InfraRack

Design for Next-Gen Data Centers

InfraRack $\mathbb{X}6$ Networked Series

Environmental	Power	Security	Cooling	Software

**AUSTIN®
HUGHES**

Traditional racks no longer satisfy the market needs as today's data centers have to be well-managed, more efficient and powerful.

Intelligent racks are required to manage and control the power, cooling, environmental and rack access. Understanding an implementation of intelligent racks in data center is a complex task, Austin Hughes optimizes and consolidates a variety of rack solutions on your behalf. The new InfraRack series provides an integrated intelligent rack system. It is an easy approach to offer the rack essentials in the 21st century data centers.

RoHS2 COMPLIANCE   **REACH**   **Green Production**

InfraRack is recognized as RoHS2 and REACH compliant by a SGS accredited test laboratory.

ISO-Certified
9001 **14001**

The design and manufacturing process of the InfraRack series achieves BSi ISO9001 quality control plus ISO14001 environment standard.

Loading

Designed for heavy / medium duty applications, the InfraRack series has passed the loading test.

Benefits

• **Integration Base**	InfraRack can be integrated with Infra-family intelligent devices for security, power, cooling & environmental management.
• **Remote Management**	To maximize users' benefits, InfraRack can be connected to allow a centralized management over network.
• **Expandability**	Designed for the global scalable data center, the InfraRack network is expandable to max. 3000 intelligent racks.
• **High Quality IT Rack**	Well-engineered InfraRack covers heavy duty and medium duty series for a variety of requirements.
• **Complete Accessories**	Austin Hughes offers a complete 19" rack solution. A comprehensive range of accessories for cabling, air blanking and KVM screens are available.

Total Rack Solution

Our new design, comprehensive valued options and extensive product range offer complete solutions for InfraRack series.

>>> Access Control	• Smartcard access control gives data centers a higher level of rack level access security • Networked version enables complete smartcard rack access management with software
>>> PDU	• Intelligent kWh PDU for remote management • Metered PDU and ATS available for different requirements
>>> Cooling Fan	• Intelligent fan unit allows remote management by software • InfraCool fan unit provides various fan unit form factors for different cooling requirements
>>> Sensors	• A wide range of sensors for complete environmental monitoring • Maintain optimum operational conditions within the data center
>>> AirFlow	• Air Blanking Panels prevent air recirculation by occupying unused rack space • Rack Seal Kits prevent air loss underneath the racks and from the gap between racks
>>> Cabling	• Framework allows multi-dimensional cable pathways • Numerous efficient cabling options
>>> KVM & Screen	• LCD console drawers combine display, keyboard and touchpad in 1U rack space • KVM allows remote or local access and control to multiple servers in the rack

Contents

>>> Infra-X6-SR Heavy Duty Rack

SR Key Highlights

- Heavy duty server rack
- Access control w/ **MiFare** or **Proximity** smartcard handle x 2
- Control box for access control, intelligent PDU, sensor & cooling fan
- LED light bar x 1
- Temp. sensor x 1 w/ 2M cord
- 600 & 800 wide models meet up-to-date requirements of global data center
- Perforated rack doors ensure ideal airflow direction
- Well-engineered to accommodate tool-less mounting PDU x 4
- Framework allows multi-dimensional cable pathways and numerous efficient cabling options
- Easy to deploy and adaptable to Aisle containment to achieve efficient airflow management
- Quick release mechanism design for doors and split side panels
- Tool-less adjustment for front and rear 19" rails

MiFARE SMARTCARD

PROXIMITY SMARTCARD

RoHS   REACH

600W	Package No.	Width		Depth				Height			
				Overall (door to door)		Effective (frame to frame)		Overall (w/ casters)		Effective	
		mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
42U	Infra-X6-SR-6042	600	24"	1072	42"	1000	39"	2035	80"	1867	74"
	Infra-X6-SR-6242	600	24"	1200	47"	1128	44"	2035	80"	1867	74"
45U	Infra-X6-SR-6045	600	24"	1072	42"	1000	39"	2168	85"	2000	79"
	Infra-X6-SR-6245	600	24"	1200	47"	1128	44"	2168	85"	2000	79"
47U	Infra-X6-SR-6047	600	24"	1072	42"	1000	39"	2257	89"	2089	82"
	Infra-X6-SR-6247	600	24"	1200	47"	1128	44"	2257	89"	2089	82"
52U	Infra-X6-SR-6252	600	24"	1200	47"	1128	44"	2480	98"	2312	91"

MiFARE SMARTCARD   **MiFare**   package - Add **M** on the model no.,   sample : Infra-X8-SR-6042**M**

PROXIMITY SMARTCARD   **Proximity** package - Add **P** on the model no.,   sample : Infra-X8-SR-6042**P**

** Custom size on request

1500 kg   3300 lb

800W	Package No.	Width		Depth				Height			
				Overall (door to door)		Effective (frame to frame)		Overall (w/ casters)		Effective	
		mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
42U	Infra-X6-SR-8042	800	31"	1072	42"	1000	39"	2035	80"	1867	74"
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PROXIMITY SMARTCARD   **Proximity** package - Add **P** on the model no.,   sample : Infra-X8-SR-8042**P**

** Custom size on request

1500 kg   3300 lb

SR 600W Heavy Duty Rack

Perforated Top

Standard Split
Quick access design for service from side panel

Fully Perforated Middle Split
Space-saving design for narrow aisle w/ smartcard handle

Fully Perforated
Gives 80% perforated area w/ smartcard handle

SR 800W Heavy Duty Rack

Perforated Top

Standard Split
Quick access design for service from side panel

Fully Perforated Middle Split
Space-saving design for narrow aisle w/ smartcard handle

Fully Perforated
Perforated w/ smartcard handle

NSR Key Highlights

- Medium duty server rack
- Access control w/ **MiFare** or **Proximity** smartcard handle x 2
- Control box for access control, intelligent PDU, sensor & cooling fan
- LED light bar x 1
- Temp. sensor x 1 w/ 2M cord
- 600 & 800 wide models meet up-to-date requirements of global data center
- Perforated rack doors ensure ideal airflow direction
- Well-engineered to accommodate tool-less mounting PDU x 2
- Framework allows multi-dimensional cable pathways and numerous efficient cabling options
- Easy to deploy and adaptable to Aisle containment to achieve efficient airflow management
- Quick release mechanism design for doors and split side panels
- Tool-less adjustment for front and rear 19" rails

RoHS   **REACH**

MiFARE SMARTCARD

PROXIMITY SMARTCARD

600W	Package No.	Width		Depth				Height			
				Overall (door to door)		Effective (frame to frame)		Overall (w/ casters)		Effective	
		mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
42U	**Infra-X6-NSR-6042**	600	24"	1072	42"	1000	39"	2035	80"	1867	74"
	Infra-X6-NSR-6242	600	24"	1200	47"	1128	44"	2035	80"	1867	74"
45U	**Infra-X6-NSR-6045**	600	24"	1072	42"	1000	39"	2168	85"	2000	79"
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MiFARE SMARTCARD
MiFare package - Add **M** on the model no., sample : Infra-X8-NSR-6042**M**

PROXIMITY SMARTCARD
Proximity package - Add **P** on the model no., sample : Infra-X8-NSR-6042**P**

** Custom size on request

1000 kg   2200 lb

800W	Package No.	Width		Depth				Height			
				Overall (door to door)		Effective (frame to frame)		Overall (w/ casters)		Effective	
		mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
42U	**Infra-X6-NSR-8042**	800	31"	1072	42"	1000	39"	2035	80"	1867	74"
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MiFARE SMARTCARD
MiFare package - Add **M** on the model no., sample : Infra-X8-NSR-8042**M**

PROXIMITY SMARTCARD
Proximity package - Add **P** on the model no., sample : Infra-X8-NSR-8042**P**

** Custom size on request

750 kg   1650 lb

NSR | 600W Medium Duty Rack

Standard Plain

Tool-less installation or removal when maximizing systems or equipment density

Perforated Top

Fully Perforated Middle Split

Space-saving design for narrow aisle w/ smartcard handle

Fully Perforated

Gives 80% perforated area w/ smartcard handle

NSR | 800W Medium Duty Rack

Standard Plain

Tool-less installation or removal when maximizing systems or equipment density

Perforated Top

Fully Perforated Middle Split

Space-saving design for narrow aisle w/ smartcard handle

Fully Perforated

Perforated w/ smartcard handle

>>> Access Control

The patented **Infra Solution**® X-600 smartcard handle is designed for rack access control.

Control Box X-2000, designed for **Rack Smartcard Access + PDU / Fan / Environmental Management**, 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.

To ensure 100% right door detection, InfraRack is equipped with high quality, durable and precise door sensors for front and rear door.

Patented and Worldwide Patents

X-600P	Features	X-600M
	Intelligent design with patent	
✔	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	
	Support 3-pt lock mechanism	

Stylish Mechanical Design

Unit : mm

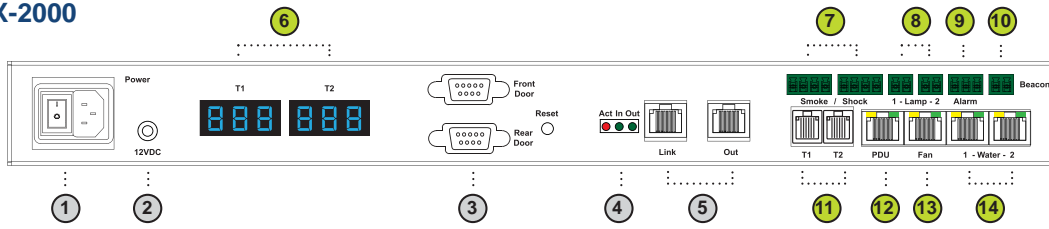Back View — 231 132 23 30 24 33 12 ⌀4.2

Side View Close — 273 36

Side View Open — 54°
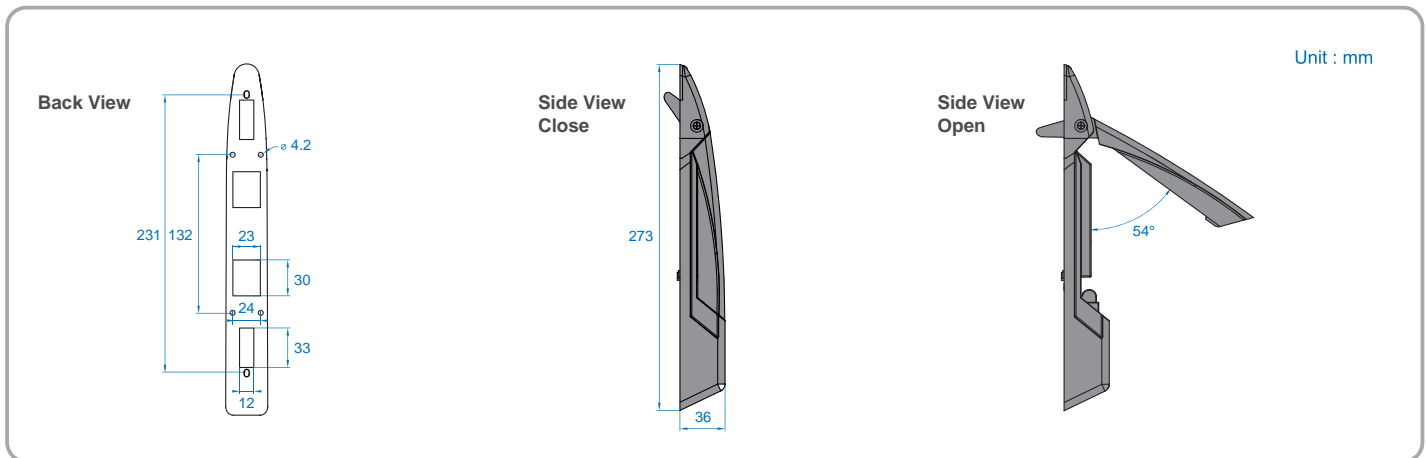
Handle Releasing

InfraSolution X-600 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

Control Box 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)
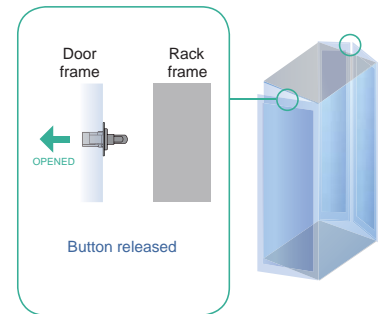14. Water sensor port x 2

Mechanical Door Sensor, pair (S-DSW)

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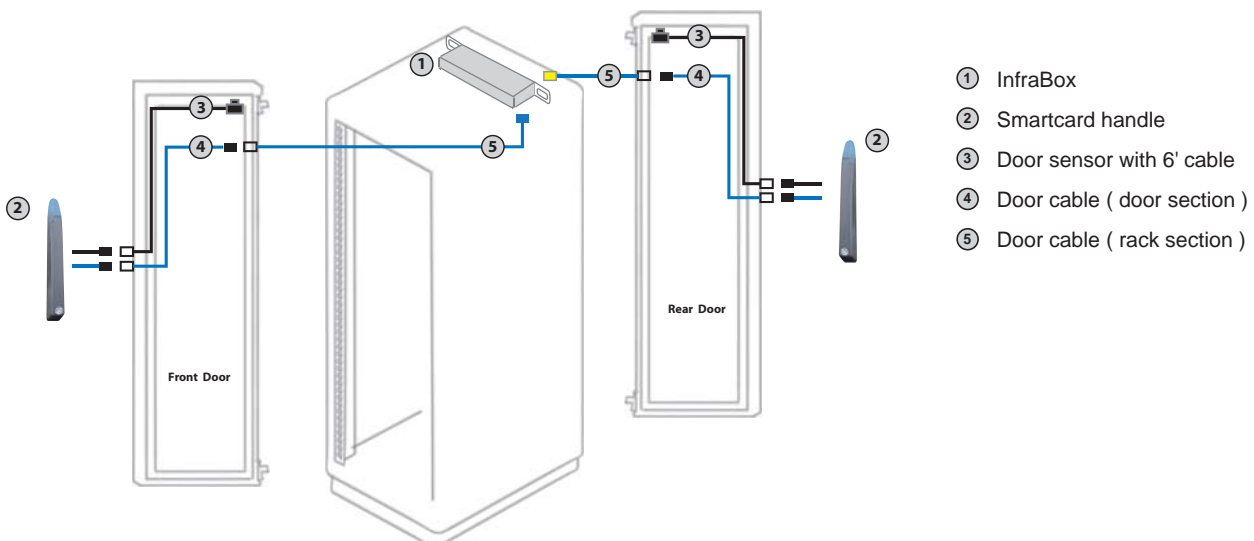- Sensor button is pressed on
- **DOOR CLOSE SIGNAL**
  sends out

Door frame   Rack frame

CLOSED

Actuation distance > 3mm

Physical touch required
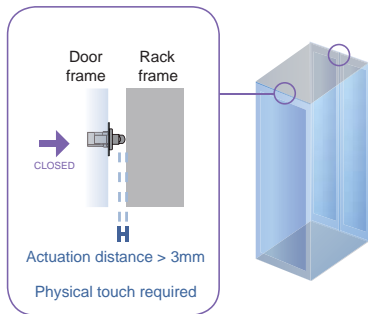
DOOR OPEN
- Open door
- Sensor button is released
- **DOOR OPEN SIGNAL**
  sends out

Door frame   Rack frame

OPENED

Button released

Key Hardware Installation Diagram - InfraBox / Handle / Door Sensor

Front Door

Rear Door

1. InfraBox
2. Smartcard handle
3. Door sensor with 6' cable
4. Door cable (door section)
5. Door cable (rack section)

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

FC CE RoHS REACH   Details

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   2M cord
  IG-TH01-4M   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   2M cord
  IG-T01-4M   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   3M cord

Smoke Sensor

- Safely operated smoke detection

  Part no. : IG-S01-1M   1M cord
  IG-S01-3M   3M cord

Shock Sensor

- Alert the physical vibration on the rack

  Part no. : IG-V01-1M   1M cord
  IG-V01-3M   3M cord

LED Beacon

- Highly visible for alerting user to alarm status

  Part no. : IG-FB03-1M   1M cord
  IG-FB03-3M   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   2M cord
 **CLB-IX-003**   3M cord

Installation

Item	Max. Qty
① LED Light Bar	2
② Smoke Sensor	1
③ Flashing LED Beacon	1
④ Temp. & Humid. Sensor	2
⑤ Shock Sensor	1
⑥ Water Sensor	1

>>> Cooling Fan

The biggest challenge in today's data center is thermal management. Cooling the equipment in an enclosed rack has always been important. **Infra Cool**® 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
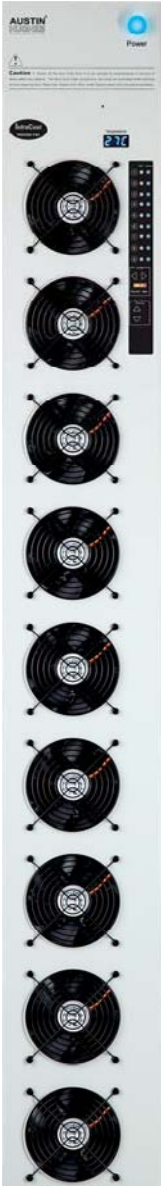
Intelligent Fan Unit	Door Mount Fan Panel	1U Rackmount Fan Tray		
Part No.	RF-33.9	RF-1.3	RF-1.6	RF-1.9
Fan Number	9	3	6	9
Total CFM	972	324	648	972
Airflow	*Front Door* **Cool Air In** *Rear Door* **Hot Air Out**	Top Exhaust hot air out — Equipment Cooling — Bottom Cool air in		
Daisy-chained Fan x 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	✔	✔		

Basic Fan Unit

• **Raised Floor Mount Fan Unit**

• **Door Mount Fan Panel**

• **1U Fan Tray**

**Details**   http://www.austin-hughes.com/infracool

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.

REACH   Details

cUL certified for specific configurations
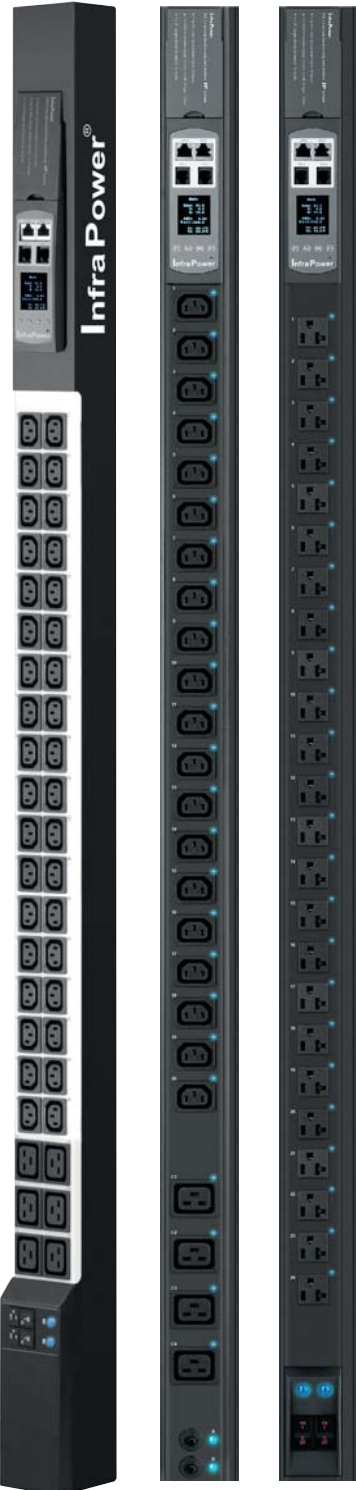
W **Intelligent PDU series**	Monitored		Switched	
	W	**Wi**	**WS**	**WSi**
Outlet AMP - kWh Measurement		✔		✔
Outlet Switch ON / OFF			✔	✔
Hot-Swap Meter	✔	✔	✔	✔
1.8" Color LCD	✔	✔	✔	✔
Circuit Amp - kWh Measurement	✔	✔	✔	✔
Temp-Humid Sensor port x 2	✔	✔	✔	✔
Daisy-chained PDU x 4 via InfraBox	✔	✔	✔	✔
SNMP Capability v2	✔	✔	✔	✔
Lockable IEC Outlet Model	✔	✔	✔	✔
Individually Fused Outlet Model	✔	✔	✔	✔
63A Model (only for 230V PDU)	✔	✔	✔	✔
Local Meter	✔	✔	✔	✔
Tool-less Mounting for Vertical PDU	✔	✔	✔	✔
0U / 1U / 2U Form Factors	✔	✔	✔	✔
Voltage 230V / 208V / 110V	✔	✔	✔	✔
Hydraulic Magnetic Circuit Breaker	✔	✔	✔	✔
Operating Temperature Range -5°C to 60°C	✔	✔	✔	✔
Outlet Types : IEC C13	✔	✔	✔	✔
IEC C19	✔	✔	✔	✔
IEC C13 + C19	✔	✔	✔	✔
IEC Lockable	✔	✔	✔	✔
IEC Individually Fused	✔	✔	✔	✔
NEMA	✔	✔	✔	✔
UK / UK + IEC	✔	✔	✔	✔
SCH / SCH + IEC	✔	✔	✔	✔

If intelligent PDU is not required, you may select Basic or Metered series.

Details   **http://www.austin-hughes.com/infrapower/single-phase/pdu/metered-pdu**

Accessories

Lockable IEC Outlet PDU

- Secure plugs and prevent accidental disconnection
- Compatible to generic IEC cords and hence cost saving in locking cables

Individually Fused IEC Outlet PDU

- Prevent an overload of the active equipment
- Avoid short circuiting the entire IEC outlet PDU

Temp. & Humid. Sensor
Temp. Sensor

IG-TH01-2M / 4M
IG-T01-2M / 4M

- External sensor with 2M or 4M cord
- Plug & Play
- Low profile design with magnetic base for easy affixing to the cabinet
- Pair of sensors can be connected to one single W series PDU meter

Temp. & Humid.

Temp.

Surge Protector
EMI Filter

Surge Protector :
- Enhances the device protection
- Grounds unwanted voltages above safe threshold

EMI Filter :
- Maintains power stability
- Suppresses conducted interference on a signal / power line

Colored Power Cords

- Enhance cable management and visualize power sources

C13 - C14 6ft cables :
EC-6PC1314-B   Blue
EC-6PC1314-R   Red
EC-6PC1314-O   Orange
EC-6PC1314-G   Light Grey

C13 - C14 10ft cables :
EC-10PC1314-B   Blue
EC-10PC1314-R   Red
EC-10PC1314-O   Orange
EC-10PC1314-G   Light Grey

C19 - C20 6ft cables :
EC-6PC1920-B   Blue
EC-6PC1920-R   Red

IEC Secure Sleeves

IPP-SS-C13
IPP-SS-C19

Sleeve attached to C14 power cord inlet : IPP-SS-C13 (pack of 200)

Sleeve attached to C20 power cord inlet : IPP-SS-C19 (pack of 100)

- Secure the power cord connections to the PDU IEC outlets
- Simple and cost efficient

ATS Automatic Transfer Switch

- **Power redundancy for single corded devices**
- **Highly efficiency for multiple devices**
- **230V / 208V / 110V**

Details

http://www.austin-hughes.com/infrapower/single-phase/ats

>>> Network Setup

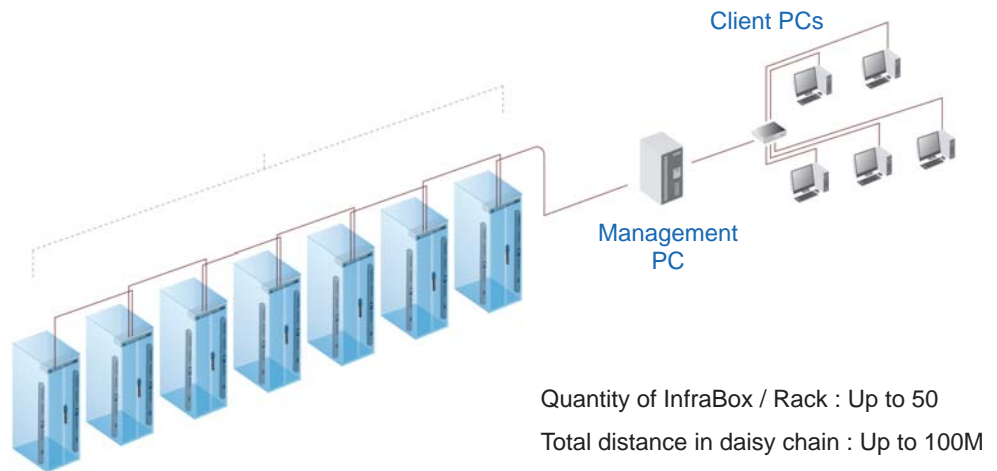There are 3 connection ways - **Daisy Chain , Star , Mixed**.
Which connection users apply is related to the site scale, environment and users' requirements.

< 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

Client PCs

Management
PC

Quantity of InfraBox / Rack : Up to 50

Total distance in daisy chain : Up to 100M

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

Key Benefits

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

Network
Switch

Client PCs

Management
PC

Network switch required

Total distance for each InfraBox to Network Switch : Up to 100M
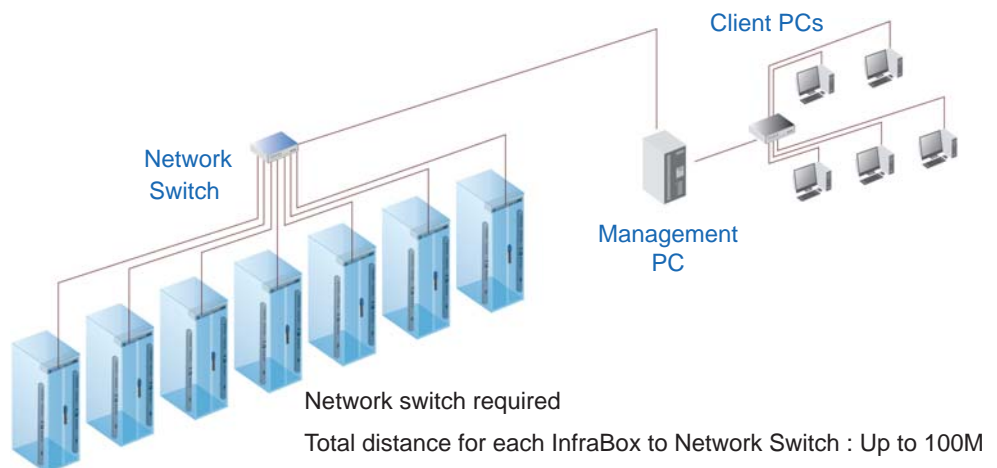
< III > Mixed   Combining daisy chain with star connection

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

Up to 50 in each row

Client PCs

Network
Switch

Management
PC

Up to 50 in each row

Total InfraBox Qty in Mixed Network : Up to 3000
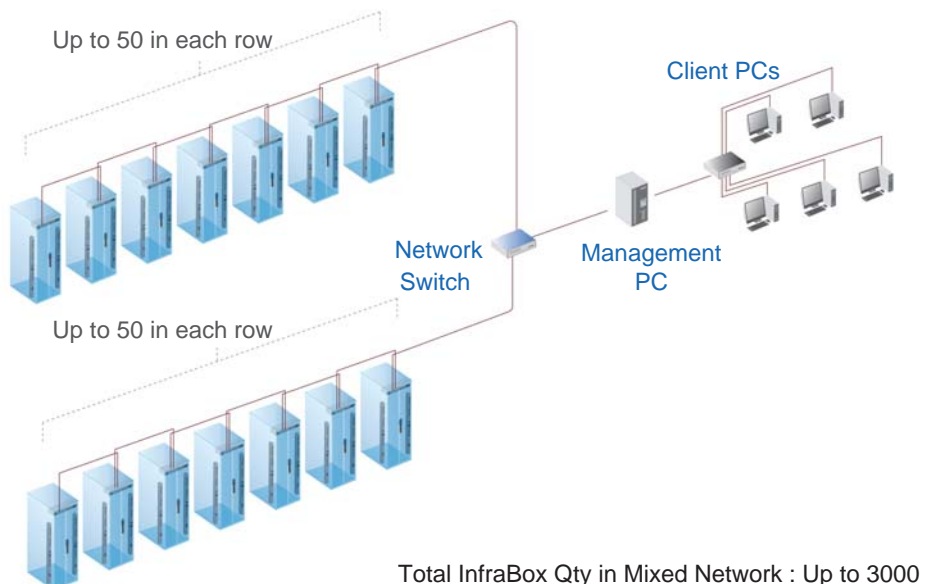
< I > Data Center

By mixed connection, InfraSolution X can be scalable up to 3000 racks. X-2000 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.
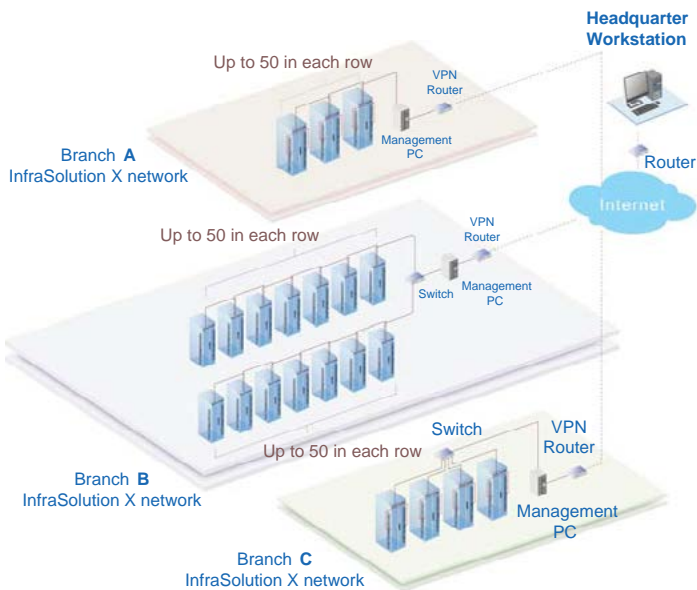
Client PCs

Network Switch
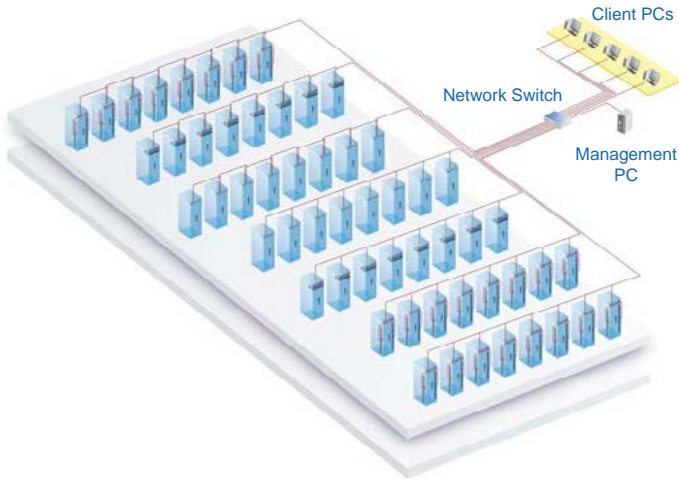
Management PC

- 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

< III > 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 Software License is required for each remote site / management PC

Headquarter Workstation

Up to 50 in each row

VPN Router

Management PC

Branch **A**
InfraSolution X network

Router

Up to 50 in each row

VPN Router

Switch Management PC

Internet

Up to 50 in each row

Switch VPN Router

Branch **B**
InfraSolution X network

Management PC

Branch **C**
InfraSolution X network

< 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.

Daisy Chain Scenario (Up to 50)

Daisy Chain Scenario (Up to 50)

Star Connection (Up to 50)

Star Connection (Up to 50)

Mixed Connection (Up to 50)

Mixed Connection (Up to 50)

Management PC

Control Room

Client PCs

Backbone Network / Fiber Switch

Network Switch for Star / Mixed Connection

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

>>> Software

Infra Solution® $\mathcal{X}$ 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.

Details
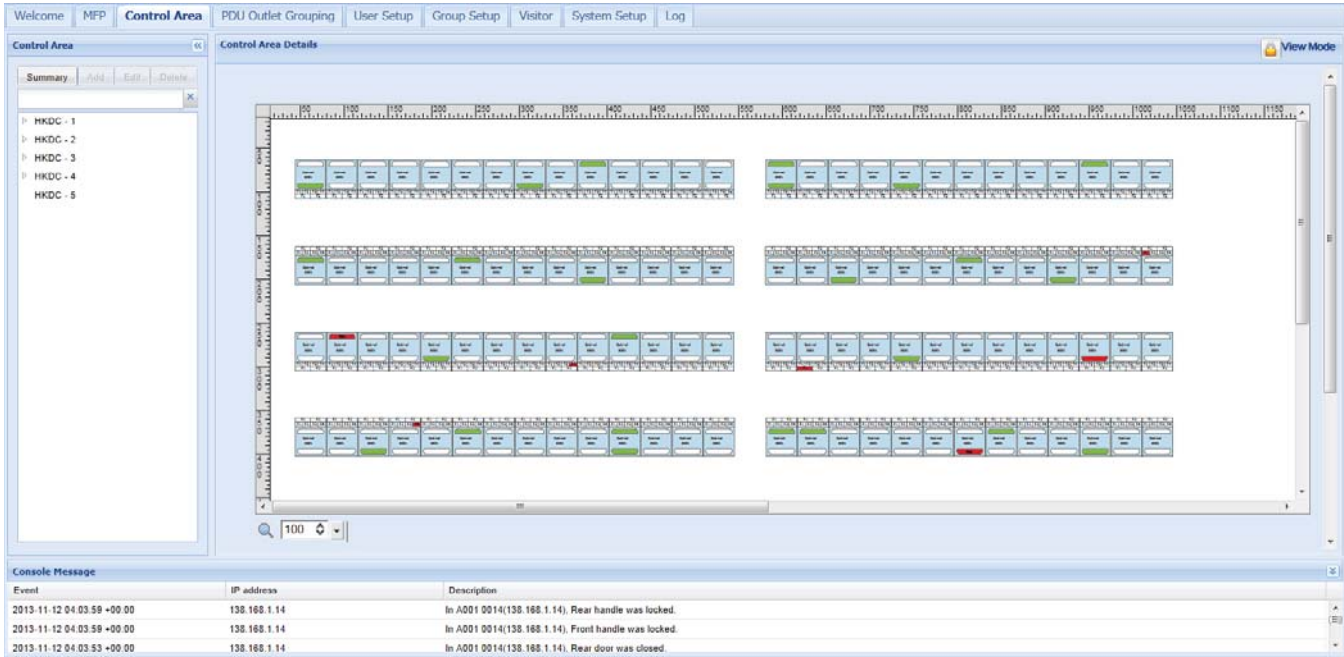
Features		X-ISM
Capacity	InfraBox	3000
	Concurrent User	100
System Setup	Backup / Restore Setting	✔
	Time Rule Setting	✔
	Alarm Mail Server Setting	✔
	Audio and Visual Alarm Output Setting	✔
Cabinet Overview Door	Status of Door, PDU, Sensor & Fan Unit	✔
	Door Open by Remote	✔
	Last Door Open & Close 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	✔

Cabinet Icon

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
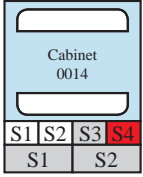
Cabinet 0014
P1 P2 P3 P4
F1 F2
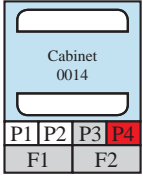
P1 P2 P3 P4 : **PDU status**
- P = PDU is enabled & connected
- P = PDU is enabled BUT disconnected OR = PDU is on alarm status
- P = PDU is disabled

F1 F2 : **Fan unit status**
- F = Fan unit is enabled & connected
- F = Fan unit is enabled BUT disconnected OR = Fan unit is on alarm status
- F = Fan unit is disabled

Layer two

Cabinet 0014
S1 S2 S3 S4
S1 S2

S1 S2 : **TH sensor status**
- S = sensor is enabled & connected
- S = sensor is enabled BUT disconnected OR = sensor is on alarm status
- S = sensor is disabled

S3 S4 : **Smoke & shock sensor status**
- S = sensor is enabled & connected
- S = sensor is on alarm status
- S = sensor is disabled

S5 S6 : **Water sensor status**
- S = sensor is enabled & connected
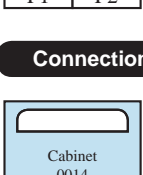- S = sensor is on alarm status
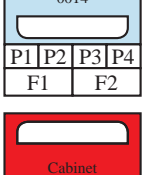- S = sensor is disabled

Door status

Cabinet 0014
P1 P2 P3 P4
F1 F2
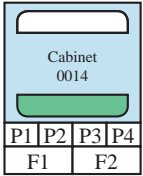
←--- **Door close status in white**
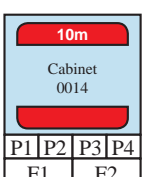
←--- **Door open status in green**

10m / Cabinet 0014
P1 P2 P3 P4
F1 F2

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

←--- **Door alarm status in red** (unauthorized open)

Connection status

Cabinet 0014
P1 P2 P3 P4
F1 F2
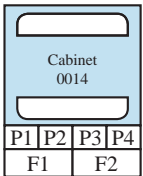
←--- **Normal connection status** (color in blue)

Cabinet 0014
P1 P2 P3 P4
F1 F2
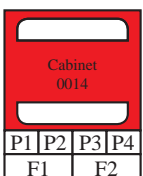
←--- **Disconnection status** (color in red)

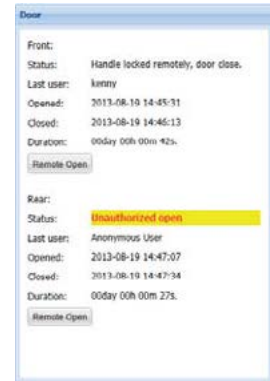**Cabinet 0014**
P1 P2 P3 P4
F1 F2
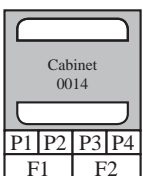
←--- **Non-configure status** (color in grey)
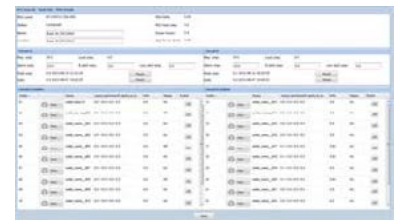
Functions

Individual Cabinet Door

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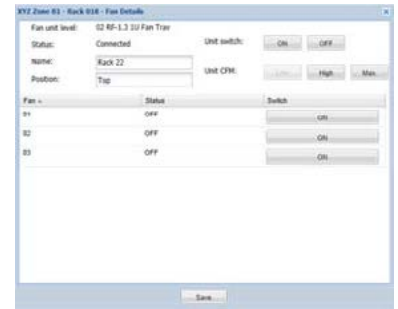» View the record of last door open & close record

PDU

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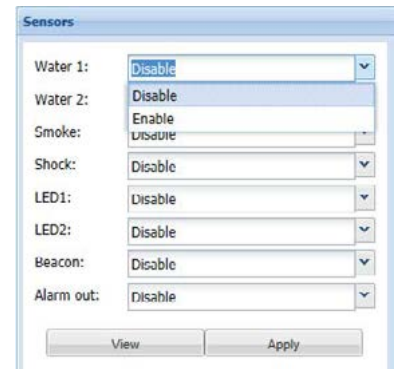» Outlet Schedule
» Outlet Switch ON / OFF

Fan
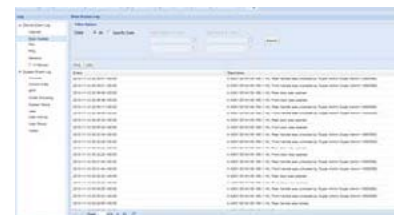
» Status
» Fan Unit Setting
» Temp. Setting

Sensor / Peripheral

» Sensor Status (provided by CA view mode)
» Sensor Setting

Device & Event Log

Devices :
» Cabinet
» Door Access
» Fan
» PDU
» Sensors
» T/H Sensor

System :
» Console
» Control Area
» MFP
» Outlet Grouping
» System Setup
» User
» User Activity
» User Group
» Visitor

Front / Rear Door

600W

Glass
Toughened and safe glass w/ single point handle lock

Steel Vented
Ventilated infill area w/ single point handle lock

Fully Perforated 2 Co-location
Glass or steel door available w/ single point handle lock

** Individual key lock option

800W

Glass
Toughened and safe glass w/ single point handle lock

Steel Vented
Ventilated infill area

Fully Perforated 2 Co-location
Glass or steel door available w/ single point handle lock

** Individual key lock option

Side Panel

Fully Perforated Split
Allows heat exhaust from high density equipment

SR only

Fully Perforated
Allows heat exhaust from high density equipment

NSR only

Top Cover

Plain Top
Ideal for air-blanked racks

Fan Top
The ventilation design enhances cooling capabilities by top fan tray
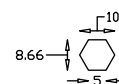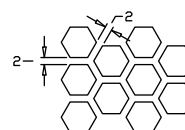
Standard Color
- Black (RAL 9005)
- Grey White (RAL 9002)

** Custom color on request

Fully Perforated Door
- Door ventilation up to 80% perforated area
- Stylish hexagon pattern

Unit : mm

Based on measurements at multiple data centers, more than 50% of valuable conditioned air cannot reach the air intake of IT equipment due to unsealed openings. Hence, the aisle containment associated with an extensive range of sealing components is essential for IT equipment reliability.

InfraRack is designed to enhanced thermal management in data center by creating a one-way path for airflow that eliminates the mixing of hot and cold air. An ideal data center environment is given with the use of Air Blanking Panels and Seal Kits in the aisle containment and server racks.

Full Height Air Blanking Panel Front left & right side

`SR` `NSR`

• Used to fill in open spaces on racks to maintain a proper airflow
• Reduce the hot air recycling from active equipment into cold aisle
• Made of steel for strength and durability
• Black or Grey white color

Part no. : ABP-V42U-SR
ABP-V45U-SR
ABP-V47U-SR

ABP-V42U-NSR
ABP-V45U-NSR
ABP-V47U-NSR

Tool-less Air Blanking Panel, pc

`SR` `NSR`

• Quick snap-in and release by turning fasteners
• EIA-310-D compliant for 19" equipment
• Rounded design eliminates sharp corners
• Plastic for enhanced aesthetics & light weight
• Steel for strength & 1 ~ 8U height selection
• Plastic Panel : Height - 1U
  Color - Dark
• Steel Panel : Height - 1U / 2U / 3U / 4U / 5U / 6U / 7U / 8U
  Color - Black or Grey white

Part no. :
ABP-1P (Plastic)
ABP-1 / 2 / 3 / 4 / 5 / 6 / 7 / 8 (Steel)

Bay Seal Kit, pc

`SR`

• Seal spacing between two bayed racks without side panels
• Eliminate bypass air from front to rear
• Designed for front only

Part no. : SSK-42U
SSK-45U
SSK-47U

Front Bottom Seal Kit, pc

`SR`

• Seal spacing between the floor and rack base
• Eliminate bypass air
• Designed for front only

Part no. : BSK-SR

Rack to Floor Seal Kit, set of 2

`SR` `NSR`

• Seal spacing between the floor and rack base
• Eliminate bypass air
• Only available for rack with casters
• Front and rear seal kit for each bayed rack
• Left and right side seal kit for the row end racks

Part no. :
PSK-600W-SR (front & rear)
PSK-800W-SR (front & rear)

PSK-1000D-SR (left & right)
PSK-1200D-SR (left & right)

PSK-600W-NSR (front & rear)
PSK-800W-NSR (front & rear)

PSK-1000D-NSR (left & right)
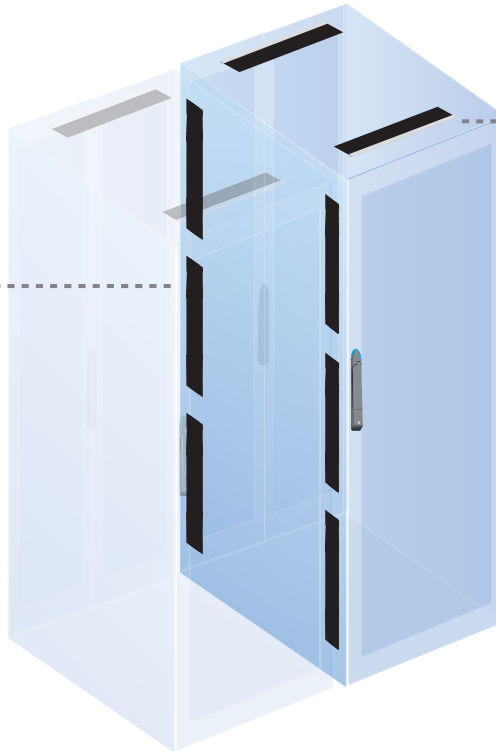PSK-1200D-NSR (left & right)

The primary purpose of cable management is to maintain the integrity of facilities installation, upgrades & serving of the system. As the number of IT components within each rack continues to increase, so do the number of power and data cables.

Recognizing these challenges, Austin Hughes responded with a comprehensive selection of optional components that allows users to pick the ideal cable management solution for their particular IT environment.

SR NSR Top Cable Entry with Brush front & rear end

• Cable entry size : 55 x 500 mm
• Top brushed cover prevents undesirable dust and hot air recirculation

Part no. : TCB-2E

SR NSR Side Partition with Cable Brush, pc

• Ideal for bayed racks
• Cable entry size : 55 x 500 mm
• Allow cable passage to adjacent racks
• Hole contains brushes to control airflow

Part no. : BVP-4210-SR / 4212-SR
BVP-4510-SR / 4512-SR
BVP-4710-SR / 4712-SR

BVP-4210-NSR / 4212-NSR
BVP-4510-NSR / 4512-NSR
BVP-4710-NSR / 4712-NSR

SR NSR Ring Cable Manager, pair

• Size : 120 x 1023 x 100 mm
• 120mm cable ring x 4
• Material : Steel
• Positioned on the rear

Part no. : RCM-120

SR NSR Ring Cable Manager, pair

• Size : 180 x 1023 x 100 mm
• 180mm cable ring x 4
• Material : Steel
• Positioned on the front

Part no. : RCM-180

SR NSR Cable Management Panel, pc

• Handle big amount of cabling

Part no. : CMP-1B (1U)
CMP-2B (2U)

SR NSR Full Height Cable Tray set of 2 sides

• Width : 75 mm

Part no. : CT-42U (42U)
CT-45U (45U)
CT-47U (47U)

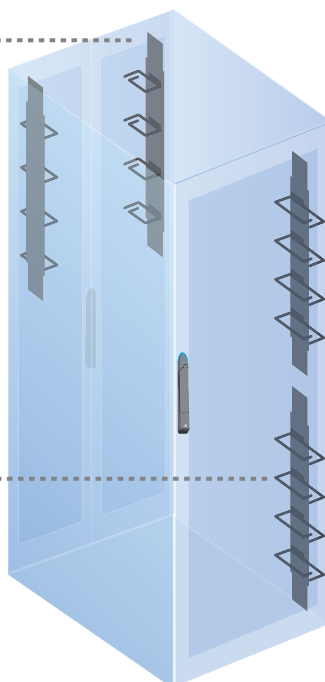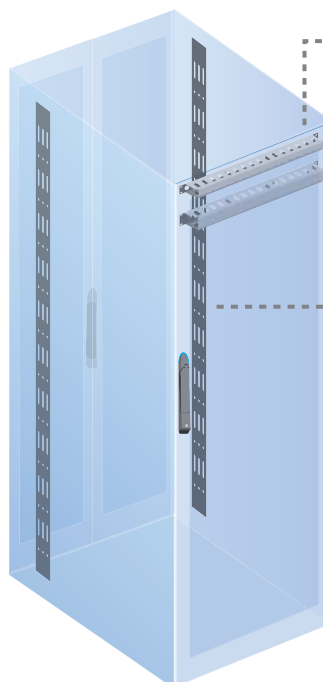**SR NSR**
Top Cable Entry with Brush front & rear end

- Cable entry size : 55 x 500 mm
- Top brushed cover prevents undesirable dust and hot air recirculation

  Part no. : TCB-2E

SR NSR
Side Partition with Cable Brush, pc

- Ideal for bayed racks
- Cable entry size : 55 x 500 mm
- Allow cable passage to adjacent racks
- Hole contains brushes to control airflow

  Part no. : BVP-4210-SR / 4212-SR
  BVP-4510-SR / 4512-SR
  BVP-4710-SR / 4712-SR

  BVP-4210-NSR / 4212-NSR
  BVP-4510-NSR / 4512-NSR
  BVP-4710-NSR / 4712-NSR

SR NSR
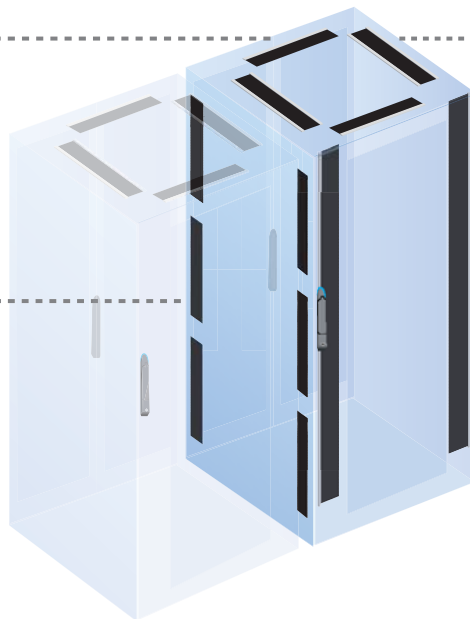**Top Cable Entry with Brush left & right side**

- Cable entry size : 110 x 500 mm
- Top brushed cover prevents undesirable dust and hot air recirculation
- Not applicable to 600 mm deep rack

  Part no. : TCB-2S

SR NSR
Full Height Cable Brush left & right side

- Brush width : 100 mm
- Provide proper airflow within the rack while allowing cables to pass through

  Part no. : VCB-42U
  VCB-45U
  VCB-47U

SR NSR
Fibre Management Channel, pair

- Material : Steel / Plastic
- Positioned on the front or rear

  Part no. : FMC-42U
  FMC-45U
  FMC-47U

SR NSR
Fibre Management Panel, pc

- Maintain a neat and organized cable layout

  Part no. : FMP-2B (2U)
  FMP-3B (3U)
  FMP-4B (4U)
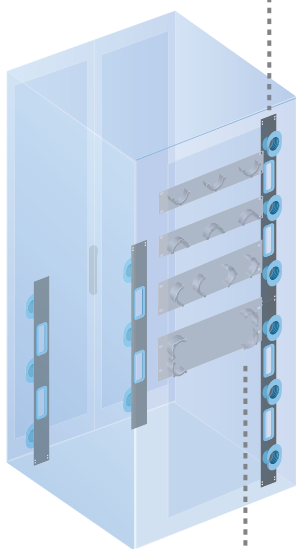
SR NSR
Cable Ring, pack of 10

- Size : 88 x 120 mm
- Rigid structure
- Material : Steel
- Positioned on the rear

  Part no. : CMR-120P

SR NSR
Cable Ring, pack of 10

- Size : 88 x 180 mm
- Rigid structure
- Material : Steel
- Positioned on the front

  Part no. : CMR-180P
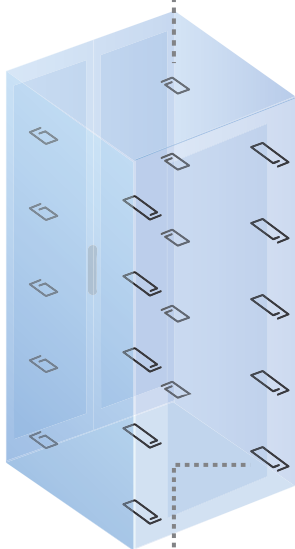
SR NSR
Full Height Cable Tray set of 2 sides

- Width : 150 mm

  Part no. : CT-42U-W150 (42U)
  CT-45U-W150 (45U)
  CT-47U-W150 (47U)

SR NSR
Cable Management Panel, pc

- Handle big amount of cabling

  Part no. : CMP-1B (1U)
  CMP-2B (2U)

SR NSR
Finger Guide, set of 2 sides

- Provide an organized cable system
- Material : Plastic
- Depth : 105 mm

  Part no. : FG-40U (42U)
  FG-45U (45U / 47U)

Austin Hughes solutions provide data center managers and administrators instant secure, local and remote access control to mission critical equipment. Our leading edge **CyberView**™ LCD console drawer and KVM Solutions provide the widest range, available on the shortest lead-times in the market today whilst ensuring capital equipment and software management costs are kept to an absolute minimum.

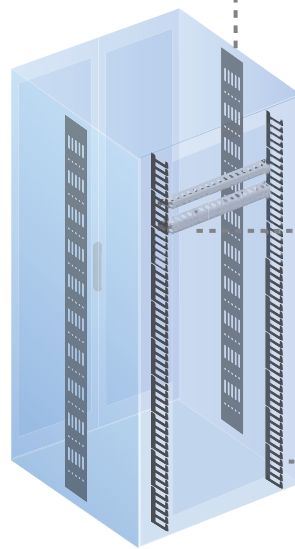cUL certified for specific models

LCD Console Drawer   `Details`

CyberView LCD console drawers completely fulfill customers' needs emerged in today's market sector via different series such as "**F**" 1080p, "**W**" widescreen and "**RKP**" enhanced version. 1U Dual Slide drawer, SUN and MAC solutions available

CyberView™ LCD Console Drawer	F117	W119	RKP117 / 119	D117 / 119
Panel Size	17"	19"	17" / 19"	17" / 19"
U Height	1U	1U	1U	1U (Dual Slide)
Resolution	Full HD 1080p	1440 x 900	1280 x 1024	1280 x 1024
Brightness	300 cd/m2	300 cd/m2	250 cd/m2	250 cd/m2
VGA	✔	✔	✔	✔
DVI	✔	✔	option	option
HDMI	option	option	option	option
Audio	option	option	option	option
KVM Integration	✔	✔	✔	✔
IP Access	option	option	option	option

Rackmount KVM   `Details`

Austin Hughes has expanded its range of KVM solutions. Including the new USB Hub KVM and DVI-D KVM, there are various KVM series suitable for different customer requirements. Besides, we offer KVM extender for KVM usage enhancement in existing customer environment.

Cat6 KVM

DB-15 KVM

DVI-D KVM

USB Hub KVM

CyberView™ KVM Family	Matrix Cat6 KVM	Combo Cat6 KVM	Matrix DB-15 KVM	Combo DB-15 KVM	DVI-D KVM	USB Hub KVM
KVM Port					DVI + USB	
Port #	32 / 16	32 / 16 / 8	16 / 8	16 / 8	12	16 / 8
1920 x 1080 Support	✔	✔	✔	✔	✔	✔
1920 x 1200 Support			✔	✔	✔	✔
Server-side KB / MS	USB / PS2	USB / PS2	USB / PS2	USB / PS2	USB	USB
Server-side Video	VGA / DVI	VGA / DVI	VGA	VGA	DVI-D	VGA
Server-side Audio					Stereo	
USB Device Port						2 x USB2.0
Max. Distance (to Server)	40M	40M	4.5M	4.5M	4.5M	4.5M
Cascade Level	8	8	8	8		
On-Screen Menu	✔	✔	✔	✔		✔
Simultaneous Users (max. 4)	✔		✔			
IP Access Option	✔	✔	✔	✔		✔
Multi-user Profile	✔	✔	✔	✔		✔
1U Standalone KVM	✔	✔	✔	✔	✔	✔
KVM Rear Kit for LCD Console Drawer	✔	✔	✔	✔	✔	✔

>>> Accessories

Cabling

TCB-2E	Top cable entry w/ brush, front & rear end
CMP-1B	1U cable management panel
CMP-2B	2U cable management panel
BVP-4210-SR	Side partition w/ cable brush, for SR 42U 1000D rack
BVP-4212-SR	Side partition w/ cable brush, for SR 42U 1200D rack
BVP-4510-SR	Side partition w/ cable brush, for SR 45U 1000D rack
BVP-4512-SR	Side partition w/ cable brush, for SR 45U 1200D rack
BVP-4710-SR	Side partition w/ cable brush, for SR 47U 1000D rack
BVP-4712-SR	Side partition w/ cable brush, for SR 47U 1200D rack
BVP-4210-NSR	Side partition w/ cable brush, for NSR 42U 1000D rack
BVP-4212-NSR	Side partition w/ cable brush, for NSR 42U 1200D rack
BVP-4510-NSR	Side partition w/ cable brush, for NSR 45U 1000D rack
BVP-4512-NSR	Side partition w/ cable brush, for NSR 45U 1200D rack
BVP-4710-NSR	Side partition w/ cable brush, for NSR 47U 1000D rack
BVP-4712-NSR	Side partition w/ cable brush, for NSR 47U 1200D rack

600W Rack

RCM-180	Ring cable manager on the front, 180 x 1023 x 100 mm, pair
RCM-120	Ring cable manager on the rear, 120 x 1023 x 100 mm, pair
CT-42U	42U full height cable tray, set of 2 sides, 75 mm wide
CT-45U	45U full height cable tray, set of 2 sides, 75 mm wide
CT-47U	47U full height cable tray, set of 2 sides, 750 mm wide

800W Rack

CMR-180P	Cable Ring on the front, 88 x 180 mm, pack of 10
CMR-120P	Cable Ring on the rear, 88 x 120 mm, pack of 10
FG-40U	Finger guide for 42U rack, set of 2 sides
FG-45U	Finger guide for 45U / 47U rack, set of 2 sides
VCB-42U	42U full height cable brush, left & right side
VCB-45U	45U full height cable brush, left & right side
VCB-47U	47U full height cable brush, left & right side
VCP-42U	42U cable cover panel, pair
VCP-45U	45U cable cover panel, pair
VCP-47U	47U cable cover panel, pair
CT-42U-W150	42U full height cable tray, set of 2 sides, 150 mm wide
CT-45U-W150	45U full height cable tray, set of 2 sides, 150 mm wide
CT-47U-W150	47U full height cable tray, set of 2 sides, 150 mm wide
TCB-2S	Top cable entry w/ brush, left & right side
FMC-42U	42U vertical fibre management channel, pair
FMC-45U	45U vertical fibre management channel, pair
FMC-47U	47U vertical fibre management channel, pair

Air Blanking

ABP-1P	1U tool-less air blanking panel, plastic
ABP-1	1U tool-less air blanking panel
ABP-2	2U tool-less air blanking panel
ABP-3	3U tool-less air blanking panel
ABP-4	4U tool-less air blanking panel
ABP-5	5U tool-less air blanking panel
ABP-6	6U tool-less air blanking panel
ABP-7	7U tool-less air blanking panel
ABP-8	8U tool-less air blanking panel
ABP-V42U-SR	42U SR full height air blanking panel, front left & right side
ABP-V45U-SR	45U SR full height air blanking panel, front left & right side
ABP-V47U-SR	47U SR full height air blanking panel, front left & right side
ABP-V42U-NSR	42U NSR full height air blanking panel, front left & right side
ABP-V45U-NSR	45U NSR full height air blanking panel, front left & right side
ABP-V47U-NSR	47U NSR full height air blanking panel, front left & right side
BSK-SR	Front bottom seal kit
SSK-42U	42U bay seal kit, for bayed SR rack
SSK-45U	45U bay seal kit, for bayed SR rack
SSK-47U	47U bay seal kit, for bayed SR rack
PSK-600W-SR	600 mm wide SR rack to floor seal kit, front & rear side
PSK-800W-SR	800 mm wide SR rack to floor seal kit, front & rear side
PSK-1000D-SR	1000 mm deep SR rack to floor seal kit, left & right side
PSK-1200D-SR	1200 mm deep SR rack to floor seal kit, left & right side
PSK-600W-NSR	600 mm wide NSR rack to floor seal kit, front & rear side
PSK-800W-NSR	800 mm wide NSR rack to floor seal kit, front & rear side
PSK-1000D-NSR	1000 mm deep NSR rack to floor seal kit, left & right side
PSK-1200D-NSR	1200 mm deep NSR rack to floor seal kit, left & right side

Cooling Fan Unit - Basic Model

TF-02	Basic top fan tray, 2 fans
TF-04	Basic top fan tray, 4 fans
TF-06	Basic top fan tray, 6 fans
F-1.3 / 1.6 / 1.9	Basic 1U fan tray, 3 / 6 / 9 fans
F-33.9A	Basic 33U door mount extract fan panel, 9 fans, for rear door
F-33.9B	Basic 33U door mount intake fan panel, 9 fans, for front door
F-66.4	Basic raised floor mount fan unit, 4 fans

Shelf, 19" mounting

S37	Fixed shelf, 370 mm deep, 50 kg loading
S44	Fixed shelf, 440 mm deep, 50 kg loading
S58	Fixed shelf, 580 mm deep, 50 kg loading
S70	Fixed shelf, 700 mm deep, 50 kg loading
HS44	Heavy duty fixed shelf, 440 mm deep, 100 kg loading
HS58	Heavy duty fixed shelf, 580 mm deep, 100 kg loading
HS70	Heavy duty fixed shelf, 700 mm deep, 100 kg loading
HS80	Heavy duty fixed shelf, 800 mm deep, 100 kg loading
TS44	Sliding shelf, 440 mm deep, 30 kg loading
TS58	Sliding shelf, 580 mm deep, 30 kg loading
HTS70	Heavy duty sliding shelf, 700 mm deep, 100 kg loading
MS19	Cantilever shelf, 190 mm deep, 20 kg loading
MS40	Cantilever shelf, 400 mm deep, 20 kg loading

Drawer

TSD-2U	2U lockable drawer, 580 mm deep, 30 kg loading
TSD-4U	4U lockable drawer, 580 mm deep, 30 kg loading
RK-1e / b	1U notebook type keyboard drawer with KVM options
RK-2e / b	1U short depth, notebook type keyboard drawer

Others

BK-M10	Top baying bracket x 2, for SR rack
BK-M6	Top baying bracket x 2, for NSR rack
SR-BK	Side baying screw set x 4, for SR rack
NSR-BK	Side baying bracket x 4, for NSR rack
M6	M6 screw set, pack of 50
GK	Grounding kit, set of 4
CuB-ET10	Insulated Earth Terminal (MOQ : pack of 5)
CuB-42U	42U copper bus grounding bar, pc, w/ insulator x 3
CuB-45U	45U copper bus grounding bar, pc, w/ insulator x 3
CuB-47U	47U copper bus grounding bar, pc, w/ insulator x 3

PROXIMITY SMARTCARD

Proximity Smartcard, pack of 10 (ISC-P10)
- Proximity 26-bit format
- Single card for multiple application
- Custom card layout available

MiFARE SMARTCARD

MiFARE Smartcard, pack of 10 (ISC-M10)
- MiFARE 26-bit format
- Single card for multiple application
- Custom card layout available

Individual Key Lock (ISK-C051)
- Up to 500 individual key-locks available
- Set of 2 for front & rear door

Unique Key Lock (ISK-UKL)
- Dedicated to single project / customer regionally
- For project size over 500 racks

Warranty Upgrade
- Extension from 2 years to 5 years

RoHS   REACH

AUSTIN® HUGHES

Design. Manufacturing. Global Services.

Founded in 1995, **Austin Hughes Electronics Ltd** is a design and manufacturing group that offers a broad range of solutions based around 19 inch rack mount technology. These solutions include InfraSolution remote access control and locking, InfraPower intelligent remote management power solutions, CyberView LCD Keyboard and KVM drawers, InfraCool intelligent remote cooling system, UltraRack IT server racks & InfraAisle cold aisle containment.

Austin Hughes has ISO14001 and ISO9001 approved design, manufacturing, assembly and test facilities in Hong Kong and China. Austin Hughes supports a worldwide customer base, through its global locations in the Americas, EMEA and APAC and through its extensive authorized channel partner support network.

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