Pamex

Kapture Series

A Multi-Family Door Access Control Solution

User Manual & Implementation Guide

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Introduction

The Pamex Kapture series is a total solution for multi-family door access control. It not only has several models of lock but also the browser based central management system (MF-Admin server).

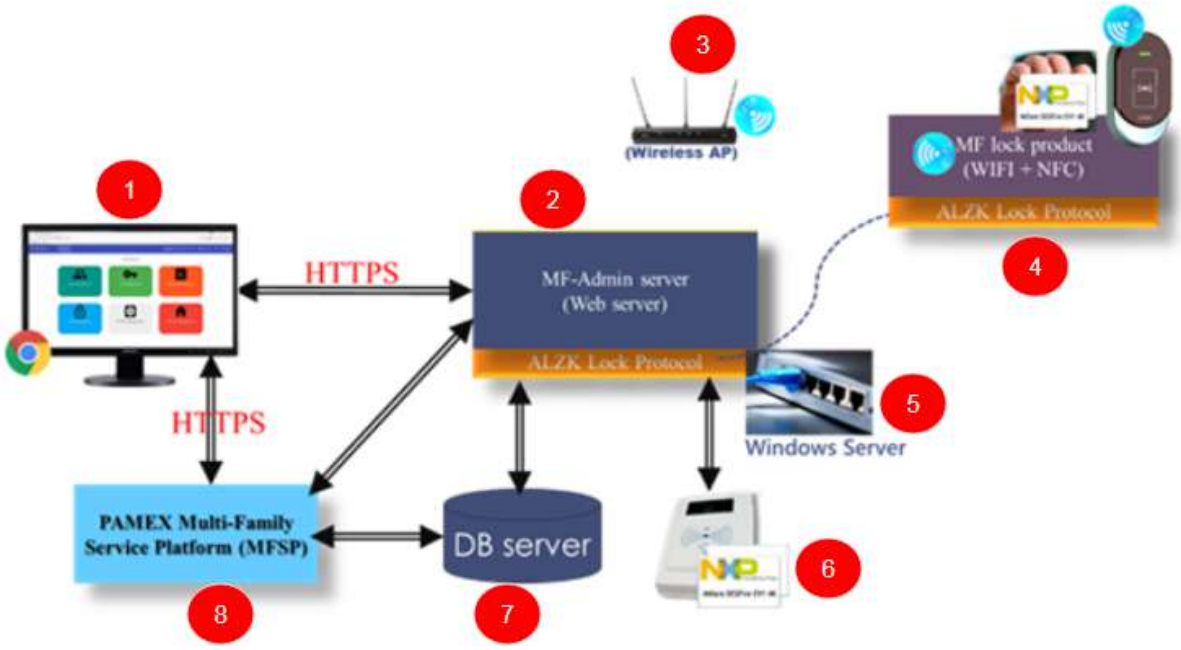


Figure 1 : Pamex Kapture System Architecture Overview

Figure 1 shows the system architecture of Pamex Kapture solution, Below are the brief description of each components :

1. Chrome browser : The user interface to the MF-Admin Server (2). You need a PC with Chrome browser to use MF-Admin. The card reader/writer (No.6 in figure 1) will be connected to this PC using USB. You may also use the windows server (5) as the client PC.
2. MF-Admin Server : An application running on Windows server (5). It provide all the functions to manage the access control of the locks and the cards/fobs.
3. Wifi AP : All the Kapture locks has the wifi capability and are necessary to connect to a wifi AP in order to be programmed by MF-Admin server. There should be a few to many Wifi APs at a multi-family property. Wifi AP is not part of Kapture products. Check the lock specifications in Appendix for the compatible Wifi AP.
4. Kapture smart locks and NFC cards : All the Kapture locks are smart locks which are accessed using NFC card/fob (Mifare Desfire).
5. Windows Server : MF-Admin server is installed on this server.
6. Card Reader/Writer : MP100 is the default reader to issue new card/fob to users/residents.

Figure 2: MP100

7. DB Server : A database is installed on windows server to keep all the data of the system. It is installed and automatically configured by the install program. Please reference *MF-Admin & MP100 installation guide*.
8. MFSP platform : MFSP (Multi-Family Service Platform) is a cloud service for all the MF-Admin Servers around the world. This platform is operated by Pamex. Connected your MF-Admin Server to MFSP is not required but we encourage you to do so. MFSP will provide some enhancement to Kapture solution in the future.

Before Installation

Check List

- Locks
- Cards : Crypto Cards x 2, Construction Card x 5, Blank Cards x 10
- MF-Admin + MP100 Software
- MP100 Card Reader x 1
- Windows Server x 1

Pamex MFSP Service Platform

- **This section is for Pamex only.**
- Before any Kapture installation, Pamex admin will have to create a project in MFSP in order to get the unique project code.
- A Kapture installation will need at least one Crypto card to activate all the locks. Crypto card can only be issued through MFSP by Pamex. MFSP will keep the encryption keys of Mifare Desfire card for every projects.

Hardware Installation

Wall Reader - Kapture KA-WR1S, Kapture KA-WR1N

Features

- IP55 Weatherproof suitable for external use
- Advanced tamper detection
- Wi-Fi enabled access controller connected directly to existing routers
- Lock and unlock lockset remotely (Wi-Fi)
- MIFARE DESFire EV1/EV2 credential required (sold separately)
- High-Security authentication with 128-bit AES Encryption
- 6000+ cards/fobs and 10,000 activity logs memory capacity
- Alert email notification
- Access time control for both areas and users
- Passage mode – temporarily allow unrestricted access
- Privacy mode – temporarily disable all user access
- Lockout functionality
- Dual LED Status Indicators for Visual communications
    - Bi-color LED Status Indicator(red, green)
- Customizable I/O
    - Main relay, Auxiliary relay
    - REQUEST-TO-EXIT input
    - DOOR SENSE input
    - ALARM SHUNT signal x 2
- UL294(US), FCC Certification (US)
- Remote configurable using MF-Admin server

Hardware Specifications

Mechanical (Dimensions)

Kapture KA-WR1S : 5.51” (H) X 2.95” (W) X 1.27” (D)
Kapture KA-WR1N : 7.45” (H) X 1.77” (W) X 1.28” (D)

Electrical

- NFC reader
- Supports ISO/IEC 14443 A/MIFARE and EV1/EV2 desfire

    Operating distance in Read/Write support Max. 2cm

- WIFI 11.b/g/n

    Operating distance support 100feets

- Input Voltage: 12/24 Volts DC, 25VDC Absolute Max. rating
  Operating Current: 30 mA typical, 150 mA max

Output Ratings

- Main Relay: Form “C” 2 Amps @ 28 Volts max
- Auxiliary Relay: Form “C” 2 Amp @ 28 Volts max
- Electrical life Min. 100,000 operations at 2A resister load
- Electrical life Min. 1,000,000 operations at 1A electrical lock
- Solid state outputs (Outputs P3.E7 & P3.E6)
- Short-to-common 100 mA @ 24 VDC maximum

Environmental

- Temperature: -31°F to 150°F (-35°C to 66°C)
- Humidity: 95% Non-condensing

Front View

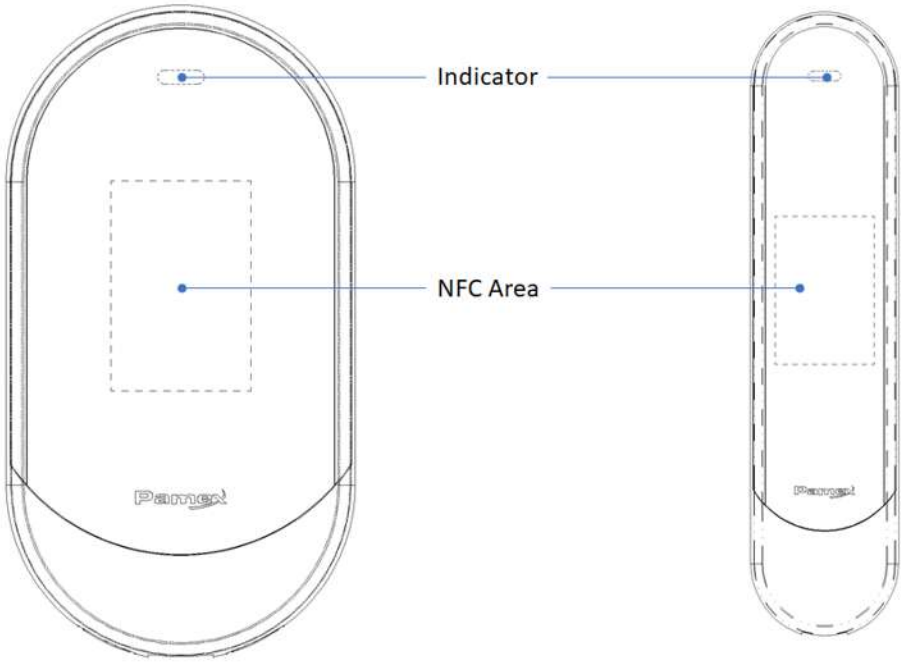


Figure 3 : Kapture KA-WR1S Front, Kapture KA-WR1N Front

Back View

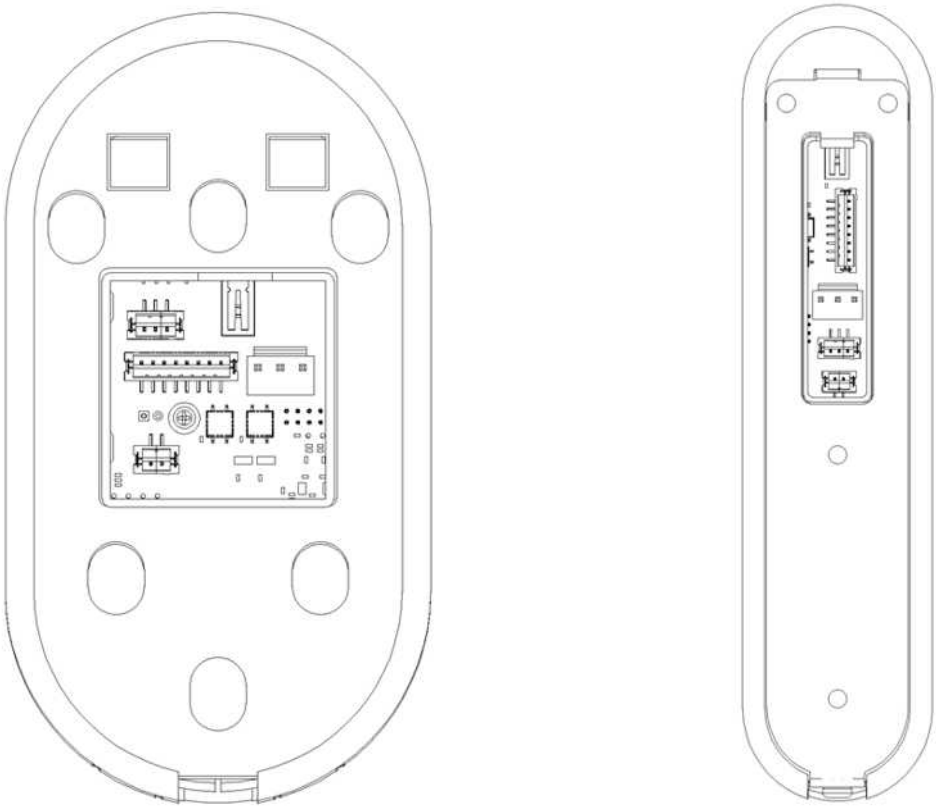


Figure 4: Kapture KA-WR1S Back, Kapture KA-WR1N Back

Wiring Pigtail Rated note

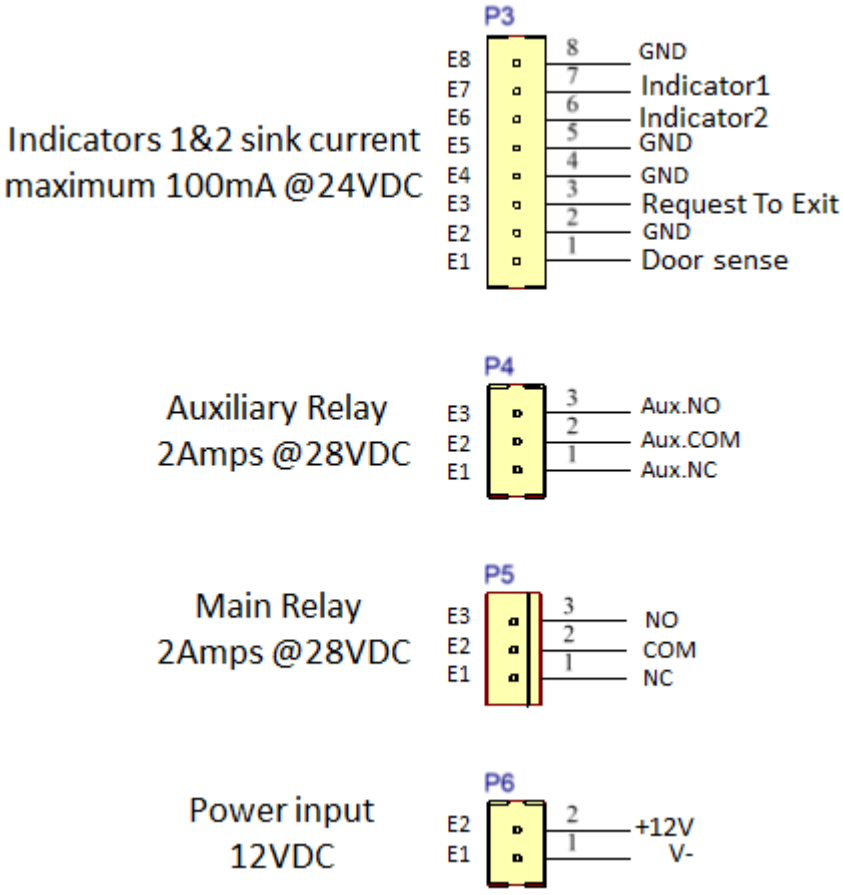


Figure 5: Kapture KA-WR1S, Kapture KA-WR1N **Wiring Pigtail Rated note**

Basic Door Installation

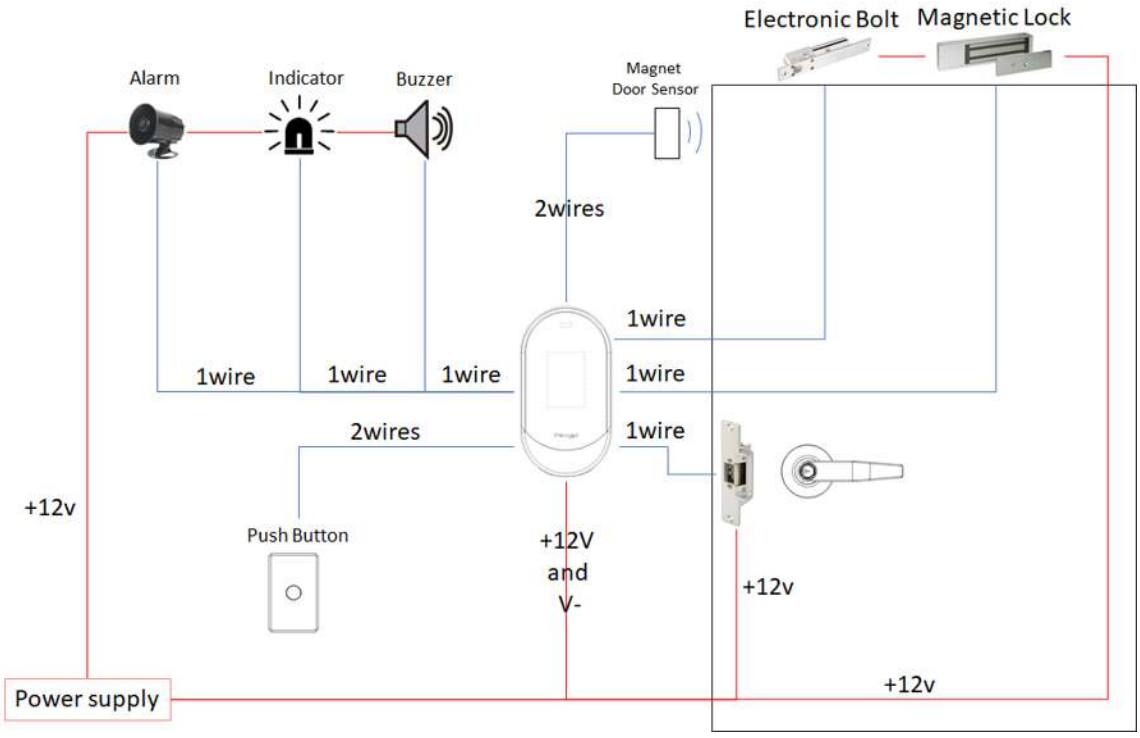


Figure 6: Kapture KA-WR1S(N) Basic Door Installation

Basic Door Installation Wiring

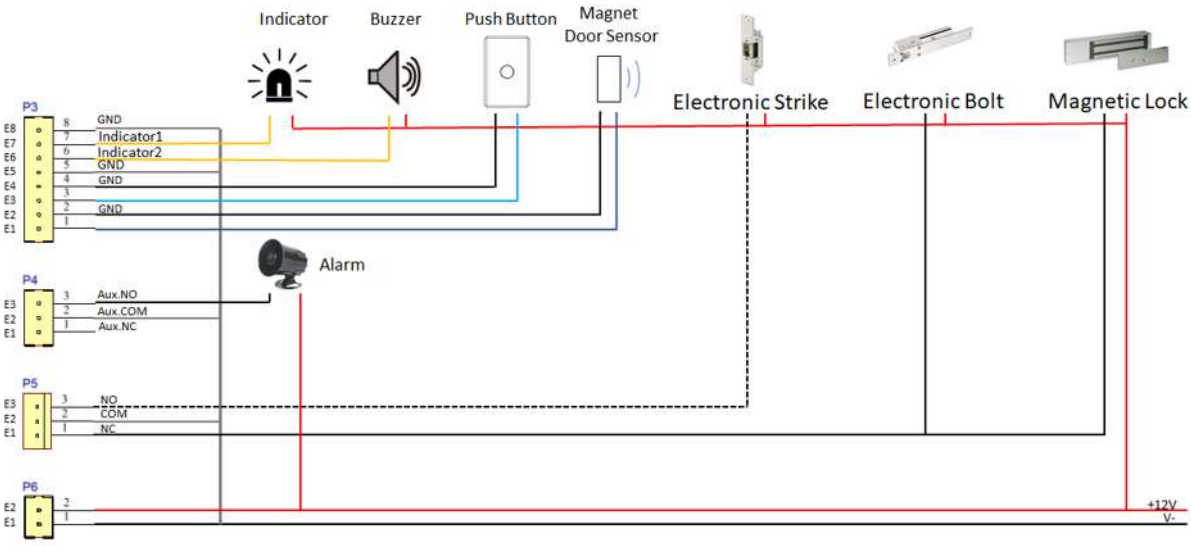


Figure 7:Kapture KA-WR1S(N) Basic Door Installation Wiring

Solid-State Output

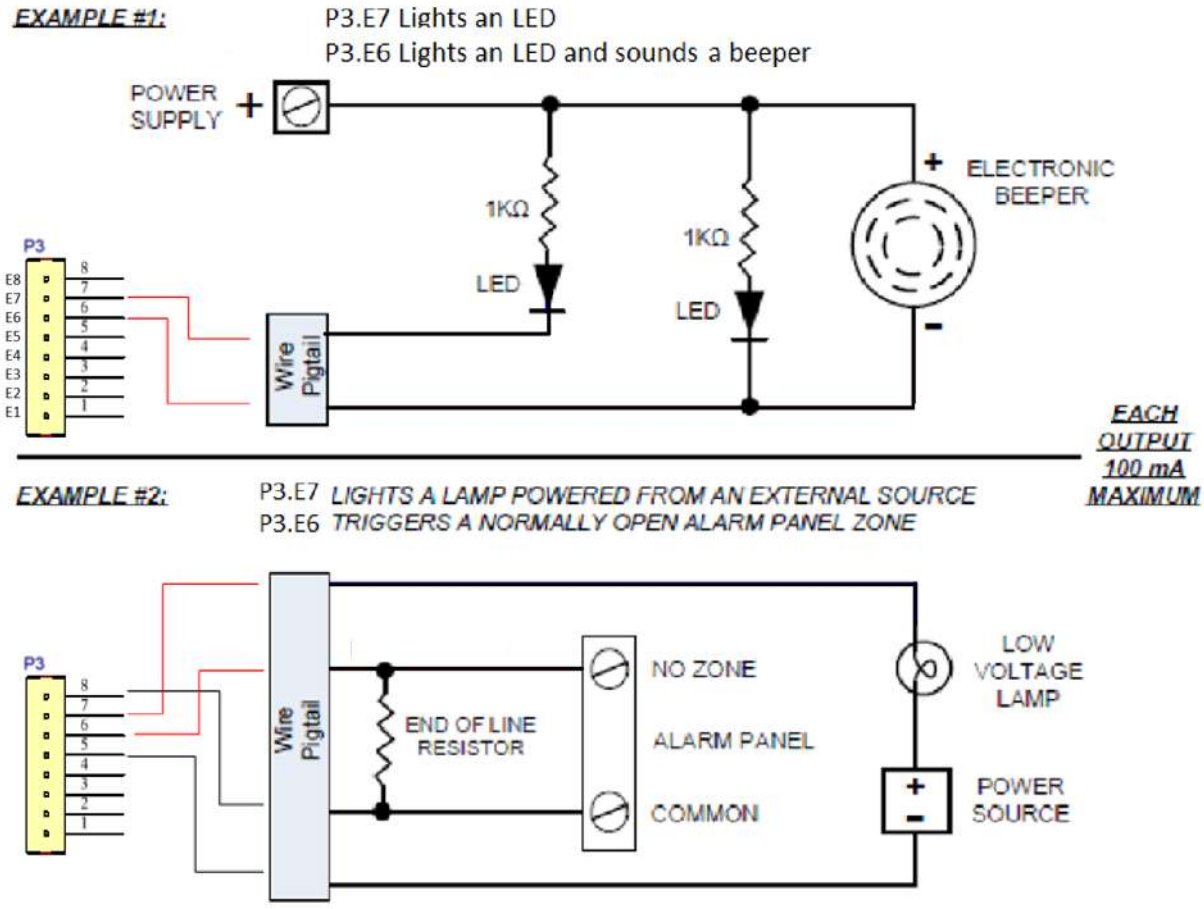


Figure 8 : Kapture KA-WR1S(N) Solid State Output

Surface Mounting

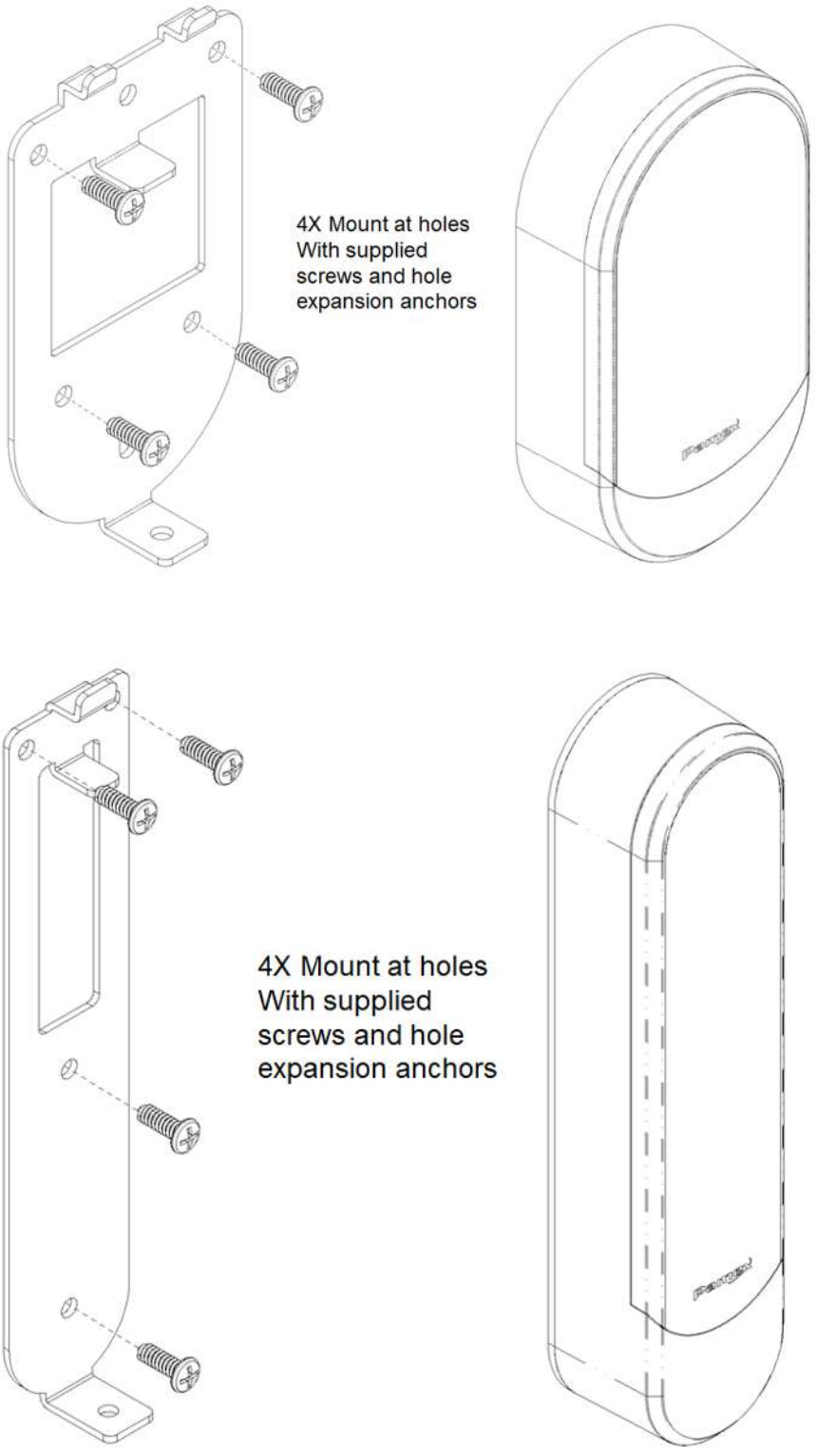


Figure 9 : Kapture KA-WR1S(N) Surface Mounting

Mounting to single gang recessed outlet box

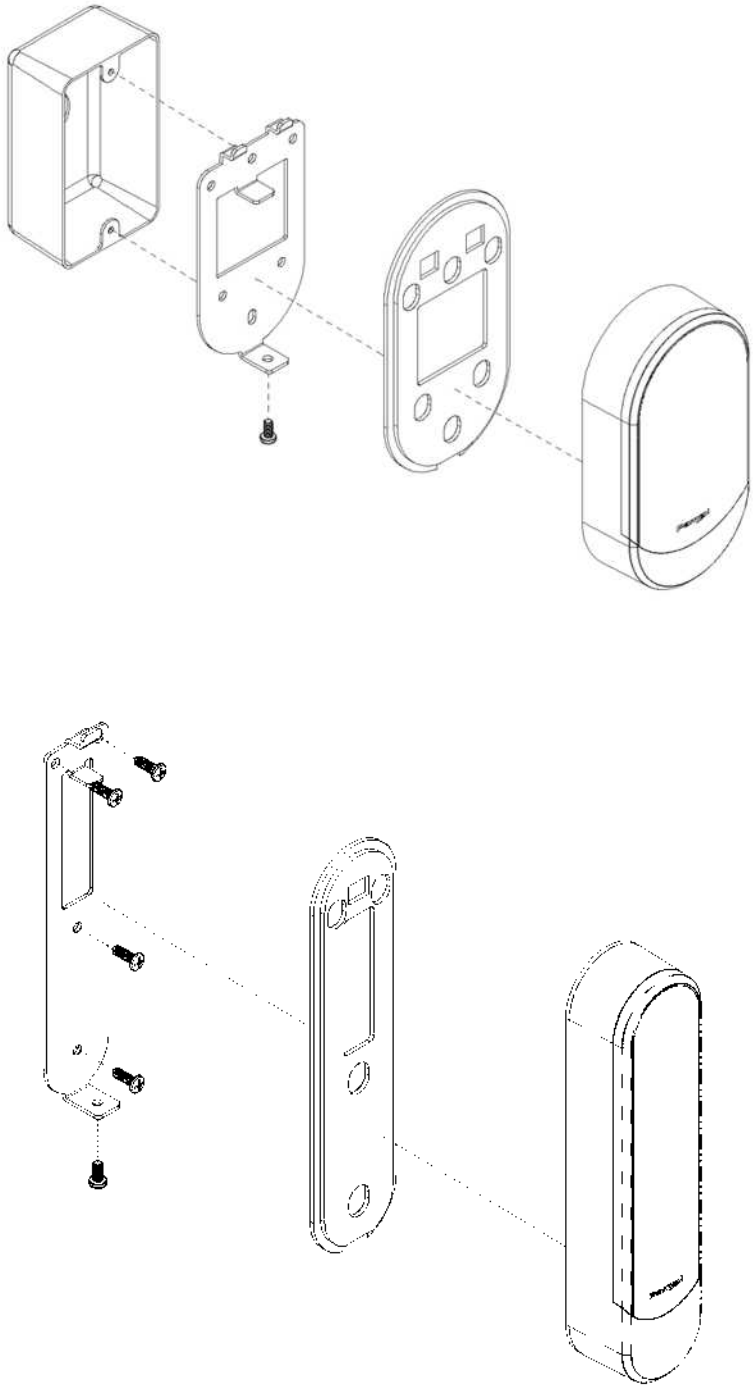


Figure 10 : Kapture KA-WR1S(N) MOUNTING TO SINGLE GANG RECESSED OUTLET BOX

Dimensions

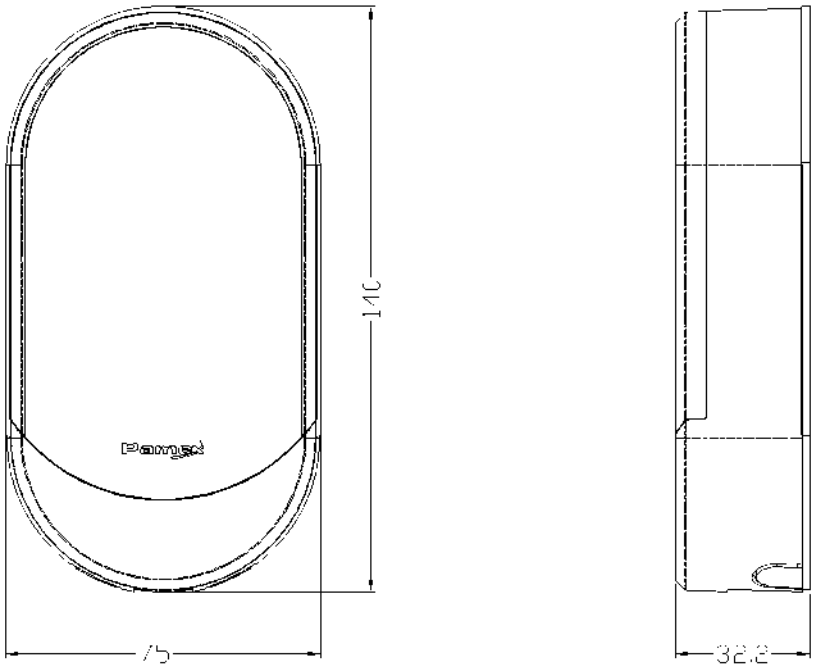


Figure 11 : Kapture KA-WR1S Front

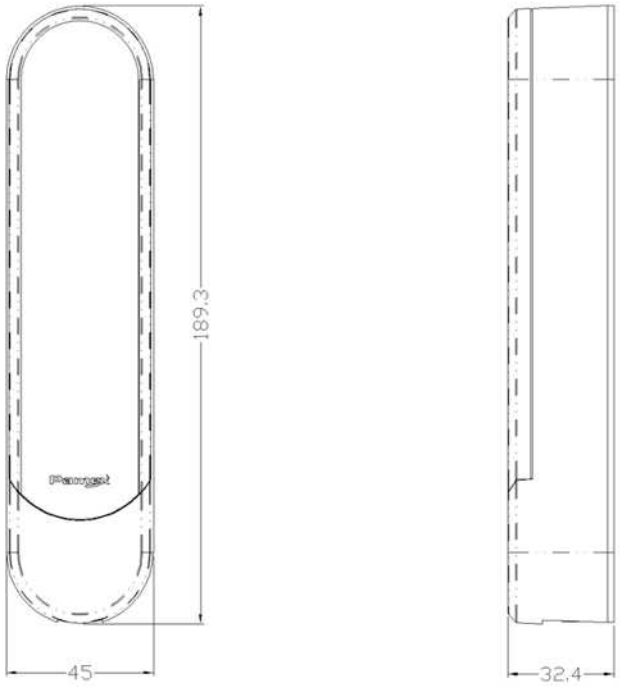


Figure 12: Kapture KA-WR1N Front

Back

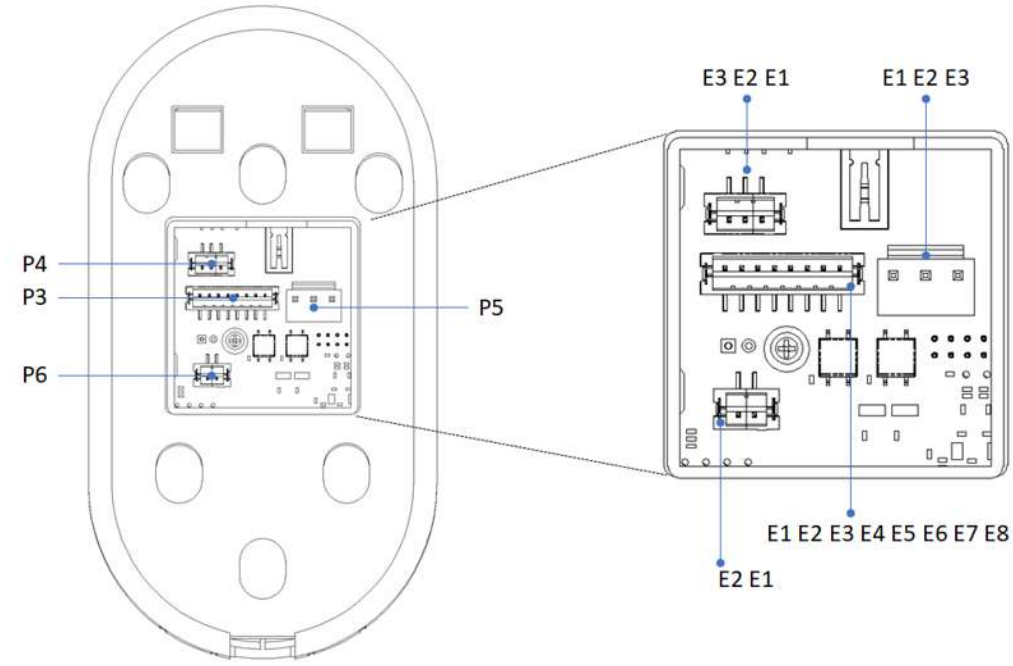


Figure 13: Kapture KA-WR1S Back

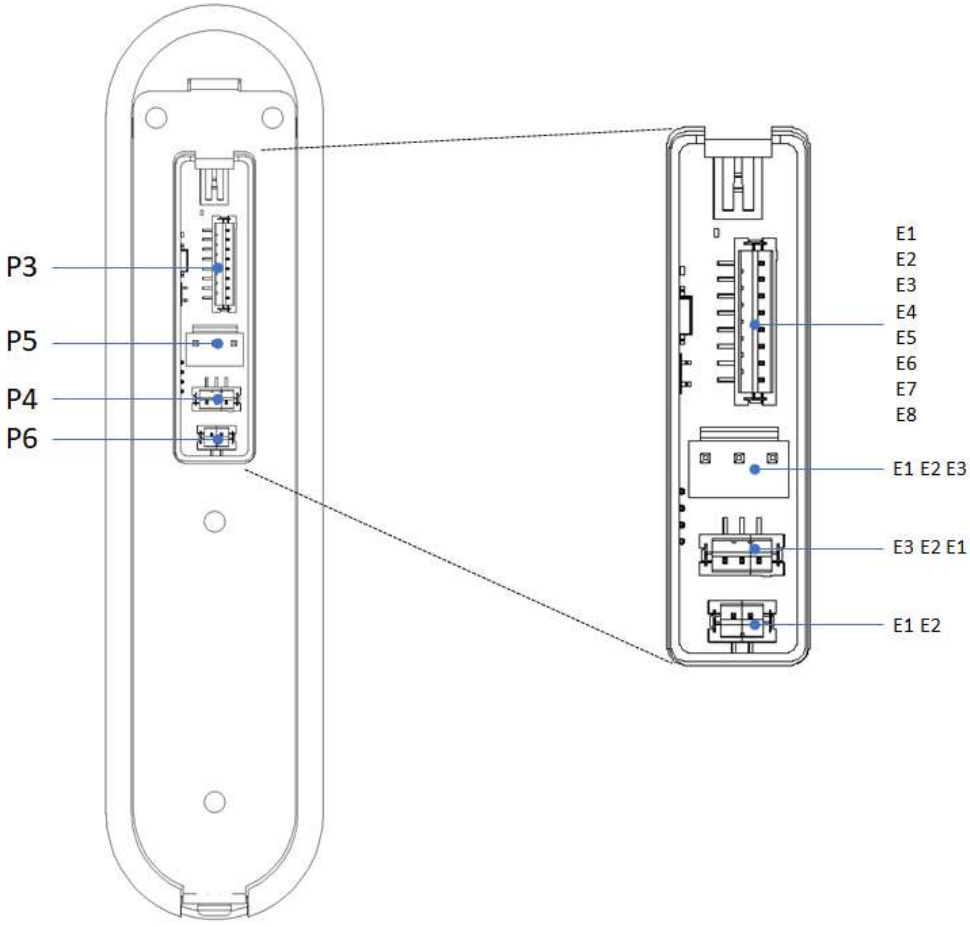
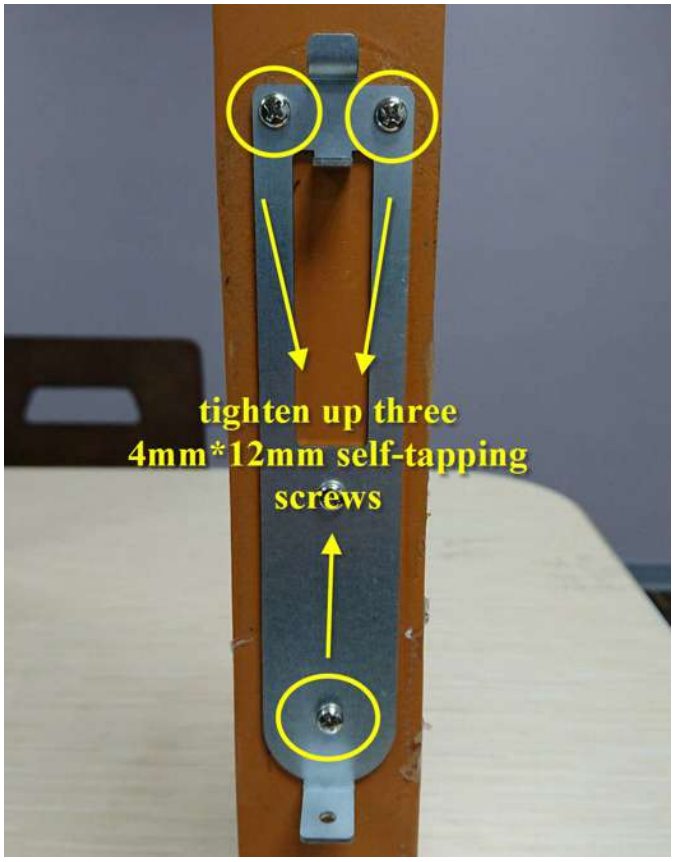


Figure 14: Kapture KA-WR1N Back

Installation Guide

Kapture KA-WR1N

1) Screw the back plate to lock base with three 4mm*12mm self-tapping screws. See picture below.



2) Place the waterproof rubber on the back of the Wall Reader. See picture 1&2.

3) Before fastened Wall Reader, please ensure the waterproof rubber is installed.
Align the hole with the hook on the top of back plate. See picture 3,
Push down the Wall Reader. See picture 4.
Tighten up the Wall Reader with a 4mm*8mm screw. See picture 5.

Kapture KA-WR1S

1) Screw the back plate to switch box with two 4mm*12mm self-tapping screws. See picture 1&2.

2) Place the waterproof rubber on the back of the Wall Reader. See picture 3&4.

3) Before fastened Wall Reader, please ensure the waterproof rubber is installed. Align with the hook on the top of back plate. See picture 5.

Pull down the Wall Reader. See picture 6.
Tiighten up the Wall Reader with one 4mm*8mm screw. See picture 7.

Deadbolt - KA-D7P1A (Auto)

Features

- Easy installation with a Philips screwdriver
- Hidden(tamperproof) emergency mechanical key override & Tamperproof Detector
- Battery operated with over 1 year battery life
- Low battery warning
- ANSI/BHMA Grade 2 Certified
- IP55 Weatherproof suitable for external use
- Wi-Fi enabled access controller connected directly to existing routers
- Lock and unlock lockset remotely (Wi-Fi)
- MIFARE DESFire EV1/EV2 credential required (sold separately)
- High-Security authentication with 128-bit AES Encryption
- 6000+ cards/fobs and 10,000 activity logs memory capacity
- Alert email notification
- Access time control for both areas and users
- Passage mode – temporarily allow unrestricted access
- Privacy mode – temporarily disable all user access
- Lockout functionality
- Dual LED Status Indicators for Visual communications
    - Bi-color LED Status Indicator(red, green)
- UL Certification, FCC Certification (US)
- Remote configurable using MF-Admin server

Hardware Specifications

Electrical Specification

- Wi-Fi enabled lock connected directly to existing routers
- Frequency – 13.56 MHz RFID
- Read Range – Proximity: 1.5cm (ISO14443A Card); MIFARE DESFire EV1/EV2
- Power Supply – 4 AA batteries (up to 1 years)
- Voltage: 6V
- Dual LED Status Indicators for Visual communications
- Bi-color LED Status Indicator(red, green)
- Communication standards – 2.4 GHz Wi-Fi (IEEE 802.11b/g/n), WPA2, Transport Layer Security (TLS) version 1.0
- Communication range – up to 100 ft.
- Data rate – 24M bps via Wi-Fi

Mechanical Specification

- 3-Hour UL Fire-Rated, Grade 2 ANSI/BHMA certified

- Dimension (W*H*D) :
    - Exterior lock body: 70 x 160 x 28 mm
    - Interior lock body: 75 x 204 x 30 mm
- Square Corner Faceplate : 1-1/8” x 2-3/4”
- Cylinder : 5-pin KW keyway standard, other options available
- Door Thickness : 1-3/8"(35 mm) to 2"(51 mm)
- Bore: 2-1/8"(54 mm) or 1-1/2"(38 mm)
- Backset: Adjustable backset, fits 2-3/8"(60 mm) and 2-3/4"(70 mm) backsets
- Finish : Two-tone Black and Silver

Operating Temperature

- Exterior Side: -35℃ to 66℃
- Interior Side: -10℃ to 50℃
- 5% to 95% relative humidity (non-condensing)

Product Photo

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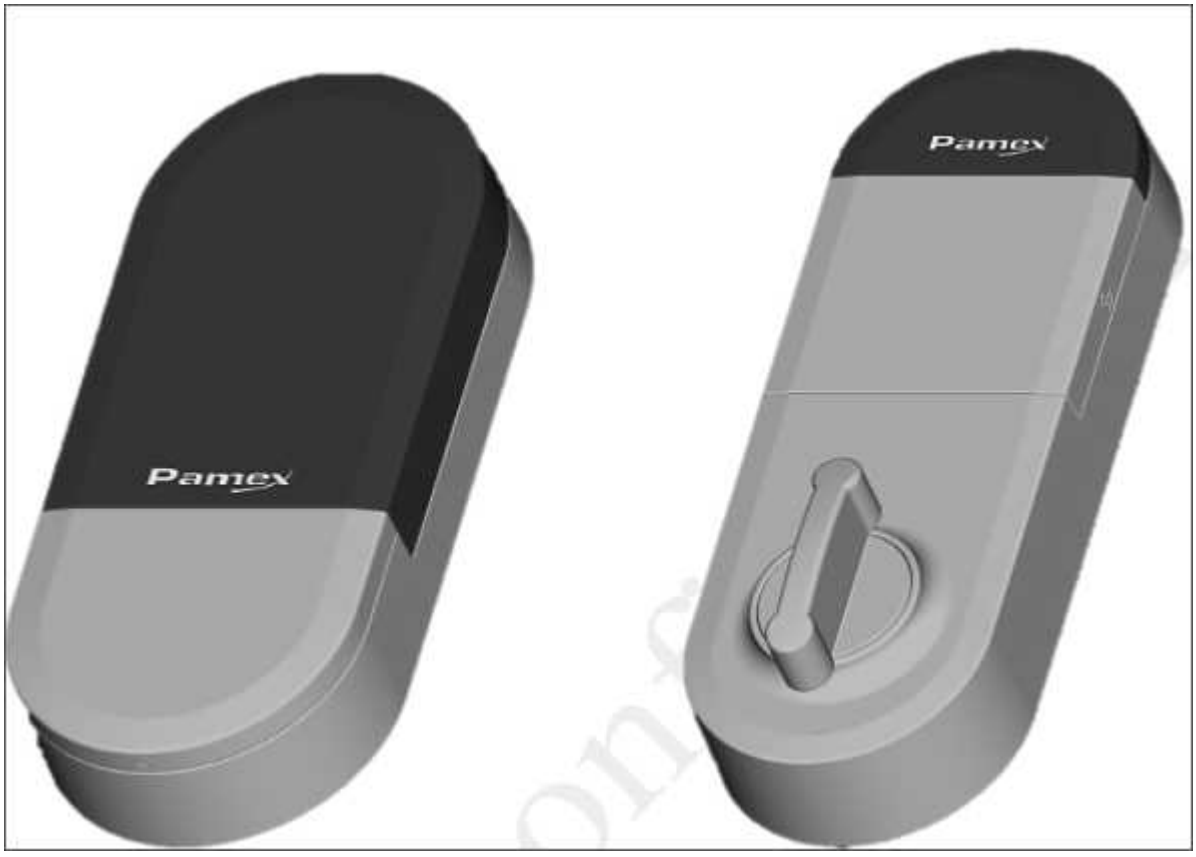

Dimensions (内外機)

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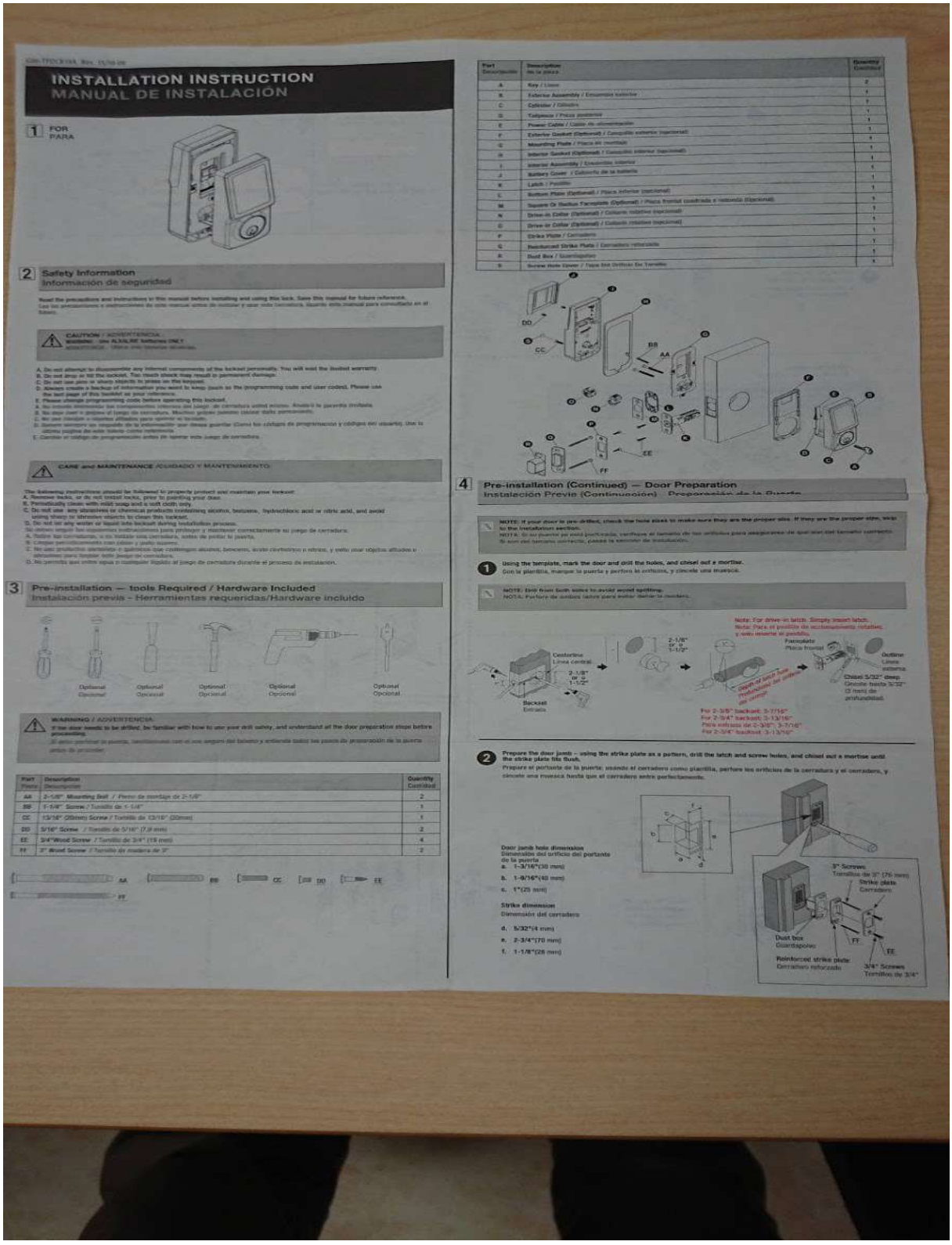
Installation Guide



INSTALLATION INSTRUCTION
MANUAL DE INSTALACIÓN

1 FOR
PARA

2 Safety Information
Información de seguridad

CAUTION / ADVERTENCIA:

CARE and MAINTENANCE / CUIDADO Y MANTENIMIENTO:

3 Pre-installation — tools Required / Hardware Included
Instalación previa – Herramientas requeridas/Hardware incluido

Optional / Opcional

WARNING / ADVERTENCIA:

Part / Parte	Description / Descripción	Quantity / Cantidad
AA	2-1/8" Mounting Bolt / Perno de montaje de 2-1/8"	2
BB	1-1/4" Screw / Tornillo de 1-1/4"	1
CC	13/16" (20mm) Screw / Tornillo de 13/16" (20mm)	1
DD	5/16" Screw / Tornillo de 5/16" (7,9 mm)	2
EE	3/4" Wood Screw / Tornillo de 3/4" (19 mm)	4
FF	3" Wood Screw / Tornillo de madera de 3"	2

Part / Descripción de la pieza	Description / Descripción de la pieza	Quantity / Cantidad
A	Key / Llave	2
B	Exterior Assembly / Ensamble exterior	1
C	Cylinder / Cilindro	1
D	Tailpiece / Pieza posterior	1
E	Power Cable / Cable de alimentación	1
F	Exterior Gasket (Optional) / Empaque exterior (opcional)	1
G	Mounting Plate / Placa de montaje	1
H	Interior Gasket (Optional) / Empaque interior (opcional)	1
I	Interior Assembly / Ensamble interior	1
J	Battery Cover / Cubierta de la batería	1
K	Latch / Pestillo	1
L	Bottom Plate (Optional) / Placa inferior (opcional)	1
M	Square Or Radius Faceplate (Optional) / Placa frontal cuadrada o redonda (opcional)	1
N	Drive-in Collar (Optional) / Collarín rotativo (opcional)	1
O	Drive-in Collar (Optional) / Collarín rotativo (opcional)	1
P	Strike Plate / Cerradero	1
Q	Reinforced Strike Plate / Cerradero reforzado	1
R	Dust Box / Guardapolvo	1
S	Screw Hole Cover / Tapa del Orificio De Tornillo	4

4 Pre-installation (Continued) — Door Preparation
Instalación Previa (Continuación) Preparación de la Puerta

NOTE: If your door is pre-drilled, check the hole sizes to make sure they are the proper size. If they are the proper size, skip to the Installation section.
NOTA: Si su puerta ya está preTaladrada, verifique el tamaño de los orificios para asegurarse de que son del tamaño correcto. Si son del tamaño correcto, pase a la sección de Instalación.

1 Using the template, mark the door and drill the holes, and chisel out a mortise.
Con la plantilla, marque la puerta y perfore los orificios, y cincele una muesca.

NOTE: Drill from both sides to avoid wood splitting.
NOTA: Perforar de ambos lados para evitar dañar la madera.

Centerline / Línea central
2-1/8" or / o 1-1/2"
Backset / Entrada
Faceplate / Placa frontal
Outline / Línea externa
Chisel 5/32" deep. Cincele hasta 5/32" (3 mm) de profundidad.
Depth of latch bolt mortise/ Profundidad del orificio del pestillo
For 2-3/8" backset: 3-7/16"
For 2-3/4" backset: 3-13/16"
Para retroceso de 2-3/8": 3-7/16"
For 2-3/4" backset: 3-13/16"

2 Prepare the door jamb – using the strike plate as a pattern, drill the latch and screw holes, and chisel out a mortise until the strike plate fits flush.
Prepare el portuerte de la puerta: usando el cerradero como plantilla, perfore los orificios de la cerradura y el cerradero, y cincele una muesca hasta que el cerradero entre perfectamente.

Door jamb hole dimension
Dimensión del orificio del portante de la puerta
a. 1-3/16"(30 mm)
b. 1-9/16"(40 mm)
c. 1"(25 mm)

Strike dimension
Dimensión del cerradero
d. 5/32"(4 mm)
e. 2-3/4"(70 mm)
f. 1-1/8"(28 mm)

3" Screws / Tornillos de 3" (76 mm)
Strike plate / Cerradero
Dust box / Guardapolvo
Reinforced strike plate / Cerradero reforzado
3/4" Screws / Tornillos de 3/4"

Deadbolt - KA-D7P1S (Semi-Auto)

Features

- Easy installation with a Philips screwdriver
- Hidden(tamperproof) emergency mechanical key override & Tamperproof Detector
- Battery operated with over 1 year battery life
- Low battery warning
- **Door handles reversible by a ring-shaped switch**
- ANSI/BHMA Grade 2 Certified
- IP55 Weatherproof suitable for external use
- Wi-Fi enabled access controller connected directly to existing routers
- Lock and unlock lockset remotely (Wi-Fi)
- MIFARE DESFire EV1/EV2 credential required (sold separately)
- High-Security authentication with 128-bit AES Encryption
- 6000+ cards/fobs and 10,000 activity logs memory capacity
- Alert email notification
- Access time control for both areas and users
- Passage mode – temporarily allow unrestricted access
- Privacy mode – temporarily disable all user access
- Lockout functionality
- Dual LED Status Indicators for Visual communications
    - Bi-color LED Status Indicator(red, green)
- UL Certification, FCC Certification (US)
- Remote configurable using MF-Admin server

Hardware Specifications

Electrical Specification

- Wi-Fi enabled lock connected directly to existing routers
- Frequency – 13.56 MHz RFID
- Read Range – Proximity: 2 cm (ISO14443A Card); MIFARE DESFire EV1/EV2
- Power Supply – 4 AA batteries (up to 1 years)
- Voltage: 6V
- Dual LED Status Indicators for Visual communications
- Bi-color LED Status Indicator(red, green)
- Communication standards – 2.4 GHz Wi-Fi (IEEE 802.11b/g/n), WPA2, Transport Layer Security (TLS) version 1.0
- Communication range – up to 100 ft.
- Data rate – 24M bps via Wi-Fi

Mechanical Specification

- 3-Hour UL Fire-Rated, Grade 2 ANSI/BHMA certified
- Dimension (W*H*D) :
    - Exterior lock body: 70 x 160 x 28 mm
    - Interior lock body: 75 x 204 x 30 mm
- Square Corner Faceplate : 1-1/8”x 2-1/4”
- Cylinder : 5-pin KW keyway standard, other options available
- Door Thickness : 1-3/8"(35 mm) to 2"(51 mm)
- Bore: 2-1/8"(54 mm) or 1-1/2"(38 mm)
- Backset: Adjustable backset, fits 2-3/8"(60 mm) and 2-3/4"(70 mm) backsets
- Finish : Two-tone Black and Silver

Operating Temperature

- Exterior Side: -35℃ to 66℃
- Interior Side: -10℃ to 50℃
- 5% to 95% relative humidity (non-condensing)

Product Photo

<< Mark >>

Dimensions (内外機)

<<Mark>>

Installation Guide

<<D1 Installation Guide>>

Leverset - KA-LNP5C

Features

- Easy installation with a Philips screwdriver
- Lever handing is field reversible in seconds; no tools required
- Hidden(tamperproof) emergency mechanical key override & Tamperproof Detector
- Battery operated(with over 1 year battery life) or **Mains supply with 6V 2A power adapter selected by a DIP switch**
- Low battery warning
- ANSI/BHMA Grade 2 Certified
- IP55 Weatherproof suitable for external use
- Advanced tamper detection
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- Dual LED Status Indicators for Visual communications
- Bi-color LED Status Indicator(red, green)
- Communication standards – 2.4 GHz Wi-Fi (IEEE 802.11b/g/n), WPA2, Transport Layer Security (TLS) version 1.0

- Communication range – up to 100 ft.
- Data rate – 24M bps via Wi-Fi

Mechanical Specification

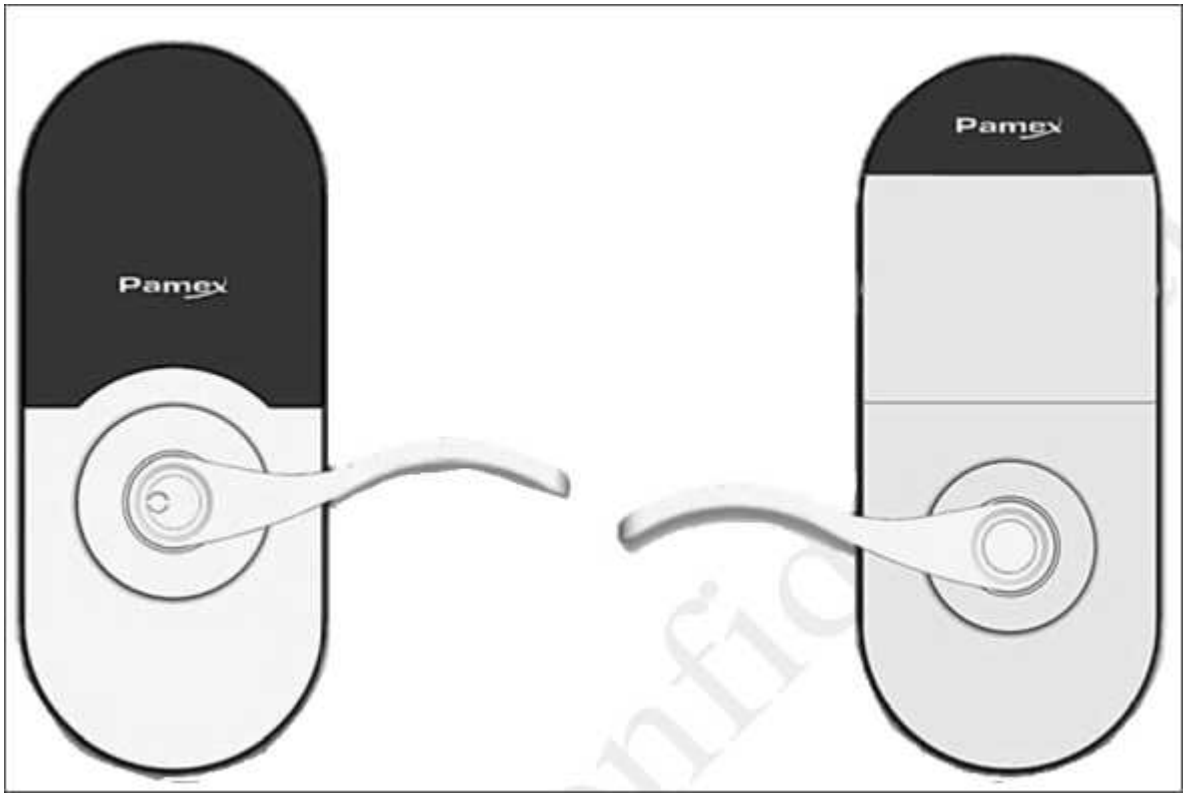
- 3-Hour UL Fire-Rated, Grade 2 ANSI/BHMA certified
- Dimension (W*H*D) :
    - Exterior lock body: 70 x 160 x 28 mm
    - Interior lock body: 75 x 204 x 30 mm
- Square Corner Lever T-strike : 1-1/8” x 2-3/4”
- Cylinder : 5-pin KW keyway standard, other options available
- Door Thickness : 1-3/8"(35 mm) to 2"(51 mm)
- Bore: 2-1/8"(54 mm) or 1-1/2"(38 mm)
- Backset: Adjustable backset, fits 2-3/8"(60 mm) and 2-3/4"(70 mm) backsets
- Finish : Two-tone Black and Silver

Operating Temperature

- Exterior Side: -35℃ to 66℃
- Interior Side: -10℃ to 50℃
- 5% to 95% relative humidity (non-condensing)

Product Photo

<< Mark >>



Dimensions (内外機)

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Read the precautions and instructions in this manual before installing and using this lock. Save this manual for future reference.
Lea las precauciones e instrucciones de este manual antes de instalar y usar este cerradura. Guarde este manual para consultarlo en el futuro.

CAUTION / ADVERTENCIA :
WARNING - Use ALKELINE batteries ONLY
ADVERTENCIA - Utilice solo baterías alcalinas

A. Do not attempt to disassemble any internal components of the lockset personally. You will void the limited warranty.
B. Do not drop or hit the lockset. Too much shock may result in permanent damage.
C. Do not use pins or sharp objects to press on the keypad.
D. Always create a backup of information you want to keep (such as the programming code and user codes). Please use the last page of this booklet as your reference.
E. Please change programming code before operating this lockset.
A. No intente desmontar los componentes internos del juego de cerradura usted mismo. Anulará la garantía limitada.
B. No deje caer o golpee el juego de cerradura. Muchos golpes pueden causar daño permanente.
C. No use clavijas u objetos afilados para oprimir el teclado.
D. Genere siempre un respaldo de la información que desea guardar (Como los códigos de programación y códigos del usuario). Use la última página de este folleto como referencia.
E. Cambie el código de programación antes de operar este juego de cerradura.

CARE and MAINTENANCE /CUIDADO Y MANTENIMIENTO:

The following instructions should be followed to properly protect and maintain your lockset:
A. Remove locks, or do not install locks, prior to painting your door.
B. Periodically clean with mild soap and a soft cloth only.
C. Do not use any abrasives or chemical products containing alcohol, benzene, hydrochloric acid or nitric acid, and avoid using sharp or abrasive objects to clean this lockset.
D. Do not let any water or liquid into lockset during installation process.
Se deben seguir las siguientes instrucciones para proteger y mantener correctamente su juego de cerradura:
A. Retire las cerraduras, o no instale una cerradura, antes de pintar la puerta.
B. Limpie periódicamente con jabón y paño suaves.
C. No use productos abrasivos o químicos que contengan alcohol, benceno, ácido clorhídrico o nítrico, y evite usar objetos afilados o abrasivos para limpiar este juego de cerradura.
D. No permita que entre agua o cualquier líquido al juego de cerradura durante el proceso de instalación.

3 Pre-installation — tools Required / Hardware Included
Instalacion previa - Herramientas requeridas/Hardware incluido

Optional / Opcional

WARNING / ADVERTENCIA:
If the door needs to be drilled, be familiar with how to use your drill safely, and understand all the door preparation steps before proceeding.
Si debe perforar la puerta, familiarícese con el uso seguro del taladro y entienda todos los pasos de preparación de la puerta antes de proceder.

Part / Pieza	Description / Descripción	Quantity / Cantidad
AA	5/16" Screw / Tornillo de 5/16" (7.9 mm)	1
BB	13/16" (20mm) Screw / Tornillo de 13/16" (20mm)	3
CC	1-1/4" Screw / Tornillo de 1-1/4"	1
DD	2-1/8" Mounting Bolt / Perno de montaje de 2-1/8"	2
EE	1-1/2" Screw / Tornillo de 1-1/2"	2
FF	1-1/16" Screw / Tornillo de 1-1/16"	2
GG	3/4"Wood Screw / Tornillo de 3/4" (19 mm)	8
HH	3" Wood Screw / Tornillo de madera de 3"	2

Part / Pieza	Description / Descripción	Quantity / Cantidad
A	Interior Lever / Manija interior	1
B	Battery Cover / Cubierta de la batería	1
C	Interior Assembly / Ensamble interior	1
D	Mounting Plate / Placa de montaje	1
E	Square Or Radius Faceplate (Optional) / Placa frontal cuadrado o redondo (Opcional)	1
F	Latch / Pestillo	1
G	Exterior Gasket (Optional) / Casquillo exterior (opcional)	1
H	Exterior Assembly / Ensamble exterior	1
I	Key / Llave	1
J	Screw Hole Cover / Tapa Del Orificio De Tornillo	1
K	Latch / Pestillo	1
L	Interior rose plate / Placa de la roseta interior	1
M	Exterior Lever / Manija exterior	1
N	Deadbolt Strike / Placa hembra de cerrojo de pasador	1
O	Reinforcement Plate / Placa del refuerzo	1
P	Deadbolt Plastic Strike Box / Cerrojo de pasador Caja Contra De Plastico	1
Q	Latch Strike / Placa hembra del pestillo	1
R	Lever Plastic strike box / Manija Caja contra de plastico	1
S	Drive-in Collar (Optional) / Collarin rotativo (opcional)	1
T	Drive-in Collar (Optional) / Collarin rotativo (opcional)	1
U	Bottom Plate (Optional) / Placa inferior (opcional)	1

4 Pre-Installation (continued) — Door Preparation
Instalación Previa (Continuación) - Preparación de la Puerta

NOTE: If your door already has holes, skip to installation.
NOTA: Si su puerta ya tiene orificios, pase a la instalación.

1 USING THE TEMPLATE, MARK THE DOOR AND DRILL THE HOLES, AND CHISEL OUT A MORTISE.
CON LA PLANTILLA, MARQUE LA PUERTA Y PERFORE LOS ORIFICIOS, Y CINCELE LAS MUESCAS.

NOTE: Drill from both sides to avoid wood splitting.
NOTA: Perforar de ambos lados para evitar rajar la madera.

2 PREPARE THE DOOR JAMB – USING THE STRIKE PLATE AS A PATTERN, DRILL THE LATCH AND SCREW HOLES, AND CHISEL OUT A MORTISE UNTIL THE STRIKE PLATE FITS FLUSH
PREPARE EL PORTANTE DE LA PUERTA: USANDO EL CERRADERO COMO PLANTILLA, PERFORE LOS ORIFICIOS DE LA CERRADURA Y EL CERRADERO, Y CINCELE UNA MUESCA HASTA QUE EL CERRADERO ENTRE PERFECTAMENTE.

Door jamb hole dimension
Dimensión del orificio del portante de la puerta
a. 1-3/16"(30 mm)
b. 1-9/16"(40 mm)
c. 1"(25 mm)

Strike dimension
Dimension del cerradero
d. 5/32"(4 mm)
e. 2-3/4"(70 mm)
f. 1-1/8"(28 mm)

Door jamb hole dimension
Dimensión del orificio del portante de la puerta
g. 1/2"(13 mm)
h. 1-1/4 "(32 mm)
i. 1"(24 mm)

Strike dimension
Dimension del cerradero
j. 1/8"(3 mm)
k. 2-3/4"(70 mm)

Interconnected - KA-INP35A

Features

- Easy installation with a Philips screwdriver
- Hidden(tamperproof) emergency mechanical key override & Tamperproof Detector
- Battery operated with over 1 year battery life
- Low battery warning
- ANSI/BHMA Grade 2 Certified
- IP55 Weatherproof suitable for external use
- Wi-Fi enabled access controller connected directly to existing routers
- Lock and unlock lockset remotely (Wi-Fi)
- MIFARE DESFire EV1/EV2 credential required (sold separately)
- High-Security authentication with 128-bit AES Encryption
- 6000+ cards/fobs and 10,000 activity logs memory capacity
- Alert email notification
- Access time control for both areas and users
- Passage mode – temporarily allow unrestricted access
- Privacy mode – temporarily disable all user access
- Lockout functionality
- Dual LED Status Indicators for Visual communications
    - Bi-color LED Status Indicator(red, green)
- UL Certification, FCC Certification (US)
- Remote configurable using MF-Admin server

Hardware Specifications

Electrical Specification

- Wi-Fi enabled lock connected directly to existing routers
- Frequency – 13.56 MHz RFID
- Read Range – Proximity: 1.5cm (ISO14443A Card); MIFARE DESFire EV1/EV2
- Power Supply – 4 AA batteries (up to 1 years)
- Voltage: 6V
- Dual LED Status Indicators for Visual communications
- Bi-color LED Status Indicator(red, green)
- Communication standards – 2.4 GHz Wi-Fi (IEEE 802.11b/g/n), WPA2, Transport Layer Security (TLS) version 1.0
- Communication range – up to 100 ft.
- Data rate – 24M bps via Wi-Fi

Mechanical Specification

- 3-Hour UL Fire-Rated, Grade 2 ANSI/BHMA certified

- Dimension (W*H*D) :
    - Exterior lock body: 70 x 160 x 28 mm
    - Interior lock body: 75 x 204 x 30 mm
- Square Corner Faceplate : 1-1/8” x 2-3/4”
- Cylinder : 5-pin KW keyway standard, other options available
- Door Thickness : 1-3/8"(35 mm) to 2"(51 mm)
- Bore: 2-1/8"(54 mm) or 1-1/2"(38 mm)
- Backset: Adjustable backset, fits 2-3/8"(60 mm) and 2-3/4"(70 mm) backsets
- Finish : Two-tone Black and Silver

Operating Temperature

- Exterior Side: -35℃ to 66℃
- Interior Side: -10℃ to 50℃
- 5% to 95% relative humidity (non-condensing)

Product Photo

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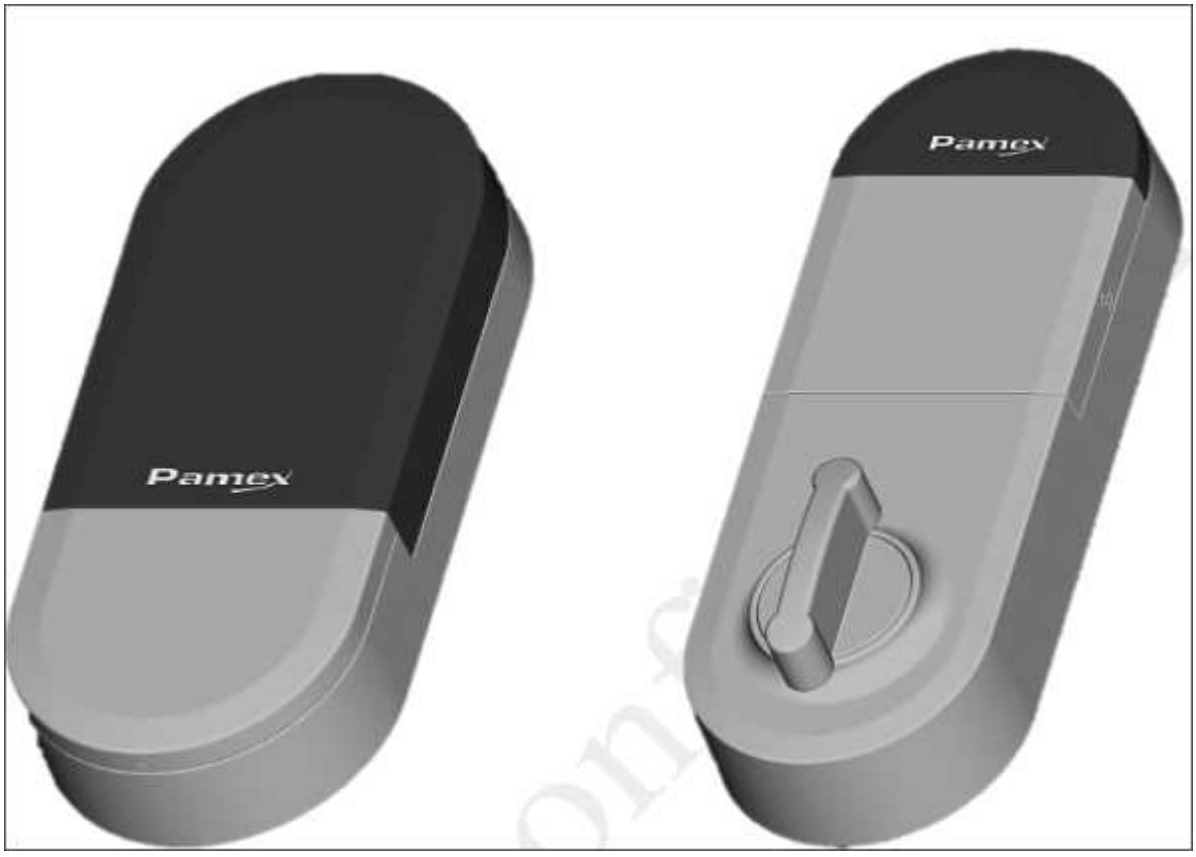

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CARE and MAINTENANCE /CUIDADO Y MANTENIMIENTO:

3 Pre-installation — tools Required / Hardware Included
Instalación previa - Herramientas requeridas/Hardware incluido

Optional / Opcional

WARNING / ADVERTENCIA:

Part / Pieza	Description / Descripción	Quantity / Cantidad
AA	5/16" Screw / Tornillo de 5/16" (7.9 mm)	1
BB	13/16" (20mm) Screw / Tornillo de 13/16" (20mm)	3
CC	1-1/4" Screw / Tornillo de 1-1/4"	1
DD	2-1/8" Mounting Bolt / Perno de montaje de 2-1/8"	2
EE	1-1/2" Screw / Tornillo de 1-1/2"	2
FF	1-1/16" Screw / Tornillo de 1-1/16"	2
GG	3/4"Wood Screw / Tornillo de 3/4" (19 mm)	8
HH	3" Wood Screw / Tornillo de madera de 3"	2

Part / Pieza	Description / Descripción	Quantity / Cantidad
A	Interior Lever / Manija interior	1
B	Battery Cover / Cubierta de la batería	1
C	Interior Assembly / Ensamble interior	1
D	Mounting Plate / Placa de montaje	1
E	Square Or Radius Faceplate (Optional) / Placa frontal cuadrada o redonda (Opcional)	1
F	Latch / Pestillo	1
G	Exterior Gasket (Optional) / Contacto exterior (opcional)	1
H	Exterior Assembly / Ensamble exterior	1
I	Key / Llave	1
J	Screw Hole Cover / Tapa Del Orificio De Tornillo	1
K	Latch / Pestillo	1
L	Interior rose plate / Placa de la roseta interior	1
M	Exterior Lever / Manija exterior	1
N	Deadbolt Strike / Placa frontal de cerrojo de pasador	1
O	Reinforcement Plate / Placa del refuerzo	1
P	Deadbolt Plastic Strike Box / Cerrojo de pasador Caja Contra De Plástico	1
Q	Latch Strike / Placa frontal del pestillo	1
R	Lever Plastic strike box / Manija Caja contra de plástico	1
S	Drive-in Collar (Optional) / Collarín rotativo (opcional)	1
T	Drive-in Collar (Optional) / Collarín rotativo (opcional)	1
U	Bottom Plate (Optional) / Placa inferior (opcional)	1

4 Pre-Installation (continued) — Door Preparation
Instalación Previa (Continuación) - Preparación de la Puerta

1 USING THE TEMPLATE, MARK THE DOOR AND DRILL THE HOLES, AND CHISEL OUT A MORTISE.
CON LA PLANTILLA, MARQUE LA PUERTA Y PERFORE LOS ORIFICIOS, Y CINCELE LAS MUESCAS.

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Door jamb hole dimension
Dimensión del orificio del portante de la puerta
a. 1-3/16"(30 mm)
b. 1-5/16"(40 mm)
c. 1"(25 mm)

Strike dimension
Dimensión del cerradero
d. 5/32"(4 mm)
e. 2-3/4"(70 mm)
f. 1-1/8"(29 mm)

Door jamb hole dimension
Dimensión del orificio del portante de la puerta
g. 1/2"(13 mm)
h. 1-1/4 "(32 mm)
i. 1"(24 mm)

Strike dimension
Dimensión del cerradero
j. 1/8"(3 mm)
k. 2-3/4"(70 mm)

Interconnected - KA-INP35S

Features

- Easy installation with a Philips screwdriver
- Hidden(tamperproof) emergency mechanical key override & Tamperproof Detector
- Battery operated with over 1 year battery life
- Low battery warning
- **Door handles reversible by a ring-shaped switch**
- ANSI/BHMA Grade 2 Certified
- IP55 Weatherproof suitable for external use
- Wi-Fi enabled access controller connected directly to existing routers
- Lock and unlock lockset remotely (Wi-Fi)
- MIFARE DESFire EV1/EV2 credential required (sold separately)
- High-Security authentication with 128-bit AES Encryption
- 6000+ cards/fobs and 10,000 activity logs memory capacity
- Alert email notification
- Access time control for both areas and users
- Passage mode – temporarily allow unrestricted access
- Privacy mode – temporarily disable all user access
- Lockout functionality
- Dual LED Status Indicators for Visual communications
    - Bi-color LED Status Indicator(red, green)
- UL Certification, FCC Certification (US)
- Remote configurable using MF-Admin server

Hardware Specifications

Electrical Specification

- Wi-Fi enabled lock connected directly to existing routers
- Frequency – 13.56 MHz RFID
- Read Range – Proximity: 2 cm (ISO14443A Card); MIFARE DESFire EV1/EV2
- Power Supply – 4 AA batteries (up to 1 years)
- Voltage: 6V
- Dual LED Status Indicators for Visual communications
- Bi-color LED Status Indicator(red, green)
- Communication standards – 2.4 GHz Wi-Fi (IEEE 802.11b/g/n), WPA2, Transport Layer Security (TLS) version 1.0
- Communication range – up to 100 ft.
- Data rate – 24M bps via Wi-Fi

Mechanical Specification

- 3-Hour UL Fire-Rated, Grade 2 ANSI/BHMA certified
- Dimension (W*H*D) :
    - Exterior lock body: 70 x 160 x 28 mm
    - Interior lock body: 75 x 204 x 30 mm
- Square Corner Faceplate : 1-1/8”x 2-1/4”
- Cylinder : 5-pin KW keyway standard, other options available
- Door Thickness : 1-3/8"(35 mm) to 2"(51 mm)
- Bore: 2-1/8"(54 mm) or 1-1/2"(38 mm)
- Backset: Adjustable backset, fits 2-3/8"(60 mm) and 2-3/4"(70 mm) backsets
- Finish : Two-tone Black and Silver

Operating Temperature

- Exterior Side: -35℃ to 66℃
- Interior Side: -10℃ to 50℃
- 5% to 95% relative humidity (non-condensing)

Product Photo

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WARNING / ADVERTENCIA:

Part Pieza	Description Descripción	Quantity Cantidad
AA	5/16" Screw / Tornillo de 5/16" (7.9 mm)	1
BB	13/16" (20mm) Screw / Tornillo de 13/16" (20mm)	3
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DD	2-1/8" Mounting Bolt / Perno de montaje de 2-1/8"	2
EE	1-1/2" Screw / Tornillo de 1-1/2"	2
FF	1-1/16" Screw / Tornillo de 1-1/16"	2
GG	3/4"Wood Screw / Tornillo de 3/4" (19 mm)	8
HH	3" Wood Screw / Tornillo de madera de 3"	2

Part Description	Description de la pieza	Quantity Cantidad
A	Interior Lever / Manija interior	1
B	Battery Cover / Cubierta de la batería	1
C	Interior Assembly / Ensamble interior	1
D	Mounting Plate / Placa de montaje	1
E	Square Or Radius Faceplate (Optional) / Placa frontal cuadrada o redonda (Opcional)	1
F	Latch / Pestillo	1
G	Exterior Gasket (Optional) / Empaque exterior (opcional)	1
H	Exterior Assembly / Ensamble exterior	1
I	Key / Llave	1
J	Screw Hole Cover / Tapa Del Orificio De Tornillo	1
K	Latch / Pestillo	1
L	Interior rose plate / Placa de la roseta interior	1
M	Exterior Lever / Manija exterior	1
N	Deadbolt Strike / Placa frontal de cerrojo de pasador	1
O	Reinforcement Plate / Placa del refuerzo	1
P	Deadbolt Plastic Strike Box / Cerrojo de pasador Caja Contra De Plástico	1
Q	Latch Strike / Placa frontal del pestillo	1
R	Lever Plastic strike box / Manija Caja contra de plástico	1
S	Drive-in Collar (Optional) / Collarín rotativo (opcional)	1
T	Drive-in Collar (Optional) / Collarín rotativo (opcional)	1
U	Bottom Plate (Optional) / Placa inferior (opcional)	1

4 Pre-Installation (continued) — Door Preparation
Instalación Previa (Continuación) - Preparación de la Puerta

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Door jamb hole dimension
Dimensión del orificio del portante de la puerta
a. 1-3/16"(30 mm)
b. 1-9/16"(40 mm)
c. 1"(25 mm)

Strike dimension
Dimensión del cerradero
d. 5/32"(4 mm)
e. 2-3/4"(70 mm)
f. 1-1/8"(28 mm)

Door jamb hole dimension
Dimensión del orificio del portante de la puerta
g. 1/2"(13 mm)
h. 1-1/4 "(32 mm)
i. 1"(24 mm)

Strike dimension
Dimensión del cerradero
j. 1/8"(3 mm)
k. 2-3/4"(70 mm)

Implementation Guide

Concepts

Depending on the progress of your project, there are three phases defined as :

- Construction Phase :
  All the door locks are installed but not programmed yet. MF-Admin server is not necessary in this phase.

- Lock Registration Phase :
  The door locks are ready to be programmed/registered to MF-Admin server.

- Go-Live Phase :
  All the locks are registered to MF-Admin Server. The system is ready to go.

Normally, as time goes by, a project will first in construction phase, then go to lock registration phase, then go-live phase. Each phase requires different tasks to be completed as described below.

In this guide, we will use the term Card or Key from time to time. Both term refers to the Mifare Card or Mifare key fob in issued by Pamex Kapture solution.

MP100 is the only device you use to issue card/key. Note that sometimes you have to re-place (take card off the reader then place the card on the reader again) the card on the reader to successfully complete your card operation. MF-Admin server will remind you to re-place the card as possible as it can. But remember to do so when you encounter MP100 reader error. It’s not a bug but the nature of Mifare Card operations.

Construction Phase

Make sure you have Crypto Cards and Construction Cards on hand. Crypto Card and Construction Card are shipped from Pamex together with physical locks.(See Appendix : Card Types)

In the scenario that wifi network and MF-Admin Server is not ready, and you have installed locks on the doors, you will need Construction Cards to unlock and open the door.

A lock can be unlocked using Construction Card only, after it has successfully scanned the Crypto Card but before programmed by programming card. No other cards can unlock the doors at this moment.

A Construction Card can unlock any locks which has been scanned by Crypto Card given by Pamex for your project only..

Depending on the lock model, lock will present below response when scanning Mifare Cards :

Lock Model	Crypto Card Success	Crypto Card Fail
Wall Reader	Green LED on 1 sec & long beep once	Red LED flash 3 times & beep 3 times
Deadbolt	Same as Wall Reader	Same as Wall Reader
Leverset	Same as Wall Reader	Same as Wall Reader
Interconnect	Same as Wall Reader	Same as Wall Reader

Construction Cards will remain valid until you scan Programming Card to a lock. Programming Cards can only be created using MF-Admin Server which means your wifi APs and network is ready and you are entering the next phase - Lock Registration Phase.

Lock Registration Phase

MF-Admin Server is required to complete all the tasks in this phase. Please follow the *MF-Admin Server & MP100 Installation Guide* to install MF-Admin Server.

MF-Admin Server is a web-based application with access controlled by login id and password. A newly installed MF-Admin Server has an admin user with login id = alzk, password = alzk. You may use this account to access all the functions in MF-Admin but we recommend you create another ids for all the users who need to access MF-Admin. Please check *MF-Admin Server User Guide* to see how to create users. The default admin user alzk can not be removed. Change the password of alzk immediately is recommended to secure the account. Please check *MF-Admin Server User Guide* to see how to change alzk password.

To better illustrate all the steps, we will use a SIMPLE example project to describe how to complete all the steps.

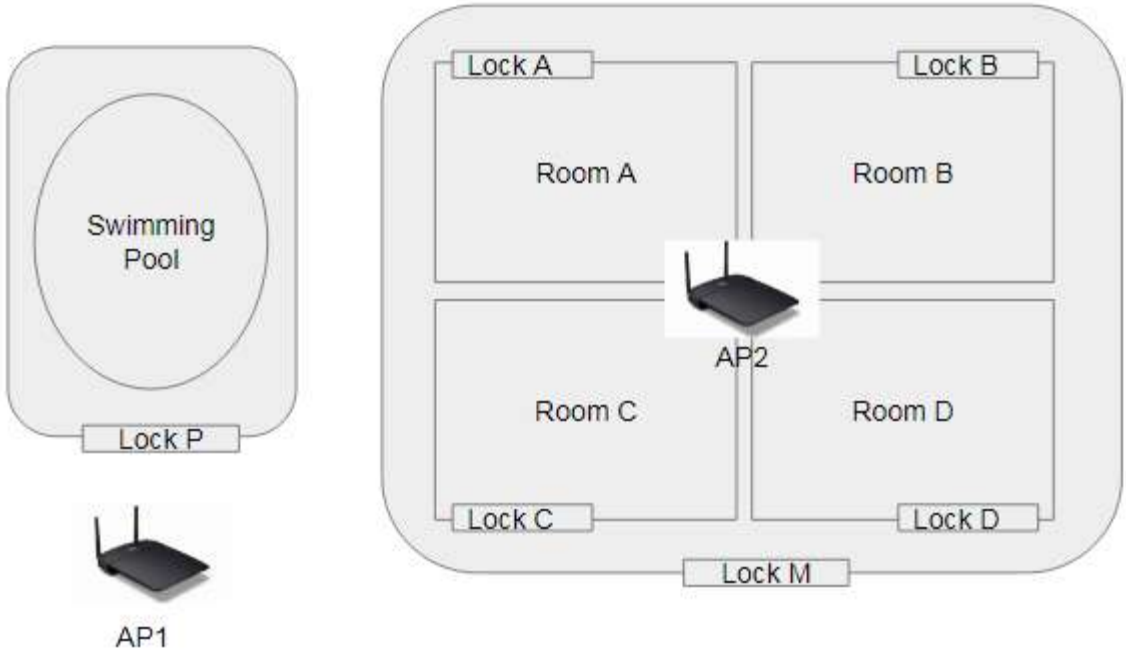


Figure 17: Project SIMPLE

In the SIMPLE project, there are 4 families (A, B, C, D) with one common entrance (M) and a shared swimming pool controlled by Lock P.

You will have to go through below steps to setup the MF-Admin server and register all the locks by using alzk account :

Plan your area tree

Area tree is the topology of your property. Before you can register your physical locks and link the locks to their corresponding lock place, you have to build the area tree in MF-Admin Server.

There are three types of areas : group, unit, public (See Appendix: Area Types for detail). An area may contain zero or several lock places which will linked to the physical lock one by one when registering.

For the SIMPLE project, you should prepare a table as below :

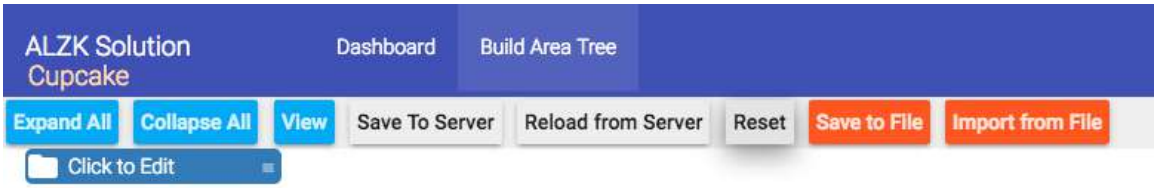
Root Area (Group area) (No lockplace)		
	Public Area P Lockplace P	
	Group Area M Lockplace M	
		Unit Area A Lockplace A
		Unit Area B Lockplace B
		Unit Area C Lockplace C
		Unit Area D Lockplace D

Notice that you will have exactly the same number of lockplaces as your physical number of locks.

Build the area tree using MF-Admin Server

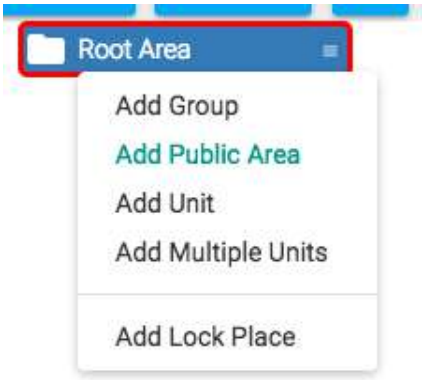
Navigate to build area tree page. **Property Management** => **Build Property**

For a brand new property, you will see only one node at beginning.



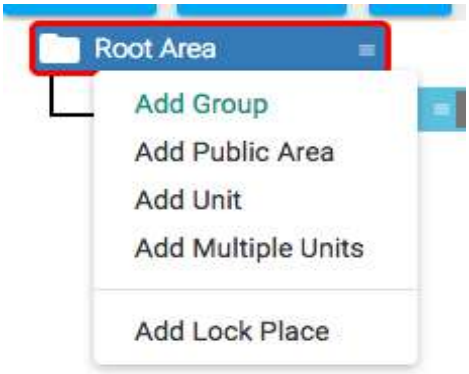
Click and edit root area name.

Click edit button on Root Area and select Add Public Area.

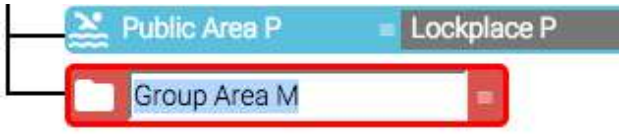


Click the name text to edit public area name and lockplace name.

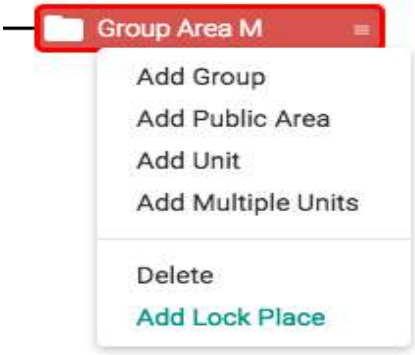
Click menu button on Root Area and select Add Group.



Click name text to edit group name.

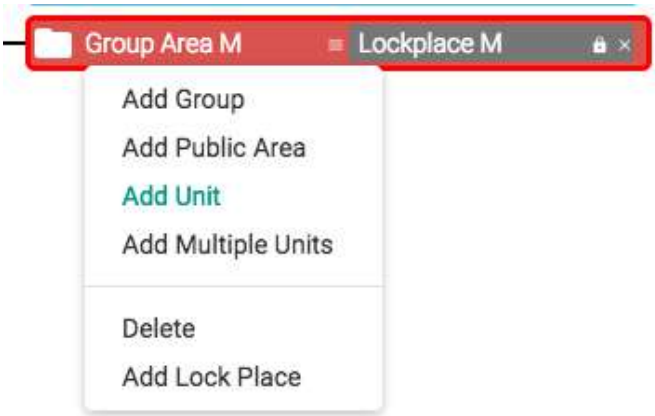


Click menu button on Group Area M and select “Add Lock Place”.

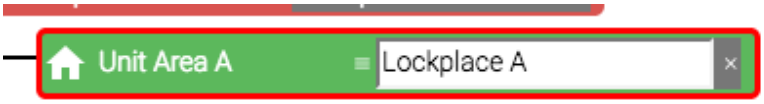


Edit lockplace name.

Click menu button on Group Area M and select “Add Unit”.

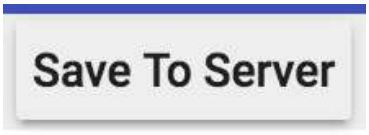


Click name text to edit unit name and lockplace name.



Keep adding unit from B to D

Click Save To Server to save the area tree.



Note that there are many ways to build an area tree as above. You may find other techniques in *MF-Admin Server User Manual.* If you make any mistakes during building the tree, feel free to click “Reload from server” or “Reset” to return to the initial state.

Plan your programming cards

The area tree is now ready to be linked to physical locks. Pamex Kapture locks support WPA2 encryption to connect to the Wifi AP. When a lock is scanned by a programming card, the preferred Wifi AP SSIDs will be loaded into the lock from programming card. A programming card may save 1 ~ 10 SSIDs.

Normally, you only have to scan one time for a lock during lifetime. The reasons to re-scan programming card will be :

- MF-Admin server ip is changed after go-live phase : This should be a rarely case and usually can be avoid. But if for whatever reason, the MF-Admin Server ip has to be changed, then you have to make new programming cards and all the locks have to be programmed again.

- Some Wifi AP SSID changed : For those locks in the range of changed wifi APs, you have to scan them with new programming card which has the new SSID in it.

- Lock has been reset to factory default.

When any of the above cases happened, we recommend you to contact with the reseller for help.

In SIMPLE project, we assume that you have two Wifi APs with SSID = AP1 and SSID = AP2. In real world, depending on the size of your project. you may have tens to hundreds of Wifi APs. Therefore, prepare below table is recommended :

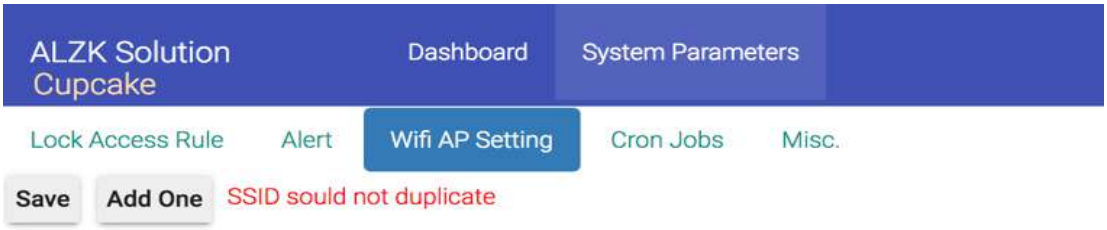
Wifi AP SSID	**WPA2 Key (32 characters)**	**Rooms in Range**	**Programming Card**
AP1	12345678	Unit A	Card 1
		Unit B	Card 1
		Unit C	Card 1
		Unit D	Card 1
AP2	abcdefg	Public Area P	Card 1

For SIMPLE project, AP1 and AP2 can be saved into one programming card. Programming card can be created using MF-Admin Server and you may create several cards with the same settings in order to programm locks in parallel by several workers. In the case that several workers are programming locks in parallel, please label the UID of the card (UID can be found on MF-Admin page when you create the programming card) on the programming card with a sticker or marker. When your lock is scanned, you will be able to tell which lock is yours by using UID. See the detail in registering locks.

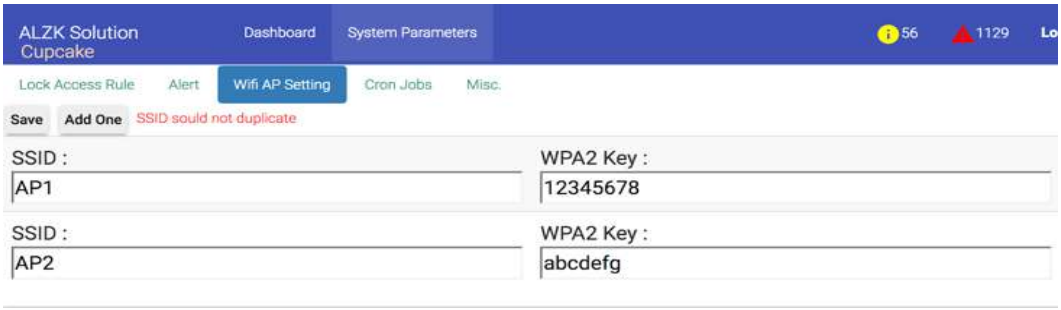
Setup Wifi AP and Create Programming Cards

Navigate to system parameters page. **System Management** => **System Parameters**

Select **Wifi AP Setting**

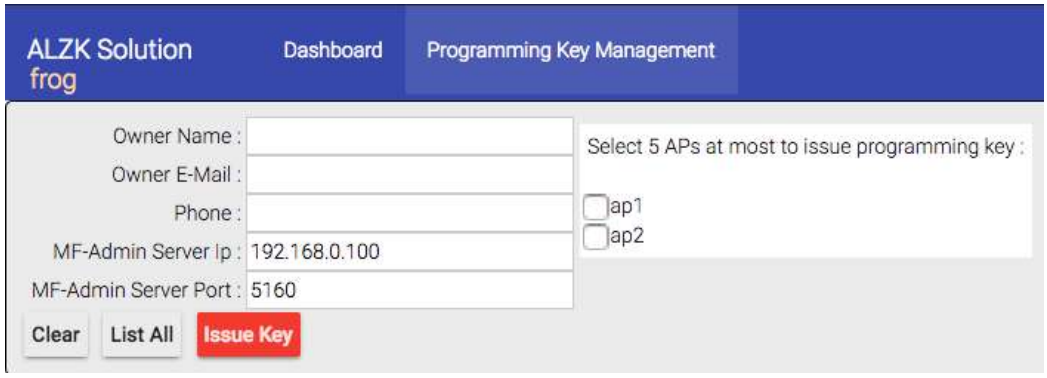


Click **Add One** to add wifi ap and click Save to save wifi ap.

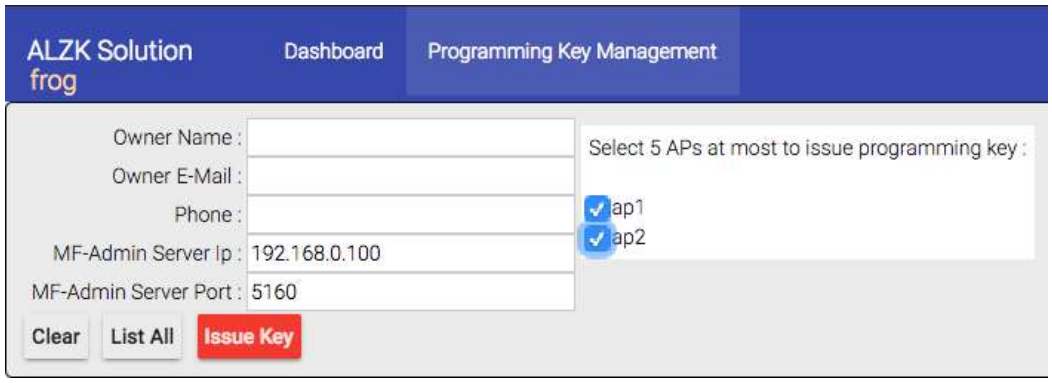


Navigate to create programming cards page. **Property Management** => **Issue Programming Key**

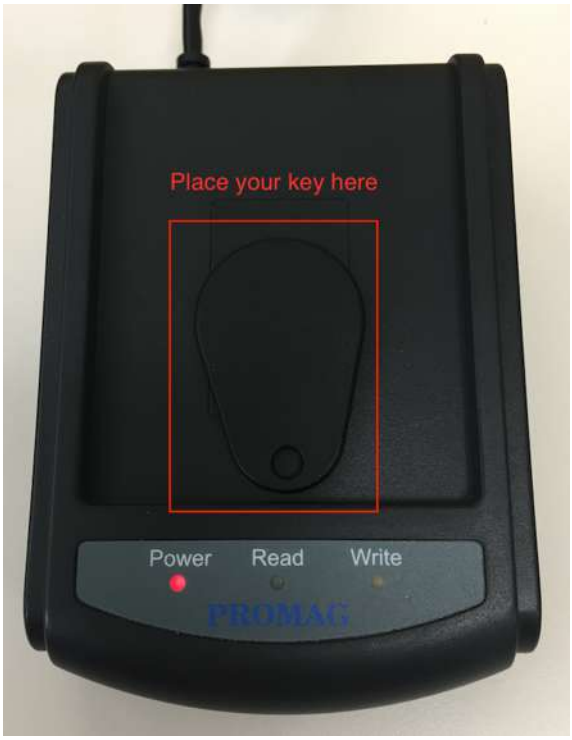
You will see there are two wifi aps you added previously.



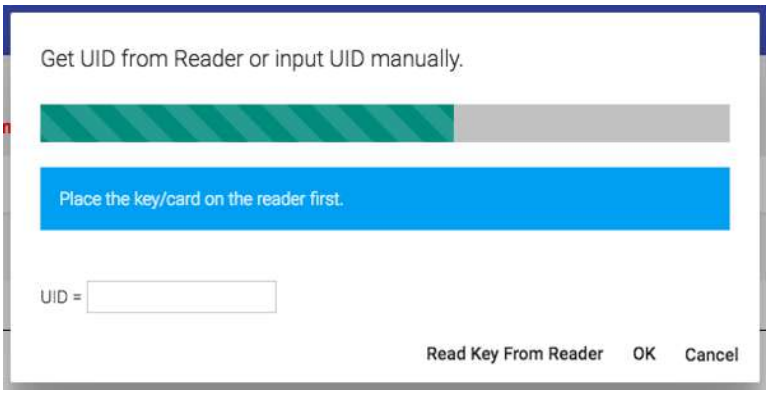
Check the checkbox on those wifi ap and click **Issue Key**.



Place key/card on reader first.

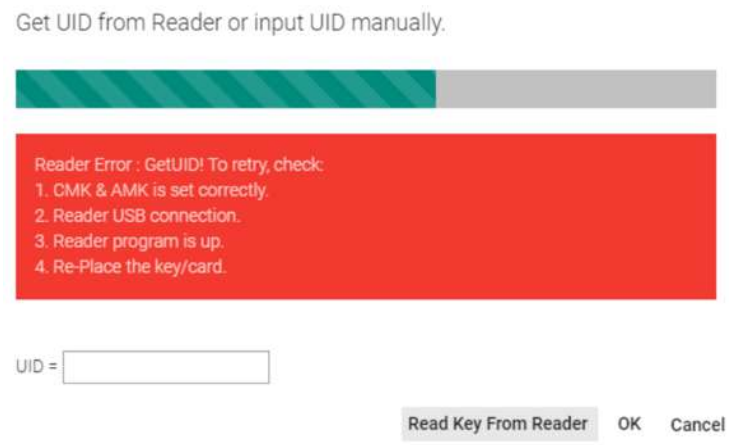


Click **Read Key From Reader** to get Key's UID.



The **green light** LED on **Read** should blink.

If **Read Key From Reader** failed with **three** beep sounds and display following message, please re-place key/card and click **Read Key From Reader** again.



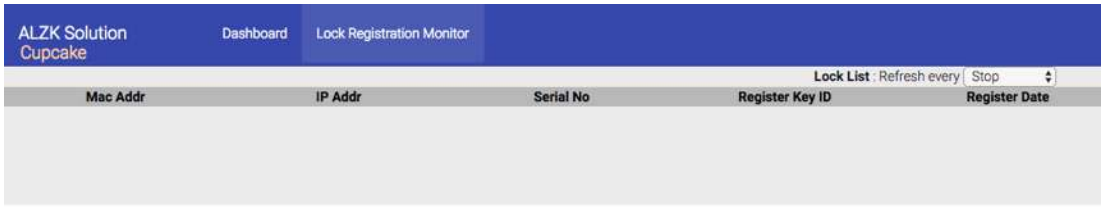
If read key successfully click **Write Key/Card** to issue programming key.

Write Key/Card successfully with **two** beep sounds.

Register Locks to MF-Admin Server

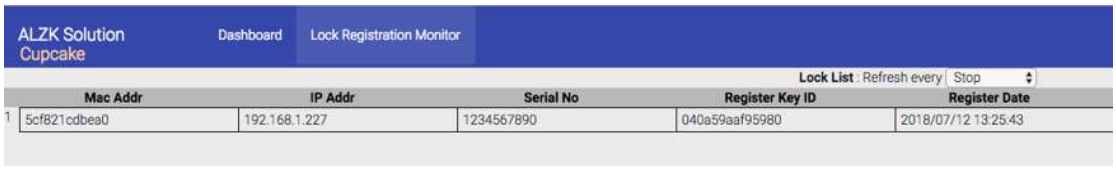
Please bring a tablet or mobile phone with Chrome browser.
Follow below steps to register a lock :

A. Open Chrome and type in MF-Admin server URL.
B. Login to MF-Admin using alzk id
C. Go to Lock Registration Monitoring function on tablet.
   Property Management => **Lock Registration Monitor**



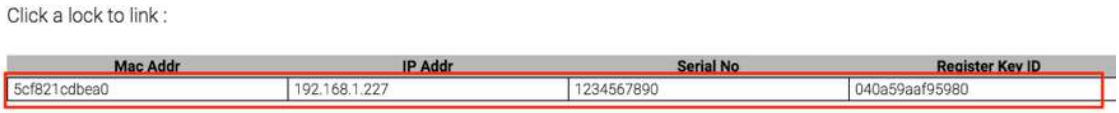
D. Go to Room A

E. Scan programming card to the lock Lockplace A.
You will see the physical new lock connect to MF-Admin server.



F. Link physical lock on Room A to lockplace.
Click lock icon near Unit Area A.

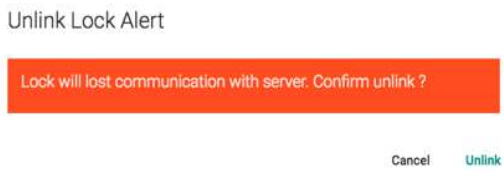
A pop-up window will show up listing all the locks not linked yet. Click the one you like to link.



G. Link the lock to **Room A** lockplace.

G.1. If you link to the wrong lockplace, Unlink and link again.
Click lockplace which you link to the wrong lockplace.

Click **Unlink** to unlink lock.



H. Repeat the steps D to G for Lockplace B,C,D,P and M

I. All set and all locks are ready for go-live phase.

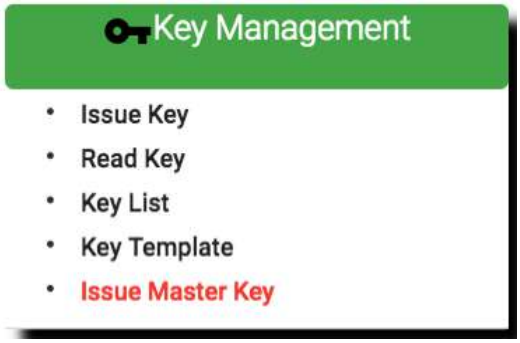
Verify lock registration using Master Card

Master Card is granted unlimited access to any locks in the project. After locks are registered to MF-Admin server, they now only recognize Residential Cards plus Master Cards.

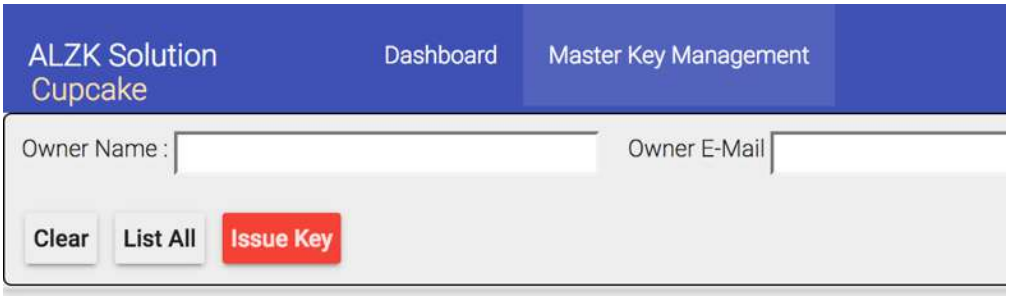
To verify that all the locks are successfully registered and linked to the right lock places in the area tree, let's first create the master card.

- How to create Master Card :

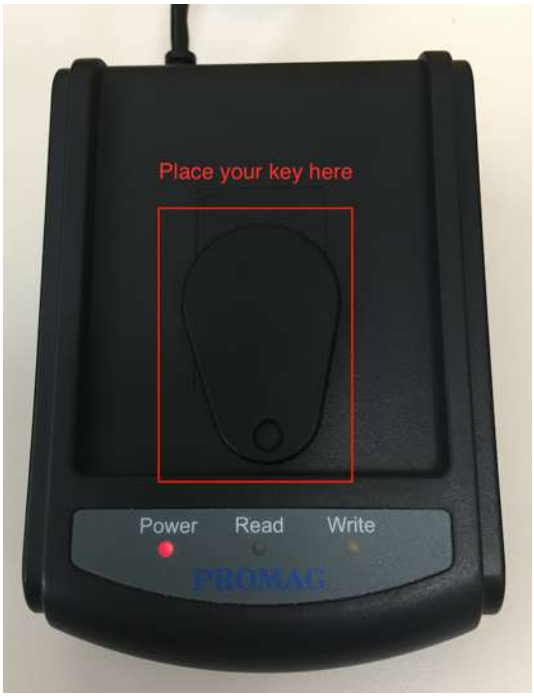
Navigate to issue master card page. **Key Management** => **Issue Master Key**



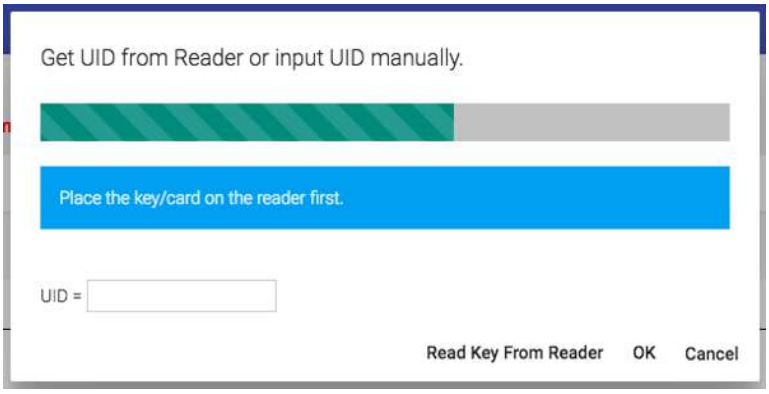
And click **Issue Key**



Place key/card on reader first.

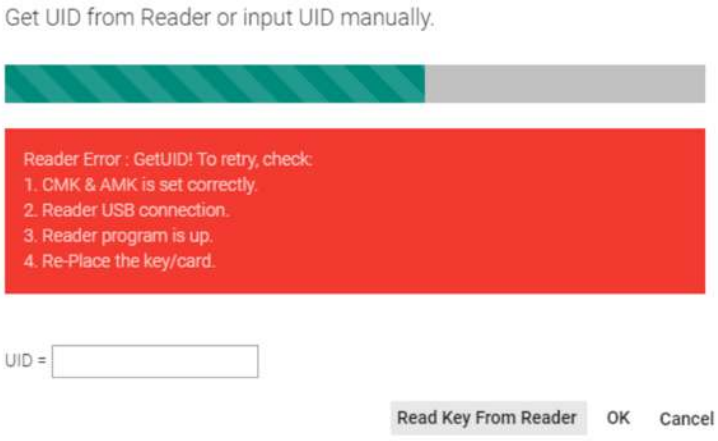


Click **Read Key From Reader** to get Key's UID.



The **green light** LED on **Read** should blink.

If **Read Key From Reader** failed with **three** beep sounds and display following message, please re-place key/card and click **Read Key From Reader** again.



If read key successfully click **Write Key/Card** to issue master key.

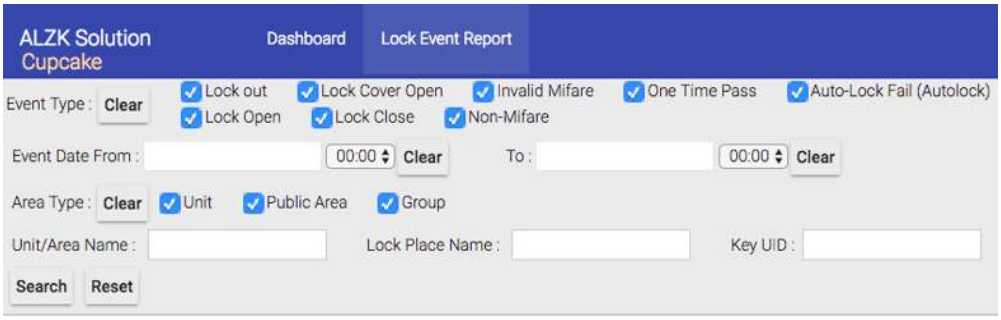
Write Key/Card successfully with **two** beep sounds.

- How to verify Master Card to a lock :

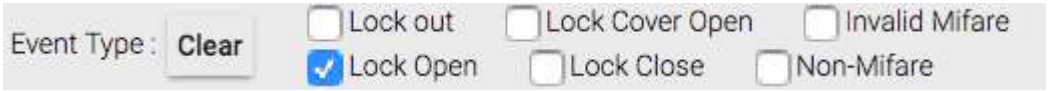
Prepare a invalid Mifare Card X (You may issue an invalid card easily by assigning no area to the card). By default, a lock will report to MF-Admin Server and get the newly create card list from MF-Admin Server every 30 mins. It means the newly created Master Card will go to the locks after 30 mins. Another way to enforce a lock to communicate with MF-Admin server is to scan an invalid card. We will use this approach to save us some time. Card X will be the invalid Card.

  - Go to lockplace A.
  - Scan Card X.
  - Scan Master Card and the lock should be opened.
  - Scan Card X again. (the event log will be transferred to MF-Admin server)
  - Check MF-Admin Server event log

    - Navigate to MF-Admin Server event log page.
      Report Management => **Events History Report**



    - Check **Lock Open** in **Event Type** fields only and click **Search**.



    - You will see **Lock Open** event with scanning **Master** card.

  - Verify lock B,C,D,P,M using the same steps.
  - If lock A is not opened, please re-scan Card X and try again.

- If lock A is still not opened, please unlink the lock and register/link again. Then repeat the verification steps.
- If problem still exist, please contact your reseller for help.

Please keep the Master Card safe and secure.

Congratulations ! The system is ready and let’s go to Go-Live phase.

Go-live Phase

We will present several daily operations when the system goes live. Most of the daily work of an administrator or property owner should be card/key management.

You have seen several card types in the previous sections: Crypto Card, Construction Card, Programming Card and Master Card. Here we will create another card type called Residential Card. There are five types of Residential Card : Tenant, Staff, Vendor, Guest and Temp Card. You can tell the purpose of the card from its name.

There are three supporting features to help you create a residential card. You may create a card without using these features but leverage these template features will speed up the process when you have many cards to create :

- Time Control Template

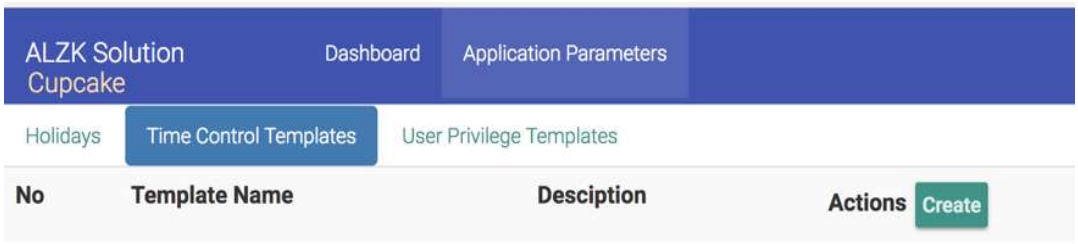
  Here we will create two time control template which we will use in demonstrate the creation of Guest Card and Vendor Card.
  Please follow below steps to create the two time control templates :

Guest Swimming Pool Period	8:00 ~ 18:00 Sat, 8:00 ~ 18:00 Sun
House Cleaning Period	8:00 ~ 12:00 Mon

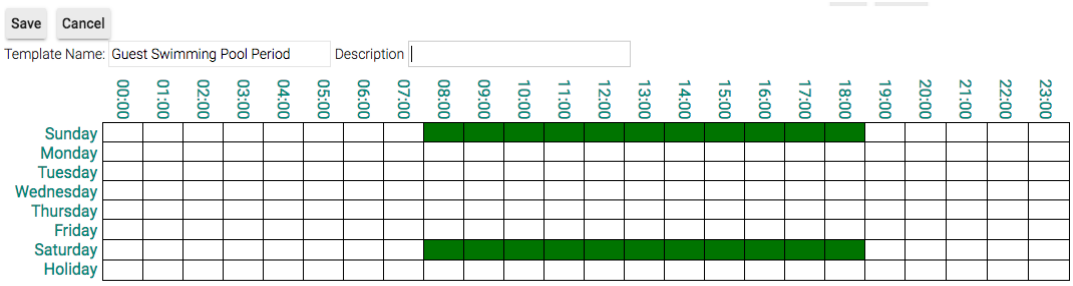
  ❖ Steps to create time control template

  Navigate to create time control template page.
  System Management => **Application Parameters**

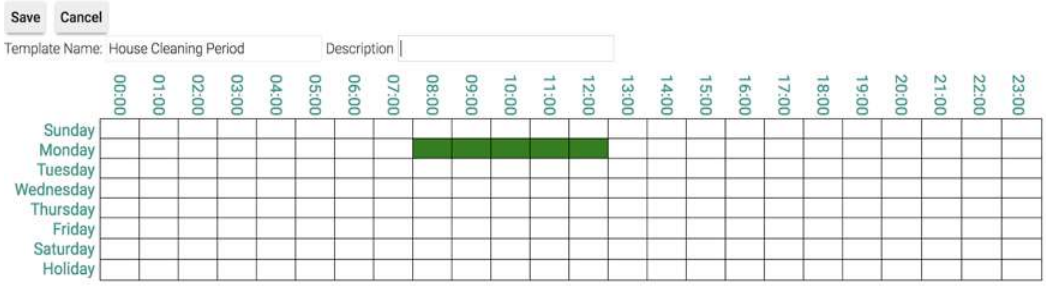
In **Time Control Templates** click **Create** button.



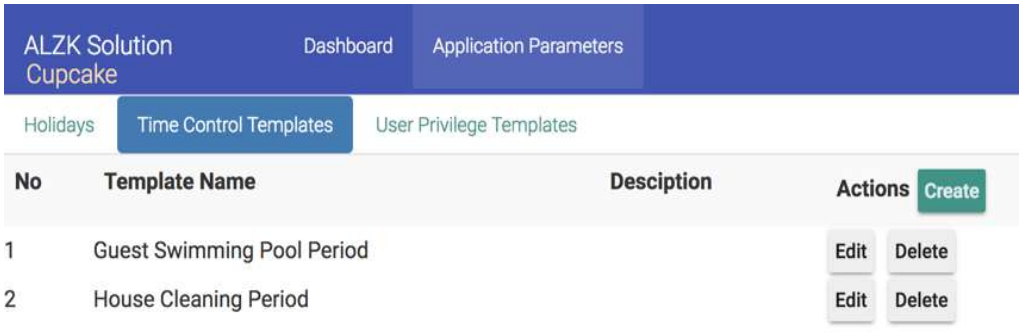
Edit the template name, According to the document, the Guest Swimming Pool Period only open on **8:00 ~ 18:00 Sat, 8:00 ~ 18:00 Sun**. Let's edit the time control to meet the requirement and click **Save** to save time control setting.



Let's create another template for house cleaning period. According to the requirement, house cleaning period only allow at **8:00 ~ 12:00 Mon**. Let's edit the time control to meet the requirement and click **Save** to save time control setting.



Both **Guest Swimming Pool Period** and **House Cleaning Period** time control templates are created successfully.



- User Management

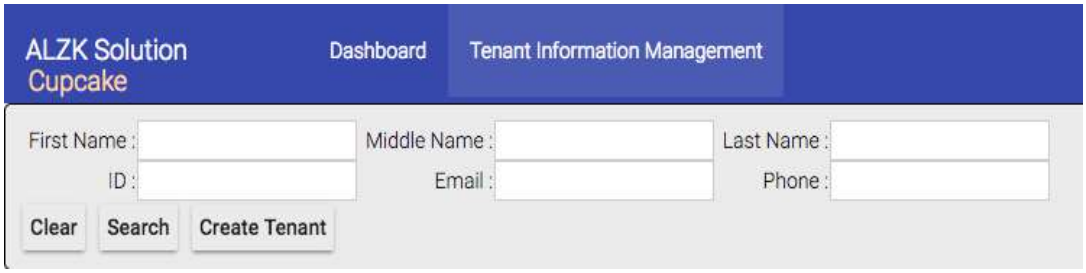
You may maintain tenants, staffs and vendors information in User Management module. The information you entered here is only for look up purpose when issuing card which we will demo later. The benefit to create entries here is to save you some typing when issue cards/keys.

Let's create some user templates. We just provide basic information for demo purpose.

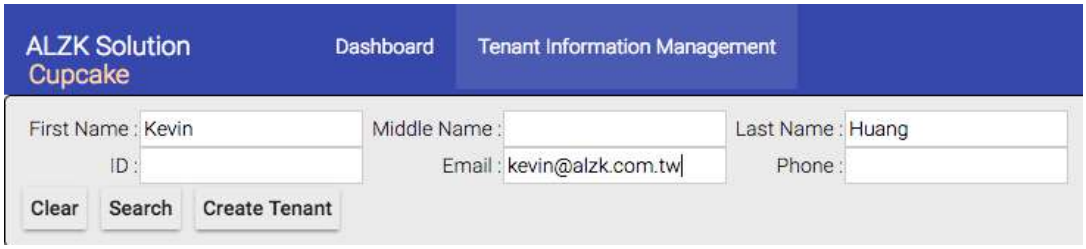
User Type	Information
Tanant A	Kevin Huang, kevin@alzk.com.tw
Tenant B	Tony Lin, lintungwei@gmail.com
Tenant C	Mark Chu, mark@alzk.com.tw
Tenant D	Jay Chen, jay@alzk.com.tw
Staff S1	Peter Liu, peter@alzk.com.tw
Staff S2	Ricky Chang, ricky@alzk.com.tw
Vendor V	Company Name : Dust Buster Employee name : Vincent Chou, vincent@gmail.com

❖ Steps to create tenants

Navigate to create tenants page. **User Management** => **Tenant**



Edit tenant information and click **Create Tenant**.

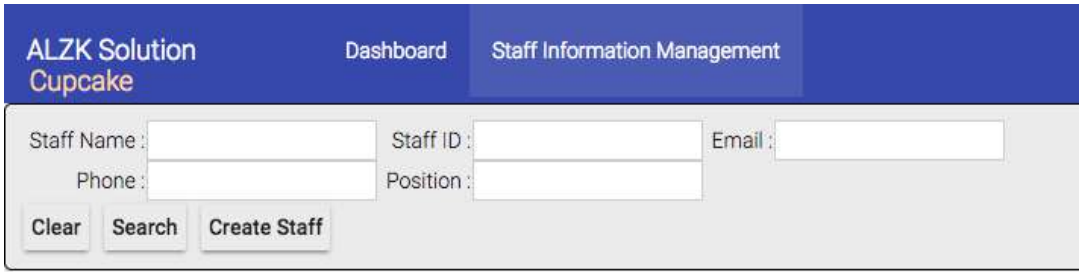


The table below the input area will list all the tenants created :

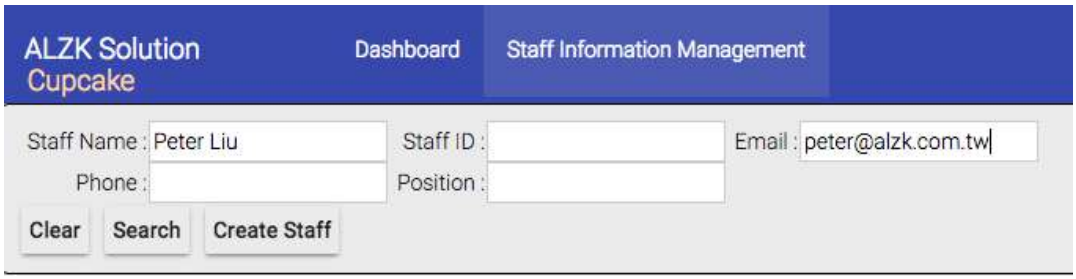
Please repeat the work and create tenant B, C, and D.

❖ Steps to create staffs

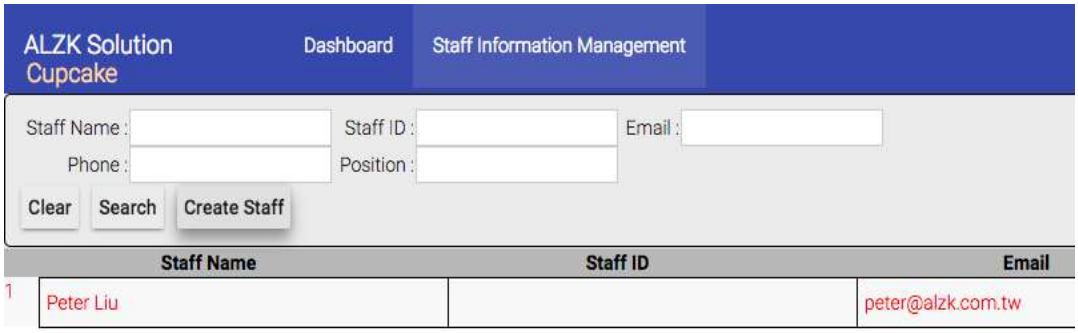
Navigate to create staffs page. **User Management** => **Staff**



Edit staff information and click **Create Staff**.



The table below the input area will list all the staffs created :



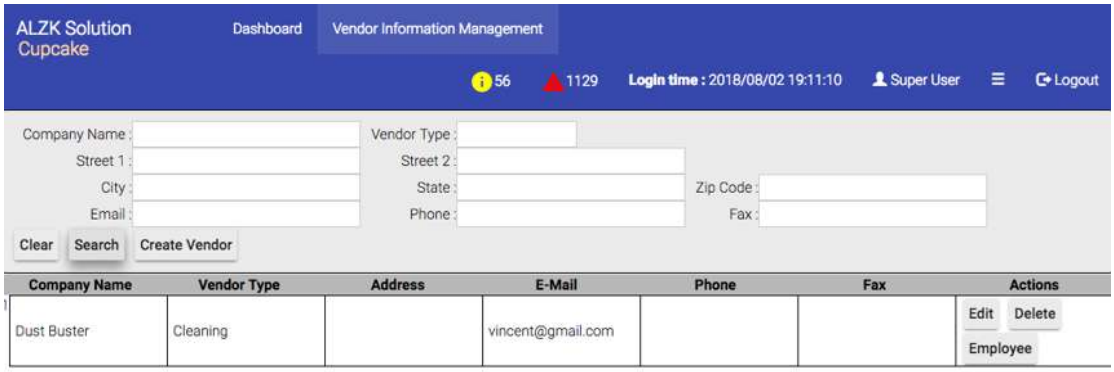
Follow the same process to create staff Ricky Chang.

❖ Steps to create vendors

Navigate to create vendors page.
User Management => **Vendor**

Edit vendor information and click **Create Vendor**.

It will display vendor list below the input area.



Click **Employee** button on **Actions** filed to add employee.

Edit employee information and click **Create New Employee**

The employee list will be displayed at the bottom of this page.

- Key Template

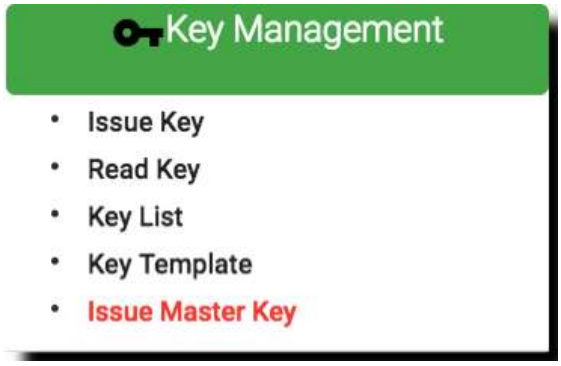
  Key template probably is the most useful supporting features when issue many keys. It is almost the same as issue a key but you may save the setting for later use. Let's create two templates :

STAFFS	Public Area P (24 hours allowed), Group Area M (24 hours allowed)
TENANTS	Public Area P (6:00 ~ 21:00), Group Area M (24 hours

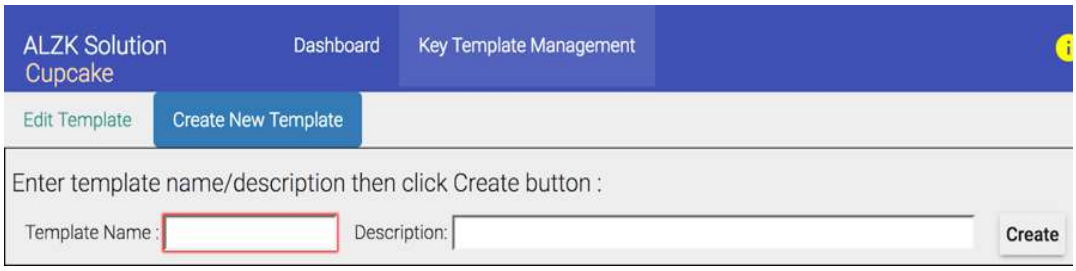
	allowed)

❖ Steps to create the key template

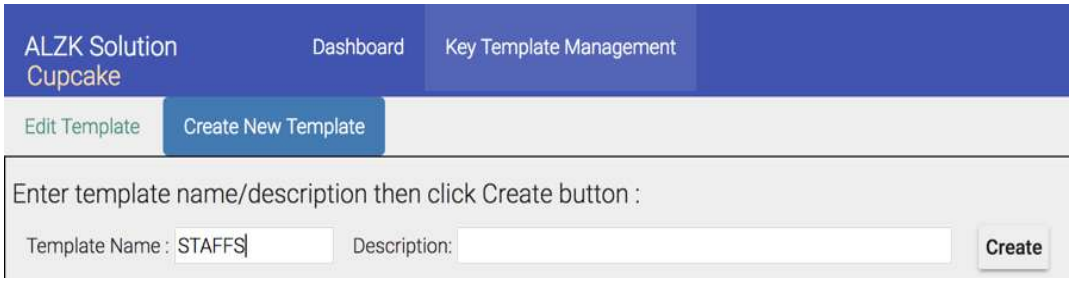
Navigate to create key time control template page.
Key Management => **Key Template**



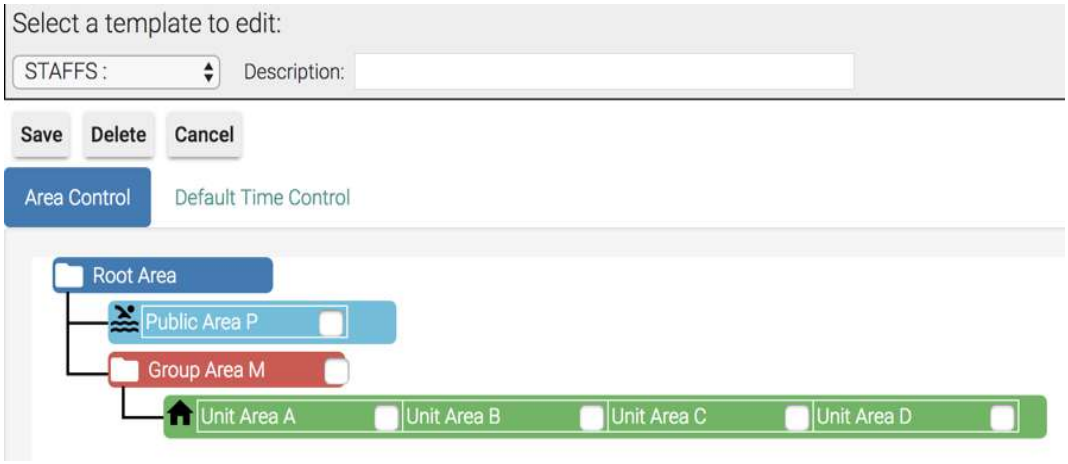
Select **Create New Template.**



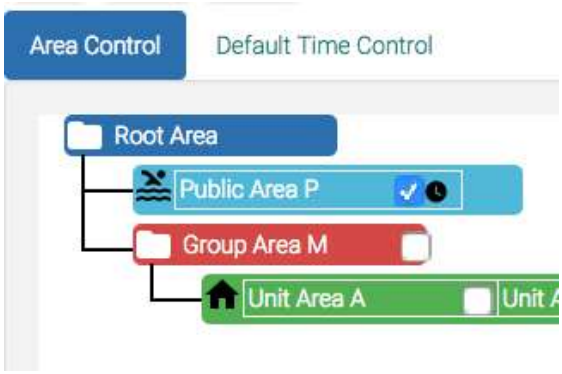
Edit **Template Name** and click **Create**



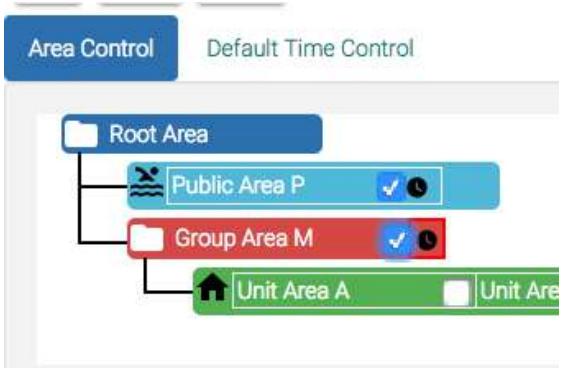
After clicking **Create** button it will display **Area Control** page.



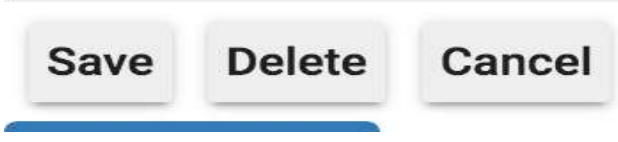
According to the requirement, Staffs can access **Public Area P (24 hours allowed), Group Area M (24 hours allowed)**. Let's check the box on **Public Area P** and no need to edit time control because it's 24 hours open by default. (Click the clock besides the checkbox can edit the time control on this area)



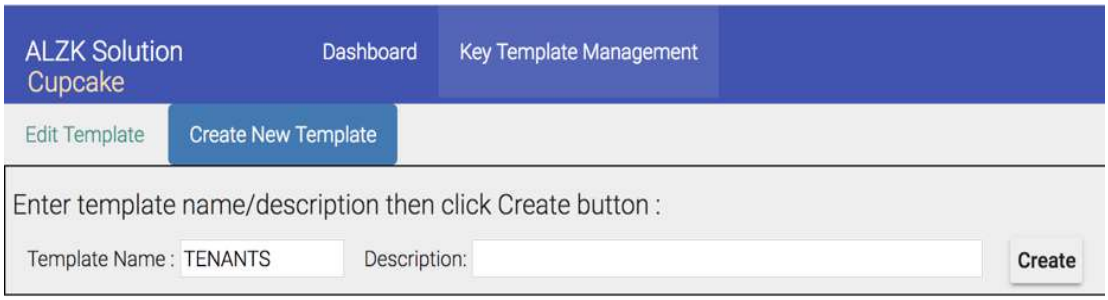
Check the box on **Group Area M** also and no need to edit time control.



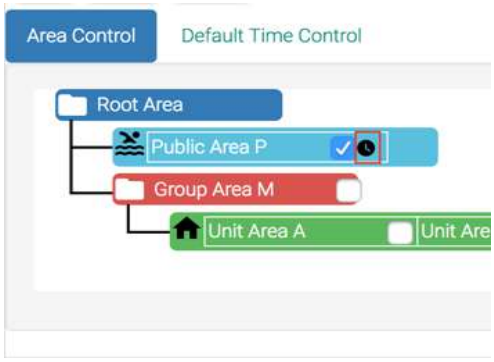
Click **Save** to save **STAFFS** key template.

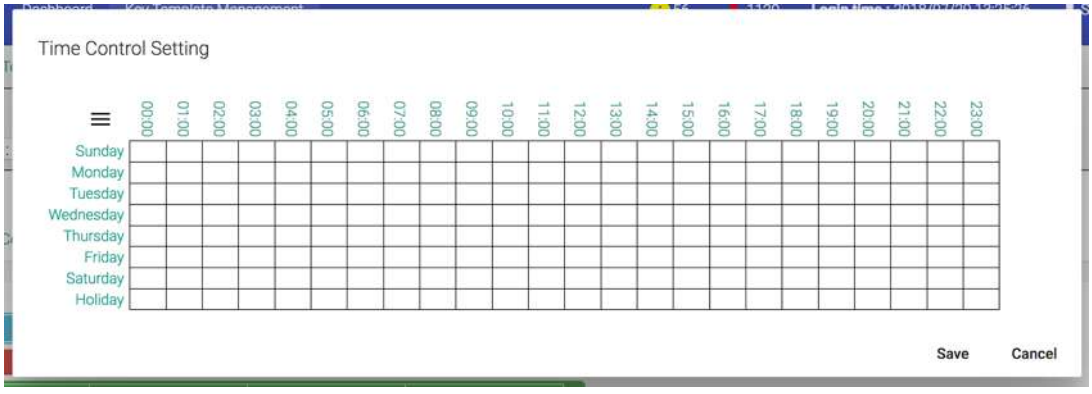


Let's create another key template for **TENANTS.** Click **Create**.

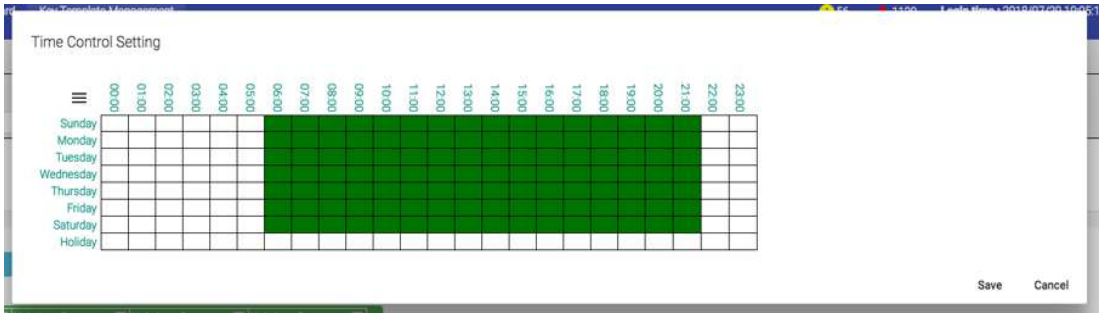


Check the box on **Public Area P** and click its **time control button**.

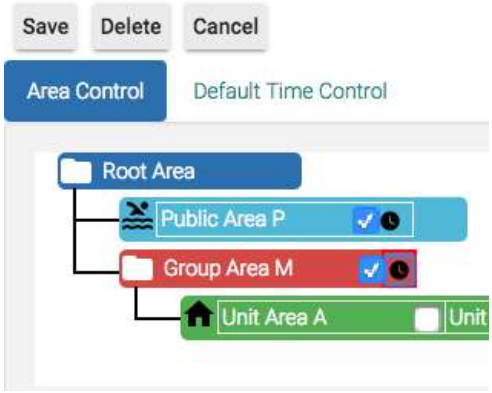




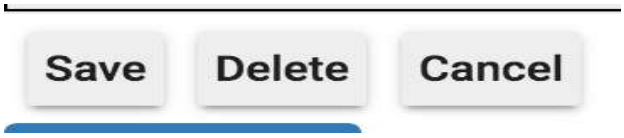
According to the requirement, Tenants can access **Public Area P (6:00 ~ 21:00), Group Area M (24 hours allowed)**. Let's edit the **Public Area P** time control and click **Save** to save time control setting.



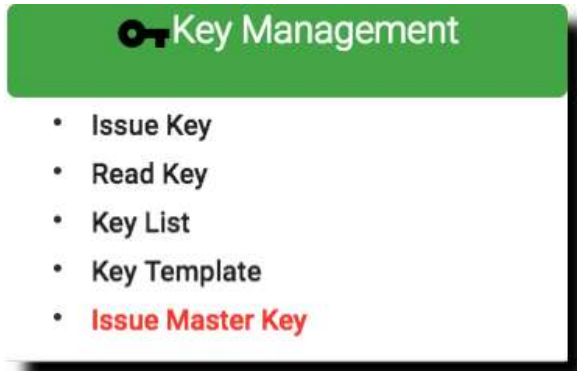
Check the box on **Group Area M**, no need to edit time control this time because it's 24 hours open by default.



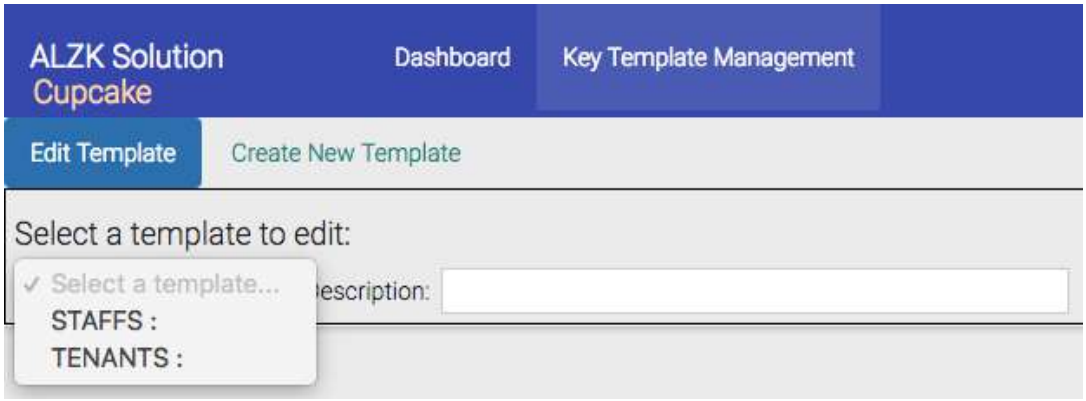
Click **Save** to save **TENANTS** key template.



Navigate to key template management page.
Key Management => **Key Template**



You can see those key templates has been created by pull down the select list.



Create Tenant Cards

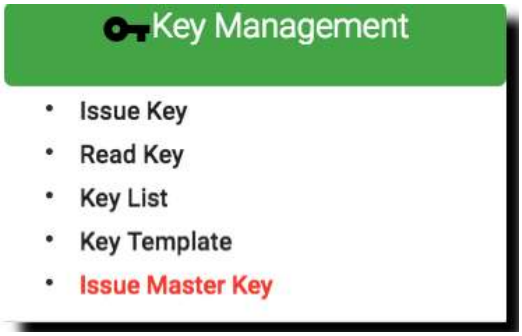
In SIMPLE project, you should at least create 4 tenant cards (Card A~D) for Room A to D with below access control :

Card A	Public Area P (6:00 ~ 21:00), Group Area M (24 hours allowed), Unit A (24 hours allowed)
Card B	Public Area P (6:00 ~ 21:00), Group Area M (24 hours allowed), Unit B (24 hours allowed)
Card C	Public Area P (6:00 ~ 21:00), Group Area M (24 hours allowed), Unit C (24 hours allowed)
Card D	Public Area P (6:00 ~ 21:00), Group Area M (24 hours allowed), Unit D (24 hours allowed)

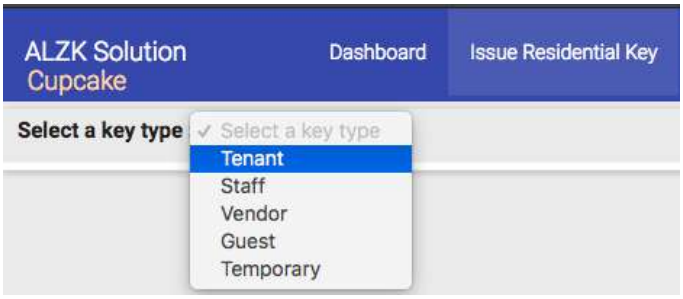
As you can see, leverage key template is a good idea to create the 4 tenants cards.

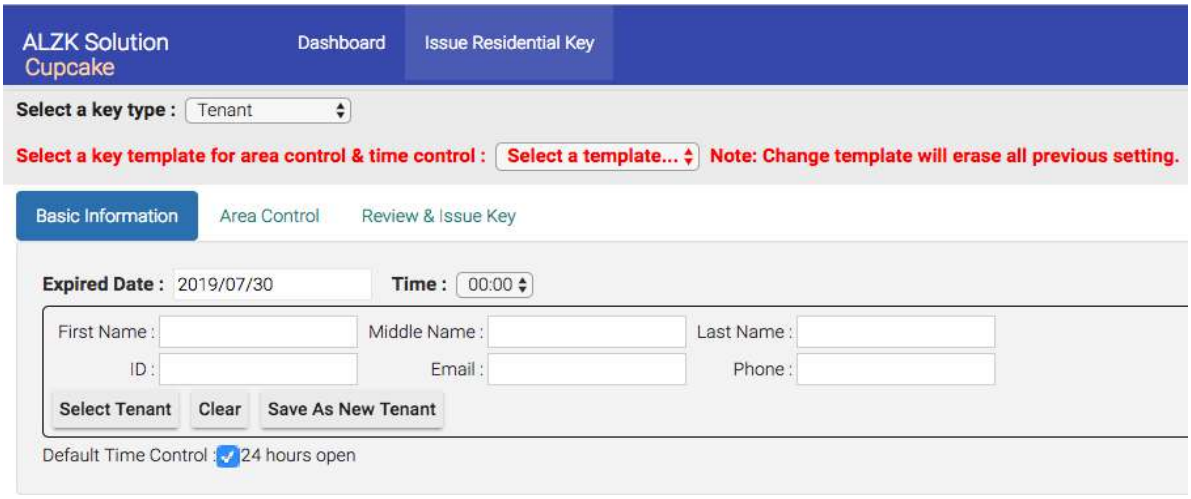
❖ Steps to create tenant cards

Navigate to Issue Key page. **Key Management** => **Issue Key**



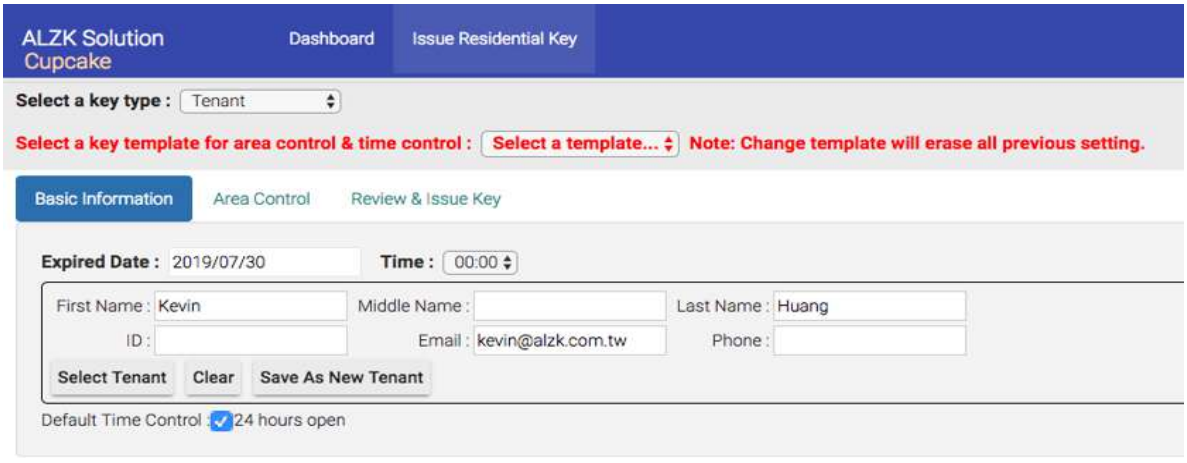
Select **Tenant** at the key type drop down list**.**



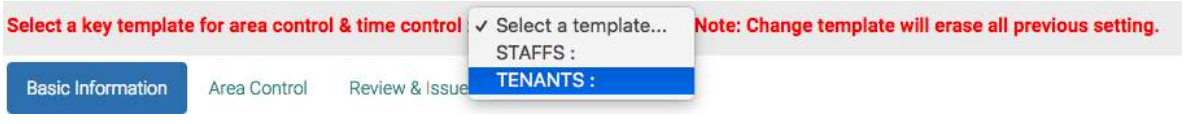


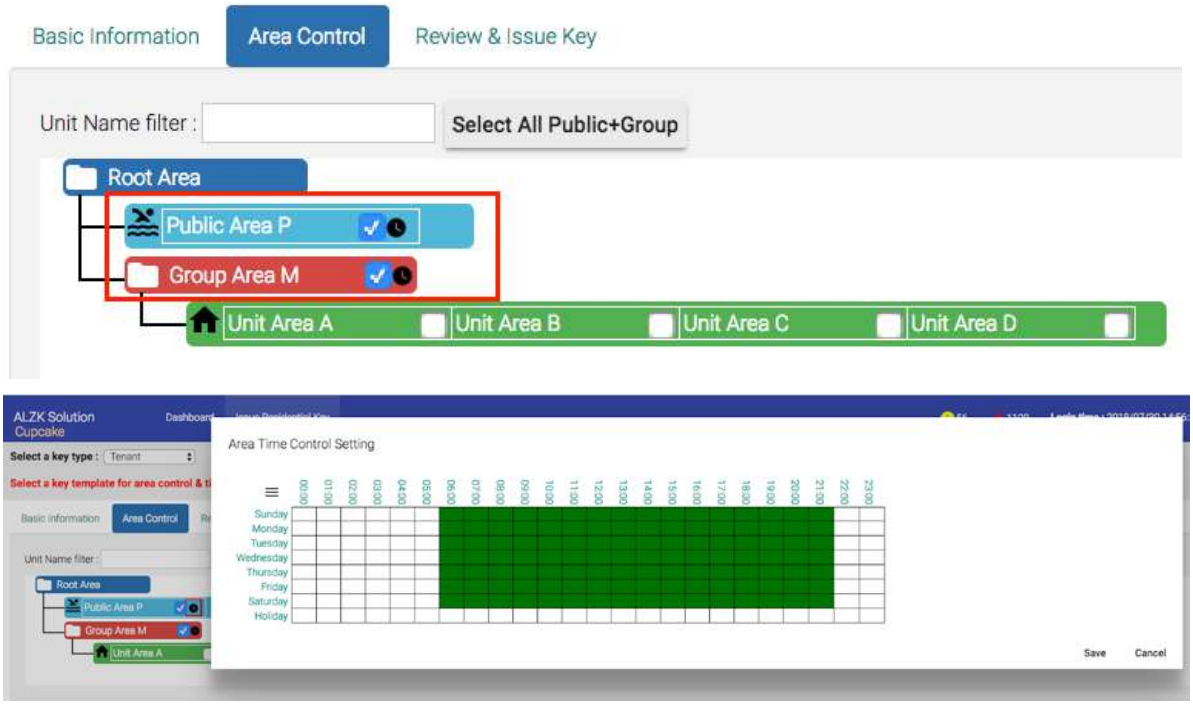
Click **Select Tenant** and it will pop up a window to display all tenants you created in user management function. Select tenant **kevin** to issue key.

Select tenant kevin will automatically bring his information back to the Basic Information tab.

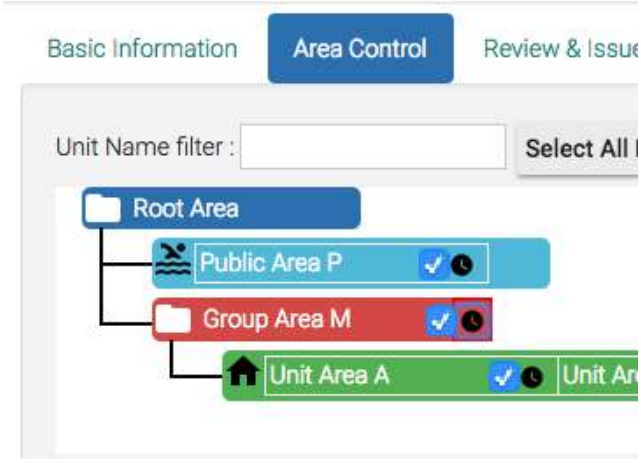


Select **TENANTS** key template and you will see TENANTS time control settings in **Area Control** page

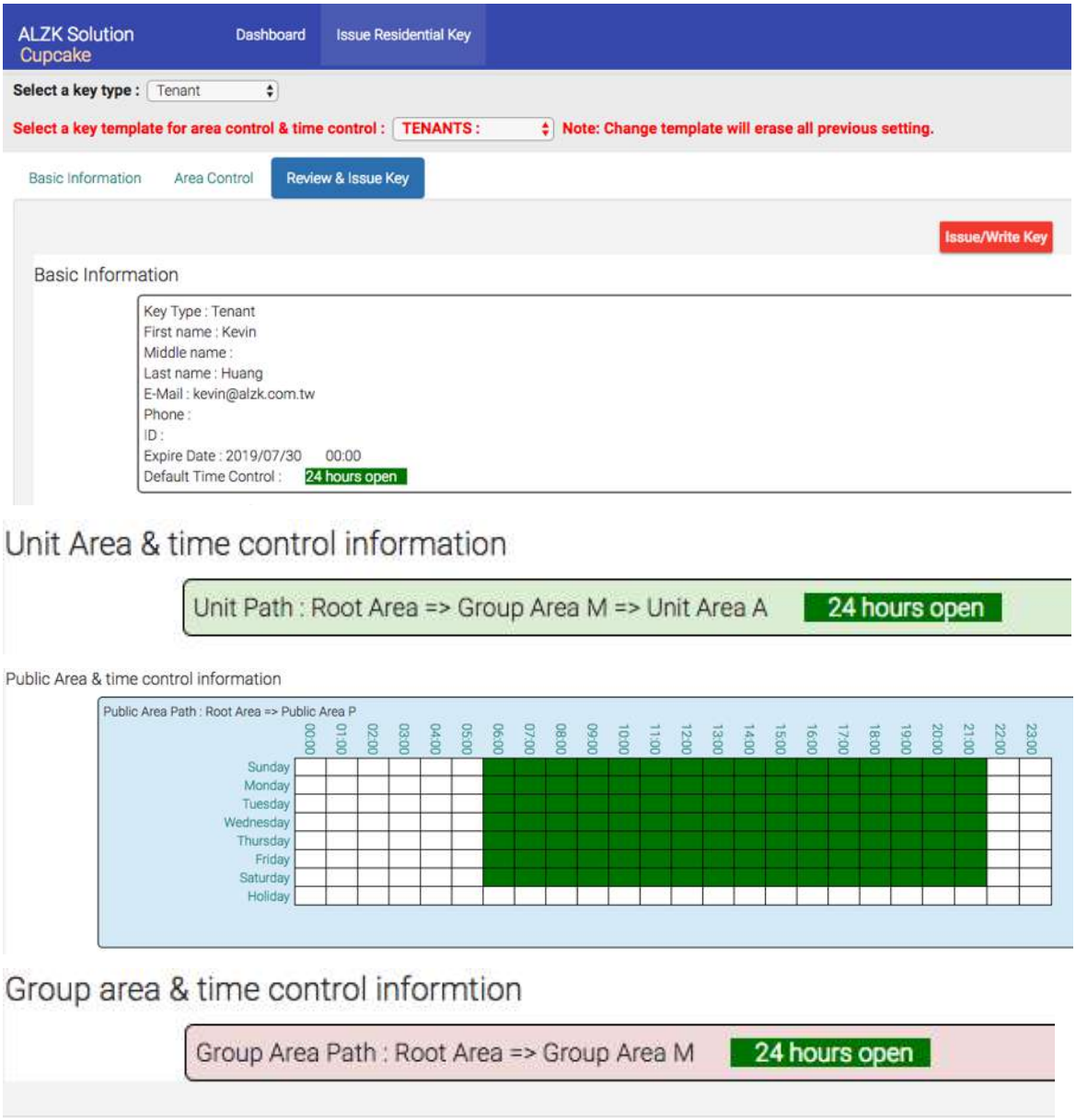




According to the requirement, tenant **Kevin** can access **Public Area P (6:00 ~ 21:00), Group Area M (24 hours allowed), Unit A (24 hours allowed)**. We had already set up time control of **Public Area P** and **Group Area M** via tenant key template, so let's check **Unit A** to grant access to Room A.



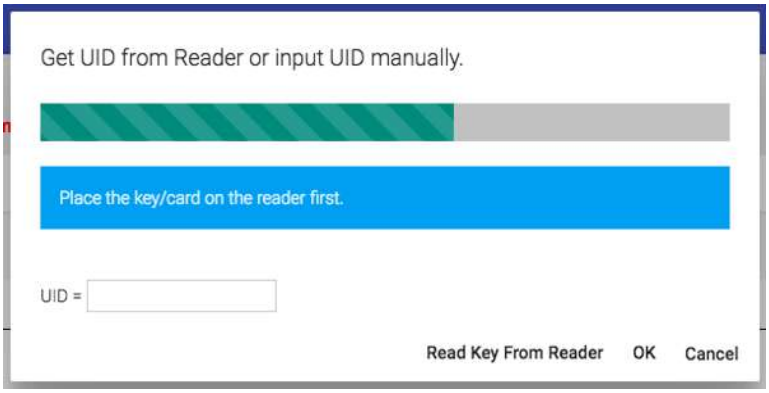
At the **Review & Issue Key** page we can verify the information of tenant key including **Basic Information**, **Unit Area & time control information, Public Area & time control information**, **Group area & time control information**



Click **Issue/Write Key** to issue tenant key.

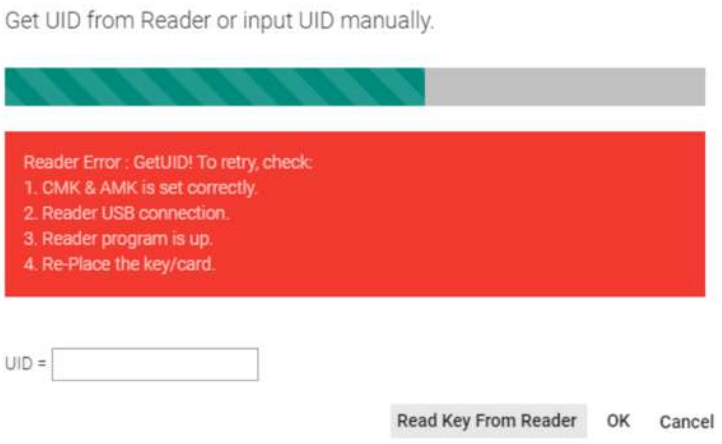
Place key/card on reader first.

Click **Read Key From Reader** to get Key's UID.

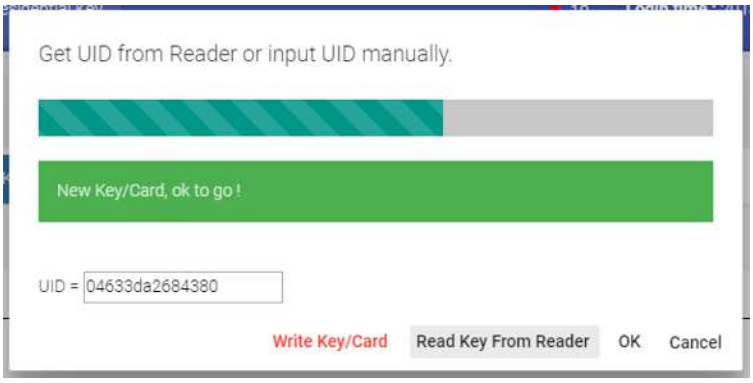


The **green light** LED on **Read** should blink.

If **Read Key From Reader** failed with **three** beep sounds and display following message, please re-place key/card and click **Read Key From Reader** again.



If read key successfully click **Write Key/Card** to issue master key.



Write Key/Card successfully with **two** beep sounds.

Repeat the similar process to create Tenant Cards for B,C and D.

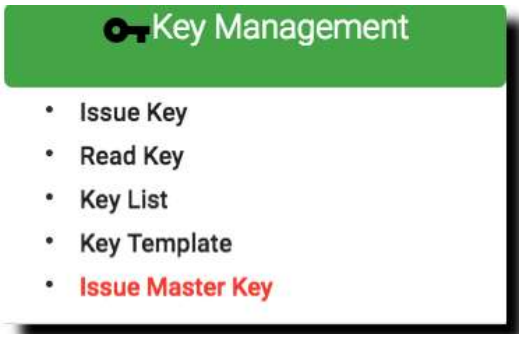
Create Staff Card

We will then create 2 staff cards in SIMPLE project. Again, you may use the STAFFS key template to complete this job. This time you can practice to choose the staff information from the staff users you created previously.

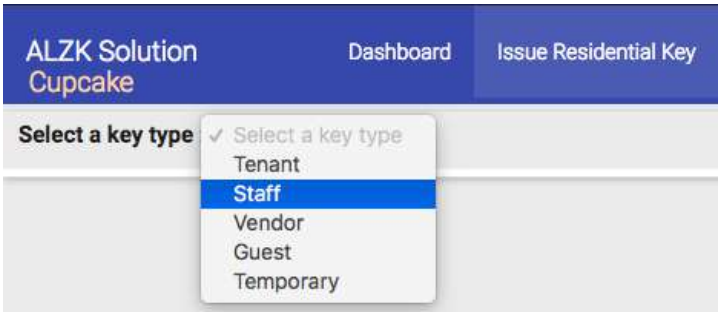
Staff S1	Public Area P (24 hours allowed), Group Area M (24 hours allowed)
Staff S2	Public Area P (24 hours allowed), Group Area M (24 hours allowed)

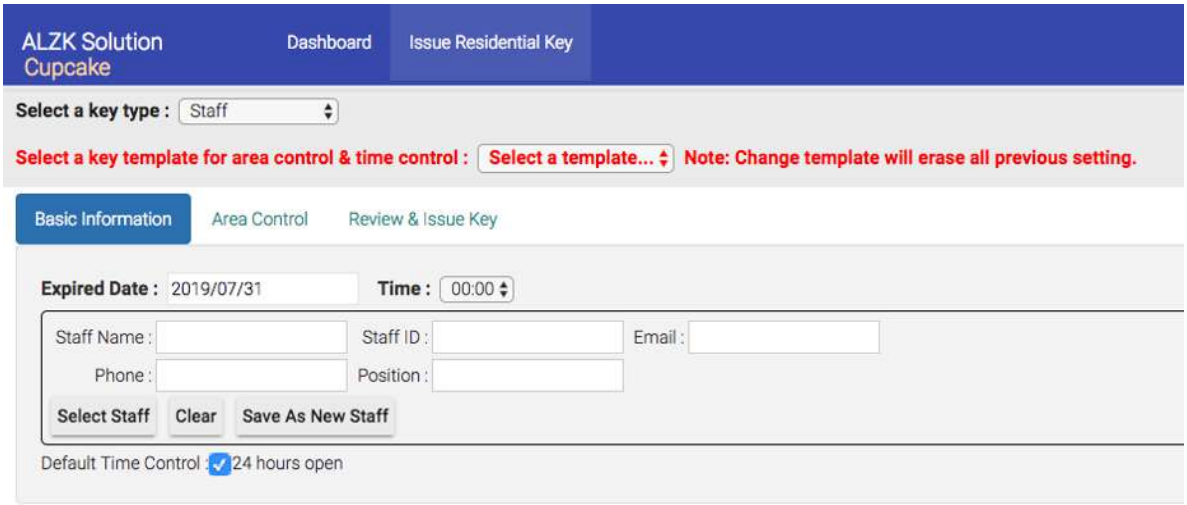
❖ Steps to create staff card

Navigate to Issue Key page. **Key Management** => **Issue Key**



Select key type as **Staff.**

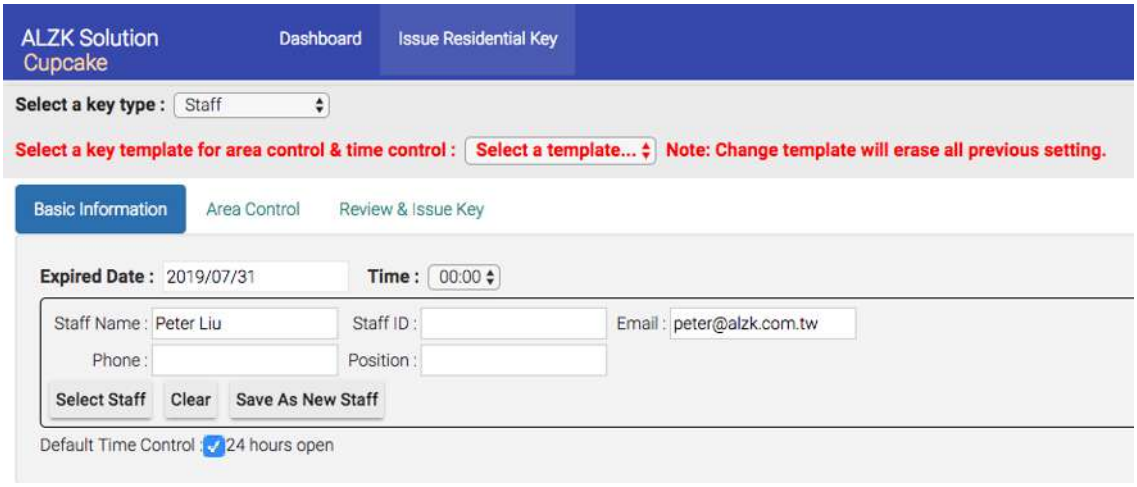




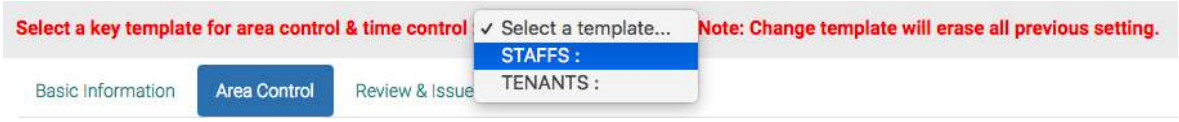
Click **Select Staff** and it will pop up a window to display all staffs you created at user management. Select staff **Peter** to issue key.

No	Staff Name	Staff ID	E-Mail	Phone No	Position
1	Peter Liu		peter@alzk.com.tw		
2	Ricky Chang		ricky@alzk.com.tw		

After selecting staff peter the **Basic Information** page will automatically attach staff's information.

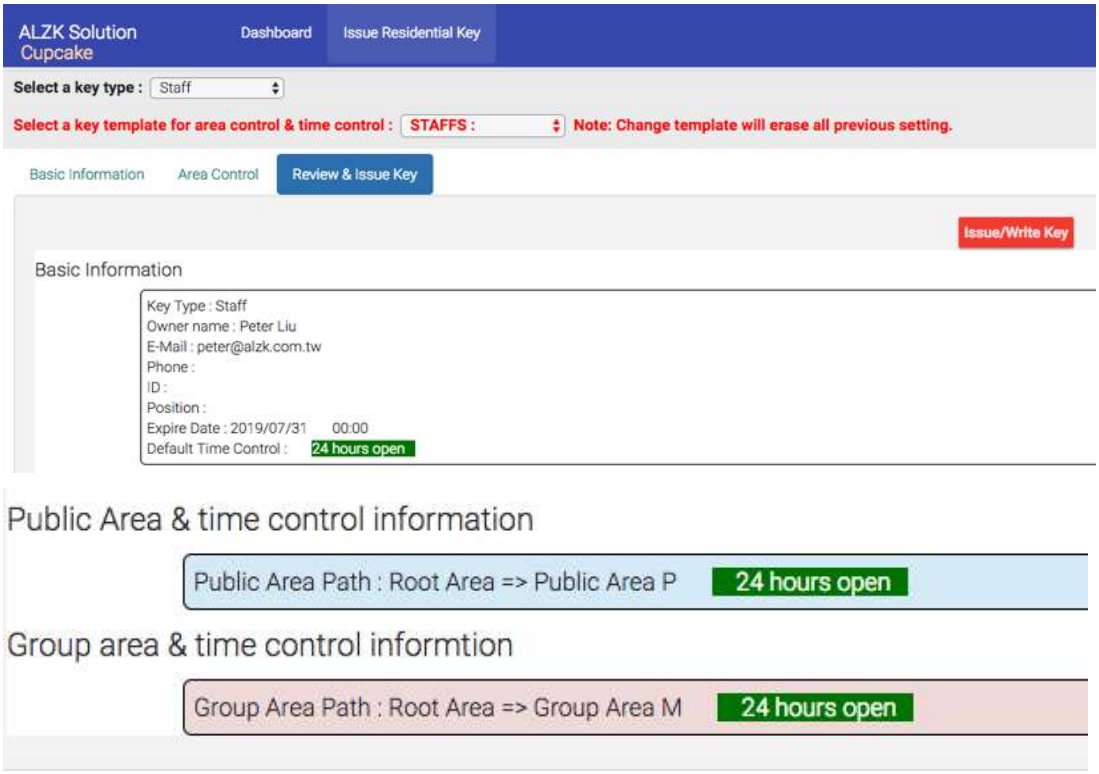


Select **STAFFS** key template and you will see STAFFS time control settings in **Area Control** page.



According to the requirement, staff **Peter** can access **Public Area P (24 hours allowed), Group Area M (24 hours allowed)**. We had already set up 24 hours access privilege of **Public Area P** and **Group Area M** via staff key template. So you may go to the review & Issue Key tab.

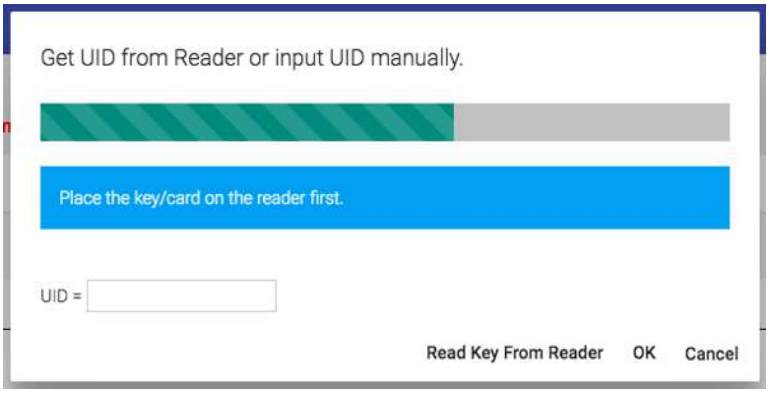
At the **Review & Issue Key** page we can verify the information of staff key including **Basic Information**, **Unit Area & time control information, Public Area & time control information**, **Group area & time control information**



Click **Issue/Write Key** to issue **Peter** staff key.

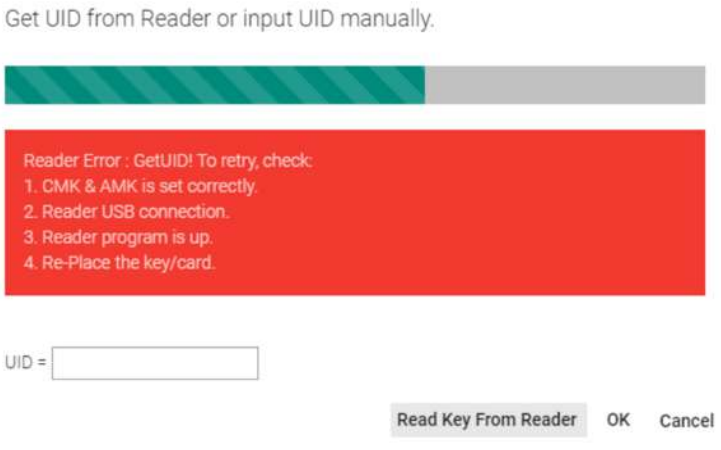
Place key/card on reader first.

Click **Read Key From Reader** to get Key's UID.



The **green light** LED on **Read** should blink.

If **Read Key From Reader** failed with **three** beep sounds and display following message, please re-place key/card and click **Read Key From Reader** again.



If read key successfully click **Write Key/Card** to issue staff key.

Write Key/Card successfully with **two** beep sounds.

Repeat the similar process to create S2 Staff Card.

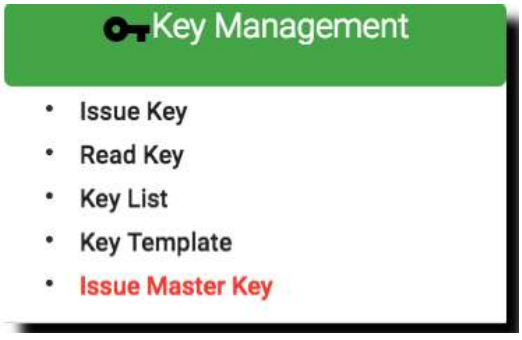
Create Vendor Card

Create a vendor card for Vincent Chou, an employee of Dust Buster cleaning company.

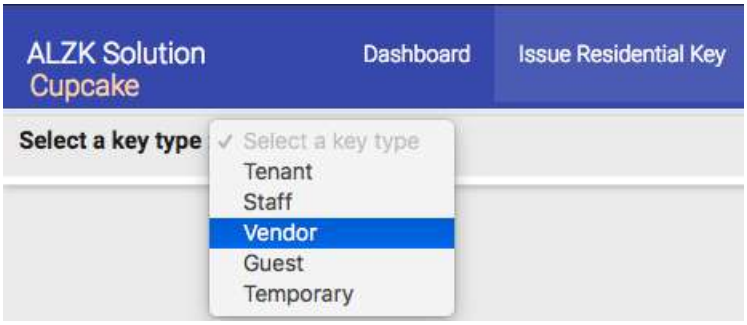
He will come to clean the swimming pool and the area around Room A~D at 8:00 - 12:00 on every Monday. So we will create a card for him to enter Lockplace P and Lockplace M with time control template : House Cleaning Period.

❖ Steps to create vendor card

Navigate to Issue Key page. **Key Management** => **Issue Key**



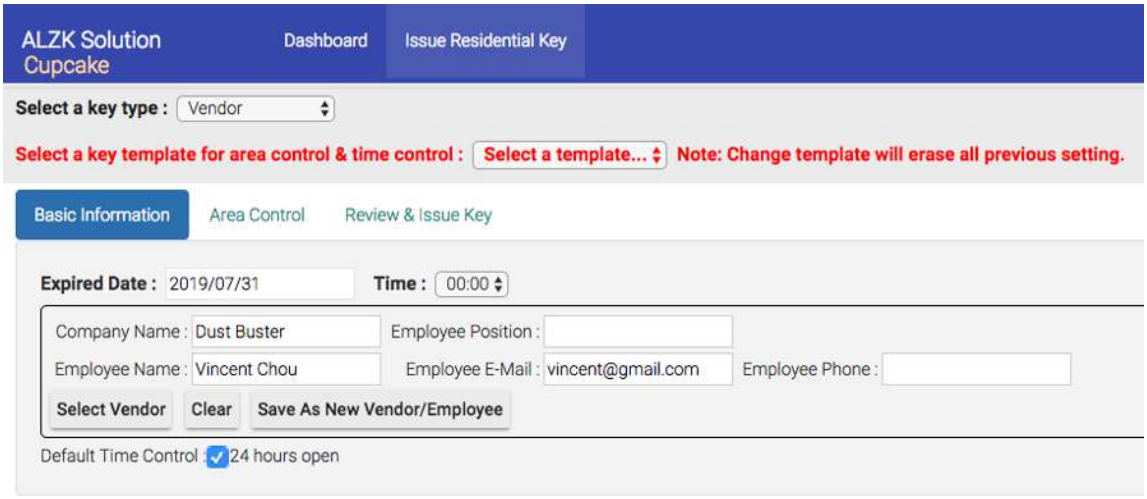
Select key type as **Vendor.**



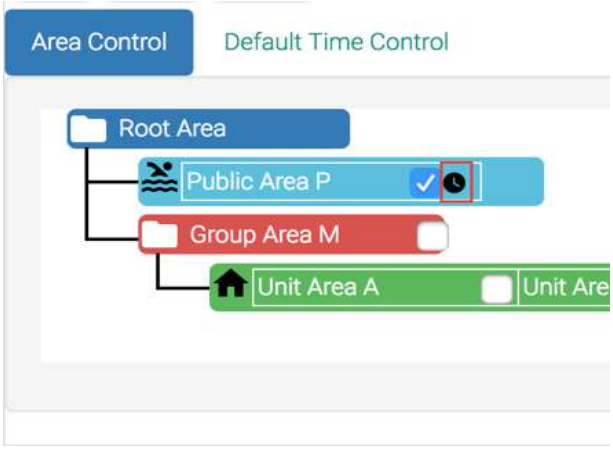
Click **Select Vendor** and it will pop up a window to display all vendors you created before at user management function. Select vendor **Vincent** from Dust Buster to issue key.

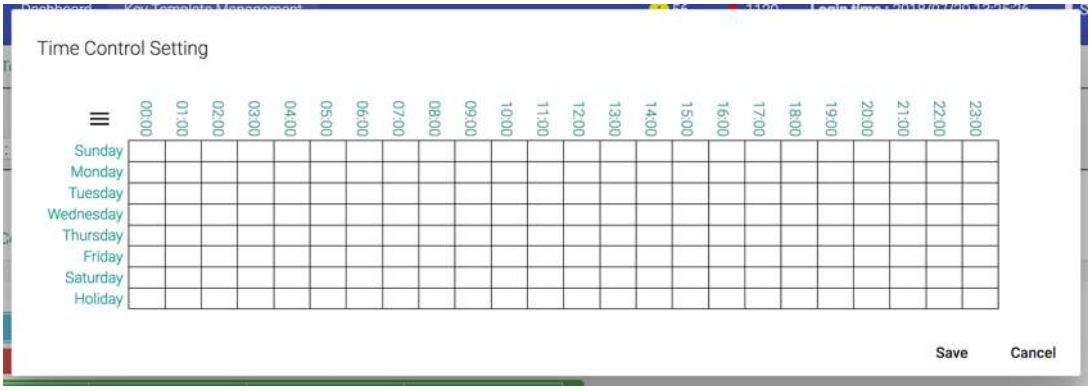
No	Company Name	Employee Name	Employee E-Mail	Employee Phone No	Employee Position
1	Dust Buster	Vincent Chou	vincent@gmail.com		

After selecting vendor vincent, the **Basic Information** page will automatically attach vendor's information.

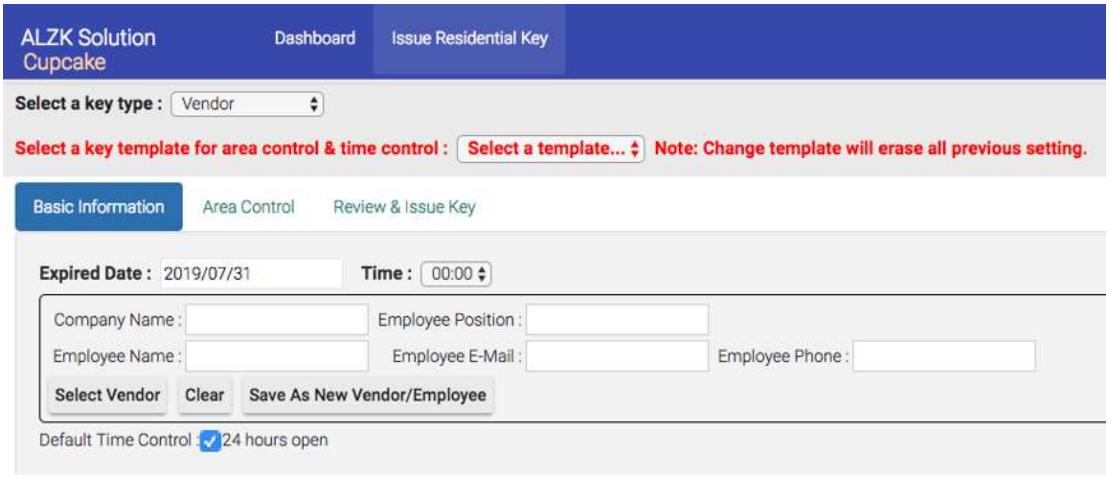


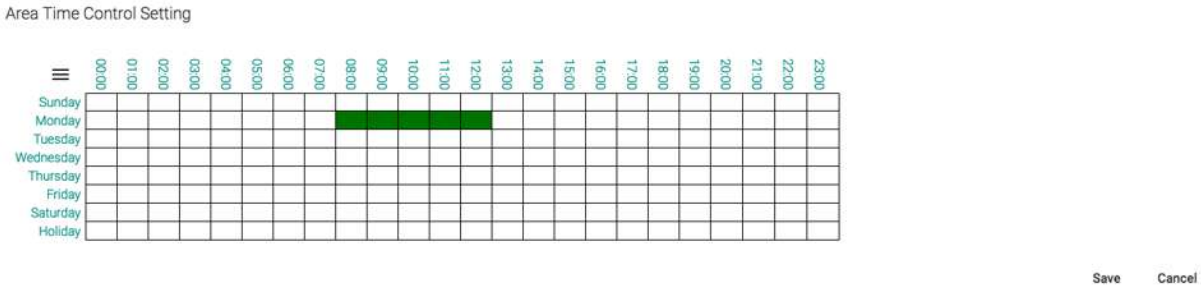
Check the box on **Public Area P** and click **time control button** to edit.



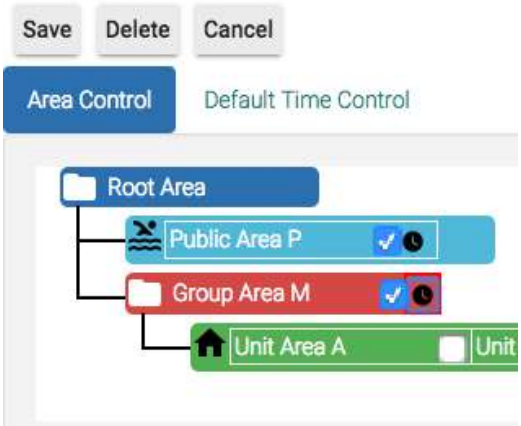


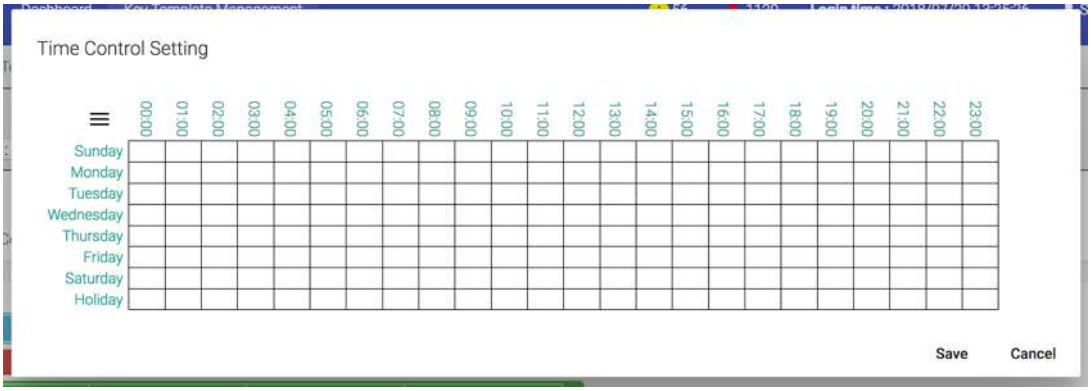
According to the requirement, Vendors can access at **8:00 - 12:00 on every Monday**. Let's use **House Cleaning Period** time control template we created before on **Public Area P** then click **Save** to save time control setting.



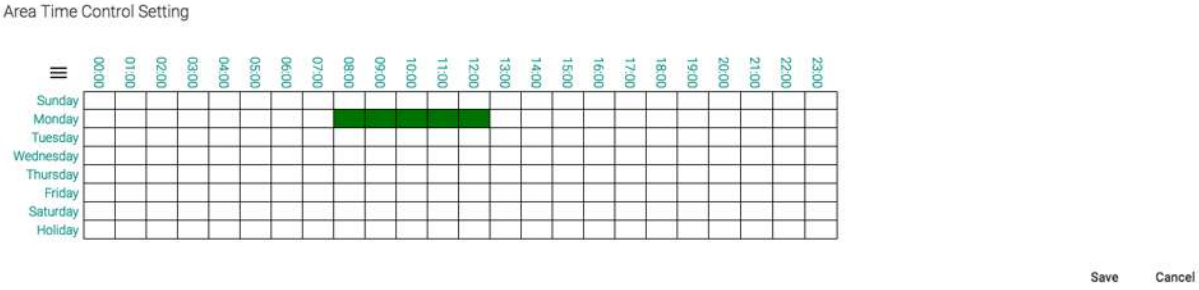


Check the box on **Group Area M** and click **time control button** to edit.

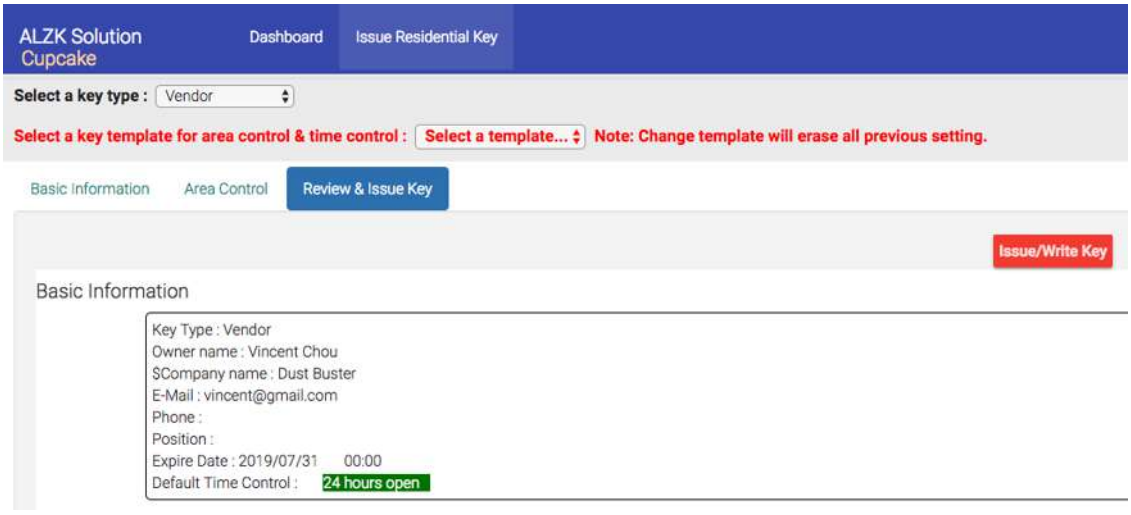


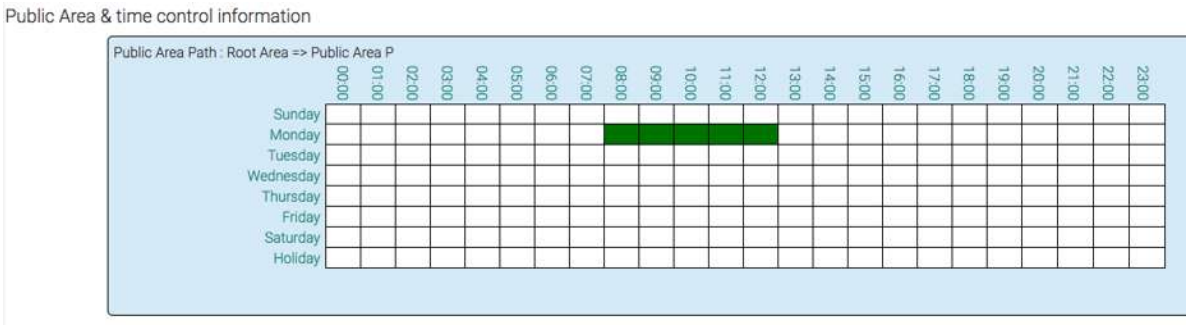


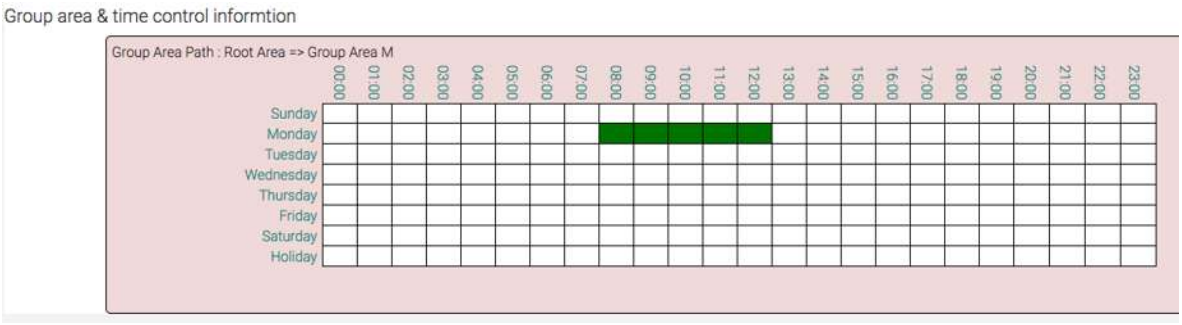
Use **House Cleaning Period** time control template we created before on **Group Area M** then click **Save** to save time control setting.



At the **Review & Issue Key** page we can verify the information of vendor key including **Basic Information**, **Unit Area & time control information, Public Area & time control information**, **Group area & time control information**



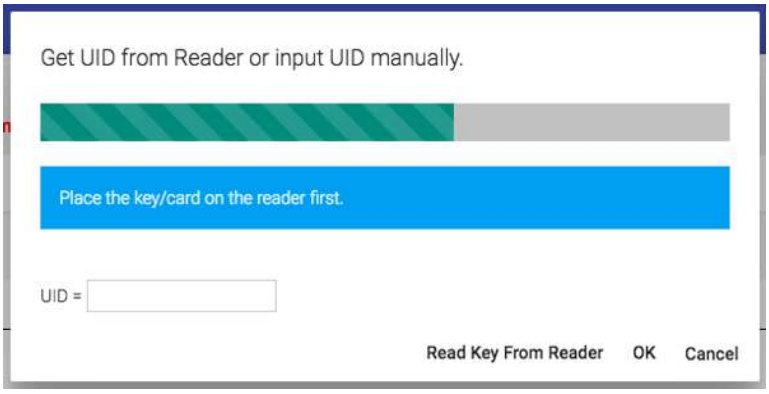




Click **Issue/Write Key** to issue the vendor key.

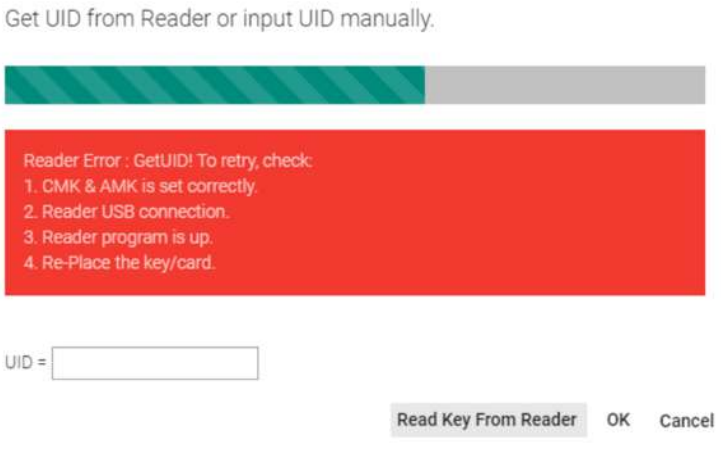
Place key/card on reader first.

Click **Read Key From Reader** to get Key's UID.



The **green light** LED on **Read** should blink.

If **Read Key From Reader** failed with **three** beep sounds and display following message, please re-place key/card and click **Read Key From Reader** again.



If read key successfully click **Write Key/Card** to issue vendor key.

Write Key/Card successfully with **two** beep sounds.

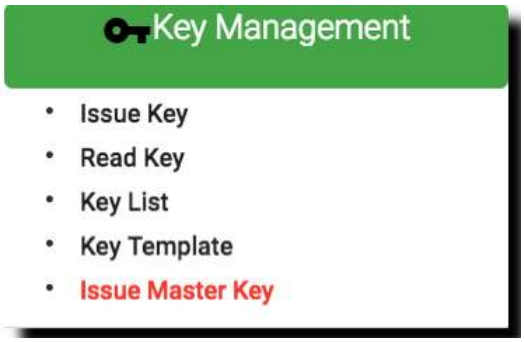
Create Guest/Temp Card

Guest Card and Temp Card are almost the same. They serve the purpose to temporarily grant access to a visitor. The default expired date will be one day only. The one time pass attribute can be used to further restrict access to lockplace to only one time for all the lockplaces granted. Below is a demo to create a Guest Card. Create a temp card is the same.

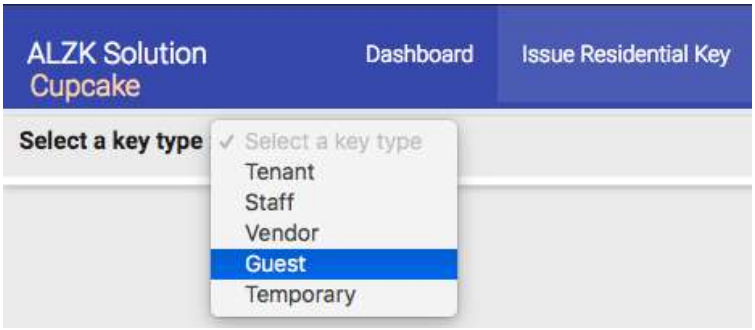
You will request the visitor to return the Guest/Temp Card when they leave the property. The returned card can be reused to issue any card types.

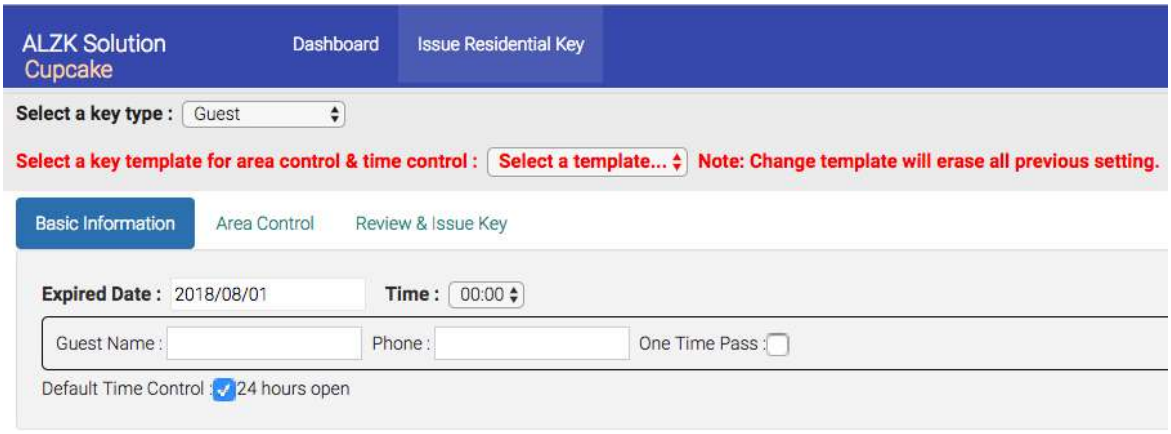
- Steps to create a guest card

Navigate to Issue Key page. **Key Management** => **Issue Key**

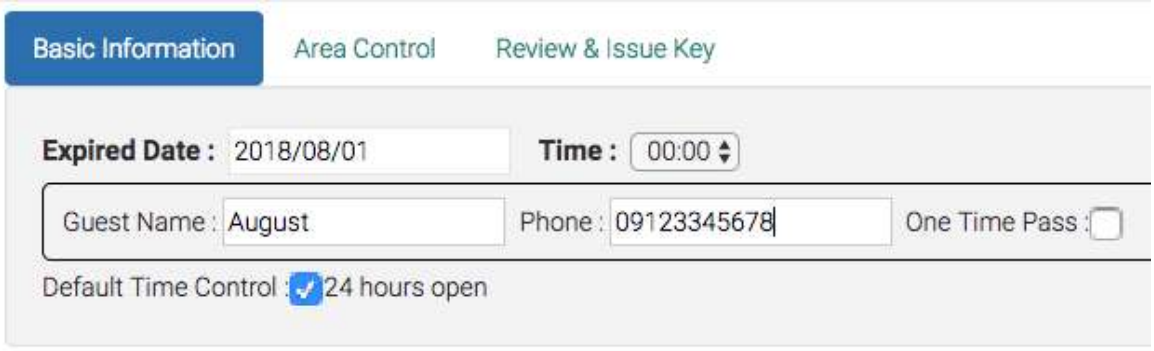


Select key type as **Guest.**

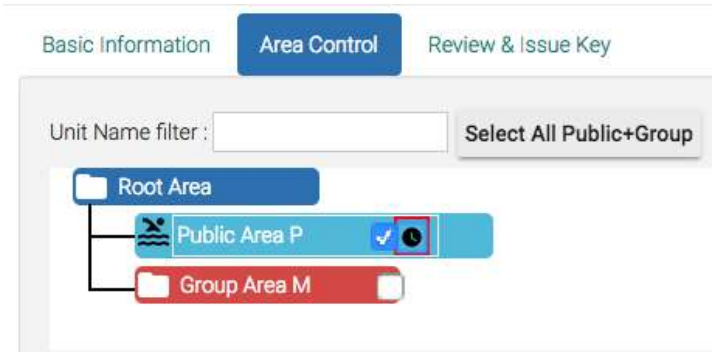




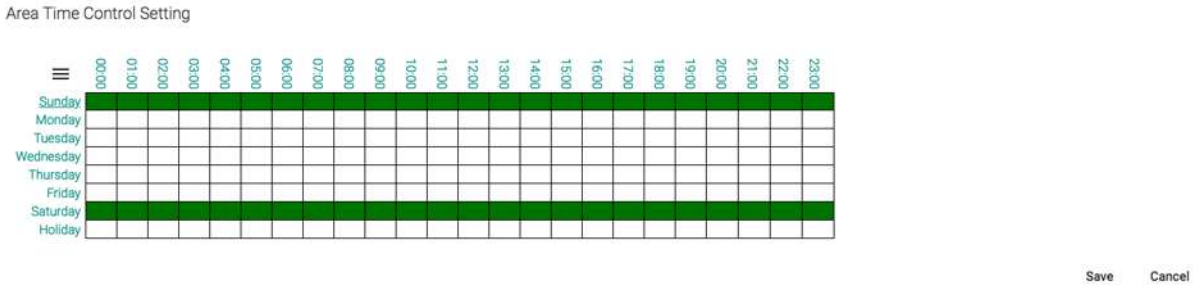
Edit guest information.



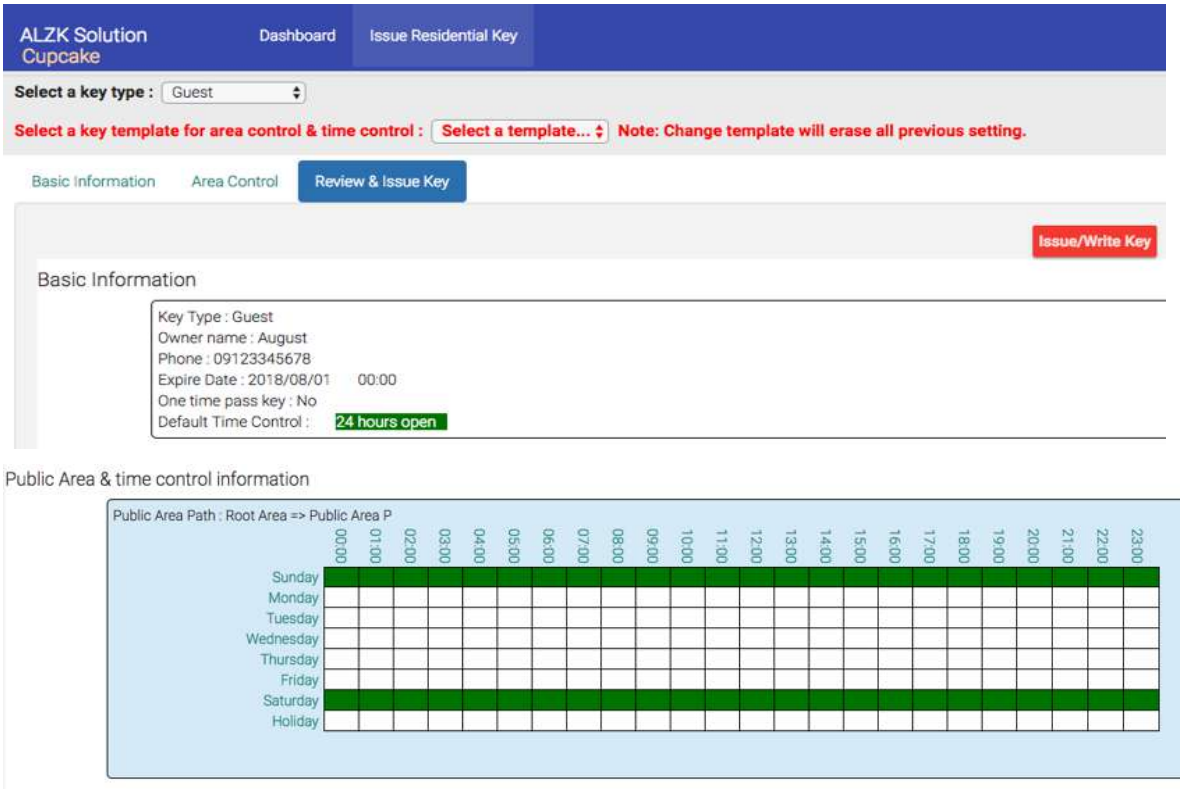
At **Area Control** page, Check the box on **Public Area P** and click edit **time control button**.



Let's assume guest **August** can access **Public Area P** on this **weekend**, edit time control settings and click **Save** to save time control setting.



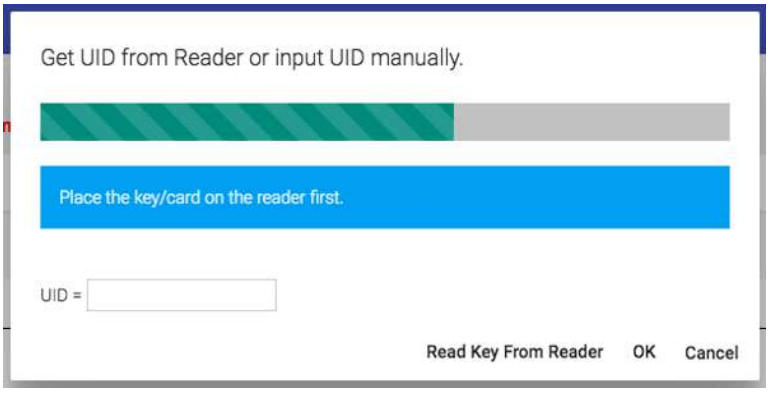
At the **Review & Issue Key** page we can verify the information of guest key including **Basic Information**, **Unit Area & time control information, Public Area & time control information**, **Group area & time control information**



Click **Issue/Write Key** to issue **August** guest key.

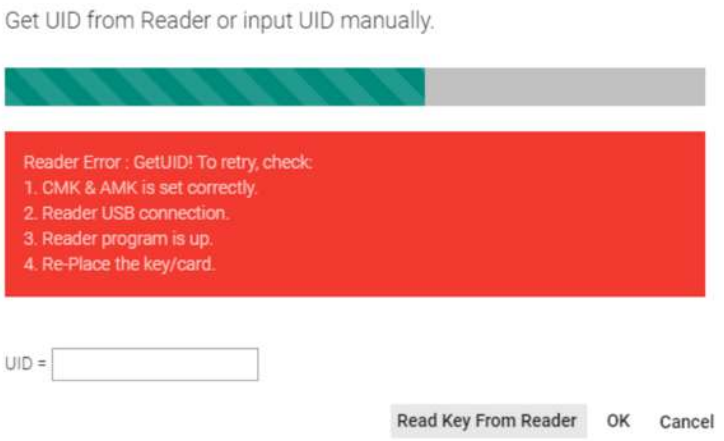
Place key/card on reader first.

Click **Read Key From Reader** to get Key's UID.

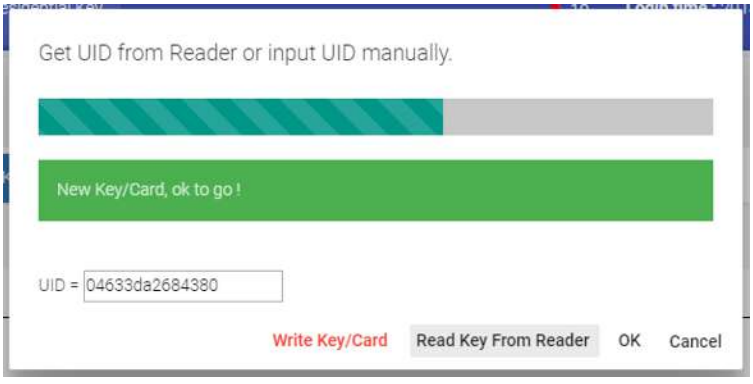


The **green light** LED on **Read** should blink.

If **Read Key From Reader** failed with **three** beep sounds and display following message, please re-place key/card and click **Read Key From Reader** again.



If read key successfully click **Write Key/Card** to issue guest key.



Write Key/Card successfully with **two** beep sounds.

Shutdown Public Area

The only public area we have in SIMPLE project is the swimming pool. Suppose you need to close the swimming pool in the winter or for maintenance purpose, it is not a good idea to re-issue all the cards to remove the swimming pool access right.

MF-Admin server has two features: Area Time Control and Lock Scheduling which will help you to complete this task in a second without re-issuing any cards.

- ### Area Time Control

  Area Time Control is another layer of time control which logically AND with the time control you set on the Mifare card during card creation for a specific area/lockplace.

  Area Time Control setting will take effect to all the residential cards (NOTE: exceptions exist if you change the access rule, we will discuss it later). Therefore, when you want to restrict the access of swimming pool to a certain time period of a day in a weekly manner, area time control is here for this task.

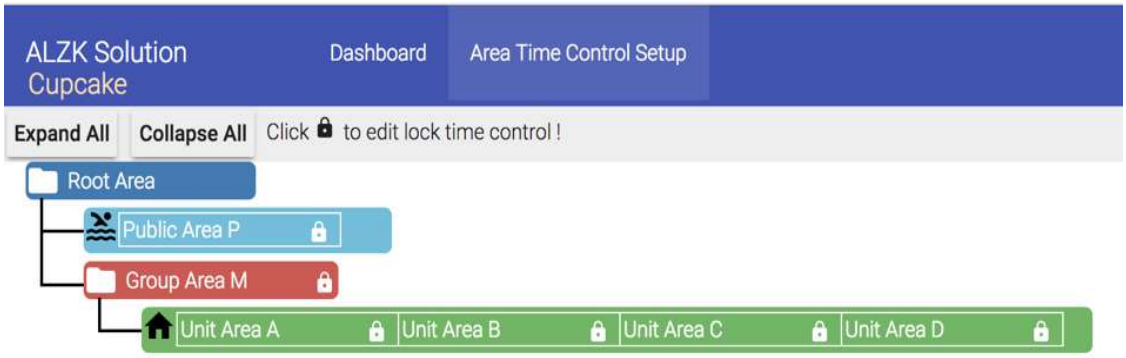
  Suppose your card has the access right of swimming pool for 24 hours everyday. And the area time control of swimming pool is only for Saturday and Sunday 24 hours. Then you are only able to access swimming pool on Saturday and Sunday.

  Note that this approach can not completely shut down the swimming pool because if you leave all the time control cells blank, it means NO time control. To complete shut down a public area, you better use Lock Scheduling feature.

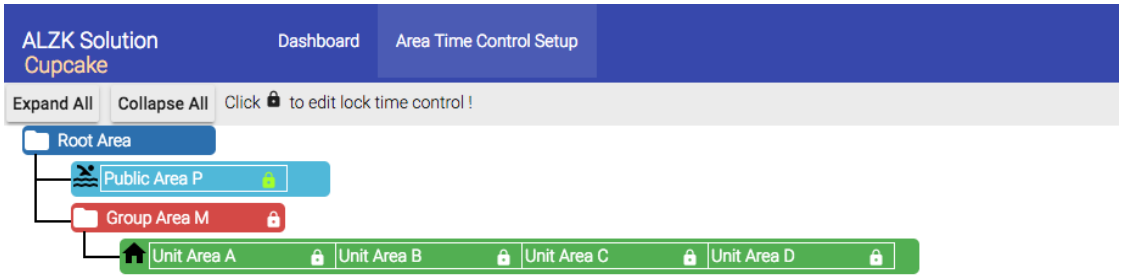
  To demonstrate how to set the area time control, follow below steps. (Note that you set time control for an area, not a lock.).

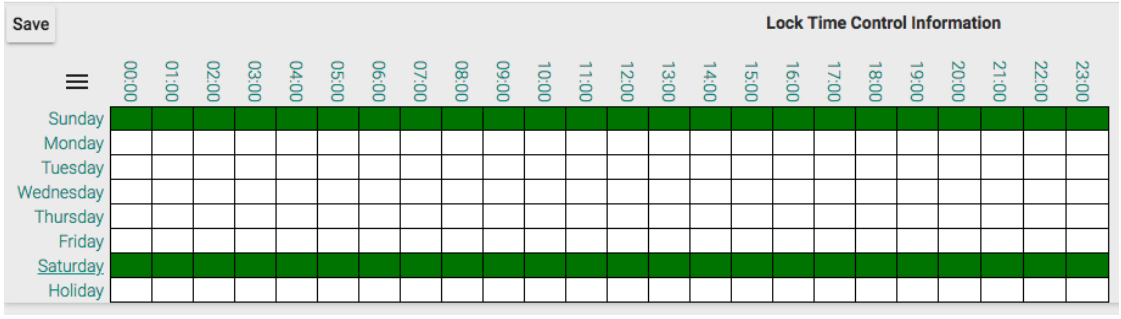
  - ❖ Steps to set area time control for swimming pool

    Navigate to Area Time Control Setup page.
    Lock Management => **Area Time Control**



Assume the area time control of swimming pool is only for **Saturday and Sunday 24 hours**. Let's edit swimming pool time control to meet the requirement, click **Save** to save time control setting.





You can see the lock on **Public Area P** turn to light green color which means there is a time control setting over this area**.**

- Lock Scheduling

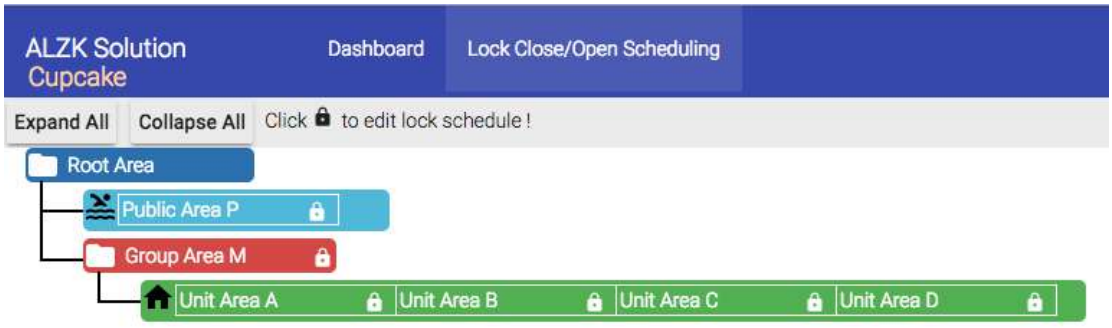
Lock scheduling has nothing to do with Mifare card. It can be used to control the schedule to lock/unlock a lock. In SIMPLE project case, we may use lock operation mode to control the locking status. Three modes are available for a lock (not an area):

- ❖ Normal (default) : Scan card is needed.
- ❖ Passage : Keep the lock unlocked, scan card is not necessary.
- ❖ Private : It acts like normal mode. In combination with the NoPrivacy access rule, only Staff Card (and Master Card of course) can access the private area. But you may change the access rule to block all cards except Master Card.

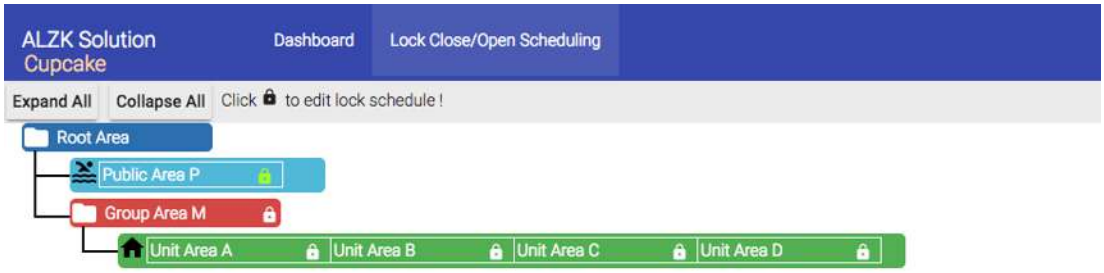
Therefore, set the operation mode to Private will block all non-staff cards now.

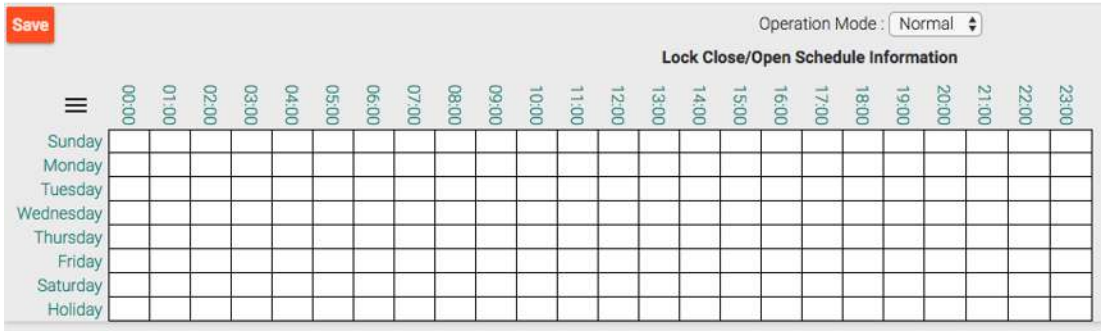
- ❖ Steps to set operation mode

  Navigate to lock operation page. **Lock Management** => **Lock Scheduling**

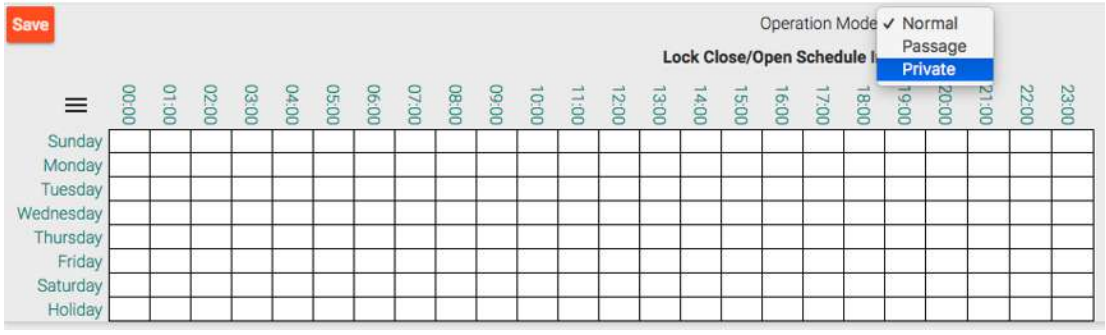


Click the lock icon in **Public Area P**.





In **Operation Mode** dialog, select **Private** and click **Save**.



The **Public Area P** lock icon color will turn to light green which means it is not normal setting**.**

As you can see in the previous screenshots, there is also a time control table which you can set when operation mode is in normal mode. It is used to manage a public/group area where you like it to be passage mode for some period of time of a day in a weekly manner. We will not demo it here. Please see *MF-Admin Server User Manual* for detail.

Access Control Rule

It is time to elaborate how access rules works. All the locks will apply the access rule when scan a card. Below is the default access rule settings :

	Tenent	Guest	Temp	Staff	Vendor
Public	Lock+Key	Lock+Key	Lock+Key	Lock+Key	Lock+Key
Unit	Lock+Key	Lock+Key	Lock+Key	Lock+Key	Lock+Key
Group	Lock+Key	Lock+Key	Lock+Key	Lock+Key	Lock+Key
NoPrivacy	No	No	No	Yes	No

You have to choose one of the three settings to apply to a combination of card types and area types. The three choices are :

- Lock+Key : Area time control will be taken into consideration together with the settings on the card/key to decide whether lock can be unlocked or not.
- Lock only : The system only takes area time control into consideration and ignore the card/key settings.
- Key only : The system will take card/key setting into consideration and ignore the area time control.

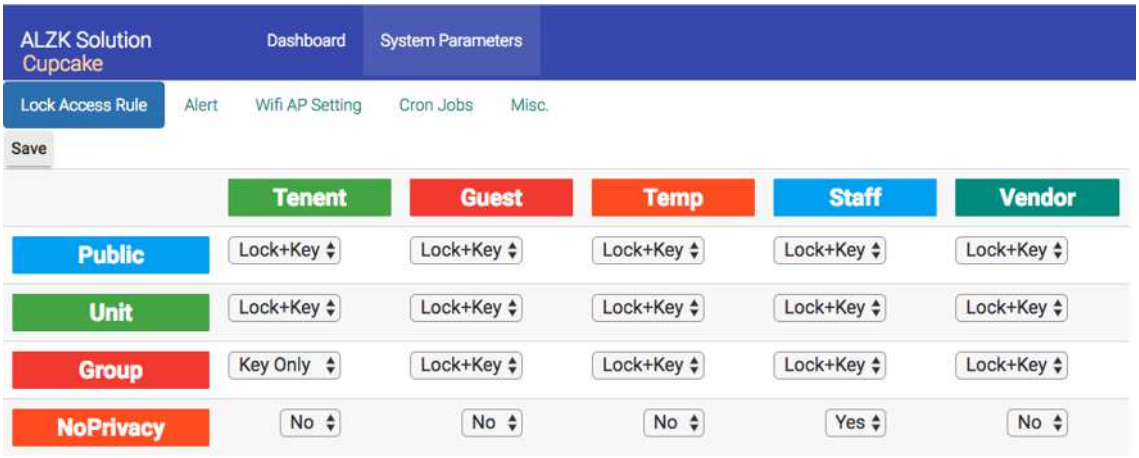
The NoPrivacy rule is a special rule for privacy locks (the mode you set at lock scheduling features). The card type with NoPrivary set to yes will ignore the privacy mode which means the card is allowed to unlock the lock.

Therefore, if you like to block all users including the staff to enter swimming pool in SIMPLE project, You have do two things : 1. At lock scheduling function, set lockplace P to private mode. 2. At lock access rule of system parameters function, set Staff's NoPrivacy setting to No.

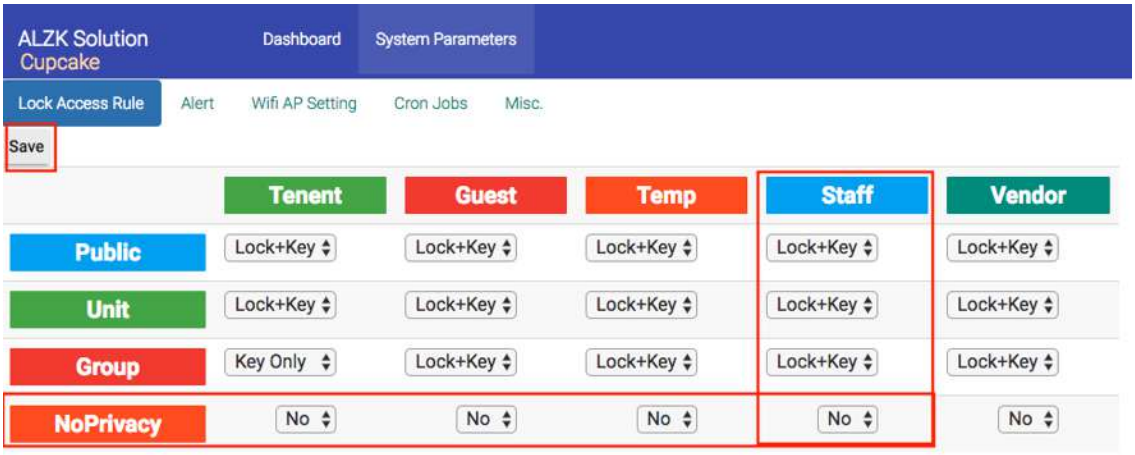
- Steps to shut down swimming pool completely except Master Key

  Previously we set swimming pool's lock operation to **Private** mode, so let's try to edit **Access Rule Control** now. Navigate to edit page first.

System Management => System Parameters



According to the document, we would want to block all users including the **staff** to enter swimming pool in private mode. Find out the **Staff** field and edit **NoPrivacy** to **No** and click **Save**.



Now, the swimming pool has been shut down completely except Master Key.

Time Control - Add/Remove Holidays

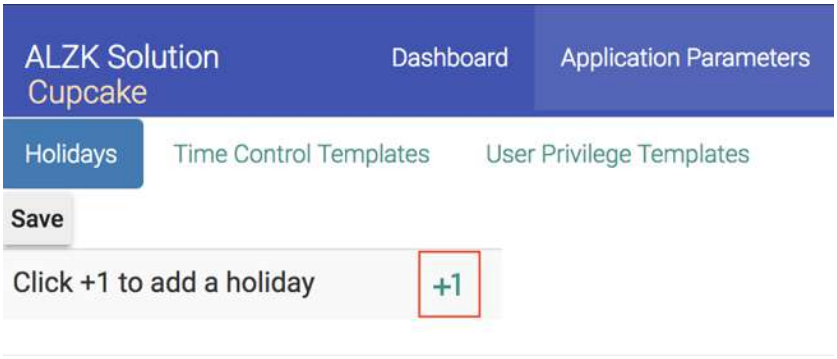
Time control settings can be found in many places in the system and it is straightforward to use. There is only one thing to remind, the holiday.
In addition to the settings for 7 days a week, you have another row (the bottom row) to set time control which is the holiday setting. For system to recognize which days are holiday, you have use the application parameters function to add/remove holidays.

- Steps to add/remove holiday

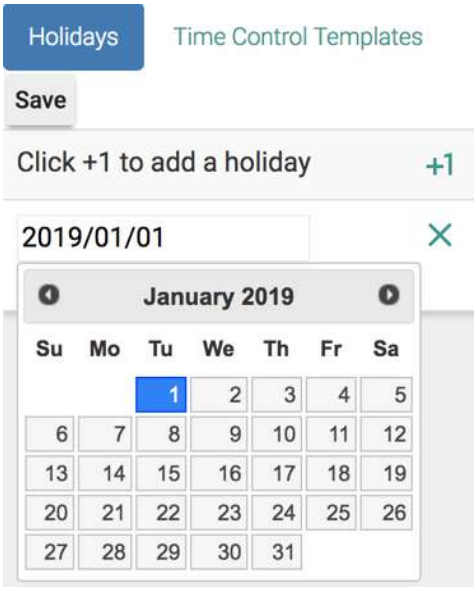
  ❖ Add holiday

  Navigate to Holidays tab in Application Parameters page.
  System Management => **Application Parameters**

  Click **+1** to add a holiday.



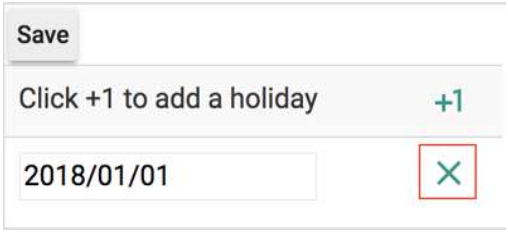
Click the blank field to edit holiday assume that **2019/01/01** is a holiday.



Click Save to save the holiday.

❖ Remove holiday

Click **X** to remove holiday and click **Save**.



The holiday setting takes precedence over weekly settings. It means if today is holiday and Monday, then the system will check holiday's settings instead of Monday's settings.

Advanced Setup Guide

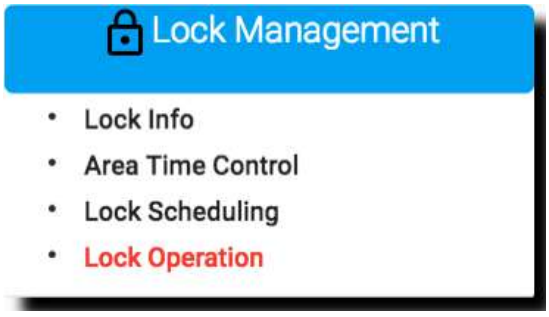
Note : Do not try this section without assistance from reseller or Pamex. Changing any of the parameters in this section to unreasonable value might lead to strange system behavior.

Lock Report Interval

Lock report interval can be changed at the Lock Operation function.
The default value of this parameter is 1800 secs (30 mins) for all locks.

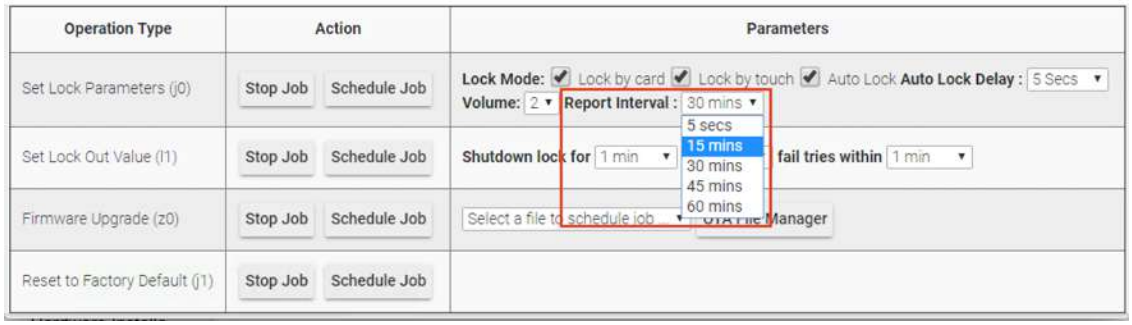
- Steps to change the report interval setting for Lock P

Navigate to **lock operation** page to change the report interval.
Lock Management => **Lock Operation**



Operation Type	Action	Parameters
Set Lock Parameters (j0)	Stop Job Schedule Job	**Lock Mode:** Lock by card Lock by touch Auto Lock **Auto Lock Delay :** 5 Secs **Volume:** 2 **Report Interval :** 30 mins
Set Lock Out Value (l1)	Stop Job Schedule Job	**Shutdown lock for** 1 min **if** 4 times **fail tries within** 1 min
Firmware Upgrade (z0)	Stop Job Schedule Job	Select a file to schedule job ... OTA File Manager
Reset to Factory Default (j1)	Stop Job Schedule Job	

Click lock icon to select lockplace **Public Area P (**multiple selections allowed here**)**, at **Set Lock Parameters (j0)** field find out **Report Interval** parameters and set up it to **15 mins**.



Click **Schedule Job** to change the report interval setting.

To save the battery's life, Pamex Kapture smart lock is not always connected to MF-Admin Server. The lock will connect to the MF-Admin Server for every 1800 secs by default. This also indicate one thing to bare in mind : every change to the card or lock will sync to locks in 1800 secs at most. For example, when you issue a card at 9:00 am, the card number will be downloaded to the related physical lock(s) at next reporting time which could be anytime before 9:30 am depending on the last report time.

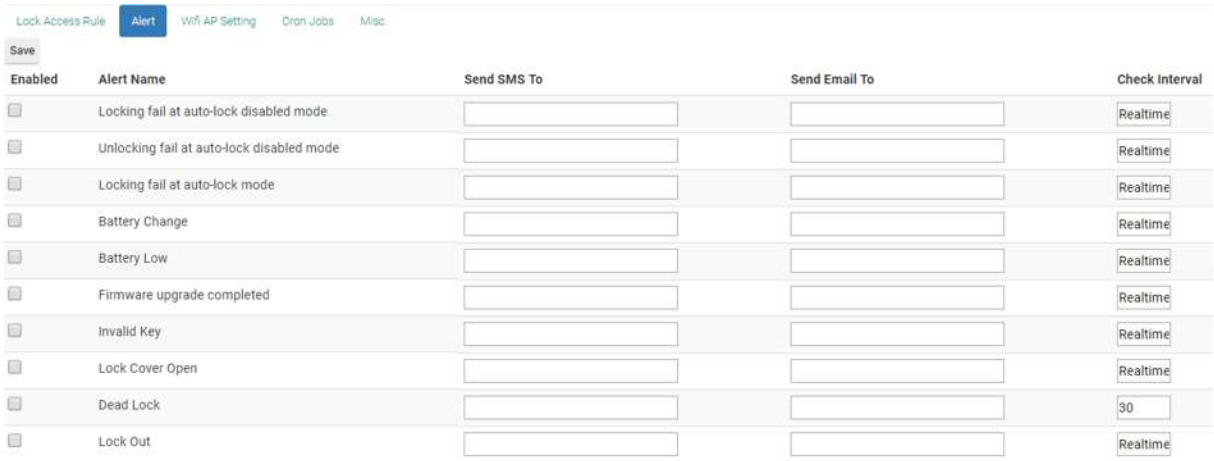
There is another way to force a lock to communicate with MF-Admin server immediately. Four real time events (See Appendix) will cause a lock to communicate with MF-Admin server. Therefore, when you want to make sure the lock to sync cards or execute lock operation commands immediately without waiting for 30 mins, just

prepare an invalid Mifare card (You may issue an invalid card easily by assigning no area to it). and scan to a lock will serve this purpose.

Alert Settings

When you login the MF-Admin Server, there are two icons showing the total number of new alerts at the navigation bar :

In the Alert tab of the system parameters, you can see there are ten types of alert that will be generated in the system :



There is no alert enabled by default. You may check the checkbox to enable the alerts you like to see.

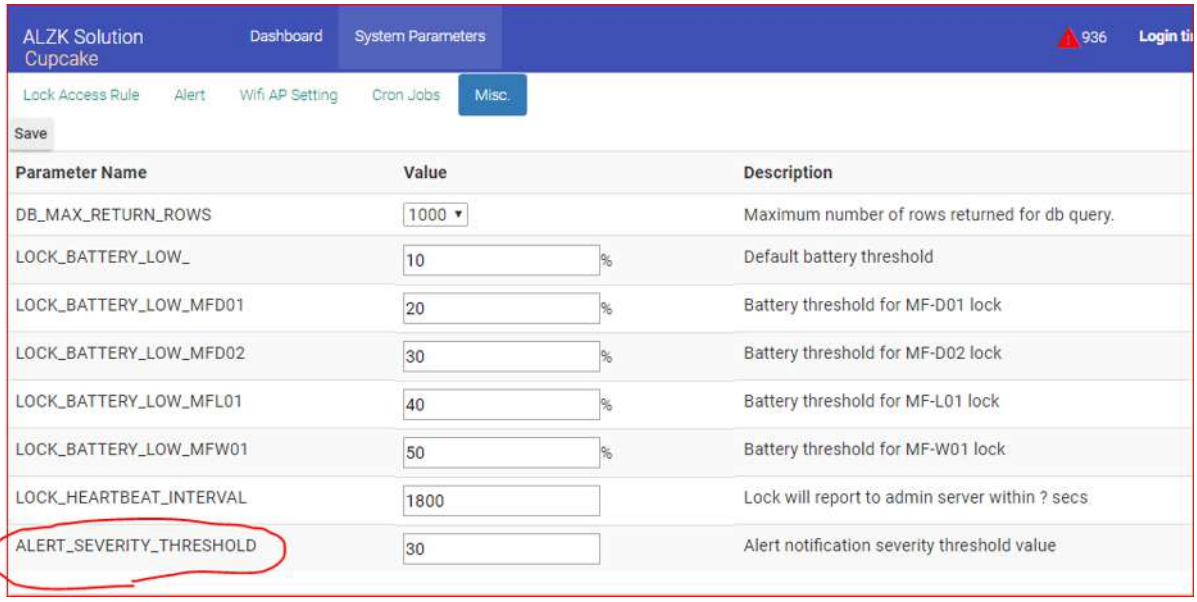
You may enter valid email addresses in the “Send Email To” field to enable email notification for an alert. Multiple addresses can be entered delimited by semicolon.

The SMS is not working in current release of MF-Admin Server.

The check intervals are all realtime and can not be modified except the “Dead Lock” alert. Dead Lock alert checking interval can be set larger than the default (30 mins). This value is related to the lock report interval. It is unreasonable to set a dead lock checking interval smaller than the lock report interval. Note that the unit of this value is minute.

For every alert types, there is a severity value config in the MF-Admin Server appConfig.json file. Please read the MF-Admin Server User Manual for how to change the severity value of each type of alerts. For the default severity setting, please see Alert Types in the Appendix. An alert will fall into lower severity category (Yellow alerts on the navigation bar) or higher severity category (Red alerts on the navigation bar)

can be controlled by the parameter ALERT_SEVERITY_THRESHOLD parameter in the Misc tab of system parameters function.



Appendix

Lock UI Patterns (LED & Buzzer)

Wall Reader

Action	Response (+ : sequential, & : parallel)
Power On	**Red**/**Green** LED flash interchange 3 times + long beep 1 time
Scan Invalid Card	**Red** LED flash 3 times & beep 3 times (進入Lock Out計算狀態)
Scan Crypto Card	**Green** LED on 1 sec & long beep once
Scan Construction Card	**Green** LED flash 1 time & beep 1 time. (Same as unlock by residential card)
Scan Programming Card	**Green** LED flash 2 times & beep 2 times + register success : **Green** LED flash + long beep register fail : NONE.
Scan Recovery Card	**Green** LED flash 3 times & beep for 3 times + Wait for 2-3 secs + <Online Re-Boot Done>
Scan Residential Card (Unlock)	**Green** LED flash 1 time & beep 1 time.
Scan Lock/Touch Lock/Auto Lock	**Red** LED flash once & beep 1 time.
OTA start to finish	**Red** & beep 5 times as start **Green** & beep 5 times as successfully downloaded + Wait 1~2 secs + <Online Re-Boot Done> **Red** and beep 3 times as fail to download
Online Re-Boot Done	**Red** LED flash 1 time + Green LED on 2 secs & beep 2 secs
MP Test	**Red** LED on 1 sec + **Green** LED on 1 sec + beep 1 time + **Green** LED flash 1 time, beep 1 time + **Red** LED flash until wifi connected.

進入Lock out計算狀態	**Red** LED flash every 1 sec, stop flashing in 1 min (default)
Lock Out	**Red** LED on for 3 minutes (default)

<<Leverset, Deadbolt>>

Wifi AP Specification and Settings

Wifi network is necessary for Pamex Kapture solution. The network setup is out of the scope of this manual. Please make sure your network is well configured with your system vendors.

Pamex Kapture locks support most of the popular wifi APs in the market. Please make sure your Wifi AP has the features listed below :

- Support 802.11 bgn, 2.4 G
- WAP2 encryption

Factory default settings - Wall Reader

Volume : 3 (high), 0~3
Locking Mode : 111, scan card enabled + touch enabled + auto lock enabled
Auto Lock Interval : 5 secs
Report Interval : 1800 secs
Lockout settings : Lockout for 180 secs after 4 fail tries within 60 secs

Factory default settings - Deadbolt

Same as Wall Reader

Factory default settings - Leverset

Same as Wall Reader

Factory default settings - Interconnect

Same as Wall Reader

MF-Admin Server Parameters default settings

Application Parameters

Please see *MF-Admin Server User Manual.*

System Parameters

Please see MF-Admin Server User Manual.

Mifare Card Specification

You may purchase Mifare Card or Key fob from 3rd party. **MIFARE**® is the NXP Semiconductors-owned trademark of a series of chips widely used in contactless smart cards and proximity cards. The MIFARE® brand name covers proprietary solutions based upon various levels of the ISO/IEC 14443 Type A 13.56 MHz contactless smart card standard. It incorporates AES and DES/Triple-DES encryption standards, as well as an older proprietary encryption algorithm.

Pamex Kapture supports only MIFARE DESFire EV1/EV2 compatible cards/key fobs.

Card Types

Pamex Kapture defines below card types :

	Card Type
1	Crypto Card (CRC)
2	Construction Card (COC)
3	Programming/Registration Card (PRC)
4	Residential Card (RSC) – sub-typed into five different residential card : Tenant card, Staff card, Vendor card, Guest card, and Temp card depending how you issue the card using MF-Admin server
5	Master Card (MAC)

Crypto Card :

To recognize any other types of card, a lock has to read Crypto card. Crypto card is not issued from MF-Admin server. It should be provided by Pamex and is unique to your project.

Construction Card :

Before the wifi network is ready, the only way to unlock the door locks will be using the construction cards. Construction cards can not be issued from MF-Admin Server. It should be provided by Pamex and is unique to your project.

Programming/registration card :

Once your wifi network is ready and MF-Admin server is installed, programming card can be used to register lock to the MF-Admin Server. Programming card can be created/issued using MF-Admin Server. In a large project, you may create several programming cards to speed up the registration process.

Residential Card :

There are five types of residential card : Tenant, Staff, Vendor, Guest and Temp. Residential cards are issued using MF-Admin Server by property owner or administrator when project goes live.

Master Card :

Master Card is an unrestricted access card to any door locks in the project. It is created using MF-Admin server. Master Card is only valid to the locks which has registered to MF-Admin server.

Area Types

There are three types of area you may create in MF-Admin Server :

Group Area :
Group area is like a folder. It is used to group together the units and public areas in the same floor/building for example.

Unit Area :
An unit area represents an unit for one family.

Public Area :
A public area represents a shared facility like swimming pool.

These areas will be organized into a single root area tree to represent your property. All the areas can be programmed to grant access to residential cards by time control and area control using MF-Admin Server.

Lock Real Time Events

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1 : Lock Out

2 : Cylinder Cover Opened

3 : Invalid Key (Mifare Desfire Key)

4 : Single Pass Success

Default Severity of Alert Types

Alert Name	Severity
Locking fail at auto-lock disabled mode	30
Unlocking fail at auto-lock disabled mode	30
Locking fail at auto-lock mode	30
Battery Change	10
Battery Low	100
Firmware upgrade completed	20
Invalid Key	80
Lock Cover Open	100
Dead Lock	100
Lock Out	50

FCC Statement

FCC Statement:

Kapture KA-WR1N, Kapture KA-WR1S complie with part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) Kapture KA-WR1N, Kapture KA-WR1S may not cause harmful interference, and

(2) Kapture KA-WR1N, Kapture KA-WR1S must accept any interference received, including interference that may cause undesired operation.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

—Reorient or relocate the receiving antenna.

—Increase the separation between the equipment and receiver.

—Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

—Consult the dealer or an experienced radio/TV technician for help.

Changes or modifications not expressly approved by the party responsible for compliance could void the user’s authority to operate the equipment.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 cm between the radiator and a human body.

NCC Statement

NCC Statement:

Taiwan Regulatory Information(NCC)

低功率電波輻射性電機管理辦法

第十二條

經型式認證合格之低功率射頻電機，非經許可，公司、商號或使用者均不得擅自變更頻率、加大功率或變更原設計之特性及功能。

第十四條

低功率射頻電機之使用不得影響飛航安全及干擾合法通信；經發現有干擾現象時，應立即停用，並改善至無干擾時方得繼續使用。

前項合法通信，指依電信法規定作業之無線電通信。

低功率射頻電機須忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干擾。