



Multi function cabinets and accessories

Stylish, practical and versatile

Product overview and technical data





Contents

USpace 4210 range of cabinets and accessories product overview and technical data

USpace 4210 cabinet overview	3-4
Standard specification	5
Technical specification	6-9
Door options	10-11
USpace 4210 Co-locate cabinet	12-13
USpace accessories overview	14-15
MAP tile	16-17
UTelligent power strips	18-19
UTelligent Secure Space series	20-21
Thermal and cooling options and accessories	22-27











Quality, recycling, compliance and manufacturing statement

USystems is registered as meeting the quality manufacturing requirements of BS EN ISO 9001:2008. Our products comply with CE, SCC, CMC and RoHS standards and are UL listed. We recycle well over 90 per cent of our waste.

We are Carbon Trust accredited – the Carbon Trust provides specialist support to business and the public sector in the UK to help cut carbon emissions, save energy and commercialise low carbon technologies.

Overview

The USpace 4210 is the latest premium cabinet range offering from USystems. Smart design and state of the art manufacturing facilities guarantees unbeatable quality, style and innovation associated with USystems.





Overview

Doors are available in AirTech steel with 80% airflow or glass, solid steel, AirTech Curve vented steel up to 86% airflow. AirTech wardrobe doors are suitable for narrow aisles and can also accommodate upgraded security locking.





The doors have swing handles as standard and hinge opening with lift off capability. Key override locks and the UTelligent audit trail and locking system is available in one, two and three point locking options where additional security is required.

Side panels have two to four cam locks with bottom pins for location. One and two part vented or solid sliding side panels are available as an option for bayed cabinets.



Fan trays can be fitted to the top cover without affecting valuable U space inside the cabinet.





Enhanced airflow management can be achieved with the addition of 4210 foam or brush strip sealing kits which create a seal to prevent hot air re-circulating to the front 19" plenum (see page 23).



4210 800 wide with AirTech vented steel door



4210 600 wide with solid steel door shown with key override lock option

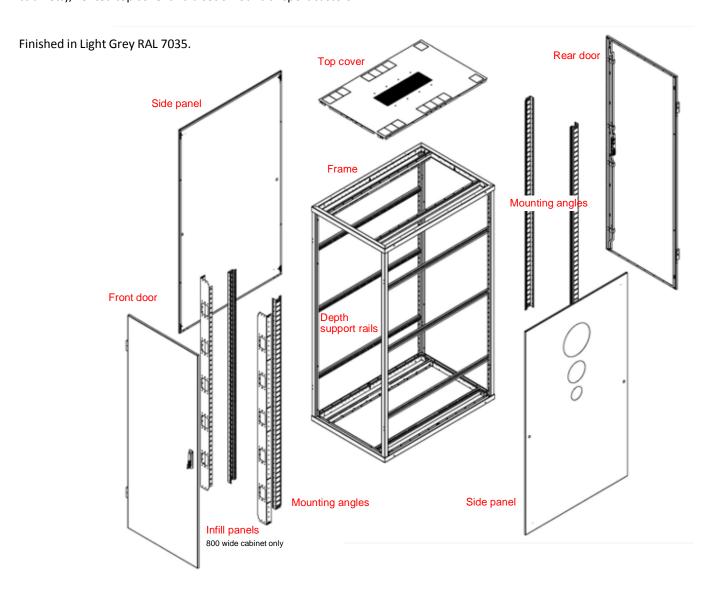


4210 600 wide bayed cabinets shown with key override lock option

Standard specification

Comms and Server cabinet build

Comprising of four corner posts, top and bottom end frame, depth support rails, front and rear 19" mounting angles, front infill panels (800w models), swing handle lockable front and rear door (available in a combination of options, see page 6), lockable side panels (vented or solid sliding panels are available for bayed cabinets), vented top cover and a set of four transport castors.



Cabinet manufactured to IEC 60297-3 and EIA STD 310

for panels and racks housing electronic equipment



Technical specification

Standard comms cabinet



600w Standard model weight loading 650kg evenly spread													
24U		30U		39U		42U		48U					
1200		1466		1733		1999		2266					
600		600		600		600		600					
600	800	600	800	600	800	600	800	600	800				
660	860	660	860	660	860	660	860	660	860				
	12 60 600	24U 1200 600 600 800	24U 30 1200 14 600 60 600 800 600	24U 30U 1200 1466 600 600 600 800 600 800	24U 30U 39 1200 1466 17 600 600 60 600 800 600 600	24U 30U 39U 1200 1466 1733 600 600 600 600 800 600 800	24U 30U 39U 42U 1200 1466 1733 199 600 600 600 600 60 600 800 600 800 600 800 600	24U 30U 39U 42U 1200 1466 1733 1999 600 600 600 600 600 600 800 600 800 600 800	24U 30U 39U 42U 48 1200 1466 1733 1999 22 600 600 600 600 600 60 600 800 600 800 600 800 600				

800w Standard	300w Standard model weight loading 650kg evenly spread													
U Height	2	4U	30	υ	39U		42U		48U					
Actual height mm without castors	12	200	1466		1733		1999		2266					
Actual width mm	800		800		800		800		800					
Footprint depth	600	800	600	800	600	800	600	800	600	800				
Cladding depth	660	860	660	860	660	860	660	860	660	860				

 $\textbf{NB:} \ \ \text{Transport castors add } 60 \text{mm} - \text{heavy duty castors add } 100 \text{mm} - \text{Please consult with sales desk reference lead times, specials and MOQ's}$

Materials and finish

Basic framework - 1.5mm CR4 steel Corner posts - 1.2mm & 1.5mm CR4 steel AirTech and Steel doors - 1.0mm, 1.2 & 2.0mm CR4 steel Side panels - 1.0mm & 1.2mm CR4 steel Textured powder coat light grey RAL 7035

Heavy duty comms cabinet



600w Heavy duty model weight loading 1200kg evenly spread													
U Height	24U		30U		39U		42U		48U				
Actual height mm without castors	1200		1466		1733		1999		2266				
Actual width mm	600		600		600		600		60	00			
Footprint depth	600	800	600	800	600	800	600	800	600	800			
Cladding depth	660	860	660	860	660	860	660	860	660	860			

800w Heavy dut	ty mo	del we	eight lo	ading	1200	kg eve	nly sp	read		
U Height	2	4U	30U		39U		42U		48U	
Actual height mm without castors	1200		1466		1733		1999		2266	
Actual width mm	8	800		800		800		800		00
Footprint depth	600	800	600	800	600	800	600	800	600	800
Cladding depth	660	860	660	860	660	860	660	860	660	860

 $\textbf{NB:} \ \ \text{Transport castors add } 60\text{mm} - \text{heavy duty castors add } 100\text{mm} - \text{Please consult with sales desk reference lead times, specials and MOQ's}$

Materials and finish

Basic framework - 1.5mm CR4 steel
Corner posts - 1.2mm & 1.5mm CR4 steel
AirTech and Steel doors - 1.0mm, 1.2 & 2.0mm CR4 steel

Side panels - 1.0mm & 1.2mm CR4 steel Textured powder coat light grey RAL 7035



Technical specification

Standard server cabinet



600w Standard	600w Standard server model weight loading 1000kg evenly spread											
U Height	24U	30U	39U	42U	48U							
Actual height mm	1200	1466	1733	1999	2266							

Actual width mm	600		600		600		600		600	
Footprint depth	1000	1200	1000	1200	1000	1200	1000	1200	1000	1200
Cladding depth	1060	1260	1060	1260	1060	1260	1060	1260	1060	1260

800w Standard server model weight loading 1000kg evenly spread

U Height	24U		30	30U		39U		42U		BU
Actual height mm without castors	1200		1466		1733		1999		2266	
Actual width mm	800		800		800		800		800	
Footprint depth	1000	1200	1000	1200	1000	1200	1000	1200	1000	1200
Cladding depth	1060	1260	1060	1260	1060	1260	1060	1260	1060	1260

Add an additional 35mm to cladding depth above for each AirTech Curve door used

 $\textbf{NB:} \ \ \text{Transport castors add } 60\text{mm} - \text{heavy duty castors add } 100\text{mm} - \text{Please consult with sales desk reference lead times, specials and MOQ's}$

Materials and finish

Basic framework - 1.5mm CR4 steel Corner posts - 1.2mm & 1.5mm CR4 steel

AirTech and Steel doors - 1.0mm, 1.2 & 2.0mm CR4 steel

Side panels - 1.0mm & 1.2mm CR4 steel Textured powder coat light grey RAL 7035

Heavy duty server cabinet



600w Heavy duty server model weight loading 1550kg evenly spread

U Height	24U		30	30U		39U		42U		BU
Actual height mm without castors	1200		1466		1733		1999		2266	
Actual width mm	600		600		600		600		600	
Footprint depth	1000	1200	1000	1200	1000	1200	1000	1200	1000	1200
Cladding depth	1060	1260	1060	1260	1060	1260	1060	1260	1060	1260

800w Heavy duty server model weight loading 1550kg evenly spread

U Height	24U		30U		39U		42U		48U	
Actual height mm without castors	1200		1466		1733		1999		2266	
Actual width mm	800		800		800		800		800	
Footprint depth	1000	1200	1000	1200	1000	1200	1000	1200	1000	1200
Cladding depth	1060	1260	1060	1260	1060	1260	1060	1260	1060	1260

$Add\,an\,additional\,35mm\,to\,cladding\,depth\,above\,for\,each\,AirTech\,Curve\,door\,used$

 $\textbf{NB:} \ \ \text{Transport castors add } 60 \text{mm} - \text{heavy duty castors add } 100 \text{mm} - \text{Please consult with sales desk reference lead times, specials and MOQ's}$

Materials and finish

Basic framework - 1.5mm CR4 steel Corner posts - 1.2mm & 1.5mm CR4 steel AirTech and Steel doors - 1.0mm, 1.2 & 2.0mm CR4 steel Side panels - 1.0mm & 1.2mm CR4 steel Textured powder coat light grey RAL 7035

4210 cabinet door options





Solid steel



Locking options

Single point swing handle as standard

Two and three point swing handle options

Combination key override swing handle (single point cam style)

Combination key override swing handle (two or three point rod latch style)

Electronic intelligent locking (see page 20)



Key override handle



Co-locate cabinets

The USpace 4210 co-location cabinet is a cost effective way of maximising expensive fixed floor area, enabling smaller users a shared floor space without any loss of revenue from each footprint.

Each compartment provides its own independent and secure area, cabling is also individually ducted and sealed to each compartment within the cabinet. USpace 4210 co-location cabinets come with our unique AirTech doors fitted with combination key override swing handles as standard, thus allowing each compartment to have its own tamper free secure space while still allowing full access top authorised key holders.



To aid cooling within each compartment, independently controlled fans can be fitted either to doors or top covers without any loss of internal 'U' space.

The USpace 4210 co-location cabinet is available in two or four compartment versions in 48U 600 x 1000 as standard. Each cabinet has a standard load bearing of 1200kg and most 4210 accessories are compatible for use in these cabinets.



4 door co-locate cabinet with solid steel doors



2 door co-locate cabinet with AirTech doors



4 door co-locate cabinet with AirTech Curve doors

Cabinet manufactured to IEC 60297-3 and EIA STD 310

for panels and racks housing electronic equipment



Shelving



Easy to fit shelving solution suitable for mounting non 19" equipment. Mount directly to the 19" mounting angles with cage nut fixings (included).

Fixed shelf



Standard or heavy duty fixed shelves with a maximum load bearing of 50kg and 100kg respectively - evenly distributed.

Chassis runners



Simple and cost effective alternative to cantilever and fixed shelving. Easy to fit and allows you to support and withdraw full width products with safety.

Telescopic shelf



Available in standard (45kg weight loading) and heavy duty (90kg weight loading) versions to fit all widths and depths of 4210 cabinets.

Cable management



Cable tray



Finger cable management style cable tray complete with aperture slots compatible with button PDU mounting brackets.

Brush strip



19" blanking panel with brush strip enabling cable entry without compromise to air flow management.

Jumper ring panels



Ensure best cabling practice by utilising 19" jumper ring panels, available in 1U and 2U heights.

Infill panels



For 800 wide cabinets to assist with blanking, cabling and cable management

Rear cable management support



Organise and support copper, fibre and power cabling to the rear of the cabinet.

Flat bar jumper rings



800w cabinet vertical cable management rings: can fit on infill panels and cable tray

Small jumper rings



Cabinet vertical cable management rings suitable for 600w and 800w cabinets

Thermal management

BEST

Quick fit and release blanking panels



Blanking panels play an important role in airflow management. A major benefit is the prevention of hot air re-circulation which eliminates the risk of hot spots.

EaziBlank panels



Innovative 'pop-in clip' allows the panels to be installed or removed in seconds without the need for fixings or tools

Plenafil panels



27U filler panels, good for large sections of unused rack space, significantly reduce time and labour costs

Sealing kit



Enhanced airflow management can be achieved with the addition of 4210 foam or brush strip sealing kits which create a seal to prevent hot air re-circulating to the front 19" plenum. (See page 24)

Rack mount fan



1U high 3 or 6 way 19" rack mount fan trays provides spot cooling to active IT equipment.

Top cover fan tray



4210 zero U top cover fan tray available in 2 and 4 way options without any loss of U space. Available in low noise or high speed versions to assist in the removal of

Thermostatic controller



For use with top cover or rack mount fan trays

Safety



Load spreader

Steel laminated load spreader used to take the load off a populated cabinet,

Stabilising Plinth



A stabilising plinth is recommended to be used when pulling out any telescopic equipment to ensure cabinet stability.

Bolt Down Plates

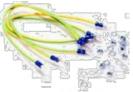


For added security and stability to stop the rack from tipping good for use with top heavy cabinets and telescopic equipment.

Earthing



Earth Bonding Kit



Standard cladding or wardrobe door earth bonding kit

Copper Bus Bar



Horizontal and vertical 3mm or 5mm thick solid copper options

Clean earth



Fixed larger earthing point for added safety

ESD Kits



Comprising earthing strap, coiled cable and an earthing plug.

Plinths, castors and feet



floor standing cabinets come supplied with transport castors which must be removed prior to populating as these are not load bearing. The fixed plinth and levelling feet raise the cabinet securely enabling bottom cable entry.

Stabilising Plinth



A stabilising plinth is recommended to be used when pulling out any telescopic equipment to ensure cabinet stability.

Heavy Duty Castors



Set of two braked and two un-braked castors with a combined load bearing of

Levelling feet



The USpace 4210 cabinet levelling feet, have a weight loading of 300kg

Miscellaneous



USpace 4210 cabinet baying kit

Document Wallet



Providing a neat solution for storage of paperwork or manuals. Can be fitted inside or outside door or side panels

U Measure Strips



Measures U height from the bottom to top on uprights for easier recognition

Cage Nut Fixings



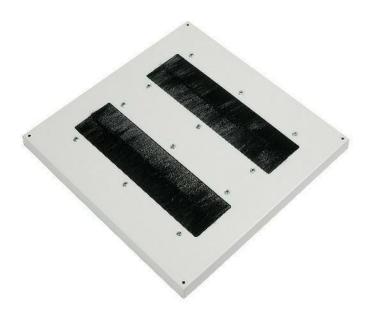
Cage nuts, bolts and washers for rack mounting equipment in cabinets

Multi Application 'MAP' tile

The *Multi application* 'MAP' tile is an engineered solution to resolve a number of problems with modified raised floor tiles used in data centres. Firstly from a health and safety point of view the MAP tile ensures there are no weight load issues, unlike modified floor tiles which have been weakened by ad hoc inconsistent cutting to allow large quantities of cables to pass through. However, the MAP tile has been specifically designed to withstand heavy loads without compromise.

The single most common complaint with specialist cut tiles is the cost! Naturally the time taken to cut the existing tile is generally understood and taken into account, but the time taken to make good the edging or the additional cost of adding proprietary components such as drop in brush strip system is often forgotten. Even making good the installation and cleaning up can be overlooked. So it's easy to see and understand that lifting one tile and replacing it with a MAP tile is going to be markedly quicker, practical and certainly more cost effective.

Should relocation be required at a later date the original tiles can be reused without any additional cost or inconvenience. Given the current trend towards saving energy costs, data centre managers are looking for ways to eradicate many of the inefficiencies that plague their data centres. One of which is forced air loss, often caused by unmanaged cable or pipe openings cut into floor tiles.



MAP tile with 2 apertures and brush strip

4210 19" cabinet range

- O Prevents air pressure loss in raised floors
- O No cutting of floor
- O Speed up installation time
- O Weight tested to 1500kg
- O Save energy costs
- O Various sizes available
- O Designed to fit with all types of raised floor
- O Compatible with any vendors 19" cabinets

Apertures can fitted with either brush strips, vented or solid panels

USystems MAP tile - quick to fit
Raised access floor

ithin its footprint. These ore commonly fitted with

Each MAP tile provides two, three or four apertures within its footprint. These apertures can be blanked off, fitted with a vent panel or more commonly fitted with heavy duty brush strip. Sited directly beneath the cabinet the MAP tile can be orientated in the direction to suit the incoming/outgoing cabling. As standard the MAP tiles comes in a range of sizes and will suit any floor thickness.

Multi application 'MAP' tile

600 x 600 MAP tile (3 apertures)

600 x 600 MAP Tile (2 apertures)

600 x 1200 MAP Tile (4 apertures - central tile)

600 x 1200 MAP Tile (4 apertures - offset tile)

800 x 1200 MAP Tile (4 aperture)

MAP Blanking Panel

MAP Brush Strip (pair)



A combination of 600 x 1200 an 800 x 1200 MAP tiles



Power distribution units

Standard units

Standard units comprise integrally fused sockets, one double pole neon switch, UK 13amp fused plug on a 3m lead - left hand orientation on vertical models, north/south on horizontal models ranging from 4 to 16 way configurations. 16amp and 32amp commando plugs are also available as standard in 10 and 12 way models. Specials and IEC sockets and plugs can be ordered on short lead times.



Intelligent power

UTelligent power strips

With today's ever increasing cost of power and the drive to reduce consumption, UTelligent power gives the user control and information to reduce costs by using the tools that identify, log and manage events. UTelligent power's flexibility allows information to be managed using SNMP/HTTP and RS485 Mod-Bus protocols and is available in a full range of socket configurations and current ratings.

Specification:

- O All IEC sockets individually fused
- O Mixed socket outlets (IEC, UK, International)
- O Up to 32 sockets per unit
- O Billing capabilities
- O 5 year warranty
- O Cost effective proven technology
- O Compatible with both SNMP and RS485 (ModBus) management platforms
- O Stand alone or Network configurations

Available in the following build configurations:

- O iP1 Overall power monitoring
- iP2 Overall and per socket power monitoring
- O iP3 Overall and per power socket monitoring and per socket switching
- O iP4 Per socket switching only
- O iP5 Link legacy interface units



All units comply with EN60950-1 and have a 5 year return to base warranty.

Intelligent solutions

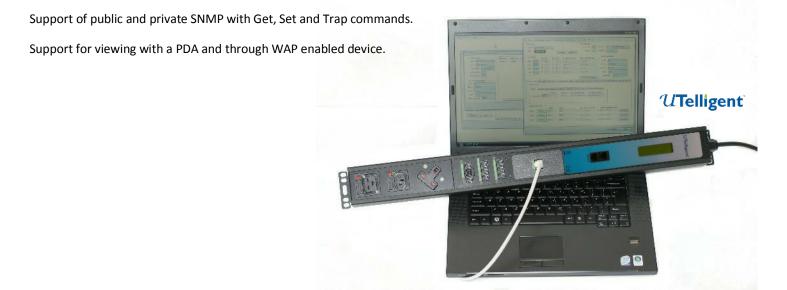
Remote monitoring and control

19" horizontal and zero U vertical PDU's with IEC C13, IEC C19, UK BS1363 and European Schuko sockets. Remote monitoring includes:

- O Aggregate PDU current (amps) monitoring
- O Aggregate PDU power monitoring (volts, amps, power factor and kW hours*)
- O Per socket control (on, off, timed delayed, reboot and sequential start up)
- O Per socket monitoring (amps)
- O Environmental sensors* (temperature, humidity, airflow)

All remote monitoring/control PDU's include an integrated web browser (HTTP) for remote viewing as well as SNMP for integration into a building/network or management tool such as HP Openview, Aperture VISTA, Ipswitch, What's up etc A simultaneous XML output is also given for integration into 3rd party database/SQL software for automatic logging and data processing.

Automated alarms with thresholds for high or low values of each monitored component using email and SNMP.



^{*}as an option when UTelligent Secure -Space is not required



The Secure Space series

- O Proximity sensors front and rear
- O Electronic handles with key override and status indicator /feedback
- O Handle status feedback via TCIP/IP
- O Web interface
- O TCIP/IP protocol
- O SNMP protocol
- O User and Admin access levels
- O One RJ45 10/100 base-TX Ethernet TCP/IP network port
- O Up to 500 users
- O Up to 20 user groups
- O Options
- O Standard or 19" rack mounted unit
- O Optional keypad and bio finger print
- O Any industry standard entry system option
- O Door status sensors front, rear and top



The UTelligent Secure-Space is a TCP/IP network ready, cost effective, flexible, access control and environmental monitoring solution which has been specifically designed with high security and simplicity in mind.

Ideal for single or multiple cabinet and site/installations, each UTelligent Secure-Space system supports two independent electronic door handles with integrated key override, cladding status and up to two temperature/humidity monitors.

Proximity card/fob sensors can be supplied pre-programmed ready for issue to users.

An optional LCD display module is available, which allows the unit IP address and status to be displayed at the cabinet. Other items such as temperature and humidity can be displayed to meet customer requirements.

The factory installed integrated web browser interface employs a Real Time Operating System (RTOS), which ensures that the browser page does not need to be constantly refreshed. Two levels of access privilege are supported: Admin and User.

Up to 500 users are supported per cabinet with individual access rights to one or both access points. Each user has a start and end date for access control.

Up to 20 user groups can be created and there can be multiple shift patterns. Shifts are defined as days of the week with start and end times. The enhanced version of the UTelligent Secure-Space includes the facility to monitor two temperature and humidity sensors.

Biometric Handle Electronic handle Keypad

handle



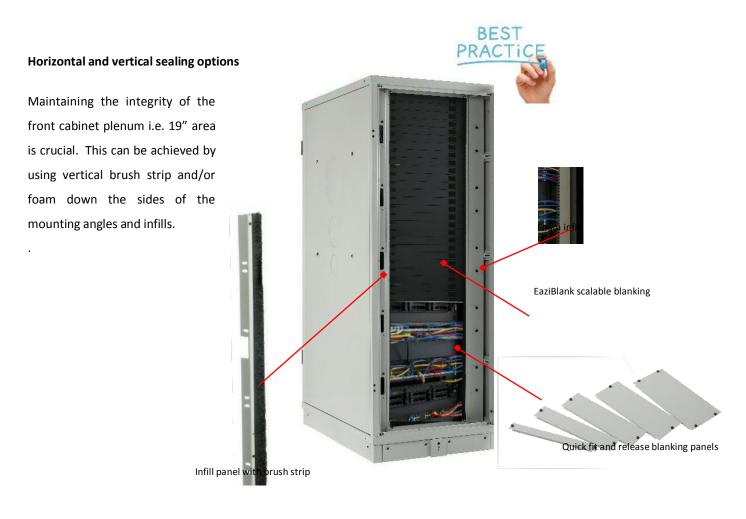
Thermal management

Anti heat recirculation - best practice

It has long been established that allowing heat re-circulation in 19" cabinets results in active IT equipment overheating, which shortens its working life but more often leads to software and systems failures.

So to maintain optimum performance and a safe controlled working environment for the IT equipment - one that overcomes hot spots and heat re-circulation issues - it has to be dealt with by correct airflow management. Achieving this comes down to a combination of clever enclosure design and the application of best installation practice.

USpace quick fit blanking panels, Plenafill or EaziBlank can play an important role in airflow. A major benefit is the prevention of hot air re-circulation which eliminates the risk of hotspots. Use to blank out any unused U spaces at the front of the cabinet to create a path for the airflow to travel without escaping.



Standard cabinet cooling

Rack mounted fan tray

Ideal for hot spot cooling, these rack mounted fan trays are available in one, two, three, four and six fan models which can if required be thermostatically controlled.

Zero 'U' top cover fan trays

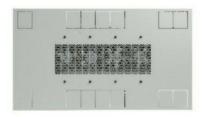
Used to remove heat from the cabinet, these trays take up no rack space and can be retrofitted and thermostatically controlled if required.



3 way rack mount fan tray



Thermostatic controller



4 way top cover fan tray - top view

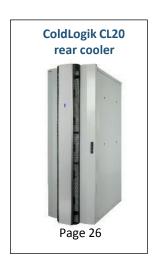
Advanced cabinet cooling

In addition to standard cabinet cooling, USystems have developed a range of world class cabinet cooling options. Please see the pages below for more information.













DAX cabinets UTelligent

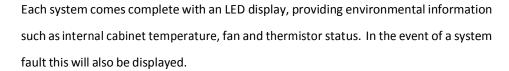




Office and comms room cabinet cooling

The USpace 4210 DAX cabinet is a complete heat removal system. The system comprises a USpace 4210 compliant cabinet and the built in DAX system. Its primary function is the removal and distribution of heat from the rear of the cabinet in an energy efficient and controlled way.

The system has been designed to work with one or two EC centrifugal fans. Each delivers 1075 cfm which in an average room temperature of 21 degrees equates to around 12kW of hot air removal with the two fan system. In most cases one fan will be sufficient to remove the heat load generated by the active equipment, however the benefit of using two EC fans is the redundancy provided. Furthermore two fan units working in tandem will mean they rotate at a slower speed thereby using less power and producing less noise.



- O Substantial reduction in power consumption of HVAC systems
- O Energy efficient by design
- O Reclaimed and recycled room heating
- O Capital cost reduction
- O Enhanced hardware performance
- O Built in redundancy
- O Network monitoring
- O On-board diagnostics
- O Local noise alarm
- O Hot swappable fans
- O GUI (Graphical User Interface)
- O Houses all major server brands



DAX system top view







Hot air can be deflected into the room for heating in winter months



DAX compliant cabinet and DAX system exhausts hot air out of the room

CAP cabinets





Data centre and comms room cooling

To improve the efficiency of a CRAC-based data centre design, USystems' ColdLogik controlled air path 'CAP' units isolate and guide hot air out of the top of the cabinet into a ceiling plenum.

Removing hot air from each cabinet by ducting the air through funnels on the top of the cabinet – in a controlled manner through to the ceiling plenum – is a logical, simple and highly cost effective improvement to managing data centre cooling.

It meets the demand for greater efficiency in CRAC-based systems and helps to overcome the higher heat loads and increased packaging densities that have led to hot spots and re-circulation issues – so saving money, improving reliability and reducing downtime.

The ColdLogik CAP system – passive and active – converts the USystems 4210 server cabinet to a ducted exhaust cabinet.*

The unit is mounted on the top of a 4210 cabinet and connected to a dropped ceiling plenum – this isolates the hot air return path, prevents air re-circulation and improves energy efficiency.

The ColdLogik CAP system also helps to future proof the infrastructure investment by allowing the user to upgrade from passive ducting units to active versions — enabling higher heat loads to be added to the cabinets without compromising the data centre design.



An active ColdLogik CAP controlled air path duct unit on a 42U high USystems 4210 cabinet.



Passive CAP



Full active CAP shown with open cartridges and three fans

^{*} Please consult us regarding upgrading other manufacturers' cabinets.



CL20 rear cooler compliant cabinets

Data centre cooling

The USpace 4210 ColdLogik compliant cabinet is available two heights 42U and 48U, two widths, 600mm and 800mm and two depths 1000mm and 1200mm as standard.

The cabinet features all the benefits of the standard 4210 with the addition of the CL20 load bearing pivot system, earth bonding kit, and U height strips. Factory fitted sealing kits are also available if required.



















4210 cooling options

Aisle containment



Data centre cooling

USystems Aisle containment options comprise hot aisle, cold aisle, horizontal, vertical or convex solutions, most of which can be retrofitted to existing data centre scenarios even when cabinets are differing in height and or widths.

In fact USystems boasts such comprehensive range of containment solutions we are confident we will be able to contain any data centre requirement however complex the design.



(The USystems family





