vantage S2
enclosure system

wright · line

technical environment solutions

The Lean Data Center

The days when the data center was a static environment performing batch processing have turned into a 24/7 virtual operation focused on real time processing – anywhere, anytime.

On a daily basis, new equipment is deployed in the data center, resulting in rapidly increasing power consumption and escalating heat output. Data center managers are constantly moving, adding and changing IT equipment and electrical circuits – all while trying to reduce or maintain costs. This rate of change, combined with the pressure to control costs, forces data center managers to do more with less.

So how do you achieve a lean operation? Choose a business partner that can truly consolidate your enclosure, thermal and power management, security and service needs under one umbrella. Work with Wright Line, a data center infrastructure partner you can trust.

The benefits are three-fold:
• Vendor consolidation reduces procurement costs.
• Complete, pre-configured solutions increase speed of deployment.
• Working direct with the manufacturer increases quality control.

Our single-order flow, Just-In-Time manufacturing process and focused efforts result in an unprecedented low defect and corrective action rate.

At Wright Line we've served a very loyal customer base for the past 70 years. And, the benefits we reap in our operation, we pass on to our clients.

STORE

- Enclosure platform is cost effective and versatile to keep pace with the rapidly evolving server market
- Exact 24" (610mm) enclosure width is designed to complement the North American standard 2' × 2' (610mm × 610mm) tile – preventing end-of-row creep
- Guaranteed compatibility with TIA/EIA-310-D* standard size equipment
- Fully welded frame rated for 2,000 lbs. (909kg) static and dynamic load capacity handles even the heaviest server equipment
- Customizable to address our individual customer needs
- Rolls through a 7' (2.13m) doorway to ease deployment
- Offers top access for adjustment of leveling feet, increasing speed of deployment

COOL

- Provides superior airflow with its fully perforated front and rear door system
- Exceeds most server manufacturers' requirements for open perforation airflow with 940 sq. in. (6065cm^2) of open perforation
- Intelligent thermal management options extend life of the IT equipment and infrastructure
- A multitude of fan options available for increased thermal management

POWER

- Basic, metered and managed power solutions to fit individual monitoring and management requirement at the enclosure level
- Wide variety of custom and standard options for power densities that are increasing and unpredictable
- Uninterruptible Power Supply (UPS) solutions address the growing need for power availability

MANAGE

- Easily accommodates up to 800 CAT5e/6 cables without bends or breaks
- Broad offering of cable management accessories for proper cable distribution and management
- Overhead cable management system offers flexibility and ease of deployment
- Comprehensive environmental monitoring devices provide advanced detection of emerging problems
- Devices provide predictive failure analysis – allowing you to act, rather than react

SECURE

- Our 125 different lock core options provide customized access to individual areas or applications in the data center
- An array of electronic locks are offered for remotely managed access
- A wide variety of security devices minimize damage and unauthorized access
- Security devices provide protection rather than detection

*TIA (Telecommunications Industry Association) • EIA (Electronic Industries Alliance)

Frequent technology refreshes –
one enclosure platform

The data center has undergone major changes over the past decade. Data centers built 10-15 years ago have infrastructure that is far outdated in terms of the technology it must support. The rapid rate of technological innovation combined with the immense amounts of data being created and the growing need for instantaneous access to that data have created a highly evolving IT environment.

The Vantage S2 enclosure platform has been designed with change in mind, which is why so many Fortune 500 companies have standardized on it. Wright Line's forward-thinking design engineers continue to develop scalable enclosure solutions to help customers store their latest technology without having to change enclosure platforms, allowing them to maximize their original investment. Wright Line is so confident that the Vantage S2 enclosure will suit your needs that we offer a "Compatibility Guaranteed" policy. It guarantees that we can offer a solution to store your server and network equipment in the Vantage S2 or we will give you a full refund.*

Vantage S2				
Depths (over doors)	**12U**	**25U**	**42U**	**45U**
39" (991mm)	X	X	X	X
42" (1069mm)		X	X	X
Widths (w/o sides)				
24" (610mm)	X	X	X	X
30" (762mm)			X	X

COMPATIBILITY
## GUARANTEED

AVAYA

CISCO SYSTEMS

DELL

FUJITSU COMPUTERS SIEMENS

We guarantee that all 19" TIA/EIA-310-D compliant equipment will physically fit into the Vantage S2 enclosure.*

*This guarantee includes all equipment that complies with the TIA/EIA-310-D standard with the mounting hardware provided by the original equipment manufacturer (OEM). OEM server rails may be required. Wright Line LLC will not be responsible for equipment that physically fits into the enclosure, but does not comply with TIA/EIA-310-D.

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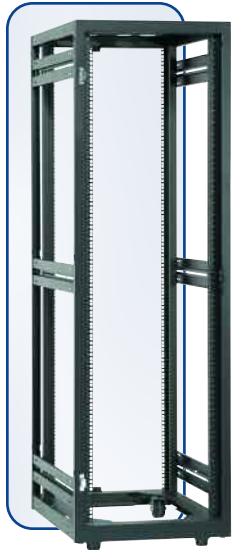
24" (610mm) Wide Enclosure

Standard server enclosure optimizes the footprint in the data center with its exact 24" (610mm) width that eliminates end-of-row creep.

30" (762mm) Wide Enclosure

The wider Vantage S2 comfortably accommodates network equipment as well as hybrid environments where large amounts of cables are required.

39" (991mm) Deep Enclosure*

Cost effective solution for shallow servers and tower (non-rack-mount) technology.

42" (1069mm) Deep Enclosure*

Accommodates deeper server technologies while providing ample cable and power management provisions in the rear integrated channel.

Gateway™   (hp)   IBM   sgi   Sun   TOSHIBA   UNISYS

* Depth includes front and rear door
All products and company names are trademarks or registered trademarks of their respective holders.

Frequent technology refreshes –
one enclosure platform

Standardization

Many of our customers have chosen to standardize on the Vantage S2 because of Wright Line's superior rack technology, first-class customer service and one of the industry's largest direct sales forces which ensures that we have representation located near you to respond to your changing requirements.

Standardization not only eases procurement and vendor manage-ment, but it helps drive out waste due to fluctuating costs, inconsistent quality and varying customer support and responses from vendors.

Vantage S2 lends itself to standardization with an open platform that can accommodate everything from SUN's proprietary dimensions and mounting methods to HP's high-density blade technology that requires a high weight load capacity.

▼ Perforated Top

▼ Solid Top

Extension Side Panel ▼

Lacing Bar ▶

◀ Side Panel

◀ Stabilizer Plate

▲ Casters

◀ Perforated Front Door

Perforated Rear Door ▶

Split Fan Door ▶
Up to 880 cfm (1495m³/h)

◀ Split Perforated Door

◀ 6" (152mm) Extension Frame

Vantage S2 Features:

- Top panel provisions for Overhead Cable Management System for flexibility and ease of deployment

- Reversible and tool-less doors to ease in-field changes

- Reversible top panel for flexible cable management access

- Half-height divider panels for ease of deployment

- Baying hardware included

- 0.375" (9.52mm) square holes, #10-32 and #12-24 threaded hole vertical rail options

- 510 sq. in. (3,290cm²) of open space in the base

- Split rear doors that require less clearance in the service aisle

- Top access leveling guides to increase speed of deployment

Roll-Out Shelves

Our 1U (100 lbs./45kg) or 2U (200 lbs./91kg) roll-out shelves support non-rack-mount equipment that requires easy, all-around access.
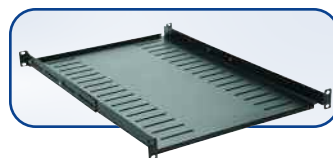
Fixed Shelves

Our less than 1U (200 lbs./91kg) and 1U (400 lbs./182kg) fixed shelves support even the heaviest non-rack-mount equipment.

Utility Drawer/Worksurface

Our 3U or 4U storage drawer keeps peripheral equipment like CDs, DVDs, mice and manuals handy and doubles as a worksurface that can support a laptop.

Please refer to our Data Center Accessories brochure for more detailed storage accessories information.

Addressing your current and
future requirements

As server sizes have decreased, heat densities in enclosures have increased dramatically. Vantage S2 has been designed with this in mind, creating optimal thermal dynamics by moving heat out of the enclosure in the manner intended by server manufacturers – front to rear. An industry leading 940 sq. in. (6065cm^2) of perforation in the front exceeds most server manufacturer requirements for enclosures. Additionally, fan trays mounted on the rear doors exhaust heat for high density applications.

When the average density per enclosure exceeds 3,500 Watts, it is recommended that an Environmental Monitoring Unit (EMU) be used. An EMU actively monitors temperature, humidity, voltage, airflow, power and other critical elements at several points in the enclosure via the network. Information can be accessed and viewed anywhere over the web through a user-friendly interface. Offering predictive failure analysis increases the availability of the critical systems. The EMU alarms users when and if certain environmental thresholds are exceeded allowing you to respond before a failure or shutdown occurs.

Vantage S2 Cooling Scalability

Load (kW)	Rear Door	Side & Top Panels
Up to 3.5kW	Perforated	Solid
Up to 4.5kW	440 cfm (748m^3/h) fan tray (x2)	Solid
Up to 8.5kW	880 cfm (1495m^3/h) fan tray (x4)	Solid
Up to 13kW	Solid	1350 cfm (2294m^3/h) fan tray

Koldlok™

Offers a permanent airflow sealing solution in the raised floor, accepting perpetual cabling changes.
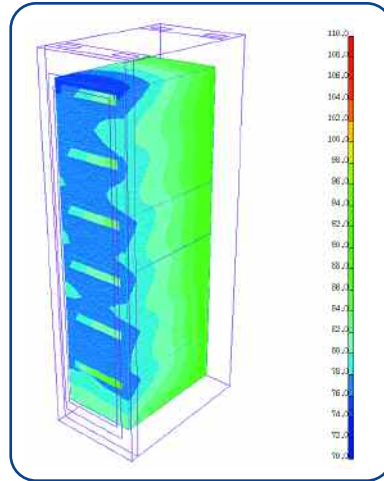
Tool-less Blanking Panels

Significantly reduce re-circulation of hot exhaust air to the equipment inlet.

Door Fans

Split rear fan doors maintain hot-row, cold-row approach. Each UL approved fan tray offers 220 cfm (374m^3/h) for a total of 880 cfm (1495m^3/h) cooling capacity.

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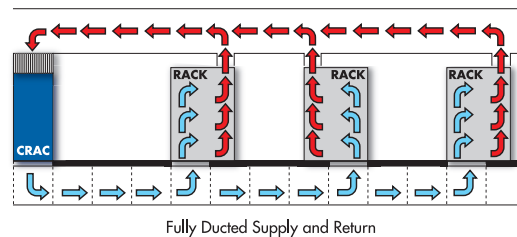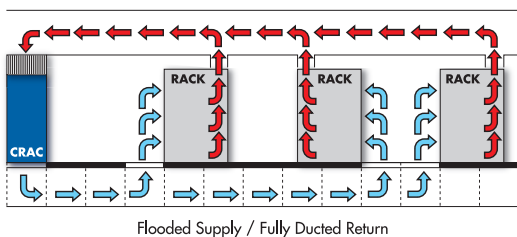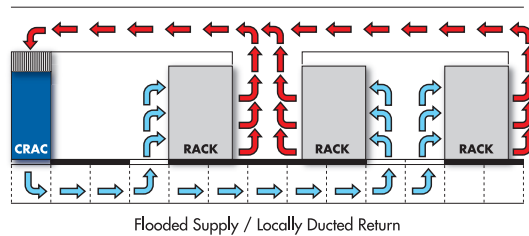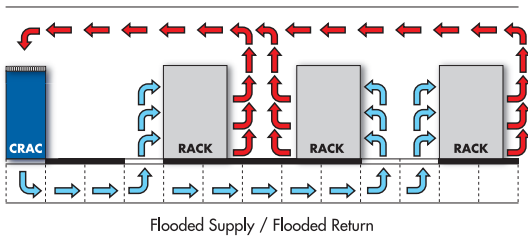MANAGE
SECURE

Heat Containment/Removal System

Offers up to 13kW of heat removal in an optimal environment that features a drop ceiling and a consistent 68°-77°F (20°-25°C) air supply along the front face of the enclosure. The result is achieved by effectively containing the hot air in the rear of the enclosure and removing it at high velocity through a duct into the drop ceiling.

Thermal Diagram

The thermal diagram illustrates the temperature gradients inside a Vantage S2 enclosure with fully perforated top, front and rear doors and solid side panels.

Cooling Methodologies

Vantage S2 has been designed to fit seamlessly into all four major cooling layouts (as illustrated below).*

Flooded Supply / Flooded Return

Flooded Supply / Locally Ducted Return

Flooded Supply / Fully Ducted Return

Fully Ducted Supply and Return

*As outlined in "Thermal Guidelines for Data Processing Environments" by ASHRAE (American Society of Heating, Refrigeration and Air-conditioning Engineers, Inc.)

Powering increasingly
unpredictable equipment densities

Vantage S2 provides superior power and power management capabilities through a basic, metered and managed rack power product offering. What was once a simple task has evolved into a calculated strategy to manage power-intensive servers in densely-packed enclosures.

By working closely with the IT community, server manufacturers and power suppliers, our product engineers continually develop new products and enhancements for a wide range of enclosure applications. Vantage S2 is designed to support the most demanding mission-critical power applications, while remaining scalable to accommodate future requirements. An ever expanding power offering includes the most basic 120V, 15 Amp strip up to a remotely monitored 208V (three-phase), 60 Amp solution specifically for blade technology.

Three-Phase Power Distribution

An increasing need for more power within the enclosure has prompted a push to three-phase power strips that can deliver up to 17.2kW of power. Decreasing the number of cables lowers installation costs and reduces cable clutter. More importantly, it allows for unimpeded airflow to the server exhaust.

Three-Phase
Provides up to 17.2kW in just one power strip (60 Amp shown).

Single-Phase
Provides up to 9.9kW in one power strip.

Please refer to our Data Center Accessories brochure for more detailed power accessories information.
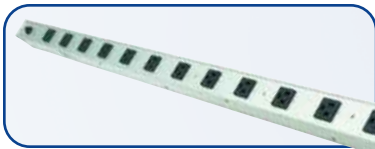
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Basic Power Strip

Simple and reliable rack-optimized power distribution.

Metered Power Strip

Monitoring the power draw at the rack level helps prevent unexpected branch circuit overloads.

Managed Power Strip

Remotely manage and monitor power for mission critical equipment.

Vertical Mounting

Maximize server storage while using space more productively.

Zero U Mounting

Hole pattern allows multi-vendor mounting of power strips.

M G E
UPS SYSTEMS

Uninterruptible Power Supply

High quality power solutions that increase power availability and system uptime to enterprise-wide networks in tower or rack-optimized form factors.

MGE EX RT

Dual-feed, high availability UPS designed for the most sensitive high-density server environments. This high performance UPS is engineered for demanding customer applications.

MGE Pulsar EX RT

True on-line double-conversion technology required for mission-critical network applications and server environments. Continuous voltage and frequency regulation.
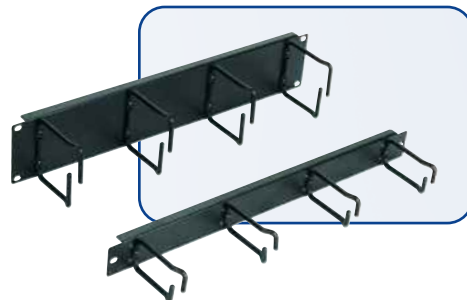
Cable Management
made simple

The Vantage S2's unique platform addresses cable and access management concurrently. From a structural standpoint, Vantage S2's frame design efficiently accommodates large quantities of cables and provides unmatched enclosure-to-enclosure, raised floor and overhead cable access. This approach is not only crucial to safeguarding cabling, but it is required to maximize airflow and provide clear, easy access to equipment.
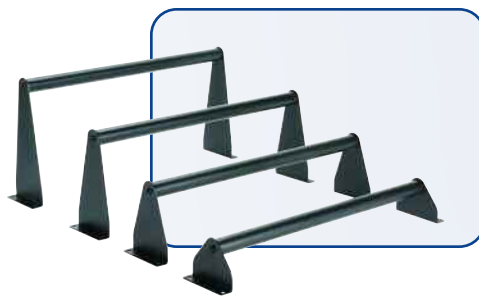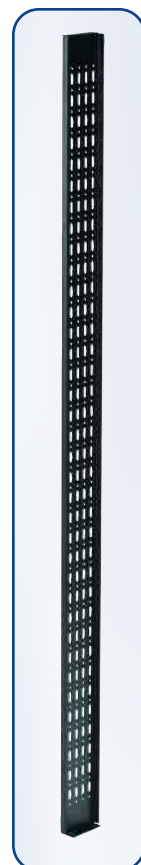
Cable Strain Relief

Avoid unnecessary cable bends and breaks with strain relief bars that gradually transition cables from a horizontal to a vertical position.

1U/2U Cable Ring Organizer

Effective horizontal cable management. Also available as a kit of four individual rings.

Middle-Rear Lacing Bar

Allows the two integrated rear channels in the enclosure to be used for cable management while adding power strips to the middle lacing bar.

Please refer to our Data Center Accessories brochure for more detailed cable management accessories information.

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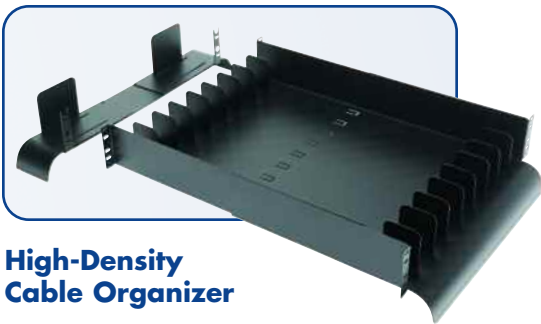**COOL**
POWER
MANAGE
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Overhead Cable Management System

Allows users to route cables on top of the enclosure and offers separate rows for power and data.

Top Panel

This perforated top panel features four cable management holes that can be positioned on either end of the enclosure based on cable entry points.

High-Density Cable Organizer

Organize and manage large amounts of cables front-to-rear in compliance with TIA/EIA-568-A bend radiuses.
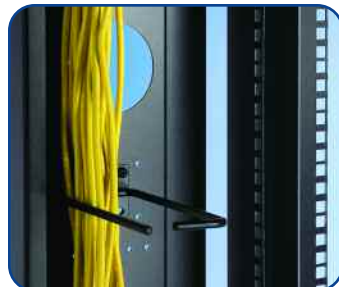

Transition Tray

Enclosure to enclosure, horizontal cable management with TIA/EIA-568-A compliant bend radiuses.

Take-up Spools

Efficient and TIA/EIA-568-A compliant organization of excess cabling within the enclosure.

Rear Channel

The integrated rear channel provides an efficient space to properly manage cables using cable rings or Velcro® straps.

Velcro® Buckle Straps

Offering superior strength, our reusable Velcro® buckle straps are available in 9" (229mm) and 12" (305mm) lengths to manage cable loads.

MANAGE

Infrastructure Management

A broad range of products provide streamlined solutions for management of the infrastructure. By combining keyboard, video and mouse (KVM) switching, LCD displays and environmental monitoring products, we offer flexible connectivity, efficient switching and convergence of technologies.

IP-Enabled KVM

Multi-functional, multi-user solutions for KVM, serial and power management.
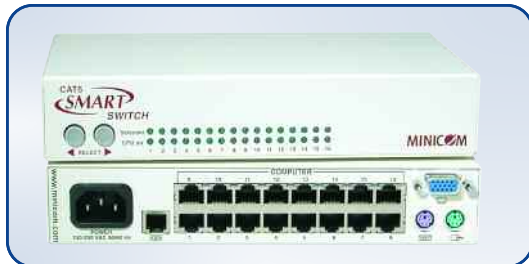
KVM Switches

Powerful CAT5 based KVM switches reduce cable clutter and speed of deployment.

Advance Detection

Monitoring system provides early detection of emerging environmental problems, minimizing equipment damage and downtime. SNMP enabled environmental monitoring system allows for quick deployment to the network.

Management Product Features:

- Integrated LCD Display and KVM solutions

- Three-button touchpad or two-button trackball mouse options

- Local or remote web based user access, IP enabled

- User name and password protection

- Alarm notification prior to system failure via e-mail or SNMP

- Event and statistical data stored for trend mapping or root cause analysis

LCD Display

Compact 1U monitor with keyboard and mouse, also available with 8 or 16-port KVM.

Please refer to our Data Center Accessories brochure for more detailed infrastructure management and security accessories information.

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Protecting your investment

Security remains a growing concern in today's data center environments. After all, the life-blood of your business is running on the equipment that is stored and monitored within your enclosures. In addition to the storage, thermal and cooling issues Vantage S2 solves, it also offers a wide selection of safeguard and security devices that protect the mission-critical equipment behind your enclosure doors.

With security appliances and accessories ranging from standard key locks to electronic access control and graphical management tools, you can rest assured that we're completely focused on the deployment and reliability of your systems.

Cage

Provide the ultimate level of security for your valuable information systems. The cage system is the perfect solution for data center environments requiring subdivision or a higher level of security.

Standard Locks

High quality standard locks feature 125 key options with master override.

Swing Handle

Cost effective locking handle that will hold in position with and without the use of keys.

Combination Lock

Mechanical handle with combination lock and override key. Cost effective multi-layer security.

Friction Lock

Kaba Mas self-powered friction lock offers advanced yet traditional access keypad.

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Wright Line, a global leader in the design and manufacture of consoles, enclosures, office and other specialty furniture, has been serving the data center, office, call center, electronic laboratory and high-tech manufacturing environments for more than 70 years. Our innovative designs are manufactured to the highest quality and safety standards.

Also see our full line of furniture that supports your Data Center environments.

Data Center Accessories Brochure

Profile Consoles Brochure

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