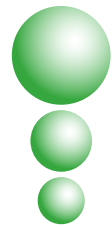# *U*Coustic

Edge 9210i soundproof server cabinets

31dbA IT noise reduction

12kW of heat load removal

M2M Connected and controlled

part of the rapid deployment micro data centre (MDC)
family of solutions from USystems

U Systems

UCoustic

Edge 9210i overview

Intelligence (M2M) as standard

The UCoustic 9210i comes with built-in sensors and management software allowing data to be accessed from multiple devices and servers remotely, in turn this then provides real time status, alarms and alerts which can be sent to up to ten users.

Visit www.usystems.co.uk/UTelligent/UMS for more information
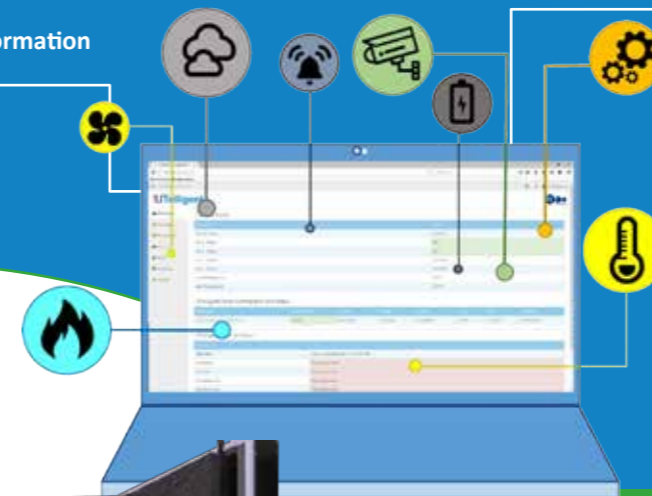
Environmental monitoring

A standard feature with the UCoustic 9210i is the built in environmental monitoring. Whether it be temperature, power, EC fan speeds or security, the UTelligent Management System 'UMS' will allow remote monitoring, device and sensor management – all displayed on the free integral web user interface (WebUI).

Safe and secure

The need to protect important hardware and sensitive information is paramount, the UCoustic 9210i will allow an immediate security upgrade by mounting security cameras internally to the front and rear of the cabinet. The UMS will record and store the information and if required will provide you with real time alerts of cabinet entry to view and download via remote access online.

For additional security the UCoustic 9210i can be upgraded with a complete access system including electronic doors etc.

Rapid deployment Micro Data Centre

A well-equipped server room should provide the IT equipment with a safe, secure, well ventilated and resilient home - this comes at a high cost in terms of equipping and fitting the room and also the expensive floor space required.

The UCoustic 9210i on the other hand takes up less than a square metre in footprint, can be located in any area including offices, receptions, hallways, cupboards etc., without concern for noise or temperature issues. Additionally, the UCoustic 9210i incorporates the latest M2M technology for real time environmental and security monitoring.

A sound investment!

It is all well and good making these savings but deploying active IT equipment into the middle of a working environment can be off putting for visitors and detrimental to working conditions in terms of the constant evasive noise and excessive heat generated from the active equipment.

The UCoustic 9210i 42U cabinet effectively removes up to 31dBA (99.9%) of IT noise, which is tech speak for saying that it will reduce server noise down to a whisper.

Energy and space saving

Reducing energy bills is always desirable but expecting a standard server cabinet to assist in this aspect is virtually impossible. That's where the UCoustic 9210i is uniquely different in design - incorporating as standard EC fan technology, which means an immediate energy reduction. These fans will also speed up and slow down as and when the heat load dictates.

The optional ducting kit will also allow heat normally expelled from the rear of the cabinet into the office to be directed either into another room/warehouse or outside, which is especially important in the summer; however equally important is to have the ability to recirculate the warm air back into the office environment during the winter months.

Unrivalled 12kW cooling capacity

Protecting expensive servers and switches or just general IT equipment is of paramount importance and by clever design the unique cooling system of the UCoustic 9210i enables the removal of up to a staggering 12kW of heat load in a 42U height cabinet.

The UCoustic 9210i can also deal with removing the exhaust heat rejected into the room from the cabinet via a ducting kit, again making for a pleasant and controlled working environment.

BEST IN CLASS

This cabinet has everything!

Being the best in class for soundproofing and cooling is one thing, but if this is at the expense of being a poorly designed data rack, then this is surely an unacceptable compromise.

The UCoustic 9210i doesn't make any compromises, the advanced design extends to it being an excellent all round 19" data, comms and server cabinet, with fully adjustable front and rear mounting angles and 6 cable entry ports.

Acoustics independently tested by PRITEX to ISO 3744
Compatible with all leading makes and types of server and SAN storage

IBM   EMC²   hp   Cisco   DELL   sun microsystems

HITACHI Inspire the Next   COMPAQ   TOSHIBA

Panasonic   UNISYS   Bull   FUJITSU

Standard specification

Edge 9210i Floor standing cabinets

The UCoustic Edge 9210i soundproof server cabinet is available in active or passive configurations and in 3 heights 12U, 24U and 42U - all are 780 mm wide and 1100 mm deep.

Active cabinets have two EC fans in the rear doors to deal with higher heat loads – to ensure maximum energy efficiency, they are controlled with variable fan speed controls and temperature sensors.

Passive cabinets utilise the IT equipment fans to draw ambient air from the front and then rely upon the temperature differential between the cabinet IT equipment space and the room ambient temperature.

Key features

› Wardrobe style front and rear doors on active and passive cabinets

› Active rear doors contain one EC fan in each door; each fan has a speed controller and temperature sensor

› Built in environmental monitoring system, accessible via the free integral web user interface (WebUI)

› Fully adjustable 19" mounting angles fitted front and rear

› Soundproof cable entry system

› Six cable entry points via removable gland plates, three at the top and three at the bottom

› Load bearing castors

› For maintaining the IT equipment, all doors and panels are easy to remove and refit

› Cabinets are finished in USpace Black with Montana Blue highlights

Executive Cabinets

Signature UCoustic cabinets for boardroom and office

The Executive cabinet comprises the same specification as the standard UCoustic Edge 9210i with the additional option of a real wood finish to blend elegantly with other office furniture – without compromising decibel attenuation, psychoacoustics, thermal performance or cabinet strength.

Standard Finish

› Oak

Other finishes are available on request at extended lead times with prices quoted on application.

Real wood finishes can be supplied in a combination
of any of the following configurations:

› Passive doors, front and rear.

› Side panels

› Top cover

Please note - active rear doors cannot be finished in wood

42U with passive doors and side panels.

UTelligent Management System included as standard

The UTelligent Management System 'UMS' is an M2M device that allows you to connect multiple sensors and devices. Giving you ultimate control and monitoring of your IT cabinet.

Power and monitoring

As part of the ability to connect to other intelligent devices the 'UMS' can obtain data from UTelligent Power modules and display it in a clear and easy to follow view. This will also benefit by enabling you to monitor the cabinet and connected devices on one screen without opening multiple windows.

UTelligent Power Distribution Unit Status

PDU Name	Alarm Status	L1 VAC	L1 Amps	L1 kW's	L1 Hz	L1 PF	L1 kWh's
PDU-1 (http://192.168.0.101)	NONE	244.8 VAC	0.00 Amps	0.000 kW's	49.8Hz	0.004 PF	22.3 kWh's
PDU-2 (http://192.168.0.102)	NONE	244.8 VAC	0.00 Amps	0.000 kW's	49.8Hz	0.004 PF	22.3 kWh's

Simple to use - Packed full of features

The UMS has a Web User Interface 'WebUI' accessible via a browser on any device. This gives you control and monitoring for your cabinet based on your access levels.

Because you need to know

Alarms and alerts in real time will notify you of any issues with your cabinet and up to 10 emails can receive the notification. The LED logo on the cabinet doors will change colour if the cabinet status changes, alerts (amber) or alarm (red). It will remain green when working correctly.

The key to cooling

One of the key features of our technology is the ability to monitor/alert and control EC fans housed in USystems enclosures to give you the best in cooling control and energy savings. To control these fans one temperature sensor is included as standard.

Power & energy	Camera system	Cooling & temperature	Dash-board	Network settings	Alarm sensor	Security & access	Fire protection	Motion sensor	Door sensor

Safe and secure

The need to protect important hardware and sensitive information is paramount. Our range of cabinets will allow an immediate security upgrade by mounting security cameras internally to the front and rear of the cabinet. The 'UMS' will store images and if required will provide you with real time alerts of cabinet entry to view and download via remote access.

Get additional security options. Our range can be upgraded with a complete access system including electronic locking. Please contact your local supplier for further information or visit www.usystems.co.uk/UMS.

Multiple sensors

Temperature sensors give you the ability to monitor in real time anywhere from inside or out of the cabinet and feature to report the data log daily, weekly or monthly. Also if required a report can be downloaded manually for the 'UMS' software. Other types of sensors are also available, the 'UMS' allows 2 one wire sensors and either 2 or 6 digital sensors dependent on the UMS version.

UTelligent Hub

The UMS Hub allows multiple cabinets with 'UMS's housed inside them to be displayed on the Hub software. Giving you the ability to monitor and access all of the cabinets that are linked within the same network depending on the level of access granted.

IP54 floor standing cabinets

Retains the sound attenuation and heat dissipation of the standard UCoustic Edge 9210i but with an IP 54 rating.

The cabinet is ideal for:

› Dusty environments

› Offices in industrial areas

› Sensitive active equipment

› Laboratories

› Schools

Cable entry system with IP gasket seal

UCoustic polyester volumetric filter

Removable IP filter

Reticulated polyester volumetric UCoustic filter, manufactured to specific and stringent tolerances. As the filter starts to work or 'load' the efficiency becomes better, reaching its peak before it has to be removed or cleaned. The material can be cleaned in warm soapy water and dried for reuse but this is only recommended once or twice in its service life.

Cable management

Cable entry systems

The UCoustic is unique in that it has six points of cable entry—three to the top and three to the bottom.

Top cable entry glands

Specially designed to retain sound-proof integrity and IP rating.

The universal cable entry system can be mounted to the top and the base with the box being mounted internally or externally to the cabinet.

Bottom cable entry glands

Cable tray

Ensure best cabling practice with 9210 cable tray, designed to fit in line with the top and bottom side cable entry posts.

Cable finger management

Ideal for laying up and dressing cables ensuring an adequate bend radius for all category cables a great time saver.

## UCoustic DAX 'Direct Airflow eXhaust' kit

Best practice energy saving option

Enables hot exhaust air to be directed outside the room or building, saves on energy keeps the room cool and protects the ambient temperature.

› Save money, energy and power consumption on existing room air conditioning

› Divert and recycle waste hot air providing free heating to other rooms

› Helps prevent hardware and software failures

› Helps prevent any unnecessary downtime

› Access to rear of cabinet and door opening is not affected when the ducting kit is utilised

› Retrofittable to the 24U and 42U UCoustic Edge 9210i active cabinet

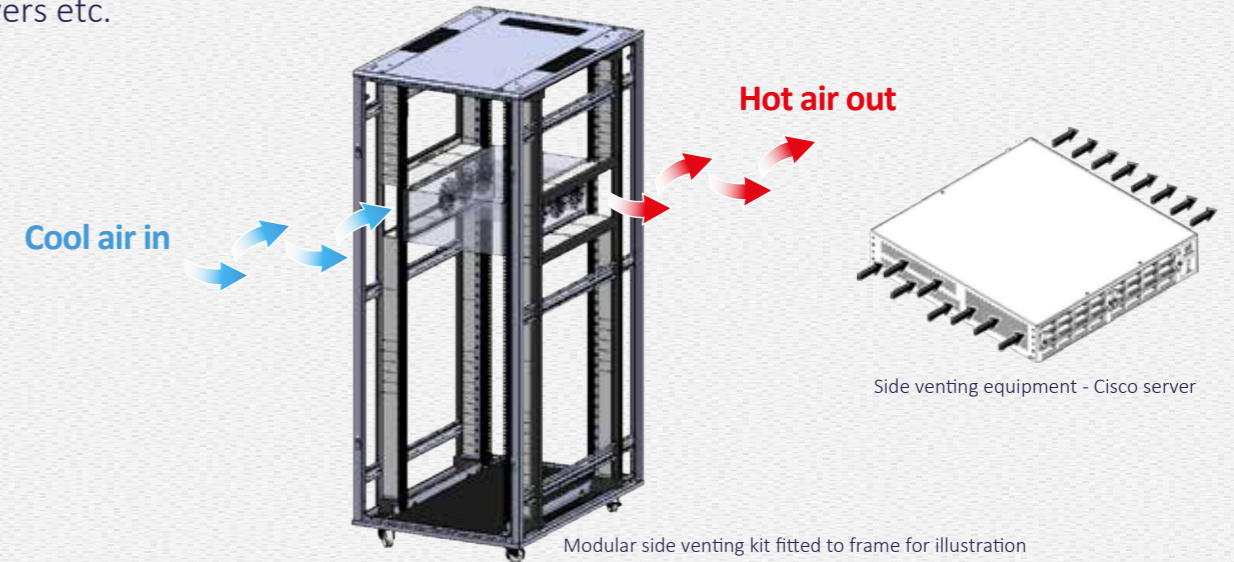› Can be directed to exhaust through wall, window or ceiling plenum

Venting to wall
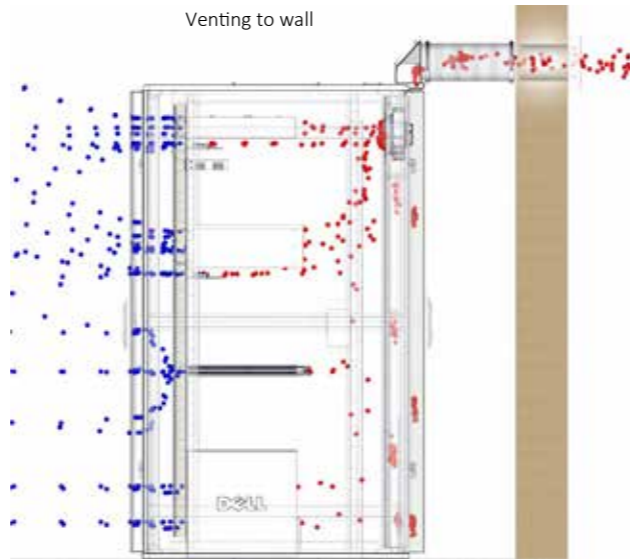
Venting to ceiling
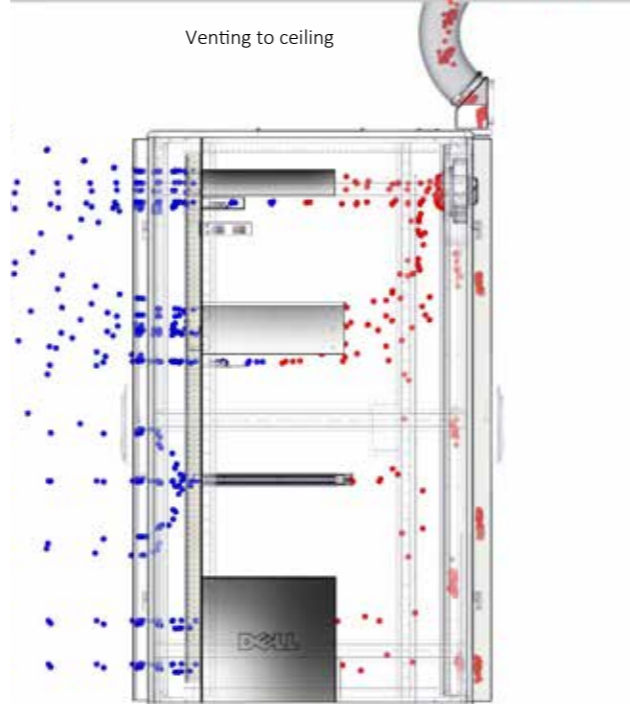
Side venting kit (Cisco server spec)

Side venting kit for active IT equipment which cools from side to side such as switch gear, Cisco servers etc.

Hot air out

Cool air in

Side venting equipment - Cisco server

Modular side venting kit fitted to frame for illustration

Anti-vibration soundproof cabinets

The anti-vibration cabinet is a recent addition to the UCoustic family - utilising special anti-vibration mounts and dampening castors it is designed to isolate the 19" mounting angles from the fabric of the cabinet—this in turn protects the IT equipment from vibration and mild shocks.
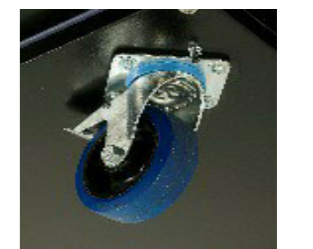
The option is especially important if installing sensitive active equipment or if used in a controlled environment. Also useful if transporting the cabinet in vehicles for relocation etc.
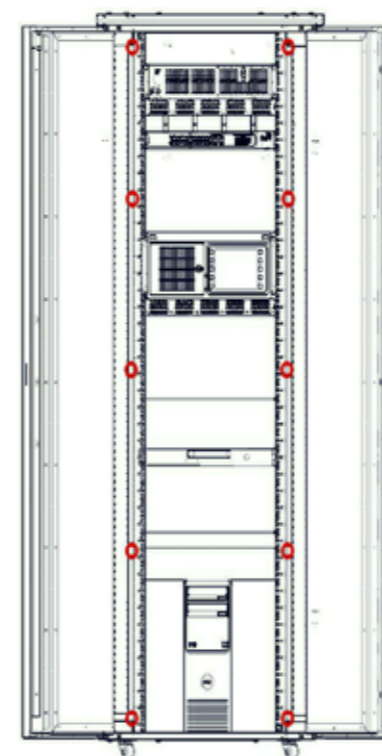
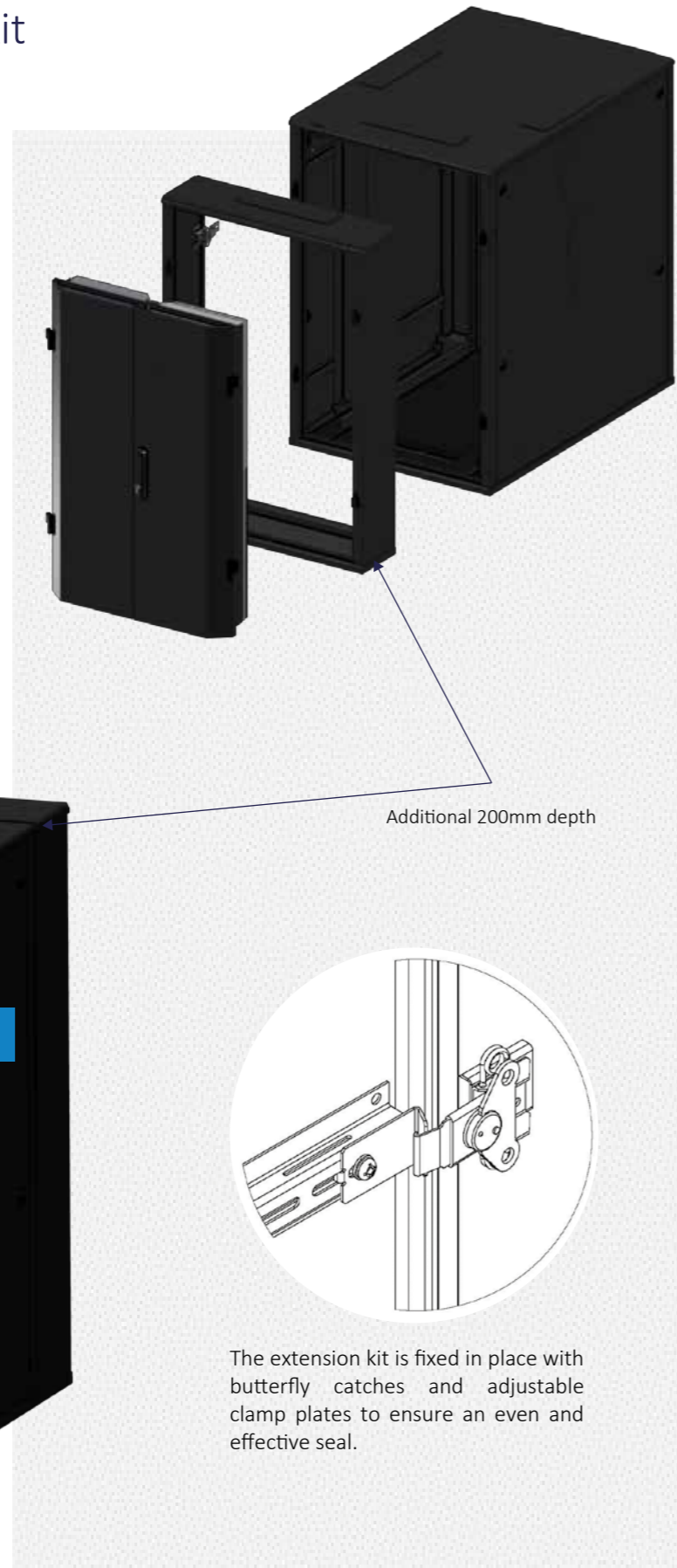Close up of anti vibration mount

◯ Anti vibration fixing positions

Specialist vibration dampening castors

Extra depth server extension kit

When utilising enterprise, render node or higher speed servers the extension kit enables these to be housed in the UCoustic Edge 9210i by giving an additional 200mm depth to accommodate this type of deeper, specialist equipment.

The extension kit is fully retrofittable and will not adversely affect the performance of the cabinet.

Additional 200mm depth

Extra 200mm usable depth

The extension kit is fixed in place with butterfly catches and adjustable clamp plates to ensure an even and effective seal.

9210i Intelligent power

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 Powers' 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.

As **SNMP/HTTP** via individual IP addresses for up to 32 units on a single IP address. Management information from each *UTelligent Power* unit is shown via WEB browser or through a dedicated software management package.

As a **ModBus** protocol *UTelligent Power* units can communicate with most modern management platforms or with *UTelligent Power's* own data logging and management software.

It will link with the **UMS** and display all of the *UTelligent Power* information onto the UMS WebUI with a direct link to the *UTelligent Power* software.

Secure Space range

Intelligent locking and monitoring solutions

Key features
› Proximity sensors front and rear
› Electronic handles with key override and status indicator/feedback
› Handle status feedback via TCIP/IP
› Web interface, TCIP/IP protocol, SNMP protocol
› User and Admin access levels
› One RJ45 10/100 base-TX Ethernet TCP/IP network port
› Up to 500 users, Up to 20 user groups
› Displays on the UMS's WebUI

Options
› Standard or 19" rack mounted unit
› Optional keypad and bio finger print
› Any industry standard entry system option
› Door status sensors front, rear and top

General accessories

Load spreader	UCoustic fixed plinth	Levelling feet	UCoustic baying kit

UCoustic blanking	UCoustic dust filter	Tower infill kit	Document wallet	U Measure strips

Cantilever shelf	Fixed shelf	Chassis runners	Telescopic shelf

Cage nut fixings	Earth bonding kit	Copper bus bar	Clean earth	ESD kits

Active cabinet — Rear doors

23mm recommended minimum distance between door face and 19" mounting angles

700mm factory settings
917mm
129mm
100mm factory settings

Front doors

Passive cabinet — Rear doors

44mm recommended minimum distance between door face and 19" mounting

700mm factory settings
938mm
129mm
100mm factory settings
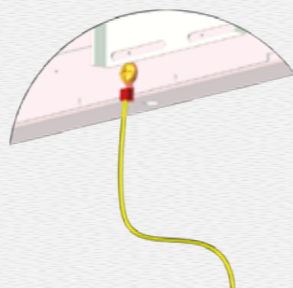
Front doors
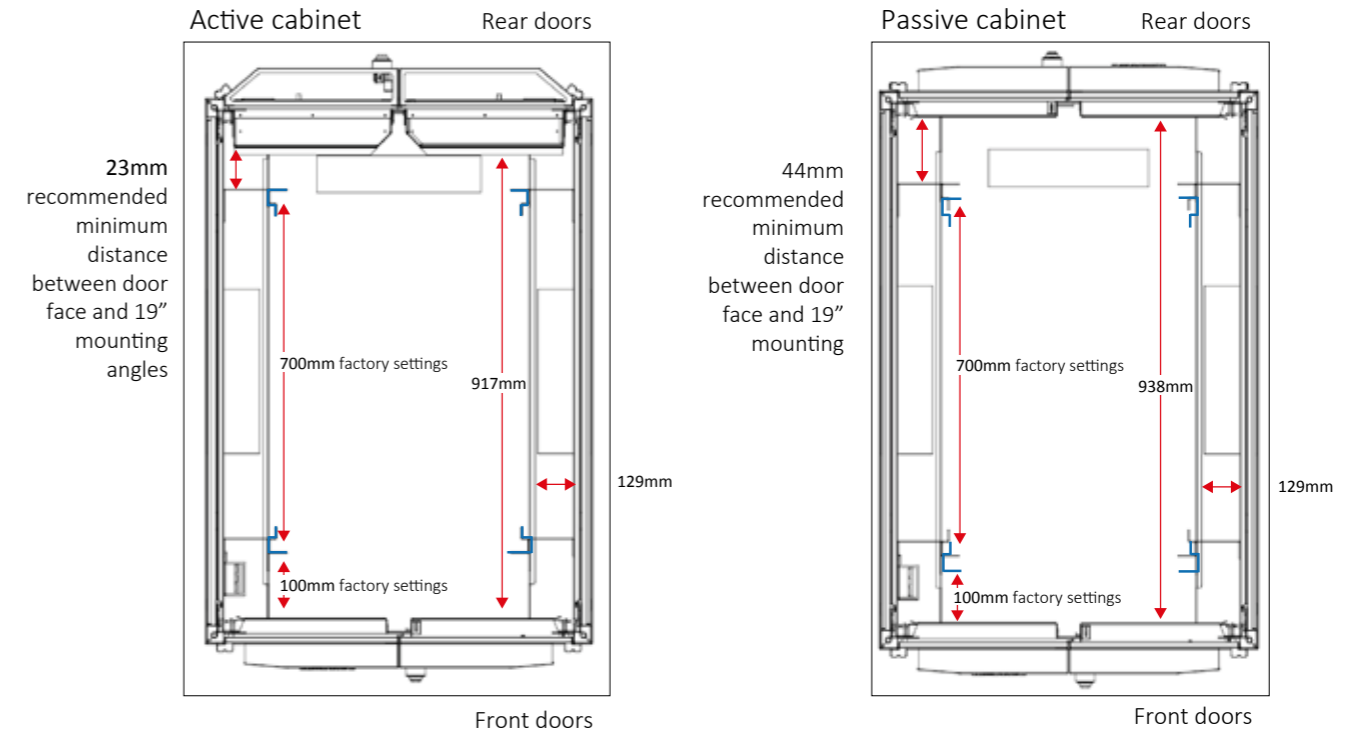
External dimensions and weights

	Active units			Passive units		
Cabinet usable space	12U	24U	42U	12U	24U	42U
External height without castors	620 mm	1152 mm	1954 mm	620 mm	1152 mm	1954 mm
External height with castors	720 mm	1252 mm	2054 mm	720 mm	1252 mm	2054 mm
Cabinet weight	133kg	194kg	313kg	124.5kg	181.5kg	290kg
Floor footprint (w x d)	780 x 1100 mm					
Floor footprint with doors (w x d)	780 x 1210 mm					
Usable internal depth	825 mm					
Maximum load capacity	1000kg without castors			500kg on castors		

Energy and attenuation performance

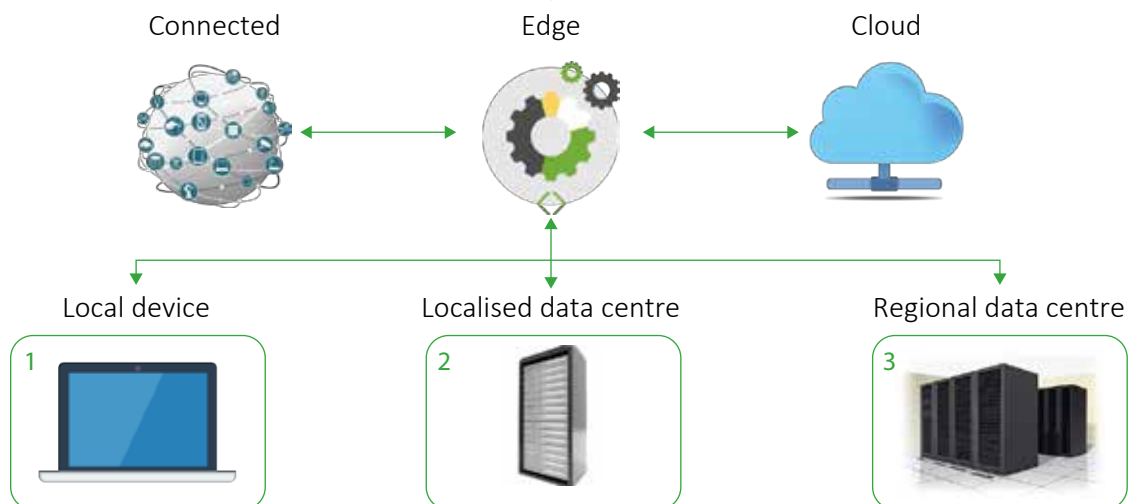|	Active units			Passive units		
Maximum heat load	12kW	12kW	12kW	1.75kW	2.25kW	2.75kW
Maximum power consumption	Up to 1 Amp - all active models			Not applicable		
Maximum attenuation performance	31dbA - all models					

UCoustic Edge 9210i data cabinets
Space utilisation with unrivalled sound attenuation and heat dissipation

A server room

in a cabinet

Connected

Edge

Cloud

Local device

1

Localised data centre

2

Regional data centre

3