

Integrated IT Access Control and Monitoring over Ethernet

## **User Manual**

Infra-2200 / 2400 Cabinet SmartCard Handle, Network version



Designed and manufactured by Austin Hughes

#### Legal Information

First English printing, October 2002

Information in this document has been carefully checked for accuracy; however, no guarantee is given to the correctness of the contents. The information in this document is subject to change without notice. We are not liable for any injury or loss that results from the use of this equipment.

#### Safety Instructions

# Please read all of these instructions carefully before you use the device. Save this manual for future reference.

- Unplug equipment before cleaning. Don't use liquid or spray detergent; use a moist cloth.
- Keep equipment away from excessive humidity and heat. Preferably, keep it in an air-conditioned environment with temperatures not exceeding 40° Celsius (104° Fahrenheit).
- When installing, place the equipment on a sturdy, level surface to prevent it from accidentally falling and causing damage to other equipment or injury to persons nearby.
- When the equipment is in an open position, do not cover, block or in any way obstruct the gap between it and the power supply. Proper air convection is necessary to keep it from overheating.
- Arrange the equipment's power cord in such a way that others won't trip or fall over it.
- If you are using a power cord that didn't ship with the equipment, ensure that it is rated for the voltage and current labeled on the equipment's electrical ratings label. The voltage rating on the cord should be higher than the one listed on the equipment's ratings label.
- Observe all precautions and warnings attached to the equipment.
- If you don't intend on using the equipment for a long time, disconnect it from the power outlet to prevent being damaged by transient over-voltage.
- Keep all liquids away from the equipment to minimize the risk of accidental spillage. Liquid spilled on to the power supply or on other hardware may cause damage, fire or electrical shock.
- Only qualified service personnel should open the chassis. Opening it yourself could damage the equipment and invalidate its warranty.
- If any part of the equipment becomes damaged or stops functioning, have it checked by qualified service personnel.

#### What the warranty does not cover

- Any product, on which the serial number has been defaced, modified or removed.
- Damage, deterioration or malfunction resulting from:
  - □ Accident, misuse, neglect, fire, water, lightning, or other acts of nature, unauthorized product modification, or failure to follow instructions supplied with the product.
  - □ Repair or attempted repair by anyone not authorized by us.
  - □ Any damage of the product due to shipment.
  - □ Removal or installation of the product.
  - □ Causes external to the product, such as electric power fluctuation or failure.
  - □ Use of supplies or parts not meeting our specifications.
  - □ Normal wear and tear.
  - □ Any other causes which does not relate to a product defect.
- Removal, installation, and set-up service charges.

#### **Regulatory Notices Federal Communications Commission (FCC)**

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.

Any changes or modifications made to this equipment may void the user's authority to operate this equipment. 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:

- Re-position 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.

Notice : The changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

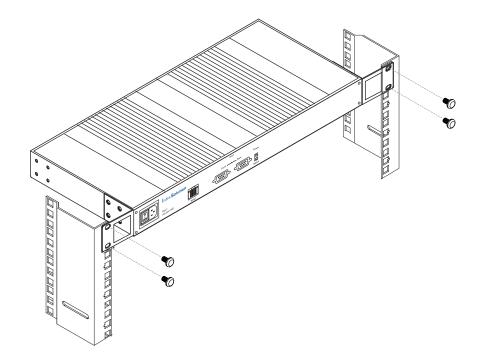
IMPORTANT NOTE: To comply with the FCC RF exposure compliance requirements, no change to the antenna or the device is permitted. Any change to the antenna or the device could result in the device exceeding the RF exposure requirements and void user's authority to operate the device.

## **Before Installation**

- It is very important to locate the equipment in a suitable environment.
- The surface for placing and fixing the equipment should be stable and level or mounted into a suitable cabinet.
- Make sure the place has good ventilation, is out of direct sunlight, away from sources of excessive dust, dirt, heat, water, moisture and vibration.
- Position the equipment with respect to related facilities.

#### InfraBox Installation

- Suggest the installation at the rear top mounting of cabinet
- M6 screws set not provided.



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## Part I. InfraBox Installation

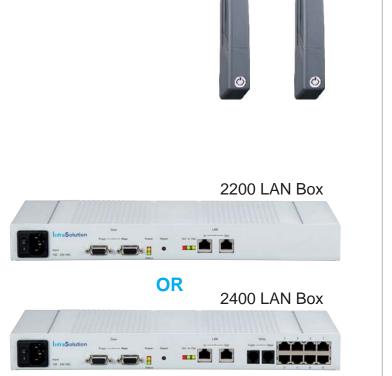
## < 1.1 > Package Contents

## Unpacking

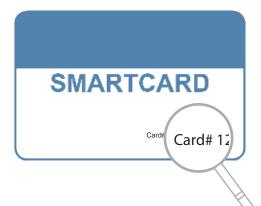
The equipment comes with the standard parts shown on the package contents. Check and make sure they are included and in good condition. If anything is missing, or damage, contact the supplier immediately.

#### **Package Content**

- 2200 LAN Box x 1 OR 2400 LAN Box x 1
- Smart card handle, pair (MiFARE **OR** Proximity)
- Inductive **OR** Mechanical Door Sensor, pair
- Temperature & Humidity Sensor x 2 ( for 2400 LAN Box only )
- Front door cable x 1 ( 3425mm )
- Rear door cable x 1 ( 2625mm )
- 6' Power cord x 1
- Activated SmartCard x 1
- Key x 1
- Cable clip x 8
- M5 x 12mm screw x 6



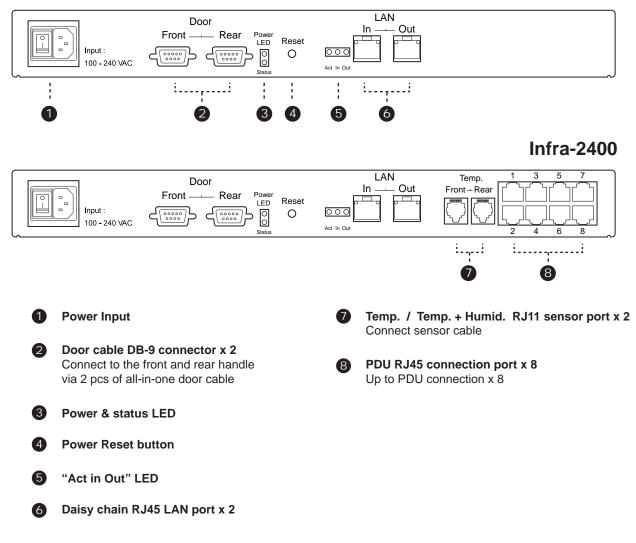
Patented and Worldwide Patents Pending



Each package bundled with smartcard x 1. The card on the bottom right shows card number information :

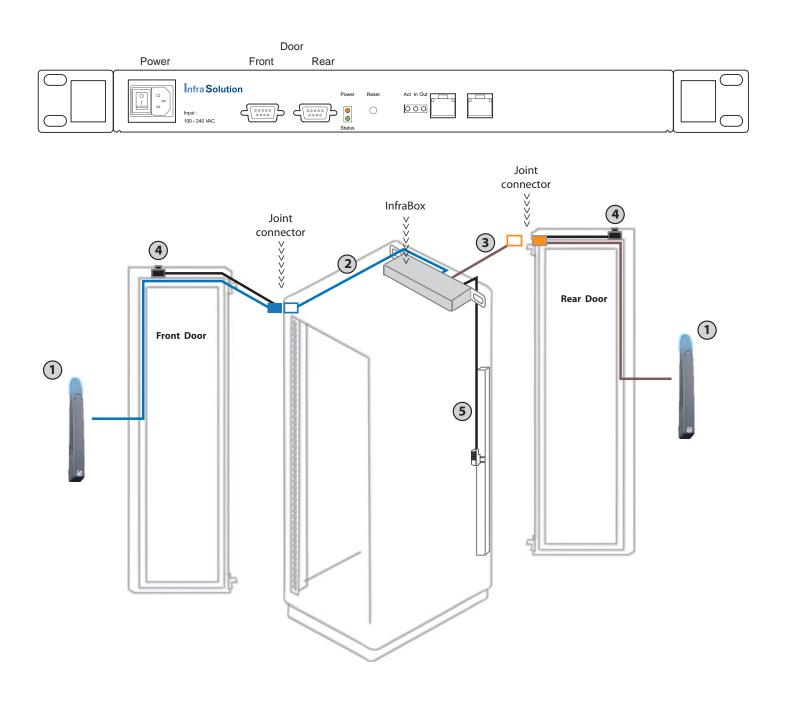
#### < 1.2 > Overall Installation Diagram for Cabinet

#### Infra-2200



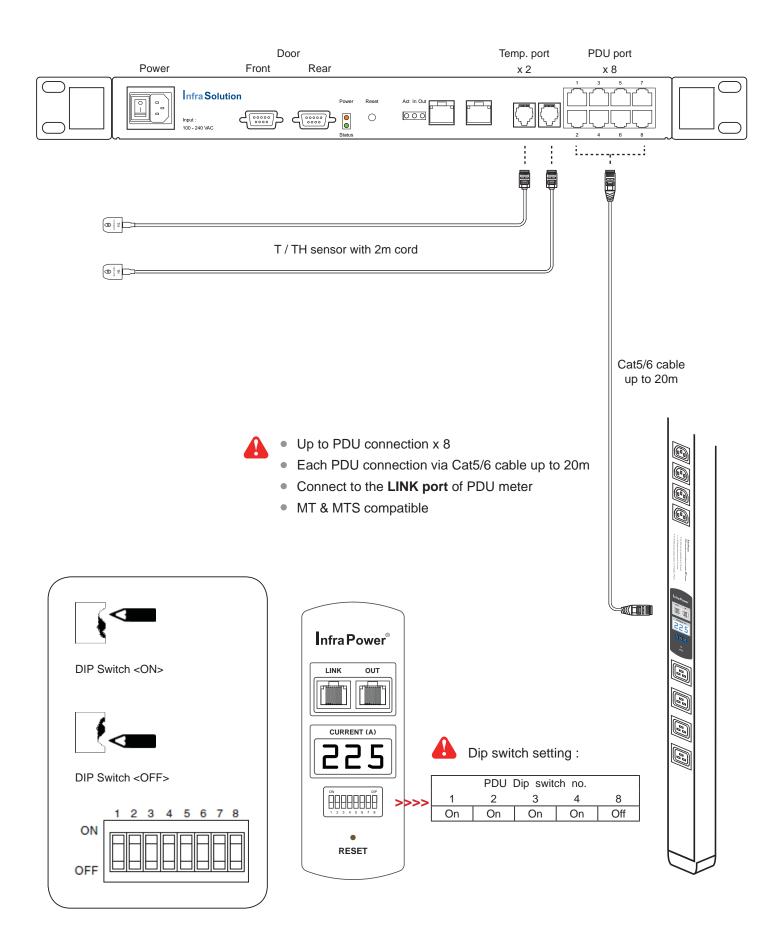
## Part I. InfraBox Installation

## < 1.2 > Overall Installation Diagram for cabinet



- 1 HV-600 SmartCard handle x 2
- ② Front door cable ( 3425mm ) with joint connector x 1
- ③ Rear door cable (2625mm) with joint connector x 1
- $\textcircled{ \ }$  Door sensor ( attached with door cable in the joint point ) x 2
- 5 6' power cord x 1

## < 1.3 > Connection Diagram for Temp. sensor & PDU

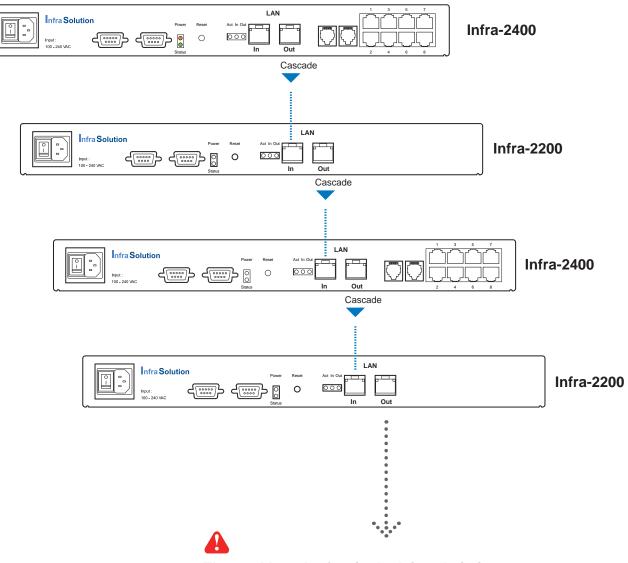


## Part I. InfraBox Installation

## < 1.4 > Temp. & Humidity Sensor Connection & Specification

		Temp. & Humid. Sensor
Part no.		IG - TH01
Temperature	Range	0 to 80°C(32 to 176°F)
Sensitivity	Accuracy	±1.0°C typical(±2°F)
	Resolution	0.1°C (0.2°F)
	Response Time	5 to 30 sec
Relative	Range	0 to 100% R.H
Humidity Sensitivity	Accuracy	0 to 100, ±8.0% R.H 20 to 80, ±4.5% R.H.
	Resolution	1% R.H.
	Response Time	8 sec
Power	Voltage	12VDC, powered by sensor port
Requirement	Current Consumption	20mA
	Power consumption	0.24 Watt
	Power on indicator	Red LED
Housing	Chassis & Cover	plastic
	Color	Dark gray
	Installation	Magnetic base for unrestricted installation
Cable	Cable Length	TH sensor w/ 2m cable ( standard ) TH sensor w/ 4m cable ( option )
	Cable Specification	4-wired 3.5mm to RJ11
	Cable Color	Black
Environmental	Operating	0 to 80°C Degree
	Storage	-5 to 80°C Degree
	Humidity	0~100%, non-condensing
	· · · · · · · · · · · · · · · · · · ·	
Dimensions	Product	30L x 25Wx 18H mm
	1	
Weight	Net	10g
Compatibility	InfraPower	W / WS / Wi / WSi series PDU
	InfraSolution	X-2000 series
	InfraGuard	Cabinet sensor system

## < 1.5 > Cascade Connection



- The total length of a single daisy chain is 100m max.
- The total Infrabox of a single daisy chain is 50 boxes max.

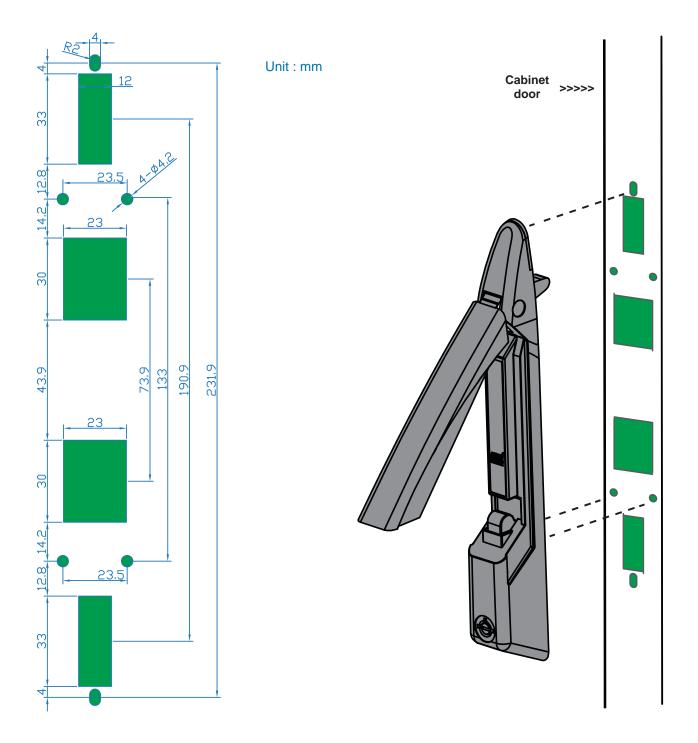
#### Part II. Handle Installation

Ω

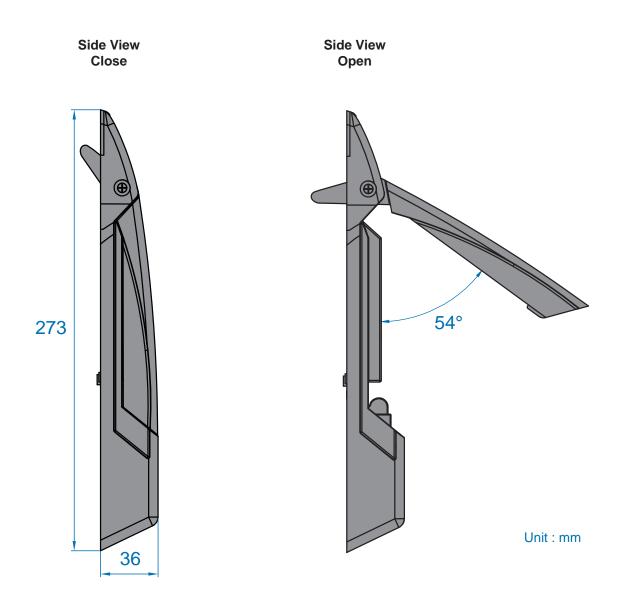
## < 2.1 > Handle Mounting Cut-out & Installation

#### Custom Mounting Cut-out on Cabinet Door for Handle Installation :

- It is highly important to make a correct handle mounting cut-out on cabinet door.
  - Please **100%** follow the diagram on the below to make the cut-out.



## < 2.1 > Handle Mounting Cut-out & Installation



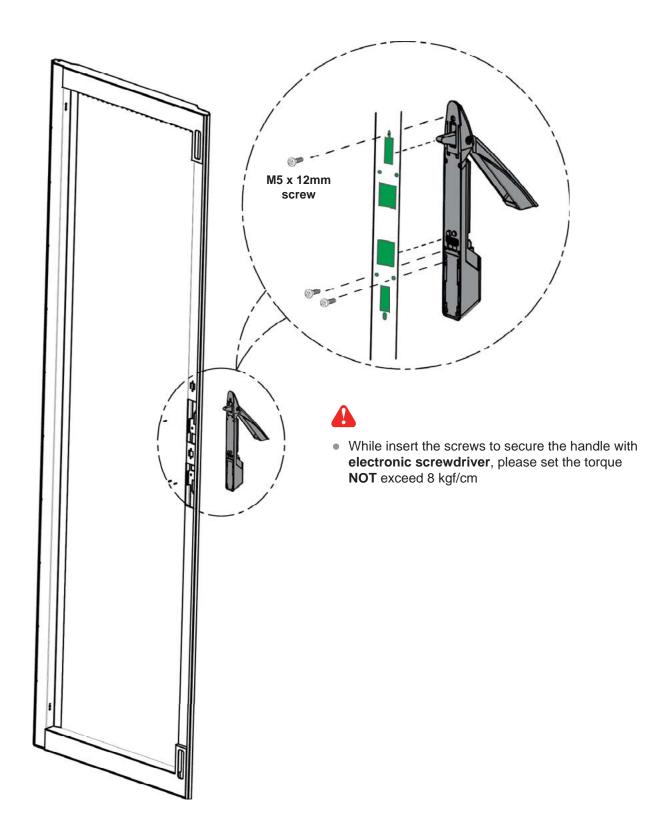
HV-600 handle design supports left side & right side open

#### Part II. Handle Installation

## < 2.1 > Handle Mounting Cut-out & Installation

#### Handle Installation Steps

- 1. Mount HV-600 handle to the custom handle mounting cut-out position.
- 2. Insert the bundled M5 x 12mm screw x 3 pcs to secure the handle in place.



## < 2.1 > Handle Mounting Cut-out & Installation

#### Parts of Cabinet Door Locking Bar

Three parts available for cabinet manufacturer to produce the cabinet door locking bar system integrated with HV-600 handle.

Locking bar handle bracket, pc Order part no. : 404 - 8 - 02111 material : alloy ( fixing screw not provided )



Dimension Diagram on next page

# Locking bar retaining bracket, pc Order part no. : 314 - 0 - 10010 material : alloy ( fixing screw not provided )



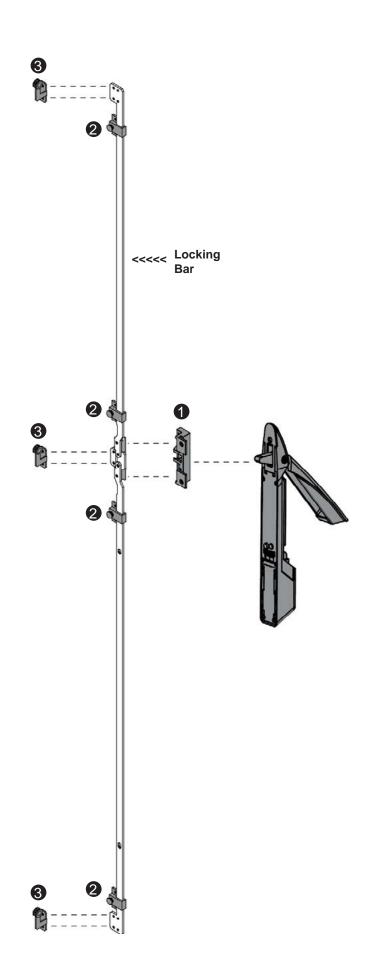
Dimension Diagram on next page

 Locking bar roller, pc
 Order part no. : 314 - 0 - 10020 material : alloy

 (fixing screw not provided)

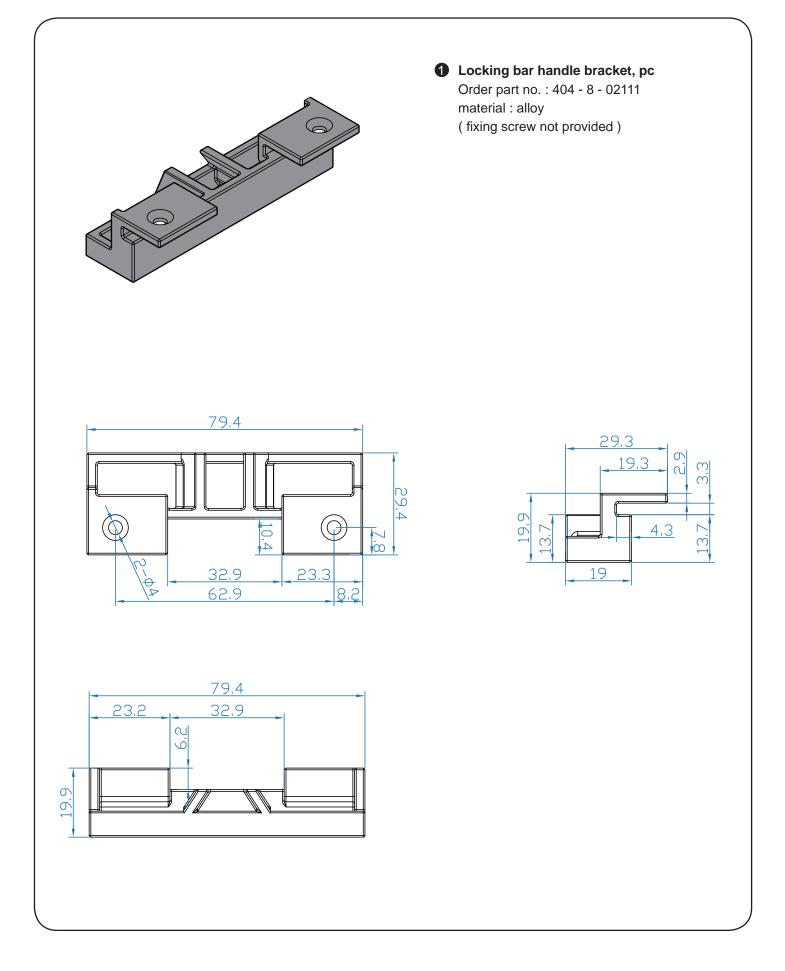


Dimension Diagram on next page

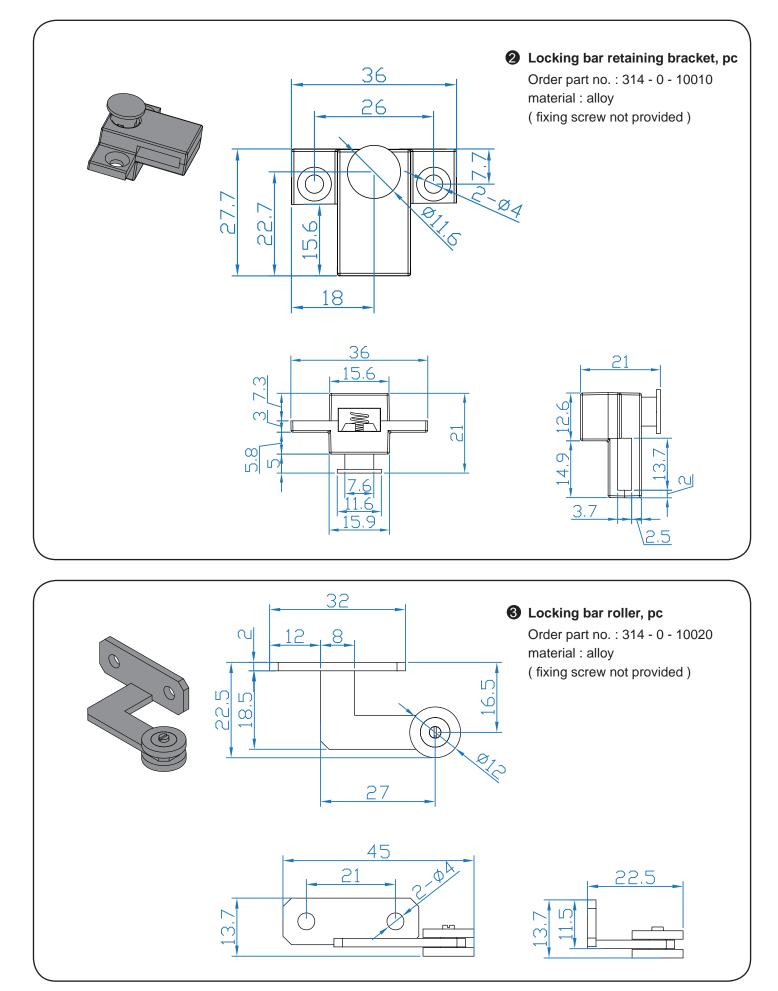


#### Part II. Handle Installation

## < 2.1 > Handle Mounting Cut-out & Installation



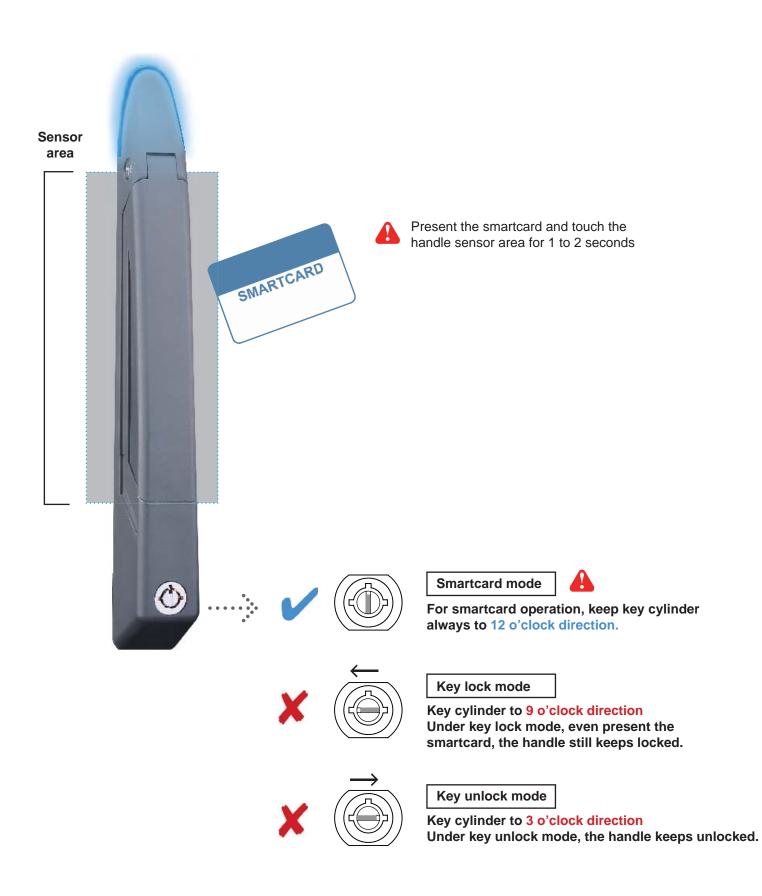
#### < 2.1 > Handle Mounting Cut-out & Installation



#### Part II. Handle Installation

## < 2.2 > Two Important Notes about Handle

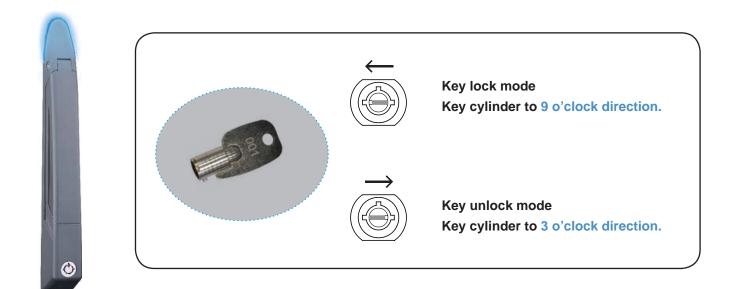
#### Handle Sensor Area & SmartCard Mode



## < 2.2 > Two Important Notes about Handle

#### Lock / Unlock the handle by mechanical key

- Unless the smartcard handle is defective, lock / unlock the handle by key is NOT recommended
- Please insert & turn the key with push force



#### Maintenance Key (MK-001)

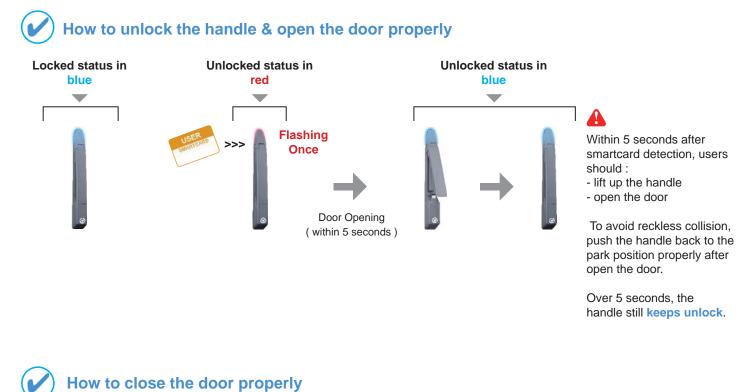


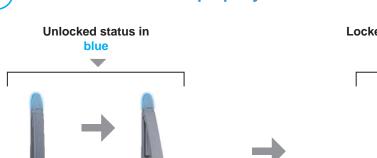
- Improper key usage may cause the cylinder stuck at abnormal direction 1 to 2 o' clock.
- Under this circumstance, the maintenance key (MK-001) is required to solve the problem.
- Please insert the maintenance key to the cylinder with push force for turning it to normal direction 9 or 12 or 3 o'clock.



## Part II. Handle Installation

## < 2.3 > Handle Operation





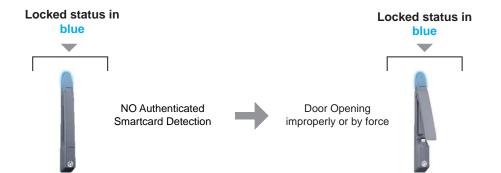


## A Ensure the l

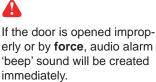
Ensure the handle returns to park position properly once the door is closed.

Over 5 seconds, the handle will **auto-lock**.





Door Closing ( within 5 seconds )



#### Part III. Door Sensor Installation

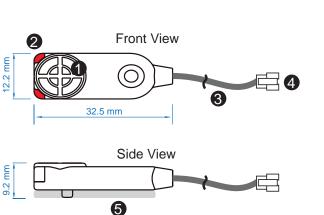
#### < 3.1 > Inductive Sensor

Optional door sensor is an essential accessories as users can be alerted by visual and audio alarm for unauthorized access.

#### Inductive Door Sensor, pair ( ISO-DSI-2)

#### Features

- light weight / adhesive
- mini size ( 32.5 x 12.2 x 9.2 mm )
- no custom cutting required on door



0	Sensor area
2	Red LED ( light up while door opening )
3	2m cable
4	Cable jack ( connect to handle )
6	2mm adhesive tape

#### Package content

- Inductive sensor w/ 2m cable x 2
- 2mm adhesive tape x 6





- cabinet frame made of ferrous metal ( iron )
- sensing distance 3mm

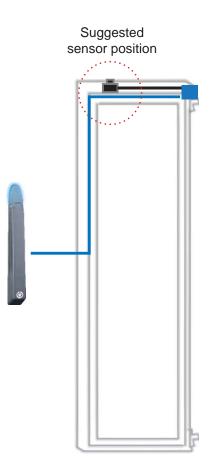


### Part III. Door Sensor Installation

## < 3.1 > Inductive Sensor

#### Installation steps

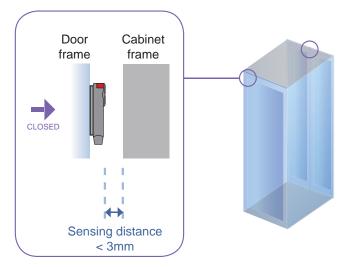
- connect to the handle
- guide & fix the cable with cable clips ( bundle with handle package )
- place the sensor at the top of the door, close to the opening side
- adjust the sensor with adhesive tape to ensure the sensing distance between door to frame within 3mm while door in close status



#### **Sensor Operation**

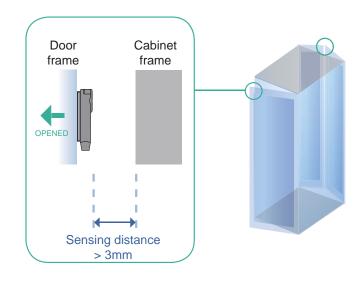
#### DOOR CLOSE

- close door
- inductive sensor detects the cabinet frame
- Red LED of sensor light up
- DOOR CLOSE SIGNAL sends out



#### DOOR OPEN

- open door
- inductive sensor lose detection with cabinet frame
- DOOR OPEN SIGNAL sends out

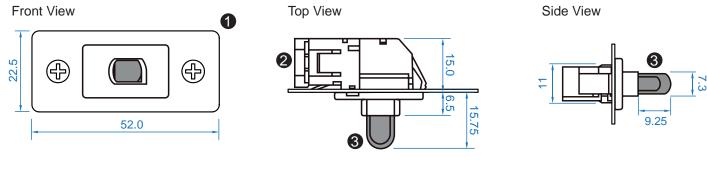


#### < 3.2 > Mechanical Sensor

#### Mechanical Door Sensor ( ISO-DSW-2)

#### Features

- low cost / precise
- cost efficient integration to new cabinet



1	Steel mounting plate with 2 screw holes	
2	Cable connector	
8	Press button ( total travel distance : 9.25 mm )	
	(min. actuation distance : 3.00 mm)	

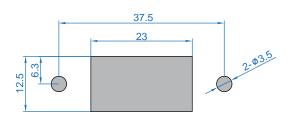
#### Package content

- Mechanical sensor w/ 2m cable x 2
- Mounting screws 6#32x4.5mm x 2



#### Requirements

- custom hole cutting required on doors
- ordering a sample for custom cutting is highly suggested
- min. actuation distance : 3.00 mm
- total travel distance : 9.25 mm



#### Dimension of door cutting hole

- circle hole x 2 for screw mounting

- rectangle hole x 1 for sensor installation

unit : mm

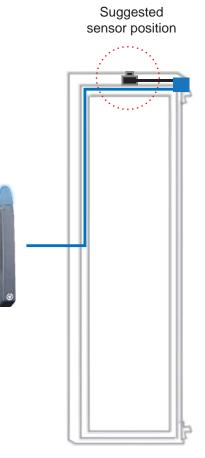
unit : mm

#### Part III. Door Sensor Installation

#### < 3.2 > Mechanical Sensor

#### Installation steps

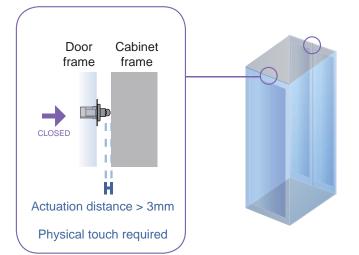
- connect to the handle
- place the sensor at the top middle of the door
- install the sensor in the custom hole
- secure it with bundled mounting screws 6#32x4.5mm x 2



#### **Sensor Operation**

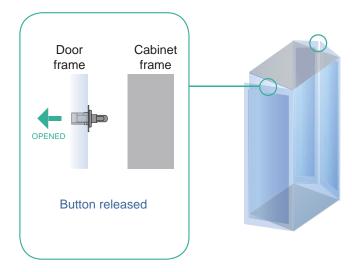
#### DOOR CLOSE

- close door
- Sensor button is pressed on
- DOOR CLOSE SIGNAL sends out



#### DOOR OPEN

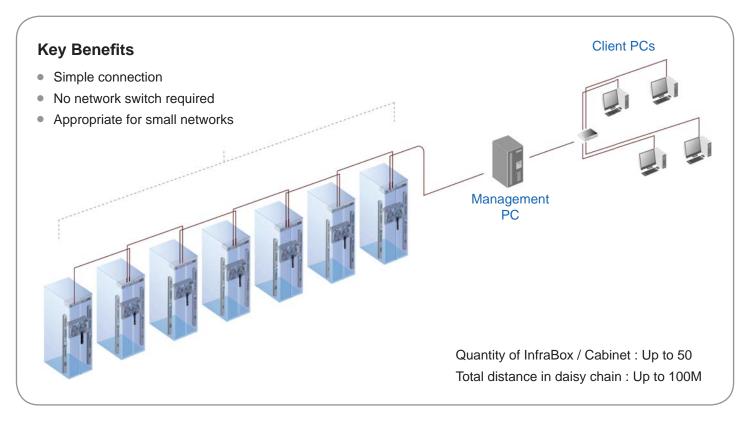
- open door
- Sensor button is released
- DOOR OPEN SIGNAL sends out



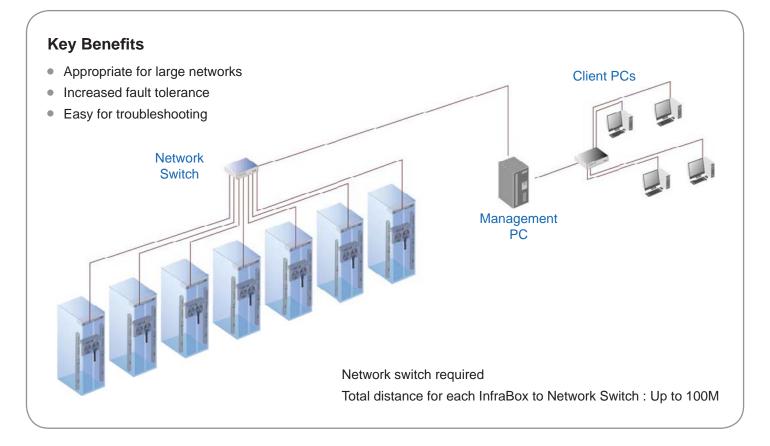
#### Part IV. Network Setup

InfraSolution provides 3 connection ways - **Daisy Chain**, **Star**, **Mixed**. Which connection users apply is related to the site scale, environment and users' requirements.

#### < 4.1 > Daisy Chain Connect all InfraBoxes by Cat5/6 cable, and no any network switch required

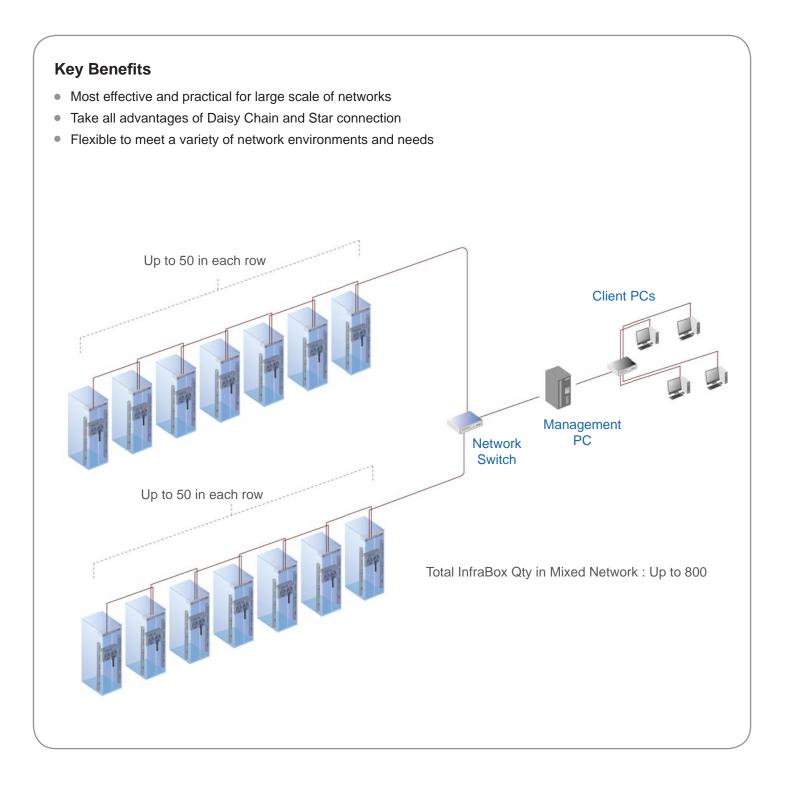


## < 4.2 > Star Connect to network switch by a point-to-point connection



#### Part IV. Network Setup

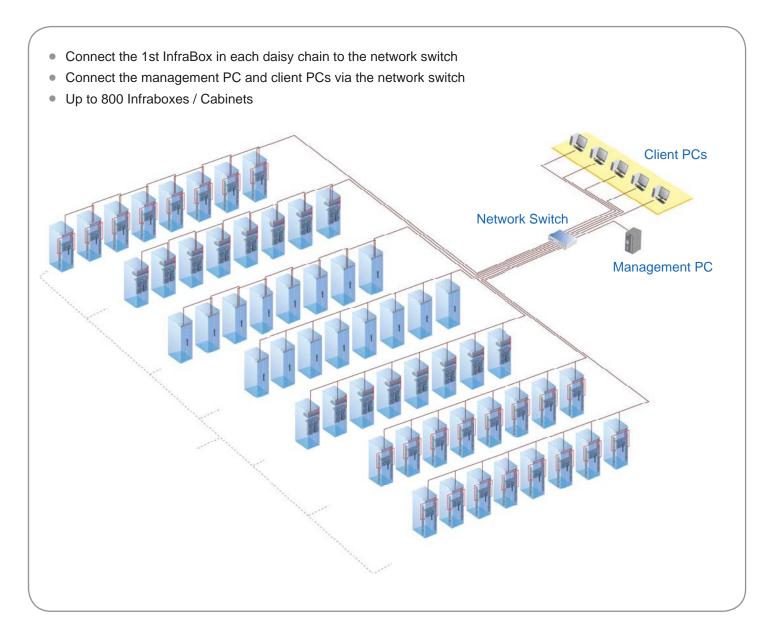
< 4.3 > Mixed Combining daisy chain with star connection



## **Part V. Application**

## < 5.1 > Data Center

By mixed connection, InfraSolution can be scalable up to 800 cabinets and the 2200 and 2400 InfraBoxes can be coexisted in the same network. Users are enabled to manage and remotely access all cabinets under a centralized and user friendly GUI.

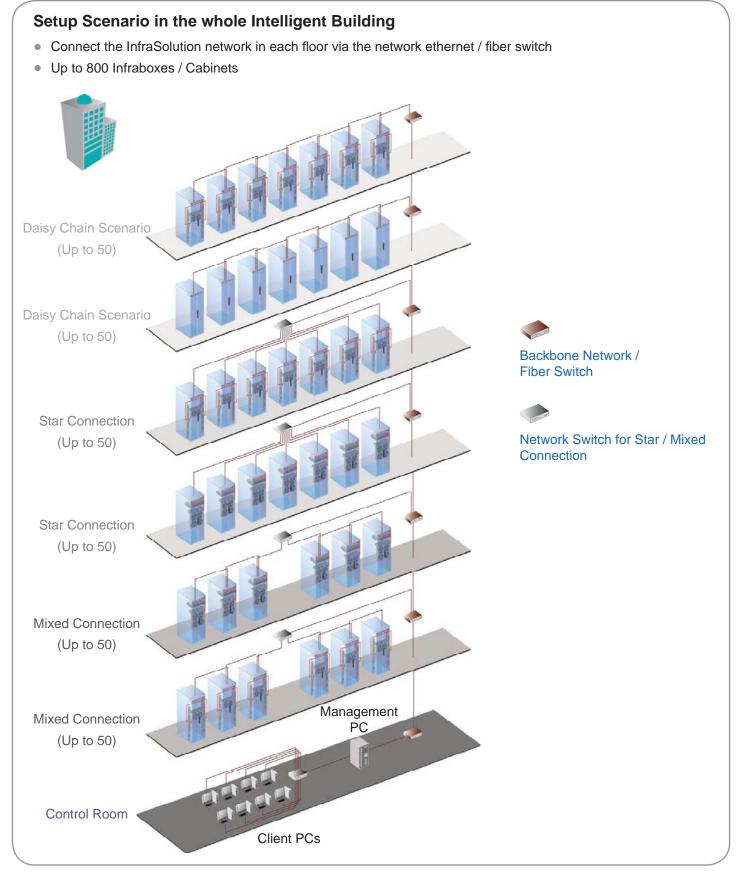


## Part V. Application

## < 5.2 > Intelligent Building

It is essential for a Multi-Storey Intelligent Building to be applied with a centralized management system for the building's mechanical and electrical equipment such as security, power, ventilation, and lighting systems, etc.

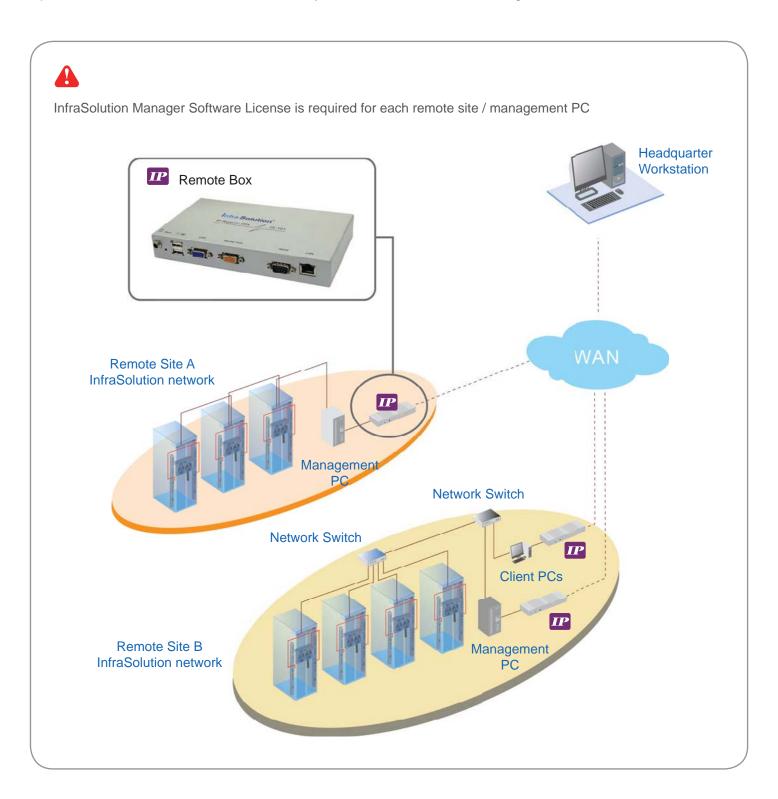
InfraSolution system allows equipment to be distributed throughout a building simply by deploying an Ethernet network. To keep capital costs down, InfraSolution can also be cascaded between boxes up to 100m over a Cat5/6 cable. Signal weakness problem for long distance between InfraBoxes can be solved by applying network hubs with repeater function.



## < 5.3 > Remote Site

Besides data centers and intelligent buildings, InfraSolution can be also applied to the remote site for access and monitoring over IP anytime and anywhere.

Optional IP Remote Box IS-101 with SSL security is available for the remote management over IP.

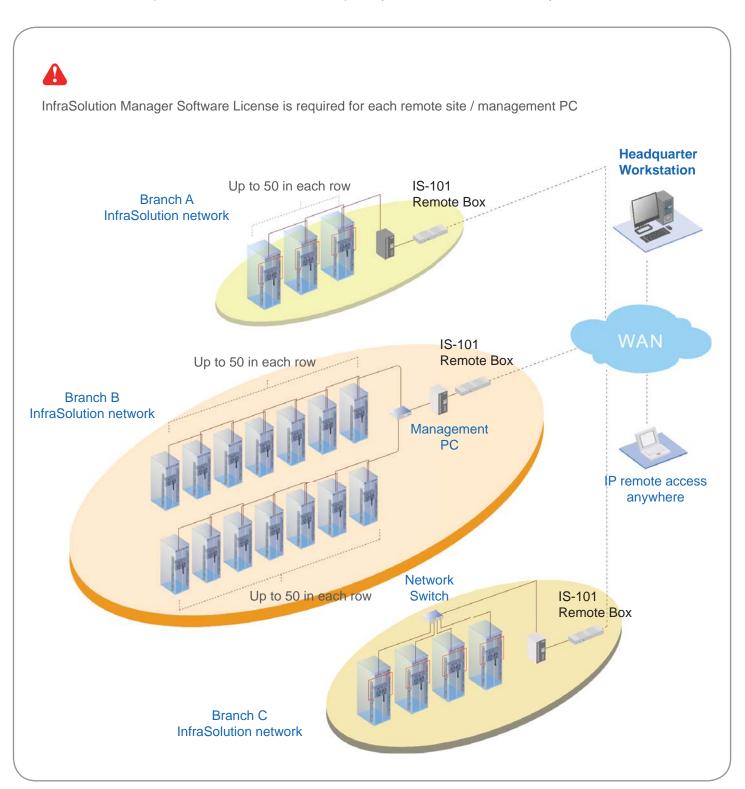


### Part V. Application

#### < 5.4 > Branches

#### How to manage a number of branches by InfraSolution

For a global or scalable company, it is vital to remote access and monitor the network of their nationwide and worldwide branches. InfraSolution provides an ideal solution to keep an eye on cabinet access security and environmental condition.



## Part VI. Hardware Specifications

Gross

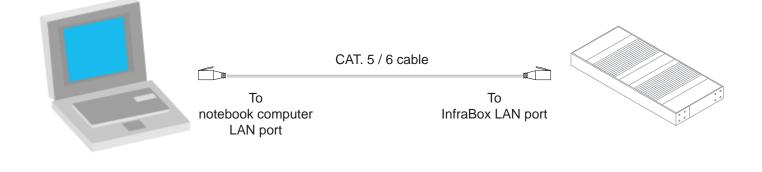
	Power	100~240VAC, 50 / 60Hz 0.5A via AC / DC cord		
Item	Regulation Approval	FCC, CE		
	Casing Material	Steel & aluminum, silver colour		
	Operation	0° to 50°C Degree		
	Storage	-5° to 60 °C Degree		
Environmental	Relative Humidity	90%, non-condensing		
	Shock	50G peak acceleration (11 ms, half-sine wave)		
	Vibration	58~100Hz / 0.98G (11ms / cycle)		
	Product (W x D x H)	410 x 135 x 39.7 mm 16.1 x 5.3 x 1.56 inch		
Dimension	Packing (W x D x H)	557 x 367 x 98 mm 21.9 x 14.4 x 3.9 inch		
	I			
Woight	Net	1.16 kg / 2.55 lbs		
Weight	Gross	2.3 kg / 5.06 lbs		

2.3 kg / 5.06 lbs

#### Part VII. IP Setup Utilities for InfraBox

After the completion of InfraBox connection, please take the following steps to configure the InfraBox :

- 1. Prepare a notebook computer to download the IP setup utilities for InfraBox from the following link: http://www.austin-hughes.com/support/utilities/infrasolution/InfraBoxSetup.msi
- 2. Double click the IP setup utilities for InfraBox.msi and follow the instruction to complete the installation.
- 3. Go to each InfraBox with the notebook computer & a piece of CAT. 5 / 6 cable to configure InfraBox as below. Please take the procedure for all InfraBoxes ONE BY ONE.



IP setup utilities for In Infra Soluti	ß	ccess Control and Mo	nitoring for Data Center	Write down the new IP address
InfraBox list Device MAC address	00:60:6E:50:0C:0D	Configuration IP address Subnet mask Gateway	138.168.1.20         255.255.0.0         138.168.1.1         Save	for Part IX - < 9.2 > Cabinet Setup & Configuration
			Close	

- 4. Click " Scan " to search the connected InfraBox.
- 5. Change the desired IP address / Subnet mask / Gateway, then Click " Save " to confirm the setting of InfraBox.

6. The default IP address is as below: IP address: 138.168.1.20 Subnet mask: 255.255.0.0 Gateway: 138.168.1.1

## Part VIII. Software Installation & Activation

## < 8.1 > Hardware Requirements

#### Please prepare a dedicated management PC with the hardware requirements as below for

InfraSolution Manager - Martix Server

#### **Recommended hardware :**

#### For node 1 to 100 :

- Processor :	Intel® Core™ i5 Processors 2.3GHz or above
- Memory :	Min. 4GB Ram
- Available Disk Space :	Min. 500GB SATA
- Optical drive :	DVD-ROM Drive
- LAN Card :	100/1000Base-T NIC
- Display :	Monitor with 1024 x 748 or higher resolution
For node over 100 :	
- Processor ·	Dual CPU Intel® Xeon® Processor 5500 or 5600

#### Processor :

- Memory :
- Available Disk Space :
- Optical drive :
- LAN Card :
- Display :

Dual CPU Intel® Xeon® Processor 5500 or 5600 Series or above Min. 8GB Ram Min. 1TB SATA **DVD-ROM Drive** 100/1000Base-T NIC Monitor with 1024 x 768 or higher resolution

#### Supported OS platform list :

- MS Windows 7 Professional with SP1
- MS Windows 7 Ultimate with SP1
- MS Windows Server 2003 R2 Standard Edition with SP2
- MS Windows Server 2008 Standard Edition with SP2
- MS Windows Server 2008 R2 Standard Edition with SP1

## Part VIII. Software Installation & Activation

## < 8.2 > Software Installation

After the InfraBox installation, please take the following steps to install the

InfraSolution Manager - Matrix Server

1. Download the InfraSolution Manager - Matrix Server to the management PC from the link :

http://www.austin-hughes.com/support/software/infrasolution/InfraSolution Manager.msi

#### 2. Turn off "UAC Setting "

Please visit the following link for the setting <u>http://windows.microsoft.com/en-gb/windows7/turn-user-account-control-on-or-off</u>

#### 3. Restart Management PC

- Ensure users login the management PC as a member of "Administrators " Group before InfraSolution Manager installation and execution
- 4. Double click the InfraSolution Manager.msi and follow the instruction

to complete the installation.





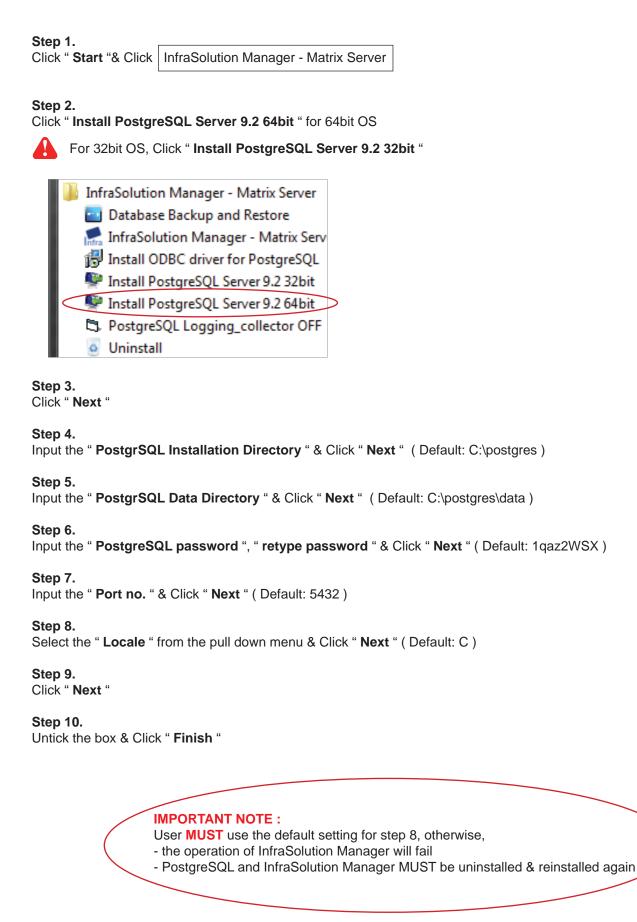
Inite Solution Managements

Complete

## < 8.2 > Software Installation

#### PostgreSQL installation

After InfraSolution Manager installation, please take the following steps to install the "PostgreSQL "



## Part VIII. Software Installation & Activation

#### < 8.2 > Software Installation

#### **ODBC** driver installation for PostgreSQL

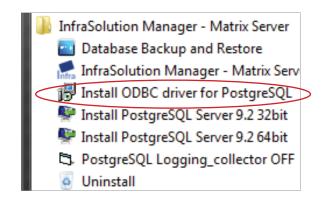
After " PostgreSQL " installation, please take the following steps to install the " ODBC driver "

Step 1.

Click " Start "& Click | InfraSolution Manager - Matrix Server

Step 2.

Click " Install ODBC driver for PostgreSQL "



#### Step 3.

Tick License Agreement box & Click " Next "

Step 4. Click " Next "

Step 5. Click " Install "

Step 6. Click " Finish "

••••••Complete

# < 8.2 > Software Installation

## **Data Execution Prevention Setup**

After " ODBC driver " installation, please take the following steps to setup the " Data Execution Prevention "

For Windows Server 2003 / 2008 32bit, 64bit and R2 version ONLY

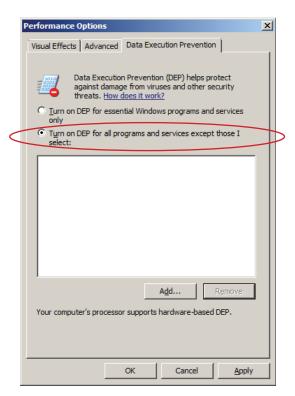
Step 1.

Right Click " Computer " & Click " Properties "

Step 2. Click " Advanced system settings "

Step 3. Click " Advanced " & Click " Settings... "

Step 4. Click " Add... " from " Data Execution Prevention "



#### Step 5.

Select the first file as below & Click " Open "

1 C:\Program Files(x86)\InfraSolution Manager - Matrix Server\InfraC.exe 2 C:\Program Files(x86)\InfraSolution Manager - Matrix Server\Services\SNMP\SNMPAgent.exe 3 C:\Program Files(x86)\InfraSolution Manager - Matrix Server\Services\EmailAlarmSrv\EmailAlarmSrv.exe 4 C:\Program Files(x86)\InfraSolution Manager - Matrix Server\Services\MFServer\THServer.exe 5 C:\Program Files(x86)\InfraSolution Manager - Matrix Server\Backup\IFSBackupEngine.exe 6 C:\Program Files(x86)\InfraSolution Manager - Matrix Server\Print\IFSPrintEngine.exe

#### Step 6.

Repeat step 4 & 5 for the remaining five files One by One

# Step 7.

Click " Apply " & Click " OK "

••••••Complete

# Part VIII. Software Installation & Activation

# < 8.2 > Software Installation

### First time database creation

After " Data Execution Prevention " setup, please take the following steps to create a new database for

InfraSolution Manager - Matrix Server



For MS Windows 7 and MS Windows server 2008, it requires to run a program with administrator rights before execution:

- Right Click InfraSolution Manager Matrix Server |, and then select "Properties ".
- Click the " Compatibility " tab.
- Tick the box "Run this program as an administrator ", and then Click " OK ".

Step 1. Double click InfraSolution Manager - Matrix Server

Step 2. Select " Celsius " or " Fahrenheit " in the temperature unit & Click " Setting "

Step 3.

Input " **Port** " & " **Password** " based on the value input in Step 7 & 6 in " **PostgreSQL Installation** " & Click " **Next** "

Step 4.

Select " Create a new database " & Click " Next "

Step 5. Select " Initialize the database with default data " & Click " Next "

Step 6. Click " Apply "

Step 7. Click " Finish "

Step 8.

Click " OK "



# < 8.3 > Software Activation

### First time software activation

After database creation, please take the following steps to activate the

InfraSolution Manager - Matrix Server



- If users want to activate the software later,
- Click " Evaluate " and go to " Part VIII. Setup & Operation " directly
- Only 5 racks can be created in Evaluation period

### Step 1.

Input the "Model ", "CD Key " in the "Product Activation " window

### Step 2.

Click " **Change Key** " & the " **Installation Key** " will be generated automatically

### Step 3.

Go to the Activation centre to get the "Activation Code "

of InfraSolution Manager - Matrix Server by clicking

### " Activate InfraSolution Online " or visit

" http://www.infra-solution.com/activation "

Product Activat	ion (Expired after 87 days)
Model	ISS-801-R5
CD Key	
Installation Key	
Activation Code	
	Activate InfraSolution Online or Offline.
	Inactivated
Evaluate	License Activate Change Key

### Step 4.

Input the "Model ", "CD Key ", "Installation Key ", " Company ", "E-mail " & "Contact Person " & Click "Submit "

#### Step 5.

The activation code generation takes a few seconds

#### Step 6.

Input the "Activation Code " to the " Product Activation " window & Click " Activate "

### Step 7.

Click " Close " & Click " Close "

Product Activatio	n						
Welcome to the InfraSolutio				set the Offic	ial Valid Ac	livation Code	
If you already registered Inf							
* Model:	ISS-801-R5	2					
Description:			et5	_			
* CD Key:		-	].[				
* Installation Key:		-	•				
Company:							
E-mail:							
Contact Person:							
						Submit butto	

# Part VIII. Software Installation & Activation

# < 8.3 > Software Activation

# Software license upgrade

If users want to upgrade "**No. of Node** ", please order a license upgrade key & take the following steps to complete the software license upgrade.

Step 1.

In < Setup > page, Click " General "

## Step 2.

Click " CD Key " at lower right corner of the UI & the " Product Activation " window pops up



Step 3. Input the " New Model no. " & " New CD Key "

Step 4.

Follow the step 2 to 7 of "First time software activation "to complete the "Software license upgrade "

### Step 5.

Restart " InfraSolution Manager - Matrix Server "

••••••Complete

# < 9.1 > Legend Definition

000

0001

The legends below indicate different status of the cabinets in the software



-



Authorized Open



Overdue Disconnect Warning





Unauthorized Door

Open







# PDU Alarm

# Heat Alarm

# For Infra 840 and 2400 model only

# < 8.2 > Cabinet Setup & Configuration

## Step 1.

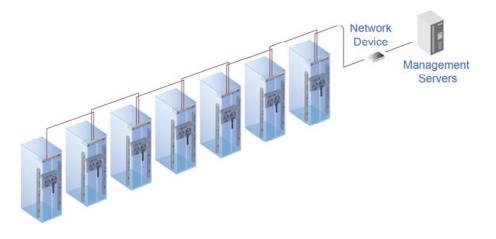
Connect the InfraBox to the management PC via the network device ( hub or switch )

## Step 2.

Make sure the InfraBox in power ON status

## Step 3.

Make sure the cabinet door is closed

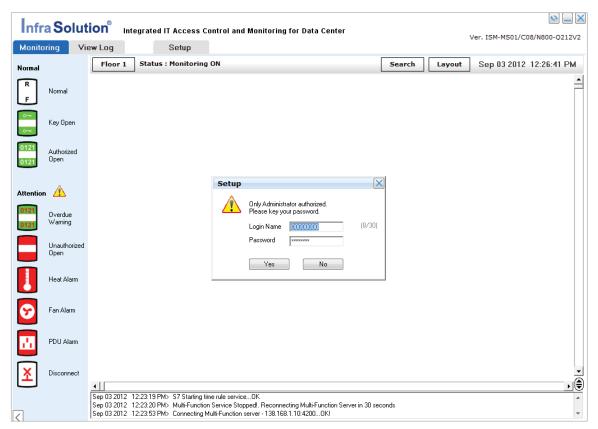


Step 4. In < Monitoring > page, Click " Layout "

# < 9.2 > Cabinet Setup & Configuration

### Step 5.

Input " Login name " & " Password " in the pop up window & Click " Yes "



Step 6.



 $\times 1$ 

/



#### to add 1 / 5 / 10 racks at one time

Infra Solu	I <b>tion<sup>®</sup> Inte</b>	egrated IT Access Cont	rol and Monitoring for Data Center
Monitoring V	/iew Log	Setup	
Normal Tools X R F F Normal R R R R R R R R R R R R R R	Floor 1	Status : 1 Alarms	
0121 Attentio			
Unauthorized Open			
Heat Alarm			

×10

# < 9.2 > Cabinet Setup & Configuration

### Step 7.

Move mouse pointer to the Layout editor area & Click the mouse once and the new rack icon(s) will be shown

Infr	Infra Solution <sup>®</sup> Integrated IT Access Control and Monitoring for Data Center										
Monito	ring N	View Log	Setup								
Normal	Tools 🔉	Floor 1	Status : 1 Alarms			Sea					
F											
o∽ 0121 0121	×10										
Attentio	Ø ⊽ Gridline										
0121 0121	Messag			R #001 F	1						
	Unauthorize Open Heat Alarm	ed									

## Step 8.

Click In Tools box & Click "Yes " to save the cabinet assignment in Layout editor

### Step 9.

Click < Setup >, input " Login name " & " Password " in the pop up window & Click " Yes "

### Step 10.

Click " Rack " from the menu bar at the left hand side

### Step 11.

Click the field of "Rack No. " to edit the rack no.

## Step 12.

Click the field of " Rack Name " to edit the rack name

### Step 13.

Click " Search " in " InfraBox Address " & Click " Select "

# < 9.2 > Cabinet Setup & Configuration

# Step 14.

Input IP address of the InfraBox into IP address field (e.g. 138.168.1.20) & Click "Test "

InfraB	ox Address Setup - #001
Setup	
	MAC address 00-00-00-00-00
	DHCP Disable
	IP address 138 . 168 . 1 . 20 Test
	Subnet Mask
	Gateway
	Apply Close

### Step 15.

" Searching... " takes a few seconds to complete

Step 16. Click " Apply " after " MAC address ", " Subnet Mask " & " Gateway " are shown.

	MAC address	00-60-6E-8E-DD-60 🥑
	DHCP	Disable
	IP address	138 . 168 . 1 . 20 Test
	Subnet Mask	255 . 255 . 0 . 0
	Gateway	138 . 168 . 1 . 1
		Apply Close
lessag	e g test on IP 138.1	

Step 17. Click " Save "

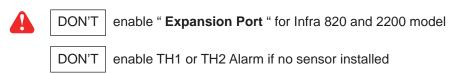


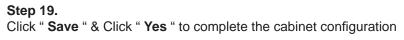
DON'T click any button before return to < Setup >

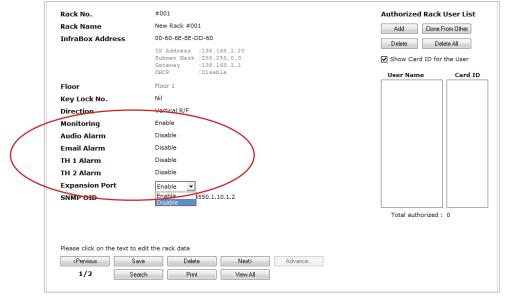
# < 9.2 > Cabinet Setup & Configuration

Step 18.

Enable or Disable "Monitoring "to "Expansion Port "if necessary







## Step 20.

Repeat step 11 to 19 for other InfraBoxes One by One

# < 9.3 > User Setup & Configuration

# **User Comparison**

Features	Operator	Administrator	Key Administrator
Rack Status Monitoring	√	✓	✓
Rack Setup & Configuration		√	√
Card Assignment		√	√
Individual Remote Handle Control		√	√
Layout (Rack Icon Addition & Removal)		✓	√
Time Zone & Time Rule Setting		✓	√
Key Administrator Setup			√
Administrator Setup			√
Operator Setup		✓	√
Visitor Setup		✓	✓
Rack Re-Connection	✓	✓	✓
* Temp-Humid Alarm Setting		✓	✓
*# Individual Outlet Switch ON / OFF		✓	✓
*# PDU Amp. Alarm Setting		✓	✓
SNMP Setup		✓	✓
View Log Record & Export	✓	✓	√
Backup / Restore	✓	√	√
Floor Plan Background		✓	√
E-Mail Alarm Setup		✓	√
Overdue Warning Setting		✓	√
Temperature Unit Modification °C / °F		✓	√
License Upgrade		✓	✓

\* For Infra 840 or 2400 Model only

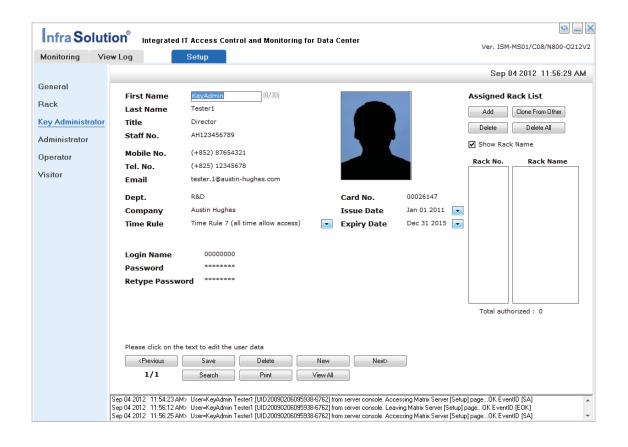
# For MTS PDU only

# < 9.3 > User Setup & Configuration

The software provides 4 types of users :

- Key Administrator
- Administrator
- Operator
- Visitor

Only key administrator & administrator can login to the software.



### **Key Administrator**

#### Step 1.

In < Setup > page, Click " Key Administrator "

#### Step 2.

Input " First Name " to " Company "

#### Step 3.

Select "Time Rule " which determines when the user can open cabinet door by the smartcard

#### Step 4.

Input " Login name ", " Password " & " Retype Password "

#### Step 5.

Assign " Card no. ", & Select " Issue Date " & " Expiry Date " of the smartcard

#### Step 6. Click " Save "

Click Save

### Step 7.

Repeat Step 2 to 6 for other Key Administrators One by One

# < 9.3 > User Setup & Configuration

Administrator Step 1. In < Setup > page, Click " Administrator " Other Steps same as step 2 to 7 of Key Administrator Setup

Operator Step 1. In < Setup > page, Click " Operator "

Other Steps same as step 2, 3, 5, 6 & 7 of Key Administrator Setup

Visitor Step 1. In < Setup > page, Click " Visitor "

Step 2. Input " First Name " to " Address "

Step 3. Assign " Card no. "

Step 4. Select " Visit Date & Time ", " Duration ", & " Leave Date & Time "

Step 5. Click " Save "

Step 6. Repeat Step 2 to 5 for other Visitors One by One



To assign card no., users should - make sure the mouse pointer at " **Card No.** " field

- present the smartcard to the card reader connected to the management PC

# < 9.4 > Card Assignment

After < User Setup & Configuration >, please take the following steps to assign smartcard to the Cabinet

Step 1. In < Setup > page, Click " Rack "

Step 2. Click " Add "

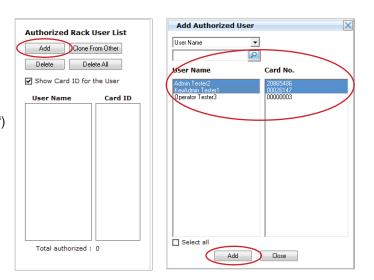
Step 3. Select " Card no." from the " Add Authorized User "

(Tick "Select all " if user wants to assign all smartcards ")

Step 4. Click " Add " & then " Close "

Step 5. Click " Save " to complete the card assignment

Step 6. Repeat Step 2 to 6 for other cabinets One by One



## **Card Delete**

Step 1. Select " Card ID " from " Authorized Rack User List "

Step 2. Click " Delete " & Click " Yes " from the pop up window

(Click " Delete All " if user wants to unassign all smartcards ")

Step 3. Click " Save "

Step 4. Repeat Step 1 to 3 for other cabinets **One by One** 



# < 9.5 > Monitoring & Control of Cabinet

To monitor & control a cabinet, users can double click the "Rack Icon "

in " Monitoring " page

### Rack Info.

Click " Details ", view the real time configuration of the cabinet

### **Door Status**

Click " **Details** ", view the door access log for the smartcard/key open / close history recorded during the time period selected

### Remote Handel Control

Click " Details ", view the door access log for the software remote opening

Click " Release " to open the door remotely

Click " 🔯 ", define the door remote open time ( min. 10 sec, max. 999 sec )

### \* Environmental

Click " Detail ", view the line chart of the TH readings

### **\*# Expansion Ports**

Click " **Details** ", view the PDU status log during the time period selected Click " **Device** " name :

- view the amp. reading & set the alarm level of PDU

- remote switch on / off individual outlet of PDU (MTS only)

\* For Infra 840 or 2400 Model only # For MTS PDU only

# < 8.6 > Log Record & Report

### < View Log >, provides

- device events in daily, weekly, monthly & yearly basis.
- application log in daily basis
- export of device events & application log in text format

# Part X. General System Setup

# < 10.1 > Floor Plan Background / Warning / Temperature Unit

" **Background** " provides total four floor plan background. User can insert one floor plan image in ".jpg " & ".jpeg " format one at a time for each floor.

Step 1. In < Setup > page, Click " General "

Step 2.

Click the field of " Specify a blueprint for Floor 1 : "

Step 3.

Click ...

Step 4. Select floor plan image & Click " Open "

Step 5. Click " Save "

**Step 6.** Repeat the above steps for other backgrounds if necessary

" Warning " provides a overdue notice shown on the rack icon (  $1\sim9999$  mins )

"Temperature Unit " allows user to change the temp unit display in °C / °F

# Part X. General System Setup

# < 10.2 > Database Management

It provides a way for database management of InfraSolution Manager - Matrix Server when users want - monitor racks created from other database

- create a new database

Please take the following steps to complete the database import or new database creation

### Step 1.

In < Setup > page, Click " General "

### Step 2.

Click " Management...> " in " Database "

### Step 3.

Click "Setup " in "Database Connection Setup " window

#### Step 4. Click " Setting "

Step 5. Input " Login name " & " Password " from the pop up window

Step 6. Click " Next " in " Database Initialization " window

### Step 7.

Select " Select from existing database server " in " Data Import " window



To create a new database, please select " Create a new database "

## Step 8.

Select the database you want to import in the pull down menu of " Database name "

Provide the new " Database name ", " User name " & " Password " if select " Create a new database " in step 7

### Step 9.

Input " User name " & " Password " of this database & Click " Next "

### Step 10.

Select " Import and use the existing database in the database " & Click " Next "

Select " Initialize the database with default data " if select " Create a new database " in step 7

Step 11. Click " Apply " & Click " Finish "

### Step 12

Click "Test " in "Database Connection Setup " window

### Step 13.

Click " Close " in " Connection Test " window after connection test is successful

#### Step 14. Click " Apply "

Step 15.

Click "Yes " to restart the InfraSolution Manager - Matrix Server

# < 10.3 > Services Setup ( Software SNMP / Email )

## Software SNMP

Step 1. In < Setup > page, Click " Setup...> " in " Services "

Step 2. Select " SNMP " & Click " Setup"

Step 3. Select " Enable " in " SNMP Agent ", Click " Apply " & Click " Yes "

Step 4. Click " Start " & Click " Yes "

Step 5. Click " Close " & Click " Close "

Step 6. Get the \*.mib file from "C:\Program Files (x86)\InfraSolution Manager - Matrix Server\Services\SNMP\MIB "

## Email

Step 1. In < Setup > page, Click " Setup...> " in " Services "

Step 2. Select " Email " & Click " Setup"

Step 3. Click " Setup " & Input all the necessary information from " Server IP " to " CC " in this page

Step 4. Click " Apply " & " Yes "

Step 5. Click " Close " & Click " Close "

# Part X. General System Setup

# < 10.4 > Time Zone / Time Rule

System provides 8 " **Time Zone** ". Single or groups of time zone can be used to form an effective access time for rack called " **Time Rule** "

### Time Zone

Step 1.

In < Setup > page, Click " Time Zone "

### Step 2.

Input the "Description ", select " time period " & tick the desirable " Days of the Week " for Zone No. 1

### Step 3.

Repeat step 1 & 2 for Zone No. 2 to 7 if necessary



Click " Reset " if user wants to cancel the modification

Step 4. Click " Save "

< Time Sync. > synchronizes the real time clock of InfraBox(es) from the system time of the management PC

### Step 1.

In < Time Zone >, Click " Time Sync. "

### Step 2.

Click " Read " to read the system time of the management PC

### Step 3.

Tick the InfraBoxes you want to update the real time clock (Tick " Select all " for all connected InfraBoxes )

### Step 4.

Click " Update "

Zone No.	Description		Time		All days	Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	Diffice Hour (Day Time: Mon-Fri)	From	09:00 To	18:15	$\checkmark$		V				◄	
2	Office Hour (Day Time: Sat)	From	09:00 To	13:15	$\checkmark$							<b>V</b>
3	Day Time	From	00:00 To	18:00	$\checkmark$	~	~	$\checkmark$	<b>V</b>	$\checkmark$	<b>v</b>	<b>V</b>
4	Night Time	From	18:00 To	23:59	$\checkmark$	~	~	$\checkmark$	<b>V</b>	$\checkmark$	<b>v</b>	<b>V</b>
5	No Time Restriction (Mon - Fri)	From	00:00 To	23:59	$\checkmark$		~	$\checkmark$	<b>~</b>	$\checkmark$	<b>v</b>	
6	Time Rule 6	From	00:00 To	23:59	$\checkmark$	~	~	$\checkmark$	<b>~</b>	$\checkmark$	<b>v</b>	<b>V</b>
7	Time Rule 7	From	00:00 To	23:59	$\checkmark$	~	~	$\checkmark$	<b>~</b>	$\checkmark$	<b>v</b>	<b>v</b>
8	No Time Restriction	From	00:00 To	23:59	$\checkmark$	×	$\checkmark$	V	$\checkmark$	<b>V</b>	V	$\checkmark$

# < 10.4 > Time Zone / Time Rule

System provides 7 Time Rules for users to access the cabinet through smartcard

### **Time Rule**

Step 1. In < Setup > page, Click " Time Rule "

Step 2. Click " Selected time zone "

Step 3.

For example, Tick " Zone 1 " & " Zone 2 " for Rule 1



Click " **Reset** " if user wants to cancel the modification

### Step 4.

Click " Save "

### Step 5.

Repeat the steps above for other rules if necessary

Description : Time Rule 1								
O No Time Limit								
<ul> <li>Selected tin</li> </ul>								
	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	
🗸 Zone 1	7	09:00-18:15	09:00-18:15	09:00-18:15	09:00-18:15	09:00-18:15	7	
🗸 Zone 2	7	1	- 7	7	- 7	- 7	09:00-13:15	
🗖 Zone 3	00:00-18:00	00:00-18:00	00:00-18:00	00:00-18:00	00:00-18:00	00:00-18:00	00:00-18:00	
🗖 Zone 4	18:00-23:59	18:00-23:59	18:00-23:59	18:00-23:59	18:00-23:59	18:00-23:59	18:00-23:59	
Zone 5	7	00:00-23:59	00:00-23:59	00:00-23:59	00:00-23:59	00:00-23:59	7	
🗖 Zone 6	00:00-23:59	00:00-23:59	00:00-23:59	00:00-23:59	00:00-23:59	00:00-23:59	00:00-23:59	
Zone 7	00:00-23:59	00:00-23:59	00:00-23:59	00:00-23:59	00:00-23:59	00:00-23:59	00:00-23:59	
🗖 Zone 8	00:00-23:59	00:00-23:59	00:00-23:59	00:00-23:59	00:00-23:59	00:00-23:59	00:00-23:59	

# Part XI. Backup & Restore

### Backup

Step 1. Click " Start " & Click InfraSolution Manager - Matrix Server

Step 2. Click " Database Backup and Restore "

## Step 3.

Right Click if from the system tray & Click " Show "

### Step 4.

Select " Backup " and tick the backup option as necessary

	Dat	tabase Management	
	Inf	fra Solution®	Integrated IT Access Control and Monitoring for Data Center
	Ba	ckup Recovery	Schedule backup will be started on local time 2013/05/13_23:59:59
(	Г Г	Backup Options: ✓ Cabinet and User Profiles ✓ Configuration Profiles ✓ Device Logging	<ul> <li>Application Log</li> <li>Application setting</li> <li>License Data</li> </ul>
		Specify a path to place backup C:\Program Files (x86)\InfraSolu Description:	filee: Ition Manager - Matrix Server\Backup\ICD\BACKUP20130513180752.ICD
			Backup Now Close

## Step 5.

Specify the path of backup file ( Default: " C:\Program Files (x86)\InfraSolution Manager - Matrix Server\Backup\ICD " )

## Step 6.

Click " Backup Now "

## Step 7.

Click " Close "

## Restore

Step 1	I.		
Close	InfraSolution	Manager - Matrix Server	]
Step 2	2.		-
Click "	· … " to find t	he backup file in " <b>Recove</b>	<b>؛ry</b> "
( Defa	ult: " <u>C:\Progra</u>	m Files (x86)\InfraSolution	n Manager - Matrix Server\Backup\ICD "
Data	ibase Manageme	ent	
Infr	a Solution	B Integrated IT Access Contro	I and Monitoring for Data Center
	a contation	integrated IT Access Contro	
Back	kup Recovery		Schedule backup will be started on local time 2013/05/13 23:59:59
	ecovery Options: ecify a path contains the	recovery files:	
	e size: :scription:		
Г			A
4			

Step 3. Click " Recovery Now "

Step 4. Click " Close "

Step 5.

Restart InfraSolution Manager - Matrix Server

# InfraSolution Manager – Matrix Server

# 1. What is InfraSolution Manger – Matrix Server ?

InfraSolution Manager provides a simple graphic user interface (GUI) to centralize the management of a large number of data center server cabinets in remote locations across Ethernet TCP/IP networks. It is basically the engine of InfraSolution and is designed to provide intelligent secure physical layer card access that remotely releases cabinet locking handles as well as centralized management for control, reporting and audit purposes. When using the InfraBox 2400 series, the InfraSolution Manager also allows GUI remote management for intelligent PDUs.

## 2. What OS does the software support ?

- MS Windows 7 Professional with SP1
- MS Windows 7 Ultimate with SP1
- MS Windows Server 2003 R2 Standard Edition with SP2
- MS Windows Server 2008 Standard Edition with SP2
- MS Windows Server 2008 R2 Standard Edition with SP1

# 3. What language does the software support ?

- English

# 4. What is the minimum required resolution of LCD monitor ?

- 1024 x 768. Otherwise, the software is not allowed to install

## 5. Which database does the software use ?

- PostgreSQL 64 bit for 64bit OS
- PostgreSQL 32 bit for 32bit OS

## 6. What is the PostgreSQL default password for the software ?

- 1qaz2WSX

## 7. Which are the default ports used in the software ?

- UDP port: 8888, 8890 & 5300 for searching InfraBox
- UDP port: 161 & 162 for SNMP communication
- TCP port: 4000 & 4001 for InfraBox communication
- TCP port: 25, 110 & 995 for email alarm service

## 8. " Could not connect to the server " when the software starts up ?

- Make sure the PostgreSQL services is started (Control Panel -> Administrative Tools -> Services -> postgresql-9.x – PostgreSQL Server 9.x )

## 9. How to reconnect the disconnected cabinet ?

- Click " Status: xx Alarms " in " Monitoring " page & Click " Reconnect all "

# Part XIII. Troubleshooting

- 1. GUI shows a certain InfraBox disconnected
- Step 1 InfraBox power off ? Check the InfraBox is power ON or not
- Step 2 Cat. 5 / 6 cable disconnected, loose or defective ? Check the Cat. 5 / 6 cable connection to InfraBox and network devices. Make sure the connectors are firmly attached. And check if any defects on your cable or not. If yes, replace a new one.
- Step 3 Can ping the IP address ? Make sure the IP address is configured using the "IP setup utilities for InfraBox "
- Step 4 "Monitoring " of the InfraBox disabled in "Setup " page? Make sure "Monitoring " is enabled
- 2. Why error shows as below during first time database creation ?

Database Configura	ation		×
Updating database			
2) Building data tab 3) Initializing the da	abase and login roleFa les for new databaseFa ta tables with default data ase configuration fileFa configuration file.	ailed aFailed	
R: new collation (C) is incompati	ible with the collation of t		
	Back	Apply	Close

Step 1. Click " Close "

Step 2. Go to " Control Panel " -> " Programs and Features "

Step	3.	Select	"PostareSQL	9.x " 8	Click "	Uninstall/Change	"
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- Step 4. Click "Yes "
- Step 5. Click " Ok "
- Step 6. Click " Ok "
- Step 7. Click " No "
- Step 8. Go to C:\ to delete " postgres " folder
- Step 9. Restart the management PC

Step 10. Repeat user manual Part VIII < 8.2 > Software Installation "PostgreSQL installation "

Make sure select " C " from the pull down menu of " Locale "

# Part XIV. Optional Acccessories

Individual key lock, set of two for front & rear door (ISK-C051)

• Up to 500 individual key-locks available

### Unique key lock (ISK-UKL)

- Unique key dedicated to single project / customer regionally
- For project size over 500 cabinets

### Proximity smartcard, pack of 10 (ISC-P10)

- Proximity 26-bit format
- Single card for multiple application
- Custom card layout available

#### MiFARE smartcard, pack of 10 (ISC-M10)

- MiFARE 26-bit format
- Single card for multiple application
- Custom card layout available

#### Proximity card reader (ISC-PCR)

- Proximity 26-bit smartcard compatible
- Convenient way for smartcard ID reading
- Driverless for easy installation

#### MiFARE card reader (ISC-MCR)

- MiFARE 26-bit smartcard compatible
- Convenient way for smartcard ID reading
- Driverless for easy installation

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