically assigned an IP address. It is recommended to set

the IP address to a static IP address for subsequent maintenance. An IT technician can assign a static IP address to the scanner.

3.2 System Settings

It is advisable not to change the system settings. TALOSYS support team can advise when a setting change is required.

3.2.1 Basic Settings

Most settings should remain at their default values.
Corporate Name: You can enter your organization name or leave the default as TALOSYS.
Recognition score: Default setting is 80. It identifies a known user with 80% confidence level. Do not change this value. This is an optimized value based on minimizing false positives and false negatives.
Credit card interval: Default value is 3. This value determines the frequency interval in seconds at which a person in front of the camera is checked.
Identify the distance: Default is 0. Do not change this value.
Rotation angle: Default is 270, do not change.
Binocular or not: Default is “no”. If “Yes”, the infrared monitor starts to assist with face recognition.
Alive or Fake: Switch to detect a live person. If “yes”, device will only detect a live person, not pictures. This is a security feature.
Binocular Handover: It works with "Binocular or not", setup time is for the color camera. Outside the setup time range, infrared camera is used. Default setting is from 8 AM to 6 PM.
Access Type [In/out] Used with gates.
Wiegand output: Switch, used in Wiegand compatible gate systems.
Wiegand output type Options to set up number type output by Wiegand.
Wiegand IP: The IP address of the Wiegand gate.
Network IP: The IP address of the scanner device. This is usually a number starting with 192.X.X.X shown on the front of the scanner based on the local Wi-Fi settings.
Permit to open the door: It is the first button to use on relay for gate access, takes the temperature result into consideration before opening the door.
Language: Default language is setup as English. Do not change.
Threshold of witnesses: Default 0. Do not change.
Photo storage: Used to select whether to save the captured photo or not.
Screensaver: The screensaver image. Allows you to pick an image that you want to use as the screensaver.
You can set up the screensaver picture under “file settings”
Resolution: Selected automatically.
UI style: Default is ”4”, do not change.
Duplicate detection: Open. Do not change.
Login mode: password

3.2.2 Temperature measurement settings

Temperature detection: Switch to set temperature detection or no temperature detection. Sometimes, the scanner is used only for attendance monitoring, then temperature detection is set to closed.
Temperature module: The chip technology used for temperature sensing
Low Temperature: This sets the lower threshold for the normal temperature range, and the normal temperature is 97 degrees F to 99 degrees F. This value can be modified as per your monitoring needs.
High Temperature: This sets a temperature range, and the normal temperature is 97 degrees F to 99 degrees F. This can be modified as per your monitoring needs. When the scanner detects the temperature of the person to be higher than the High temperature value, the LED light turns red.

Data correction: Whether data compensation is enabled.
Compensation value: Default to 0. If the device consistently shows 99.5, for example, when the medical thermometer shows 99.7, then changing the compensation value will add 0.2 to all results. So, this is used for calibration, if needed.
Temperature type: Fahrenheit. You can toggle between Centigrade and Fahrenheit.
Temperature to broadcast: The choices are normal/abnormal or the actual temperature value.
Precision: 0.2. The temperature is generally accurate to +/- 0.2 degrees Centigrade or +/- 0.5 degrees Fahrenheit at appropriate distance.
Display Mode: Defaults to the temperature value.
Temperature measuring area: Set to unlimited by default.

3.2.3 Mask settings

Mask detection: whether mask detection is turned on or not.
Mask threshold: Identify if a person is wearing a face mask. Default is 60%. The higher the value, the more strict the test. Do not change this value.
Mask alarm: Default Mask alarm icon is shown on screen when someone without a mask is detected.
Voice and tips: Voice prompt when the scanner detects a person without a mask.

3.2.4 Voice prompt settings

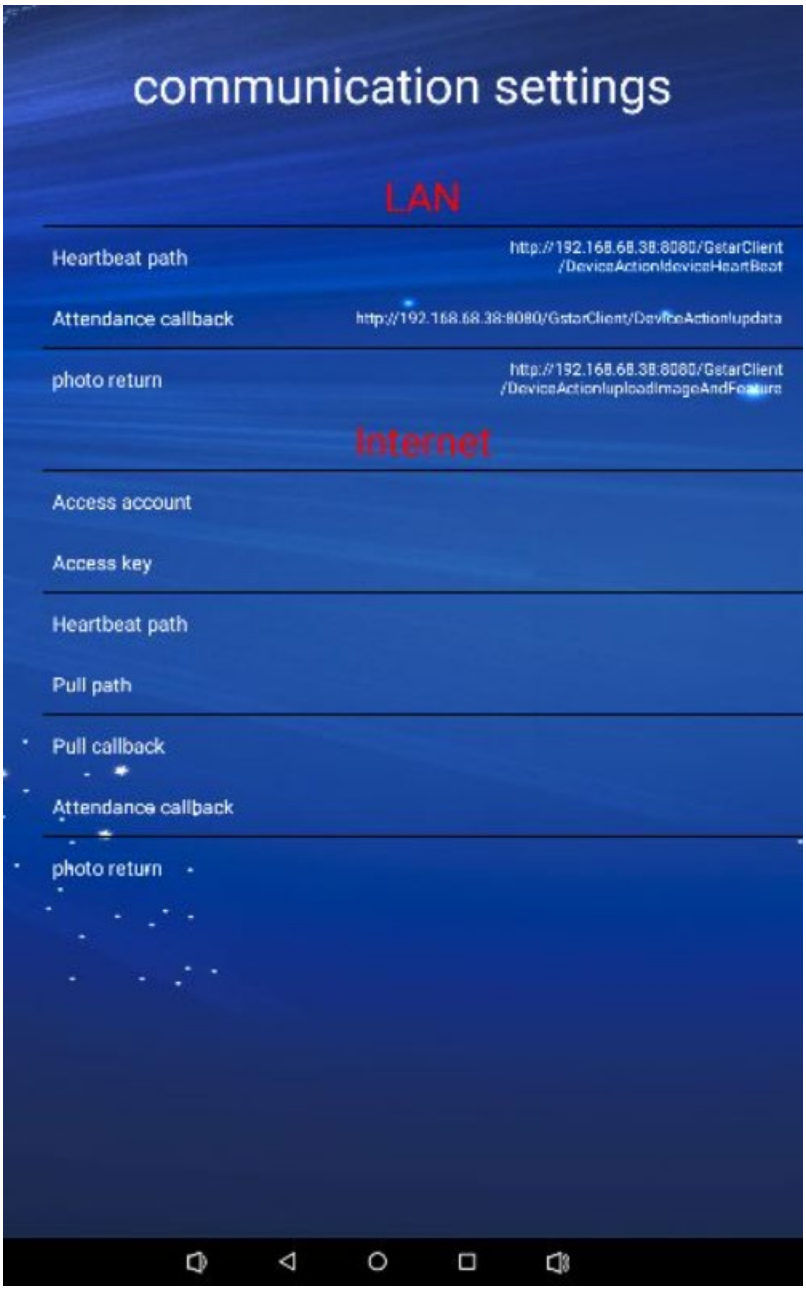
Speed of speech: Setup voice speed, unit: second.
Tone: Set up the volume for voice.
Speech mode: It is optional for voice mode, details are as below:
”Broadcast name” implies that the device will broadcast the name(default).
”Prompt tone” is a custom beep.
”Import voice package” is the button to upload your voice, and you can do next step on ”file settings”-”Custom language pack”.
”Custom” means the switch to do voice customization.
Voice customization: Fill the voice content, works after you select ”Custom” at [Speech mode], to define voice content.

Display mode: Default: ”display name” displays the person’s name on screen;
Show customization: Fill the display text, works after picking ”custom” in [display mode].
Unregistered person detection: Based on this setting, temperature scanning of strangers will not be done, when they are not recognized by the system.
Unregistered person notification: Setup of voice alert for unregistered persons (visitors).
Customize voice: Fill the text, work after selecting “custom” on [Unregistered person notification]
Unregistered person open the door: It is used with gate access, using the relay or Wiegand port
Near-range reminder: When testing distance is too close, select voice prompt/text prompt/all prompt, or customize.
Reminder customization: Fill the text, It work after selecting ”shut down” on [Near-range reminder]
A long-range reminder: When testing distance is too far, select voice prompt/text prompt/all prompt, or customize
Reminder customization: Fill the text, It work after selecting ”shutdown” on [A long-range reminder]

3.2.5 Communication settings

LAN settings

Heartbeat Path/Callback Path/Photo return: These three will need to be filled with the device IP address on your Wi-Fi. Once you have updated the IP address for the above 3 parameters, the communications settings page gets updated as shown below (your IP numbers will be different):



Internet settings

Access account
Access key
Heartbeat Path/Callback Path/Photo return: These three will need to be filled with the device IP address on your Wi-Fi.
Set the image recognition terminal and the heartbeat and attendance data interface point to this system by changing the IP address. After the setting is successful, the device will send a heartbeat

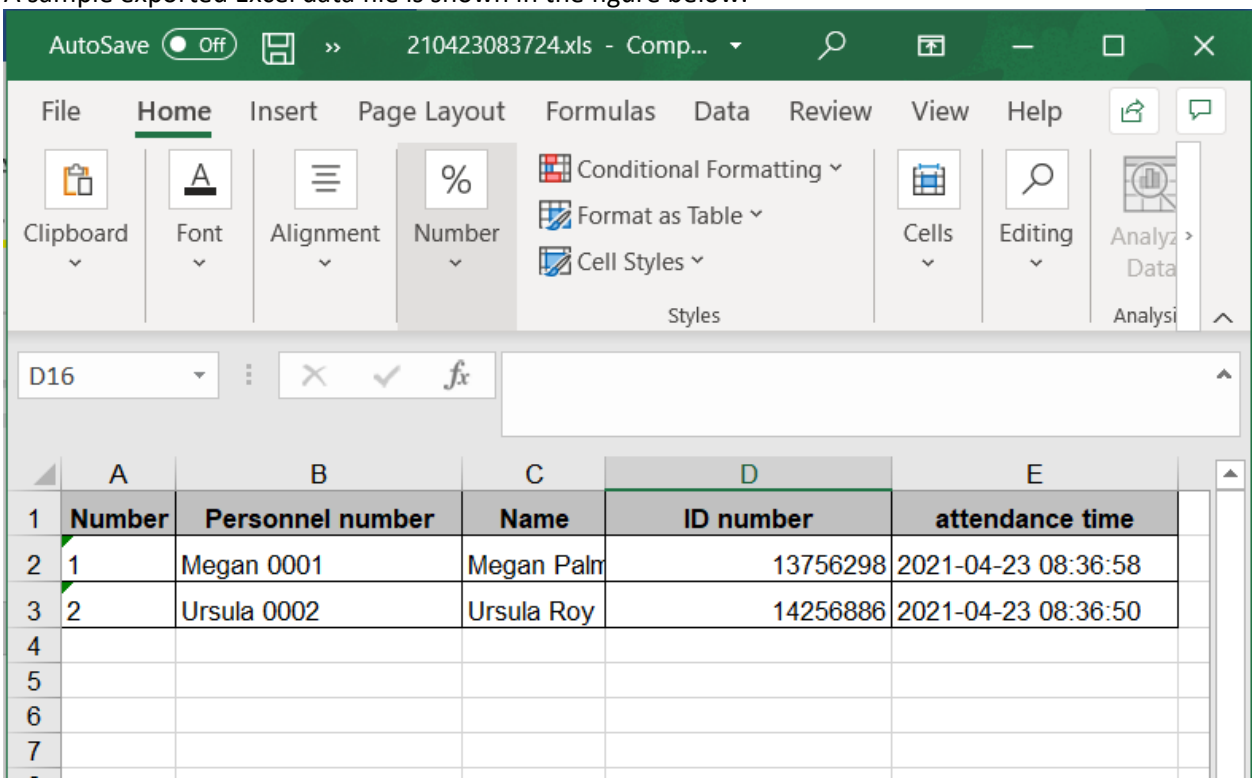
to the system every minute. After a successful attendance setting, the scanner will send attendance details and photo information to the system upon a successful entry.

3.3 User Management

Search: Search for any person existing in the database based on identifier number or name.
Add User: Add a new user as follows:
Number: Custom identifier such as Kylie user0001, Megan user0002, it is recommended to maintain a pattern.
Name**:** Name of the person whose details are being added.
IC card No: Person's IC card number, optional.
Save: Save the details of the IC card. After saving, the IC card will not show as invalid card.
Delete: Delete a specific record.
Delete all: Delete all records.

3.4 Attendance Management

Search: Search based on name, number, and time period.
Number: Name the personal information record, it can be customized as Kylie user0001, Megan user0002. It is advisable to maintain a pattern for ease of maintenance.
Delete: Delete the photo info associated with this Job number.
Delete all: Delete all the records.
Excel: Allows you to export the attendance data as an Excel file.
A sample exported Excel data file is shown in the figure below.



	A	B	C	D	E
1	Number	Personnel number	Name	ID number	attendance time
2	1	Megan 0001	Megan Palm	13756298	2021-04-23 08:36:58
3	2	Ursula 0002	Ursula Roy	14256886	2021-04-23 08:36:50
4					
5					
6					
7					