



IP-NET MANUAL

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Specification

PCB size: 160 x 106mm

Power supply size: 336 x 307 x 82mm

Power supply current: 3A or 5A

Controller current consumption: <100mA

Communication: TCP/IP

Database: SQL

Number of readers: 2 – 4

Number of outputs: 1 – 4 (C, NO & NC)

Output time: 1-600 seconds adjustable

Reader input format: Wiegand 26-37bits

Maximum number of controllers: Unlimited

Maximum number of users: 20,000

Maximum number of events: 100,000 offline

Support real-time monitoring: Yes

Remote unlock: Yes

Door forced open alarm: Yes

Door open too long alarm: Yes

Interlock: Yes

Anti-passback: Yes

Multi-card open: Yes

Operating temperature: -40 °C ~ 70 °C

Operating humidity: 10% ~90 % RH, No condensation

Power failure protection measures: High speed memory, never lose records

Connections & drawings

Cable requirements

Supply the power supply with 230Vac from a spur or plug. The product must be **earthed**.

From controller to card reader: 6 core screened twisted pair with at least 0.3mm diameter. Maximum distance 100 metres (80m recommended).

From the controller to exit button: 2 core with at least 0.3mm diameter.

From the controller to the lock: 2 core for power, at least 1mm stranded cable. An extra 2 cores will be required if using monitored locks for interlocking, door forced open warnings, etc. Maximum distance 100 metres (80m recommended).

The card reader, door sensor and exit button can use the same cable.

From the controller to the router/computer: Network cable, RJ45.

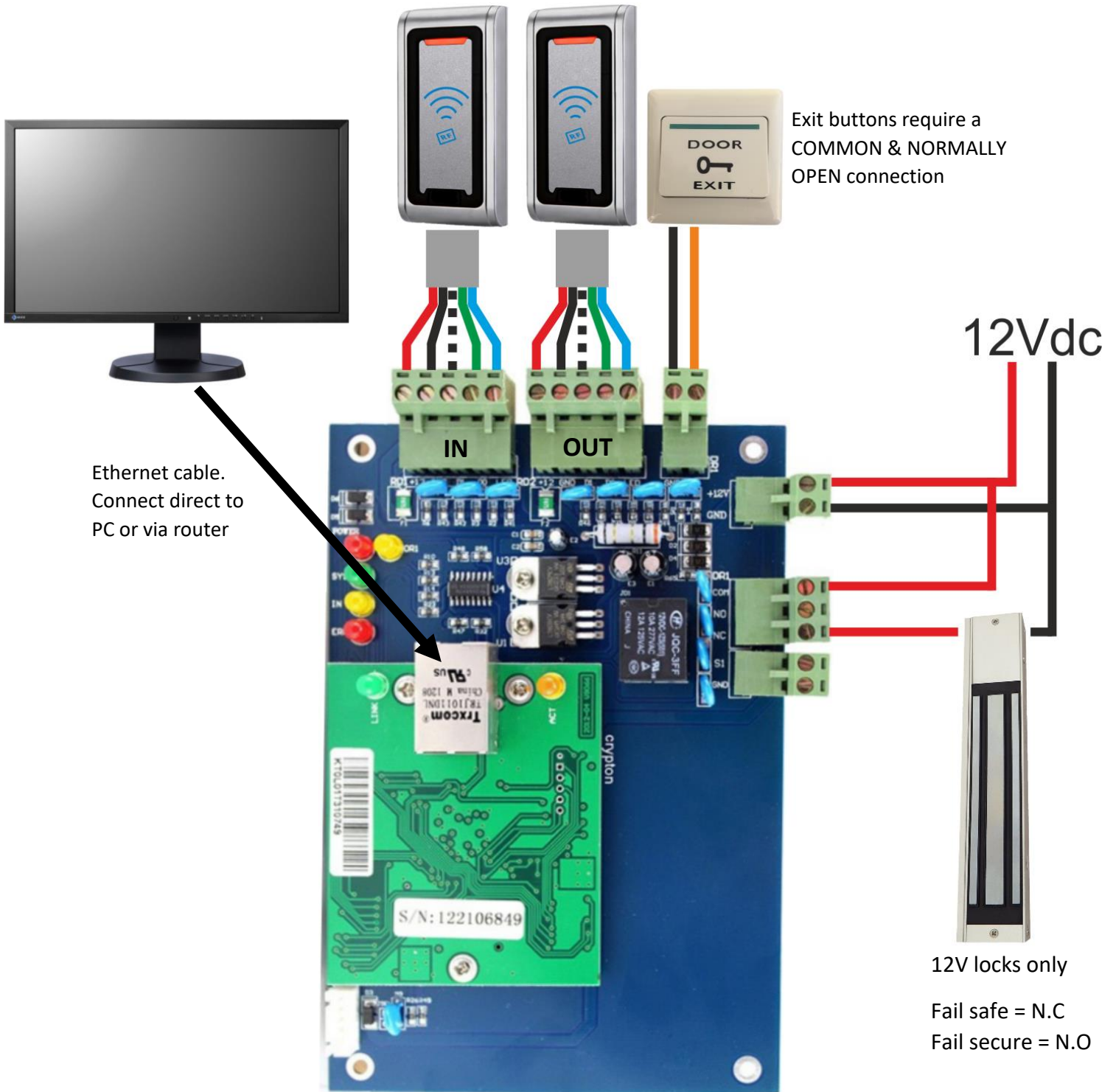
All cables should be installed in suitable conduit or trunking and kept away from mains cable.

1 door

Read in / read out or read in / push button out

Please note the black dotted line represents the white wire from the reader.

Red +12V Black GND White D1 Green D0 Blue LED

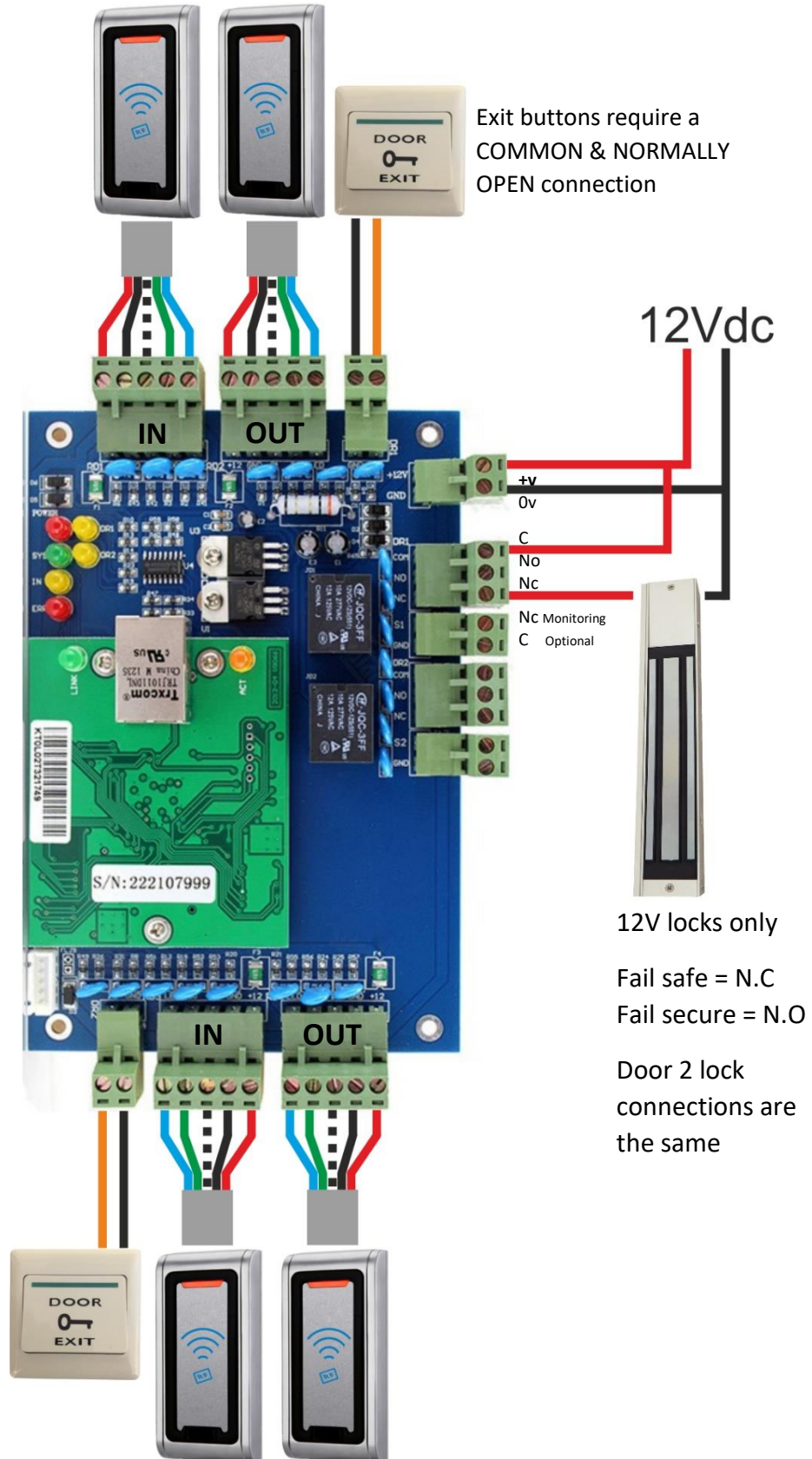


2 door

Read in / read out or read in / push button out

Please note the black dotted line represents the white wire from the reader.

Red +12V Black GND White D1 Green D0 Blue LED

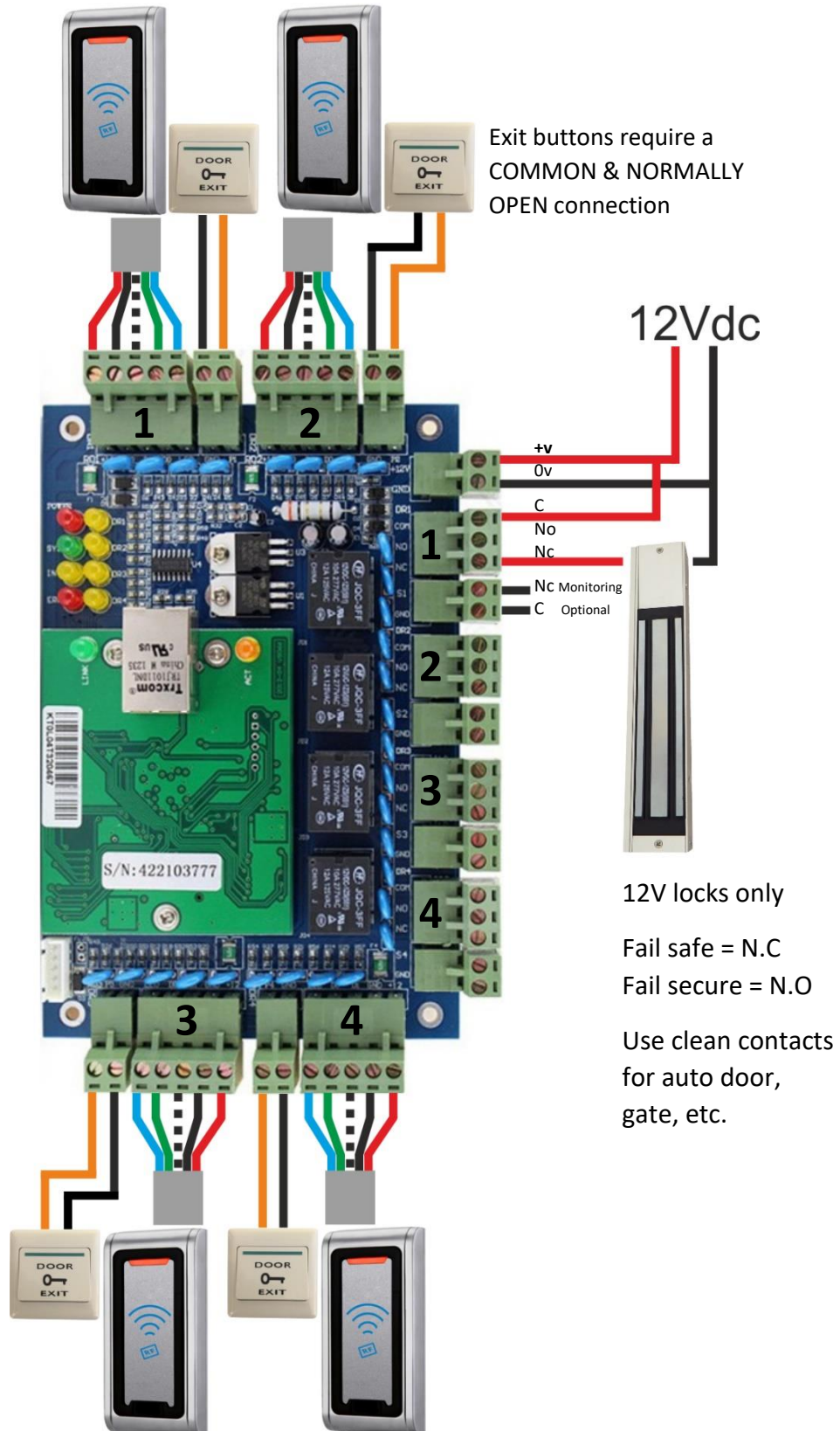


4 door

Read in / push button out

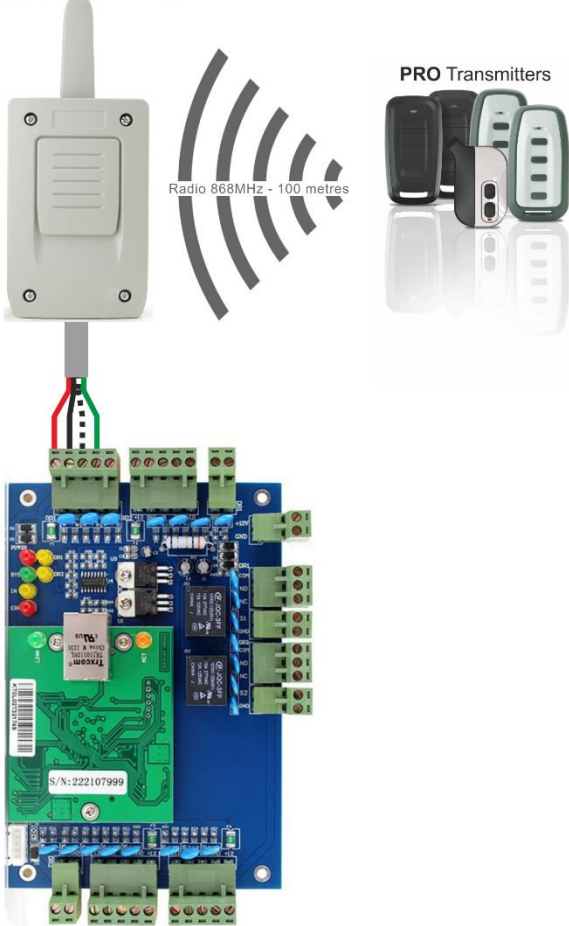
Please note the black dotted line represents the white wire from the reader.

Red +12V Black GND White D1 Green D0 Blue LED

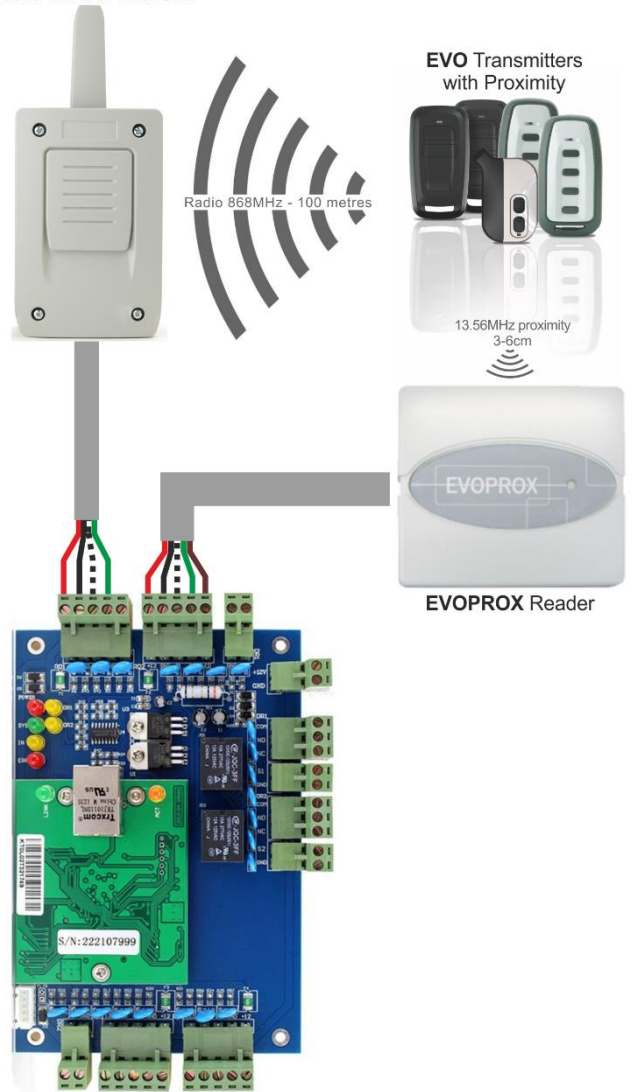


CONNECT Radio interface and EVOPROX

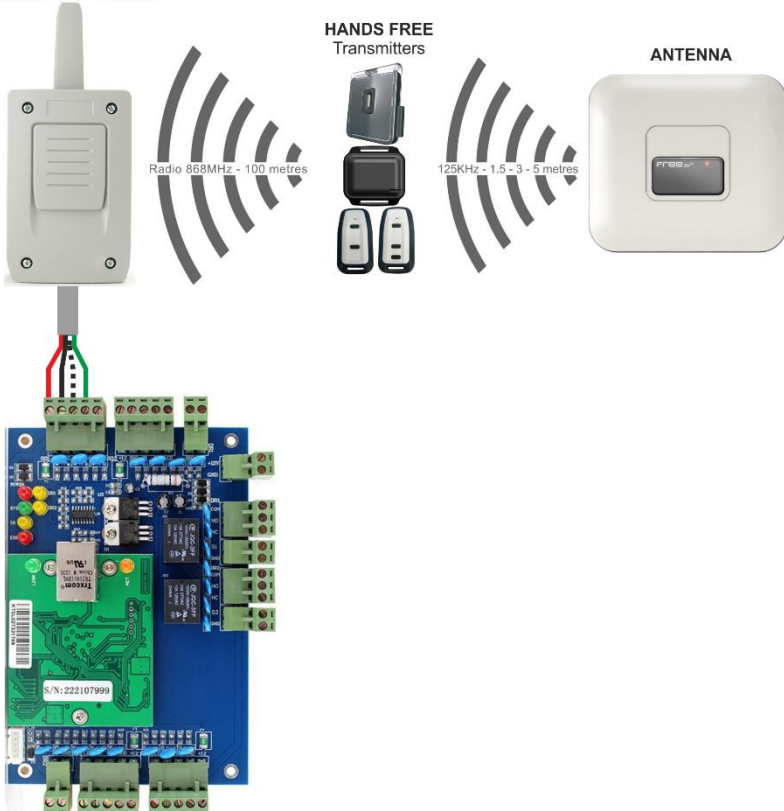
CONNECT Receiver
Access Control Interface



CONNECT Receiver
Access Control Interface



CONNECT Receiver
Access Control Interface



The CONNECT is an access control interface which converts a radio signal to Wiegand that the IPNET controllers can understand.

If there are to be radio and proximity controlled doors on the same system and the same device is to be used to control them, then EVO transmitters will need to be used along with EVOPROX readers.

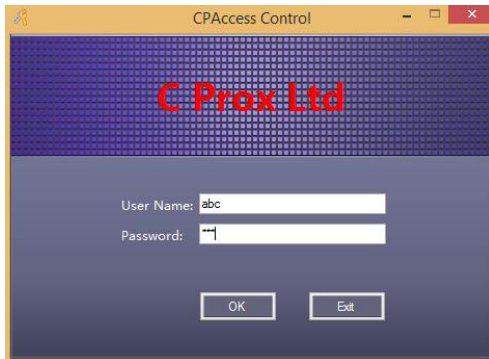
Hands free tags can also be used on the system as they are compatible with the CONNECT and EVOPROX (TRI transmitters). FREE antennas required.

Please refer to the manuals of the CONNECT & EVOPROX for more information.

Software startup

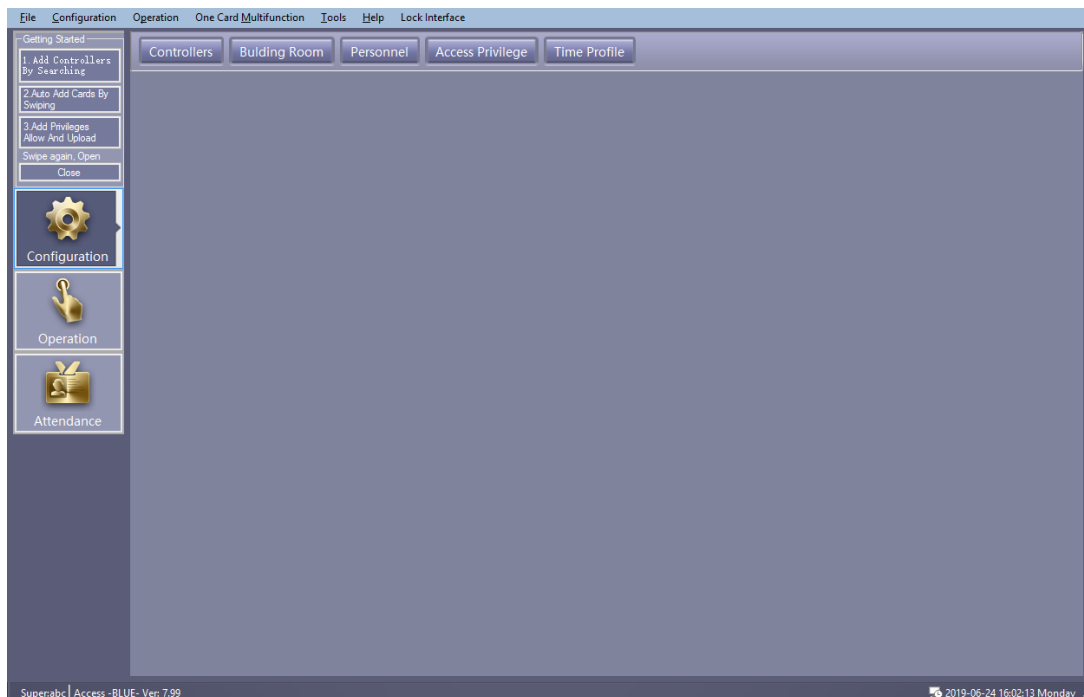
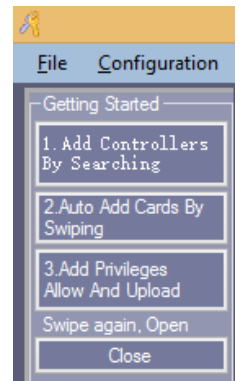
Software login

When you run the software it will ask for a Username and Password. The default Username is **abc** and the password is **123**.



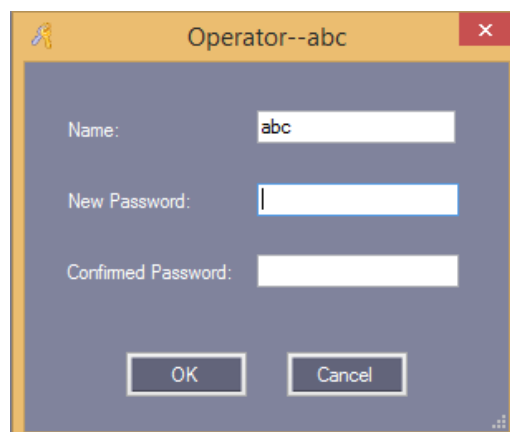
When the correct Username and Password has been entered you will be displayed with the main interface screen.

In the top left hand corner are the three **Getting Started** buttons which help you quickly do the main tasks to get your system up and running; add controllers, add cards (users) and add access privileges. This menu can also hidden by clicking 'Close'.

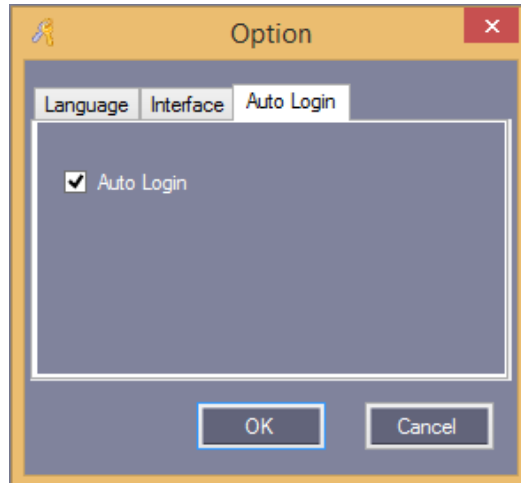


Changing Username & Password and Auto-login

If you wish to change the username and password, click **Tools > Edit Operator**
Enter the new username and password and click **OK**

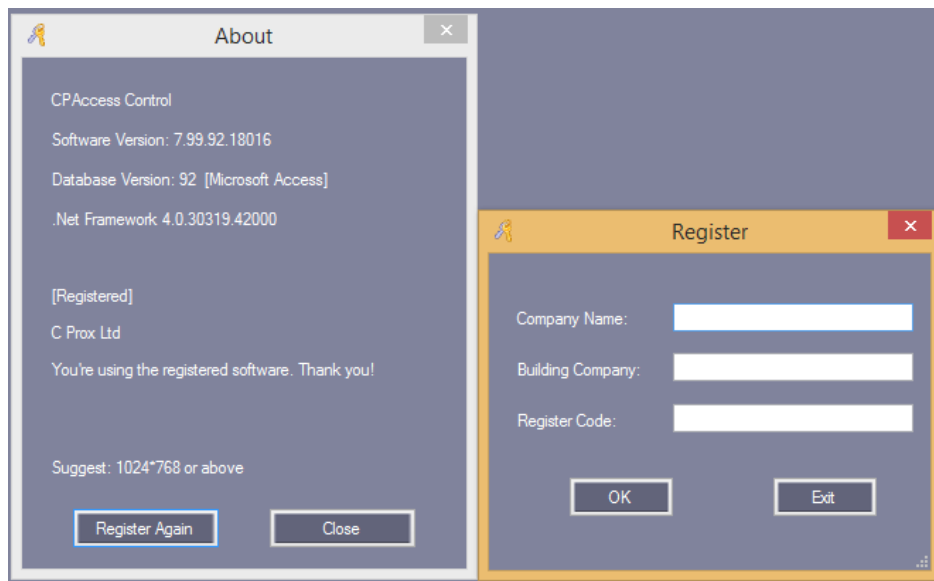


You can also set the system to login automatically, click **Tools > Auto Login**
Select the box and click **OK**



Software registration

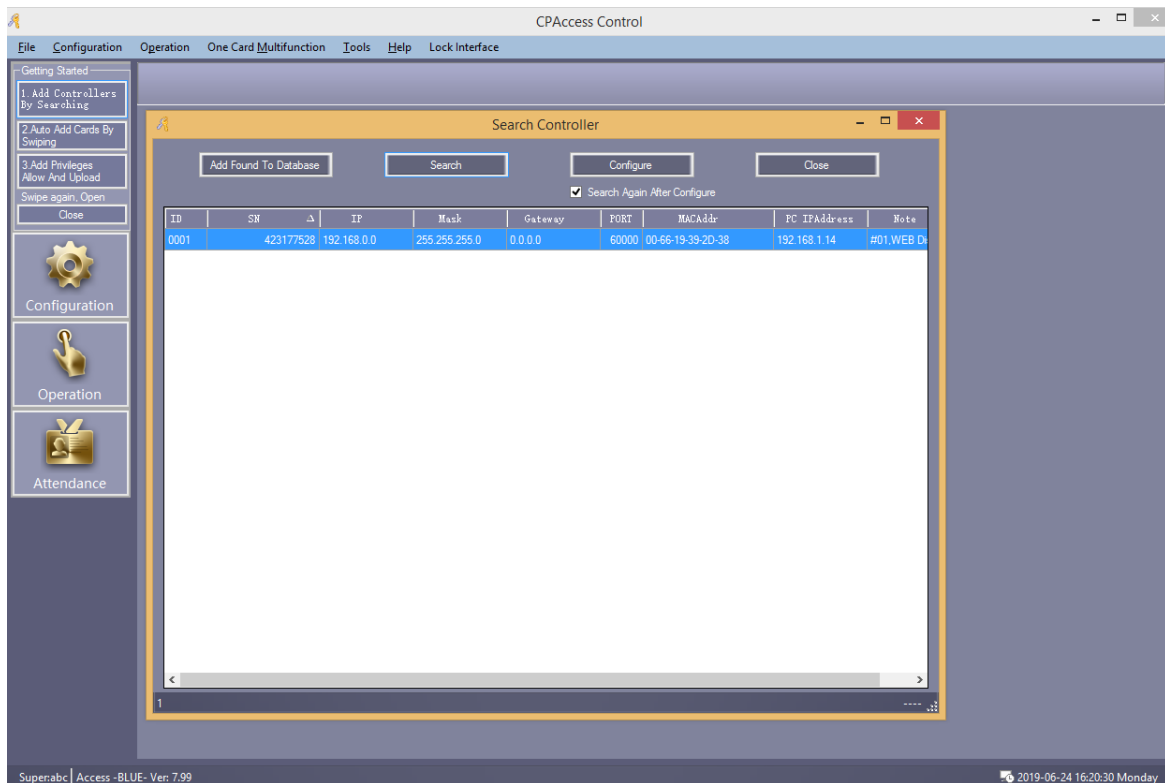
The software provides a timed evaluation period of approximately two months before it expires. In order to continue using the software you need to register it. Click **Help > About > Register** and enter the relevant details. The registration code can be obtained from your supplier.



Add controllers

Click **Add controller by searching** in the top left hand corner. The software will then locate the controller and provide the required information automatically. You will need to repeat this process if you add more controllers.

You will then be displayed with a screen confirming the controller information. Click **Add to found database** followed by **Close**.



LAN – Local area connection

Revert to the main screen and click **Configuration > Controllers > Edit**

Choose small network for LAN communication, click **Next**

You can now edit door names, control status of doors and relay time. When complete click **OK**

WAN – Wide are connection

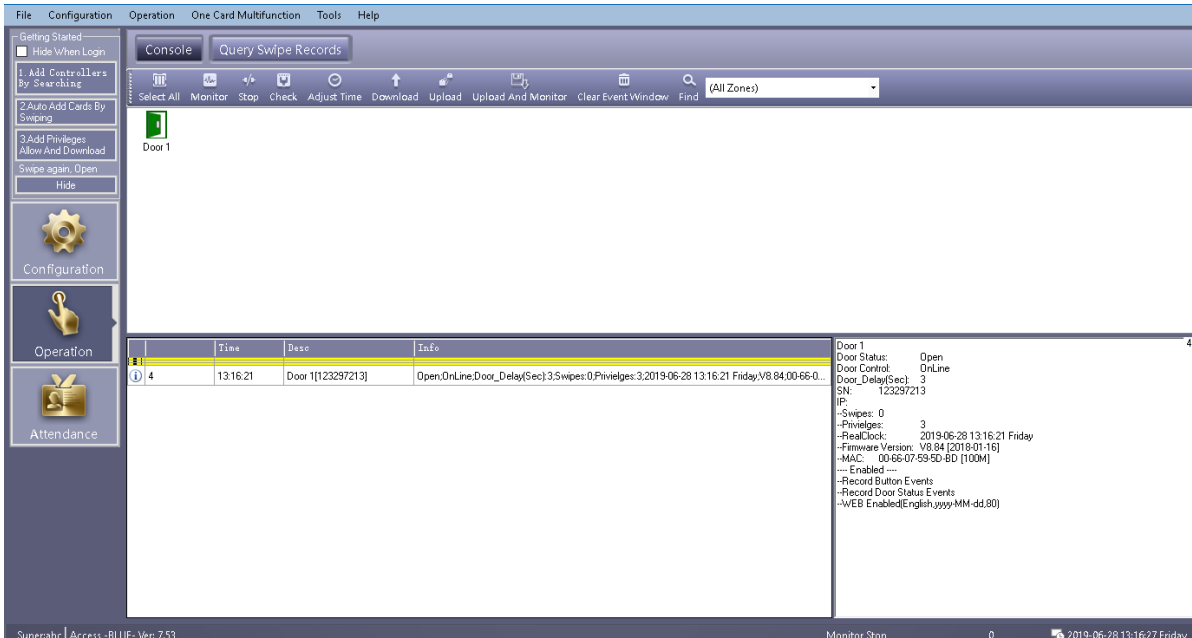
Revert to the main screen and click **Configuration > Controllers > Edit**

Choose medium/large network for WAN communication via internet connection.

Port forwarding is required to be setup for WAN connection via your hub or router.

Check communication

When the controllers have been added to the software, we need to check that they are communicating properly. To do this click **Operation**, then select a door and click **Check** to test the communication between the controller and the software. If you have more than one door/controller to check, you can click **Select All** followed by **Check**. You should see a similar image to the one below. Click **Adjust Time** followed by **Download** to ensure the time is synchronised between the computer and controller.



Edit door name and lock status

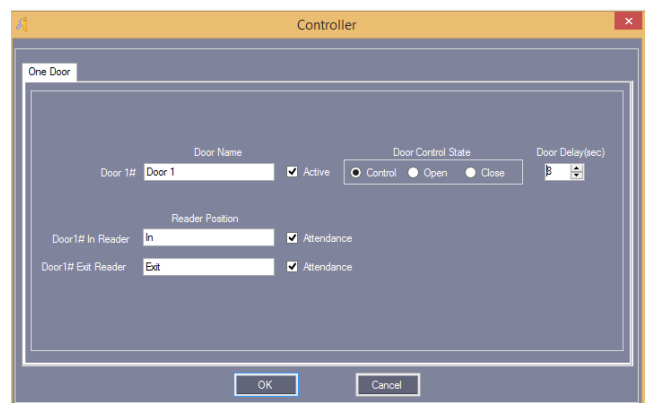
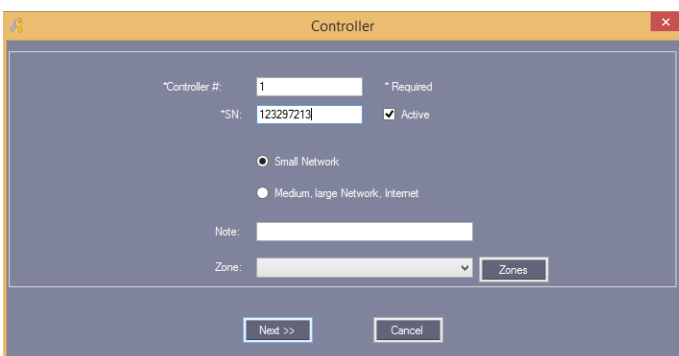
Click **Configuration > Controllers > (select controller to be edited) > Edit**. Then click **Next**

Door control state:

Control: Normal PC control status

Open: Will keep the door open

Close: Will keep the door locked



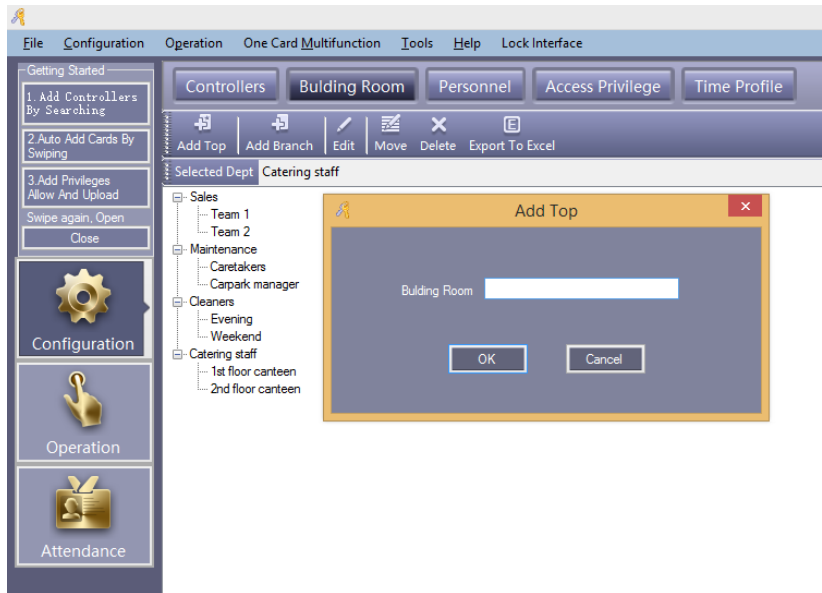
Adding users and departments

Departments & branches

You can create departments and branches (sub-departments) if required. This can help with creating group access privileges later.

Click **Configuration > Department** (displayed as **Building Room** in some versions)

Click **Add Top** to create and name a department. Select the department and click **Add Branch** to add a branch under it.



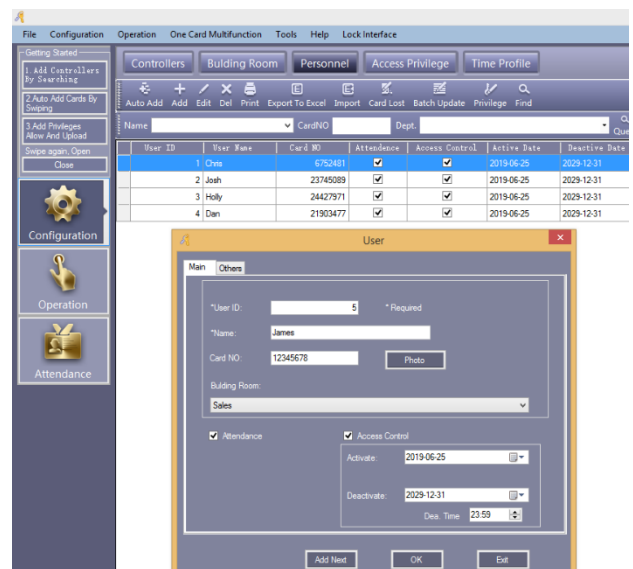
Adding personnel (users)

There are 4 ways to add users to the system:

1. Individually, by entering the number of the card or fob
2. By desktop USB reader
3. By one of the access control readers
4. By manual batch input (sequential card numbers required)

Click **Configuration > Personnel**

1. To manually enter an individual card, click **Add** and type in the last 8 digits on the card or fob in the **Card No** box. You should also enter the name. If required you can also assign a photo by clicking the **Photo** button, and enter additional information by clicking the **Other** tab. The department the user belongs to can also be selected if required. When complete click **OK** to exit, or **Add Next** if you have more users to add.



- To add by USB reader. Click **Auto Add**, select **USB Reader** then click **Next**.
Read the cards or fobs to be added on the USB reader. The numbers will appear in the white box after they have been read. When all the cards/fobs have been added click **OK**.
The card numbers will appear in the list. You can select each user and click **Edit** to change the name, add a photo or enter other information.
- To add cards by access control reader. Click **Auto Add**, select **Door** and choose the reader you want to use, then click **Next**.
Read the cards or fobs to be added on the reader. The numbers will appear in the white box after they have been read. When all the cards/fobs have been added click **OK**.
The card numbers will appear in the list. You can select each user and click **Edit** to change the name, add a photo or enter other information.
- The add cards by manual batch input. Click **Auto Add**, select **Manual batch input** then click **Next**.
Enter the start number and end number of the cards or fobs (they need to be sequential). Click **OK**.
The card numbers will appear in the list. You can select each user and click **Edit** to change the name, add a photo or enter other information.

Note: The cards will not work straight away. Access privilege needs to be assigned to each user first and the information needs to be downloaded to the controller.

Creating time profiles

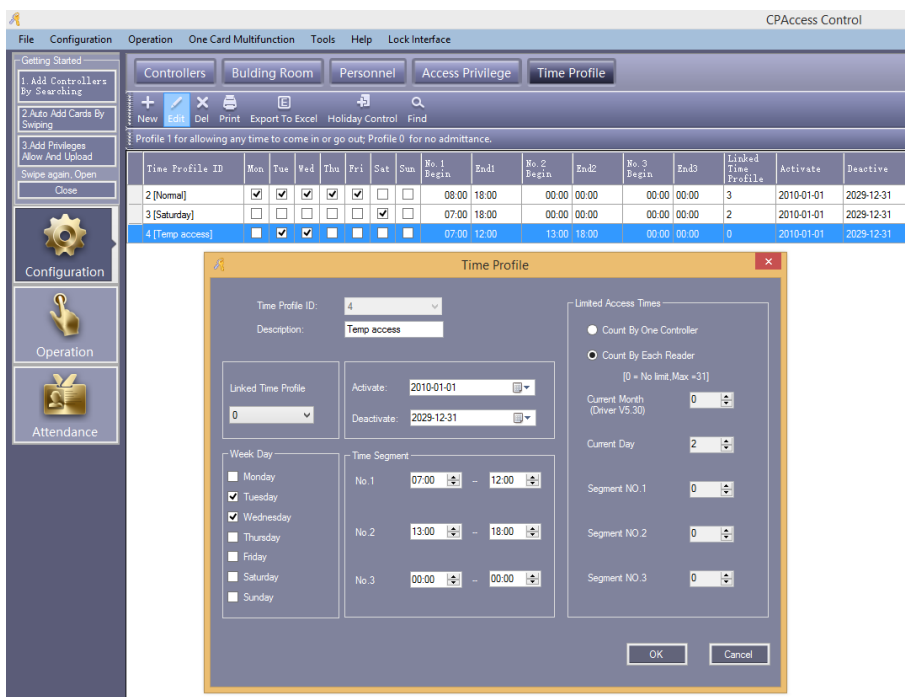
Please note this section may need enabling in **Extended Functions**. See page 18.

Time profiles stipulate when certain users have access to certain readers. For example, on an office installation the boss will have free access at all times, while staff may only be able to enter between the hours of 8am and 6pm Monday to Friday.

To create a time a profile, click **Configuration > Time Profile > New**

Select Time profile ID (note Profile ID 1 is reserved for free access). Give the profile a description then select the days and time segments you want to give access. You can also limit the number of times a user can gain access in the **Limited Access Times** section.

For example below the user is only allowed to gain access twice per day, on Tuesday and Wednesday, 7am to 12pm and 1pm to 6pm.



Access privileges

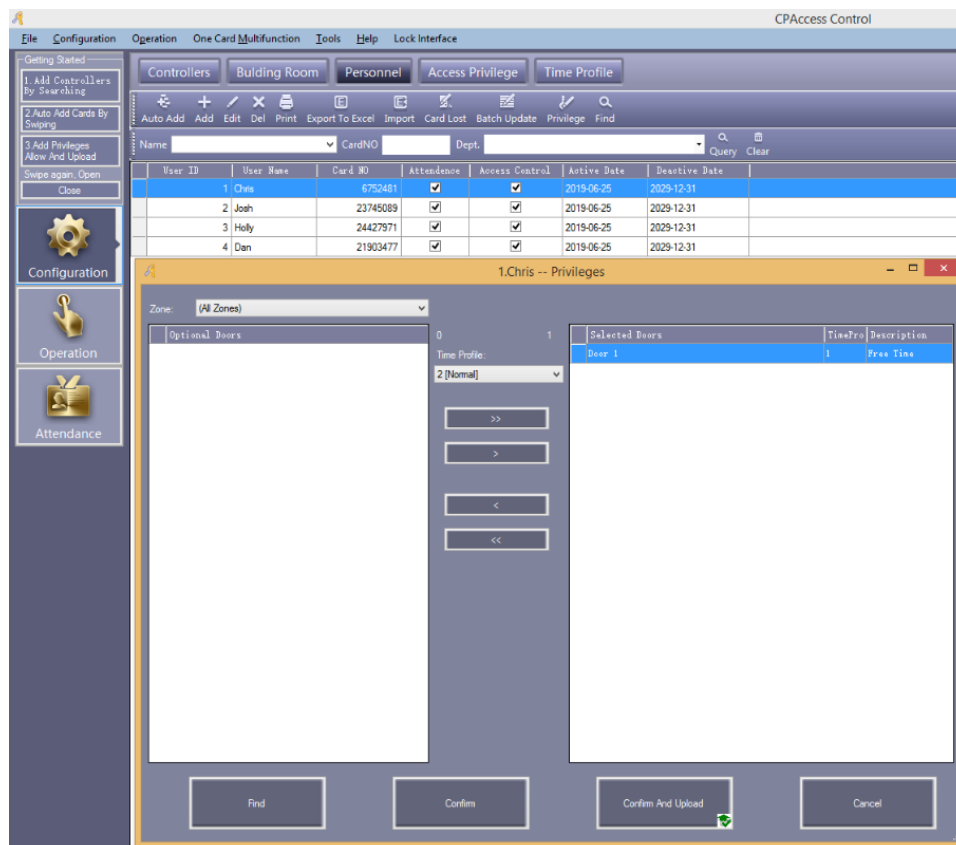
In order to allow users through the door(s) you need to allocate access privileges. This can be done on an individual user basis, or by multiple users and/or departments.

Individual: **Configuration > Personnel**. Highlight the user and click **Privilege**.

Select doors you wish the user to access and click the > arrow button to move it to the right hand side. If you wish to allow the user access to all doors, click the >> double arrow button to move all doors to the right hand side.

You can also select a time profile to assign. Default is free access.

Once complete click **Allow and Upload**.

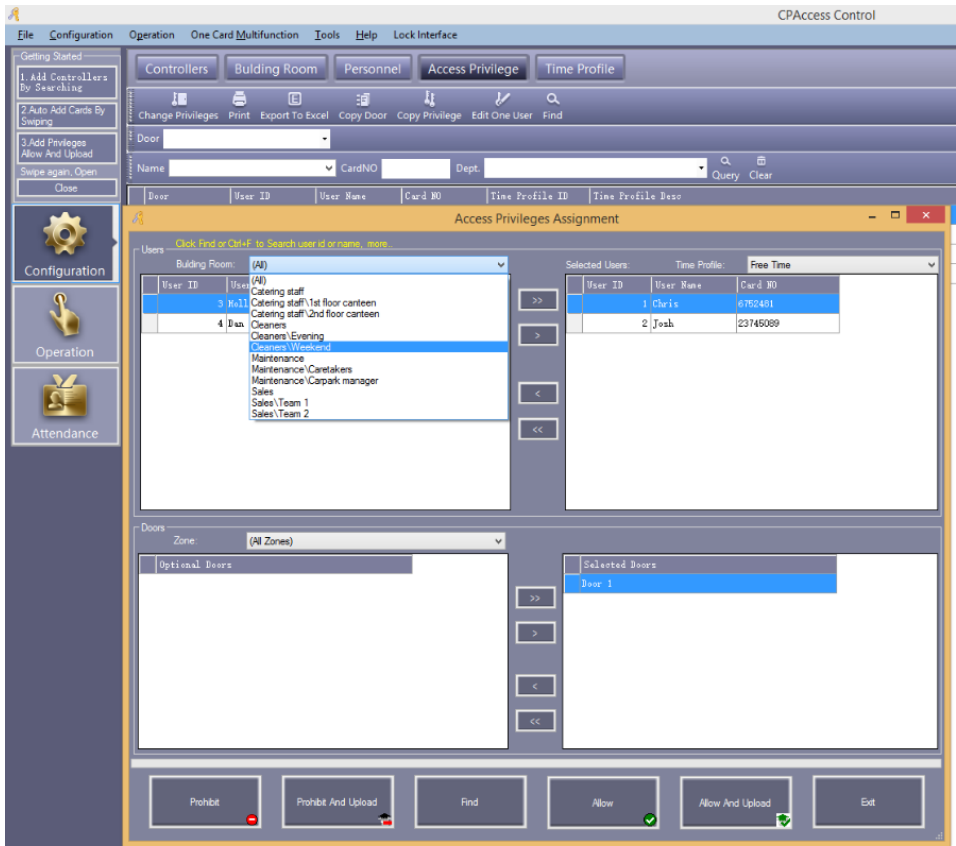


If you need to revoke privilege for a user or users on specific or all doors at any point, move the doors to the left box and click **Allow and Upload**, or deselect the **Access Control** box relating to the user and Download to the controller.

Multiple: Configuration > Access Privilege > Change Privilege

Using the > or >> buttons move the users and doors you wish to allow access to over to the right hand side. You can filter the users by department by using the drop-down box, and also allocate a time profile.

Once complete click **Confirm And Upload**.

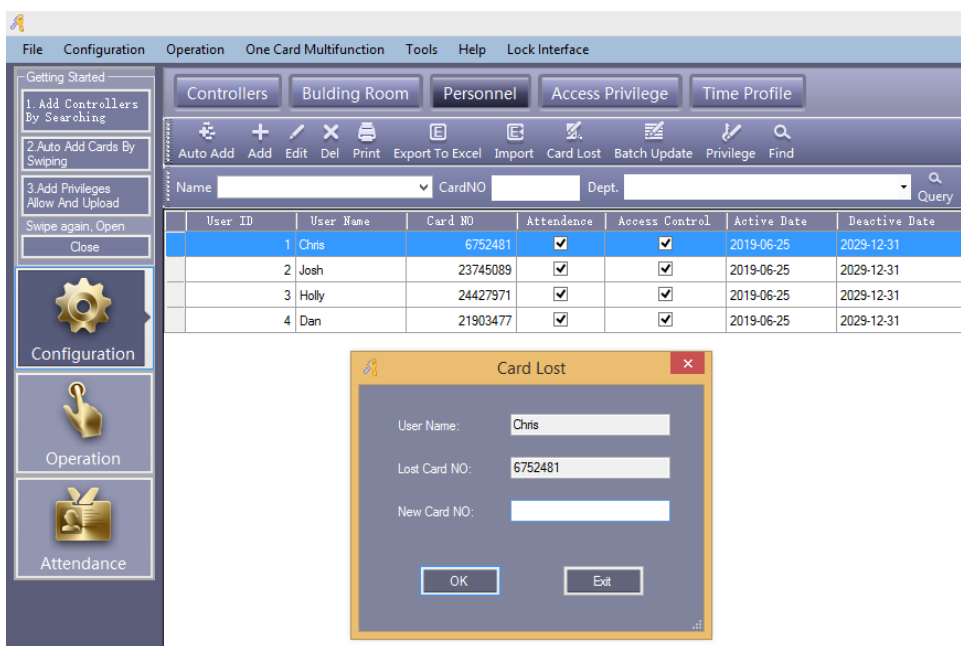


Lost user card

If a user has lost their card it is very easy to issue a new one and remove the old one.

Click **Configuration > Personnel > (select the user) > Card Lost**

The below screen will appear. Enter the new card number and click **OK**. Then issue the card to the user.



Swipe records and monitoring

Query swipe records

Query swipe records will maintain 100,000 offline events for all activity. You can filter this information by user, department, event type, time, etc. The records can also be exported to Excel.

Click **Operation > Console**. Select the door(s) you want to get records from and click **Download**. Then click **Query Swipe Records**.

RecID	Card ID	User ID	User Name	Building Room	Date/Time	Door	Description
393	24427971				2019-06-25 12:11:06 Tuesday	H004-1-In	Denied Access: No PRIVILEGE
397	6192061				2019-06-25 12:11:03 Tuesday	H004-1-In	Denied Access: No PRIVILEGE
396	2541724	ab-e00001	Chris Cunn		2019-06-25 12:11:01 Tuesday	H004-1-In	Denied Access: No PRIVILEGE
396	8				2019-06-24 23:35:56 Monday	H004-4	Door Open
394	8				2019-06-24 23:35:56 Monday	H004-3	Door Open
393	8				2019-06-24 23:35:56 Monday	H004-2	Door Open
392	8				2019-06-24 23:35:56 Monday	H004-1	Door Open
391	18427451	ab-e00001	Dan		2019-05-15 13:08:48 Wed...	Door 1-In	Swipe
390	8				2019-05-15 13:08:47 Wed...	Door 1	Door Open
389	0				2019-05-15 13:08:44 Wed...	Door 1-In	Controller Power On
388	8				2019-05-15 13:05:50 Wed...	Door 1	Door Open
387	0				2019-05-15 13:05:47 Wed...	Door 1-In	Controller Power On
386	18427451	ab-e00001	Dan		2019-05-15 13:05:08 Wed...	Door 1-In	Swipe
385	18427451	ab-e00001	Dan		2019-05-15 12:58:27 Wed...	Door 1-In	Swipe
384	18427451	ab-e00001	Dan		2019-05-15 12:53:43 Wed...	Door 1-In	Swipe
383	18427451	ab-e00001	Dan		2019-05-15 12:53:18 Wed...	Door 1-In	Swipe
382	18427451	ab-e00001	Dan		2019-05-15 12:44:17 Wed...	Door 1-In	Swipe
381	18427451	ab-e00001	Dan		2019-05-15 12:43:45 Wed...	Door 1-In	Denied Access: No PRIVILEGE
380	18427451	ab-e00001	Dan		2019-05-15 12:34:38 Wed...	Door 1-In	Denied Access: No PRIVILEGE
379	18427451	ab-e00001	Dan		2019-05-15 12:34:36 Wed...	Door 1-In	Denied Access: No PRIVILEGE
378	18427451	ab-e00001	Dan		2019-05-15 12:34:36 Wed 2019-05-15 12:34:36 Wednesday		Denied Access: No PRIVILEGE
377	18427451	ab-e00001	Dan		2019-05-15 12:32:46 Wed...	Door 1-In	Denied Access: No PRIVILEGE
376	18427451	ab-e00001	Dan		2019-05-15 12:32:36 Wed...	Door 1-In	Denied Access: No PRIVILEGE
375	1				2019-05-15 12:28:49 Wed...	Door 1-In	Remote Open Door
374	18427451	ab-e00001	Dan		2019-05-15 12:22:09 Wed...	Door 1-In	Swipe
373	18427451	ab-e00001	Dan		2019-05-14 14:47:47 Tuesd...	Door 1-In	Swipe
372	1				2019-05-14 13:30:48 Tuesd...	Door 1-In	Remote Open Door
371	18427451	ab-e00001	Dan		2019-05-14 12:51:16 Tuesd...	Door 1-In	Swipe
370	10469492				2019-05-14 12:51:14 Tuesd...	Door 1-In	Denied Access: No PRIVILEGE
369	18242787				2019-05-14 12:51:07 Tuesd...	Door 1-In	Denied Access: No PRIVILEGE
368	18427451	ab-e00001	Dan		2019-05-14 12:35:56 Tuesd...	Door 1-In	Swipe
367	18427451	ab-e00001	Dan		2019-05-14 12:35:47 Tuesd...	Door 1-In	Swipe
366	18427451	ab-e00001	Dan		2019-05-14 12:11:14 Tuesd...	Door 1-Exit	Denied Access: No PRIVILEGE
365	0				2019-05-14 19:16:48 Tuesd...	Door 1-In	Controller Reset-WDT

Monitoring


Click **Operation > Console > (Select doors) > Download and Monitor**

This allows you to monitor real time activity in the events window, and downloads the latest activity to the computer that can be viewed in Query Swipe Records.

You can click on any of the records and more information on the user will be displayed on the right hand side.

Time	Door	Info
16:36:55	Door 1-In	24427971-3-Holly--2019-06-25 16:36:56 Tuesday-Door 1-In-Swipe
16:36:59	Door 1-In	23745089-2-Josh--2019-06-25 16:37:00 Tuesday-Door 1-In-Swipe
16:37:02	Door 1-In	6752481-1-Chris--2019-06-25 16:37:03 Tuesday-Door 1-In-Swipe
16:37:06	Door 1-Exit	6752481-1-Chris--2019-06-25 16:37:07 Tuesday-Door 1-Exit-Swipe

Card No: 6752481
 User ID: 1
 Name: Chris
 Building Room:
 Read Date: 2019-06-25 16:37:07 Tuesday
 Addr: Door 1-Exit
 Status: Swipe



Location

Note: Only works on 1 or 2 door controllers with read in/read out setup.

Click **Location** and the location box will appear. You can filter by either user or department. Highlight the user and click **Query**.

Below we can see that Josh entered the door and exited 5 minutes later.

The screenshot shows the CPAccess Control interface. On the left, there are three main sections: Configuration, Operation, and Attendance. The main window is titled 'CPAccess Control' and has a menu bar with 'File', 'Configuration', 'Operation', 'One Card Multifunction', 'Tools', 'Help', and 'Lock Interface'. Below the menu bar is a toolbar with buttons for 'Select All', 'Stop', 'Check', 'Adjust Time', 'Download and Monitor...', 'Remote Open', 'Clear Event Window', 'Location', 'Persons Inside', and 'Find'. The 'Location' window is open, showing a table of users and their entry/exit times. The table has columns for 'User ID', 'User Name', and 'Card NO'. The data is as follows:

User ID	User Name	Card NO
1	Chris	6752481
2	Josh	23745089
3	Holly	24427971
4	Dan	21903477

Below the table, the details for the selected user (Josh) are shown:

Josh
2019-06-25 16:37:00 Tuesday Enter Into Door 1
2019-06-25 16:42:19 Tuesday Go Off Door 1
Stay: 5 Minutes

And below we can see that Holly entered the door and hasn't yet exited, having been in the building for 6 minutes.

The screenshot shows the CPAccess Control interface. On the left, there are three main sections: Configuration, Operation, and Attendance. The main window is titled 'CPAccess Control' and has a menu bar with 'File', 'Configuration', 'Operation', 'One Card Multifunction', 'Tools', 'Help', and 'Lock Interface'. Below the menu bar is a toolbar with buttons for 'Select All', 'Stop', 'Check', 'Adjust Time', 'Download and Monitor...', 'Remote Open', 'Clear Event Window', 'Location', 'Persons Inside', and 'Find'. The 'Location' window is open, showing a table of users and their entry/exit times. The table has columns for 'User ID', 'User Name', and 'Card NO'. The data is as follows:

User ID	User Name	Card NO
1	Chris	6752481
2	Josh	23745089
3	Holly	24427971
4	Dan	21903477

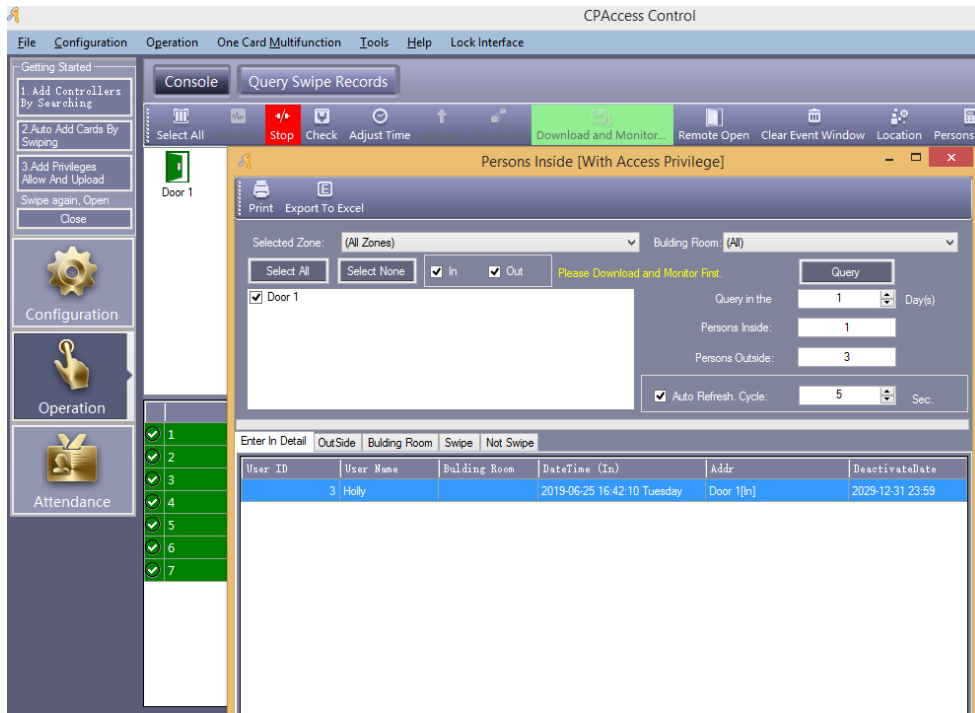
Below the table, the details for the selected user (Holly) are shown:

Holly
2019-06-25 16:42:10 Tuesday Enter Into Door 1
Dont Go Off
Stay: 6 Minutes

Persons inside

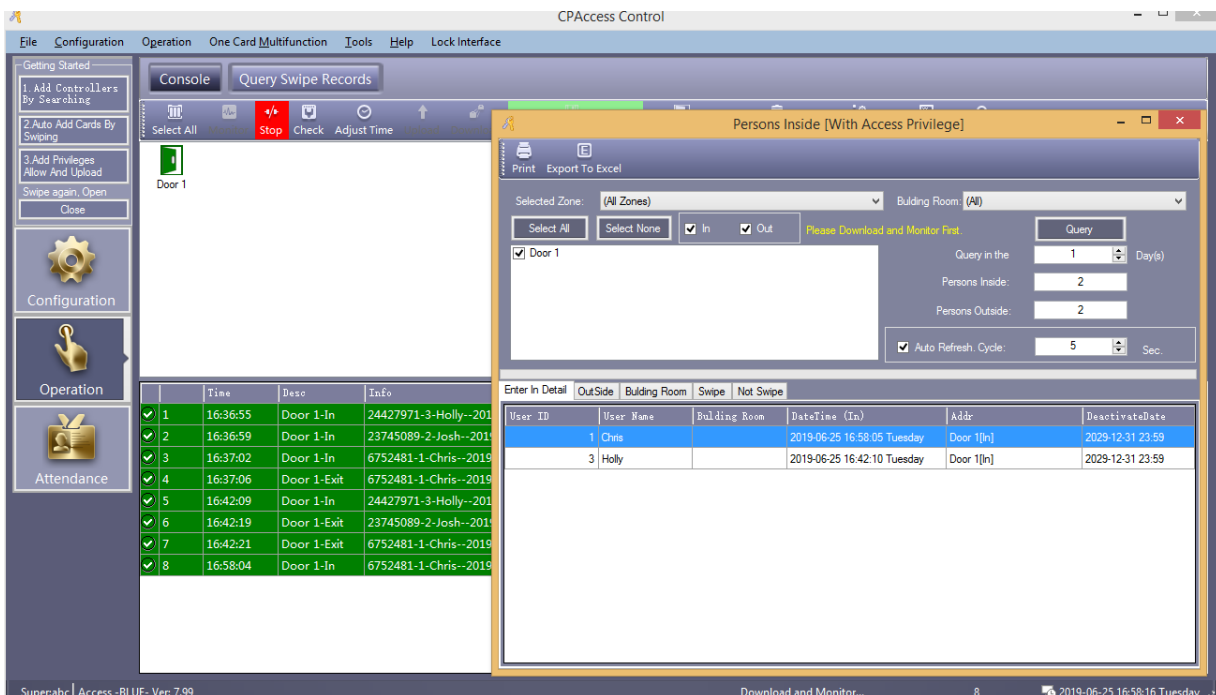
Note: Only works on 1 or 2 door controllers with read in/read out setup.

This feature allows you to see who is inside the room or building. Click **Persons Inside**, select the doors and then click **Query**. It will then tell you how many people, and who, are inside or outside. It can also be filtered by department. Auto refresh cycle can be selected to keep updating the query and monitor it in real time. This could be useful in car parks to know how many spaces are available, for example.



Above we can see that only Holly is inside the room, and the other 3 users are outside.

However, below we can now see below that Chris has entered, as shown on the transaction list and the Auto refresh cycle updates the Persons Inside window.



Database backup & restore

It is highly advisable to regularly backup the database by clicking **File > DB Backup > OK** and choosing the folder where you wish to save the backup.

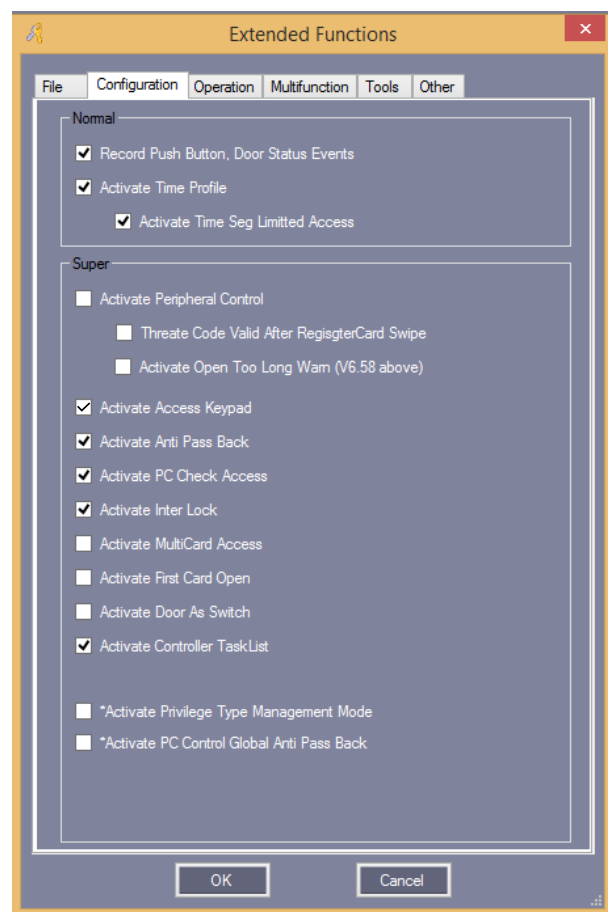
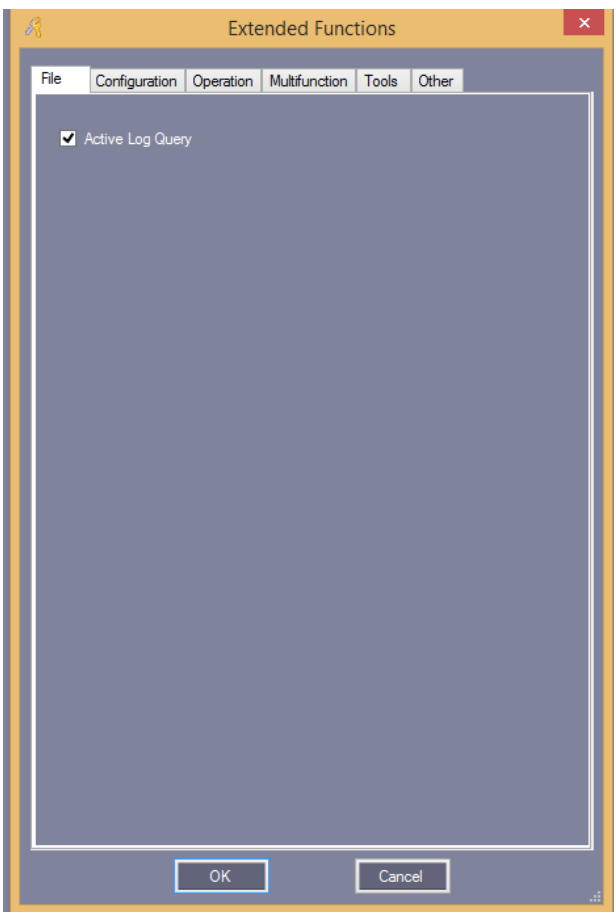
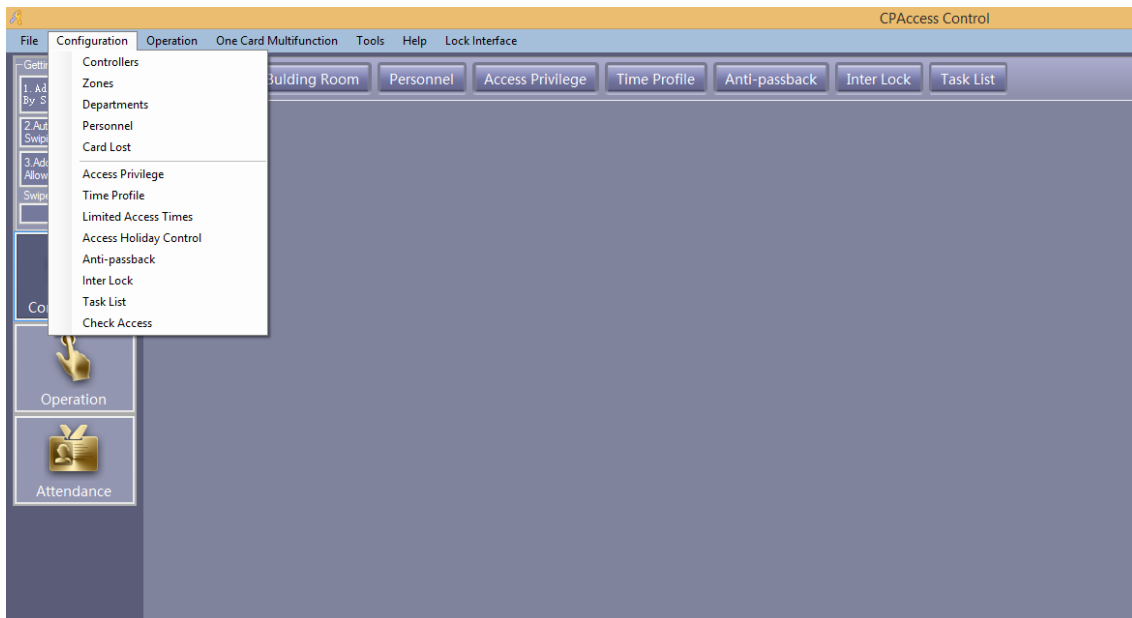
This file will be required in the event you need to re-install the software but don't want to re-enter all the user data. Copy and paste the backup database file starting **iCCard3000** from your backup folder into the newly installed **Access Control** folder, in the **Backup** sub-folder.

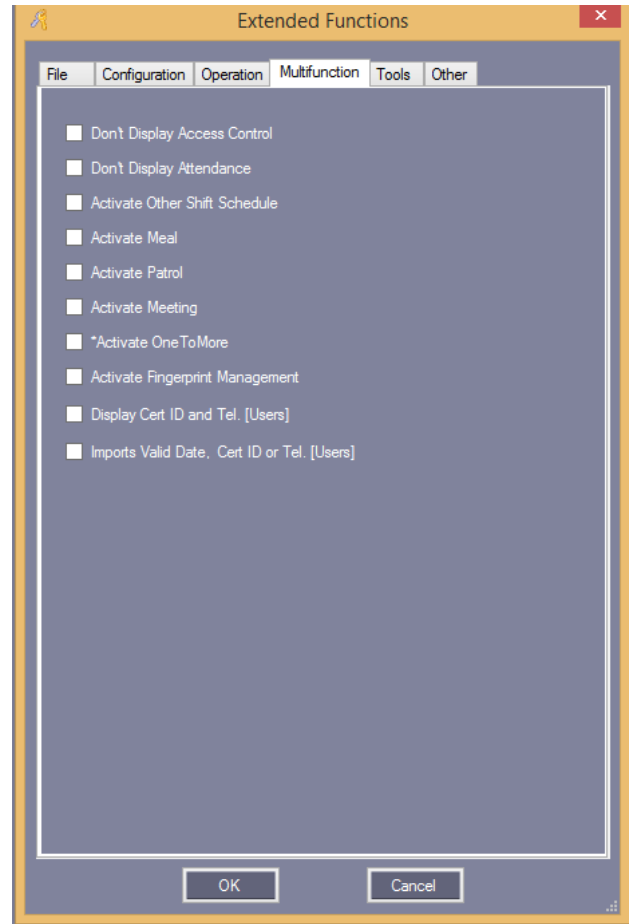
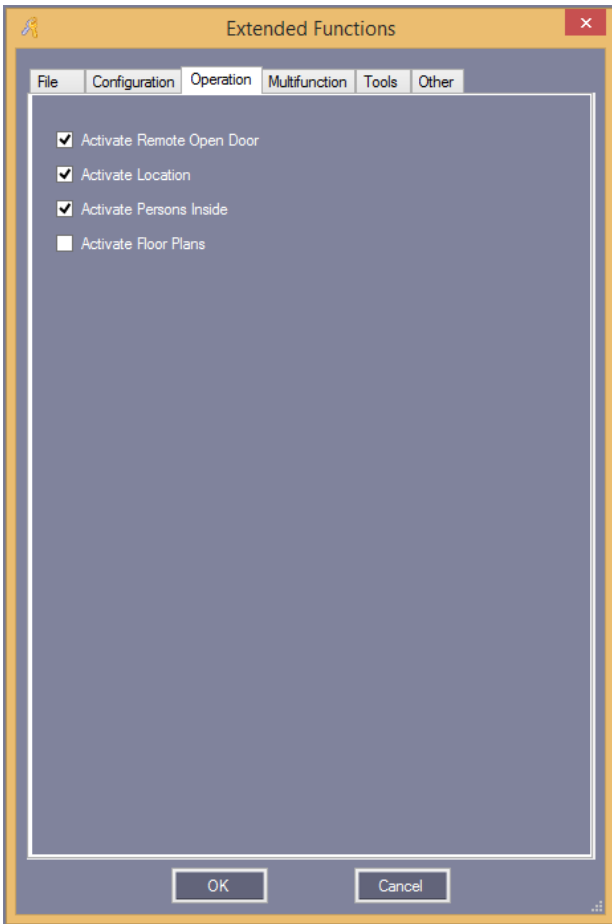
Extended functions

The extended functions provides sections offering additional more advanced options to suit your own requirements as can be seen below.

To enter extended functions, click **Tools > Extended Functions** and enter password **5678**

Select the options you require and click OK, then software will then ask to restart. When it restarts the new options will be displayed under the main headers and also as shortcuts.

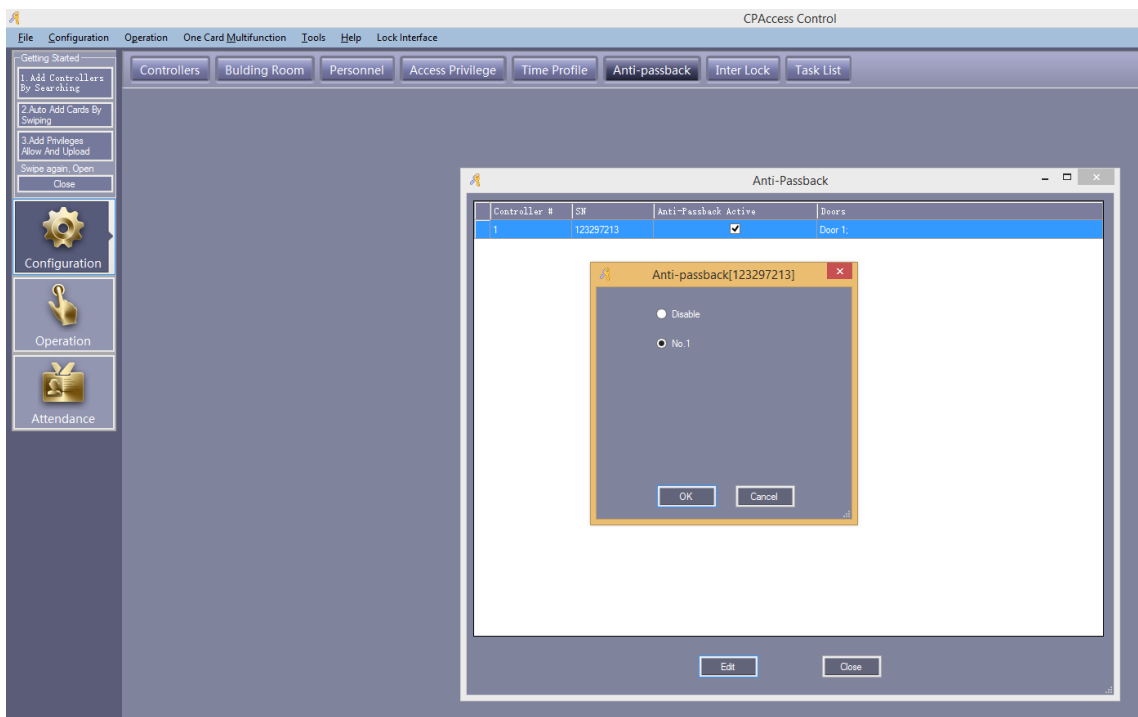




Anti-passback

Click **Configuration > Anti-Passback**

This feature only works on 1 & 2 door controllers with read in/read out setup. The facility prevents a card from being read twice on the entry reader without it being read on the exit reader. This prevents users passing back their card to another user to gain access. An ideal feature for secure rooms or clubs where there is a fee for membership.

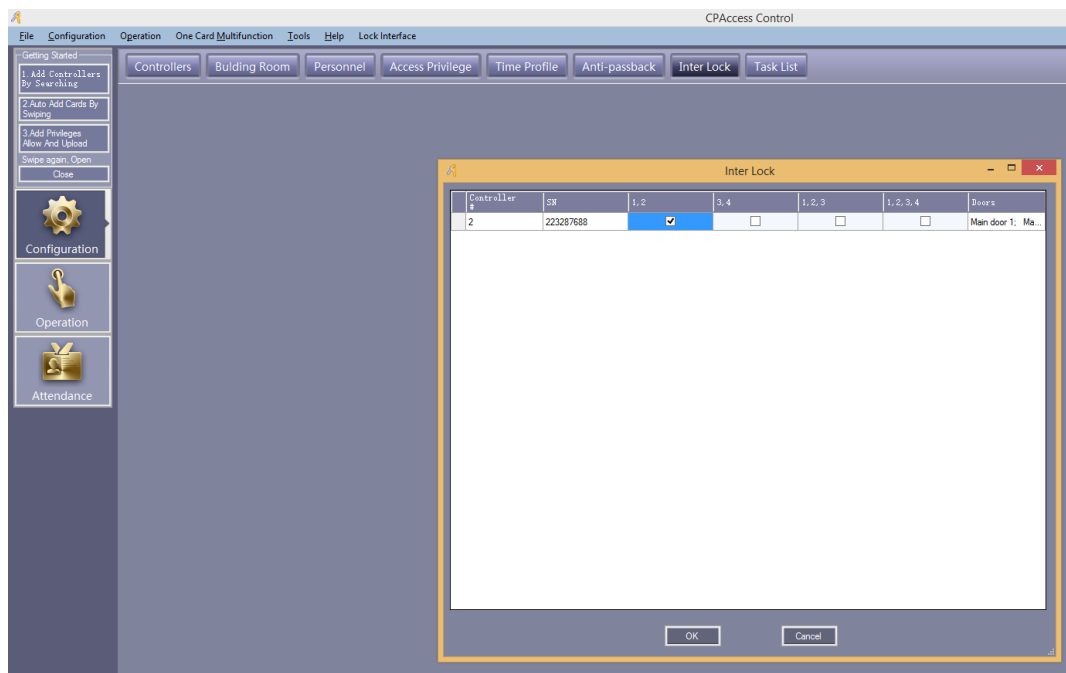


Interlock

Click **Configuration > Interlock**

This feature allows you to create and interlock (sometimes called airlock) system where you have two doors but only one can be open at a time. So, the user enters through door one, door two will not open until door one is closed. When door one is closed the user will then be able to open door two. Door contacts or a monitored magnetic locks will need to be fitted so the controller knows the state of the doors.

Note: Not available on single door controllers.

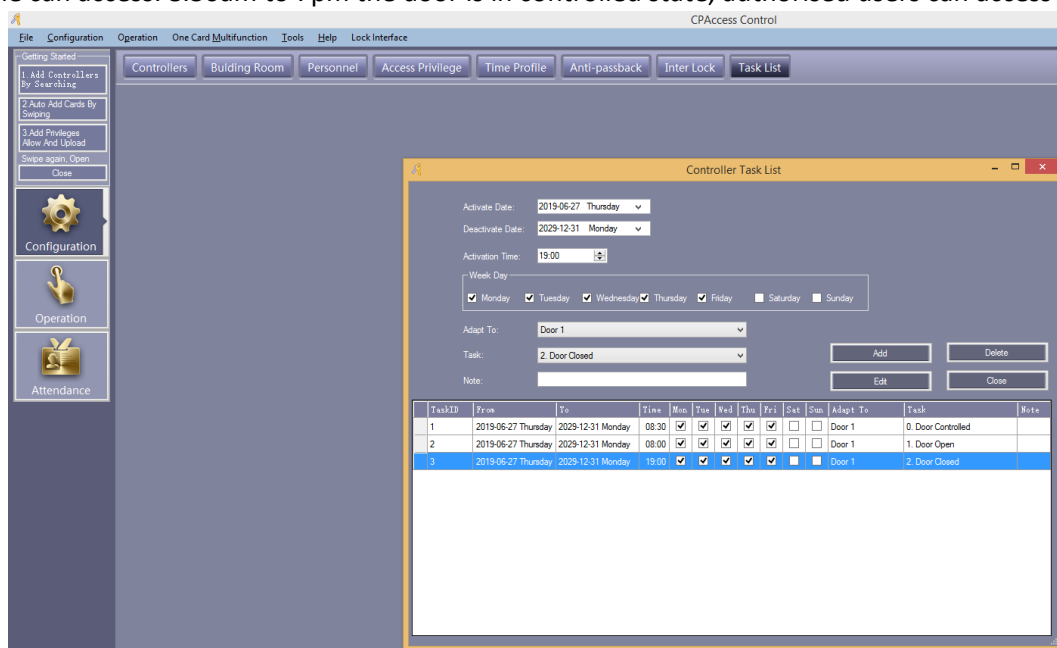


Task list

Click **Configuration > Task List**

This feature allows you to set times of the day and days of the week where you require to control the status of the door automatically. Click on the **Task** drop down list to see the variety of options available.

In the example below. Monday to Friday 7pm to 8am Door 1 is closed, no one has access. 8am to 8.30am the door is open, anyone can access. 8.30am to 7pm the door is in controlled state, authorised users can access by card.



Password management

Tick 'Activate access keypad' in extended functions.

A Wiegand keypad will provide more secure access for all users and can be used in four ways:

Card + PIN

Card only

Wiegand PIN

Master PIN

Click **Configuration > Pwd MGT**

Within the Password management screen are four sub sections, CARD + PIN, PIN Code, Controller's password, and Manual input password. Tick each door required for keypad operation.

PIN Code

The PIN Code section will display all users, or you can filter it by department. The default PIN for all users is **345678** and is displayed as **Unchanged**.

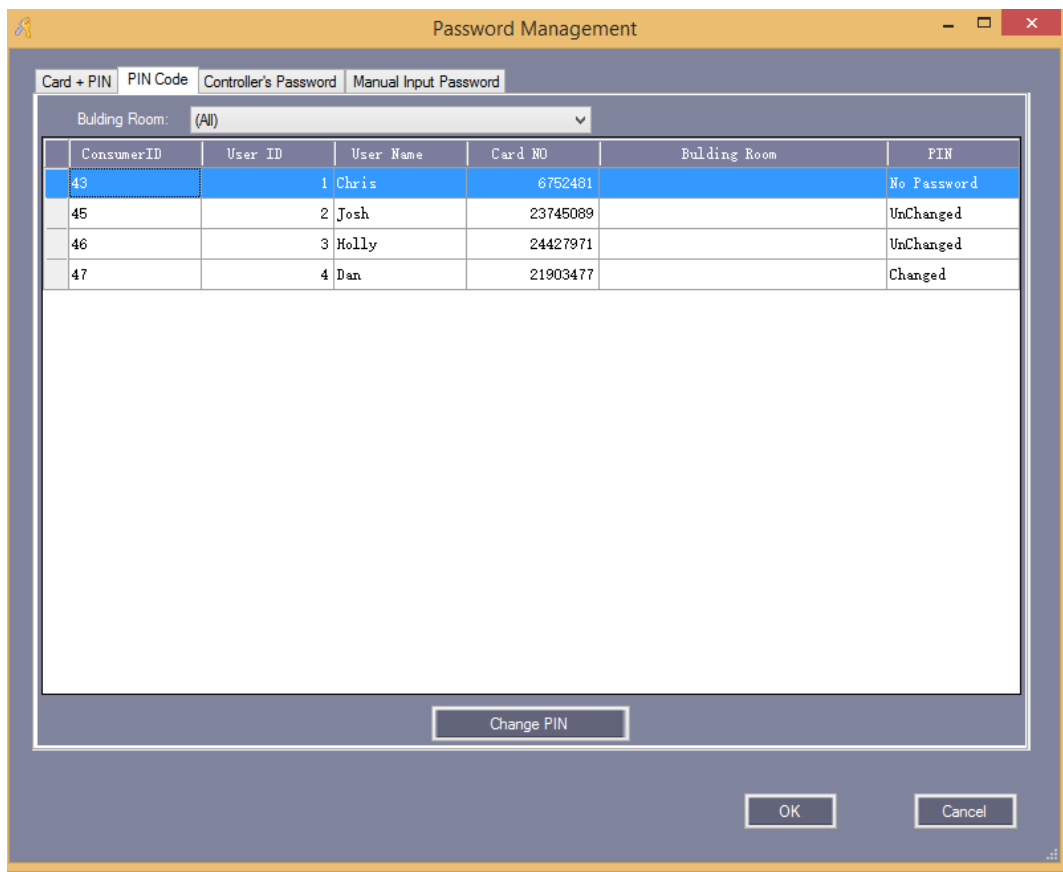
Change PIN will allow you to enter a new 4-6 digit PIN for each user and will be displayed as **Changed**. If you do not enter anything at all it will be displayed as **No Password**.

It is important to note that the software will not display the user PIN number at all, so you should make a note of the allocated PIN numbers for users elsewhere.

In the event that PIN number for a user is lost, you will need to manually delete and re-add the user.

With the configurations set below (**Changed/Unchanged/No Password**) will be as follows:

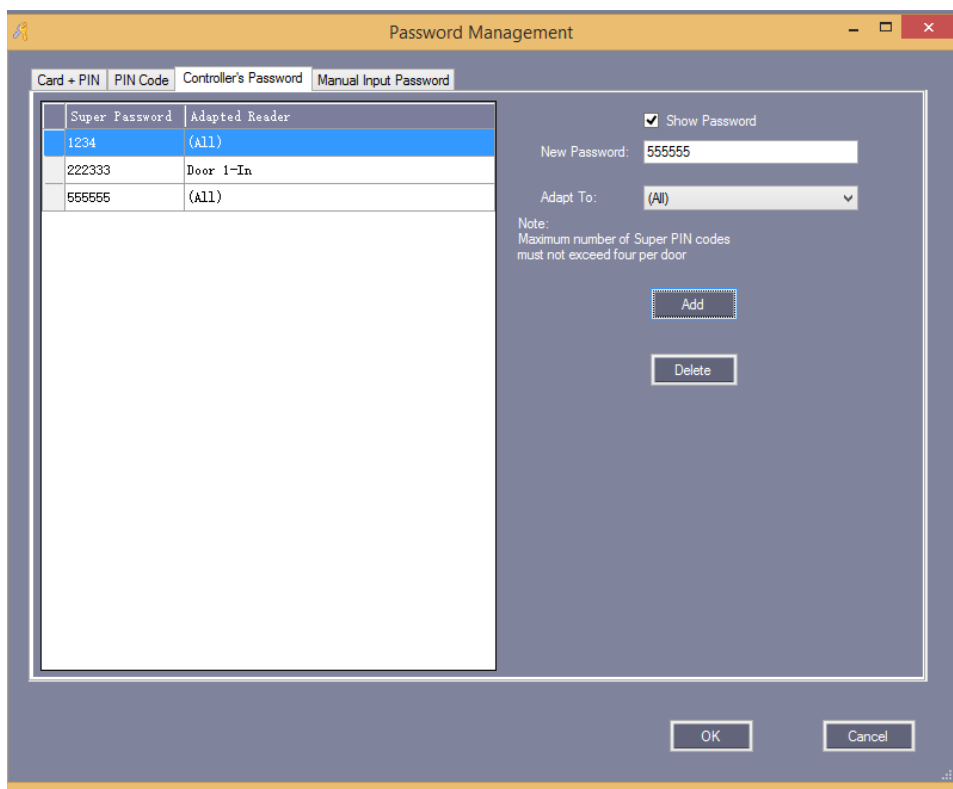
1. Chris – '**Present card**' or enter '*** + 8 digit Wiegand number on card + #**' in order to gain access
2. Josh & Holly – '**Present card + Default PIN (345678)**' in order to gain access (# not required)
3. Dan – '**Present card + PIN + #**' in order to gain access



Controller's password

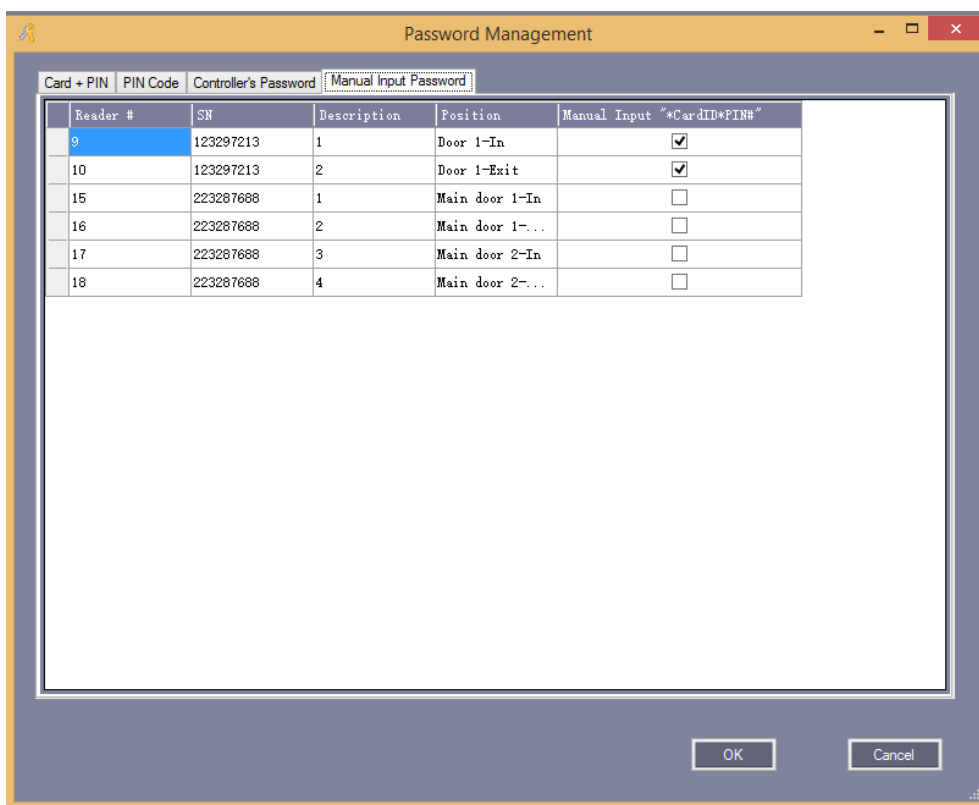
Master PIN codes can also be created for senior staff members, up to a maximum of 4 per door. They can be 4-6 digits.

Enter '**PIN + #**' to gain access.



Manual input password

Users who have **No Password** can present their **card** or enter '*** + 8 digits Wiegand number on card + #**' to gain access. Box must be ticked in Manual Input Password section.



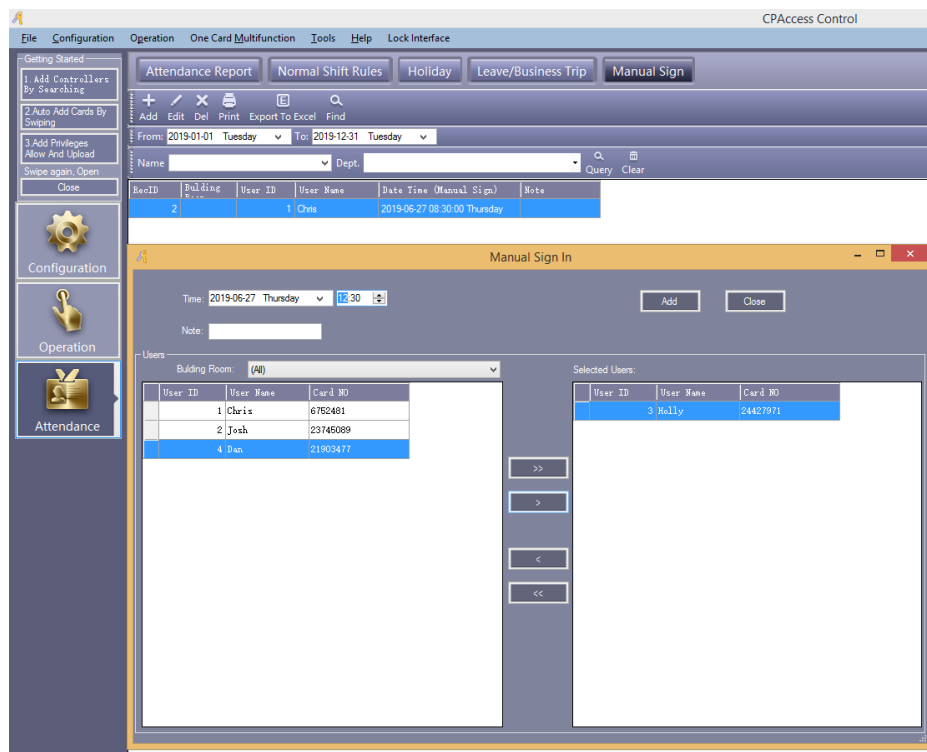
Time & attendance

Time attendance operates automatically in the background for all users and allows you to create daily and annual leave, company holidays, work shifts and manual sign in. Reports can be created and filtered, and printed or exported to Excel if required. **Note:** ensure user privileges are set for attendance.

Manual sign-in

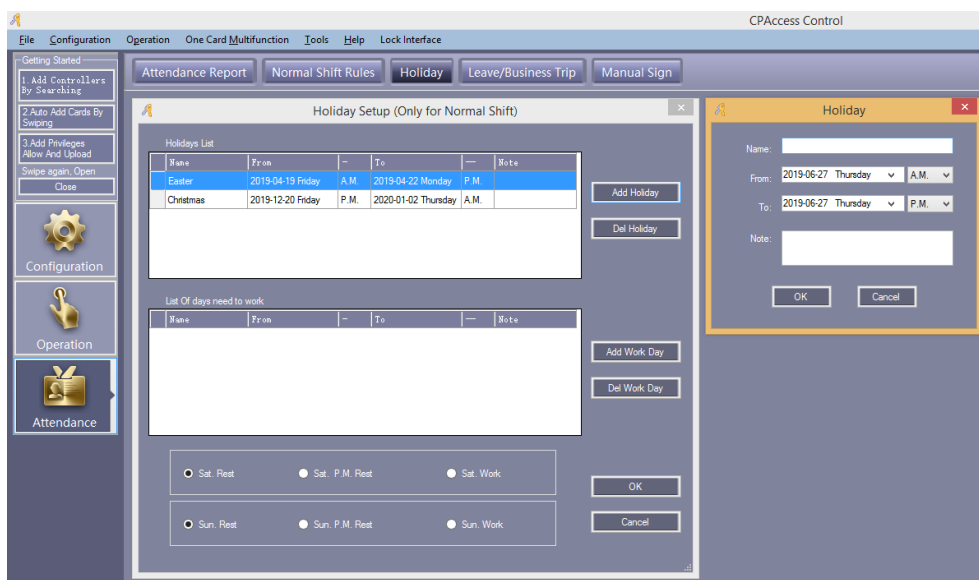
This will provide an **On Duty** time for users or departments within the reports. This is only normally required if the is temporary staff, otherwise you do not need to enter any details.

Click **Attendance > Manual Sign In > +Add** to create a new manual sign in. Select the users or departments on the left and move the ones you want to create a manual sign in for into the right box using the > or >> buttons. Enter the time and click **Add** followed by **Close**.



Holiday

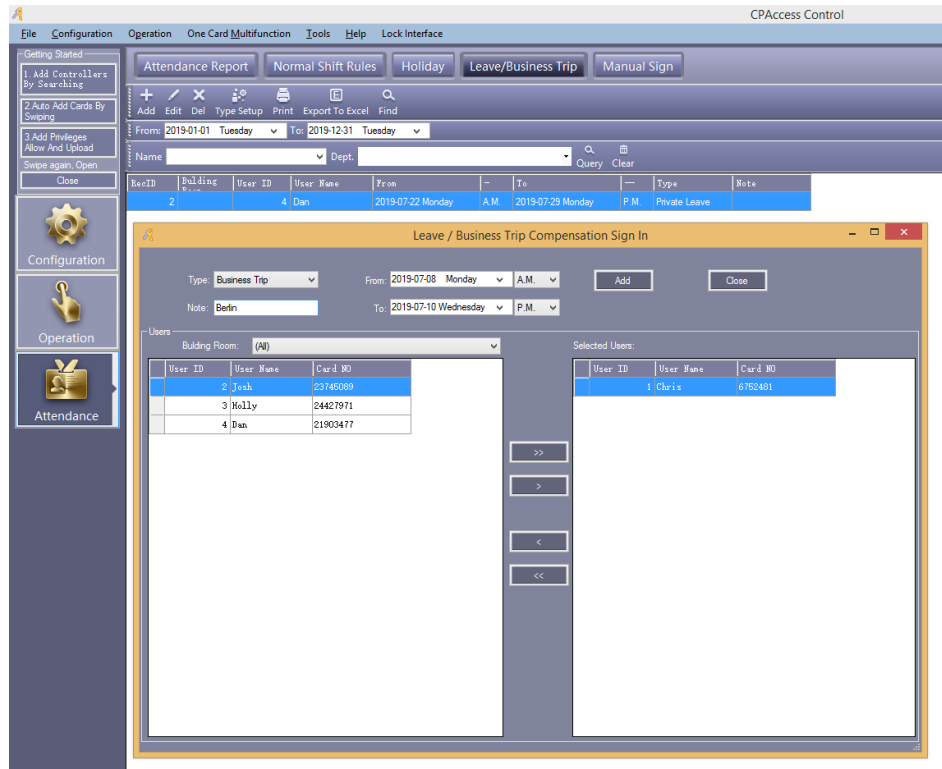
This allows you to assign company closure dates, like Christmas, Easter and bank holidays. This will be displayed on the reports as a * for each user or department. Click **Add Holiday**, give it a name and select start and finish dates.



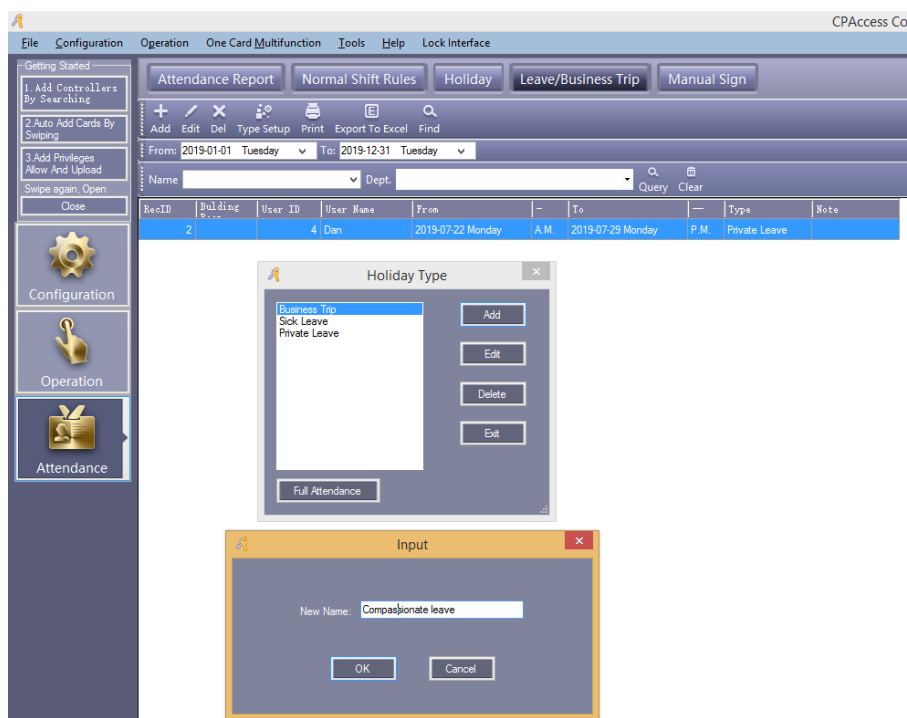
Leave/Business Trip

This feature allows you to allocate business trip, sickness leave or private leave to individuals or departments. You can also create your own title by selecting **Type Setup**.

Click **+Add** to create new leave. Select the type of leave and choose the start and finish date. Select the users on the left you want to allocate leave to and move them to the right box using the **>** or **>>** buttons. You can also filter by department. When complete click **Add** then **Close**.

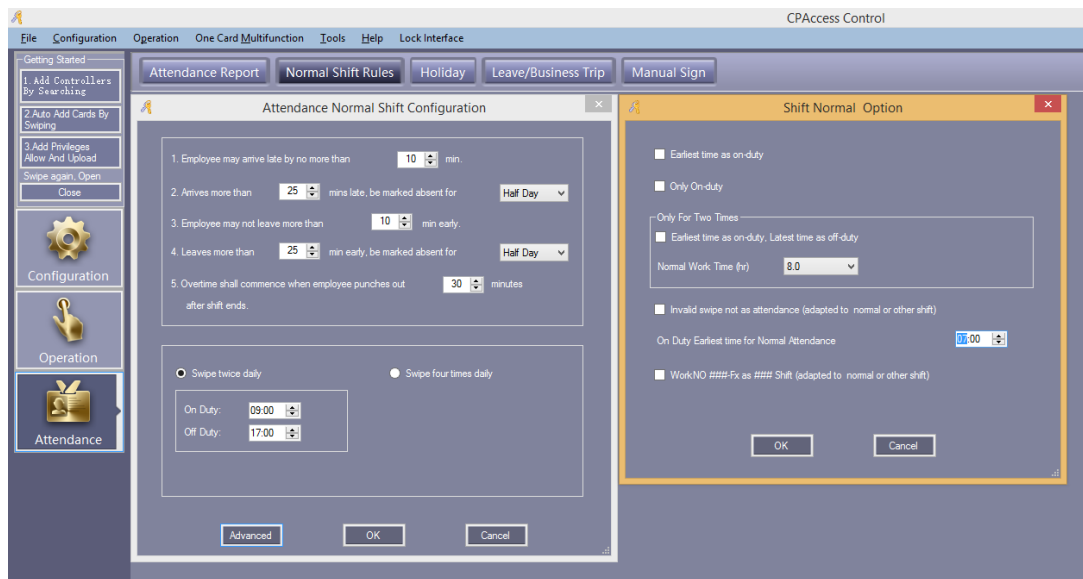


To create your own Leave title click **Type Setup > Add > New name**
When complete click **OK**.



Normal shift rules

This allows you to allocate normal working shift times, including start and finish times, lunch start and finish times (optional) as well as the amount of time allowed for arriving late or early. Correctly setting these options will help to generate a more thorough **Attendance Report**.



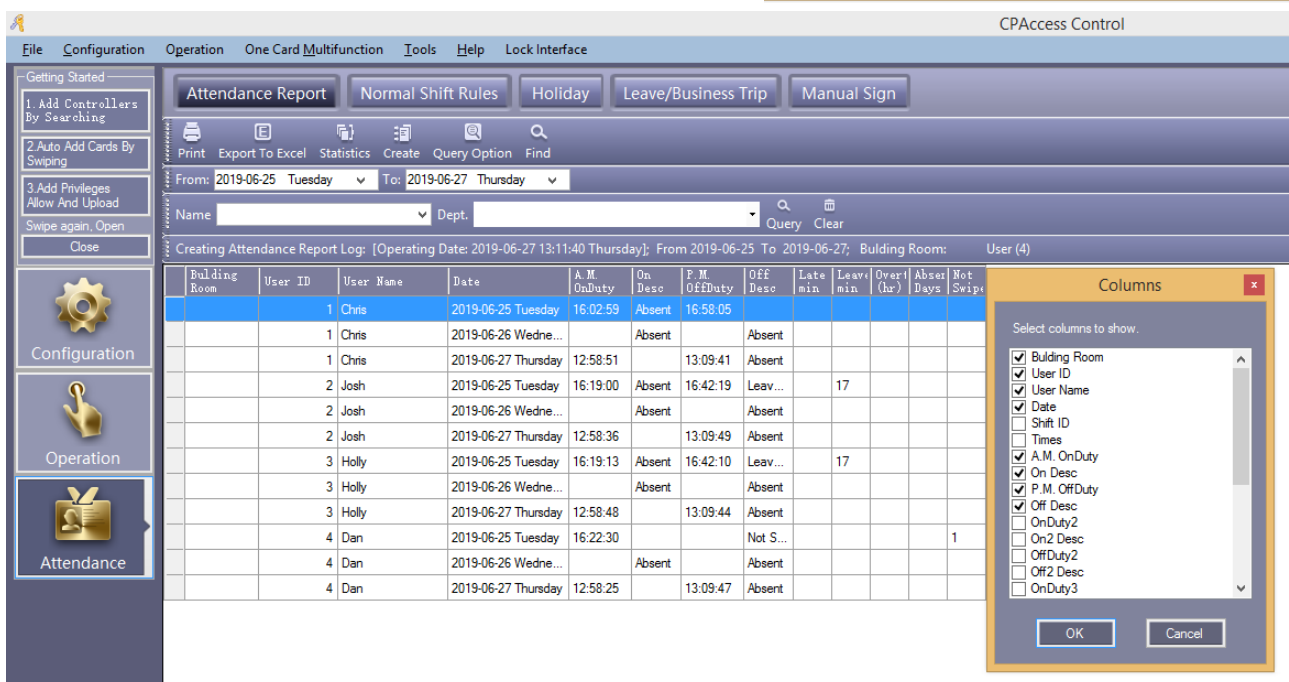
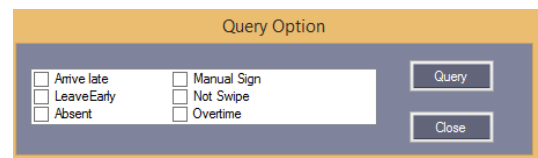
Attendance report

Firstly, you will need to download the latest transactions. Click **Operation > Console > Download**

Click **Create** to generate the report. The attendance report can be filter by user, department and date, and exported to Excel.

Right clicking on the report and selecting **Columns configure** will allow you to choose which columns you want to view and remove those that aren't relevant.

Query option allows you to view specific results of the report.



Statistics

The statistics button will provide an individual report for days worked, lateness, sick leave, annual leave, etc. This can also be printed or exported to Excel.

The screenshot displays the CPAccess Control software interface. The main window is titled "Attendance Report" and shows a date range from 2019-06-17 to 2019-06-27. A secondary window titled "Attendance Statistics" is open, displaying a table with the following data:

Building Room	User ID	User Name	Planned Days	Full Work Days	Late Minutes	Late Count	Leave# Minutes	Leave# Count	Over (hr)	Absen Days	Bus Trip	Manual Sign In (Times)	Busine Trip (Days)	Sick Leave (Days)	Privat Leave (Days)	Notes
	1	Chris	9									1				
	2	Josh	9				17	1								
	3	Holly	9				17	1								
	4	Dan	9								1					

The "Notes" column for the first row contains the text "6:27:8:30 Manual Sign".