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# VERICOM®



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# VERICOM®

The Future Of Technology - Today.

## Aisle Containment Solution





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## About Vericom

Vericom Global Solutions is a leading provider of network infrastructure and connectivity solutions for enterprise, government, and operator markets. With global headquarters in Knoxville, TN, we provide best-in-class solutions to more than 30 countries worldwide.

We deliver a comprehensive product portfolio designed to meet Vericom customers' network infrastructure needs in an increasingly connected world through our global network of distributors and integrators.

In addition to Vericom innovative design, engineering and manufacturing capabilities, we are the relationship of choice for a diverse family of clients worldwide who are confident in our ability to consistently perform to a standard of excellence that is without equal in the industries we serve.



### Industry Compliant Manufacturing Capabilities

- 5+ Major Manufacturing Facilities (3.5M sq. ft)
- State-of-art Research and Development Center
- 4k+ Employees
- EC/ETL Verified
- ISO Certified
- UL Listed



### Custom Configuration-Build To Suit

- Pre-installation Support and Solutions
- Data Center Design
- On-site Installation Support
- Technical Training and Service



## Vericom Aisle Containment Solution



### Vericom Aisle Containment Solution Offers Increase In Energy Efficiency

With the growths of explosive data processing, Data Center constructions have to consider multiple and competing demands: reducing operational costs, improving energy efficiency, and optimizing available capacity, while sustaining a low total cost.

To meet these demands while minimizing the risk to service levels, Vericom has created an outstanding modular solution to help you overcome the various challenges associated with data centers, such as increasing cabinet densities, budgetary constraints, lack of airflow management, and high energy costs. We offer you a turnkey solution that provides maximum flexibility in design, operation, and upgrades.

The Vericom Aisle Containment Solution can support single or double rows, as well as multiple hot and cold channels, which effectively eliminates the mixing of hot and cold air to maximize energy efficiency and lower operating costs. A single containment module can support up to 40 cabinets, including IT cabinets, network cabinets, PDCs (an integrated UPS cabinet), and battery cabinets, as well as air conditioners, skylights, doors, cable troughs, and other necessary components. Power density of a single cabinet can range from 1 kw to 20kw.

### Ideally Suited For

- Data centers with raised floor utilizing underfloor cooling methodology
- Data centers with non-raised floor utilizing row based air-conditioning system
- Data centers with hybrid cooling architecture
- Flexible deployment with existing data center infrastructure retrofitting or new construction
- Flexible installation and fixture, supporting most neutral racks from other vendors
- Retractable roof panels with fire system integration capability, which opens automatically to allow suppression gas to enter the aisle containment

## Cooling Methodologies of Vericom Aisle Containment Solution

Cold Aisle configuration for equipment rows is considered to be the best practice for separating hot and cold air. The goal is to achieve energy conservation and lower cooling cost by managing air flow.

The Vericom's Aisle Containment Solution offers a physical barrier and improved sealing to isolate hot air and from cold air, and prevents them from mixing during to recirculation, and accordingly provide superior energy savings compared to competitive offerings.

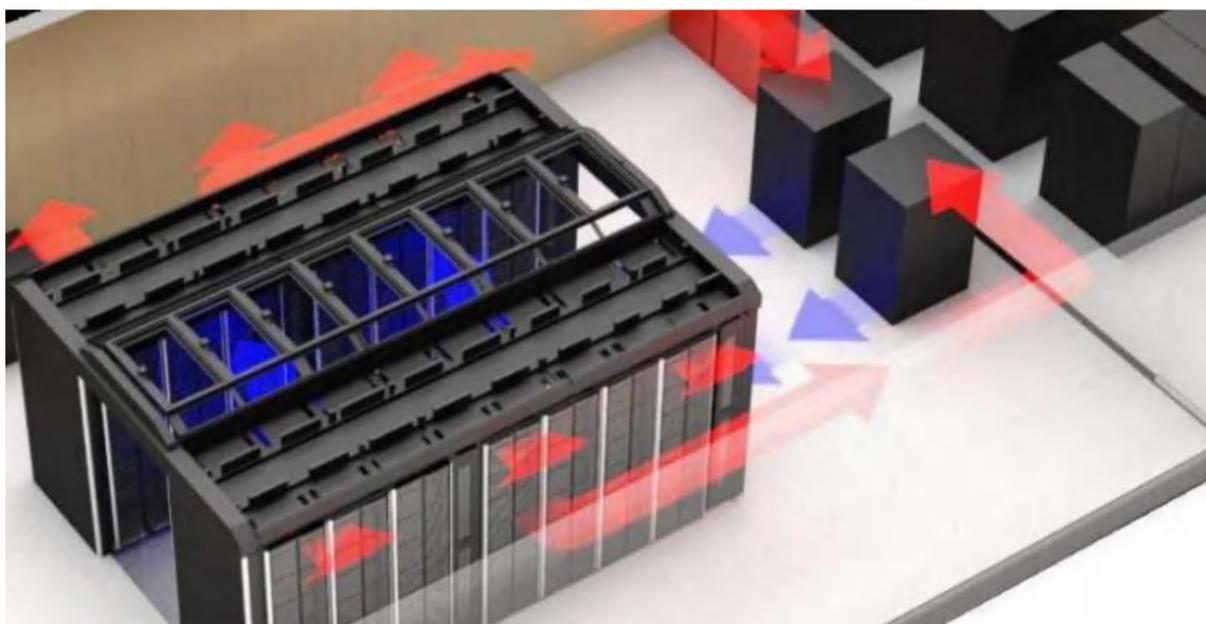


### Vericom Cold Aisle Containment Solution Offers a Flexible Approach While Utilizing Hybrid Cooling Methodologies

It is always a challenge for retrofitting of an existing data center where air mixing is high and a demand for aisle separation arises. Data centers can be designed with a mix of cooling methodologies, such as row and room based cooling, to address various equipment densities.

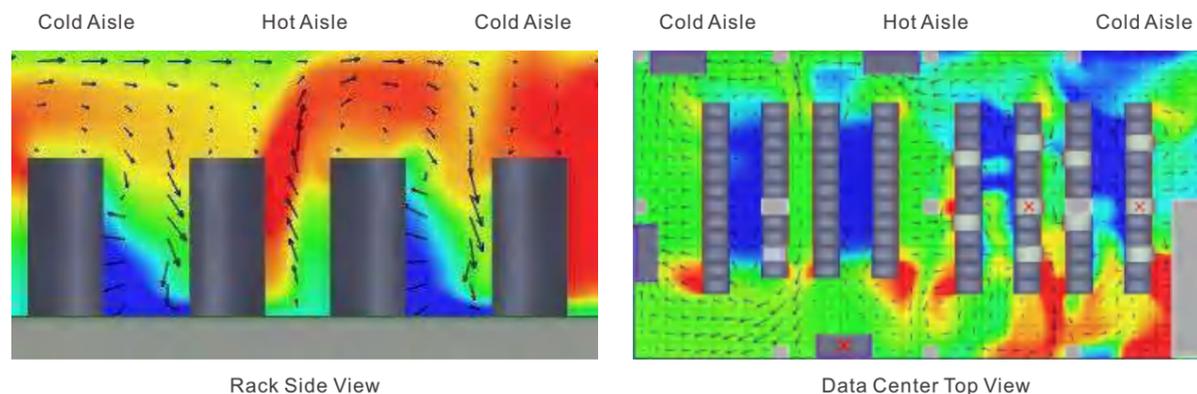
Room and row based cooling systems take the approach of providing cold air near the equipment and capturing the hot air return. Cold Aisle Containment Solution supports both of these cooling methodologies and provides good containment of cold air within the aisle.

The Vericom Cold Aisle Containment Solution seals the cold aisle, so the cold air is not mixed with the hot air in the data center, which is typically accomplished by using roof skylights above the aisle between adjoining racks and installing doors at the two ends of the aisle.



## CFD Analysis of A Traditional Data Center Vs A Data Center With Cold Aisle Containment

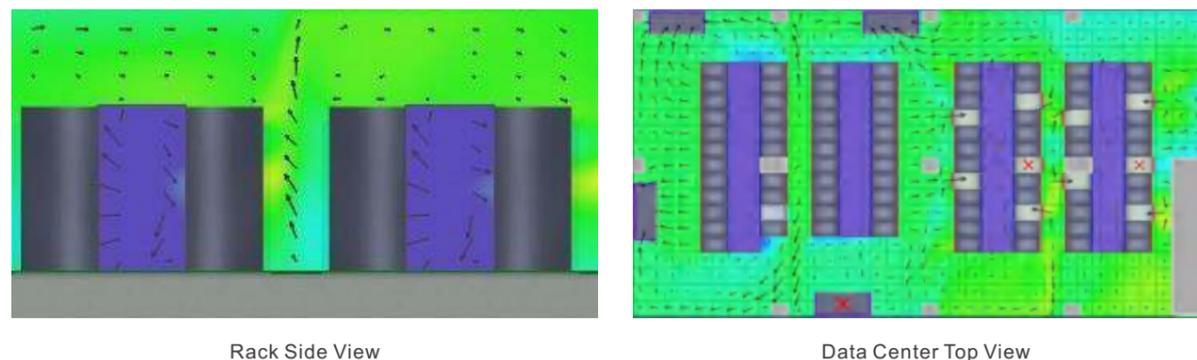
### Traditional Data Center without Cold Aisle Containment



**Problem:**

Temperature billboard for a traditional data center without cold aisle containment shows a number of hot spots, cold and hot air mixing, variation in rack inlet temperature, high inlet temperature for equipment mounted on top of racks, and higher exhaust temperatures. This results in wastage of cold air, a lower return temperature for CRAC units, higher inlet temperature for equipment (thus leading to higher exhaust hot air), and an increase in equipment power consumption due to higher fan speed and inefficient performance by CRACs.

### Data Center with Cold Aisle Containment



**Solution:**

Temperature bill board for a data center with cold aisle containment shows a significant decrease in hot exhaust air from equipment while receiving lower temperatures in the cold aisle. Hot and cold air mixing has been all but eliminated, allowing the cold aisle to maintain the required temperature and reducing energy usage.

## Vericom Aisle Containment Solution Overview

The All-in-Room design of the Vericom Cold Aisle Containment Solution is a standardized, modular platform with built-in flexibility to meet a wide variety of requirements. It is a robust solution with built-in features for safety, security, and expandability. Designed for rapid deployment and installation, our energy-efficient platform reduces up-front investment and lowers operating expenses.

### Cabinet System

- Flexible expansion and quick deployment
- Suitable for retrofitting or new construction
- Rack height: 2000mm(42U), 2220mm(47U)
- Rack depth: 1000mm, 1100mm, 1200mm or customized
- Aisle width: 1200mm, 1800mm
- Optional LED strip with each cabinet



### Skylight System

- A variety of skylights available
- LED strip included
- Infrared sensor for LED strip control
- Tempered glass skylight
- Intelligent connections between skylight and fire suppression system support automatic open in 0.5s for fire extinguishing gas entry

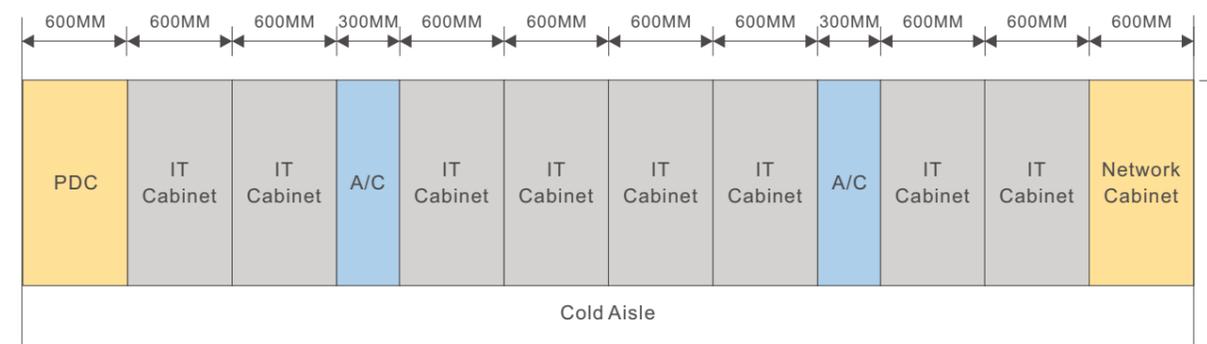


### Sliding Door System

- 12mm tempered glass door
- Sliding doors with automatic opening and closing
- Available in IC card, fingerprint, and password control
- Optional monitoring touch screen
- Infrared sensor on each door frame for anti-pinch function



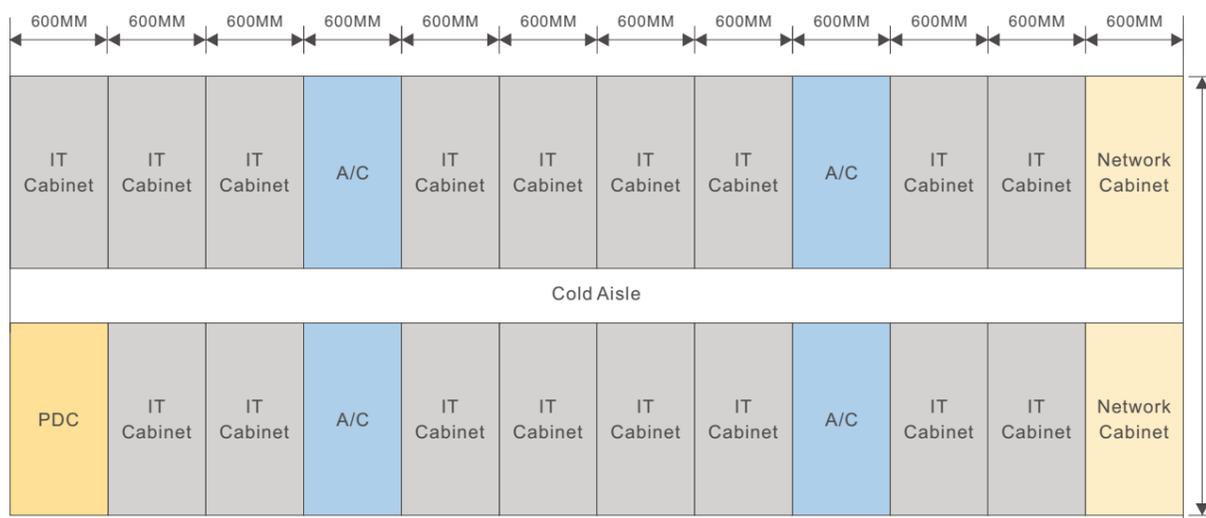
## Single Row Aisle Containment Configuration



### Features & Benefits

- Sliding entrance doors at both ends
- Active roof skylight integrated with fire suppression system
- Designed for continuous rack row without any obstruction, opening, missing rack or columns
- Easy to install and integrate with most neutral racks from other vendors
- Access control feature with IC card, fingerprint, and password

## Double Row Aisle Containment Configuration



### Features & Benefits

- Sliding entrance door at both ends
- Active roof skylight integrated with fire suppression system
- Both sides attach to rack cabinet and require uniform rack height, width and row length
- Designed for continuous rack row without any obstruction, opening, missing rack or columns
- Easy to install and integrate with most neutral racks from other vendors
- Access control feature with IC card, fingerprint, and password

## VC5 Data Center Cabinets

Vericom VC5 Cabinets provide a customizable solution for data center build-outs, network rooms, or IT closets. The feature-rich, robust design can be shipped flat packed or as a custom-configured solution that is fully assembled with Vericom accessories pre-installed.

Vericom VC5 Cabinets offer multiple size combinations and abundant accessories to meet your specific needs.

### Compliance

- ANSI/EIA RS-310D
- IEC60297-2
- DIN41494; Part 1
- DIN41494; Part 7



LOAD CAPACITY



RAISED HEIGHT



### Benefits

#### Security & Protection

- Locking doors and side panels prevent unauthorized access to equipment
- Two pairs of adjustable 19" EIA rails provide a stable mounting structure

#### Flexibility

- Vertical zero-U PDU lacing panel pre-installed in rear corners for PDU mounting and easy cable management
- Multiple cable entry options provide greater flexibility during installation
- Removable and lockable half height side panels

#### Multi-Use

- Adaptable for use in data center build outs, computer rooms or data closets

#### Key Features

- Recessed casters combine convenient mobility with minimal added height to provide additional stability
- Brush cable entry slots at front and back of top panel and sliding panels on bottom

## VC5 Data Center Cabinets

### Specifications

<b>Standard Configuration of Front &amp; Rear Door</b>	Removable, Reversible & Lockable Opens Full 180°, 2 Point Latch	<b>Grounding</b>	14 AWG Ground Wire Connects Doors and Side Panels to Cabinet Frame
<b>Side Panels</b>	Half Height, Removable (2 Per Side)	<b>Static Loading Capacity</b>	1363kgs/3000 lbs.
<b>Top Panel</b>	(1) Removable Vented Panel for Optional Fan Unit (2) Brush Cable Managers	<b>Included Accessories</b>	(50) Sets of M6 Screws & Cage Nuts (4) Adjustable Leveling Feet (4) Casters (1) Grounding Kits (2) Keys
<b>Bottom Panel</b>	Sliding / Removable Panels		
<b>Equipment Support</b>	2 Pair of Mounting Rails 1.75" RU Spacing, Marked and Numbered on Rails 19" W, EIA-310-D Universal Hole Spacing		

### Definition of Code

<b>WIDTH</b>	600mm	6	<b>A</b>	High density vented
	800mm	8	<b>B</b>	High density vented split
<b>DEPTH</b>	1000mm	0	<b>0</b>	Front door, side panel, and LED strip not included
	1100mm	1	<b>1</b>	Front door included, side panel and LED strip not included
	1200mm	2	<b>2</b>	Front door and LED strip included, side panel not included
<b>HEIGHT</b>	42U	42	<b>A</b>	Assembled
	47U	47	<b>F</b>	Flat Packed
<b>TOP</b>	Vented	<b>V</b>	<b>0</b>	White RAL7035
	Solid	<b>S</b>	<b>1</b>	Black RAL9005
			<b>2</b>	White RAL9002

**PACK**

**COLOR**

### Ordering Information

Part No.	Capacity (U)	Height mm[inch]	Width mm[inch]	Depth mm[inch]
VC5-6042-■■■■■■■	42	2000[78.75]	600[23.62]	1000[39.37]
VC5-6047-■■■■■■■	47	2220[87.40]		1100[43.31]
VC5-6142-■■■■■■■	42	2000[78.75]		1200[47.24]
VC5-6147-■■■■■■■	47	2220[87.40]		1000[39.37]
VC5-8142-■■■■■■■	42	2000[78.75]		1100[43.31]
VC5-8147-■■■■■■■	47	2220[87.40]		1200[47.24]
VC5-8242-■■■■■■■	42	2000[78.75]	800[31.50]	1000[39.37]
VC5-8247-■■■■■■■	47	2220[87.40]		1100[43.31]
VC5-8247-■■■■■■■	47	2220[87.40]		1200[47.24]
VC5SS-■■■■(Side Panel)	/	/	/	Same as cabinet depth

Note: Not all the available part No. are listed. For more information, please contact your Vericom Representative.

## Skylights

### End Roof Skylight



Arc Type With Flat Cable Trough



Flat Type With M-shape Cable Trough

### Active Roof Skylight (Flat Type)



Single Glass Panel



Split Glass Panel

### Active Roof Skylight (Arc Type)



Single Glass Panel



Split Glass Panel

### Vericom Skylight Product Guide

- Cold aisle containment roof skylight panels for vendor neutral racks
- Tempered glass in center enclosed within powder coated steel frames
- Skylight available in flat and arc designs
- Fixed end roof skylight with optional availability of cable troughs
- Active skylight for center aisle containment automatically opens in case of fire via an electromagnetic lock, which is seamlessly integrated with existing room-based fire suppression system
- No plumbing extension or extra work required in areas with existing fire suppression system
- Active skylight available with single or split glass panel
- LED strip lighting within the containment provides sufficient light for access and maintenance
- Optional infrared motion sensor based lighting control
- Quick deployment and easy changes/moves

### Material

- High Quality Cold Rolled Steel Plate

### Aisle Width

- 1200mm Width
- 1800mm Width

### Finish

- RAL9005 Black Powder Coated Finish

### Rack Size

- 600mm Width
- 800mm Width

## Skylights

### Ordering Information

Part No.	Description	Supporting Panel Height mm[inch]	Cabinet Width mm[inch]	Aisle Width mm[inch]	Roof Skylight Type
VR06-3612X-1	End Roof Skylight with M-shape Cable Trough	300[11.81]	600[23.62]	1200[47.24]	Flat
VR06-3612X-2					Arc
VR06-3812X-1			800[31.50]	1200[47.24]	Flat
VR06-3812X-2					Arc
VR06-3612G-1	End Roof Skylight with Flat Cable Trough	300[11.81]	600[23.62]	1200[47.24]	Flat
VR06-3612G-2					Arc
VR06-3812G-1			800[31.50]	1200[47.24]	Flat
VR06-3812G-2					Arc
VR06-3612S-1	Active Roof Skylight with Single Glass Panel	300[11.81]	600[23.62]	1200[47.24]	Flat
VR06-3612S-2					Arc
VR06-3812S-1			800[31.50]	1200[47.24]	Flat
VR06-3812S-2					Arc
VR06-3612D-1	Active Roof Skylight with Split Glass Panel	300[11.81]	600[23.62]	1200[47.24]	Flat
VR06-3612D-2					Arc

Note: Not all the available part No. are listed. For more information, please contact your Vericom Representative.

## Sliding Doors

### Vericom Sliding Doors Product Guide

- Motorized cold aisle containment sliding access door
- Provides easy access with state-of-the-art access control integration
- Suitable for both double and single row cold aisle containment
- Sliding door provides greater concealment with matching material and color of Vericom cabinets to provide unified look
- Automatic door opening and closing
- Brush grommets to provide optimum sealing and preventing leakage of cold air
- Optional access control or push button for exit
- Containment access with IC card, fingerprint and password control
- 12mm thickness tempered glass
- Optional monitoring touch screen
- Infrared sensor on the two sides of door for anti-pinch function
- Quick, convenient and easy installation



Single Row



Double Row

#### Material

- High Quality Cold Rolled Steel Plate

#### Aisle Type

- Single Row Aisle
- Double Row Aisle

#### Finish

- RAL9005 Black Powder Coated Finish

#### Aisle Width

- 1200mm
- 1800mm

### Ordering Information

Part No.	Description	Aisle Width mm[inch]	Cabinet Depth mm[inch]	Height mm[inch]	Feature
VR08-121242S-0	Sliding Door for Single Row Aisle Containment	1200[47.24]	1200[47.24]	2000[78.75]	/
VR08-121242S-1					Monitoring touch screen position reserved
VR08-121247S-0				2000[78.75]	/
VR08-121247S-1	Monitoring touch screen position reserved				
VR08-121242D-0	Sliding Door for Double Row Aisle Containment	1200[47.24]	1200[47.24]	2000[78.75]	/
VR08-121242D-1					Monitoring touch screen position reserved
VR08-121247D-0				2000[78.75]	/
VR08-121247D-1	Monitoring touch screen position reserved				

Note: Not all the available part No. are listed. For more information, please contact your Vericom Representative.

## Cable Trough / Rear Cover Plate / Single Row Aisle Panel



Cable Trough



Rear Cover Plate

### Vericom Cable Trough Product Guide

- Cable troughs are provided with tools and accessories which allow convenient and quick installation
- Convenient installation and provide ease of cable installation, routing and maintenance
- Rear cover plates are used for better protection of cables and structure appearance

### Material

- High Quality Cold Rolled Steel Plate

### Size

- 300/600/800mm Length

### Finish

- RAL9005 Black Powder Coated Finish

### Ordering Information

Part No.	Description	Length mm[inch]	Width mm[inch]	Height mm[inch]
VR07-M3	M-shape Cable Trough	300[11.81]	320[12.60]	200[7.87]
VR07-M6		600[23.62]		
VR07-M8		800[31.50]		
VR07-3	Rear Cover Plate	300[11.81]	240[9.45]	40[1.57]
VR07-6		600[23.62]		
VR07-8		800[31.50]		



Single Row Aisle Panel

### Vericom Single Row Aisle Panel Product Guide

- Suitable for scenarios with only single row aisle
- Tempered glass enclosed in powder coated steel frame
- Provide support for cabinet roof skylight
- Support sliding glass door for containment access

### Material

- High Quality Cold Rolled Steel Plate

### Width

- 300/600/800mm Width

### Finish

- RAL9005 Black Powder Coated Finish

### Rack Size

- 42U & 47U

### Ordering Information

Part No.	Description	Width mm[inch]	Height mm[inch]
VR09-847	Single Row Cold Aisle Panel	800[31.50]	2200[86.61]
VR09-647		600[23.62]	
VR09-347		300[11.81]	
VR09-842		800[31.50]	2000[78.75]
VR09-642		600[23.62]	
VR09-342	300[11.81]		

## Power Distribution Box / Gang Clips



Power Distribution Box

### Vericom Power Distribution Box Product Guide

Distribution acquisition box mainly converts the AC power to the low-voltage DC power, and finally offer power supply and control to the DC equipment or components within a cold aisle or modular data center.

- Voltage transformation: convert AC to DC, for example, 12V DC.
- Power supply: power supply for the DC equipment or components, including electromagnetic lock, LED strip, lighting, access control components, etc.
- Control: control the DC equipment or components, for example, power on and off for electromagnetic lock and LED strip.
- Linkage control: link with other external signals, for example, link with the fire control system to control the electromagnetic lock to open the active skylight, to ensure that the fire-extinguishing gas can enter the aisle.

### Material

- High Quality Cold Rolled Steel Plate

### Finish

- RAL9005 Black Powder Coated Finish

### Input Voltage

- 88-264V AC

### Output Voltage

- 12V DC

### Ordering Information

Part No.	Description	Aisle Width mm[inch]	Cabinet Depth mm[inch]	Height mm[inch]	Feature
VR10-12-320W-V	Power Distribution Box	482[18.98]	300[11.81]	88[3.46]	12V switching power supply (320W, dual power supply), 12-position terminal board, active fire signal 24V DC.

Note: Not all the available part No. are listed. For more information, please contact your Vericom Representative.



Gang Clips

Vericom offers this 4 pack of ganging clips that are designed for Server and Network Cabinets.

### Ordering Information

Part No.	Description	Feature
RAGAN04	Ganging Clips, 4 Pack	VC5 Server Cabinets

Not all available items listed are pictured. For more information contact your Vericom Representative.

