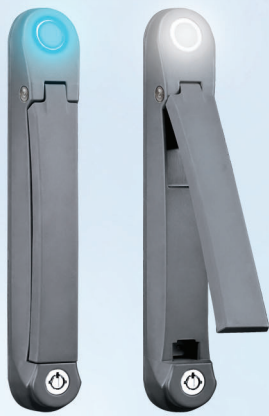


InfraSolution® X

SmartCard Access Control for Racks

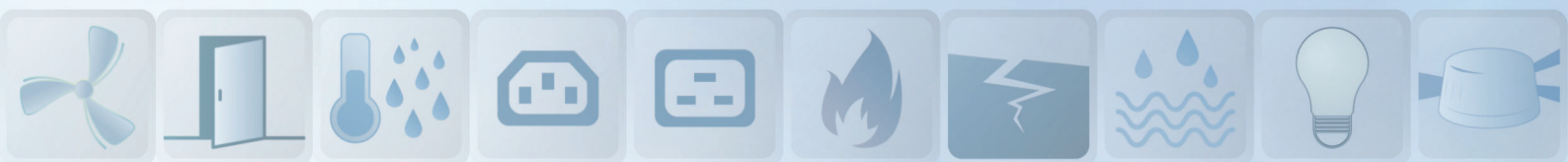
X-800 Networked Rack SmartCard Access



PROXIMITY
SMARTCARD

MIFARE
SMARTCARD

Patented & Worldwide Patents

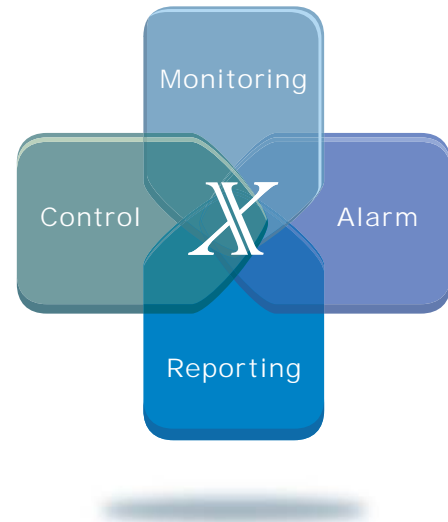


**AUSTIN[®]
HUGHES**

>>> Security

Rack level access security has become critically important for all data centers and server rooms. More and more IT managers have recognized this need and upgraded their racks with smartcard access control.

InfraSolution X 800 series data center managers a complete networked solution with **monitoring, control, alarm & reporting**. It allows rack access remote management - saving traveling time / costs and hence increases the data center operation efficiency.



>>> Compatibility

Hardware - InfraSolution X-800 handle is designed for the global IT branded rack. Its Universal Mounting Cut-out generally allows easy integration with most third party racks, so costly & complicated door customization is not required.

Software - We offer InfraSolution X Manager for software remote management. Besides, InfraSolution X also supports SNMP for integration to the existing BMS of data center. Users can use their own platform for a centralized management.

Smartcard - InfraSolution X caters for the 2 most common SmartCard alternatives - **Proximity** & **MiFARE** format. The users can keep using their existing Smartcard to apply on the rack access system if their Smartcards are in either format as above.



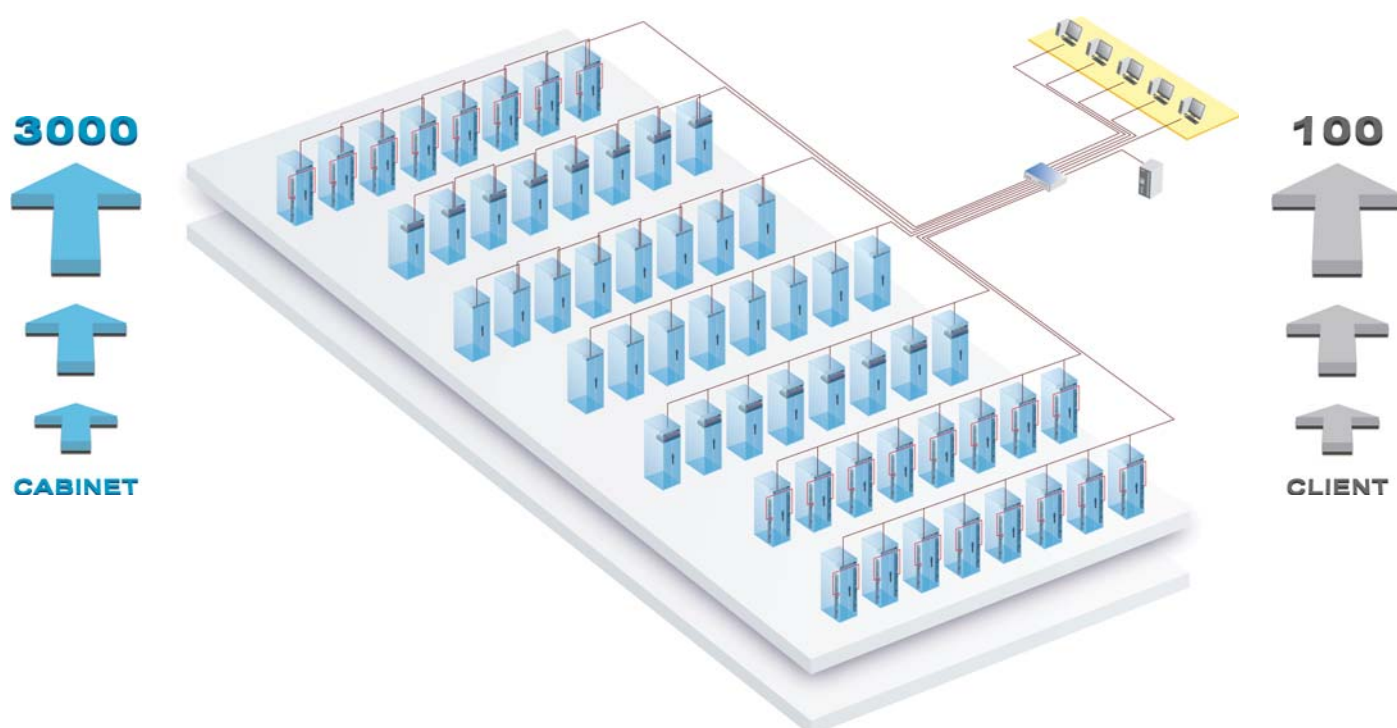
>>> Functionality

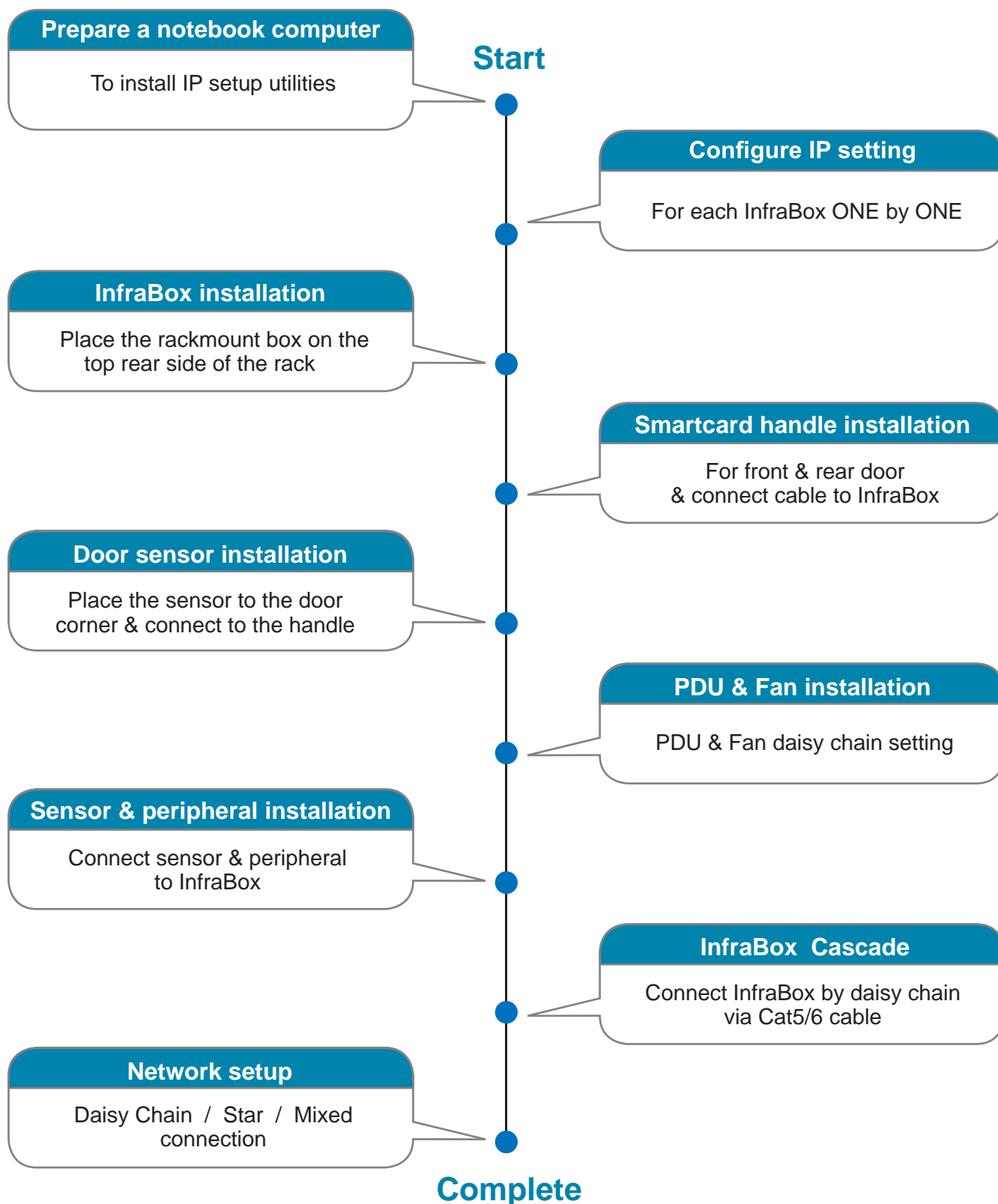
Functionality is not limited to rack access management. In addition to rack access control, InfraSolution X can be further expanded to PDU and environmental management. Users can remotely manage the above devices via the InfraSolution X Manager.



>>> Expandability

The managing capacity of InfraSolution X is expandable to a maximum of 3000 racks. And the InfraSolution X GUI allows up to 100 concurrent client access to remotely manage the Smartcard locking handles. InfraSolution X provides the scalable flexibility to the data center projects, especially to the project with several phases.



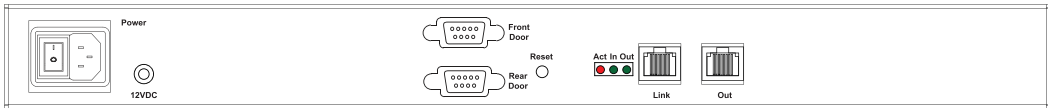


Control Box consolidates the smartcard access components and integrated devices such as integrated PDU, cooling fan and environmental sensors in a single rack. For a centralized management, all control boxes can be connected under wired networks.

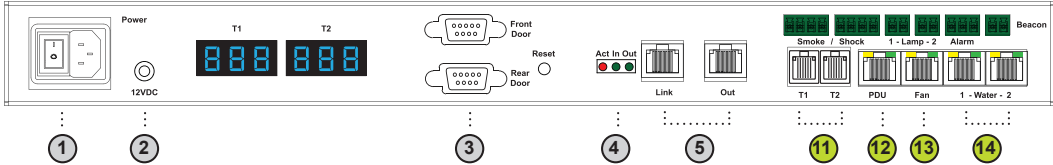
InfraSolution X offers 2 optional control box models :
X-1000 for Rack Smartcard Access
X-2000 for Rack Smartcard Access + PDU / Fan / Environmental Management



X-1000



X-2000



- 1

Power input
- 2

Dual power input (option)
- 3

Door cable DB-9 connector x 2
Connect to the front and rear handle
- 4

"Act in Out" LED
- 5

Daisy chain RJ45 port x 2
(Link & Out)
- 6

Temp. LED display x 2
- 7

Smoke / Shock sensor port x 2
- 8

LED Light Bar port x 2
- 9

Port for 3rd party alarm board x 1
- 10

LED beacon port x 1
- 11

Temp. & Humid. sensor port x 2
- 12

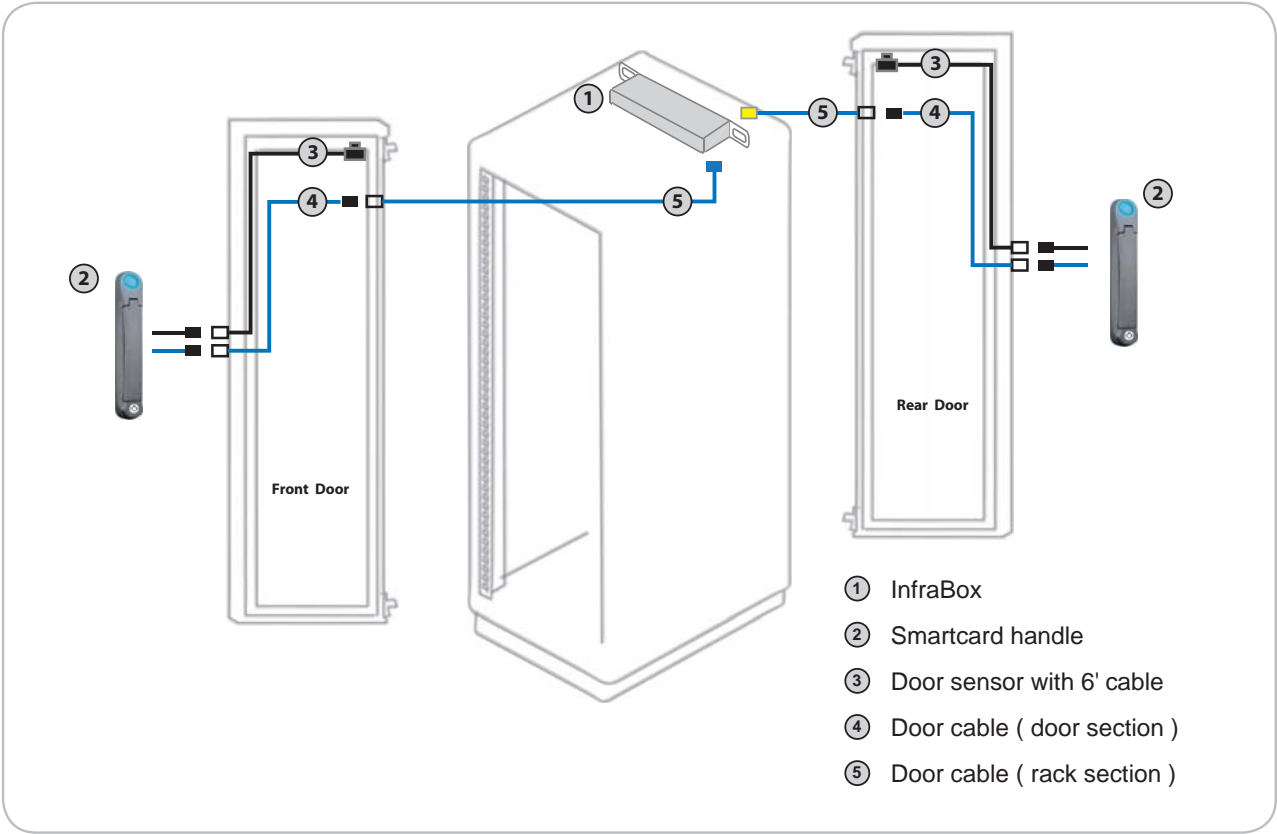
PDU port x 1 (RJ-45, up to PDU daisy chain level x 4)
- 13

Fan unit port x 1 (RJ-45, up to fan unit daisy chain level x 2)
- 14

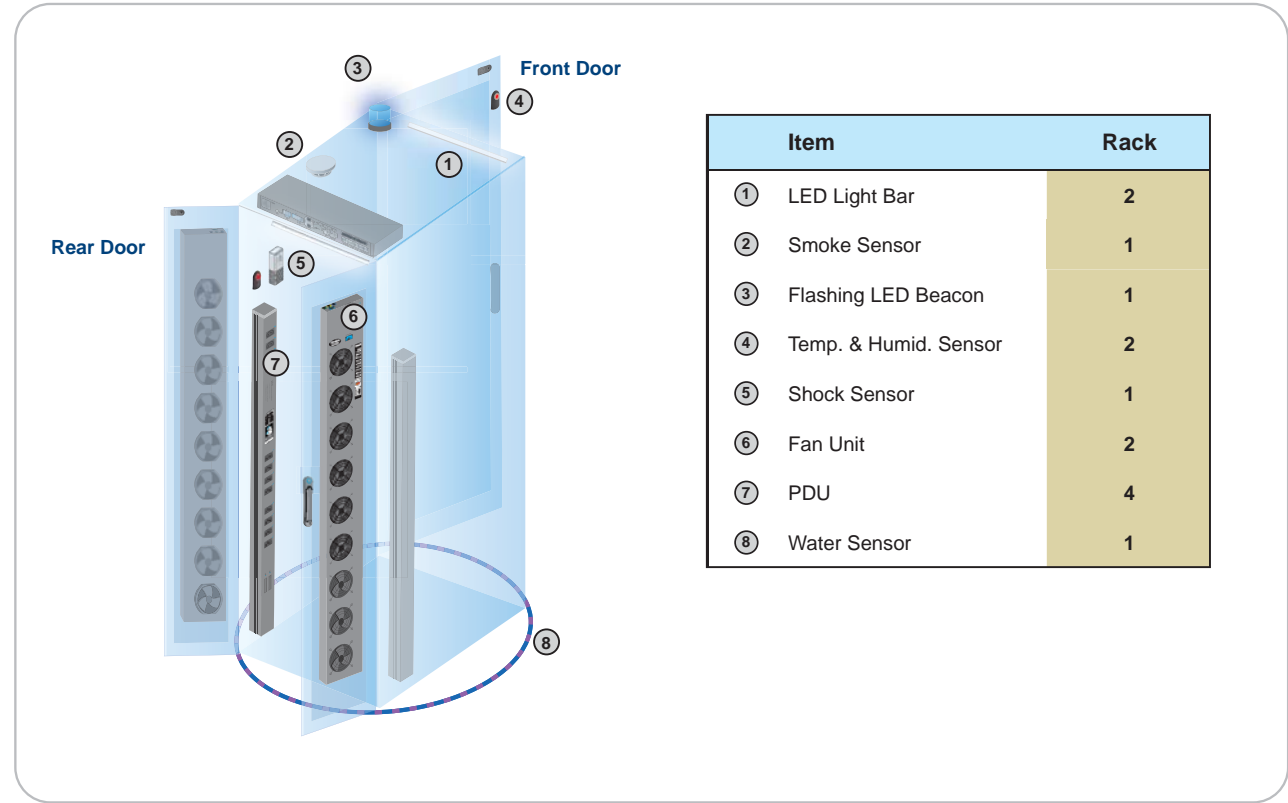
Water sensor port x 2

| X-1000 / X-2000 Specification | |
|---------------------------------|---|
| Product Dimension (W x D x H) | 400 x 135 x 39.7 mm / 15.7 x 5.3 x 1.6 inch |
| Net Weight | 1.06 kgs / 2.3 lbs |
| Gross Weight | 2.2 kgs / 4.8 lbs |
| Power Consumption | Auto-sensing 100 to 240VAC, 50 / 60Hz, Max. 48 Watt |
| Operating Temperature | 0 to 55°C Degree |
| Storage Temperature | -5 to 60°C Degree |
| Relative Humidity | 5~90%, non-condensing |
| Mounting | 1U Rackmount |
| Safety Regulatory | FCC & CE certified |
| Environmental | RoHS3 & Reach compliant by SGS |

Key Hardware Installation Diagram - InfraBox / Handle / Door Sensor





Installation Diagram - PDU / Fan / Sensor / Peripheral



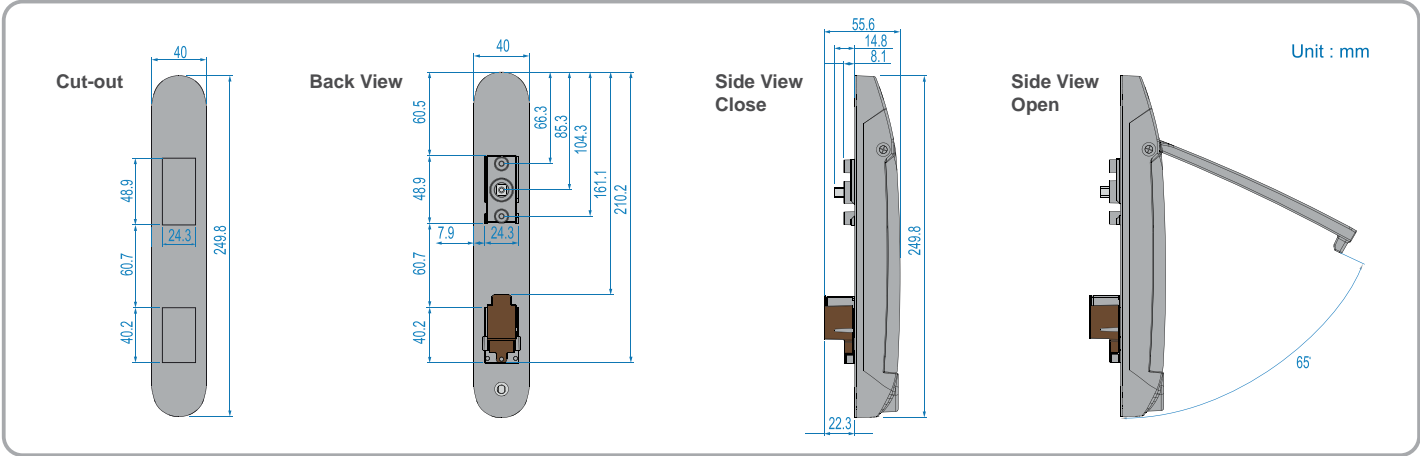
The patented X-800 smartcard handle is an intelligent design with universal mounting cut-out. Most global branded racks have applied a standard handle cut out dimension on the door. To achieve the highest level of interoperability offered in the rack industry, the X-800 handle applies the same mounting dimension. It avoids costly and complicated door customization for the smartcard handle integration.

Patented and Worldwide Patents



| X-800P | | Features | | X-800M |
|---|---|--|---|---|
|  | | Intelligent design with patent | |  |
| | | Universal mounting design for global branded racks | | |
| | ✓ | Proximity 26-bit smartcard compatible | | |
| | | MIFARE 26-bit smartcard compatible | ✓ | |
| | | Dual locking system (electronics and mechanical lock) | | |
| | | Electronic lock released either by smartcard or software | | |
| | | Rack access status and alarm indication by LED | | |
| | | Individual key lock option available | | |
| | | Left side open standard (optional right side open) | | |


Universal Mounting Cut-out




Handle Releasing

InfraSolution X-800 handle allows 3 lock releasing ways - by Software remote, Smartcard or Mechanical key.

By Software Remote





By Smartcard



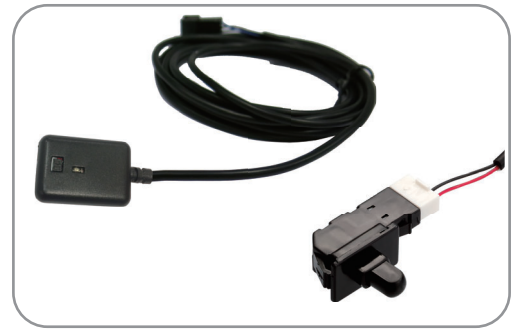
PROXIMITY SMARTCARD

MIFARE SMARTCARD

By Mechanical Key

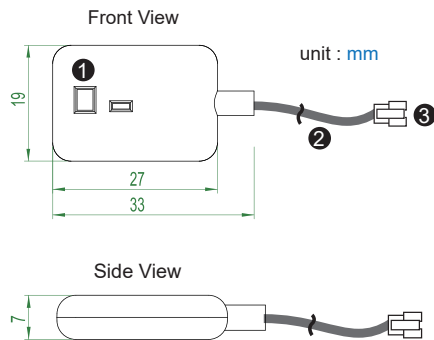


Door Sensor is an important component which should never be overlooked.
InfraSolution provides high quality, durable and precise door sensors to ensure 100% right door detection.



(I) IR Door Sensor, pair (S-DIR)

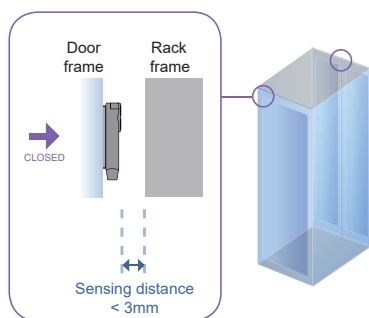
- Magnetic base for easy setup
- No custom cutting required on doors
- Light weight & mini size (33 x 19 x 7 mm)
- 2m cord



| | |
|---|----------------------------------|
| ① | Sensor area |
| ② | 2m cable |
| ③ | Cable jack (connect to handle) |

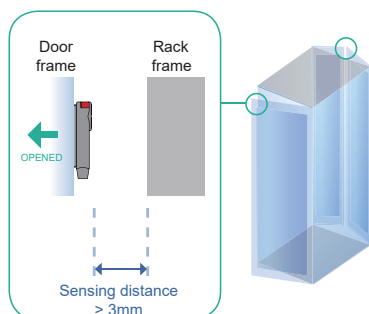
DOOR CLOSE

- Close door
- IR sensor detects the rack frame
- **DOOR CLOSE SIGNAL** sends out



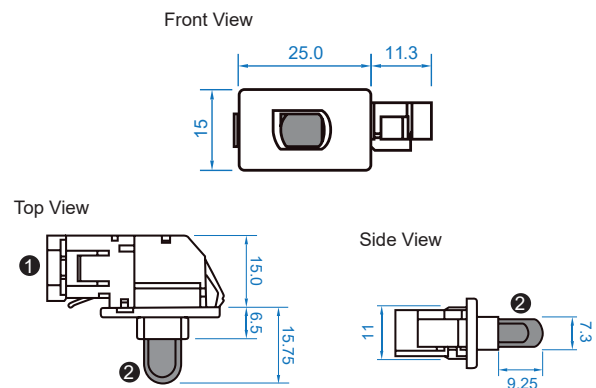
DOOR OPEN

- Open door
- IR sensor loses detection with rack frame
- **DOOR OPEN SIGNAL** sends out



(II) Mechanical Door Sensor, pair (S-DSW)

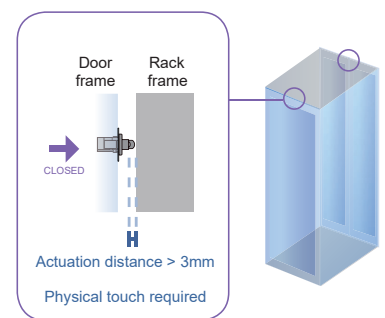
- Low cost / precise
- Size (36.3 x 15 x 30.75 mm)
- 2m cord



| | |
|---|---|
| ① | Cable connector |
| ② | Press button (total travel distance : 9.25 mm) (min. actuation distance : 3.00 mm) |

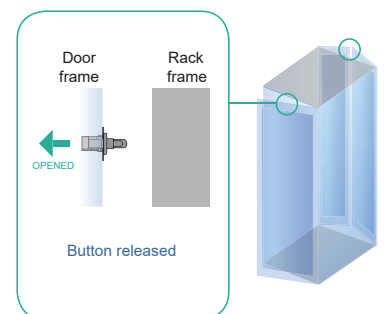
DOOR CLOSE

- 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

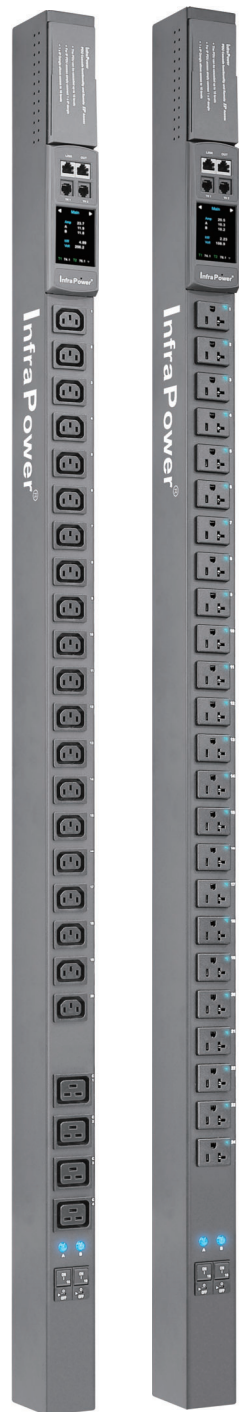
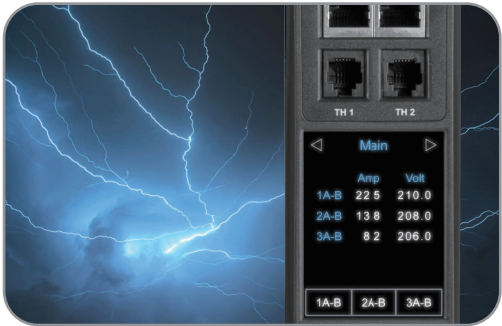


With today’s increasing demand for power management solution, a complete suite of rack PDU models is required specifically to help data center IT managers meet their rapidly escalating power requirements.

InfraPower® intelligent PDU can be integrated to provide a power management solution from PDU Level to Outlet Level kWh monitoring. Switched models are also available for remote outlet switching on / off. Our PDUs are also offered in many sizes and configurations depending on voltage, current, outlet number and type of connections.



TUV & cUL certified for specific configurations



| PDU series | Monitored | | Switched | |
|--|-----------|----|----------|-----|
| | W | Wi | WS | WSi |
| 1-Phase : 230V / 208V / 110V | ✓ | ✓ | ✓ | ✓ |
| Outlet Level Measurement Over IP | | ✓ | | ✓ |
| Outlet ON / OFF Switching Over IP | | | ✓ | ✓ |
| Latching Relay | | | ✓ | ✓ |
| Field Replaceable DC Module | ✓ | ✓ | ✓ | ✓ |
| Hot-Swappable Meter | ✓ | ✓ | ✓ | ✓ |
| 2.8" Color Touch LCD Meter | ✓ | ✓ | ✓ | ✓ |
| Billing Grade Meter Accuracy Within +/- 1% | ✓ | ✓ | ✓ | ✓ |
| Amp & kWh Measurement | ✓ | ✓ | ✓ | ✓ |
| Resettable Fuse / Hydraulic MCB | ✓ | ✓ | ✓ | ✓ |
| Options ELCR / Surge Protector / EMI Filter | ✓ | ✓ | ✓ | ✓ |
| RCM (Residual Current Monitoring Module) | ✓ | ✓ | ✓ | ✓ |
| Temp., Humidity, Smoke & Door Sensors | ✓ | ✓ | ✓ | ✓ |
| Door Mount PDU Panel w/ 4.3" Color LCD | ✓ | ✓ | ✓ | ✓ |
| WiFi Kit (Supports Max. 32 Daisy Chained PDUs) | ✓ | ✓ | ✓ | ✓ |
| Tool-less Mounting for Vertical PDU | ✓ | ✓ | ✓ | ✓ |
| 0U / 1U / 2U Form Factors | ✓ | ✓ | ✓ | ✓ |
| Operating Temperature -5 to 60° C | ✓ | ✓ | ✓ | ✓ |
| Outlet : US NEMA / C13 / C19 / UK / SCH / FR | ✓ | ✓ | ✓ | ✓ |
| Lockable IEC | ✓ | ✓ | ✓ | ✓ |
| Fused IEC | ✓ | ✓ | ✓ | ✓ |
| Custom PDUs on Request | ✓ | ✓ | ✓ | ✓ |



The biggest challenge in today's data center is thermal management. Cooling the equipment in an enclosed rack has always been important.

InfraCool® intelligent cooling fan units can be integrated to have both local & remote management capabilities. Front panel LED and buttons allow the local monitoring and individual fan kit switch on / off. Moreover, fan speed can be adjusted automatically according to the temperature detected by the sensor. It provides adequate airflow and minimizes the operation cost for data center energy consumption.


[Details](#)


| Intelligent Fan Unit | Door Mount Fan Panel | 1U Rackmount Fan Tray | |
|------------------------------------|---|-----------------------|--------|
| Part No. | RF-33.9 | RF-1.6 | RF-1.9 |
| Fan Number | 9 | 6 | 9 |
| Total CFM | 972 | 648 | 972 |
| Airflow | <div> <p><i>Front Door</i> Cool Air In</p> <p><i>Rear Door</i> Hot Air Out</p> </div> | | |
| Daisy-chained Fan x 2 via InfraBox | ✓ | ✓ | |
| Temp. Port | ✓ | ✓ | |
| Temp. Sensor | ✓ | ✓ | |
| Automatic Fan Speed Control | ✓ | ✓ | |
| Control Panel : | ✓ | ✓ | |
| • Individual Fan On / Off | ✓ | ✓ | |
| • Alarm Temp. Setting | ✓ | ✓ | |
| • Unit CFM (fan speed) Setting | ✓ | ✓ | |
| • Temperature LED | ✓ | ✓ | |
| • Fan Status LED | ✓ | ✓ | |
| • CFM Status LED | ✓ | ✓ | |

Rackmount Fan Trays



Auto Fan Speed Control



Temp. Sensor Port x 1



To maintain optimum operational conditions in data centers, getting instant notification of various environmental fluctuations is vital.

InfraSolution® X offers a wide range of sensors for complete environmental monitoring, including temperature, humidity, smoke, shock and water leakage.

Peripherals such as LED light bars and flashing LED beacons, are designed for use with the sensors for a comprehensive local environmental monitoring solution.



Temp. + Humid. Sensor



- One sensor for temperature & humidity
- Low profile and light weight design with a magnetic base for easy affixing to rack

Part no. :

IG-TH01-2M with 2M cord

IG-TH01-4M with 4M cord

Temp. Sensor



- Detection for temperature
- Low profile and light weight design with a magnetic base for easy affixing to rack

Part no. :

IG-T01-2M with 2M cord

IG-T01-4M with 4M cord

Water Sensor



- Fluid leakage detection
- 5M rope round the rack bottom to detect any fluid flowing to the rack area
- IP65 cable joint connectors provided

Part no. :

IG-W01-3M with 3M cord

Smoke Sensor



- Safely operated smoke detection

Part no. :

IG-S01-1M with 1M cord

IG-S01-3M with 3M cord

Shock Sensor



- Alert the physical vibration on the rack

Part no. :

IG-V01-1M with 1M cord

IG-V01-3M with 3M cord

LED Beacon



- Highly visible for alerting user to alarm status

Part no. :

IG-FB03-1M with 1M cord

IG-FB03-3M with 3M cord

LED Light Bar



- Auto ON / OFF by door sensor detection
- Manual ON / OFF by software remote
- Magnetic base for easy affixing to rack
- Dimension (W x D x H) : 20 x 300 x 12 mm

Part no. :

CLB-IX-002 with 2M cord

CLB-IX-003 with 3M cord

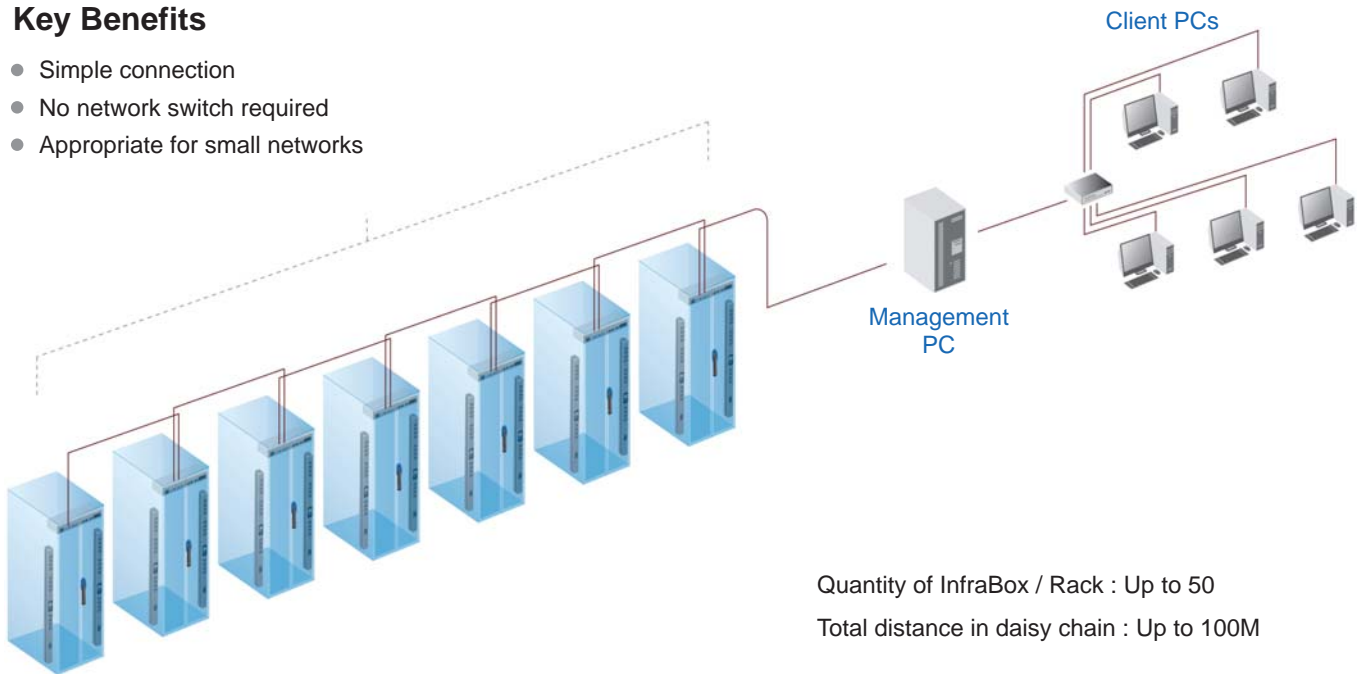
InfraSolution X provides 3 connection ways - **Daisy Chain** , **Star** , **Mixed**.

Which connection users apply is related to the site scale, environment and users' requirements.

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

Key Benefits

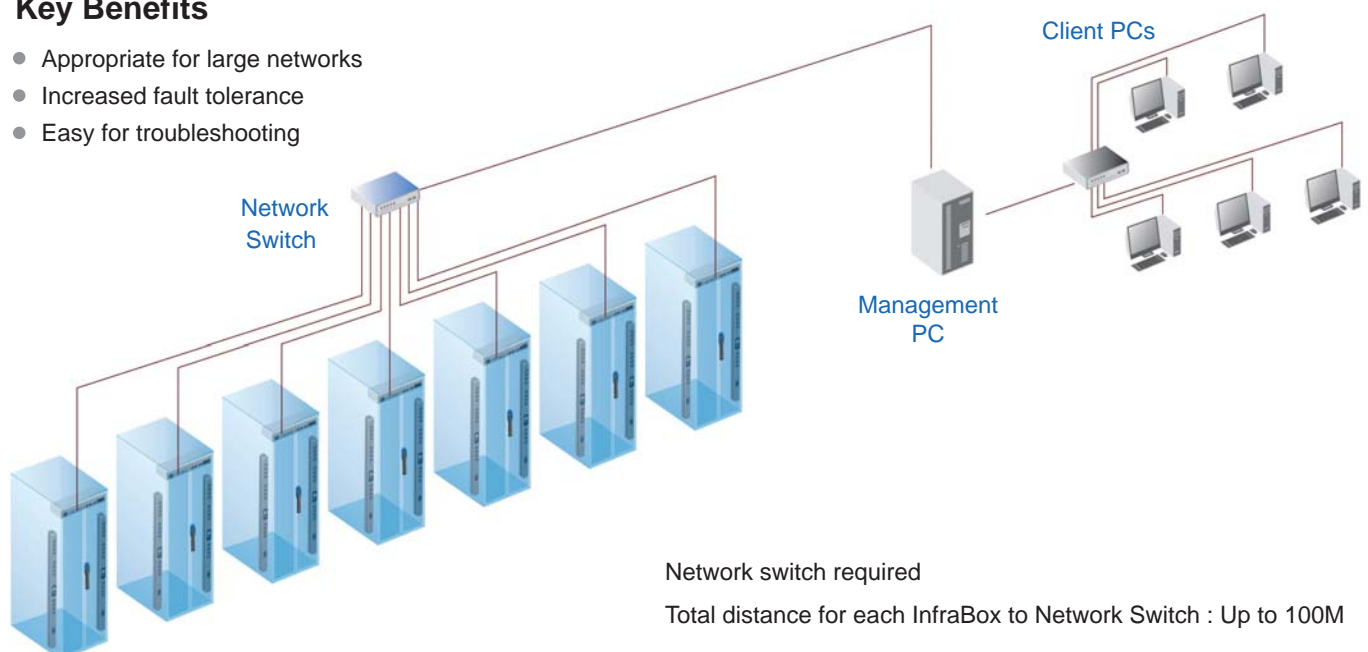
- Simple connection
- No network switch required
- Appropriate for small networks



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

Key Benefits

- Appropriate for large networks
- Increased fault tolerance
- Easy for troubleshooting

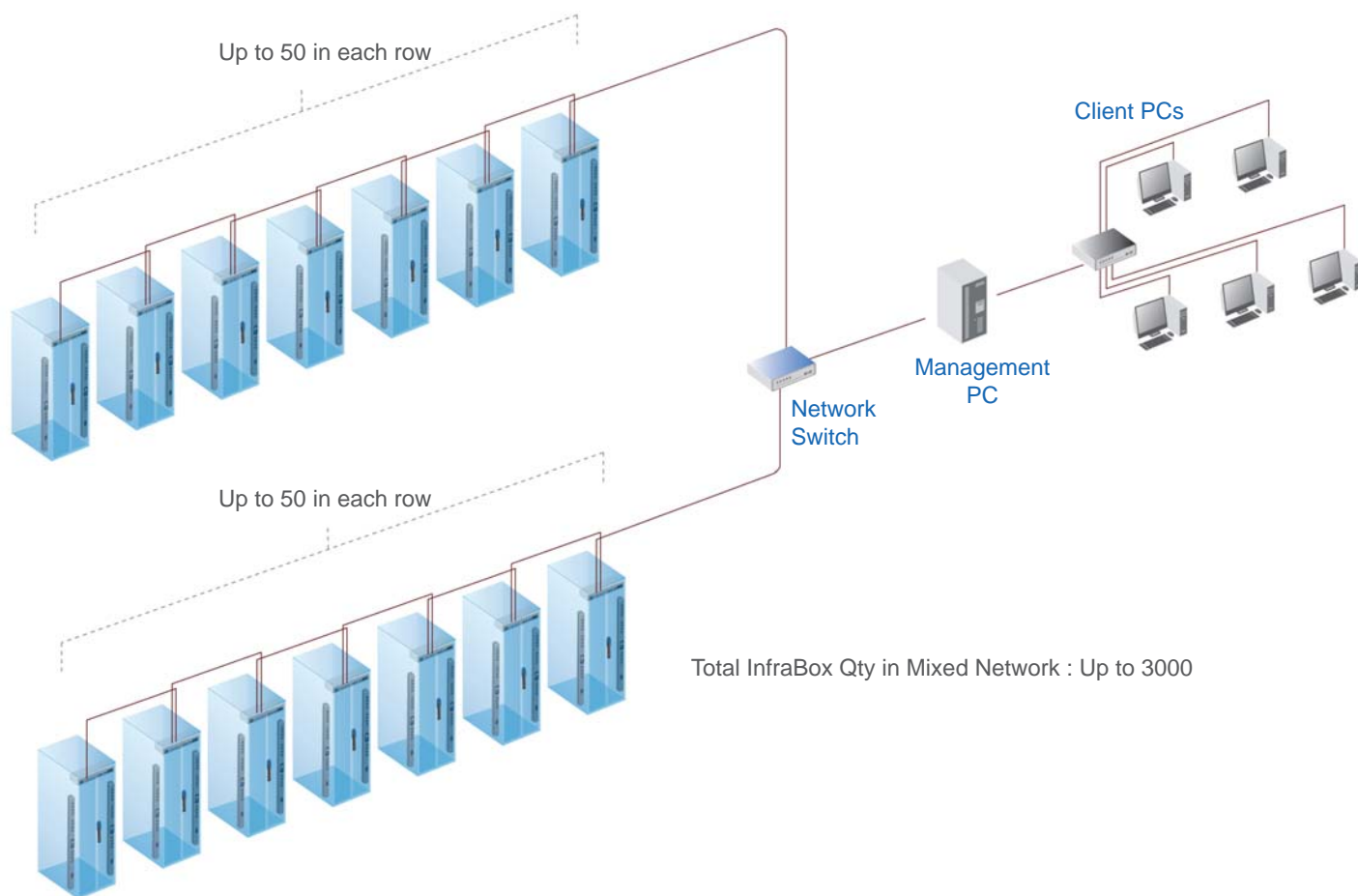


< III > Mixed

 Combining daisy chain with star connection

Key Benefits

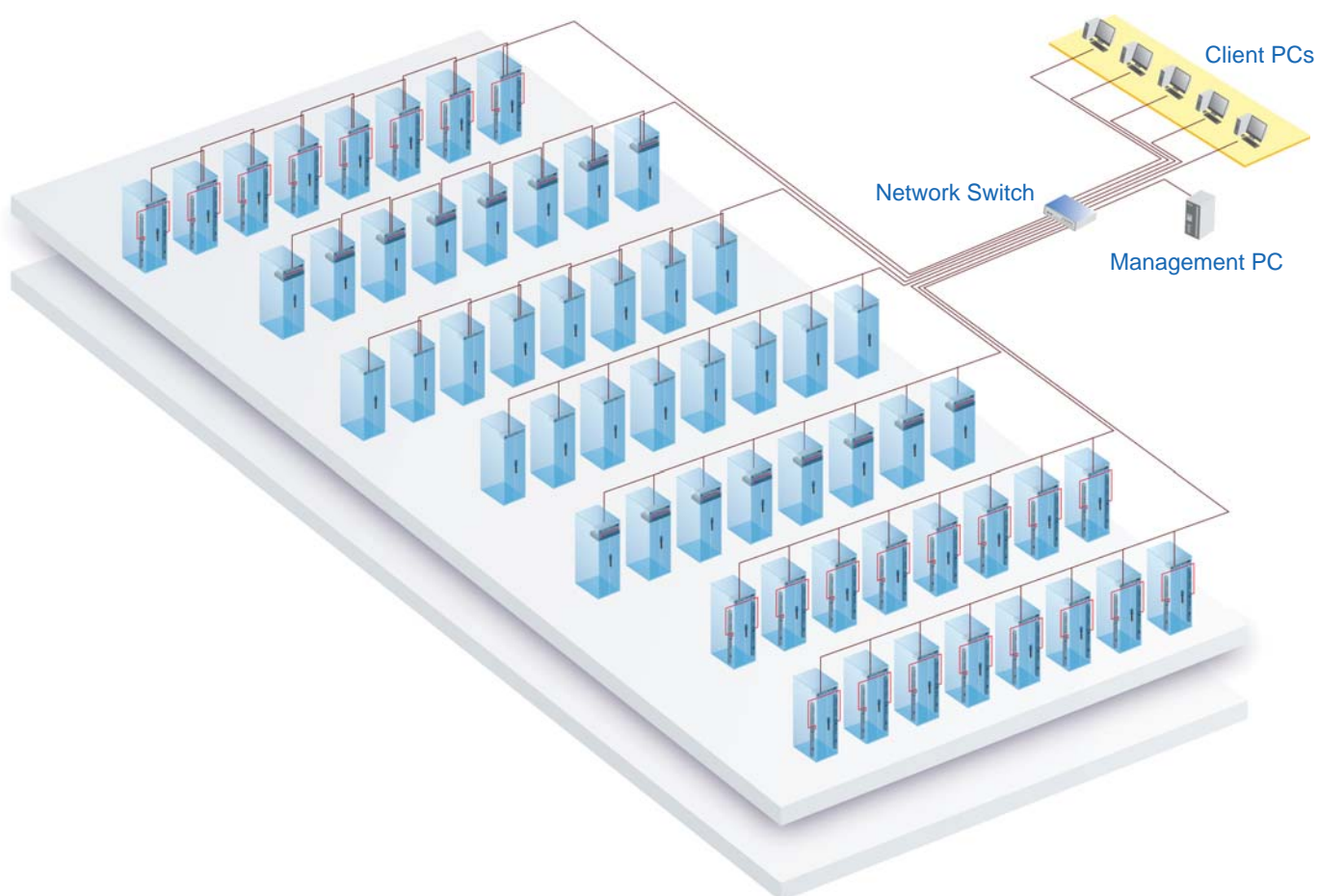
- Most effective and practical for large scale of networks
- Take all advantages of Daisy Chain and Star connection
- Flexible to meet a variety of network environments and needs



< I > Data Center

By mixed connection, InfraSolution X can be scalable up to 3000 racks. X-2000 and X-1000 InfraBoxes can be coexisted in the same network. Users are enabled to manage and remotely access all racks under a centralized and user friendly GUI.

- Connect the 1st InfraBox in each daisy chain to the network switch
- Connect the management PC and client PCs via the network switch
- Up to 3000 Infraboxes / Racks



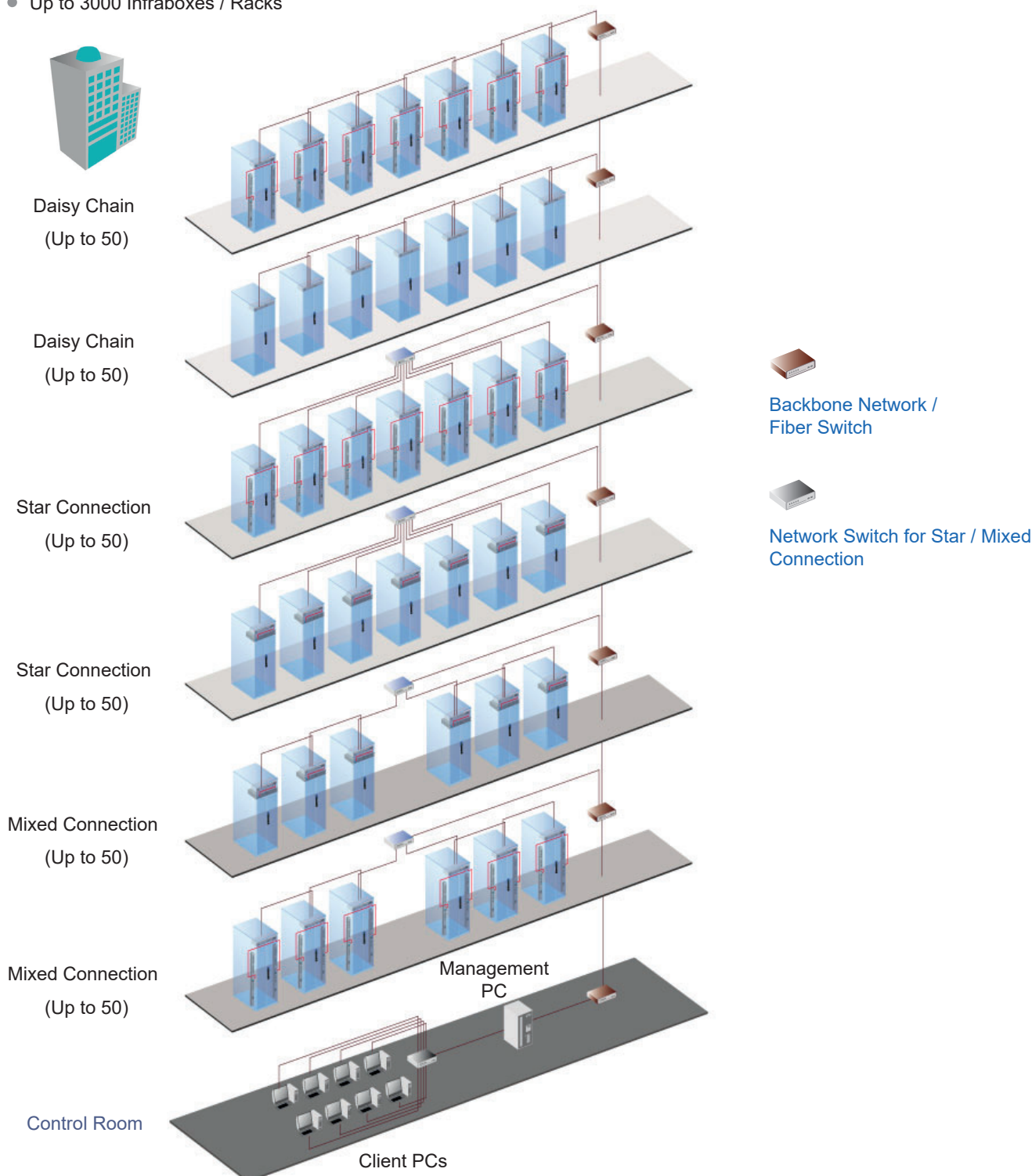
< II > Intelligent Building

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 X system allows equipment to be distributed throughout a building simply by deploying an Ethernet network. To keep capital costs down, InfraSolution X 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.

Setup Scenario in the whole Intelligent Building

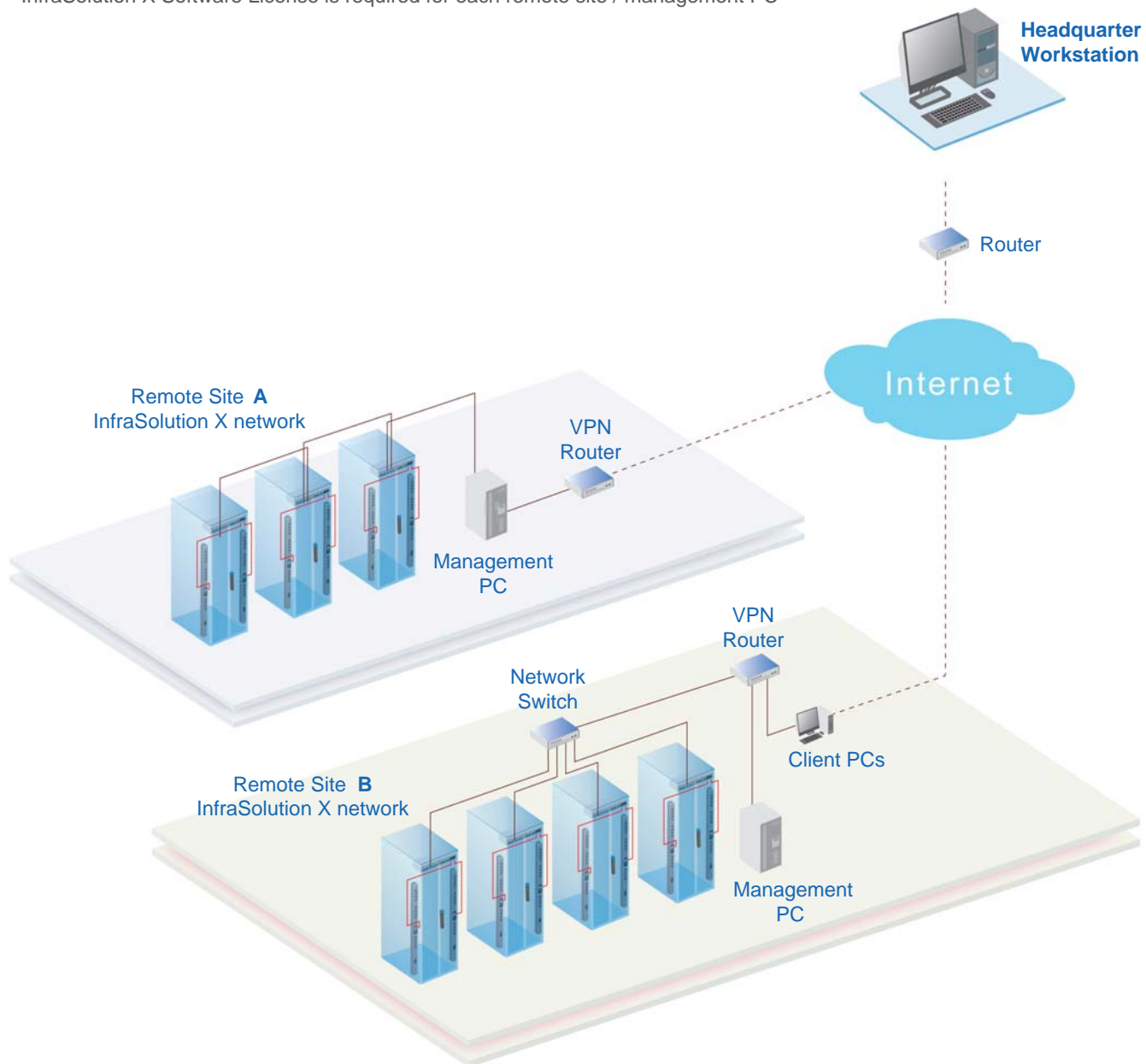
- Connect the InfraSolution X network in each floor via the network ethernet / fiber switch
- Up to 3000 Infraboxes / Racks



< III > Remote Site

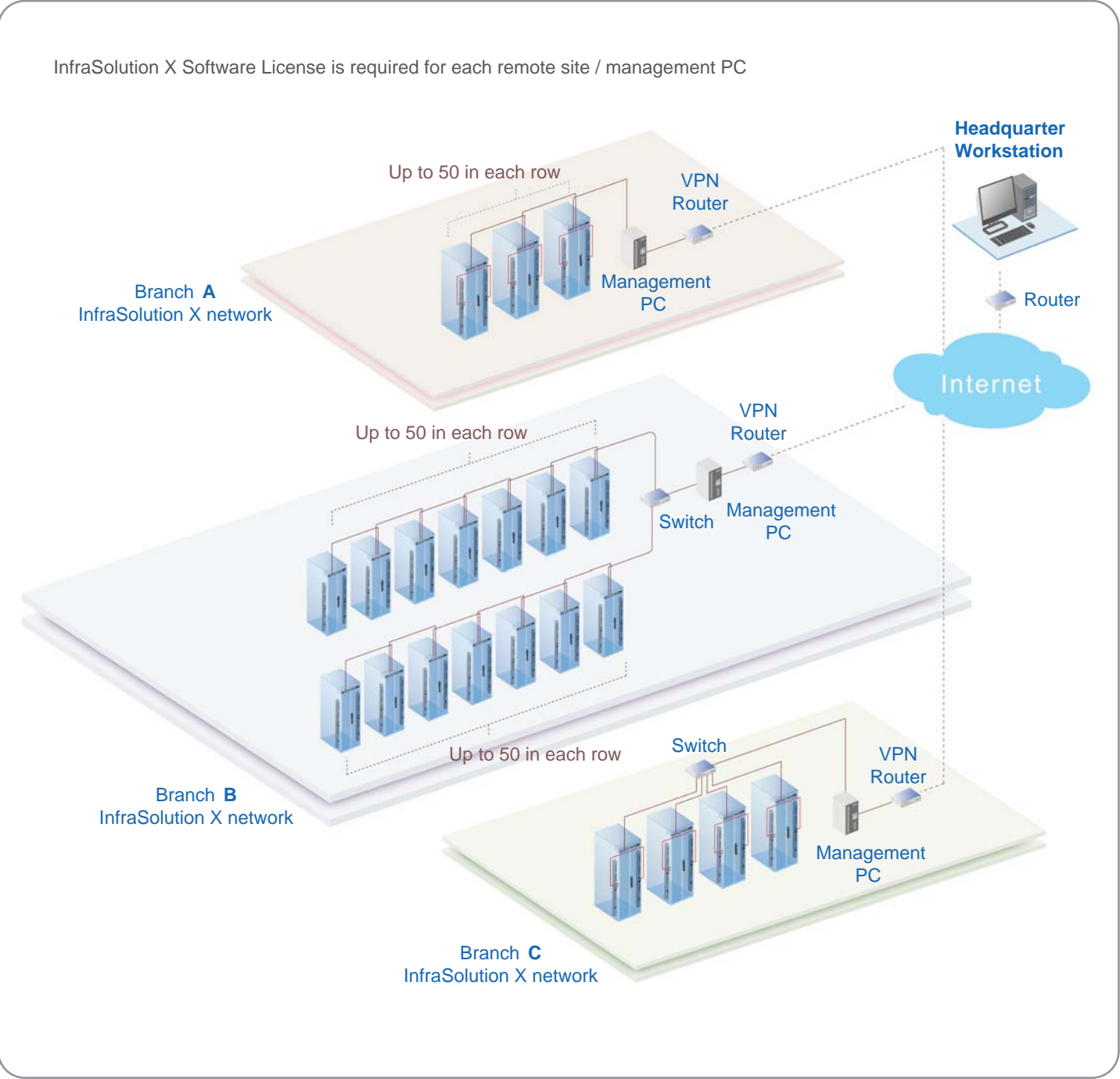
InfraSolution X can be also applied to the remote site for access and monitoring over IP anytime and anywhere.

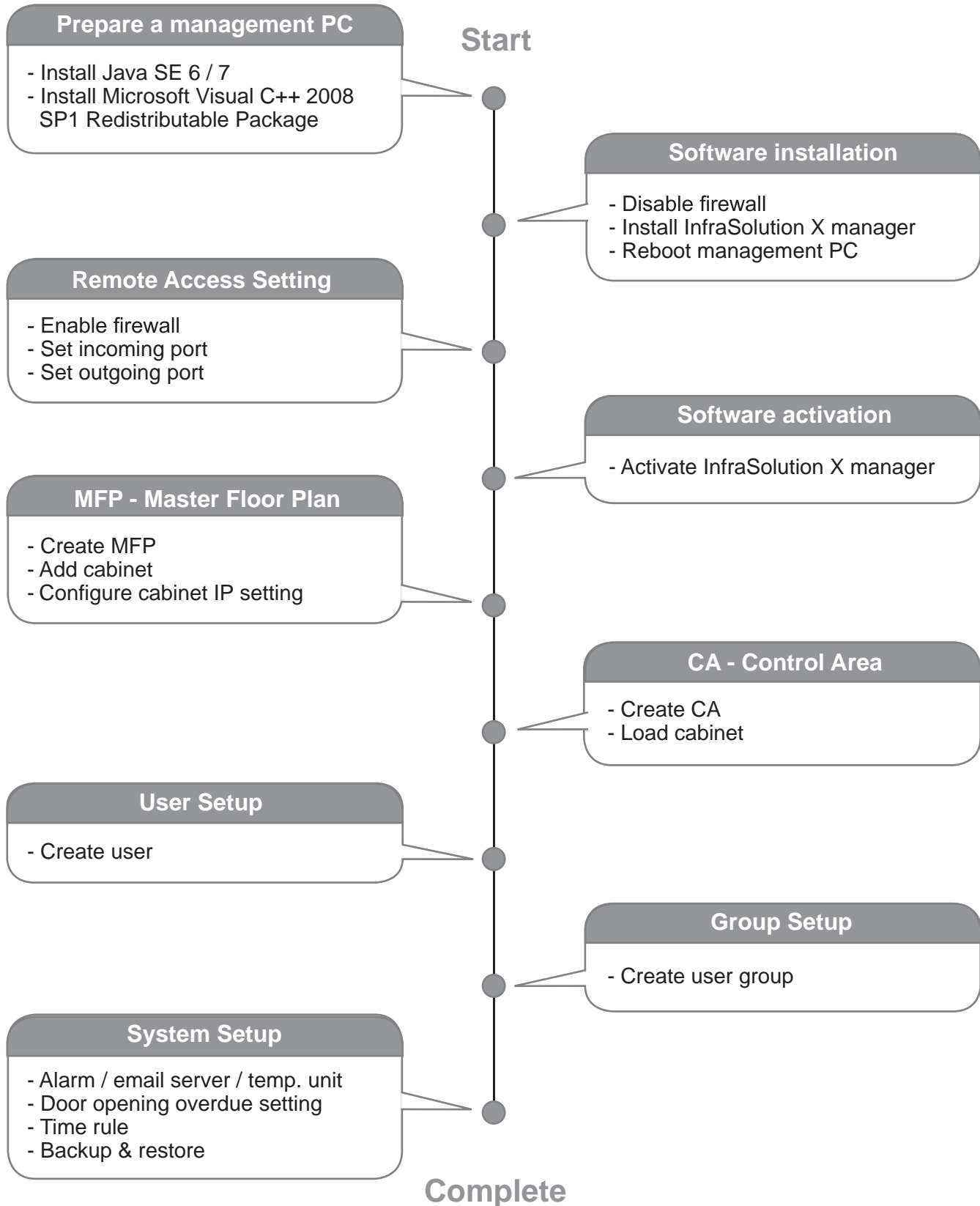
InfraSolution X Software License is required for each remote site / management PC



< IV > Branches

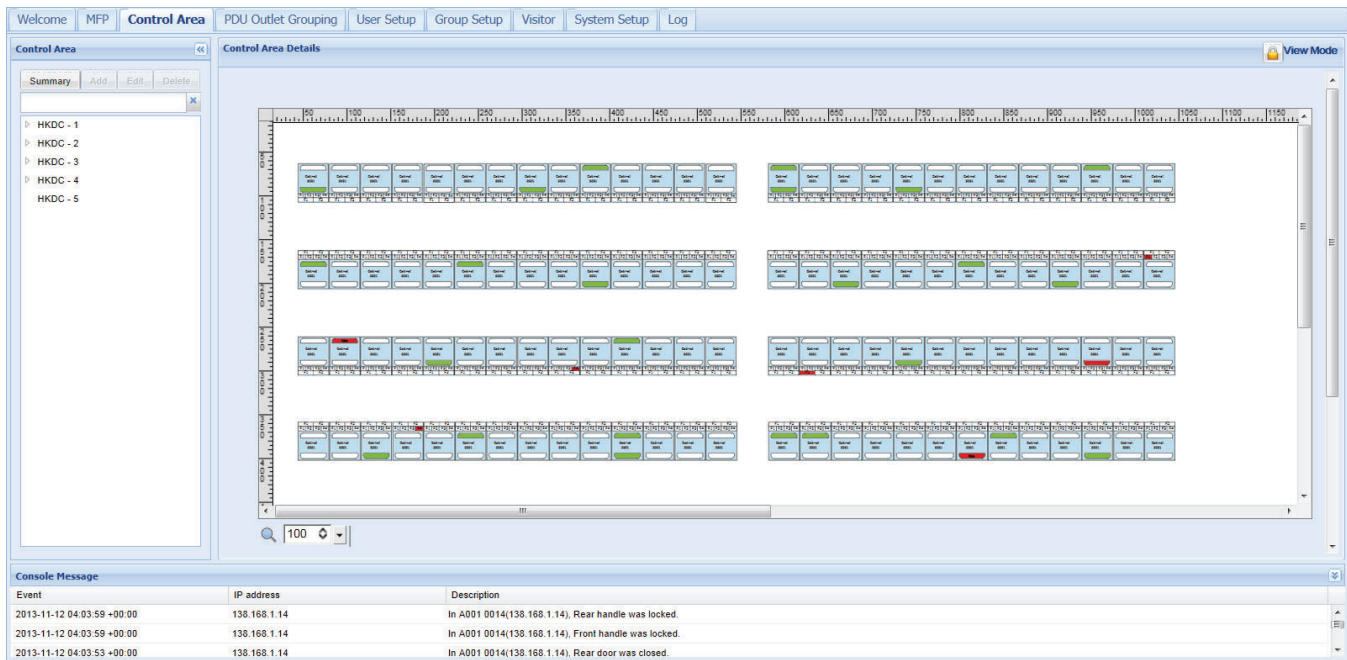
For a global or scalable company, it is vital to remote access and monitor the network of their nationwide and worldwide branches. InfraSolution X provides an ideal solution to keep an eye on rack access security and environmental condition.





InfraSolution® X Manager X-ISM is a LICENSED rack management software to monitor up to 3000 racks remotely.

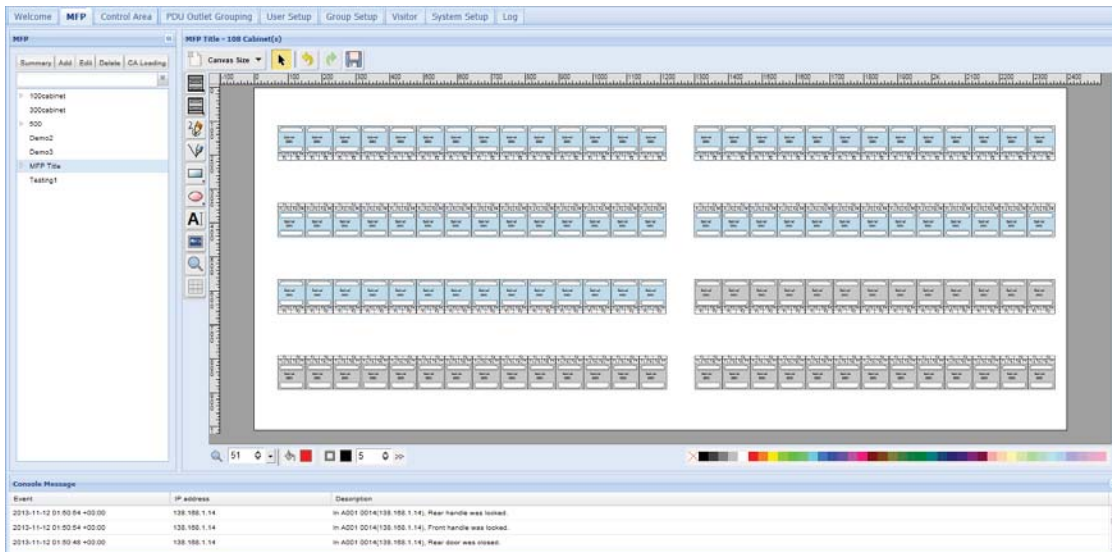
Each InfraBox connects a pair of smartcard handles to secure the rack access control, and connect a variety of sensors to provide an environmental monitoring solution. To enhance the functionality, up to 1920 x kWh PDU / 960 x Fan Unit can be monitored through InfraSolution X Manager as well. Up to 100 concurrent users can access the management software remotely to achieve the demand of multi-user / multi-tasking in nowadays' time sharing data center operation.



| Features | | X-ISM |
|---------------------------|--|-------|
| Capacity | InfraBox | 3000 |
| | Concurrent User | 100 |
| System Setup | Backup / Restore Setting | ✓ |
| | Time Rule Setting | ✓ |
| | Alarm Mail Server Setting | ✓ |
| | Audio and Visual Alarm Output Setting | ✓ |
| Cabinet Overview Door | Status of Door, PDU, Sensor & Fan Unit | ✓ |
| | Door Open by Remote | ✓ |
| | Last Door Open & Close Record | ✓ |
| Sensor / Peripheral | Status Monitoring | ✓ |
| | Temp-Humid Alarm Threshold Setting | ✓ |
| PDU | Energy Consumption kWh / Amp Monitoring | ✓ |
| | Outlet Level Measurement | ✓ |
| | PDU Outlet Schedule | ✓ |
| | Outlet Switch ON / OFF | ✓ |
| | Amp Alarm Threshold Setting | ✓ |
| | Amp Rising / Low Alert Threshold Setting | ✓ |
| | Temp-Humid Monitoring | ✓ |
| Fan Unit | CFM & Temp. Monitoring | ✓ |
| | Unit CFM (fan speed) Setting | ✓ |
| | Auto CFM Control Setting | ✓ |
| | Individual Fan Kit ON / OFF | ✓ |
| | Fan Unit ON / OFF | ✓ |
| Chart / Event / Reporting | System & Device Event Reporting | ✓ |
| | Temp-Humid Line Chart of InfraBox | ✓ |

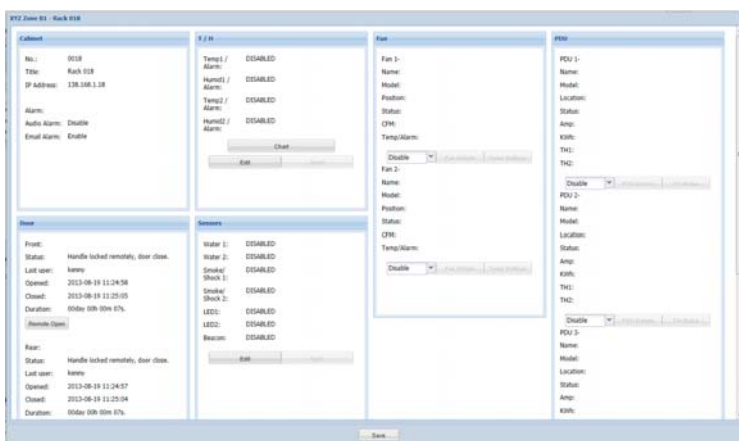
MFP - Master Floor Plan

- An actual Cabinet floor plan
- To create Cabinet & configure the IP setting for the cabinet.
- MFP can be more than one. No. of MFP is subject to the site scale & plan by floor, zone, building, branches or remote sites.



CA - Control Area

- To build a Control Area for some specific cabinets to monitor, configure & control.
- All cabinets in the CA should be loaded from the MFP.
- CA can be more than one. How many CA is subject to the User plan.
- CA has 2 modes : Edit mode & View mode.
- Under Edit mode, users can configure not only cabinets but also devices such as PDU, Fan unit & sensors.
- View mode is designed for users with limited authority so they can only monitor the status of Cabinet & device.



User Setup

- To create a user list for building the user group.
- Each user has his own login name & password for remote System login.
- Each user also has his own smartcard for cabinet access
- Before users join a user group, they can do nothing.

User

First Name: Peter
 Last Name: Chan
 Title: IT Manager
 Staff ID: 12345678
 Dept: MIS
 Phone: (852) 3310 0700
 Mobile: (852) 6789 5600
 Email: Peter.Chan@abc.com
 Company: ABC Company
 Smart Card No.: 10809901
 Issue Date: 2013-08-15
 Expiry Date: 2015-08-14
 Login Name: Peter
 New Password: ••••••••
 Confirm Password:
☒ Enforce to change password in next login
☒ Email Alert
☐ User Suspended

Photo upload: Browse...

Save Cancel

User Group

- To form a user group from the User list.
- To define the user group with authority and which Control Area(s) to monitor & access.
- Each user subordinated to only ONE user group.
- If the user wants to join one more user group, a new login name, password & smartcard number MUST be assigned.
- Each user group MUST select ONE time rule. All group user can access the cabinet according to the time period of the selected time rule.
- Without time rule assignment, All group user cannot access the cabinet.

Group

Summary Add Edit Delete

Administrator Profile
 AAA
 Operator
 richard1
 Super Admin
 Admin Group
 kenny
 Richard
 Simon
 test
 AAA
 walker
 walker testing
 Operator Profile
 Operator Group
 Monitor Profile
 Monitor Group
 Auditor Profile
 Unassigned user

Group Details

User(s)
☐ AAA
☐ Auditor
☐ kenny
☐ Monitor
☒ Operator
☐ Richard
☒ richard1

Control Area(s)
☐ ABC Company Zone A1
☐ ABC Company Zone A2
☐ walker
☒ XYZ Company Zone A3
☒ XYZ Zone B1

Authority Category
 Setup
☒ Master Floor Plan
☒ Control Area (View mode only)
☒ Control Area (Edit & View mode)
☒ User Setup
☒ Group Setup
☒ Visitor

Device Configuration
☒ Door Remote Open
☒ PDU
☒ Sensors
☒ Fan
☒ MF T/H Sensors

System & Device Log
☒ User Activity
☒ System Setup
☒ MFP
☒ Control Area
☒ User
☒ User Group

Time Access Setting for User Group:
 Working hours
 Applied to:
☒ Smart Card Access
☐ Remote System Login

Save Cancel

Time Rule

- To set time rules up to 32.
- Afterward, all time rules will be shown in user group for their selection.
- Only ONE time rule can be assigned to ONE user group.

System Setup - Time Rule

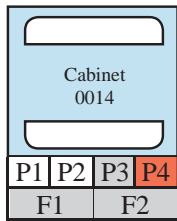
Time rule: Time Rule 06 Time Rule Name: Time Rule 06 Select All Clear All

| Time Slot | Sunday | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday |
|---------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 00:00 - 01:00 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 00:00 - 00:15 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 00:15 - 00:30 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 00:30 - 00:45 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 00:45 - 01:00 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 01:00 - 02:00 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 02:00 - 03:00 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 03:00 - 04:00 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 04:00 - 05:00 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 05:00 - 06:00 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 06:00 - 07:00 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 07:00 - 08:00 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 08:00 - 09:00 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 09:00 - 10:00 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 10:00 - 11:00 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 11:00 - 12:00 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 12:00 - 13:00 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 13:00 - 14:00 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 14:00 - 15:00 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 15:00 - 16:00 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Save

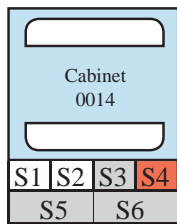
Cabinet icon has two layers, the layer one by default shows on all control area under view mode for status monitoring. User can click cabinet icon to switch to layer two.

Layer one



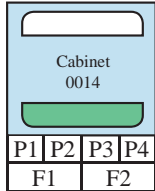
- show PDU status (**P1, P2, P3, P4**)
- if PDU is enabled & connected, **P** icon in WHITE color
- if PDU is enabled BUT disconnected, **P** icon in **RED** color
- if PDU is on alarm status, **P** icon also in **RED**
- if PDU is disabled, **P** icon in GREY color
- show Fan unit status (**F1, F2**)
- if Fan unit is enabled & connected, **F** icon in WHITE color
- if Fan unit is enabled BUT disconnected, **F** icon in **RED** color
- if Fan unit is on alarm status, **F** icon also in **RED** color
- if Fan unit is disabled, **F** icon in GREY color

Layer two

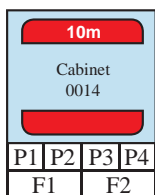


- show TH sensor status (**S1, S2**)
- if TH sensor is enabled & connected, **S1, S2** icon in WHITE color
- if TH sensor is enabled BUT disconnected, **S1, S2** icon in **RED** color
- if TH sensor is on alarm status, **S1, S2** icon also in **RED** color
- if TH sensor is disabled, **S1, S2** icon in GREY color
- show smoke & shock sensor status (**S3, S4**)
- if smoke & shock sensor is enabled & connected, **S3, S4** icon in WHITE color
- if smoke & shock sensor is on alarm status, **S3, S4** icon also in **RED** color
- if smoke & shock sensor is disabled, **S3, S4** icon in GREY color
- show water sensor status (**S5, S6**)
- if water sensor is enabled & connected, **S5, S6** icon in WHITE color
- if water sensor is on alarm status, **S5, S6** icon also in **RED** color
- if water sensor is disabled, **S5, S6** icon in GREY color

Door status

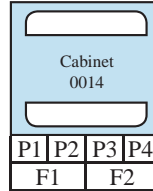


- ← - - Door close status in white
- ← - - Door open status in green

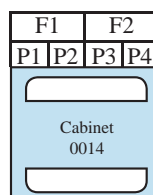


- ← - - Door open overdue status in red (show overdue time)
- ← - - Door alarm status in red (unauthorized open)

Door direction

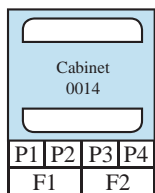


- ← - - Front door

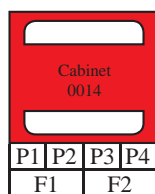


- ← - - Front door

Connection status

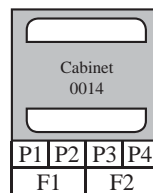


- ← - - Normal connection status (color in blue)



- ← - - Disconnection status (color in red)

Non-configure cabinet

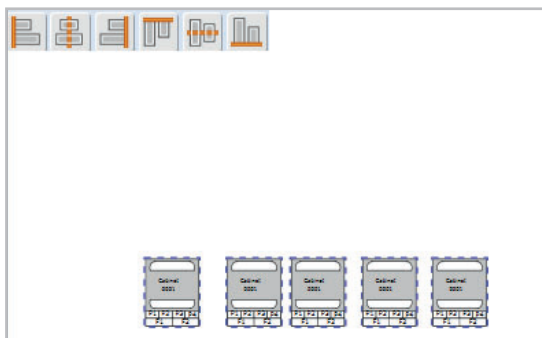


- ← - - (color in grey)
- In MFP master floor plan, the grey cabinet icon shows that the cabinet has not been configured with IP setting yet.

In CA control area, the grey cabinet icon shows that the cabinet has been deleted in master floor plan. The user should remove this non-function cabinet from control area.

Cabinet Alignment

- >> Provided by MFP & CA
- >> For user to arrange the cabinet in a neat way
- >> Top / middle / bottom alignment
- >> Left / center / right alignment



Individual Cabinet Door

- >> Door open by remote
- >> View the record of last door open & close record

Door

Front:

Status: Handle locked remotely, door close.

Last user: kenny

Opened: 2013-08-19 14:45:31

Closed: 2013-08-19 14:46:13

Duration: 00day 00h 00m 42s.

Remote Open

Rear:

Status: Unauthorized open

Last user: Anonymous User

Opened: 2013-08-19 14:47:07

Closed: 2013-08-19 14:47:34

Duration: 00day 00h 00m 27s.

Remote Open

Fan

- >> Status
- >> Fan Unit Setting
- >> Temp. Setting

XYZ Zone B1 - Rack 018 - Fan Details

Fan unit level: 02 RF-1.3 1U Fan Tray

Status: Connected

Unit switch: ON OFF

Name: Rack 22

Unit CFM: Low High Max.

Position: Top

| Fan | Status | Switch |
|-----|--------|--------|
| 01 | OFF | ON |
| 02 | OFF | ON |
| 03 | OFF | ON |

Save

Sensors / Peripherals

- >> Sensor Status (provided by CA view mode)
- >> Sensor Setting

Sensors

Water 1: Disable

Water 2: Disable

Smoke: Enable

Shock: Disable

LED1: Disable

LED2: Disable

Beacon: Disable

Alarm out: Disable

View Apply

PDU

- >> Status
- >> PDU / Temp + Humid Setting
- >> Outlet Schedule
- >> Outlet Switch ON / OFF

XYZ Zone B1 - Rack 018 - PDU Details

PDU Level: 03 V24C13-32A-W5

Status: Connected

Name: Rack 18 23C13WS

Location: Rack 18 23C13WS

PDU kWh: 0.00

PDU load amp: 0.0

Power Factor: 0.4

App Power (WVA): 0.03

Circuit A

Max. amp: 16.0 Load amp: 0.0

Alarm amp: 13.0 R.alert amp: 0.0 Low alert amp: 0.0

Peak amp: 0.0 2013-08-15 11:12:24

kWh: 0.0 2013-08-07 14:03:55

Circuit B

Max. amp: 16.0 Load amp: 0.0

Alarm amp: 13.0 R.alert amp: 0.0 Low alert amp: 0.0

Peak amp: 0.1 2013-08-12 16:22:30

kWh: 0.0 2013-08-07 14:04:01

| Outlet | Name | Amp/Load/Alarm/R.alert/Lo... | kWh | Status | Switch |
|--------|----------------|------------------------------|------|--------|--------|
| 01 | outlet_name_01 | 0.0 / 0.0 / 0.0 / 0.0 | 0.0 | On | ON |
| 02 | outlet_name_02 | 0.0 / 0.0 / 0.0 / 0.0 | 0.0 | Off | ON |
| 03 | outlet_name_03 | 0.0 / 0.0 / 0.0 / 0.0 | 0.0 | On | ON |
| 04 | outlet_name_04 | 0.0 / 0.0 / 0.0 / 0.0 | 0.0 | On | ON |
| 05 | outlet_name_05 | 0.0 / 0.0 / 0.0 / 0.0 | 0.0 | Off | ON |
| 06 | outlet_name_06 | 0.0 / 0.0 / 0.0 / 0.0 | 0.0 | On | ON |
| 07 | outlet_name_07 | 0.0 / 0.0 / 0.0 / 0.0 | 0.0 | On | ON |
| 08 | outlet_name_08 | 0.0 / 0.0 / 0.0 / 0.0 | 0.0 | Off | ON |
| 09 | outlet_name_09 | 0.0 / 0.0 / 0.0 / 0.0 | 0.0 | On | ON |
| 10 | outlet_name_10 | 0.0 / 0.0 / 0.0 / 0.0 | 0.0 | On | ON |
| 11 | outlet_name_11 | 0.0 / 0.0 / 0.0 / 0.0 | 0.0 | On | ON |
| 12 | outlet_name_12 | 0.0 / 0.0 / 0.0 / 0.0 | 0.0 | On | ON |
| 13 | outlet_name_13 | 0.0 / 0.0 / 0.0 / 0.0 | 0.0 | On | ON |
| 14 | outlet_name_14 | 0.0 / 0.0 / 0.0 / 0.0 | 0.0 | On | ON |
| 15 | outlet_name_15 | 0.0 / 0.0 / 0.0 / 0.0 | 0.0 | On | ON |
| 16 | outlet_name_16 | 0.0 / 0.0 / 0.0 / 0.0 | 0.0 | On | ON |
| 17 | outlet_name_17 | 0.1 / 0.0 / 0.0 / 0.0 | 0.02 | On | ON |
| 18 | outlet_name_18 | 0.1 / 0.0 / 0.0 / 0.0 | 0.02 | On | ON |
| 19 | outlet_name_19 | 0.1 / 0.0 / 0.0 / 0.0 | 0.0 | On | ON |
| 20 | outlet_name_20 | 0.1 / 0.0 / 0.0 / 0.0 | 0.04 | On | ON |
| 21 | outlet_name_21 | 0.0 / 0.0 / 0.0 / 0.0 | 0.0 | On | ON |
| 22 | outlet_name_22 | 0.0 / 0.0 / 0.0 / 0.0 | 0.0 | On | ON |

Save

System Setup

- >> Backup & Restore
- >> Alarm Setting, Mail Server Setting, Audio Visual Alarm
- >> Temperature unit
- >> Door opening overdue setting
- >> Time Rule

Device & Event Log

- | | |
|------------------|--------------------|
| Devices : | System : |
| >> Cabinet | >> Console |
| >> Door Access | >> Control Area |
| >> Fan | >> MFP |
| >> PDU | >> Outlet Grouping |
| >> Sensors | >> System Setup |
| >> T/H Sensor | >> User |
| | >> User Activity |
| | >> User Group |
| | >> Visitor |

SNMP

InfraBox can manage the following connected devices via SNMP :

- >> Smartcard handles
- >> PDUs
- >> Fan Units
- >> Sensors
- >> Peripherals

Individual Key Lock



- Up to 500 individual key-locks available

Part no. :

ISK-C051 set of 2 for front & rear door

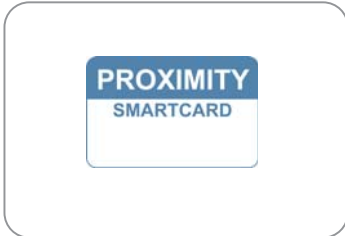
Unique Key Lock



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

Part no. : ISK-UKL

Proximity Smartcard

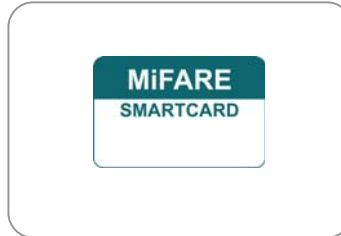


- **Proximity** 26-bit format
- Single card for multiple application
- Custom layout available

Part no. :

ISC-P10 pack of 10

MiFARE Smartcard



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

Part no. :

ISC-M10 pack of 10

Proximity Card Reader



- Compatible to **Proximity** 26-bit Smartcard format
- Convenient way for Smartcard ID checking
- Driverless for easy installation

Part no. : ISC-PCR

MiFARE Card Reader



- Compatible to **MiFARE** 26-bit Smartcard format
- Convenient way for Smartcard ID checking
- Driverless for easy installation

Part no. : ISC-MCR

Key Hardware

>> InfraBox - X-1000 or X-2000

| Connection | X-1000 | X-2000 |
|-----------------------------------|--------|--------|
| Smartcard Handles w/ Door Sensors | ✓ | ✓ |
| PDU's | | ✓ |
| Fan Units | | ✓ |
| Sensors / Peripherals | | ✓ |

>> Smartcard handle - Proximity or MiFARE

| Smartcard Compatibility | X-800P | X-800M |
|-------------------------|--------|--------|
| Proximity | ✓ | |
| MiFARE | | ✓ |

>> Smartcard handle open direction - Left or Right

X-800P / X-800M support left side open only. If user requires right side open, change the order part no. to X-800P-R / X-800M-R

>> Door Sensor - Inductive or Mechanical

| Inductive Door Sensor (S-DSI) | Mechanical Door Sensor (S-DSW) |
|--|---|
| <ul style="list-style-type: none"> • light weight / mini size / adhesive • easy setup for existing rack retrofit • no custom cutting required on door | <ul style="list-style-type: none"> • low cost / precise • cost efficient integration to new rack • custom cutting required on door |

Management Software

>> Select the Matrix server license package

| Part no. | Rack License no. | Client License no. |
|---------------|------------------|--------------------|
| X-ISM-10+5 | 10 | 5 |
| X-ISM-20+5 | 20 | 5 |
| X-ISM-50+5 | 50 | 5 |
| X-ISM-100+5 | 100 | 5 |
| X-ISM-300+5 | 300 | 5 |
| X-ISM-500+10 | 500 | 10 |
| X-ISM-1000+10 | 1000 | 10 |

>> Rack license for additional requirement (up to 3000)

| Part no. | Rack License no. |
|----------|------------------|
| X-N005 | 5 |
| X-N010 | 10 |
| X-N020 | 20 |
| X-N050 | 50 |
| X-N100 | 100 |
| X-N200 | 200 |

>> Client license for additional need (up to 100)

| Part no. | Client License no. |
|----------|--------------------|
| X-C005 | 5 |

PDU (X-2000 only)

InfraPower intelligent PDU :

- WSi** Switched + Outlet measurement
- WS** Switched
- Wi** Monitored + Outlet measurement
- W** Monitored PDU

* All PDUs come with Temp. + Humid. sensor port x 2

| | |
|-----------------|-------------------------|
| Outlet : | Voltage (AC) : |
| US Nema | 110V |
| IEC C13 / C19 | 230V / 208V |
| UK BS1363 + IEC | 230V |
| GR Schuko + IEC | 230V |

Fan Unit (X-2000 only)

InfraCool remote fan unit :

- RF-33.9** 33U remote door mount fan panel w/ 9 fans
- RF-1.3** 1U rackmount expansion fan tray w/ 3 fans
- RF-1.6** 1U rackmount expansion fan tray w/ 6 fans
- RF-1.9** 1U rackmount expansion fan tray w/ 9 fans

* All remote fan units come with Temp. sensor x 1

Sensor / Peripheral (X-2000 only)

| | | |
|-------------------|------------------------------|------------------|
| IG-TH01-2M | Temp. + Humid. sensor | w/ 2m cord |
| IG-TH01-4M | Temp. + Humid. sensor | w/ 4m cord |
| IG-T01-2M | Temp. sensor | w/ 2m cord |
| IG-T01-4M | Temp. sensor | w/ 4m cord |
| IG-S01-1M | Smoke sensor | w/ 1m cord |
| IG-S01-3M | Smoke sensor | w/ 3m cord |
| IG-V01-1M | Shock sensor | w/ 1m cord |
| IG-V01-3M | Shock sensor | w/ 3m cord |
| IG-W01-3M | Water sensor | w/ 3m Cat6 cable |
| IG-DSI-2M | Inductive door sensor, pair | w/ 2m cord |
| IG-DSI-4M | Inductive door sensor, pair | w/ 4m cord |
| IG-DSW-2M | Mechanical door sensor, pair | w/ 2m cord |
| IG-DSW-4M | Mechanical door sensor, pair | w/ 4m cord |
| CLB-IX-002 | LED light bar | w/ 2m cord |
| CLB-IX-003 | LED light bar | w/ 3m cord |
| IG-FB03-1M | LED beacon | w/ 1m cord |
| IG-FB03-3M | LED beacon | w/ 3m cord |



Founded in 1995, Austin Hughes is a design and manufacturing group that offers a broad range of solutions based around 19-inch rack mount technology. These solutions include UltraRack IT server rack, InfraRack smart rack, InfraPower rack PDU & ATS, InfraCool rack cooling systems, InfraGuard rack sensors and peripherals, InfraSolution rack access control and CyberView rack LCD KVM switches. We also offer industrial & commercial IT products, such as UltraView professional displays and Mini IP solutions.

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As a leading global IT manufacturer, Austin Hughes provides TAA-compliant data center solutions, manufactures and assembles products in strategic TAA-certified locations.



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