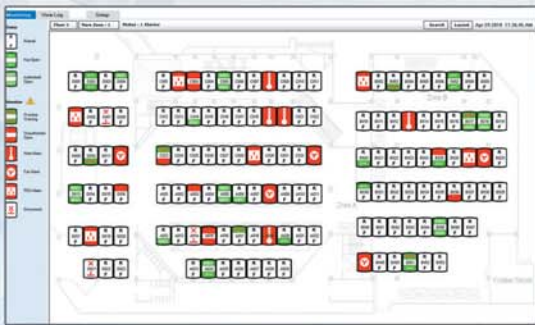
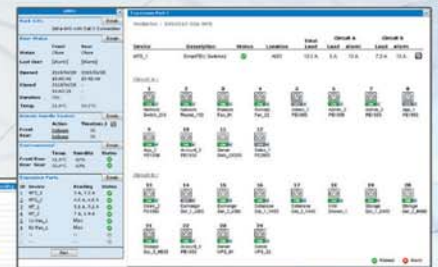




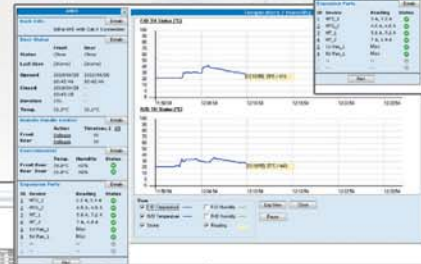
### Security



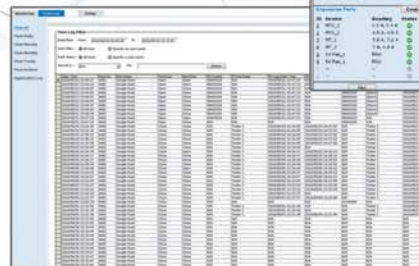
### Power & Cooling Management



### Environmental Monitoring



### Reporting







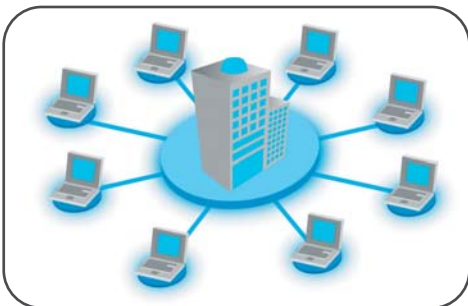
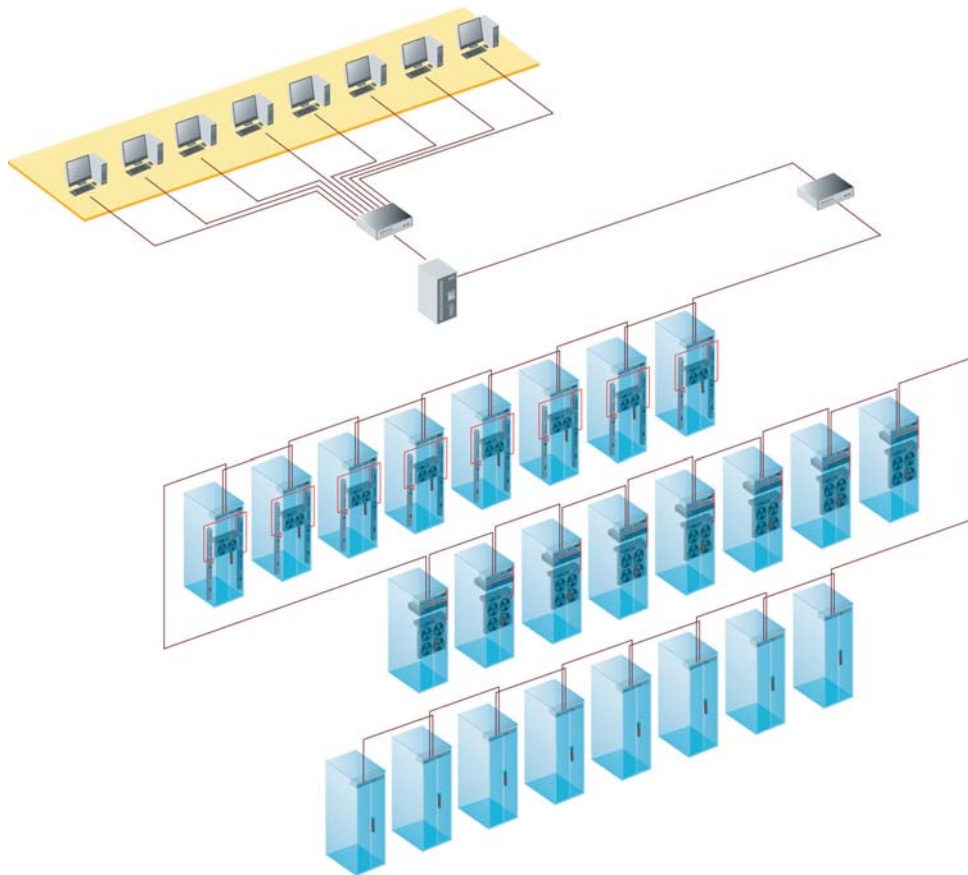
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# Key Benefits of



## Enclosure Asset Security

As information technology takes on increased importance the protection of data and assets becomes ever more critical, InfraSolution provides secure physical layer card access or remotely IP released locking handle with centralized software for management. Only authorized employees can gain access and only as specified by the administrator to individual enclosures in specific time windows. All unauthorized access will immediately result in alarms being sent via e-mail or SNMP. If a card is misplaced then the user or card can simply be de-authorized from the management software - InfraSolution provides total enclosure asset management and data protection.



## Centralized Remote Management

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. When using the Infrabox 840 series, the InfraSolution Manager allows GUI remote management for intelligent PDUs and Fan Units.

# InfraSolution<sup>®</sup>

## Reporting & Audit Management

Data center and server farm operation audits are a required industry standard for the protection of data and capital equipment. Corporate and government entities need to ensure strict compliance of staff members to company policies to meet these requirements. InfraSolution provides a total reporting and audit platform down to the equipment rack level. This is achieved using detailed access logs and event occurrences. Every event at the rack is recorded and stored, and can easily be accessed through the InfraSolution software or via SNMP with the data being used for integration into other management platforms.



## Compatibility and Interoperability

Compatibility issues between different standards on access control cards are a major area for customers to consider when deploying any access control solution. The InfraSolution 800 series caters for the Two most common alternatives used in the industry today, SmartCard options provide direct compatibility with MiFARE and Proximity (compatible with HID) protocols. The HV-800 SmartCard handle is designed to be seamless with enclosure industry standards in terms of its operation, footprint and mounting dimensions, InfraSolution provides the highest level of interoperability offered in the industry today, it enables customers to retrofit existing enclosures used with in data center and server farms with Intelligent access control and environment monitoring or specify InfraSolution to be used or supplied with new capital rack equipment purchases with the peace of mind that compatibility is guaranteed.

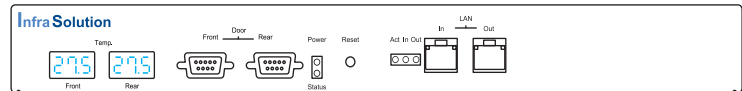


# InfraSolution<sup>®</sup> 800 Series

**Cabinet Setup** - Basically, the InfraSolution setup requires 1 x LAN InfraBox and 2 x SmartCard locking handles (front and rear cabinet doors).

## Infra-820 System - Door Access Management

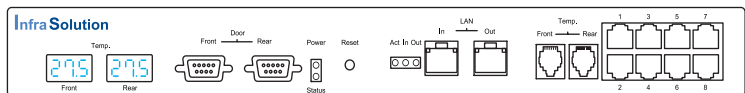
The Infra-820 System provides a connection hub for door access and management functions. Simply connect the HV-800 SmartCard door handles to the InfraBox by using the two all-in-one cables. The InfraBox 820 sends a door open/close signal to the InfraSolution server.



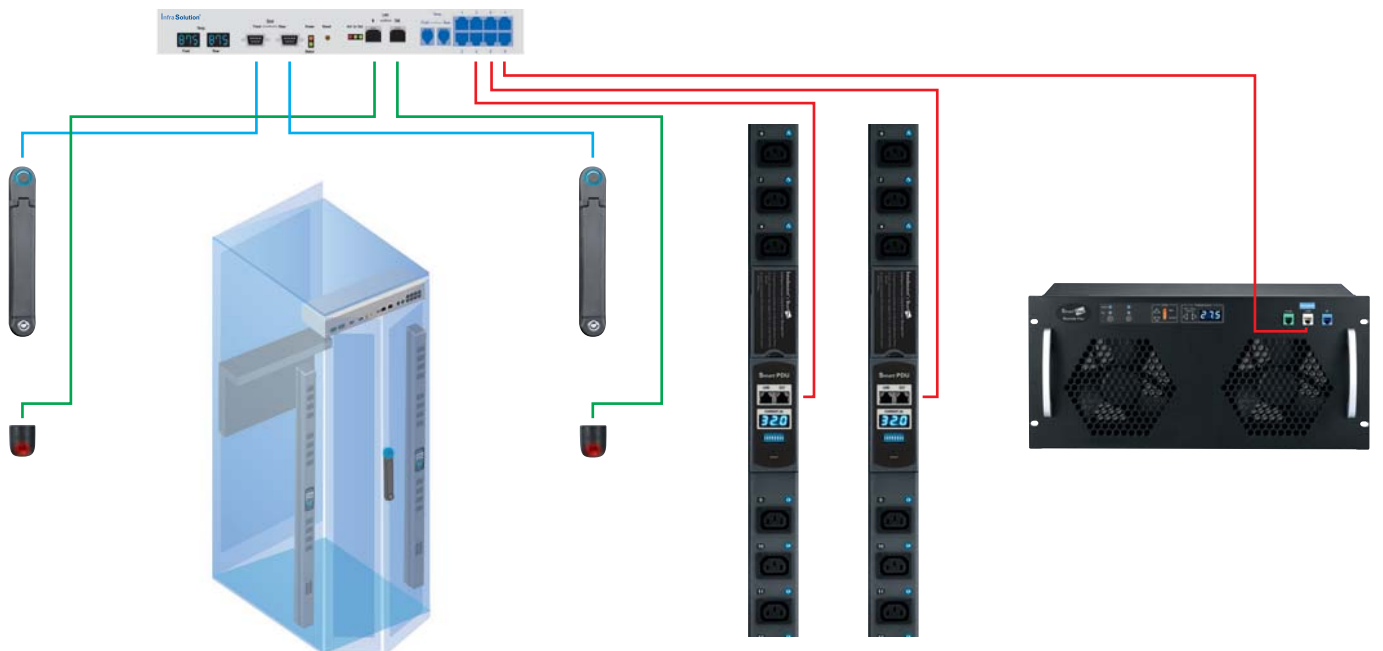
## Infra-840 System - Door Access, Multi-Function Devices & Environmental Management

The Infra-840 System provides the same door management functions as the InfraBox-820 plus remote management for further devices as follows :

- (i) Maximum 8 x multi-functional device (e.g. Intelligent PDU and Fans)
- (ii) Maximum 2 x temperature and humidity sensor for environmental monitoring within the cabinet



## Configuration of InfraSolution 800 Series Hardwares

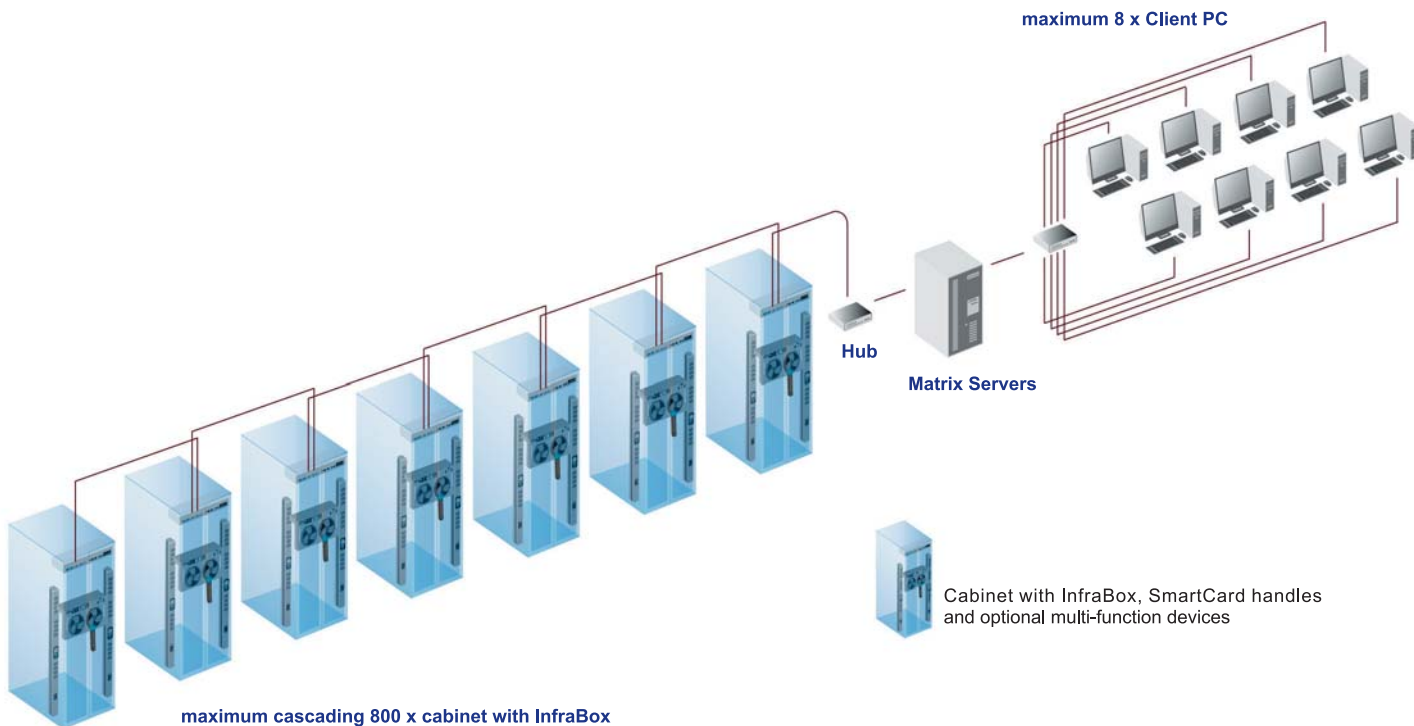


- SmartCard Handle Connection
- Multi-Function Device Connection
- Temperature / Humidity Sensor Connection

**Network Setup** - The InfraSolution 800 series supports the connection for maximum 800 InfraBoxes in cabinets to the InfraSolution Server and maximum 8 Client PCs. To interconnect the InfraBoxes using the InfraSolution 800 wired network, the installation requires an Ethernet network connection via Cat5/6 patch cables.

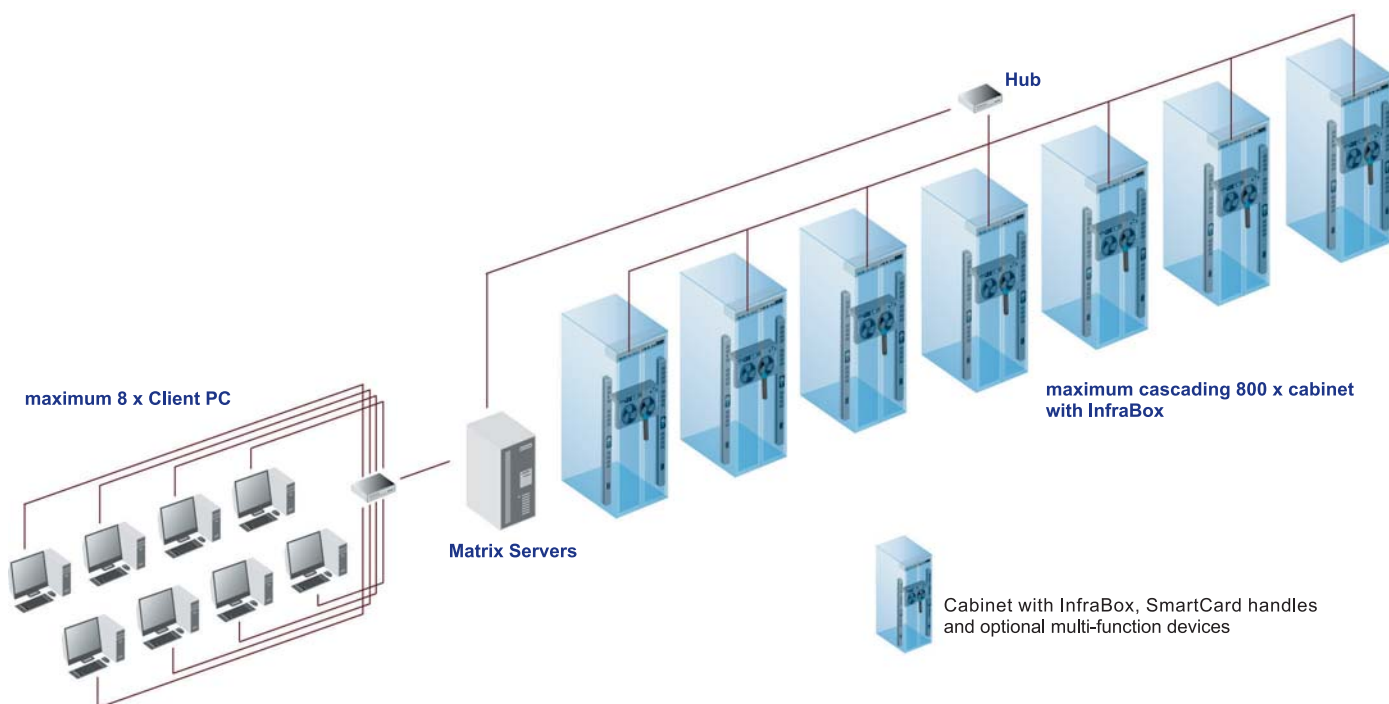
### Cascading InfraBoxes

For reducing active port requirements in the network, the InfraBoxes can be cascaded between cabinets. To integrate the InfraSolution wired network to the LAN simply requires the user to connect either the first or last InfraBox to the network hub or switch.



### Connecting InfraBoxes via a Network hub

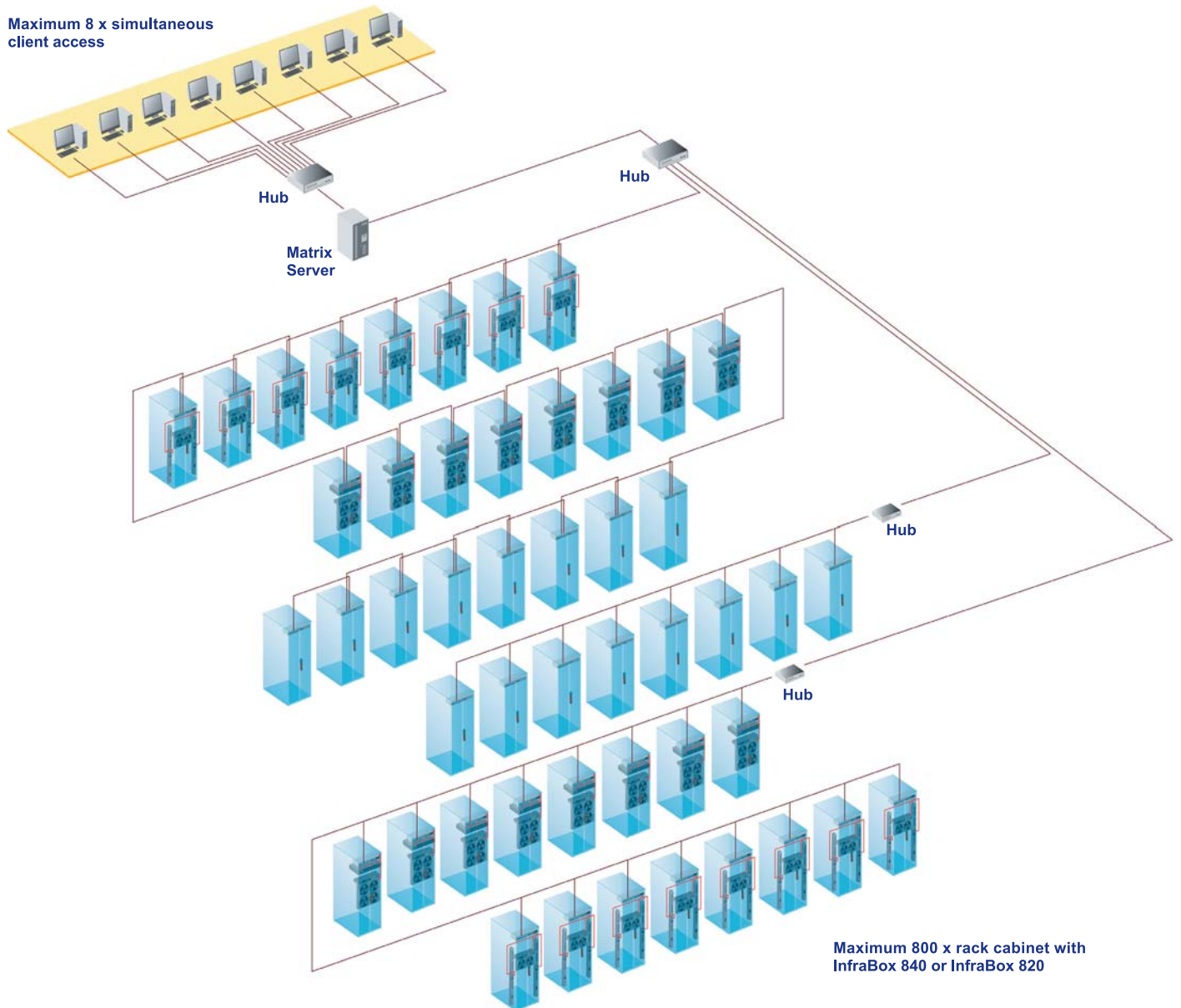
By connecting InfraBoxes to a central hub via Cat5/6 patch cords, the star connection way reduces the chance of whole network failure. The isolation and centralization allows simplify fault detection, as each link of InfraBox can be probed individually.



# Application for Data Center

InfraSolution is designed to be highly scalable up to 800 cabinets, connectivity between InfraBoxes can be via a network hub or simply cascaded between boxes. The 820 and 840 InfraBoxes can be mixed across a cabinet setup and all managed from the central InfraSolution Manager software with 8 simultaneous users having client access to control and monitor the InfraSolution network.

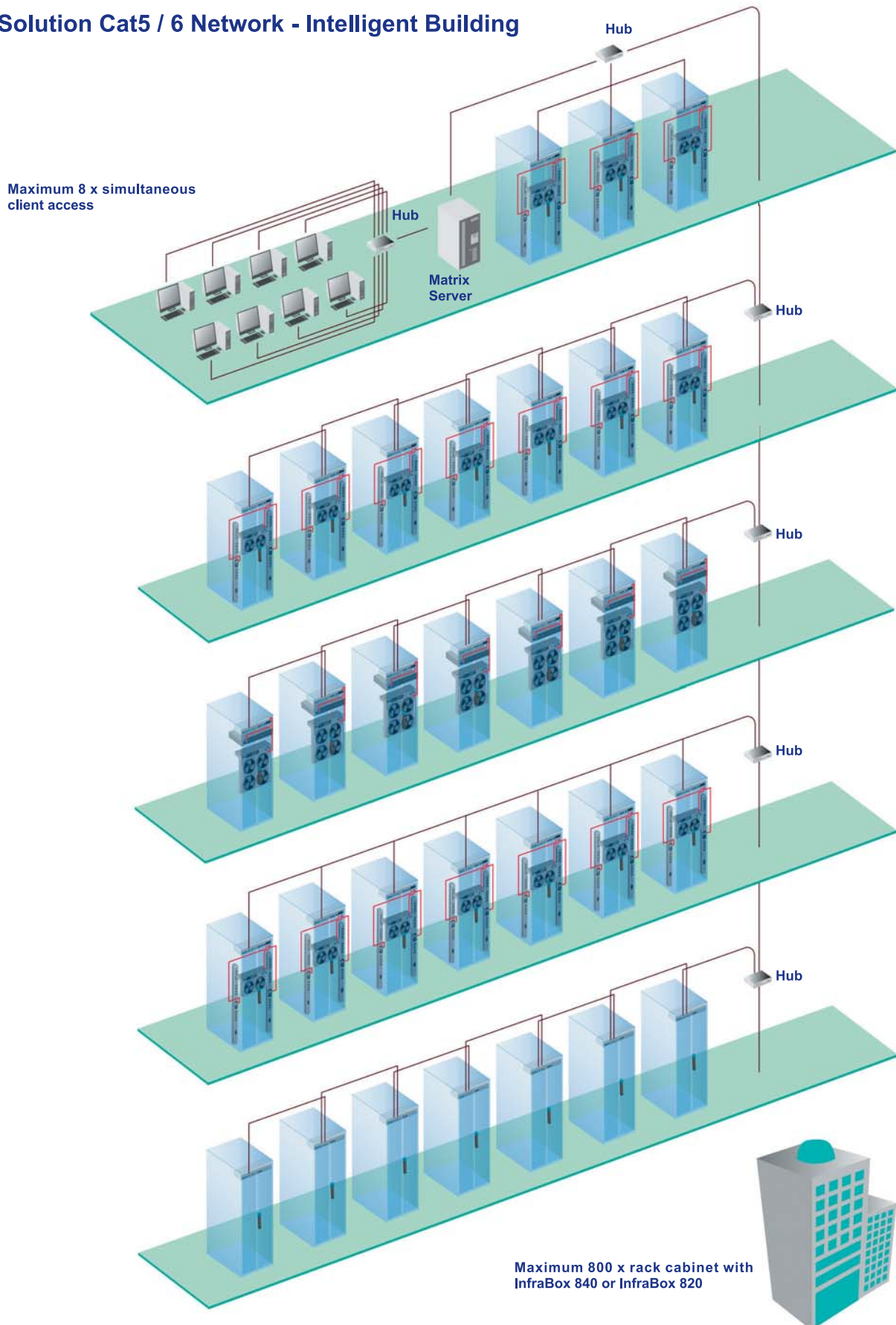
## InfraSolution network in data center



# Application for Intelligent Building

InfraSolution's centralized management allows equipment to be distributed throughout a building simply by deploying an Ethernet network. To keep capital equipment costs down, InfraSolution can also be cascaded between boxes up to 100m over a Cat6 patch cord. It is possible for using fibre connections in InfraSolution network throughout the whole intelligent building.

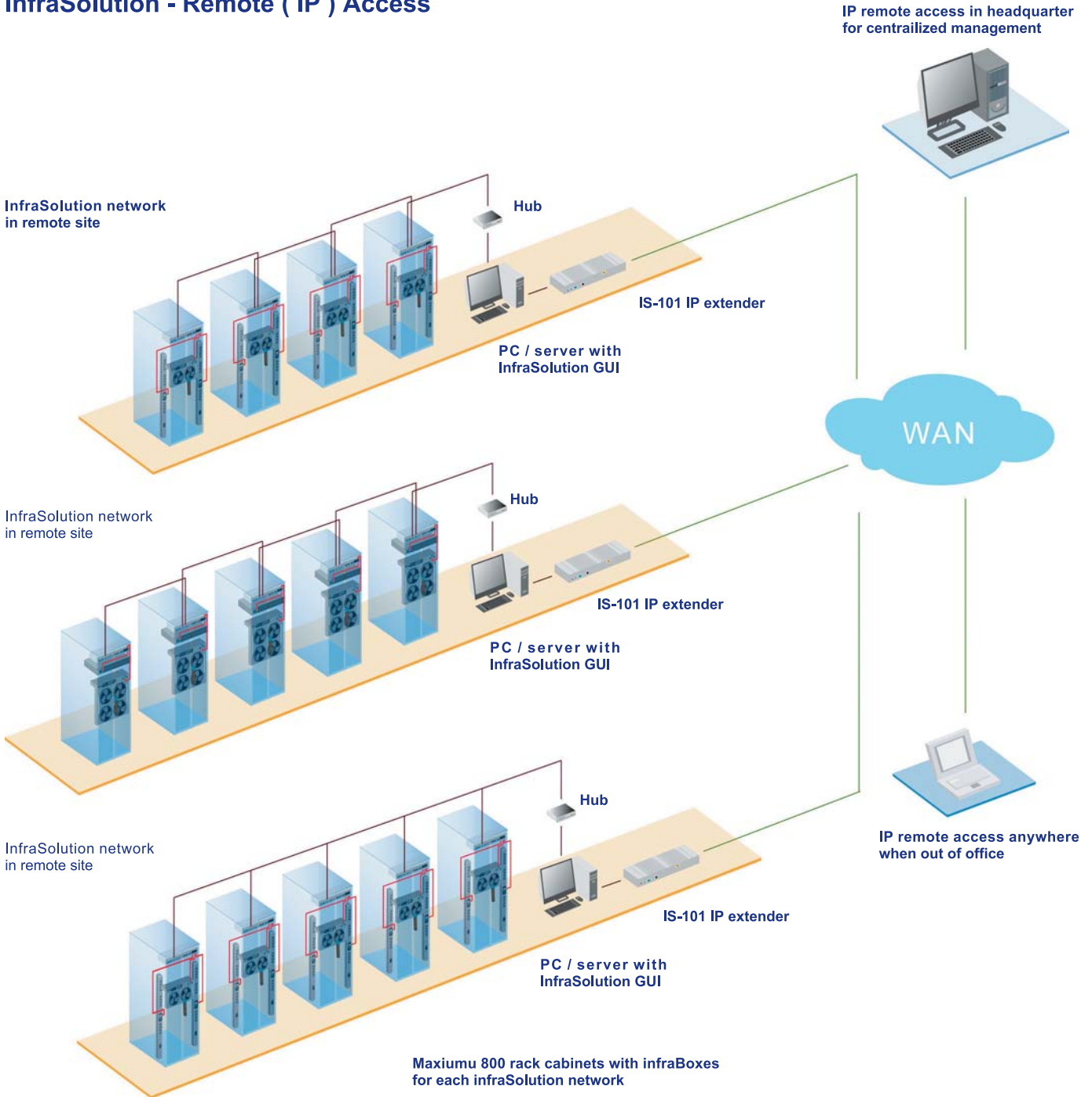
## InfraSolution Cat5 / 6 Network - Intelligent Building



# Application for Remote Branch

User can access to InfraSolution network in remote branch by simply across the www over IP. The optional IS-101 IP extender allows the InfraSolution network to be remotely IP accessed from anywhere. By applying the IS-101, the user in headquarter can keep monitoring and control to the InfraSolution networks in remote branches. Besides, the user can also remotely IP access to the InfraSolution network applied with IS-101 when he / she is out of office.

## InfraSolution - Remote ( IP ) Access



# Hardware Component Specifications

## HV-800 Handle



### Features

- Intelligent design with patent
- Universal mounting fit for most popular brand racking cabinet
- Dual locking system (electronic and mechanical lock) provides two levels of security
- Electronic lock can be released by authorized Smartcard or remote management software
- Smartcard access compatible to mainstream security system with MiFARE and Proximity (compatible with HID) card technology
- Built-in digital temperature sensor
- Built-in reflective optical sensor for monitoring door status
- Status LED for power on, smartcard detection, authorized and unauthorized lock releasing
- Motorized lock uses less power than traditional solenoid mechanism

## SmartCard Releasing of HV-800



Door Close



Door Open by SmartCard



Authorized Open



Unauthorized Access

## Mechanical Releasing of HV-800

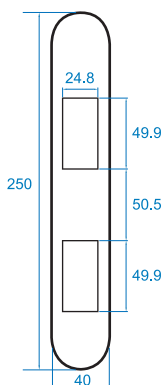


### Features

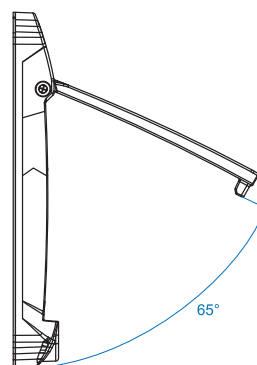
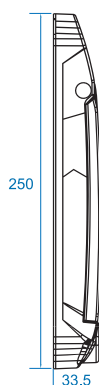
- Up to 1,000 key-lock combination for customized project is unique
- Fail safe design, the mechanical lock can override the electronic lock to open or close the handle

## Installation of the HV-800

Back View



Side View



Handle pivots approx. 65°  
Unit : mm

# Hardware Component Specifications



## SmartCard

### Features

- Utilizes the highly secure MIFARE smartcard technology, enabling users to carry just a single card for multiple applications
- With anti cloning & collision design, each smartcard has a unique card serial number (4 bytes) to ensure the uniqueness
- 13.56 MHz carrier frequency provides fast transaction time for each access
- Customized layout available
- Proximity card access compatible with HID mainstream security system

### Technical Specifications

- Memory capacity : 1KB EEPROM
- Operating temperature : 0 to 50°C



## InfraBox 820

### Features

- Centralized monitoring of the front and rear HV-800 handle access control and door status
- Simplified management for remote door programming and opening
- Real-time temperature LED display of the HV-800 handles
- Access control event reporting within management software
- Standalone mode can store up to 999 events



## InfraBox 840

### Features

- Centralized monitoring of the front and rear HV-800 handle access control and door status
- Simplified management for remote door programming
- Real-time temperature LED display of the HV-800 handles
- 8 x expansion port for remote controlling multiple PDUs and fan units (Monitored / Switched model)
- Two external Temperature-humidity sensors up to 6 feet away
- Standalone mode can store up to 999 events



## Digital Temperature and Humidity

### Features

- High precision digital temperature-humidity sensors for monitoring front & rear of the cabinet
- Low profile design comprises a magnetic base which can be easily affixed to the metal cabinet
- Built-in status LED to ensure a secure physical connection

### Technical Specifications

#### Temperature

- Measuring range : 0 to 99°C
- Accuracy :  $\pm 0.5^{\circ}\text{C}$
- Response Time : < 20 sec.

#### Humidity

- Measuring range : 0 to 100%
- Accuracy :  $\pm 3.5\%$
- Response Time : < 4 sec.

# Hardware Component Specifications



## IS-101

### Features

- Remote control access the InfraBox 840 / 820 with administration PC via IP or your internal LAN / WAN
- Utilizing advanced security and regardless of operating system, the IS-101 IP extender allows user to remotely access the InfraSolution network at anytime and anywhere.



## Matrix Server


### Features

- Centralized monitoring of multiple InfraBox 840 & 820 status, door access, remote access control diagnostics, and complete system programming database backup.

### Technical Specifications

- Core 2 Duo 2.8GHz / 2GB of Ram min.
- 40GB HDD storage / 64MB graphic card
- Ethernet 100Base-T/1000Base-T connection (RJ45)
- CD-Rom drive
- 19" LCD size min.
- Windows 2003 / 2008 Server


### InfraBox 840 Package

A collection of components for the InfraBox 840 package, including the main device, two SmartCard handles, two SmartCards, and two mechanical keys.

**Package includes:**

- 1U InfraBox 840 with [2] TH sensor port & [8] multi-function port
- [2] HV-800 SmartCard handle with built-in temperature sensor
- 2-in-1 door cable x 2
- SmartCard x 2
- Mechanical key x 2

### InfraBox 820 Package

A collection of components for the InfraBox 820 package, including the main device, two SmartCard handles, two SmartCards, and two mechanical keys.

**Package includes:**

- 1U InfraBox 820
- [2] HV-800 SmartCard handle with built-in temperature sensor
- 2-in-1 door cable x 2
- SmartCard x 2
- Mechanical key x 2



The MTS switched series of Smart PDUs focus on improving energy efficiency and data center reliability. Used in conjunction with the InfraSolution, they allow remote control and monitoring of the intelligent PDU via the centralized GUI.



### Features & Benefits

- Remote control to individual outlets and remote monitoring on the total current consumption
- Centralized management on the intelligent PDUs via a simple secure GUI, InfraSolution Manager
- True RMS current monitoring indicates remaining capacity before adding new device to the PDU
- Hot-pluggable ammeter with blue light LED display provides visible warning before the current overload
- LED located near each outlet indicates the individual switch ON/ OFF status
- Alerts users to the event by E-mail for taking action before the power overload by the alarm thresholds setting
- Outlet naming, passwords, secure web server and password protection
- Optional hot-pluggable circuit breaker avoid nuisance tripping caused by normal in-rush current
- Zero U (vertical) and rackmount (horizontal) form factors available

### Configuration of the InfraSolution SmartPDU MTS Network

The InfraBox-840 provides 8 expansion ports for connecting multi-function devices including SmartPDUs. SmartPDUs can be simply connected to InfraBox using a standard Cat 5/6 patch cord.



( Connecting SmartPDU to the expansion ports of InfraBox840 via Cat5/6 cable, Max. 8 PDUs per InfraBox )

### Options



#### RMS current meter

Field-replaceable design helps to eliminate the maintenance downtime by simply replacing the defective current meter without interruption of service.



#### Circuit breaker / Resettable fuse

Individual branch rated circuit breakers that protect load segments to ensure increasing reliability. Circuit breakers with flat rockers are fully shrouded to prevent accidental ON/OFF operation.

Model	Rack Space	Outlet Quantity	Outlet Types	Input Plug	Cord	Voltage	Amp	Dimensions (W x D x H, inch)
SV24US-20A-MTS	0 U	24 outlets	(24) 5-20R	5-20P	10 Feet	110V	20A	2.2 x 2.6 x 78.7
SV24US-30A-MTS	0 U	24 outlets	(24) 5-20R	5-30P	10 Feet	110V	30A	2.2 x 2.6 x 78.7
SV20US-20A-MTS	0 U	20 outlets	(20) 5-20R	5-20P	10 Feet	110V	20A	2.2 x 2.6 x 68.9
SV20US-30A-MTS	0 U	20 outlets	(20) 5-20R	5-30P	10 Feet	110V	30A	2.2 x 2.6 x 68.9
SV16US-20A-MTS	0 U	16 outlets	(16) 5-20R	5-20P	10 Feet	110V	20A	2.2 x 2.6 x 59.1
SV16US-30A-MTS	0 U	16 outlets	(16) 5-20R	5-30P	10 Feet	110V	30A	2.2 x 2.6 x 59.1
SV12US-20A-MTS	0 U	12 outlets	(12) 5-20R	5-20P	10 Feet	110V	20A	2.2 x 2.6 x 52.7
SV12US-30A-MTS	0 U	12 outlets	(12) 5-20R	5-30P	10 Feet	110V	30A	2.2 x 2.6 x 52.7
SV8US-20A-MTS	0 U	8 outlets	(8) 5-20R	5-20P	10 Feet	110V	20A	2.2 x 2.6 x 40.8
SV8US-30A-MTS	0 U	8 outlets	(8) 5-20R	5-30P	10 Feet	110V	30A	2.2 x 2.6 x 40.8
SV24C13-30A-MTS	0 U	24 outlets	(24) IEC320 C13	L6-30P	10 Feet	208V	30A	2.2 x 2.6 x 78.7
SV20C13-30A-MTS	0 U	20 outlets	(20) IEC320 C13	L6-30P	10 Feet	208V	30A	2.2 x 2.6 x 68.9
SV16C13-30A-MTS	0 U	16 outlets	(16) IEC320 C13	L6-30P	10 Feet	208V	30A	2.2 x 2.6 x 59.1
SV12C13-30A-MTS	0 U	12 outlets	(12) IEC320 C13	L6-30P	10 Feet	208V	30A	2.2 x 2.6 x 52.7
SV8C13-30A-MTS	0 U	8 outlets	(8) IEC320 C13	L6-30P	10 Feet	208V	30A	2.2 x 2.6 x 40.8
SV20C13/4C19-30A-MTS	0 U	24 outlets	(20) IEC320 C13 / (4) IEC320 C19	L6-30P	10 Feet	208V	30A	2.2 x 2.6 x 78.7
SV20C13/2C19-30A-MTS	0 U	22 outlets	(20) IEC320 C13 / (2) IEC320 C19	L6-30P	10 Feet	208V	30A	2.2 x 2.6 x 78.7
SV16C13/4C19-30A-MTS	0 U	20 outlets	(16) IEC320 C13/ (4) IEC320 C19	L6-30P	10 Feet	208V	30A	2.2 x 2.6 x 68.9
SV16C13/2C19-30A-MTS	0 U	18 outlets	(16) IEC320 C13/ (2) IEC320 C19	L6-30P	10 Feet	208V	30A	2.2 x 2.6 x 68.9
SV12C13/4C19-30A-MTS	0 U	16 outlets	(12) IEC320 C13/ (4) IEC320 C19	L6-30P	10 Feet	208V	30A	2.2 x 2.6 x 59.1
SV12C13/2C19-30A-MTS	0 U	14 outlets	(12) IEC320 C13/ (2) IEC320 C19	L6-30P	10 Feet	208V	30A	2.2 x 2.6 x 59.1
SV8C13/4C19-30A-MTS	0 U	12 outlets	(8) IEC320 C13/ (4) IEC320 C19	L6-30P	10 Feet	208V	30A	2.2 x 2.6 x 52.7
SV8C13/2C19-30A-MTS	0 U	10 outlets	(8) IEC320 C13/ (2) IEC320 C19	L6-30P	10 Feet	208V	30A	2.2 x 2.6 x 52.7
SV4C13/4C19-30A-MTS	0 U	8 outlets	(4) IEC320 C13/ (4) IEC320 C19	L6-30P	10 Feet	208V	30A	2.2 x 2.6 x 40.8
SV4C13/2C19-30A-MTS	0 U	6 outlets	(4) IEC320 C13/ (2) IEC320 C19	L6-30P	10 Feet	208V	30A	2.2 x 2.6 x 40.8
SH20US-20A-MTS	2 U	20 outlets	(20) 5-20R	5-20P	10 Feet	110V	20A	17.3 x 8.7 x 3.5
SH20US-30A-MTS	2 U	20 outlets	(20) 5-20R	5-30P	10 Feet	110V	30A	17.3 x 8.7 x 3.5
SH16US-20A-MTS	2 U	16 outlets	(16) 5-20R	5-20P	10 Feet	110V	20A	17.3 x 8.7 x 3.5
SH16US-30A-MTS	2 U	16 outlets	(16) 5-20R	5-30P	10 Feet	110V	30A	17.3 x 8.7 x 3.5
SH12US-20A-MTS	2 U	12 outlets	(12) 5-20R	5-20P	10 Feet	110V	20A	17.3 x 8.7 x 3.5
SH12US-30A-MTS	2 U	12 outlets	(12) 5-20R	5-30P	10 Feet	110V	30A	17.3 x 8.7 x 3.5
SH8US-20A-MTS	1 U	8 outlets	(8) 5-20R	5-20P	10 Feet	110V	20A	17.3 x 8.7 x 1.8
SH8US-30A-MTS	1 U	8 outlets	(8) 5-20R	5-30P	10 Feet	110V	30A	17.3 x 8.7 x 1.8
SH4US-20A-MTS	1 U	4 outlets	(4) 5-20R	5-20P	10 Feet	110V	20A	17.3 x 8.7 x 1.8
SH4US-30A-MTS	1 U	4 outlets	(4) 5-20R	5-30P	10 Feet	110V	30A	17.3 x 8.7 x 1.8
SH20C13-30A-MTS	2 U	20 outlets	(20) IEC320 C13	L6-30P	10 Feet	208V	30A	17.3 x 8.7 x 3.5
SH16C13-30A-MTS	2 U	16 outlets	(16) IEC320 C13	L6-30P	10 Feet	208V	30A	17.3 x 8.7 x 3.5
SH12C13-30A-MTS	2 U	12 outlets	(12) IEC320 C13	L6-30P	10 Feet	208V	30A	17.3 x 8.7 x 3.5
SH8C13-30A-MTS	1 U	8 outlets	(8) IEC320 C13	L6-30P	10 Feet	208V	30A	17.3 x 8.7 x 1.8
SH4C13-30A-MTS	1 U	4 outlets	(4) IEC320 C13	L6-30P	10 Feet	208V	30A	17.3 x 8.7 x 1.8
SH16C13/2C19-30A-MTS	2 U	18 outlets	(16) IEC320 C13/ (2) IEC320 C19	L6-30P	10 Feet	208V	30A	17.3 x 8.7 x 3.5
SH12C13/4C19-30A-MTS	2 U	16 outlets	(12) IEC320 C13/ (4) IEC320 C19	L6-30P	10 Feet	208V	30A	17.3 x 8.7 x 3.5
SH12C13/2C19-30A-MTS	2 U	14 outlets	(12) IEC320 C13/ (2) IEC320 C19	L6-30P	10 Feet	208V	30A	17.3 x 8.7 x 3.5
SH8C13/4C19-30A-MTS	2 U	12 outlets	(8) IEC320 C13/ (4) IEC320 C19	L6-30P	10 Feet	208V	30A	17.3 x 8.7 x 3.5
SH4C13/4C19-30A-MTS	1 U	8 outlets	(4) IEC320 C13/ (4) IEC320 C19	L6-30P	10 Feet	208V	30A	17.3 x 8.7 x 1.8
SH4C13/2C19-30A-MTS	1 U	6 outlets	(4) IEC320 C13/ (2) IEC320 C19	L6-30P	10 Feet	208V	30A	17.3 x 8.7 x 1.8



Model	Rack Space	Outlet Quantity	Outlet Types	Input Plug	Cord	Voltage	Amp	Dimensions ( W x D x H, mm )
SV24C13-16A-MTS	0 U	24 outlets	(24) IEC320 C13	60309 / C20	3M	220V	16A	55 x 65 x 2000
SV24C13-20A-MTS	0 U	24 outlets	(24) IEC320 C13	Open end	3M	220V	20A	55 x 65 x 2000
SV24C13-32A-MTS	0 U	24 outlets	(24) IEC320 C13	60309	3M	220V	32A	55 x 65 x 2000
SV20C13-16A-MTS	0 U	20 outlets	(20) IEC320 C13	60309 / C20	3M	220V	16A	55 x 65 x 1750
SV20C13-20A-MTS	0 U	20 outlets	(20) IEC320 C13	Open end	3M	220V	20A	55 x 65 x 1750
SV20C13-32A-MTS	0 U	20 outlets	(20) IEC320 C13	60309	3M	220V	32A	55 x 65 x 1750
SV16C13-16A-MTS	0 U	16 outlets	(16) IEC320 C13	60309 / C20	3M	220V	16A	55 x 65 x 1500
SV16C13-20A-MTS	0 U	16 outlets	(16) IEC320 C13	Open end	3M	220V	20A	55 x 65 x 1500
SV16C13-32A-MTS	0 U	16 outlets	(16) IEC320 C13	60309	3M	220V	32A	55 x 65 x 1500
SV12C13-16A-MTS	0 U	12 outlets	(12) IEC320 C13	60309 / C20	3M	220V	16A	55 x 65 x 1337.5
SV12C13-20A-MTS	0 U	12 outlets	(12) IEC320 C13	Open end	3M	220V	20A	55 x 65 x 1337.5
SV12C13-32A-MTS	0 U	12 outlets	(12) IEC320 C13	60309	3M	220V	32A	55 x 65 x 1337.5
SV8C13-16A-MTS	0 U	8 outlets	(8) IEC320 C13	60309 / C20	3M	220V	16A	55 x 65 x 1037.5
SV8C13-20A-MTS	0 U	8 outlets	(8) IEC320 C13	Open end	3M	220V	20A	55 x 65 x 1037.5
SV8C13-32A-MTS	0 U	8 outlets	(8) IEC320 C13	60309	3M	220V	32A	55 x 65 x 1037.5
SV20C13/4C19-32A-MTS	0 U	24 outlets	(20) IEC320 C13 / (4) IEC320 C19	60309	3M	220V	32A	55 x 65 x 2000
SV20C13/2C19-32A-MTS	0 U	22 outlets	(20) IEC320 C13 / (2) IEC320 C19	60309	3M	220V	32A	55 x 65 x 2000
SV16C13/4C19-32A-MTS	0 U	20 outlets	(16) IEC320 C13 / (4) IEC320 C19	60309	3M	220V	32A	55 x 65 x 1750
SV16C13/2C19-32A-MTS	0 U	18 outlets	(16) IEC320 C13 / (2) IEC320 C19	60309	3M	220V	32A	55 x 65 x 1750
SV12C13/4C19-32A-MTS	0 U	16 outlets	(12) IEC320 C13 / (4) IEC320 C19	60309	3M	220V	32A	55 x 65 x 1500
SV12C13/2C19-32A-MTS	0 U	14 outlets	(12) IEC320 C13 / (2) IEC320 C19	60309	3M	220V	32A	55 x 65 x 1500
SV8C13/4C19-32A-MTS	0 U	12 outlets	(8) IEC320 C13 / (4) IEC320 C19	60309	3M	220V	32A	55 x 65 x 1337.5
SV8C13/2C19-32A-MTS	0 U	10 outlets	(8) IEC320 C13 / (2) IEC320 C19	60309	3M	220V	32A	55 x 65 x 1337.5
SV4C13/4C19-32A-MTS	0 U	8 outlets	(4) IEC320 C13 / (4) IEC320 C19	60309	3M	220V	32A	55 x 65 x 1037.5
SV4C13/2C19-32A-MTS	0 U	6 outlets	(4) IEC320 C13 / (2) IEC320 C19	60309	3M	220V	32A	55 x 65 x 1037.5
SH20C13-16A-MTS	2 U	20 outlets	(20) IEC320 C13	60309 / C20	3M	220V	16A	440 x 220 x 89
SH20C13-20A-MTS	2 U	20 outlets	(20) IEC320 C13	Open end	3M	220V	20A	440 x 220 x 89
SH20C13-32A-MTS	2 U	20 outlets	(20) IEC320 C13	60309	3M	220V	32A	440 x 220 x 89
SH16C13-16A-MTS	2 U	16 outlets	(16) IEC320 C13	60309 / C20	3M	220V	16A	440 x 220 x 89
SH16C13-20A-MTS	2 U	16 outlets	(16) IEC320 C13	Open end	3M	220V	20A	440 x 220 x 89
SH16C13-32A-MTS	2 U	16 outlets	(16) IEC320 C13	60309	3M	220V	32A	440 x 220 x 89
SH12C13-16A-MTS	2 U	12 outlets	(12) IEC320 C13	60309 / C20	3M	220V	16A	440 x 220 x 89
SH12C13-20A-MTS	2 U	12 outlets	(12) IEC320 C13	Open end	3M	220V	20A	440 x 220 x 89
SH12C13-32A-MTS	2 U	12 outlets	(12) IEC320 C13	60309	3M	220V	32A	440 x 220 x 89
SH8C13-16A-MTS	1 U	8 outlets	(8) IEC320 C13	60309 / C20	3M	220V	16A	440 x 220 x 45
SH8C13-20A-MTS	1 U	8 outlets	(8) IEC320 C13	Open end	3M	220V	20A	440 x 220 x 45
SH8C13-32A-MTS	1 U	8 outlets	(8) IEC320 C13	60309	3M	220V	32A	440 x 220 x 45
SH4C13-16A-MTS	1 U	4 outlets	(4) IEC320 C13	60309 / C20	3M	220V	16A	440 x 220 x 45
SH4C13-20A-MTS	1 U	4 outlets	(4) IEC320 C13	Open end	3M	220V	20A	440 x 220 x 45
SH4C13-32A-MTS	1 U	4 outlets	(4) IEC320 C13	60309	3M	220V	32A	440 x 220 x 45
SH16C13/2C19-32A-MTS	2 U	18 outlets	(16) IEC320 C13 / (2) IEC320 C19	60309	3M	220V	32A	440 x 220 x 89
SH12C13/4C19-32A-MTS	2 U	16 outlets	(12) IEC320 C13 / (4) IEC320 C19	60309	3M	220V	32A	440 x 220 x 89
SH12C13/2C19-32A-MTS	2 U	14 outlets	(12) IEC320 C13 / (2) IEC320 C19	60309	3M	220V	32A	440 x 220 x 89
SH8C13/4C19-32A-MTS	2 U	12 outlets	(8) IEC320 C13 / (4) IEC320 C19	60309	3M	220V	32A	440 x 220 x 89
SH4C13/4C19-32A-MTS	1 U	8 outlets	(4) IEC320 C13 / (4) IEC320 C19	60309	3M	220V	32A	440 x 220 x 45
SH4C13/2C19-32A-MTS	1 U	6 outlets	(4) IEC320 C13 / (2) IEC320 C19	60309	3M	220V	32A	440 x 220 x 45



Model	Rack Space	Outlet Quantity	Outlet Types	Input Plug	Cord	Voltage	Amp	Dimensions ( W x D x H, inch )
SV20UK-13A-MTS	0 U	20 outlets	(20) BS1363	BS1363	3M	230V	13A	55 x 65 x 2000
SV20UK-16A-MTS	0 U	20 outlets	(20) BS1363	60309 / C20	3M	230V	16A	55 x 65 x 2000
SV20UK-20A-MTS	0 U	20 outlets	(20) BS1363	Open end	3M	230V	20A	55 x 65 x 2000
SV20UK-32A-MTS	0 U	20 outlets	(20) BS1363	60309	3M	230V	32A	55 x 65 x 2000
SV16UK-13A-MTS	0 U	16 outlets	(16) BS1363	BS1363	3M	230V	13A	55 x 65 x 1750
SV16UK-16A-MTS	0 U	16 outlets	(16) BS1363	60309 / C20	3M	230V	16A	55 x 65 x 1750
SV16UK-20A-MTS	0 U	16 outlets	(16) BS1363	Open end	3M	230V	20A	55 x 65 x 1750
SV16UK-32A-MTS	0 U	16 outlets	(16) BS1363	60309	3M	230V	32A	55 x 65 x 1750
SV12UK-13A-MTS	0 U	12 outlets	(12) BS1363	BS1363	3M	230V	13A	55 x 65 x 1337.5
SV12UK-16A-MTS	0 U	12 outlets	(12) BS1363	60309 / C20	3M	230V	16A	55 x 65 x 1337.5
SV12UK-20A-MTS	0 U	12 outlets	(12) BS1363	Open end	3M	230V	20A	55 x 65 x 1337.5
SV12UK-32A-MTS	0 U	12 outlets	(12) BS1363	60309	3M	230V	32A	55 x 65 x 1337.5
SV8UK-13A-MTS	0 U	8 outlets	(8) BS1363	BS1363	3M	230V	13A	55 x 65 x 1037.5
SV8UK-16A-MTS	0 U	8 outlets	(8) BS1363	60309 / C20	3M	230V	16A	55 x 65 x 1037.5
SV8UK-20A-MTS	0 U	8 outlets	(8) BS1363	Open end	3M	230V	20A	55 x 65 x 1037.5
SV8UK-32A-MTS	0 U	8 outlets	(8) BS1363	60309	3M	230V	32A	55 x 65 x 1037.5



## Supplementary Information for SmartPDU MTS / MT Series

### PDU Outlets



NEMA 5-20R



IEC320 C13



IEC320 C19



BS1363 45°



BS1363 90°



BS1363 135°



CEE 7 Schuko

### Power Plugs

#### US



20 Amp  
NEMA 5-20P



20 Amp  
NEMA L5-20P



30 Amp  
NEMA L5-30P



20 Amp  
NEMA L6-20P



30 Amp  
NEMA L6-30P

#### IEC



16 Amp  
IEC320 C20



16 Amp  
60309



20 Amp  
Open end



32 Amp  
60309

#### UK



13 Amp  
BS1363



16 Amp  
IEC320 C20



16 Amp  
60309



20 / 32 Amp  
Open end



32 Amp  
60309

#### GR



16 Amp  
Schuko



16 Amp  
IEC320 C20



16 Amp  
60309



20 / 32 Amp  
Open end



32 Amp  
60309

### Optional Accessories for SmartPDU MTS / MT Series



**F-16A / 20A / 30A / 32A**  
Resettable fuse



**CR-16A / 20A / 30A / 32A**  
Circuit breaker with protection cover for vertical PDU



**VMS**  
Vertical button mounting



**VMB**  
Vertical bracket mounting



Horizontal rack mounting



The MT series of monitored Smart PDUs also focus on improving energy efficiency and data center reliability. Used in conjunction with the InfraBox-840, they allow monitoring of the PDU via the centralized GUI, InfraSolution Manager.



### Features & Benefits

- Provides local & remote monitoring to the aggregate current draw on each PDU
- True RMS current monitoring allows users to receive the most accurate current reading
- Centralized remote monitoring by the simple secure GUI, InfraSolution Manager
- Blue light LED display on the hot-pluggable ammeter provides the current reading of the PDU
- Alarm thresholds alert users to the potential problems before the circuit overload
- Alert of events by E-mail
- Outlet naming, passwords, secure web server and password protection
- Optional hot-pluggable circuit breaker avoid nuisance tripping caused by normal in-rush current
- Wide range of input and output connections allows users to adapt to varying power requirements
- Zero U (vertical) and rackmount (horizontal) form factors available
- Multiple configurations of outlets & input plugs for variety of application environments and power requirements

### Configuration of the InfraSolution SmartPDU MT Network

The InfraBox-840 provides a maximum of 8 expansion ports to connect Smart PDUs to the InfraBox using a standard Cat5 / 6 patch cord.



( Connecting SmartPDU to the expansion ports of InfraBox840 via Cat5/6 cable, Max. 8 PDUs per InfraBox )

### Options



#### RMS current meter

Field-replaceable design helps to eliminate the maintenance downtime by simply replacing the defective current meter without interruption of service.



#### Circuit breaker / Resettable fuse

Individual branch rated circuit breakers that protect load segments to ensure increasing reliability. Circuit breakers with flat rockers are fully shrouded to prevent accidental on/off operation.



Model	Rack Space	Outlet Quantity	Outlet Types	Input Plug	Cord	Voltage	Amp	Dimensions (W x D x H, inch)
SV24US-20A-MT	0 U	24 outlets	(24) 5-20R	5-20P	10 Feet	110V	20A	2.2 x 2 x 59.1
SV24US-30A-MT	0 U	24 outlets	(24) 5-20R	5-30P	10 Feet	110V	30A	2.2 x 2 x 59.1
SV20US-20A-MT	0 U	20 outlets	(20) 5-20R	5-20P	10 Feet	110V	20A	2.2 x 2 x 52.7
SV20US-30A-MT	0 U	20 outlets	(20) 5-20R	5-30P	10 Feet	110V	30A	2.2 x 2 x 52.7
SV16US-20A-MT	0 U	16 outlets	(16) 5-20R	5-20P	10 Feet	110V	20A	2.2 x 2 x 46.8
SV16US-30A-MT	0 U	16 outlets	(16) 5-20R	5-30P	10 Feet	110V	30A	2.2 x 2 x 46.8
SV12US-20A-MT	0 U	12 outlets	(12) 5-20R	5-20P	10 Feet	110V	20A	2.2 x 2 x 40.8
SV12US-30A-MT	0 U	12 outlets	(12) 5-20R	5-30P	10 Feet	110V	30A	2.2 x 2 x 40.8
SV8US-20A-MT	0 U	8 outlets	(8) 5-20R	5-20P	10 Feet	110V	20A	2.2 x 2 x 34.9
SV8US-30A-MT	0 U	8 outlets	(8) 5-20R	5-30P	10 Feet	110V	30A	2.2 x 2 x 34.9
SV24C13-30A-MT	0 U	24 outlets	(24) IEC320 C13	L6-30P	10 Feet	208V	30A	2.2 x 2 x 59.1
SV20C13-30A-MT	0 U	20 outlets	(20) IEC320 C13	L6-30P	10 Feet	208V	30A	2.2 x 2 x 52.7
SV16C13-30A-MT	0 U	16 outlets	(16) IEC320 C13	L6-30P	10 Feet	208V	30A	2.2 x 2 x 46.8
SV12C13-30A-MT	0 U	12 outlets	(12) IEC320 C13	L6-30P	10 Feet	208V	30A	2.2 x 2 x 40.8
SV8C13-30A-MT	0 U	8 outlets	(8) IEC320 C13	L6-30P	10 Feet	208V	30A	2.2 x 2 x 34.9
SV20C13/4C19-30A-MT	0 U	24 outlets	(20) IEC320 C13 / (4) IEC320 C19	L6-30P	10 Feet	208V	30A	2.2 x 2 x 59.1
SV20C13/2C19-30A-MT	0 U	22 outlets	(20) IEC320 C13 / (2) IEC320 C19	L6-30P	10 Feet	208V	30A	2.2 x 2 x 59.1
SV16C13/4C19-30A-MT	0 U	20 outlets	(16) IEC320 C13/ (4) IEC320 C19	L6-30P	10 Feet	208V	30A	2.2 x 2 x 52.7
SV16C13/2C19-30A-MT	0 U	18 outlets	(16) IEC320 C13/ (2) IEC320 C19	L6-30P	10 Feet	208V	30A	2.2 x 2 x 52.7
SV12C13/4C19-30A-MT	0 U	16 outlets	(12) IEC320 C13/ (4) IEC320 C19	L6-30P	10 Feet	208V	30A	2.2 x 2 x 46.8
SV12C13/2C19-30A-MT	0 U	14 outlets	(12) IEC320 C13/ (2) IEC320 C19	L6-30P	10 Feet	208V	30A	2.2 x 2 x 46.8
SV8C13/4C19-30A-MT	0 U	12 outlets	(8) IEC320 C13/ (4) IEC320 C19	L6-30P	10 Feet	208V	30A	2.2 x 2 x 40.8
SV8C13/2C19-30A-MT	0 U	10 outlets	(8) IEC320 C13/ (2) IEC320 C19	L6-30P	10 Feet	208V	30A	2.2 x 2 x 40.8
SV4C13/4C19-30A-MT	0 U	8 outlets	(4) IEC320 C13/ (4) IEC320 C19	L6-30P	10 Feet	208V	30A	2.2 x 2 x 34.9
SV4C13/2C19-30A-MT	0 U	6 outlets	(4) IEC320 C13/ (2) IEC320 C19	L6-30P	10 Feet	208V	30A	2.2 x 2 x 34.9
SH24US-20A-MT	2 U	24 outlets	(24) 5-20R	5-20P	10 Feet	110V	20A	17.3 x 8.7 x 3.5
SH24US-30A-MT	2 U	24 outlets	(24) 5-20R	5-30P	10 Feet	110V	30A	17.3 x 8.7 x 3.5
SH20US-20A-MT	2 U	20 outlets	(20) 5-20R	5-20P	10 Feet	110V	20A	17.3 x 8.7 x 3.5
SH20US-30A-MT	2 U	20 outlets	(20) 5-20R	5-30P	10 Feet	110V	30A	17.3 x 8.7 x 3.5
SH16US-20A-MT	2 U	16 outlets	(16) 5-20R	5-20P	10 Feet	110V	20A	17.3 x 8.7 x 3.5
SH16US-30A-MT	2 U	16 outlets	(16) 5-20R	5-30P	10 Feet	110V	30A	17.3 x 8.7 x 3.5
SH10US-20A-MT	1 U	10 outlets	(10) 5-20R	5-20P	10 Feet	110V	20A	17.3 x 8.7 x 1.8
SH10US-30A-MT	1 U	10 outlets	(10) 5-20R	5-30P	10 Feet	110V	30A	17.3 x 8.7 x 1.8
SH8US-20A-MT	1 U	8 outlets	(8) 5-20R	5-20P	10 Feet	110V	20A	17.3 x 8.7 x 1.8
SH8US-30A-MT	1 U	8 outlets	(8) 5-20R	5-30P	10 Feet	110V	30A	17.3 x 8.7 x 1.8
SH6US-20A-MT	1 U	6 outlets	(6) 5-20R	5-20P	10 Feet	110V	20A	17.3 x 8.7 x 1.8
SH6US-30A-MT	1 U	6 outlets	(6) 5-20R	5-30P	10 Feet	110V	30A	17.3 x 8.7 x 1.8
SH5US-20A-MT	1 U	5 outlets	(5) 5-20R	5-20P	10 Feet	110V	20A	17.3 x 8.7 x 1.8
SH5US-30A-MT	1 U	5 outlets	(5) 5-20R	5-30P	10 Feet	110V	30A	17.3 x 8.7 x 1.8
SH4US-20A-MT	1 U	4 outlets	(4) 5-20R	5-20P	10 Feet	110V	20A	17.3 x 8.7 x 1.8
SH4US-30A-MT	1 U	4 outlets	(4) 5-20R	5-30P	10 Feet	110V	30A	17.3 x 8.7 x 1.8
SH20C13-30A-MT	2 U	20 outlets	(20) IEC320 C13	L6-30P	10 Feet	208V	30A	17.3 x 8.7 x 3.5
SH16C13-30A-MT	2 U	16 outlets	(16) IEC320 C13	L6-30P	10 Feet	208V	30A	17.3 x 8.7 x 3.5
SH10C13-30A-MT	1 U	10 outlets	(10) IEC320 C13	L6-30P	10 Feet	208V	30A	17.3 x 8.7 x 1.8
SH8C13-30A-MT	1 U	8 outlets	(8) IEC320 C13	L6-30P	10 Feet	208V	30A	17.3 x 8.7 x 1.8
SH6C13-30A-MT	1 U	6 outlets	(6) IEC320 C13	L6-30P	10 Feet	208V	30A	17.3 x 8.7 x 1.8
SH5C13-30A-MT	1 U	5 outlets	(5) IEC320 C13	L6-30P	10 Feet	208V	30A	17.3 x 8.7 x 1.8
SH4C13-30A-MT	1 U	4 outlets	(4) IEC320 C13	L6-30P	10 Feet	208V	30A	17.3 x 8.7 x 1.8
SH16C13/4C19-30A-MT	2 U	20 outlets	(16) IEC320 C13/ (4) IEC320 C19	L6-30P	10 Feet	208V	30A	17.3 x 8.7 x 3.5
SH18C13/2C19-30A-MT	2 U	20 outlets	(18) IEC320 C13/ (2) IEC320 C19	L6-30P	10 Feet	208V	30A	17.3 x 8.7 x 3.5
SH12C13/4C19-30A-MT	2 U	16 outlets	(12) IEC320 C13/ (4) IEC320 C19	L6-30P	10 Feet	208V	30A	17.3 x 8.7 x 3.5
SH14C13/2C19-30A-MT	2 U	16 outlets	(14) IEC320 C13/ (2) IEC320 C19	L6-30P	10 Feet	208V	30A	17.3 x 8.7 x 3.5
SH4C13/4C19-30A-MT	1 U	8 outlets	(4) IEC320 C13/ (4) IEC320 C19	L6-30P	10 Feet	208V	30A	17.3 x 8.7 x 1.8
SH6C13/2C19-30A-MT	1 U	8 outlets	(6) IEC320 C13/ (2) IEC320 C19	L6-30P	10 Feet	208V	30A	17.3 x 8.7 x 1.8
SH2C13/4C19-30A-MT	1 U	6 outlets	(2) IEC320 C13/ (4) IEC320 C19	L6-30P	10 Feet	208V	30A	17.3 x 8.7 x 1.8
SH4C13/2C19-30A-MT	1 U	6 outlets	(4) IEC320 C13/ (2) IEC320 C19	L6-30P	10 Feet	208V	30A	17.3 x 8.7 x 1.8
SH4C19-30A-MT	1 U	4 outlets	(4) IEC320 C19	L6-30P	10 Feet	208V	30A	17.3 x 8.7 x 1.8
SH2C13/2C19-30A-MT	1 U	4 outlets	(2) IEC320 C13/ (2) IEC320 C19	L6-30P	10 Feet	208V	30A	17.3 x 8.7 x 1.8
SH2C19-30A-MT	1 U	2 outlets	(2) IEC320 C19	L6-30P	10 Feet	208V	30A	17.3 x 8.7 x 1.8



Model	Rack Space	Outlet Quantity	Outlet Types	Input Plug	Cord	Voltage	Amp	Dimensions (W x D x H, mm)
SV24C13-16A-MT	0 U	24 outlets	(24) IEC320 C13	60309 / C20	3M	220V	16A	55 x 50 x 1500
SV24C13-20A-MT	0 U	24 outlets	(24) IEC320 C13	Open end	3M	220V	20A	55 x 50 x 1500
SV24C13-32A-MT	0 U	24 outlets	(24) IEC320 C13	60309	3M	220V	32A	55 x 50 x 1500
SV20C13-16A-MT	0 U	20 outlets	(20) IEC320 C13	60309 / C20	3M	220V	16A	55 x 50 x 1337.5
SV20C13-20A-MT	0 U	20 outlets	(20) IEC320 C13	Open end	3M	220V	20A	55 x 50 x 1337.5
SV20C13-32A-MT	0 U	20 outlets	(20) IEC320 C13	60309	3M	220V	32A	55 x 50 x 1337.5
SV16C13-16A-MT	0 U	16 outlets	(16) IEC320 C13	60309 / C20	3M	220V	16A	55 x 50 x 1187.5
SV16C13-20A-MT	0 U	16 outlets	(16) IEC320 C13	Open end	3M	220V	20A	55 x 50 x 1187.5
SV16C13-32A-MT	0 U	16 outlets	(16) IEC320 C13	60309	3M	220V	32A	55 x 50 x 1187.5
SV12C13-16A-MT	0 U	12 outlets	(12) IEC320 C13	60309 / C20	3M	220V	16A	55 x 50 x 1037.5
SV12C13-20A-MT	0 U	12 outlets	(12) IEC320 C13	Open end	3M	220V	20A	55 x 50 x 1037.5
SV12C13-32A-MT	0 U	12 outlets	(12) IEC320 C13	60309	3M	220V	32A	55 x 50 x 1037.5
SV8C13-16A-MT	0 U	8 outlets	(8) IEC320 C13	60309 / C20	3M	220V	16A	55 x 50 x 887.5
SV8C13-20A-MT	0 U	8 outlets	(8) IEC320 C13	Open end	3M	220V	20A	55 x 50 x 887.5
SV8C13-32A-MT	0 U	8 outlets	(8) IEC320 C13	60309	3M	220V	32A	55 x 50 x 887.5
SV20C13/4C19-32A-MT	0 U	24 outlets	(20) IEC320 C13 / (4) IEC320 C19	60309	3M	220V	32A	55 x 50 x 1500
SV20C13/2C19-32A-MT	0 U	22 outlets	(20) IEC320 C13 / (2) IEC320 C19	60309	3M	220V	32A	55 x 50 x 1500
SV16C13/4C19-32A-MT	0 U	20 outlets	(16) IEC320 C13/ (4) IEC320 C19	60309	3M	220V	32A	55 x 50 x 1337.5
SV16C13/2C19-32A-MT	0 U	18 outlets	(16) IEC320 C13/ (2) IEC320 C19	60309	3M	220V	32A	55 x 50 x 1337.5
SV12C13/4C19-32A-MT	0 U	16 outlets	(12) IEC320 C13/ (4) IEC320 C19	60309	3M	220V	32A	55 x 50 x 1187.5
SV12C13/2C19-32A-MT	0 U	14 outlets	(12) IEC320 C13/ (2) IEC320 C19	60309	3M	220V	32A	55 x 50 x 1187.5
SV8C13/4C19-32A-MT	0 U	12 outlets	(8) IEC320 C13/ (4) IEC320 C19	60309	3M	220V	32A	55 x 50 x 1037.5
SV8C13/2C19-32A-MT	0 U	10 outlets	(8) IEC320 C13/ (2) IEC320 C19	60309	3M	220V	32A	55 x 50 x 1037.5
SV4C13/4C19-32A-MT	0 U	8 outlets	(4) IEC320 C13/ (4) IEC320 C19	60309	3M	220V	32A	55 x 50 x 887.5
SV4C13/2C19-32A-MT	0 U	6 outlets	(4) IEC320 C13/ (2) IEC320 C19	60309	3M	220V	32A	55 x 50 x 887.5
SH20C13-16A-MT	2 U	20 outlets	(20) IEC320 C13	60309 / C20	3M	220V	16A	440 x 220 x 89
SH20C13-20A-MT	2 U	20 outlets	(20) IEC320 C13	Open end	3M	220V	20A	440 x 220 x 89
SH20C13-32A-MT	2 U	20 outlets	(20) IEC320 C13	60309	3M	220V	32A	440 x 220 x 89
SH16C13-16A-MT	2 U	16 outlets	(16) IEC320 C13	60309 / C20	3M	220V	16A	440 x 220 x 89
SH16C13-20A-MT	2 U	16 outlets	(16) IEC320 C13	Open end	3M	220V	20A	440 x 220 x 89
SH16C13-32A-MT	2 U	16 outlets	(16) IEC320 C13	60309	3M	220V	32A	440 x 220 x 89
SH10C13-16A-MT	1 U	10 outlets	(10) IEC320 C13	60309 / C20	3M	220V	16A	440 x 220 x 45
SH10C13-20A-MT	1 U	10 outlets	(10) IEC320 C13	Open end	3M	220V	20A	440 x 220 x 45
SH10C13-32A-MT	1 U	10 outlets	(10) IEC320 C13	60309	3M	220V	32A	440 x 220 x 45
SH8C13-16A-MT	1 U	8 outlets	(8) IEC320 C13	60309 / C20	3M	220V	16A	440 x 220 x 45
SH8C13-20A-MT	1 U	8 outlets	(8) IEC320 C13	Open end	3M	220V	20A	440 x 220 x 45
SH8C13-32A-MT	1 U	8 outlets	(8) IEC320 C13	60309	3M	220V	32A	440 x 220 x 45
SH6C13-16A-MT	1 U	6 outlets	(6) IEC320 C13	60309 / C20	3M	220V	16A	440 x 220 x 45
SH6C13-20A-MT	1 U	6 outlets	(6) IEC320 C13	Open end	3M	220V	20A	440 x 220 x 45
SH6C13-32A-MT	1 U	6 outlets	(6) IEC320 C13	60309	3M	220V	32A	440 x 220 x 45
SH5C13-16A-MT	1 U	5 outlets	(5) IEC320 C13	60309 / C20	3M	220V	16A	440 x 220 x 45
SH5C13-20A-MT	1 U	5 outlets	(5) IEC320 C13	Open end	3M	220V	20A	440 x 220 x 45
SH5C13-32A-MT	1 U	5 outlets	(5) IEC320 C13	60309	3M	220V	32A	440 x 220 x 45
SH4C13-16A-MT	1 U	4 outlets	(4) IEC320 C13	60309 / C20	3M	220V	16A	440 x 220 x 45
SH4C13-20A-MT	1 U	4 outlets	(4) IEC320 C13	Open end	3M	220V	20A	440 x 220 x 45
SH4C13-32A-MT	1 U	4 outlets	(4) IEC320 C13	60309	3M	220V	32A	440 x 220 x 45
SH16C13/4C19-32A-MT	2 U	20 outlets	(16) IEC320 C13/ (4) IEC320 C19	60309	3M	220V	32A	440 x 220 x 89
SH18C13/2C19-32A-MT	2 U	20 outlets	(18) IEC320 C13/ (2) IEC320 C19	60309	3M	220V	32A	440 x 220 x 89
SH12C13/4C19-32A-MT	2 U	16 outlets	(12) IEC320 C13/ (4) IEC320 C19	60309	3M	220V	32A	440 x 220 x 89
SH14C13/2C19-32A-MT	2 U	16 outlets	(14) IEC320 C13/ (2) IEC320 C19	60309	3M	220V	32A	440 x 220 x 89
SH4C13/4C19-32A-MT	1 U	8 outlets	(4) IEC320 C13/ (4) IEC320 C19	60309	3M	220V	32A	440 x 220 x 45
SH6C13/2C19-32A-MT	1 U	8 outlets	(6) IEC320 C13/ (2) IEC320 C19	60309	3M	220V	32A	440 x 220 x 45
SH2C13/4C19-32A-MT	1 U	6 outlets	(2) IEC320 C13/ (4) IEC320 C19	60309	3M	220V	32A	440 x 220 x 45
SH4C13/2C19-32A-MT	1 U	6 outlets	(4) IEC320 C13/ (2) IEC320 C19	60309	3M	220V	32A	440 x 220 x 45
SH4C19-32A-MT	1 U	4 outlets	(4) IEC320 C19	60309	3M	220V	32A	440 x 220 x 45
SH2C13/2C19-32A-MT	1 U	4 outlets	(2) IEC320 C13/ (2) IEC320 C19	60309	3M	220V	32A	440 x 220 x 45
SH2C19-32A-MT	1 U	2 outlets	(2) IEC320 C19	60309	3M	220V	32A	440 x 220 x 45



Model	Rack Space	Outlet Quantity	Outlet Types	Input Plug	Cord	Voltage	Amp	Dimensions (W x D x H, mm)
SV24UK-13A-MT	0 U	24 outlets	(24) BS1363	BS1363	3M	230V	13A	55 x 50 x 2000
SV24UK-16A-MT	0 U	24 outlets	(24) BS1363	60309 / C20	3M	230V	16A	55 x 50 x 2000
SV24UK-20A-MT	0 U	24 outlets	(24) BS1363	Open end	3M	230V	20A	55 x 50 x 2000
SV24UK-32A-MT	0 U	24 outlets	(24) BS1363	60309	3M	230V	32A	55 x 50 x 2000
SV20UK-13A-MT	0 U	20 outlets	(20) BS1363	BS1363	3M	230V	13A	55 x 50 x 1750
SV20UK-16A-MT	0 U	20 outlets	(20) BS1363	60309 / C20	3M	230V	16A	55 x 50 x 1750
SV20UK-20A-MT	0 U	20 outlets	(20) BS1363	Open end	3M	230V	20A	55 x 50 x 1750
SV20UK-32A-MT	0 U	20 outlets	(20) BS1363	60309	3M	230V	32A	55 x 50 x 1750
SV16UK-13A-MT	0 U	16 outlets	(16) BS1363	BS1363	3M	230V	13A	55 x 50 x 1500
SV16UK-16A-MT	0 U	16 outlets	(16) BS1363	60309 / C20	3M	230V	16A	55 x 50 x 1500
SV16UK-20A-MT	0 U	16 outlets	(16) BS1363	Open end	3M	230V	20A	55 x 50 x 1500
SV16UK-32A-MT	0 U	16 outlets	(16) BS1363	60309	3M	230V	32A	55 x 50 x 1500
SV12UK-13A-MT	0 U	12 outlets	(12) BS1363	BS1363	3M	230V	13A	55 x 50 x 1337.5
SV12UK-16A-MT	0 U	12 outlets	(12) BS1363	60309 / C20	3M	230V	16A	55 x 50 x 1337.5
SV12UK-20A-MT	0 U	12 outlets	(12) BS1363	Open end	3M	230V	20A	55 x 50 x 1337.5
SV12UK-32A-MT	0 U	12 outlets	(12) BS1363	60309	3M	230V	32A	55 x 50 x 1337.5
SV8UK-13A-MT	0 U	8 outlets	(8) BS1363	BS1363	3M	230V	13A	55 x 50 x 1037.5
SV8UK-16A-MT	0 U	8 outlets	(8) BS1363	60309 / C20	3M	230V	16A	55 x 50 x 1037.5
SV8UK-20A-MT	0 U	8 outlets	(8) BS1363	Open end	3M	230V	20A	55 x 50 x 1037.5
SV8UK-32A-MT	0 U	8 outlets	(8) BS1363	60309	3M	230V	32A	55 x 50 x 1037.5
SV10UK/8C13/6C19-32A-MT	0 U	24 outlets	(10) BS1363/ (8) IEC320 C13/ (6) IEC320 C19	60309	3M	230V	32A	55 x 50 x 1750
SV10UK/8C13/4C19-32A-MT	0 U	22 outlets	(10) BS1363/ (8) IEC320 C13/ (4) IEC320 C19	60309	3M	230V	32A	55 x 50 x 1750
SV8UK/8C13/4C19-32A-MT	0 U	20 outlets	(8) BS1363/ (8) IEC320 C13/ (4) IEC320 C19	60309	3M	230V	32A	55 x 50 x 1500
SV10UK/4C13/4C19-32A-MT	0 U	18 outlets	(10) BS1363/ (4) IEC320 C13/ (4) IEC320 C19	60309	3M	230V	32A	55 x 50 x 1500
SV10UK/4C13/2C19-32A-MT	0 U	16 outlets	(10) BS1363/ (4) IEC320 C13/ (2) IEC320 C19	60309	3M	230V	32A	55 x 50 x 1500



Model	Rack Space	Outlet Quantity	Outlet Types	Input Plug	Cord	Voltage	Amp	Dimensions (W x D x H, mm)
SV20SCH-16A-MT	0 U	20 outlets	(20) CEE 7 Schuko	Schuko / 60309 / C20	3M	220V	16A	55 x 65 x 1500
SV20SCH-20A-MT	0 U	20 outlets	(20) CEE 7 Schuko	Open end	3M	220V	20A	55 x 65 x 1500
SV20SCH-32A-MT	0 U	20 outlets	(20) CEE 7 Schuko	60309	3M	220V	32A	55 x 65 x 1500
SV16SCH-16A-MT	0 U	16 outlets	(16) CEE 7 Schuko	Schuko / 60309 / C20	3M	220V	16A	55 x 65 x 1337.5
SV16SCH-20A-MT	0 U	16 outlets	(16) CEE 7 Schuko	Open end	3M	220V	20A	55 x 65 x 1337.5
SV16SCH-32A-MT	0 U	16 outlets	(16) CEE 7 Schuko	60309	3M	220V	32A	55 x 65 x 1337.5
SV12SCH-16A-MT	0 U	12 outlets	(12) CEE 7 Schuko	Schuko / 60309 / C20	3M	220V	16A	55 x 65 x 1187.5
SV12SCH-20A-MT	0 U	12 outlets	(12) CEE 7 Schuko	Open end	3M	220V	20A	55 x 65 x 1187.5
SV12SCH-32A-MT	0 U	12 outlets	(12) CEE 7 Schuko	60309	3M	220V	32A	55 x 65 x 1187.5
SV8SCH-16A-MT	0 U	8 outlets	(8) CEE 7 Schuko	Schuko / 60309 / C20	3M	220V	16A	55 x 65 x 887.5
SV8SCH-20A-MT	0 U	8 outlets	(8) CEE 7 Schuko	Open end	3M	220V	20A	55 x 65 x 887.5
SV8SCH-32A-MT	0 U	8 outlets	(8) CEE 7 Schuko	60309	3M	220V	32A	55 x 65 x 887.5



# SmartCool Intelligent Fan Unit Series

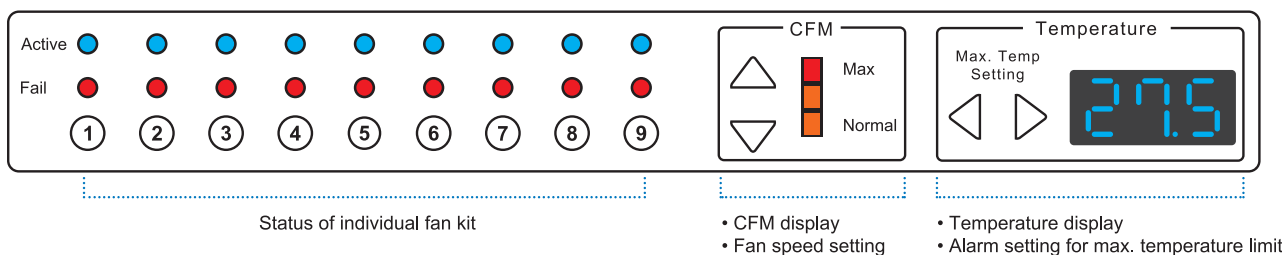


InfraSolution supports controllable fan units that provide maximum energy and minimum environmental impact, ultimately this reduces operational cost for data center energy consumption. The switched fan units are designed to have remote on/off capabilities. When used with InfraSolution, the fans can be reduced in speed or prevented from running when specific temperatures are achieved via the main data center room cooling systems. Furthermore if the temperature rises in the room then the fan unit can automatically be re-started or simply be increased in speed and airflow. The level of intelligent control also helps maximizing equipment life cycles. Used in conjunction with the InfraSolution allows remote management of the intelligent fan unit via the centralized GUI.

## Features & Benefits

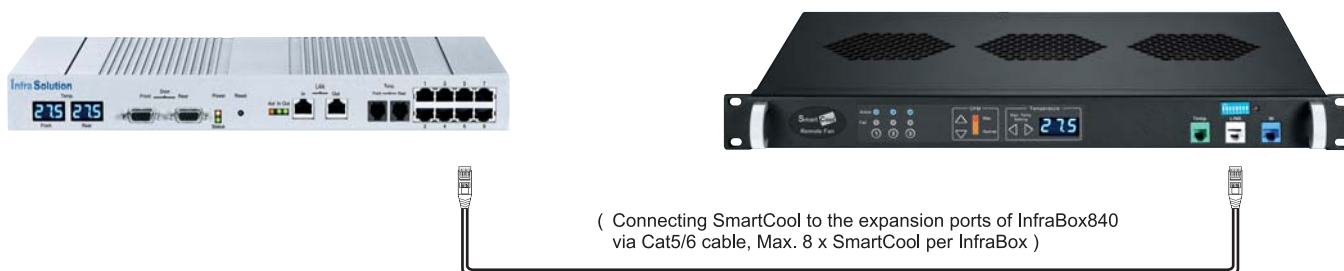
- Intelligent, compact and economical rack cooling solution
- Centralized management for all intelligent fan units in maximum 800 cabinets in the InfraSolution network, via the user-friendly InfraSolution Manager GUI
- Remotely real-time monitoring function reduces manpower cost and improves uptime and productivity
- External temperature sensor with a 6 feet cable for the temperature detection and automatic temperature dependent speed control
- Low fan speed at low temperature - save power and keep minimum noise level created by the fan kits
- Higher fan speed in rising temperature - deliver the appropriate fan speed as demand increases
- With choices of models with small fan kits and large fan kits, depending on the heat density at the environment
- Wide range in form factors (fan tray, front rack mount and rear door mount) for the cooling on different areas of the cabinet
- Different cooling ways (intake for cooling with air, extract for heat dissipation) are available for the optimum cooling performance
- Customs configurations include DC power input

## Monitoring & Control for SmartCool



## Configuration of SmartCool InfraSolution Network

The InfraBox-840 provides 8 expansion ports for connecting multi-function devices. SmartCool can be simply connected to InfraBox using a standard Cat 5/6 patch cord.



# Smart Cool Rackmount Fan Tray

## Cooling Concept - *Exhausting the hot air from the top of the cabinet*

As hot air rises, rackmount fan trays provide a way of efficiently exhausting hot air from a cabinet.



Remarks : Top fan tray models are available on request

## Benefits

- Simple way for thermal management. Applicable to most rack cabinet models
- Fan kit quantity range from 3 to 9, depending on the exhaustion level required
- Effective for removing hot air at high heat density top position inside the enclosure

## Rackmount Fan Tray Series

### 1U Rackmount Fan Tray



**SRF-1.3S**  
**SRF-1.3S / DC24**  
**SRF-1.3S / DC48**

1U, 3 small fans with AC /  
 -24V DC / -48V DC power  
 options



**SRF-1.6S**  
**SRF-1.6S / DC24**  
**SRF-1.6S / DC48**

1U, 6 small fans with AC /  
 -24V DC / -48V DC power  
 options



**SRF-1.9S**  
**SRF-1.9S / DC24**  
**SRF-1.9S / DC48**

1U, 9 small fans with AC /  
 -24V DC / -48V DC power  
 options

### 2U Rackmount Fan Tray



**SRF-2.2L**  
 2U, 2 large fans  
 with AC power



**SRF-2.4L**  
 2U, 4 large fans  
 with AC power

# Smart Cool Intake Rackmount Fan Panel

## Cooling Concept - Horizontally pulling cool air into the cabinet

Panel fan trays are designed to be used in conjunction with cabinet perforated doors where cooler air is taken from cool data centre isles and distributed horizontally through the cabinet.

Rear Side



Front Side

Cool Air In



## Benefits

- Simple mounting design. Easy to be mounted to the rack cabinet
- 5U, 8U & 9U form factors are available for selection. User can select the right form factor model according to the actual equipment rack mounting environment
- Can be rack mounted to different vertical position, according to the air flow design to the cabinet
- Provides a spot cooling or air flow into the particular cabinet area with highest heat density problem

## Intake Rackmount Fan Panel Series



**SRF-5.3S / IT**  
**SRF-5.3S / IT / DC24**  
**SRF-5.3S / IT / DC48**  
5U, 3 small fans with AC / -24V DC / -48V DC power options



**SRF-5.2L / IT**  
5U, 2 large fans with AC power



**SRF-8.6S / IT**  
**SRF-8.6S / IT / DC24**  
**SRF-8.6S / IT / DC48**  
8U, 6 small fans with AC / -24V DC / -48V DC power options



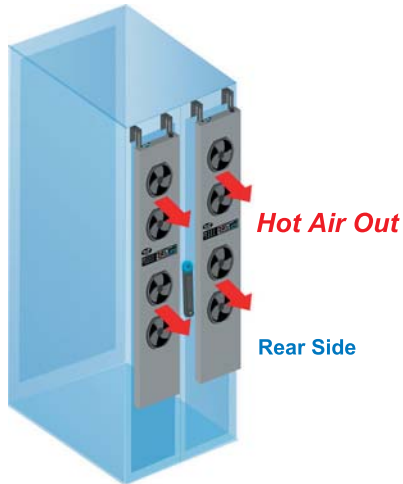
**SRF-9.4L / IT**  
9U, 4 large fans with AC power

# Smart Cool Extract Fan Panel for Rear Door

## Cooling Concept - Extracting air from the rear of the cabinet

Vertical fan trays are designed for uses where there is a heat build up at the rear of the cabinet and where the equipment density is often at its lowest.

### Front Side



### Extract Fan Panel Series

#### 28U



#### SRF-28.4L / ET

4 large fans with AC power

#### 32U



#### SRF-32.9S / ET SRF-32.9S / ET / DC24 SRF-32.9S / ET / DC48

9 small fans with AC / -24V DC / -48V DC power options

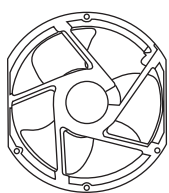
Remarks: Tailor-made models in shorter length and selected fan kit quantity for rear door with swing handle are available on request.

## Benefits

- Light weight. Compatible to the perforated doors of most heavy duty or normal rack cabinet models
- Simple mounting design. Easy to be mounted on the perforated door
- The fit mounting location and strong air flow remove the heated air just exhausted from the equipments effectively
- Long strong fan kits row design is effective on preventing the recirculation of heated air airflow
- Narrow design allows the pair mounting to the rear perforated doors of most 600mm wide rack cabinets
- Mounting is adjustable so that the extract fan unit can be located at different height of the rear door

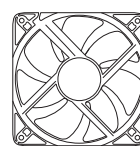
## Technical Specification of Fan Kits

### Large Fan Kit



Air Delivery : 417 CFM  
Rate Speed : 6200 RPM +/-10%  
Rated Voltage : 48 VDC  
Rated Current : 1550 mA  
Noise Level : 71 dB  
Dimension : 170 x 150 x 51 mm  
Bearing System : Precision ball bearing system  
Protection : Automatic restart capability

### Small Fan Kit

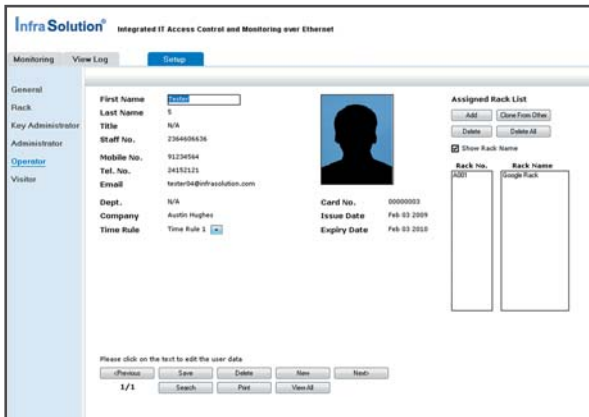


Air Delivery : 108 CFM  
Rate Speed : 3100 RPM +/-10%  
Rated Voltage : 12 VDC  
Rated Current : 451 mA  
Noise Level : 45 dB  
Dimension : 120 x 120 x 25 mm  
Bearing System : Precision ball bearing system  
Protection : Automatic restart capability

# InfraSolution<sup>®</sup> Manager

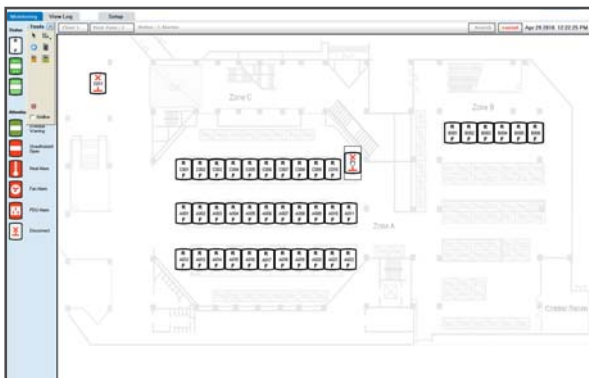
InfraSolution Manager provides a simple graphic user interface (GUI) to centralize the management of a large number of data center server cabinets in remote locations across Ethernet TCP/IP networks. It is basically the engine of InfraSolution and is designed to provide intelligent secure physical layer card access that remotely releases cabinet locking handles as well as centralized management for control, reporting and audit purposes. When using the InfraBox 840 series the InfraSolution Manager also allows GUI remote management for Intelligent SmartPDUs and SmartCool Fan systems.

## Features & Benefits



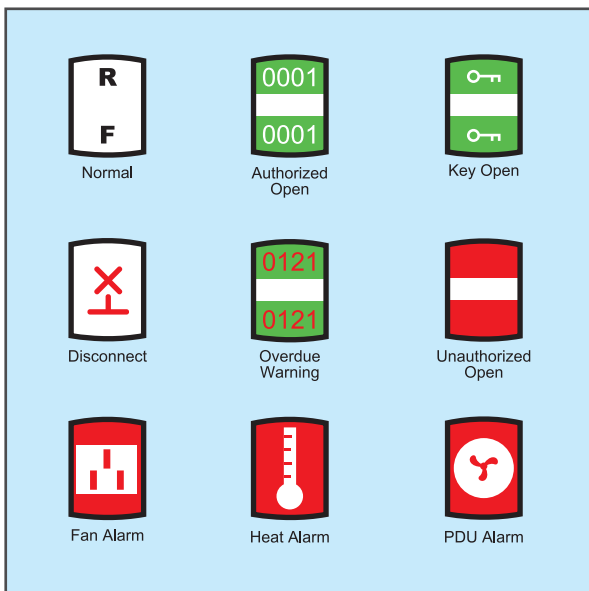
## Simple Configuration

InfraSolution Manager is a simple way for the administrator to allocate manager profiles, visitor access and operating times.



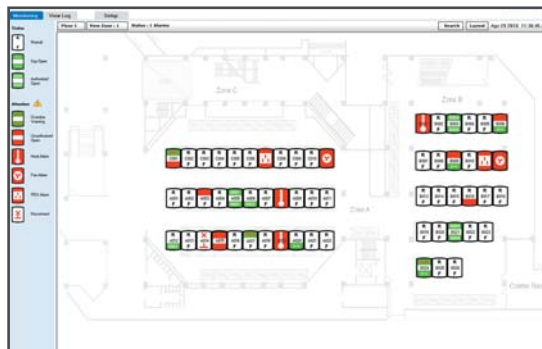
## User Friendly GUI

Graphic design of cabinet icons can be used in conjunction with the data center floor plan. The layout design allows the user to remotely manage cabinets connected to the InfraSolution network system in an efficient way.



## Clear Indication of Event Occurrence

When different events occur, the icons change appearance for easy indication and monitoring.



# InfraSolution® Manager

## Table for the status on rack cabinets, multi-function devices and environment

By double clicking a particular cabinet icon, a table will be shown for the status of the corresponding cabinet.

First level table interface provides the following monitoring/ control features :



### Doors

- Front and rear door open / close status
- The user SmartCard ID in last time door open / close
- Temperature at front and rear doors recorded by the built-in temperature sensors in the HV-800 handles

### Door Remote

- Remote opening function for the Rack Cabinet

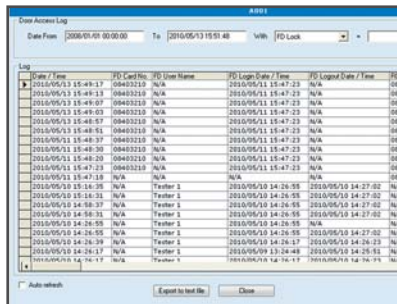
### Temperature / Humidity

- Temperature/ Humidity inside the cabinet recorded by the optional TH sensors affixed on the doors

### Multi-function Devices

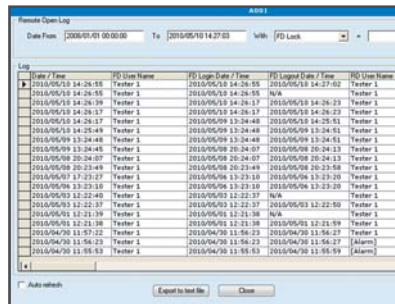
- Data of the current and alarm set of the SmartPDU
- Data of the SmartCool Fan status

Second level table interface on each part provides much details information :



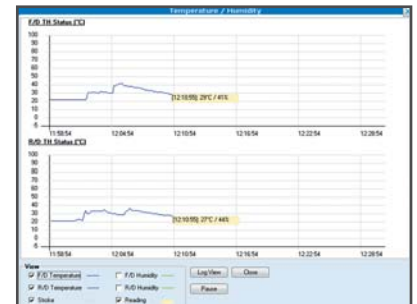
### Door

- Door access log for the SmartCard/ key open / close history recorded during the time period selected



### Door Remote

- Door access log for the software remote opening



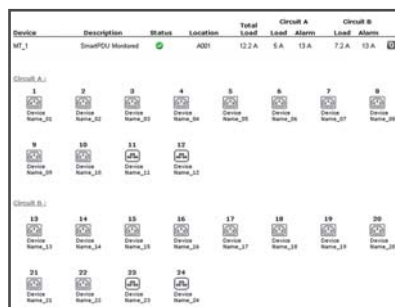
### Environmental

- Curve diagrams for continuous temperature monitoring



### Multi-function - PDU Switching

- Switch ON/ OFF function key for Individual outlet socket



### Multi-function - PDU Monitoring

- Details aggregate current data in circuit A and circuit B

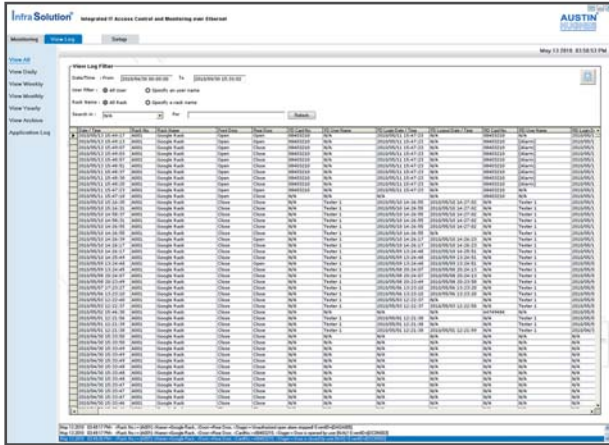


### Multi-function - Fan

- Fan Speed data and Switch ON/ OFF function key for SmartCool

## Reporting - Best Tools for Management & Audit

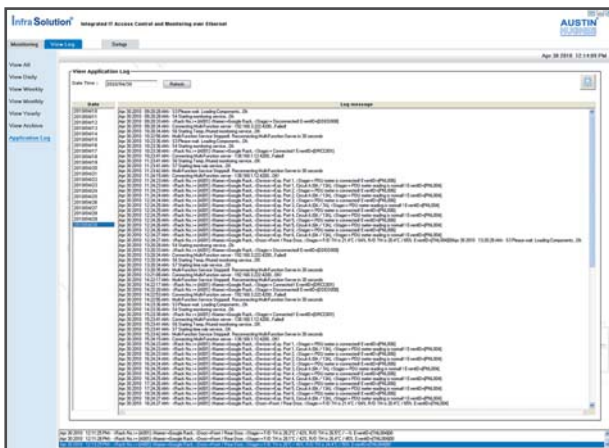
InfraSolution provides simple cost effective management of the SmartCard/ Lock key / Software Remote door access to cabinets in data center. The centralized management provides total reporting with detailed access logs and event occurrences for audit purposes. The view log for specific time period, server cabinet, SmartCard ID, system component can be searched easily for an efficient reporting management.



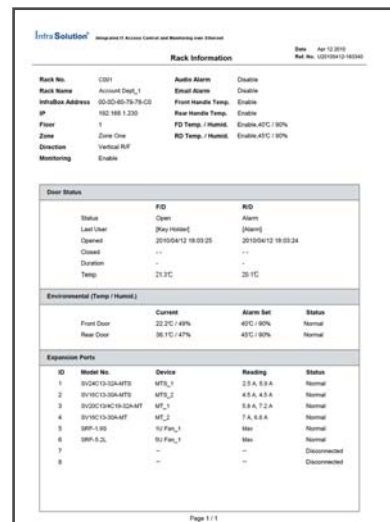
### View Log

View Log function provides a total reporting for the event occurrences on all the rack cabinets and users in the InfraSolution system. Filtering or searching on specific date, rack and user can be made.

### View application function

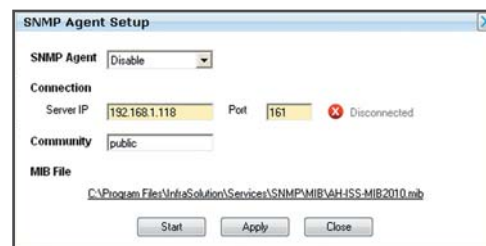
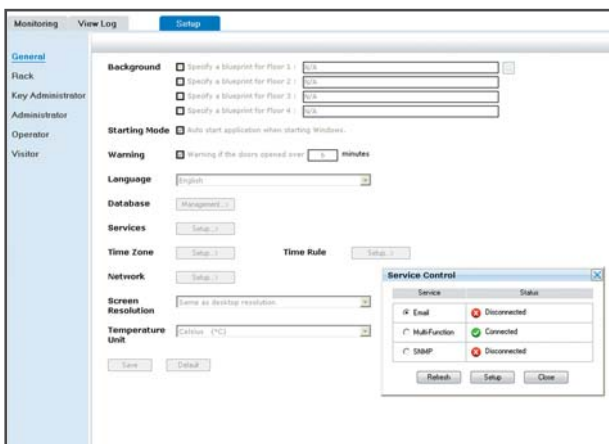


### Specific rack cabinet information



## Alert Problem via E-mail or SNMP

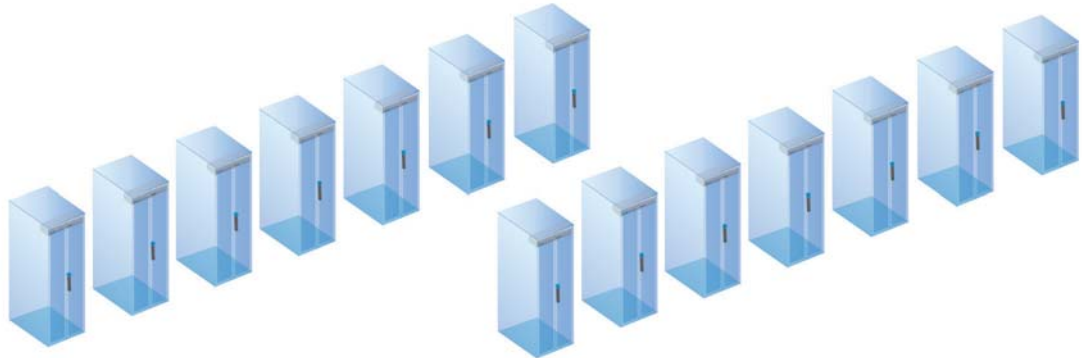
InfraSolution Manager allows the alarming on unauthorized access, environmental conditions, multi-function devices issues to be sent to the users via e-mail or SNMP. Users can be alerted for the problem immediately by the management software and take the corresponding action to fix the issue.



# InfraSolution<sup>®</sup> Manager

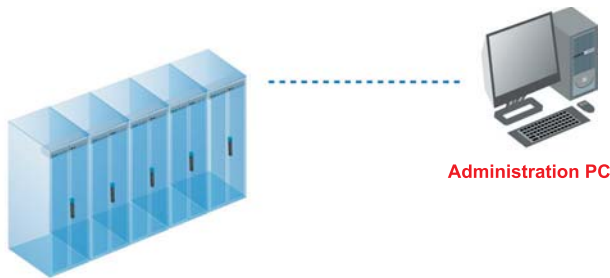
## ISM-N InfraSolution Manager Node License

InfraSolution Manager supports the management of max. 800 InfraBoxes in cabinets. The node license number required depends on the quantity of InfraBox or server cabinets in the InfraSolution system.



## ISM-SS01 InfraSolution Manager, Single Server License

It provides single software managing console for the InfraSolution system.



( Support wired InfraSolution network )

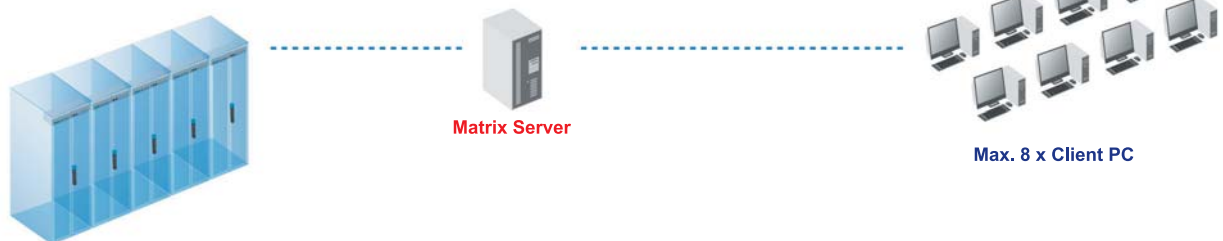
### Hardware configuration requirement for Single Server

- 2GHz CPU / 2GB of RAM min.
- 40GB HDD storage / 64MB graphic card
- Ethernet 100Base-T/1000Base-T connection (RJ45)
- CD-Rom drive
- 19" LCD size min.
- Windows 2K / XP / 2003 / Vista

## ISM-MS01 InfraSolution Manager, Matrix Server License

## ISM-C01 InfraSolution Manager, Client License

The matrix server and client license supports max. 8 simultaneous user client access.



( Support wired InfraSolution network )

### Hardware configuration requirement for Matrix Server

- Core 2 Duo 2.8GHz / 2GB of RAM min.
- 40GB HDD storage / 64MB graphic card
- Ethernet 100Base-T/1000Base-T connection (RJ45)
- CD-Rom drive
- 19" LCD size min.
- Windows 2003 / 2008 Server

### Hardware configuration requirement for Client PC

- 2GHz CPU / 2GB of RAM min.
- 40GB HDD storage / 64MB graphic card
- Ethernet 100Base-T/1000Base-T connection (RJ45)
- CD-Rom drive
- 19" LCD size min.
- Windows 2K / XP / 2003 / Vista

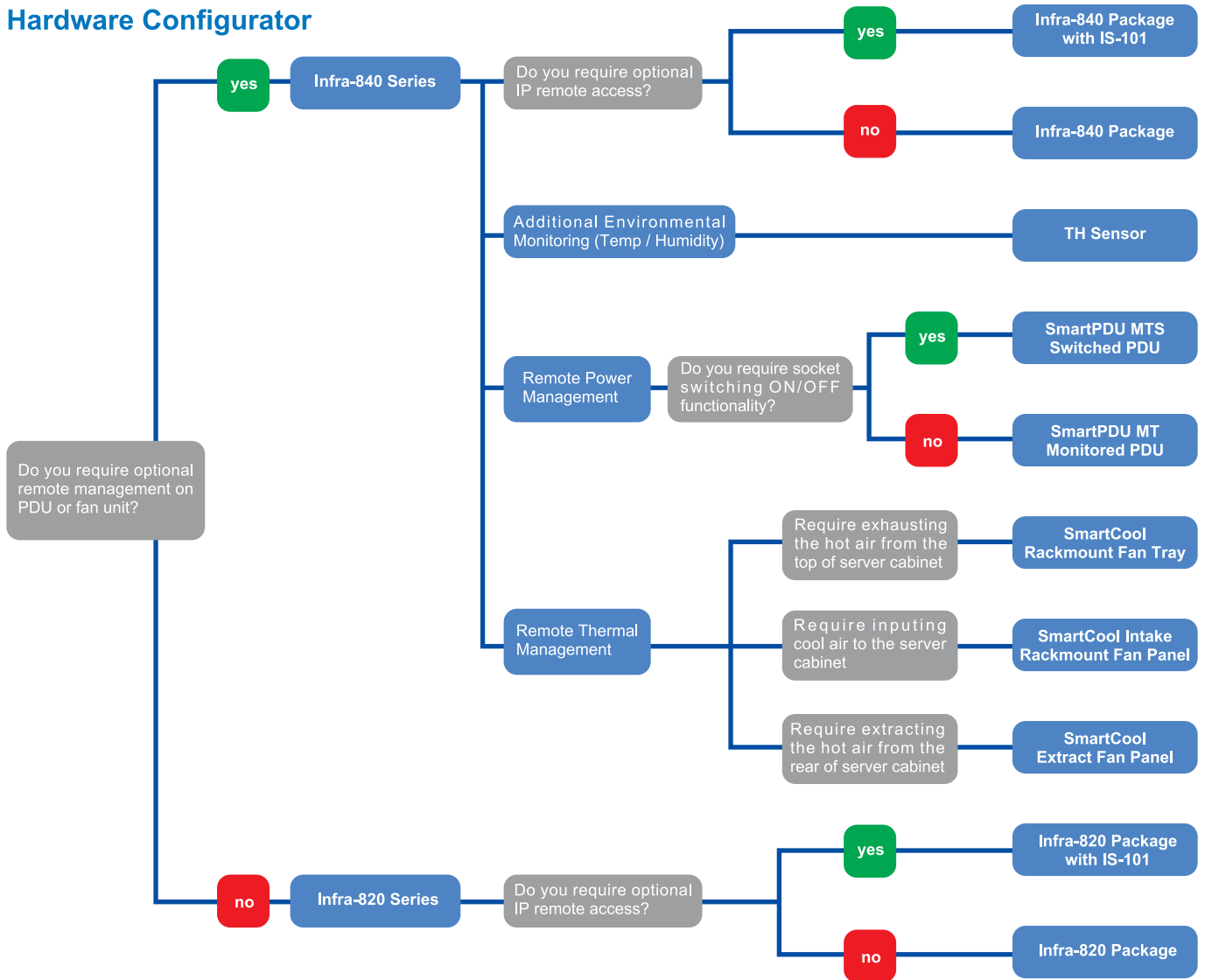
## ISM-MU01 InfraSolution Manager, Matrix Server Upgrade License

Upgrade for the existing Single console to Matrix console.

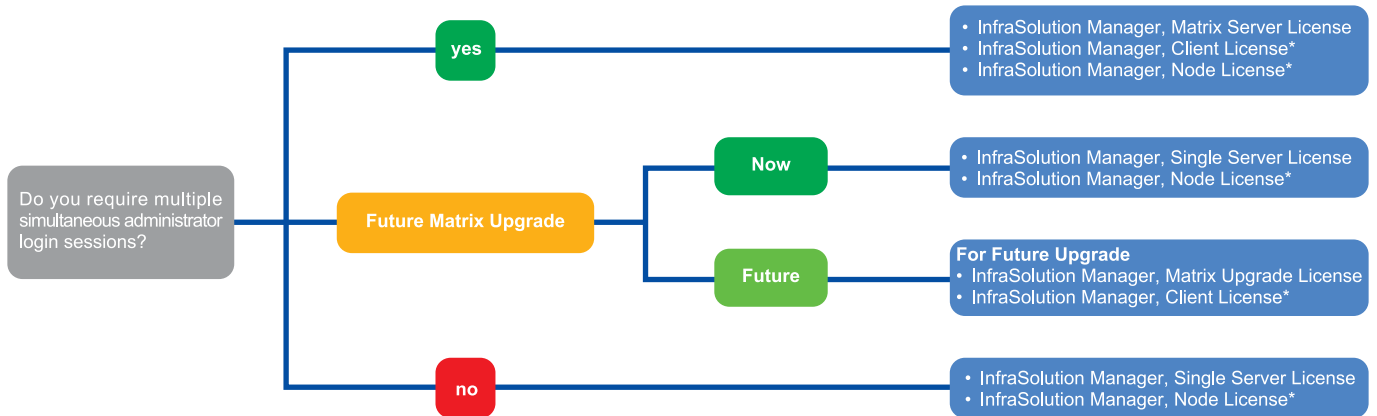
# InfraSolution® Series Selection Chart

InfraSolution® Basic Configuration = Hardware Configuration + Software Configuration

## Hardware Configurator



## Software Configurator



\* Remarks : InfraSolution Manager Node License –  
InfraSolution Manager Client License –

Order the node license quantity according to the InfraBox quantity in the InfraSolution system  
InfraSolution 800 Series system support up to maximum 800 x Node (InfraBox 840/820)  
Order the client license quantity according to the simultaneous user access required  
InfraSolution 800 Series system support up to maximum 8 x simultaneous client access



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