

# Face Manager Server Software iR37 User Manual



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Device - 7" iR37 – Thermometer/Camera/Ultrasonic distance sensor/Facial Recognition Use Case - Software for upload/download/ interrogation

## **OVERVIEW**

This document relates to software "Device Manager" capabilities as a means to extract, analyze, and export data from the iR37 device or devices sitting on a single LAN.

Up to 200 devices (iR37) on a single LAN are supported.

## **SCOPE VER 1.4.16**

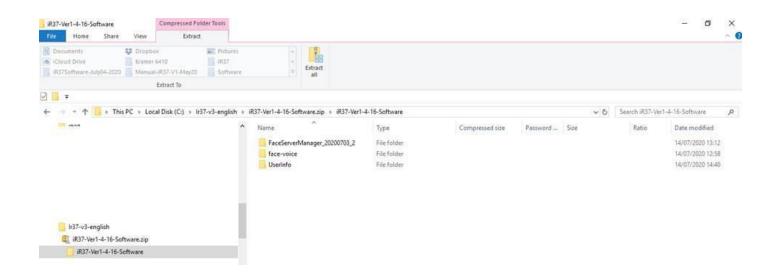
The software is constantly evolving and enhancements made both at the request of users and as part of the roadmap of functions are likely to be required over time.

The instructions herein relate to a single LAN of up to 200 devices.

This document relates to capabilities and function existing on July 21, 2020.

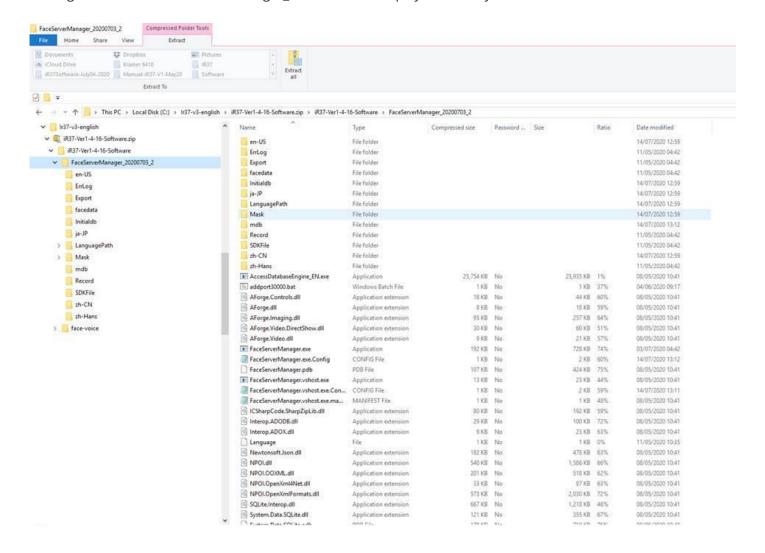
## **INSTALLING SOFTWARE – STEP-BY-STEP PROCESS**

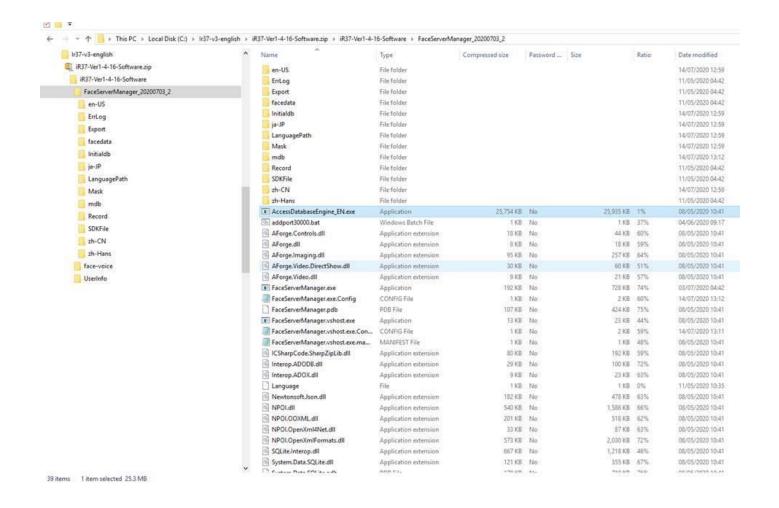
- 1. Create a separate directory on your hard drive or server for the software and give this a useful descriptive such as **iR37**.
- 2. Copy or download the Zip file to the iR37 main directory.
  - a. current version is "iR37-Ver1-4-16-Software"
- 3. Unzip the file into this directory.
- 4. Your main iR37 directory structure should now look like this:



## **OPENING PROGRAM**

Clicking on the iR37 / FaceServerManager\_20200520 will display a directory like this:



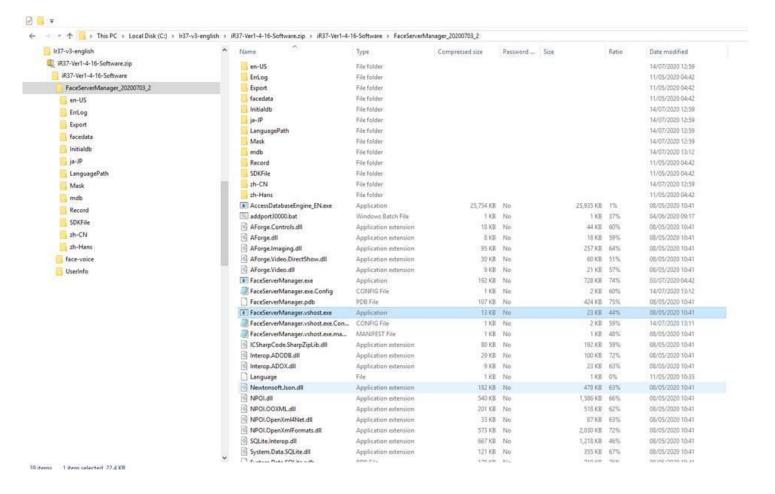


Find "AccessDatabaseEngine EN.exe" (highlighted as above)

Double click this file.

The file will open and your computer will ask you to allow changes – click Yes. The program will open and install Access 2010 – (it will not remove or amend any other version of Access already on the machine) the Face Server software does work with Access up to 2016 – the last release:

This program will run and then close.



Find "FaceServerManager.exe" (highlighted as above).

Double click this file.

The file will open and your computer will ask you to allow changes – click Yes. The program will open and present you with the following screen, most likely as a central window:



## SOFTWARE MAIN SCREEN COMPONENTS

Depending upon your operating system it may open in Chinese characters as follows:



If this is the case, click the far right-hand menu tab. Select English.



- There are seven menu tabs across the top.
- These do not have sub/ dropdown-menus.
- Each opens in the same window the menu tabs are visible at all times.
- The very top line will show the software version plus your current computer's allocated IP (your machine) suffixed with 30000.

## **MENU TABS - OVERVIEW - LEFT TO RIGHT**

#### **Device Manager**

Entering and managing the details of each iR37 you have.

#### **User Group Manager**

Entering the departments of your organization for specific individuals, e.g. HR, FM.

#### **User Manager**

Adding specific users individually or en masse to groups.

#### **Picture Transfer Status**

Confirmation screen of specific users uploaded to the device/s.

#### Record

Information from the iR37 for each scan. Analyze detail with granular options.

#### **Update Firmware**

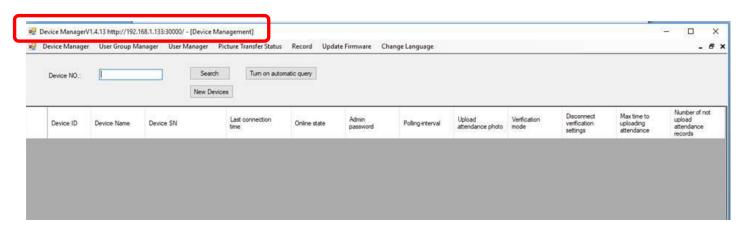
If a firmware update is required this can be effected across the LAN from here.

#### **Change Language**

Set menu display language, currently English, Chinese, Japanese.

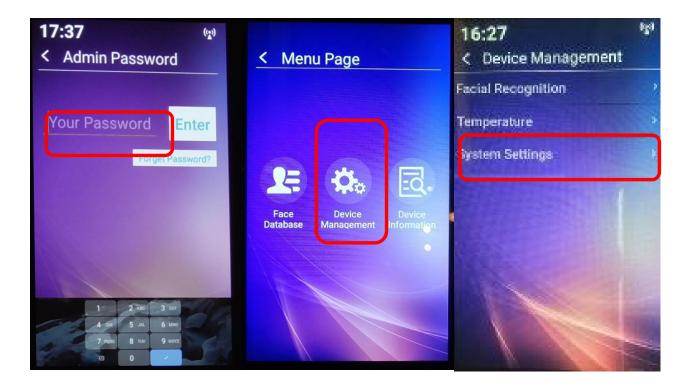
## **NETWORK SET-UP**

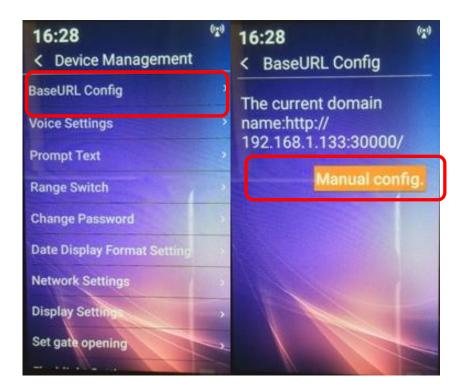
#### **Base URL**



At the top of the screen for the software is its address. This is the IP of the computer on to which it is loaded.

- 1. Your computer should have a fixed IP.
  - a. Under DHCP you may end up with a different IP on a re-boot, this is to be avoided.
- 2. The address at the top of the screen forms the Base URL which must be entered manually into each iR37. In the example here it is:
- 3. http://192.168.1.133:30000/
  - a. Enter this address into the iR37 as follows:





The device now knows where requests will come from and this is allied to an encryption key generated at the computer end. (more detail later in this manual).

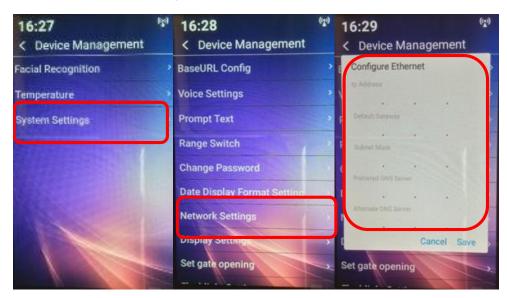
#### **Device IP Setting**

Now the device needs to be given a fixed IP. Your network administrator will provide this. You will need the following information.

IP / Gateway/ Subnet/ DNS/ Alternate DNS

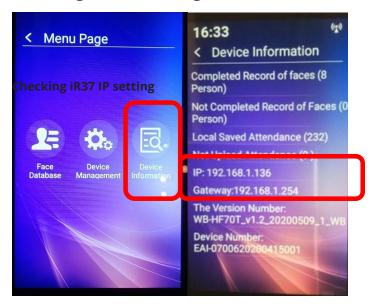
Subnet/ Gateway and DNS should be the same as the PC.

To enter the IP follow this process:



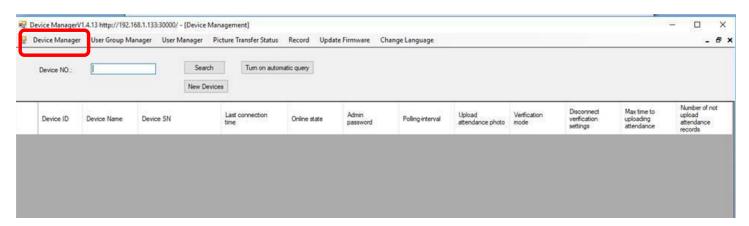
- a. The device has NO default IP address; it is blank (out of the box).
- b. This is where the IP you wish to allocate to the device is entered.
- c. For standalone deployments not in a networked environment this can be left blank.
- d. Please note the fields will always appear blank on re-entering this screen after an IP has been set. It is not a fault.
- e. If you wish to check the device's IP. See next section.
- f. Note: In a networked environment, the device will require TWO DNS servers. If you have only one, simply enter it twice as both the preferred and alternate. The iR37 will not let you enter only one!

#### **Checking iR37 IP setting**



## **MENU TAB DETAIL**

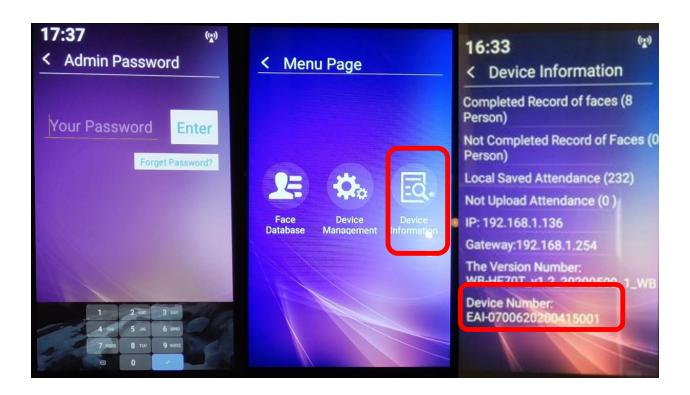
#### **Device Manager**



Clicking Search button on a new installation will produce a blank record – as above.

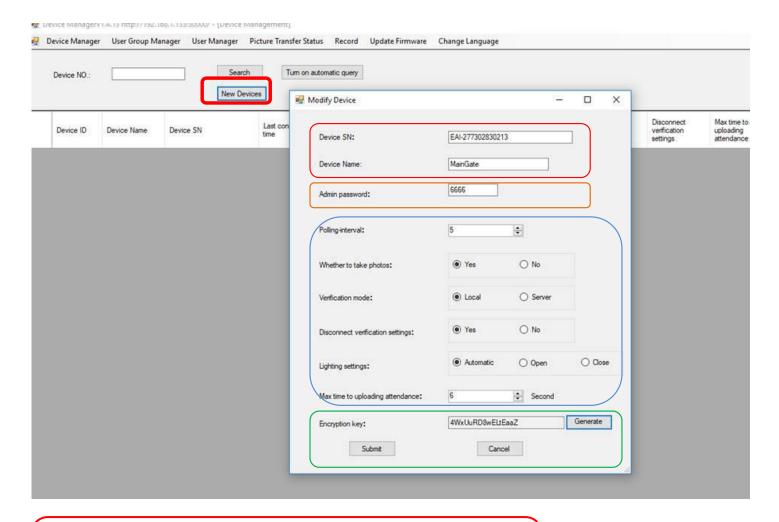
So let's add a device.

You will need each iR37's device/serial number:



The first three characters are letters, so it is EAI not EA1.

Click "New Devices" and the following pop-up appears.



**Device SN** – Enter the serial number of the iR37 device exactly as it appears.

**Device Name** – Enter a descriptor that indicates function and location.

The default settings for the remaining items are displayed as in the above screen grab. The radio button options are as follows:

**Admin Password** – Change to a four-digit alphanumeric, default is 6666; once changed here, it is instantly changed on the device.

**Polling Interval** – This is the interval in seconds at which the software will poll the device to ensure that it is online and active.

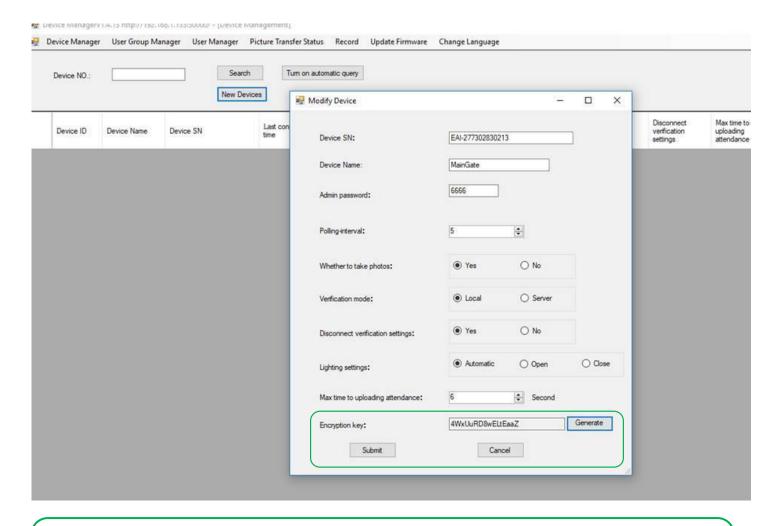
**Take Photos** – Global setting for the device to take a photograph with every scan or not at all.

**Verification Mode** – Set checks to local device OR refer to device manager first.

**Disconnect Verification** – Set device to work whether verified or not.

**Light Settings** – Set the camera light to be automatic or on (open) or off (closed).

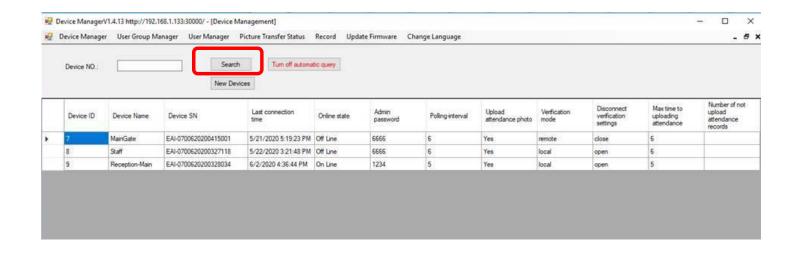
**Upload Attendance** – Time interval in seconds between each polling of the device for new scans. This is additive and only adds new records since last scan. Scans are stored on each device until deleted, locally or remotely. Scans once uploaded are stored within the device manager software.

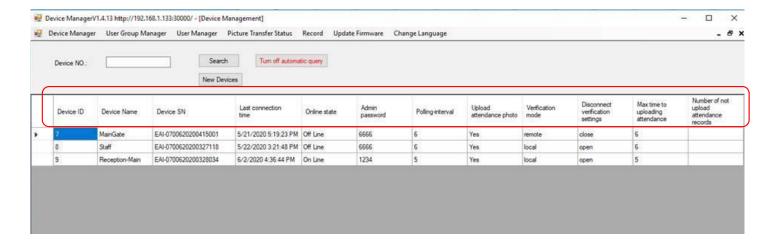


**Encryption Key** – Accept the auto-generated one or click "generate" for a new one.

**Submit** – Affects any changes to the device and verifies this has been done with a popout "success" window.

Once populated, clicking "search" will populate the screen as below.





#### Taking each column reading left to right:

Auto-allocated device ID. These are always listed in ascending numerical order.

The meaningful name you gave the device.

Device's full serial number.

The last time & date the device was polled.

The current on/offline status.

Device password.

How often the device is polled for its network status.

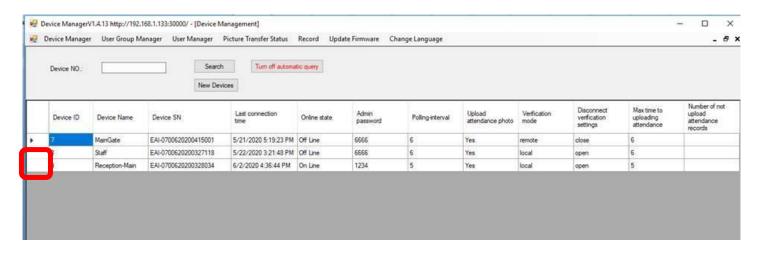
Whether device is set to take photographs for every scan – subject to local device settings which may disable the taking of photos of visitors and/or failed scans (over temp). Your local data protection, GDPR laws and/or company policy will be relevant.

Verification mode - local, server or none.

Disconnection of verification - required or not.

Time interval to poll device for new scan data.

## ADJUSTING DEVICE SETTINGS AND DATA



Left-click the left-hand column to highlight the row.

Right-click within that row to bring up the sub-menu as below.



Five options are provided:

**Modify Device** – Change the settings as entered at original set-up.

Clear Face Data - Removes the device's database of registered users (~staff).

Resend Face Data - Re-send the database of registered users (~staff with pictures).

**Delete Device** – Remove the device, replace with new or discard or re-purpose.

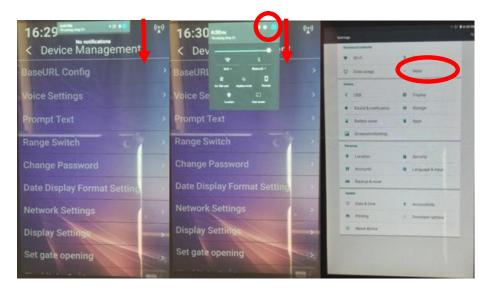
Clear ALL Data - Removes user database and scans recorded (from device but not those already downloaded).

## **NETWORK ISSUES?**

IF at this stage you have clicked "search" and still have a blank field in the "last connection and online status" columns, check these things BEFORE proceeding further.

Make sure the device's serial number exactly matches what you have entered including letters, dashes and hyphens if present.

Make sure the subnet, gateway and DNS of your iR37 is the same as your computer.



#### Swipe down TWICE from date/time bar

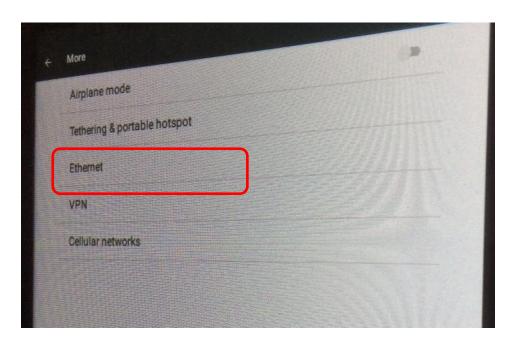
Tap square

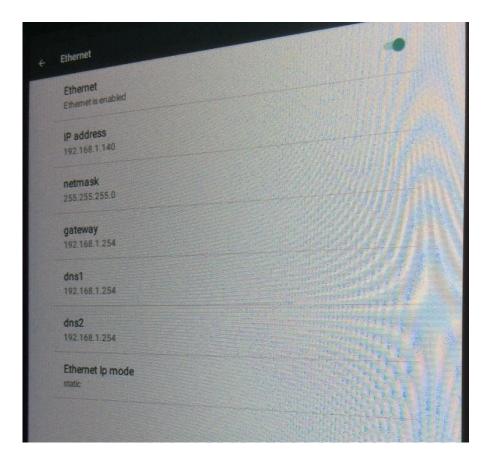
Tap gear wheel

Tap More

Tap Ethernet

Check IP settings. Can be changed here OR as factory setting process.





#### **Firewall**

This is a critical issue.

If you are using the device and control PC outside of your corporate network the firewall and domain server needs to be OFF.

You can set up a route through the firewall by allowing the program to tunnel. The routes by which this is accomplished vary by network structures; see your network administrator for the best solution.

In any event the control computer should we advise sits outside the corporate network, that is outside as a VLAN or within a DMZ.

Communication by the computer into your network should be avoided. Exported data from the device manager can be requested by the corporate network in a format it allows, such as a comma delimited csv file or Access database flat file or Excel sheet or similar.

Once on the network, using the command line prompt and the arp/a command, you can identify the Mac address — useful if you intend to white label the devices.

#### **Next Steps**

Once the iR37 has been registered and there is communication – evidenced by its online status and a current date and time — proceed to the setting up of the data sets.

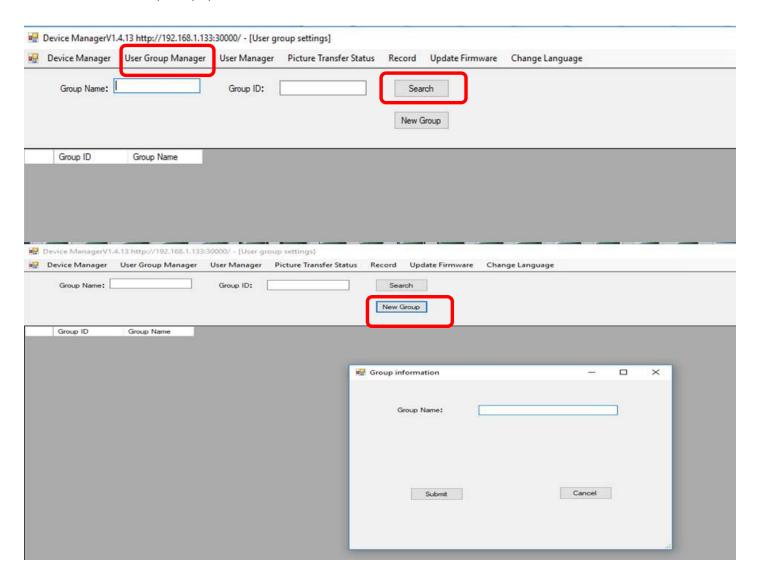
## **USER GROUP MANAGER**

Once the iR37 has been registered and there is communication – evidenced by its online status and a current date and time — proceed to the setting up of the data sets for individual users using facial recognition.

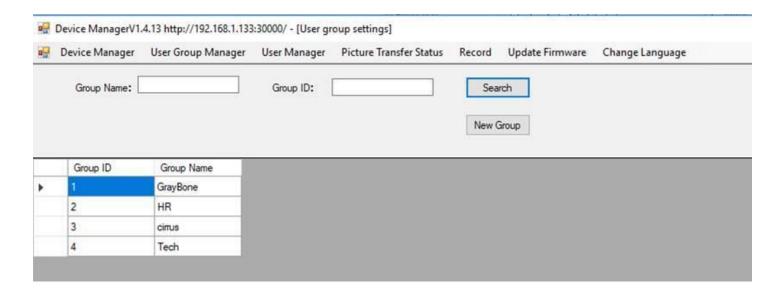
Click on the "User Group Manager" menu tab.

Click on the "Search" button.

This will have, at set-up, no populated fields.



- 1. Click the "New Group" button.
- 2. A window like the one above will open.
- 3. Enter a group name examples may be Security, HR, Accounts, FM, R&D, Board, VPs, etc.
- 4. Repeat steps 1 through 3 for as many departments or sections as desired.
- 5. You can add departments and change their names at any time.
- 6. It is worth adding "XX Visitors" for those invited guests that may require access for more than (say) a week, or for freelancers, contractors, who are not full-status employees/staff.
- 7. Below is an example of four departments.



If you have more departments or locations than will fit on one page, clicking the Group ID or Group name will re-order these.

Numerically low to high <> high to low

Alphabetically ascending or descending.

You can search by Group name or Group ID.

The Group ID is computer generated and not able to be changed or specified by the user.

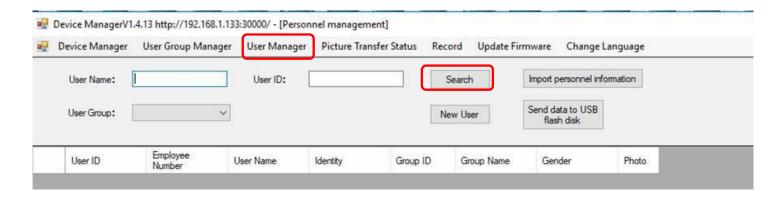
At present all of these Groups apply to all of the devices on the network.

## **USER MANAGER**

This where we add personnel individually or import en masse.

Click the "User Manager" menu tab.

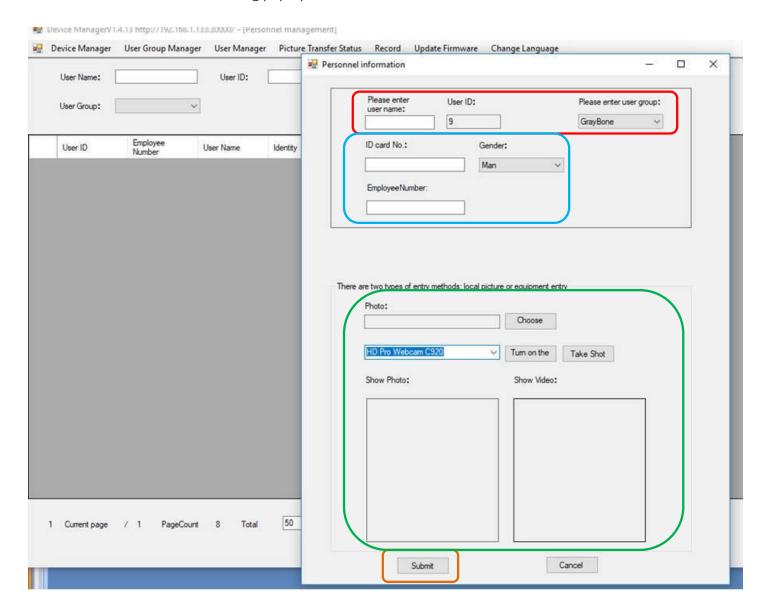
Click the "Search" button.



On initial set-up the records fields will be blank as above.

## **Dataset - Adding an Individual**

Click "New User" button; the following pop-up will be shown.



User Name – This can be any format, e.g. Jones.S or S.Jones or Simon Jones or JonesS etc.

**User ID** – This is auto-generated and cannot be changed.

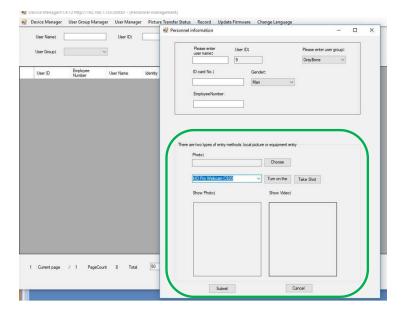
**User Group** – Drop down of every department – only one can be selected per user.

**ID Card Number** – First unique identifier, such as a security pass number (alpha numeric). This information is sent to the device/s.

**Employee Number** – Second unique identifier, e.g. payroll number or staff number (alpha numeric). Do not use NI or insurance or tax ref numbers.

This information resides with computer and is not sent to the device/s.

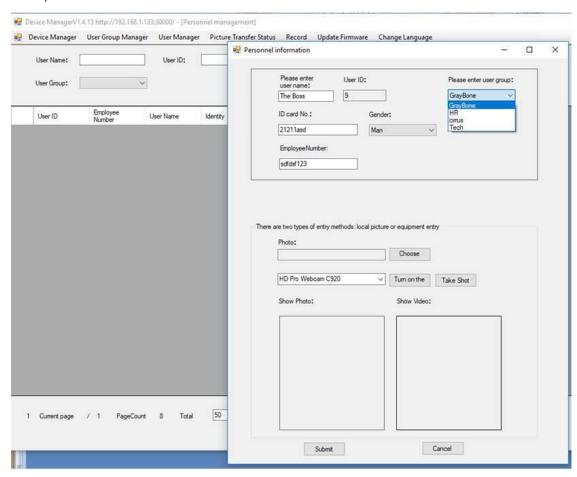
**Gender** – Male or female (pick one).



**Photo of User**– This should be a head shot – shoulders/neck upwards. With or without glasses is fine. (no sunglasses) Avoid using one with a face mask. The facial recognition works on shapes, not color.

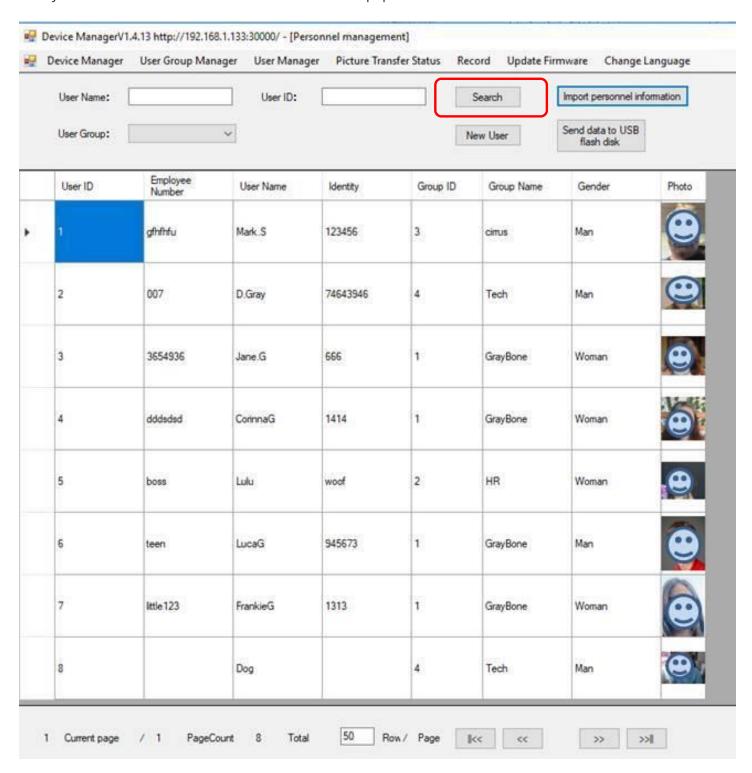
Photo can be from an existing image or take one using a local camera. Use jpg format, with a maximum size of 1mb.

#### Example:



Once you click submit, the data is added to all devices across the network immediately.

Once you have the data entered the "search" button will populate the window:



#### **Modifying Personnel Data**

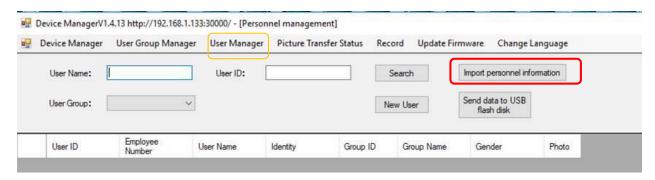
Right-clicking on a row will pop up a window giving the option to "modify/delete/resend".

Modify – You can change any of the information entered at set-up.

Delete - Remove the record entirely.

Resend - The data to the device/s.

#### **Importing Records**

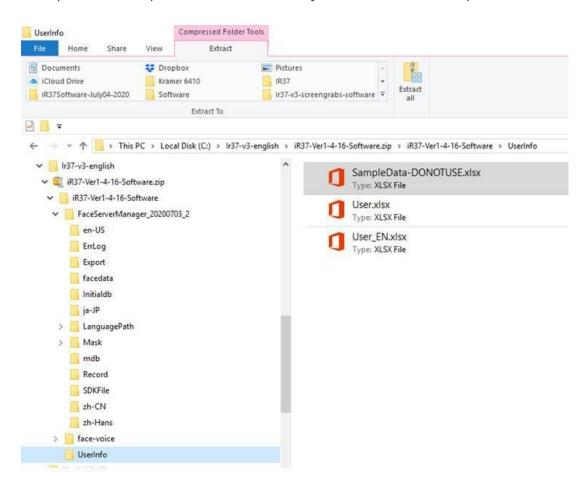


The "import" button asks you to load a specific file which must be in the spreadsheet format of:

User ID	User Name	Group ID	Employee Number	Gender	Identity ID
1	Joe Soap	Tech	2346	7 Man	q457
2	BillyK	HR	2366	) Man	ghgh576ert
3	Susan.R	Acct	34512	Woman	Ghgt553489
4					
5					

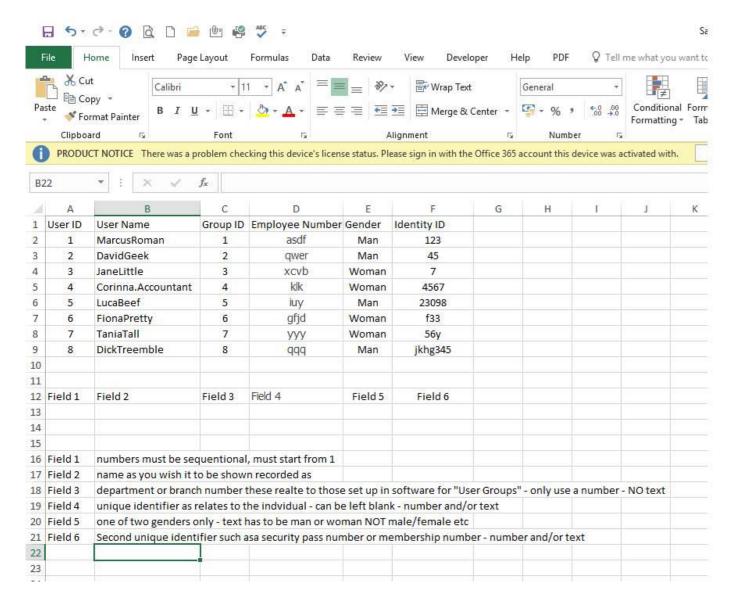
The directory in which this resides has to be "UserInfo". (Uppercase U and I.)

A sample Excel file is provided. See the directory UserInfo and click to expand. You will see:



Open the "SampleData-DONOTUSE.xlsx

The file will look like this in Excel.



The Excel file to be populated is the USER\_EN.xlsx.

Your company datasets could be in any one of a number of formats.

It will be necessary to extract from the master dataset using (say) SQL the above information.

The User ID starts at 1 and sequentially increases in the series 1,2,3,...n.

The employee number can be any unique identifier that you have which will enable the information to be sent back to your system after scans to be related to that individual.

The identity ID can for instance be an existing security pass number or be left blank.

The associated photograph has to be named the same as the User ID, so in this example MarcusRoman is User ID 1 and his photograph will be 1.jpg.

How your existing photographs are named and stored is unknown. The key will be either the employee number or identity ID which can directly cross reference to whatever the image naming convention is that you employ.

You could write a batch file or macro to import all of those photographs and rename them as per the above schedule.

This can be a simple or complex process, but can be automated, and we can assist if given the relevant source data, field/ file names, format etc. The most practical way is to export the relevant data to an intermediate spreadsheet file which can then be manipulated or extracted from to form the above data file format.

Speak with your supplier for further support on this if required.

#### **Exporting Records**

This Export if on a USB stick can be used directly to upload to a device manually.

Where no network connection is in place, you can upload this export manually using a USB stick.

See Operations Manual for method.

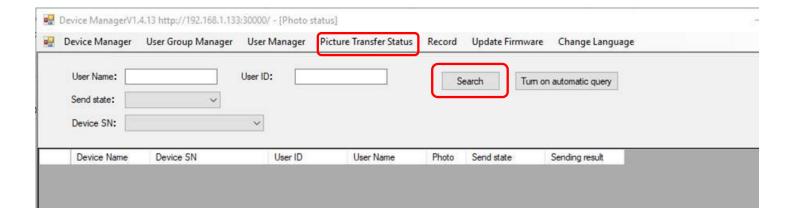
#### **Data Structure Use and Location**

It is important to understand that the personal information which could identify an individual within your organization such as their payroll number is NOT sent or accessible to the scan device.

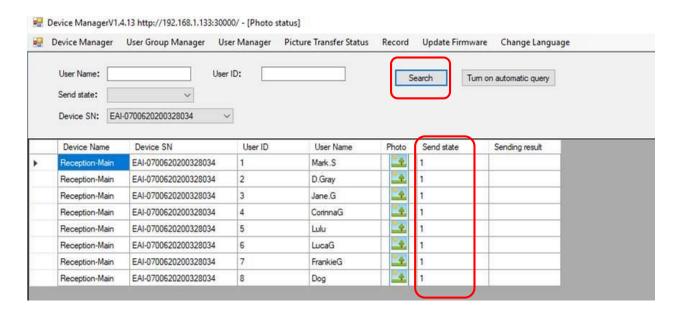
All communications between the software and the device are encrypted.

#### **Picture Transfer Status**

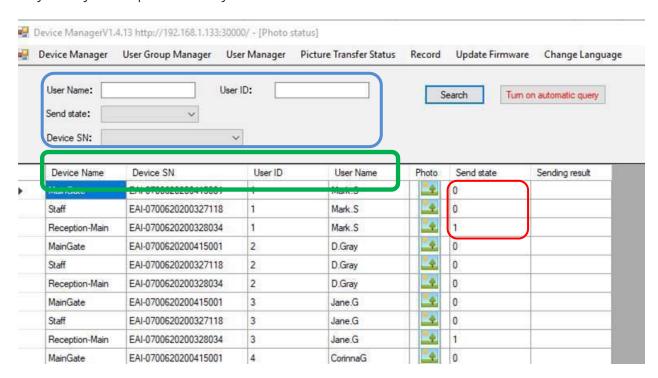
Click the "picture transfer status" menu tab and it will show:



Clicking the "Search" button will now bring up the records as sent to the device/s.

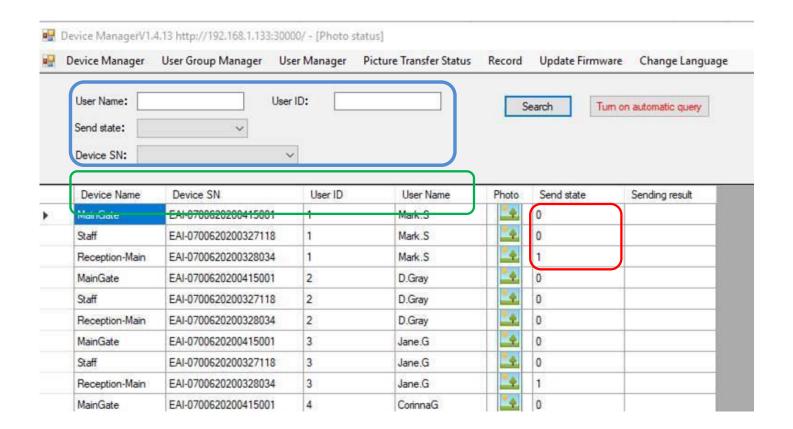


This shows the devices and the records they contain – Send State 1 = Success 0 = Fail ?:- = Connection Problem Or you may have a problem and you see this !?:



In this example, there are some devices which have not received this users file. So if the device is on the LAN and live then you can re-send the data by selecting that user under the "User Manager" menu tab. Right-click and select "re-send data".

Should you wish to search across multiple devices or for specific individuals or sent/not sent status, clicking the column headings will order the data in ascending/descending order for each metric. To use this however make sure Automatic query is OFF – i.e. as shown in above picture.



The data presented can be refined by any one of or combination of the: user name/ user id / send state/ device.

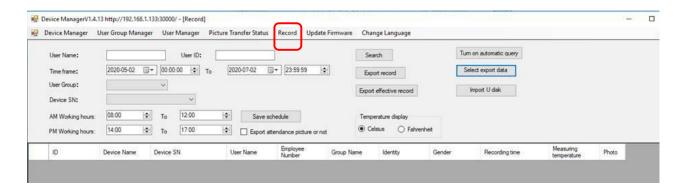
To use this make sure Automatic query is OFF as shown in above picture.

If there is an issue with a device – multiple files not uploaded (Send State = 0).

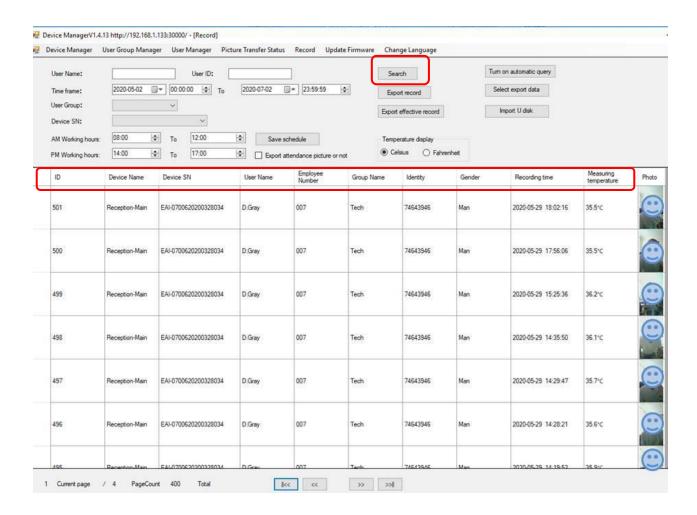
Check the device's online connectivity first under "Device Manager" menu tab.

#### Records - Scan Data

Click the "Record" menu tab to present the following window initially:



Clicking "Search" button will bring up a list of all scans from all connected devices – newest first.



The dataset can be in ascending or descending order by clicking each of the column headers. I.e. in device order (alphabetical), User name, Employee number (note casual Visitors do not have an Employee number – field is blank), Group/ Department, Identity number, Gender, Time and Temperature.

Default listing is in time order - descending.

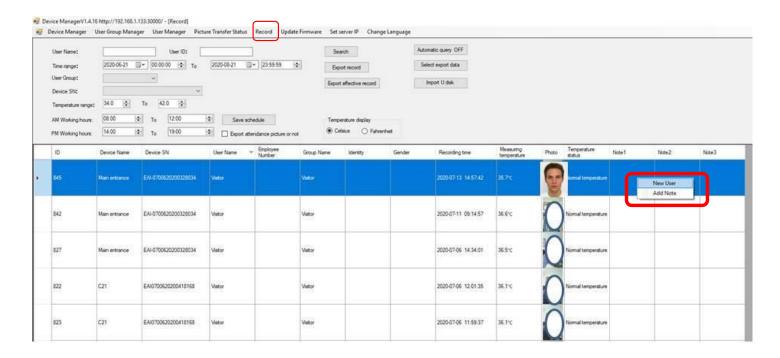
#### **NEW - Convert a Visitor to Registered User**

On the records screen there are in the latest software release three new columns (shown below) named Note 1.2 and 3.

Here you can make a note (or 3) for a particular entry – this is a freeform field, so it can be anything relevant to the person such as: delete after 30 days/ came for interview/ VIP/ third party consultant for 1 week etc.

In addition to the note function, mouse over the field and right-click to activate.

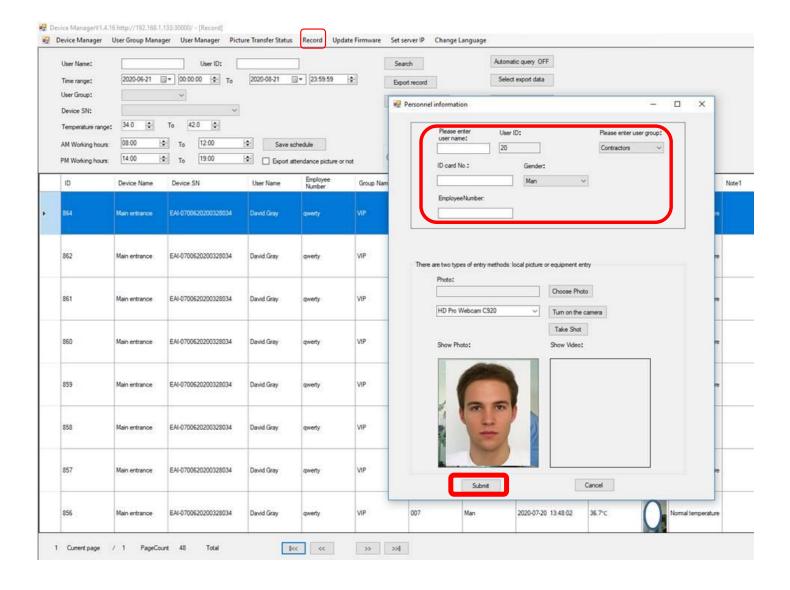
You can also convert a visitor to a registered user – this would be useful in the event of say a contractor coming onto your site for several days or weeks.



To convert the "visitor" to a user – right-click in the notes field, select "new user".

The "add new user" pop-up will appear pre-loaded with the photograph taken at the time of scan.

See next page:



Simply give the individual a name or a descriptive – which for (say) one of several contractors could be the company name and the person's first name, e.g. "TechGroupInc-Steve"

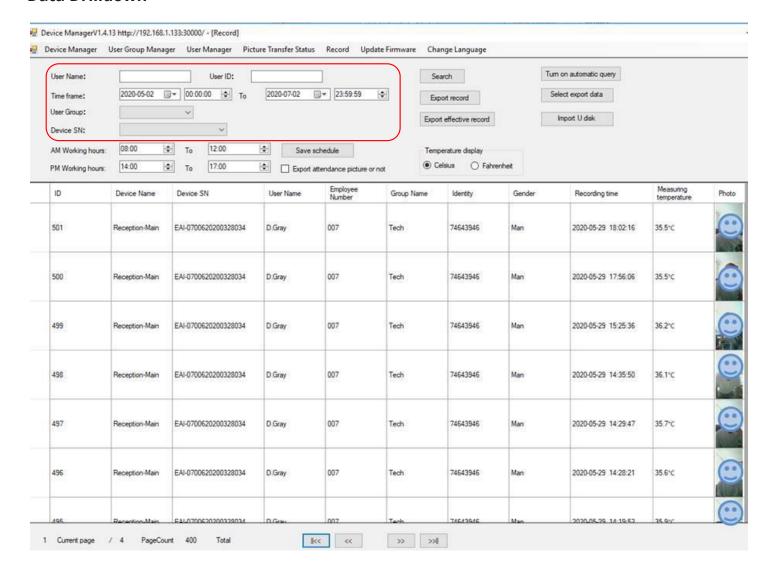
The ID and employee fields can be left blank if desired.

Click "submit" when finished – you can amend the detail later under the "user manager" tab if so desired.

The individual will be added to all devices instantly.

Next time they present for scan they are recognized and recorded by their new identity/ department.

#### **Data Drilldown**

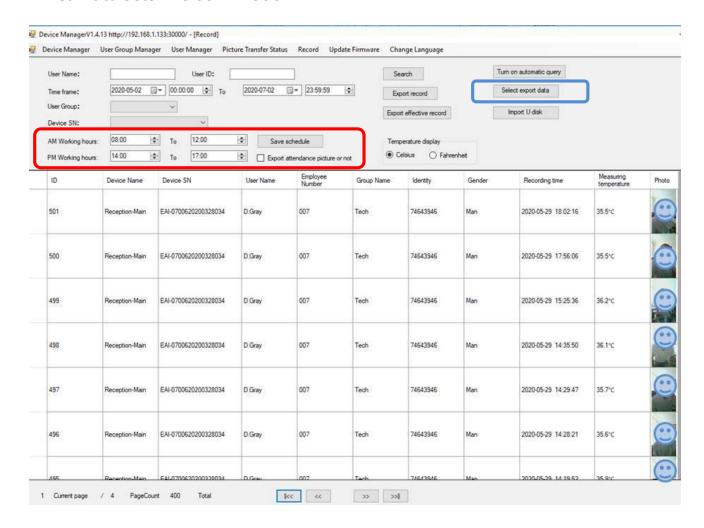


#### **Data Sub-Sets**

You can select a sub-set of data from the full dataset. This can be by any combination of the following metrics:

- User name Enter as per the data e.g. D.Gray as in above picture.
- User ID number The individual's iR37 number1,2,3..n.
- Between a given START Date & Time and an END Date and Time.
- Member of a specific Group e.g. HR or Security or Tech.
- Scanned through a particular device (drop down list of all registered devices on system/LAN).

#### Timed Data Sets - "Clock In/Out"



If your organization has set working hours or flex-time the ability to track multiple entrances and exits for each individual could be allied to a Clock in/out system.

If (say) working hours were set as a Start of 08:00 and a Finish of 17:00 – the dataset can track the first (earliest) and last (latest) use by an individual on a given day.

This data subset is not displayed on this window but can be exported as an Excel file and thereafter further manipulated/ rationalized.

## An example of the raw output is as follows:

1D	Device Name	Device SN User Name	Emp#	Group Name	UID	Gender	Recordingtime	Temp	Sequence	State
	343 iR37-Demo	EAI- 070062020 0328034 D.Gray	007	Tech	74643946	Man	5/25/2020 4:50:59 PM	36.4°C	First	No AM
	354 iR37-Demo	EAI- 070062020 0328034 D. Gray EAI-	007	Tech	74643946	Man	5/26/2020 10:07:31 AM	36.4°C	First	Late
	404 iR37-Demo	070062020 0328034 D.Gray	007	Tech	74643946	Man	5/26/2020 3:40:17 PM	35.5°C	Second	Leave early
	405 iR37-Demo	EAI- 070062020 0328034 D. Gray	007	Tech	74643946	Man	5/27/2020 4:11:35 PM	36.8°C	First	Late
	406 iR37-Demo	EAI- 070062020 0328034 D. Gray	007	Tech	74643946	Man	5/27/2020 6:08:17 PM	36.3°C	Second	Normal
	407 iR37-Demo	EAI- 070062020 0328034 D.Gray	007	Tech	74643946	Man	5/28/2020 9:27:21 AM	36.8°C	First	Late
	421 iR37-Demo	EAI- 070062020 0328034 D. Gray	007	Tech	74643946	Man	5/28/2020 7:59:15 PM	47.5°C	Second	Normal
	495 iR37-Demo	EAI- 070062020 0328034 D. Gray	007	Tech	74643946	Man	5/29/2020 2:19:52 PM	35.9°C	First	Late
	502 iR37-Demo	EAI- 070062020 0328034 D. Grav	007	Tech	74643946	Man	5/29/2020 6-02-26PM	55°C	Second	Normal

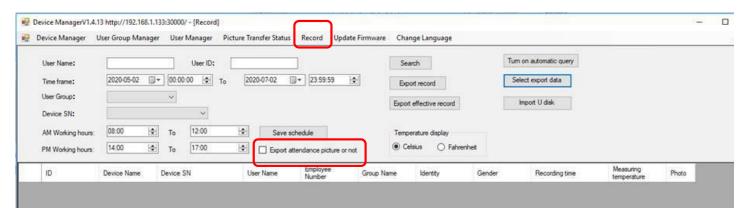
All of the data can be exported to a spreadsheet for every scan. Such data can be exported after or before interrogation in many formats.

This can then be rationalized (say) every 24 hours to be by individual and the earliest/ latest scan and or the time difference between "scan1 and Scan2" e.g. 0800 - 0916 = 96mins, + "scan3 and scan4" 1300-1500 = 240mins, total time on site 336 mins.

The ability to interrogate the data is only limited by the need and the complexity required thereof.

Should you require a custom solution please see your supplier who will be pleased to provide advice and support on your situation.

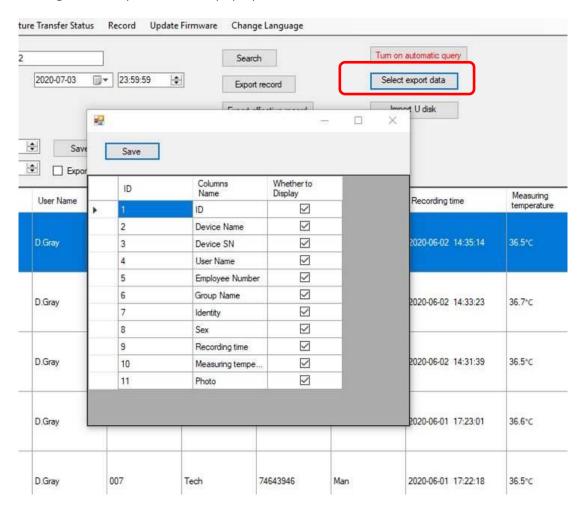
#### **Exporting Data**



By default the picture taken (if enabled) at the scan time will NOT be part of any exported data. If you wish to export the picture this radio button must be selected first. Its status DOES NOT affect the storage of any photographs within the device manager.

#### **Export Criteria**

Clicking "Select export data" will pop up this window.



Select or deselect check boxes as desired and click "save".

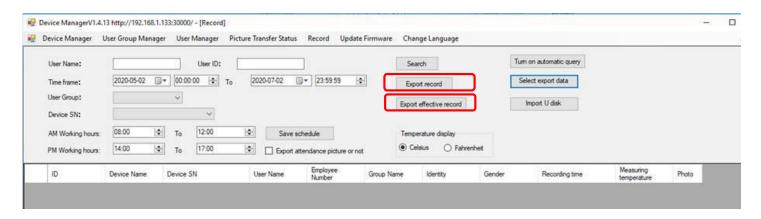
#### **Export Data Format - Extents**

Once you have the dataset displayed that you wish to export there are two export options.

"Export Record"

Or

"Export Effective Record"



Both formats output in Excel with one record per row.

Both formats contain the data as per:

Scan ID / Device Name/ Device Number/ Device Ser#/ User Name/ Employee #/
Group/ Identity ID/ Gender/ Date & Time / Temp

The Export Effective Record also includes:

Sequence (First/Last use) / Normal,Late,Early,Absent / Time Calc

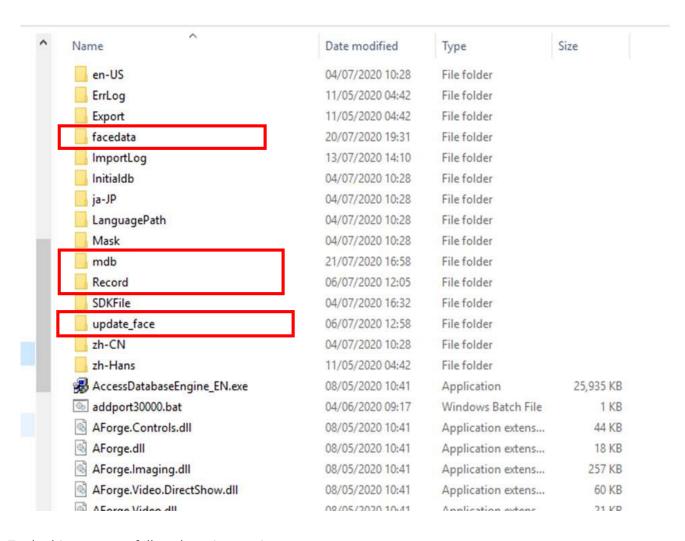
When exporting, the program will default to the file name format of:

Temprecord.xlsx. Change this to a more relevant name as required.

Can be saved in any location of your choosing.

## **UPGRADING TO NEW SOFTWARE - IMPORTANT**

When a new version of the software is released, the existing data sets are NOT by default transferred.



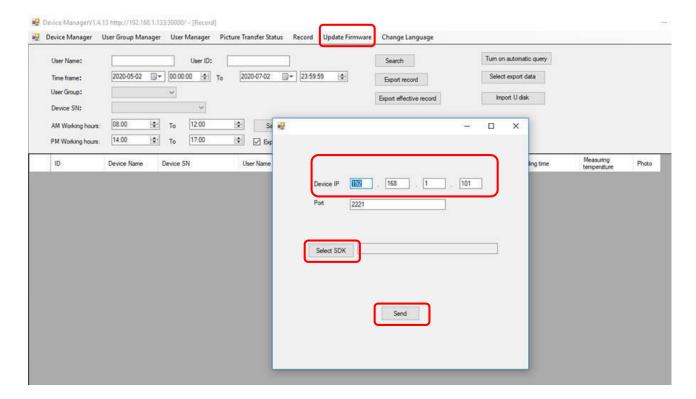
To do this you must follow these instructions.

- 1. Open your new software in a new directory e.g. iR37-New-Vx-x-x.
- 2. Download and unzip the new software to this directory.
  - a. DO NOT run the software yet.
- 3. Copy the following files from the EXISITNG (old) directory.
  - a. Copy the following files from the EXISTING (old) directory to the new directory using copy & paste function
  - b. Select the directory files as ringed in RED above.
- 4. Go to the NEW directory.
  - a. Go to the directory where your new unzipped files are.
  - b. Click Paste.
- 5. Job done.

- 6. Now you may open the new software (close the old one first) and all your existing data is transferred.
  - a. The original sets are still in the original location.
  - b. REMEMBER to copy across any Excel or Access files you have created.
  - c. REMEMBER to copy across any mp3 voice files you have created.
  - d. REMEMBER to change the shortcut on your desktop if you created one.
  - e. REMEMBER, only one instance of the software can run at any given time.
  - f. When all is working as it should, delete the old directory.

## **UPDATE FIRMWARE**

Clicking on "update firmware" menu tab will pop up the following window:

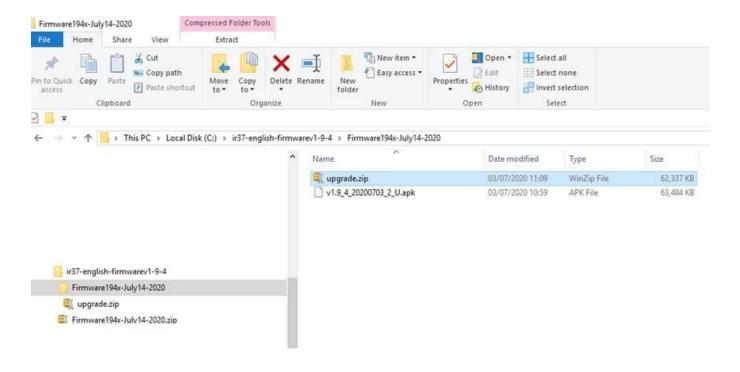


Enter the IP address of the device to upgrade.

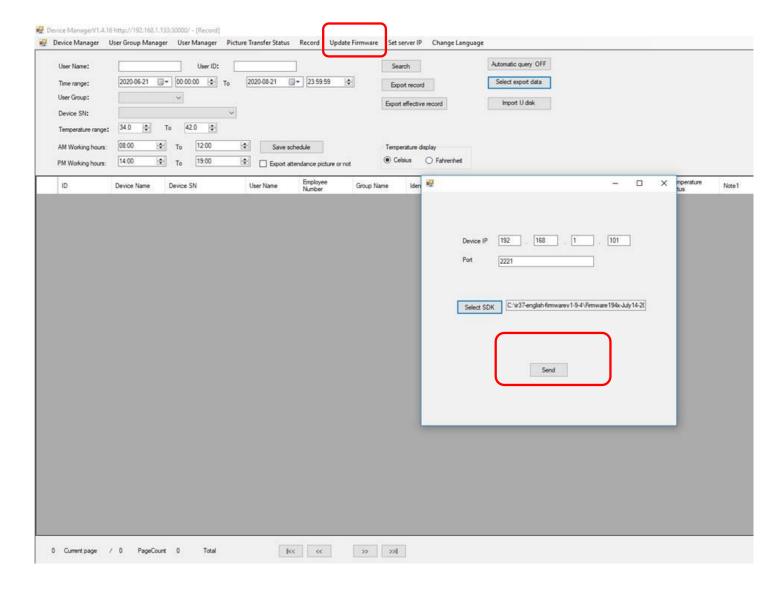
Click the "Select SDK" button:

Select the directory Firmware as shown.

Highlight the "Upgrade.zip" file - DO NOT extract.



Click the "open" button at the bottom of your directory view window:



Click the "send" button.

A "please wait", confirmation window will pop up.

The selected device will load the upgrade and re-boot.

You will then need to tap the "confirm" button on the device "usage statement".

< END of DOCUMENT >

## Thank you for your purchase.

Please contact us with your questions and comments.

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